

MINI550 GPS Warning Device

User Manual

Version 0.3

MINI550+200TX WRD



We market and sell the **MINI550 GPS** as a road safety enhancement device. It is your responsibility to drive within the speed limits at all times. You should always drive with full care and attention. You should not let any in-car device distract your attention or take your eyes off the road. It is your responsibility to remain aware at all time. If you need to adjust any **MINI550 GPS** setting on the move, ask a passenger. Alternatively, stop at the next available safe location and then make any changes.

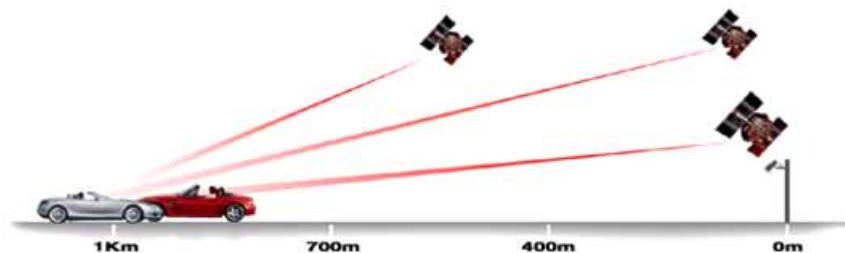
1.Product Introduction

1.1 Overview

The all-in-one **MINI550 GPS**, has revolutionized the radar detector category again, which means it delivers the best protection possible against all speed measuring devices. We added advanced

GPS-powered intelligence, which delivers the best performance, and is the quietest and most user-friendly radar detector ever designed.

The **MINI550 GPS** is equipped with the latest generation MTK chipset digital processor specially designed for fast and accurate fix on GPS signals. It had been designed to help you drive safety within the confines of today's speed limits, by alerting you quickly and easily to the presence of police speed traps, often located at Accident black spots, electronically indicating potentially dangerous and hazardous situations. The **MINI550 GPS** will help you to drive safely, when the database has been downloaded, the device will compare your position using its built-in GPS antenna with the position of every known danger locations and give you an audible and visual warning as you approach them.



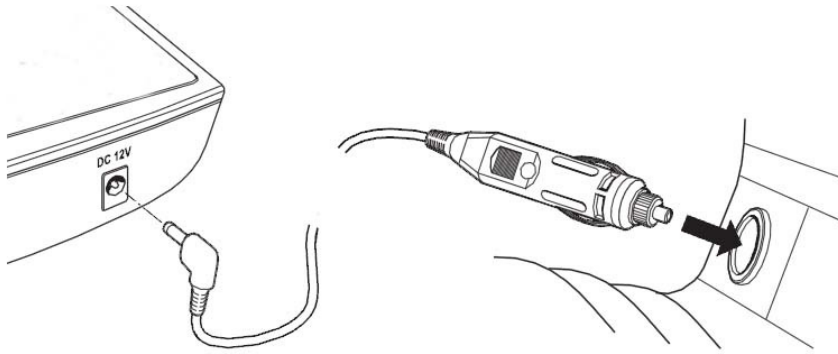
1.2 Check the Package Content

- **MINI550 GPS** unit - FND display*1
- **Wireless radar detector -200TX WRD** unit*1
- Smart on/off switch cord*1
- Windshield suction cup mounted with brackets*1
- Dashboard mounting metal with magnet*1
- Extension cord for 200TX WRD*1
- The brackets for 200TXWRD *1
- USB download Cable *1
- User manual*1

1.3 Install MINI550 GPS in your vehicle

Power Connection

To power the **MINI550 GPS**, plug the small end of the DC Plug, (DC JACK-type connector) into the jack on the **MINI550 GPS's** left side, and plug the lighter plug adapter into your vehicle's lighter socket or accessory socket.

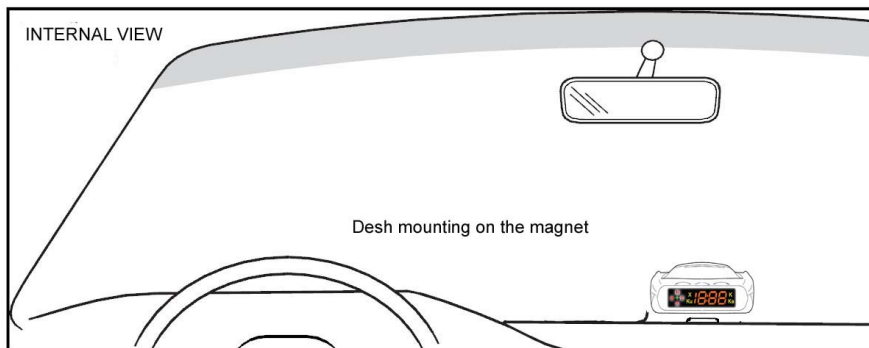


The **MINI550 GPS** operates on 12 volts DC negative ground only. The lighter plug provided is a standard size and will work in most vehicles. However, some vehicles may require our optional sleeve to ensure a snug fit. If so, simply call or contract with local dealers.

NOTE: *depending on your vehicle, the lighter socket power may either be continuously on, or it may be switched on and off with your ignition switch.*

Mounting Location

WARNING: *We cannot anticipate the many ways the MINI550 GPS can be mounted. It is important that you mount the MINI550 GPS where it will not impair your view or present a hazard in case of an accident.*



Where to mount MINI550 GPS

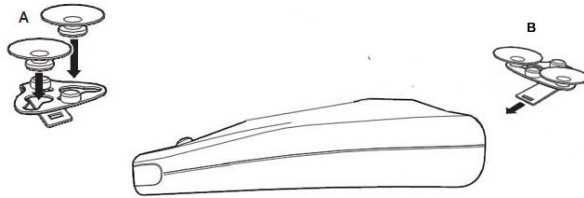
For optimum detection performance, we recommend the following:

- Using the supplied windshield mount, mount your **MINI550 GPS** level and high enough on your front windshield to provide a clear view of the road ahead. For optimum rear detection, center the detector between the driver and passenger.
- Mount the **MINI550 GPS** away from windshield wipers, other solid objects, and heavily tinted areas that might obstruct the radar antenna or laser lens.

NOTE: *In order for the MINI550 GPS's GPS based features to work properly, the top case must have a clear view of the sky.*

Windshield Mount

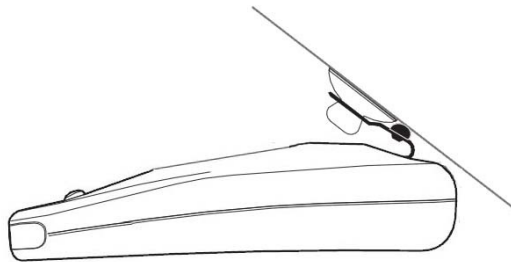
The **MINI550 GPS**'s windshield bracket is designed for unobtrusive and hassle-free mounting.



1 Depress the adjustment button on the top of the **MINI550 GPS** and slide the bracket into the slot until it is locked into the position which best fits the angle of your windshield (there are four settings available). For extremely horizontal or extremely sloped windshields, the bracket can also be bent to the correct angle.

However, we suggest that you do not do this when the bracket is connected to the detector.

To ensure that the suction cups adhere to the windshield firmly, be sure to keep both your windshield and the suction cups clean.



2 To adjust the **MINI550 GPS** on your windshield, use the Easy Mount adjustment button located on the top of the **MINI550 GPS** , and slide **MINI550 GPS** forward or backward to obtain a level horizontal position.

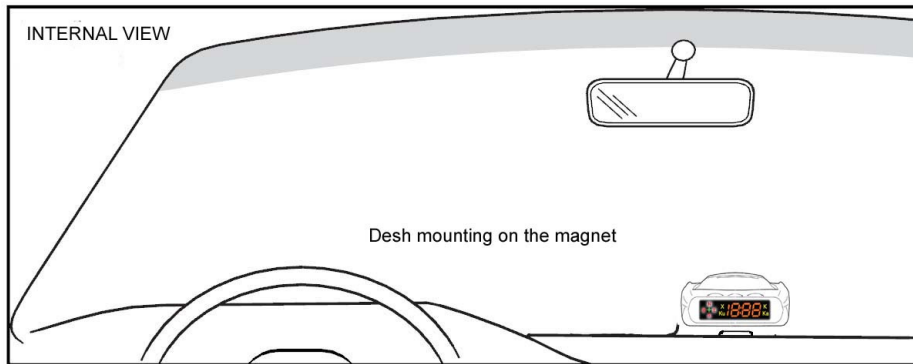
When installed and adjusted properly, the back top edge of the **MINI550 GPS** should rest solidly against your windshield.

User's Tip

You can leave the bracket in place on your windshield, and easily remove the **MINI550 GPS** by pressing the adjustment button and sliding it off the mount. Again, be sure to position the bracket where it won't present a hazard in the event of an accident.

Dash mounting

To sure to keep your location clean for fixed magnet, there is a 3M sticker at button of magnet to paste on desk. Position the **MINI550 GPS** on the magnet to prevent the unit from sliding and fix firmly on dash.



1 A professional installer must install your new **200TX WRD**. Installation of this system requires experience and expertise in automotive electronics. Car Audio specialists and many car dealers can install **200TX WRD** for you.

2 Attempting to install this product without expertise in automotive electronics installation can cause personal injury, or damage to your vehicle.

3 If your vehicle is damaged during installation, its safety systems may be compromised, which could cause personal injury or property damage.

4 Improper installation may void **200TX WRD's** warranty.

To get the best performance possible, the mounting location of the front **200TX WRD** is critical. Although radar signals will pass through some types of plastic, it is critical that this receiver be mounted level, and have an unobstructed "view" of the road.

1 Determine the best location for the Receiver. The best location is typically under the bumper, or inside the front grill of the vehicle. For the best performance, install the Receiver horizontally, with a clear "view" of the road.

2 Using the supplied mounting hardware, mark the hole locations and drill pilot holes in the vehicle if necessary. It's best to check and double-check clearances BEFORE drilling the holes.

3 Mount the Receiver using the supplied hardware. (If right-angle mounting bracket is used, secure Receiver to the right-angle bracket first, then install bracket with Receiver to the vehicle.)

Note:

1. **Do not drill holes in the Receiver itself.**
2. **Thoroughly investigate location before drilling any holes.**
3. **Keep all cables away from moving parts, and hot surfaces (radiator, hoses, etc.).**
4. **DO NOT splice cable.**

1 Connect the receiver cable to the Receiver (+) / (-). Another side connects with power battery.

2 Route cable to battery, and secure with zip-ties (included).

Note:

Make certain that the Display is clearly visible from the driver's position.

After all components are installed correctly:

- 1 **Turn vehicle's engine to the "on" position.**
 - 2 **Turn the MINI550 GPS on by pressing the "PWR" button at top side of the power cable.**
 - 3 **The MINI550 GPS will cycle through a startup sequence.**
 - 4 **If commutation messages come up, you can see the star icon with twinkle per 3 second /time.**
- If the wireless radar detector is disconnected with MINI550 GPS, you cannot see the flash star icon, and issues with a message " The wireless radar detector is disconnected per 3 minutes"**

1.4 Product Notification- Using Tips

Updating the *MINI550 GPS* with the latest Smart AI database

The **Smart AI** Database is one of the largest shared resources of fixed speed camera locations and other important locations from around the world.



For a full list of all the countries that are covered, or are actively being mapped, please refer to <http://update.gpscamera.org>.

The database contains locations for accident blackspots, fixed speed cameras, average speed

cameras and red light cameras, as well as commonly-used mobile speed trap locations and general points of information.

The **MINI550 GPS**'s memory can store up to 360,000 individual locations. New locations are constantly added to the **Smart AI** database, so it is imperative that you regularly update your **MINI550 GPS** to ensure you will be warned of the most up to date information available. We recommend updating your database at least once every month.

Switched on for the first time

The **MINI550 GPS** receives signals from the network of 24 satellites orbiting the Earth, called the Global Positioning System, and uses the latest Generation chipset GPS technology to work out where you are every second.



When the **MINI550 GPS** is searching for satellite lock the display will show "TIME". Once satellite lock is achieved, a voice alert will confirm "Have a nice driving" and your current speed will be displayed.



The first time your **MINI550 GPS** is switched on, it may take up to 2 minutes to calculate its current position and lock on to the satellites. This is normal and happens with all GPS-based devices.

If you use the **MINI550 GPS** regularly, subsequent satellite lock will be greatly reduced; normally between 5 seconds and 2 minutes.

GPS's Speed

The **MINI550 GPS** calculates your vehicle's speed using GPS data. The speed reading is continually updated and is extremely accurate when you are driving at a steady speed. As with all GPS speed systems there will be a slight lag during accelerating or decelerating while the GPS data is being refreshed.



You may notice a slight difference between the GPS speed reading and the speed displayed by your vehicle's instruments. This is normal, because car manufacturers always build in a slight tolerance to their displayed speed for safety reasons.

The **MINI550 GPS** also has a very handy adjustable "Overspeed Alert" feature which warns you whenever you drive above your chosen speed limit setting.

Safety driving Alerts

The **MINI550 GPS** uses the **Smart AI** database which contains details of danger areas and high risk accident locations that have been designated by police and government bodies, often by the placement of safety cameras. When you are approaching a location that is stored in the **Smart AI** database, the **MINI550 GPS** provides spoken and audible warnings to advise you that you are approaching a hazard area.

Where they are known and recorded in the database, "Advisory speed limits" are announced during an alert. These advisory announcements are for guidance only. It is your responsibility to always be aware of the prevailing speed limit, including any temporary restrictions, and lower your driving speed to suit local driving conditions.

A spoken voice announcement will identify the **Safety driving Alert's** type at a preset distance before the hazard location. If your speed is above the known advisory speed limit, you will be given a further announcement "Attention, overspeed." The digital speed display will switch to give a distance countdown to a fixed camera hazard. This distance is shown in metres. One metre is approximately equal to one yard. GPS warnings are directional, meaning you will receive warnings of targeted threats in your direction of travel.

IMPORTANT NOTE

Mobile Camera Warnings:

Mobile cameras can be used anywhere and can potentially record your speed at 1000 metres or more. Warning of a single location within a mobile camera enforcement area is not necessarily sufficient. If the camera moves within the area then the original warning will be ineffective.

The **MINI550 GPS** will alert you to the start of the mobile enforcement area, before you drive within range of the mobile speed trap. This means you will know that enforcement is possible around the next corner, or along the next straight stretch of road. Therefore, you will not see any distance countdown for mobile speed trap locations.

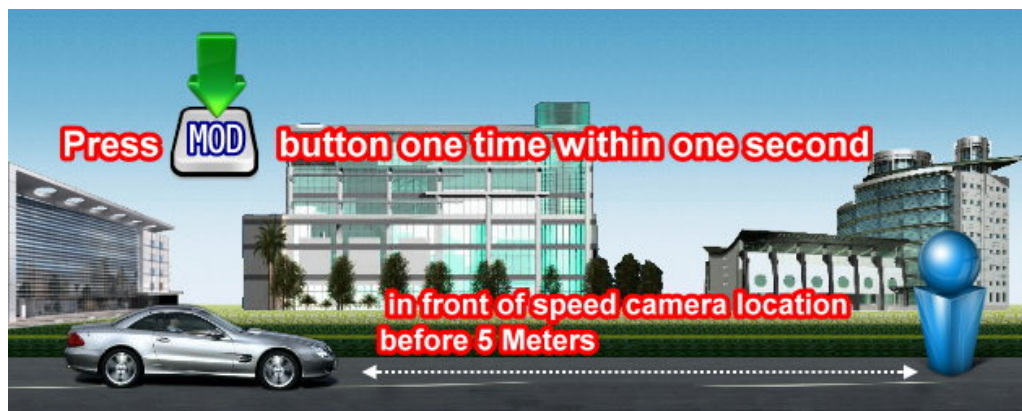
1.5 Storing personal locations

Storing personal locations

The **MINI550 GPS** can store up to 255 Personal Locations. The user can easily store any personal locations. It provides to store the fixed camera, straps camera, danger areas and high risk accident locations, etc.,.

◆ When to press the “POI” button is correct? Ex. POI is a point of interest.

- 1) In front of a fixed camera location or a hazard area, please press POI button one time within one second to save coordinate in front of location 5 meters before. You can hear a message “P.O.I save completely” as same as your direction of travel when P.O.I save successfully. Come back the same P.O.I stored coordinate location area, a message “approaching a P.O.I location when approaching to target.”



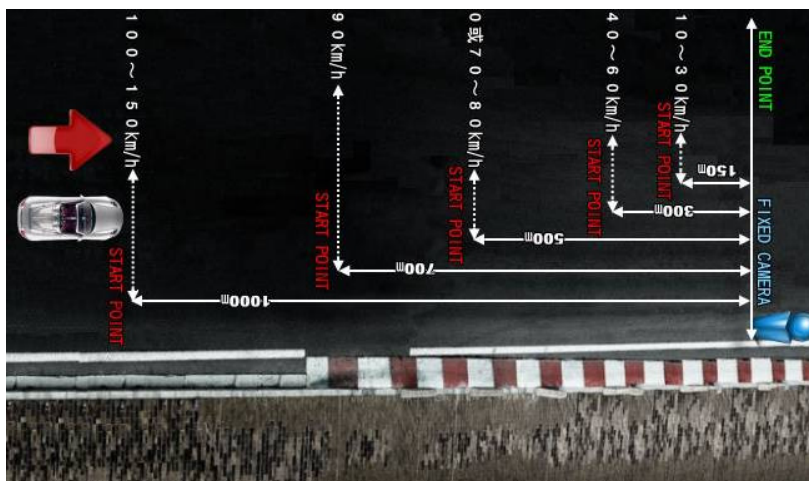
- 2) If there is a fixed camera location or a hazard area located at reverse your direction of travel. Press POI button twice within one second to save coordinate in back of location 3 metres. Along street driving with several metres as your direction of travel when P.O.I save successfully. You can hear a message “P.O.I the start point with direction, and then a flash distance till the range of alerts distance is fully, another messages “P.O.I saved successfully with the end point direction”.



◆ How to save the P.O.I database?

MINI550 GPS has a memory to store the range of alert by the over-speed functions, At first time, you must make a range of warning distances. You can easy to adjust the over speed limit alert from 0 to 160km/h. the warning distance is kept as like as below range table. For example, if you don't use the over-speed alerts function, the default of speed limit is 0km/h with 500 metres. This is a factory default setup, if so, it cannot offer the over speed limit alerts. However, you can press the "POI" button to store POI location. In other words, you can make a decision about P.O.I of the warning ranges as like as below table.

Speed limits	A range of POI distances	A range of alert distances
0 km/hr (default)	500 metres	500 metres
10-30km/h	150 metres	150 metres
40-60km/h	300 metres	300 metres
70-80km/h	500 metres	500 metres
90km/h	700 metres	700 metres
100-160m/h	1000 metres	1000 metres



Note: All collecting methods are used one way alerts of coordinates.

For example, if the P.O.I direction is the north, after collecting coordinates, we can get P.O.I alert message when drive the car approaching to the targets of coordinate from south to north direction. Otherwise, we cannot get P.O.I alert message when drive the car approaching to the targets of coordinate from north to south direction.

◆ How to make a range of alert distances?

Please holding and press the SET function about 3 seconds and more press within 1 second twice from the standby mode to over speed alerts functions mode. And select the range of speed limit by Up and

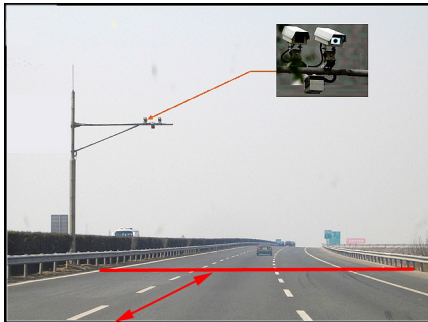
Down buttons, choice the best distance ranges from 0 to 160 km/hr. After 4-5 seconds, **MINI550 GPS** will make a range of alert distance automatically, approaching the target of fixed camera location or mobile camera location when you press “POI” button one time within one second. **MINI550 GPS** will store the same direction of travel coordinates.

If the fixed camera location in reverse direction of travel, you can press “POI” button twice within one second, it will store another reverse direction of P.O.I database, too. You don’t waste time to make U turn. It’s an easy way to collect another side fixed camera or mobile database in highway.

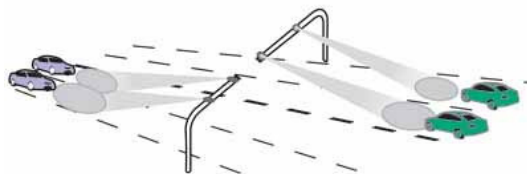
◆How to collect the speed cams information?

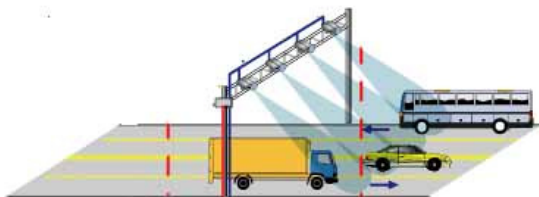
The factory default covers all types of safety cameras. It contains the GPS co-ordinates of the dangerous intersections and roads with accident histories where red-light or speed cameras are used. It alerts you to all types of Fixed Speed Cameras, Red Light Cameras and Average Speed Speed Cameras (GATSO, Truvelo, SPECS, Traffiphoto , etc) as well as other known accident black spots and common mobile speed trap sites.

1. One direction of speed cam—one pinpoint coordinate with one way warning



2. Two direction of speed cams—two pinpoints coordinate with two directions warning





◆ How to **report new** speed cams **locations**

The **Smart AI** database is constantly monitored and enhanced with new camera information and directional information. The camera and safety information contained in the **Smart AI** Database is provided free of charge to all users. Please feel free to help us enhance the **Smart AI** database for everyone by reporting new locations or changes to existing locations. Stored fixed camera location or a hazard area POI and report any information you can via our website <http://cp.gpscamera.org>. or email as much information about the camera site to sales@radargps.com Any information sent will only be used to enhance the **Smart AI** database, and not for any other purpose. Our global camera team will verify the details and enhance the **Smart AI** database, allowing every single user around the world to benefit.

1.6 Downloading Speed cams from sever

◆ How to update database from sever,

Step 1 (To be performed once after initial purchase):

Microsoft Windows Vista (X64) users

When you first connect the **MINI550 GPS** to your PC, Vista will automatically install the necessary USB driver. Or download the driver [PL-2303 USB-to-Serial \(122KB\)](#). Follow the on screen instructions. If the necessary USB driver is not installed automatically, The USB driver is also available from <http://update.gpscamera.org>. If a manual installation of the necessary USB driver is required, please restart your PC and then follow the instructions shown for **Windows Vista (X86)** users.

Microsoft Windows Vista (X86) users

When you first connect the **MINI550 GPS** to your PC, Vista will automatically install the necessary USB driver. Or download the driver [PL-2303 USB-to-Serial \(1.96MB\)](#). Follow the on screen instructions.

Microsoft Windows XP / 2000 (X86) Service Pack 2 user

Do not connect the **MINI550 GPS** to your PC yet. **Install the USB driver BEFORE connecting the MINI550 GPS to your PC.**

Before you update your **MINI550 GPS** or the first time you must first install the necessary USB drivers

and Microsoft accessories program available from <http://update.gpscamera.org>

- [PL-2303 USB-to-Serial \(3.02MB\)](#)
- [Microsoft Installer 3.1 \(2.6MB\)](#)
- [Microsoft .Net Framework 2.0 \(23MB\)](#)

If you have connected your **MINI550 GPS** to your computer before installing the USB driver, you should unplug the **MINI550 GPS** and restart your computer.

Microsoft Windows XP / 2000 (X86) Service Pack 3 user

Do not connect the **MINI550 GPS** to your PC yet. **Install the USB driver BEFORE connecting the MINI550 GPS to your PC.**

Before you update your **MINI550 GPS** for the first time you must first install the necessary USB drivers and Microsoft accessories program available from <http://update.gpscamera.org>

- [PL-2303 USB-to-Serial \(3.02MB\)](#)
- [Microsoft .Net Framework 3.5 \(2.8MB\)](#)

If you have connected your **MINI550 GPS** to your computer before installing the USB driver, you should unplug the **MINI550 GPS** and restart your computer.

Step 2 (To be performed at monthly intervals):

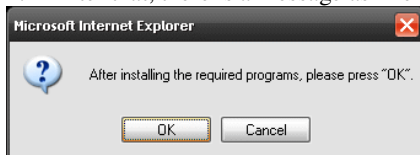
To update the **MINI550 GPS** with the latest Smart AI database, you should connect the **MINI550 GPS** to your computer, ensure your computer is connected to the internet, then double click the application named the update button icon which is located at web right side on <http://update.gpscamera.org>

We recommend you copy this address to a memorable place on your PC so you have easy access for future updates.

1. Please **double click** the update button icon which is located at web right side.



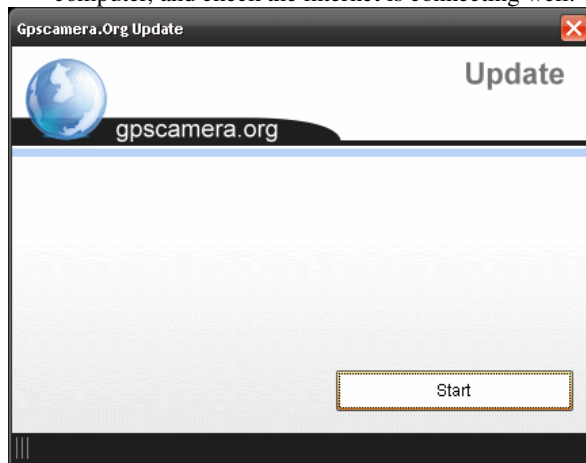
2. After that, there is a message as like as below, and please press Ok button to accept the next steps.



3. You can see the application run-security warning message, please press run button to accept the next steps too.



4. The main update program process, before press start button, you shall connect with device to PC computer, and check the internet is connecting well.



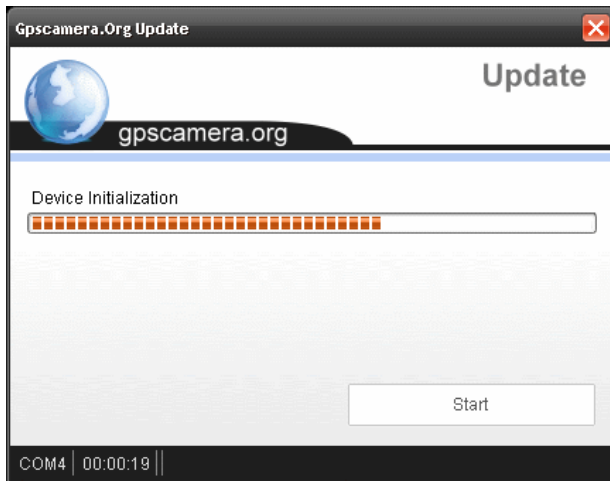
5. Connect the USB download from PC to Speed camera locator.



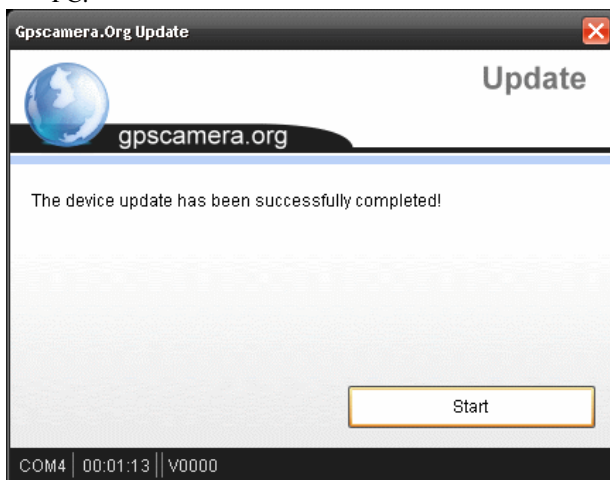
6. The speed camera locator shall be show the system at download model



7. The program will checking the hardware, and then download the firmware, voice, database file from server.



8. Please wait a several minutes, the download speeding is independent on internet condition. If download completely, you can the message as like as below. And you can remove the USB cable from PC.

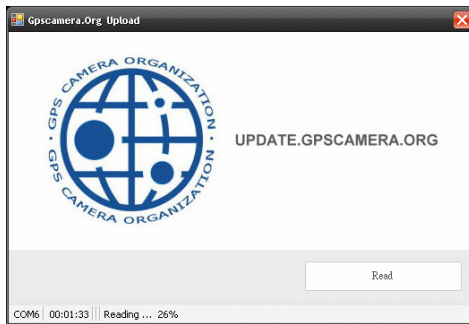


1.7 Uploading personal locations to sever

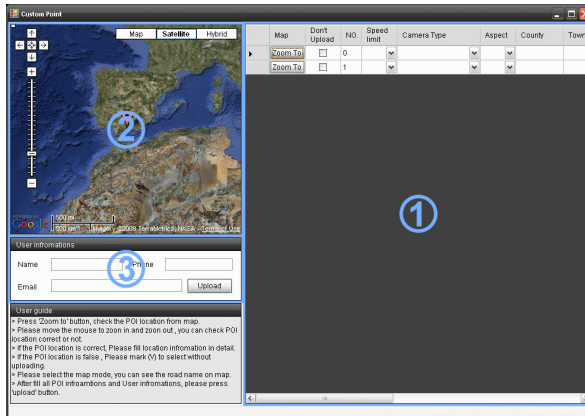
◆ How to upload the POI of database from *MINI550 GPS* to sever,

. Stored fixed camera location or a hazard area POI and report any information you can via our website <http://cp.gpscamera.org>. or email as much information about the camera site to sales@radargps.com
Any information sent will only be used to enhance the **Smart AI** database, and not for any other purpose. Our global camera team will verify the details and enhance the **Smart AI** database, allowing every single user around the world to benefit.

Please **double click** read button as below, waiting a moment for checking POI of database from *MINI550 GPS* .



After uploading database for **MINI550 GPS** , you can see the POI table.



(1) Fill information in detail as the same database table as below:

Map	Don't Upload	NO.	Speed limit	Camera Type	Aspect	County	Town	Road	Action	Description
Zoom To	<input type="checkbox"/>	0	60	Red light camera	N				Add	
Zoom To	<input type="checkbox"/>	1								

Column description in keyword

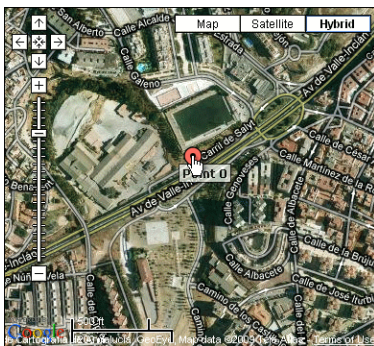
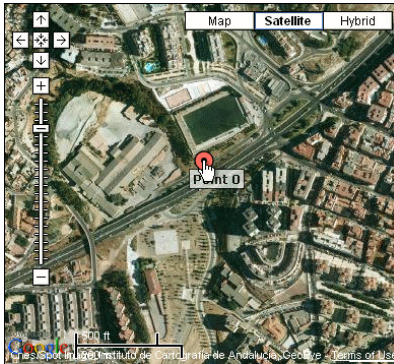
1. Zoom : **Double click the zoom button, and you can review the POI location from Google map.**
2. Don't Upload : Some POI location, maybe it's only testing pinpoints. You shall mark it without uploading to server.
3. You can edit some information about the speed limit, camera type, headin of POI direction, County, Town, Road etc. and fill the location address in detail according real address. You can edit that by the icon to select it. ▽
4. Speed limits: it's from 40 to 160 km/hr (mile).
5. Camera Type: there are several types in column
6. Headin: It's a pinpoint direction of your travel, and provides the warning direction from the start point.
7. Edit : There are three kind of types

Add—Mark POI with add new speed camera

Remove—Mark POI with Speed camera delete

Revise—Mark POI with modify some information

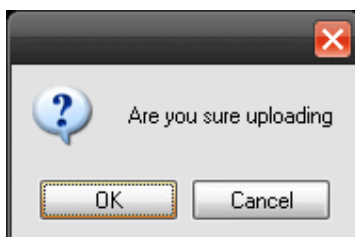
(2)How to check if the pinpoint location is correct? Please check the figure 1 ***Double click the zoom button, and you can review the POI location from Google map. To select which one is best one for you, it offers three type maps which provides Google map.***



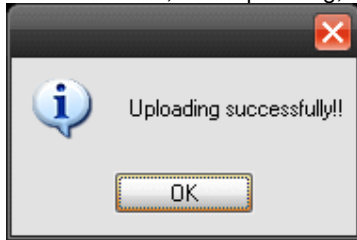
(3)Before uploading database, please fill the user information in detail and then send out it. The A/S server worker would possible to touch with you if necessary. All database will be checked it again , and share to others user later.

User informations	
Name	<input type="text" value="Carina"/>
Phone	<input type="text" value="09123456789"/>
Email	<input type="text" value="abc@hotmail.com"/>
<input type="button" value="Upload"/>	

Uploading now , Please click the ok button.



Wait a moment, after uploading, it will show upload successfully.



Note : Macs are not currently supported.

2.Specification

2.1 Specification

Specifications:

Operating Bands

- X-band 10.525 GHz ± 25 MHz
- K-band 24.150 GHz ± 100 MHz
- Ku-band 13.450 GHz ± 100 MHz
- Ka-narrow band 33.890~34.11GHz
- Ka-low band 34.190~34.410GHz
- Ka-widen band 34.700 GHz ± 1300 MHz
- Laser 904nm ± 50 nm

2.2 features views

Features:

- 360-degree radar and laser detection
- blistering broad-band protection
- multi-speed radar performance
- GPS-powered Truelock filter
- mark location (P.O.I.) features
- speeding alert
- crystal-clear voice alerts
- total distance counter
- top speed record
- coordinate location (with voice)
- low power auto warning
- indications of satellite signal status, date, time, and battery power
- camera and safety mode selectable functions
- intelligent volume control
- intelligent sensitivity control
- product ID with a upgrade security code
- user-selectable preferences

- high-resolution display
- auto brightness control
- Completely immune to the VG-2 and Spectre III "detector-detector"
- Mute, AutoMute & SmartMute
- built-in smart GPS antenna
- simple lighter plug installation
- every type of fixed speed camera warning
- GPS NMEA data can be transferred via the USB
- coordinates database can store around 100, 000 positions at a time
- the locations can be divided into different data sets

2.3 Program views

Programmable Features

- power-on indication
- AutoVolume (On/Off)
- AutoMute (On/Off)
- power-on sequence
- Distance reduce meter
- over speed alert (On/Off)
- Units (English/Metric)
- Voice and Tone mode (optional)
- Auto Brightness Control
- Highway, Auto and City
- GPS speed and car speed indication match
- POI deletion available
- Time Zone selection available
- Radar/Laser Bands
- Auto Calibration Circuitry
- Mute, AutoMute and SmartMute
- Smart-Shield/ VG-2 Protection
- Radar Receiver / Detector Type
- Super-heterodyne, Varactor-Tuned VCO
- Scanning frequency discriminator
- Digital Signal Processing (DSP)

2.4 Requirements

Power Requirements: Operating voltage 12V-24V DC

Smart on/off Switch Cord Included

Dimensions: 1.40" H x 3.10" W x 4.6" L

Temperature Range: Operating: -10 °C to +60 °C (14 °F to +140 °F)

Storage: -20 °C to +70 °C (-4 °F to +158 °F)

Operating Humidity: 5% to 95% (non condensing)

Database capacity: 360,000

PC requirements: Windows 98SE, 2000, ME, XP or Vista operating system

1 x USB port

Internet access

GPS Receiver

- Chipset: SiRF Star III ,
- Channel: 20
- Tracking sensitivity: -162dbm
- Cold start: 40 sec.
- Warm start: 10 sec.
- Hot start: 3 sec.

3.Main Manual

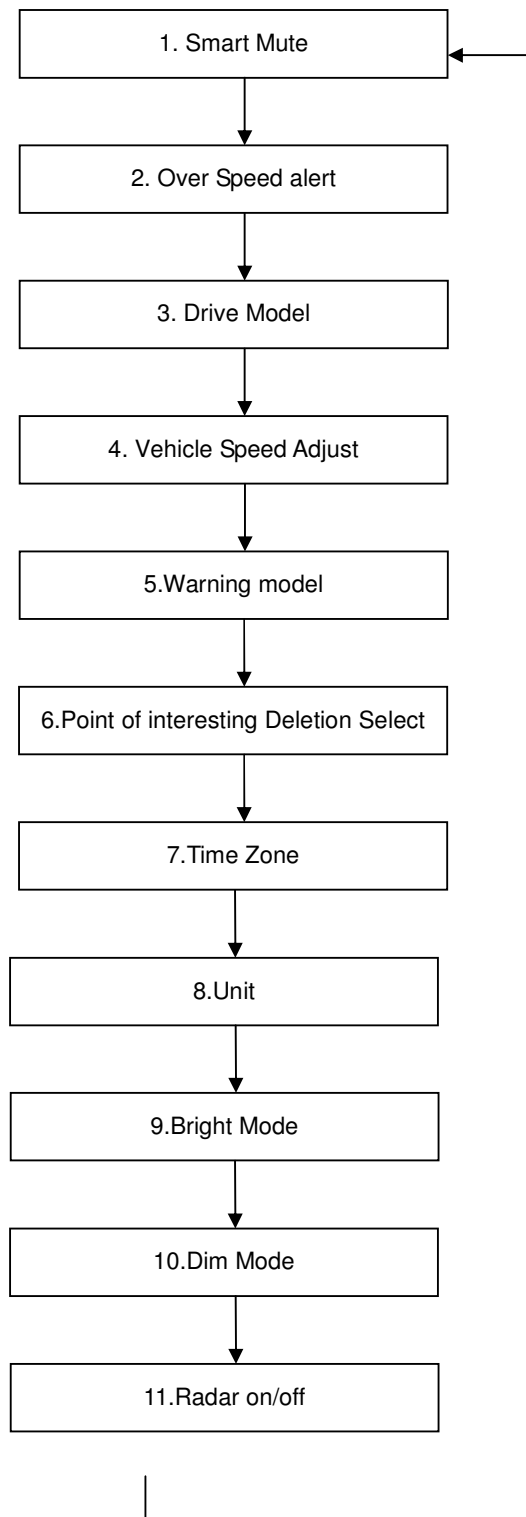
3.1 Button

- 1) FUN Button 1 (Function button)
- 2) UP Button 2 (+ and Up)
- 3) DN Button 3 (- and Dn)
- 4) POI Button 4 (POI and Mode)
- 5) Digital compass display
- 6) Digital speed / distance display
- 7) External alert centre (displays radar and laser alerts from radar detection)
- 8) USB download cable socket
- 9) 360° laser eyes
- 10) 12-24V Power cable socket
- 11) Power on/off switch button
- 12) MCX External GPS antenna connector
- 13) Extension performance in front of lens

3.2 Button functions

During normal driving mode, the button functions are:

Press and holding FUN Button 1(**Menu**) **about** 2-3 seconds, enter main menu, it will lead you to User Set up mode. When you are at the status of main menu selection, push and hold the FUN Button 1(**Menu**) key for 1 second again and it will lead you to the next set up mode.



Note:

1. After pressing FUN Button 1 (**Menu**) about 2-3 seconds to enter the main menu, the button functions change to allow the individual menu item settings to be adjusted. Inside the menu system,

the button functions become:

2. *Scroll through the menu options by pressing FUN Button 1 repeatedly. You can press the button quickly to access a particular feature - you do not need to wait for voice confirmation of each section.*
3. *Change the settings of an individual menu item by pressing Buttons 2 (+) or 3 (-).*
4. *Save any changes to your settings by waiting 4-5 seconds (Save). You will then return to the normal driving mode. You will also exit the menu structure once you have cycled through all the available menu options.*

*FUN Button 1 (**Menu**) Each press will proceed to the next menu item.*

UP Button 2 (+) Up

DN Button 3 (-) Down.

*POI Button 4 (**Return**) return to normal driving mode.*

LONG KEY : Move to User Set up mode

1. **Smart Mute** In order to reduce 99 % of any microwave interference from auto doors, communication tower signals, etc., we are suggesting the speed limit is the city's minimum speed. In Asia, the downtown maximum speed limit is 40k/h, if you choose the 40 k/h, the car's speeding is under 40k/h, it will be entered in smart automatically muted. You cannot hear any sound when the radar detects any microwave signals. Due to that there has been no over speeding, there is no meaning for any warning, the speed limit is selectable from 0 ~160 k/h. Choose the speed above which you hear radar alerts. Radar alerts are not sounded below this speed, however radar alerts are displayed visually at all speeds.
2. **Over Speed alerts** A warning is given continuously when you are over your selected maximum speed. If the car's speed exceeds your setting speed limit, a warning is given - "your speed is over speed limit". The speed limit is selectable from 0 ~160 k/h. Choose the speed at which an overspeed reminder is played. An overspeed alert will be played in the following instances:
 - 1) If your speed rises above the selected speed.
 - 2) If you are travelling above the selected speed after an event (such as returning to the driving mode after navigating the menu, or at the end of a radar alert), the warning will play as an additional reminder.
 - 3) Regardless of the selected overspeed alert, the warning will also play if you are driving above the prevailing speed limit at a camera site (if known). For example, if the overspeed alert is set to 80, but you drive towards a camera in a 50 zone slightly above the prevailing speed limit, the overspeed

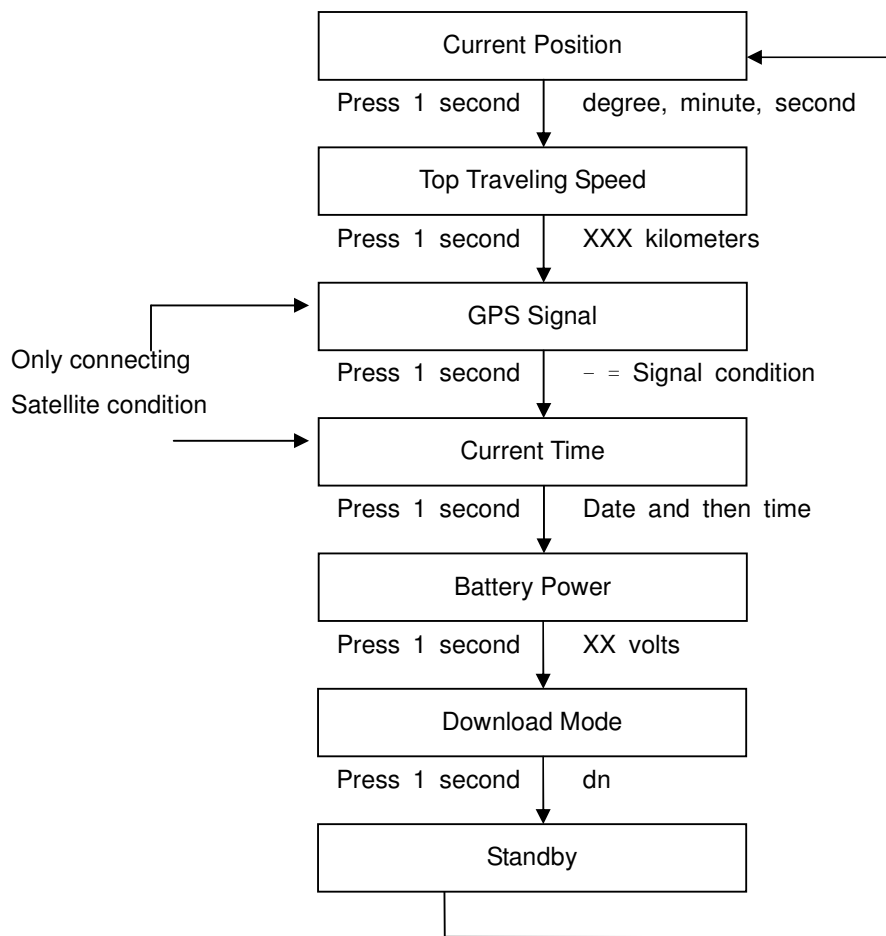
alert warning will play.

3. **Vehicle Speed Adjustment** Car's speed is calculated by tire's revolution rate. It is not accurate when the car is running at high speed. In order to reduce the driver's confusion, it functions to adjust GPS's speed to match the speed at speed meter.
4. **Warning model** It offers different tones and sound levels of warning. There are three types of warning: speaking voice with ton, speaking voice only, and speaking voice with continuous tones.
5. **Point of interesting (P.O.I.) Deletion** It offers users to delete any previous P.O.I.
6. **Time Zone** It offers the function to announce the time hourly according to the time zone where you are at. In this mode, press up and download to select time zone. Adjust the clock to the correct time zone for your country. Factory default setting = 8= UMT (China Beijing Time).
7. **Unit** It provides the options for the Metric and English systems. Press up or down to select Miles per hour or Kilometres per hour. Changing between units of miles per hour and kilometres per hour will automatically adjust the saved settings for Audible Alert Speed and Overspeed Alert to the nearest suitable value. Factory default setting = Kilometres per hour.
8. **Bright Mode** The LED display should be bright during the day due to the sunlight. The Bright Mode allows you to adjust the display automatically according to the time setting. The range of time setting is from 1:00 am to 12:00 am.
9. **Dim Mode** The LED display should be dim during the night. The Dim Mode allows you to adjust the display automatically according to the time setting. The range of time setting is from 1:00 pm to 12:00 pm.
10. **Radar on/off** There are three systems: GPS only, Radar Detector only, and combo MINI550 GPS .

3.3 Modes

During normal information checking mode, the button functions are:

Press and holding FUN Button 1(**Menu**) about 1 seconds, enter information checking mode, it will lead you to check some importance information. When you are at the status of information checking mode selection, push the FUN Button 1(**Menu**) key for 1 second again and it will lead you to the next information mode.



When selecting, all functions are programmed to run in a cycle. If there is no following action taken for about 5-6 seconds, it will return to the standby condition.

SHORT KEY: Move to User Set's info checking mode

1. **Current Position**– checks the current position. It shows the coordinates by NMEA format with Degrees, Minutes and Seconds. A short press will cause the **MINI550 GPS** to speak your current “Rescue Me” GPS coordinates. This can be written down or played to emergency staff. When you get lost, it offers the information of your position to get emergency help in accidents anywhere.
2. **Top speed record**- the highest speed recording. You might get speeding tickets by traps gun detection, however, you might be blameless. The police could have made an error. The function of the Top speed record allows you to provide the evidence to show that you are not over the speed.
3. **GPS Signal** – the satellite condition checking. Sometimes the GPS set is dysfunctional. It is not necessarily out of order. It could be a bad communication with satellites or shortage of satellites. In this situation, the function of GPS Signal allows to check the satellite condition upon the sky.

4. **Current time** - the current time and date checking
5. **Battery Power** – the car's battery checking. When the power of battery is under 11.0 volts, a warning is given – “the battery is too low”. GPS set offers this friendly function to you at anytime and anywhere.
6. **Download Mode** – the camera sites upgrading .New camera locations might be added anywhere. Therefore, the GPS supplier collects all types of camera sites' database for users to download and upgrade their new camera sites' datum.

3POI Key

Store up to 255 GPS locations for personal reminders of your own hazard locations. As you drive past a location where you would like a future safety reminder, enter Personal Locations from the main menu structure and press POI to store this location in the next available empty memory position. An alert will play when you next drive towards this location in the same direction.

Note:

1. *To delete an existing Personal Location during an alert, press and hold POI again.*
2. *To delete an existing Personal Location remotely, use the + and – buttons to select the Personal Location number, then press and holding UP or down over 3 seconds.*
3. *Resetting the MINI550 GPS to factory default values does not affect your stored Personal Locations. All stored Personal Locations will be retained in the memory.*

A. SHORT KEY : store any point of Interest

- I. When the fixed camera is located at the same driving direction, press the P.O.I. key for 1 second and the location data of the fixed camera will be stored automatically.
- II. When the fixed camera is located counter the driving direction, press the P.O.I. key for 1 second twice and the location data of the fixed camera will be stored automatically.

B. LONG KEY : move to mode selection

Press and hold this key for 2-3 seconds and the mode will be moved from camera mode to safety mode.

2. Down Key

A. SHORT KEY : volume Down

Press this key; it will turn down the volume level.

Standby model: Press this key; it will turn up the volume level.

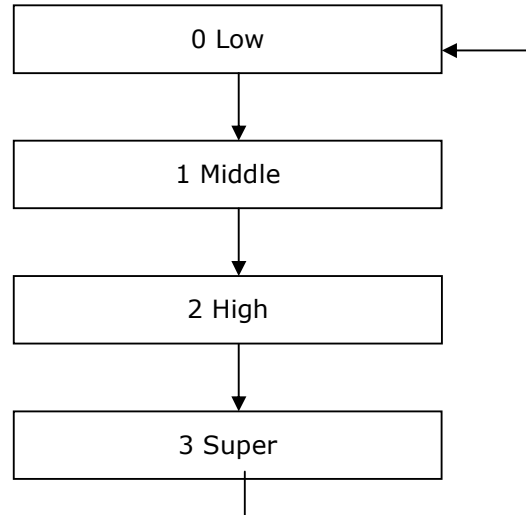
Detection Model: When MINI550 GPS detect, Press short this key. The radar

band and the alert tones will be silenced.

B. LONG KEY :

Press and hold the Down Key for 2-3seconds, it will reduce radar detect sensitivity

Press and hold for 2-3 seconds Radar sensitivity



3. Up Key

A. SHORT KEY : Volume Up

Standby model: Press this key; it will turn up the volume level.

Detection Model: When MINI550 GPSdetect, Press short this key. The radar band and the alert tones will be silenced.

B. LONG KEY :

Press and hold the Down Key for 2-3seconds, it will reduce the radar detect sensitivity.

3.4 Factory reset procedure

Resetting the MINI550 GPS to factory default values does not affect your stored Personal Locations. All stored Personal Locations will be retained in the memory.

To perform a factory reset, first switch off the power. Press and hold down POI button 4 (Save) and switch on the power. Keep POI button 4 (Save) pressed for a couple of seconds until you hear a tone confirming the reset procedure was successful.

For more information or to order any of our products, please visit our website:

<http://www.radarway.com.tw>

3.5 technology issues

How GPS Works

The Global Positioning System (GPS) is used to create an electronic reference frame around the earth. It consists of 24 satellites that orbit the earth in just under 12 hours. Each satellite transmits a unique signal and follows a strict orbital path. Every GPS antenna stores these orbits inside its memory, so it knows where each satellite is at any given time.

The GPS antenna is able to accurately calculate its current location on the earth's surface as soon as it knows the exact distance to a minimum of 4 different GPS satellites. Distance is calculated by simply timing how long each satellite's radio signal takes to reach the antenna.

What is GPS coordinate format?

GPS coordinates define a single point on an imaginary mathematical model of the earth, or datum.

There are a number of different datums in use around the world. Importantly, each datum will give rise to different coordinates for the same physical location. So it is important that we reference the same datum when describing coordinates. The Global Position System (GPS) uses the WGS-84 (World Geodetic System 1984) datum.

A coordinate can be written with varying levels of decimalisation.

MINI550 GPS offers the Degrees Minutes Seconds information.

Eg 38° 33' 42.43" N

121° 26' 11.70" W

When navigation of the sea was first pioneered, the earth was divided into 360 imaginary lines of latitude running from Pole to Pole, and 180 imaginary lines of longitude parallel to the equator. Each degree was then subdivided into 60 (minutes), and again into 60 (seconds). Positions are described as being North / South of the equator and West / East of the Prime Meridian, which passes through Greenwich, London.

The Fixed Speed Cameras how to work?

There are many different types of fixed speed or red light camera systems used around the world but, broadly speaking, there are 4 main technologies used by fixed camera systems to measure the speed of passing vehicles.

- Radar Camera systems like GATSOs use radar signals to measure speed.
- Inductive Loop Camera Systems like Redflex, Redspeed and Traffiphot, are linked to inductive (electrical) coils buried under the road surface which calculate speed based on the time taken to travel over them.
- Piezo Strip Camera Systems like Truvelo or DS2 are linked to three sensor strips placed across the road surface which calculate speed by timing how long it takes to drive over the sensors.

Average Speed Camera Systems like SPECs or "GATSO pointtopoint" calculate a vehicle's average

speed between fixed two points by recording a vehicle's details at two separate camera locations and working out how long it has taken that vehicle to drive the known distance between the cameras.

MINI550 GPS warnings, as you approach potential accident locations where these camera systems are sited, are a very effective safety tool to give advance awareness of upcoming hazard areas.

For the most comprehensive guides on the internet, or to identify the camera systems being used in your country, please visit the support section of our website where you will find useful speed camera guides and country guides.

The Mobile Radar

Mobile radar camera systems are used in most countries with enforcement programmers.

There are three main categories of mobile radar speed cameras.

- Tripod mounted radar systems like Multanova and Mobile GATSOs
- Hand held radar guns
- Vehicle mounted radar systems

GPS systems can provide reminders when you are approaching an area where a radar system might have been used in the past, but they do not tell you if a radar system is actually being used there now. GPS systems do not "detect" anything - they simply provide a safety alert to remind you that you are approaching a map location.

Radar Detectors are the only product which actually "detect" when mobile radar enforcement is being carried out. There can be a huge difference in performance between different brands of radar detector. The best radar detector for your country may differ from another country because performance can also vary against different types of radar cameras.

The **MINI550 GPS** offers Radar Detectors function and GPS systems functions, it's a combo unit, but please note that the legality of radar detectors can vary from country to country and it is your responsibility to ensure that you comply with any local legislation.

The Mobile Laser how to work?

Laser guns fire quick pulses of light in a straight line which bounce off your car and return to the gun.

The beam of light is very narrow and will spread slightly over a longer distance. The laser gun measures how long it takes for the return beams to arrive back at the gun and because the whole process works at the speed of light, the laser gun can calculate a vehicle's speed in less than one third of a second. GPS systems can provide reminders when you are approaching an area where a laser gun might have been used in the past, but they do not tell you if laser is actually being used there now. GPS systems do not "detect" anything - they simply provide a safety alert to remind you that you are approaching a map location.

Most radar detectors on the market also contain a laser detector, however please be aware that merely "detecting" a laser hit often only means that your speed has already been recorded.

The MINI550 GPS can join with a range of laser jammers from the leading brand manufacturers, but

please note that the legality of laser jammers can vary from country to country and it is your responsibility to ensure that you comply with any local legislation.

3.6 Limited Warranty

Warrant our products against all defects in materials and workmanship for a period of one year from the date of the original purchase, subject to the following terms and conditions.

This warranty is limited to the original owner, and is Non-Transferable. This warranty does not apply if the serial number has been removed or is unreadable or if the product has been subjected to physical abuse, improper installation, modification or internal examination.

To obtain warranty service, the product must be returned, insured and shipping prepaid, to RAYEE Technologies Ltd., at the address shown, in its original packaging or a suitable alternative, together with a written description of the problem, proof of purchase and a return shipping address.

The sole responsibility of RAYEE Technologies Ltd under this warranty is limited to repair or, at discretion, replacement of the product.

RAYEE Technologies disclaims all other warranties, expressed or implied, including warranties of fitness for any particular purpose or merchantability.

RAYEE Technologies Ltd accept no liability for any direct, indirect or consequential claim arising from the use or misuse of this product or from any incident arising from an installation that inhibits the correct operation of an airbag or any other vehicle system.

The use of RAYEE software products is governed by a license agreement. This license contains a limitation of liability. You can review the license conditions at <http://www.radarway.com.tw>
RAYEE Technologies Ltd. declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.