GPS & radar detector Warning Device

User Manual

Version 0.6

We market and sell the ***GPS & radar detector*** 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 ***GPS & radar detector*** 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 ***GPS & radar detector***, has revolutionized the radar detector category again, which means it delivers the best protection 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 ***GPS & radar detector*** 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 ***GPS & radar detector*** 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.

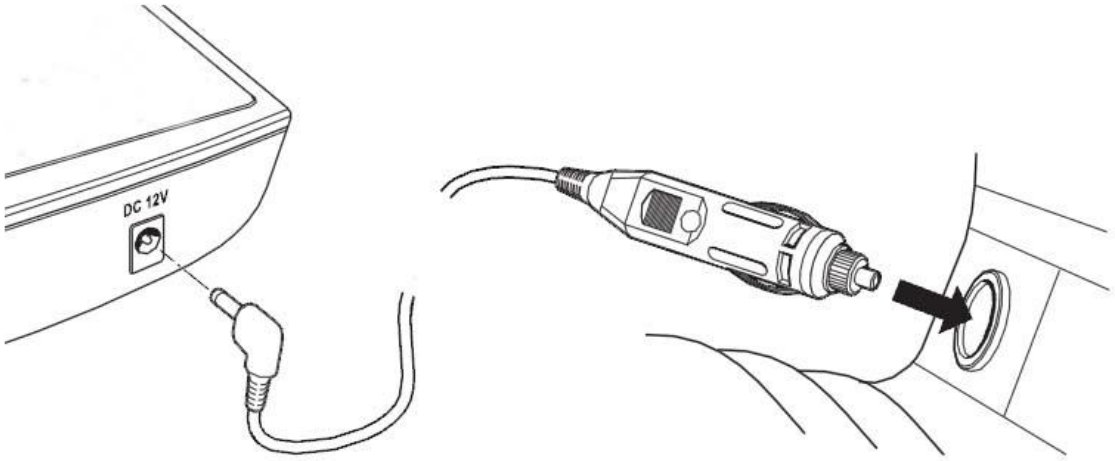
1.2 Check the Package Content

- ***GPS & radar detector*** unit - FND display*1
- Power cable*1
- Windshield suction cup mounted with bracket*1
- Dashboard mounting with magnet *1
- USB download Cable *1
- User manual (in electronic file)

1.3 Install GPS & radar detector in your vehicle

Power Connection

To power the **GPS *Radar Detector***, plug one end of the power cable, (DC JACK-type connector)into the jack((DC 12V)) on the ***GPS Radar Detector***, and plug the other end of the power cable into your vehicle's cigar lighter socket or accessory socket.

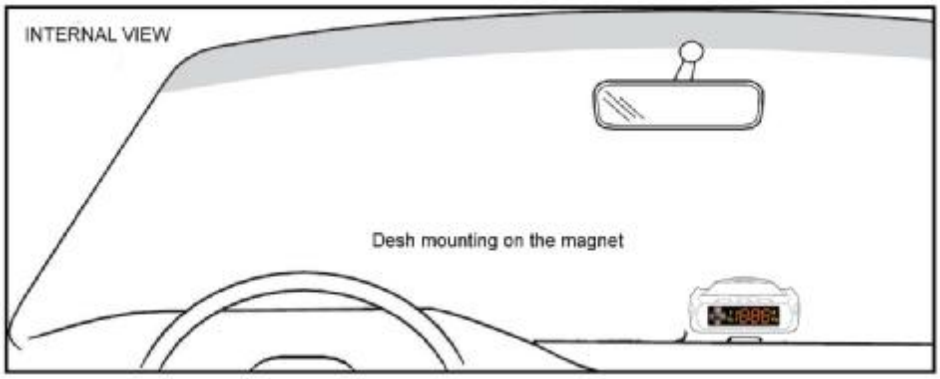


The ***GPS & radar detector*** operates on 12 volts DC negative ground only. The power cable provided is a standard size and will work in most vehicles. However, some vehicles may require our optional sleeve to ensure a snug fit. If so, simply call or contact with local dealers.

NOTE: depending on your vehicle, the cigar lighter power may either be continuously on, or it may be switched on and off according to your ignition switch.

Mounting Location

WARNING: We cannot anticipate all the places the GPS Radar Detector can be mounted. It is important that you mount GPS Radar Detector where it will not impair your view or cause a hazard in case of an accident.



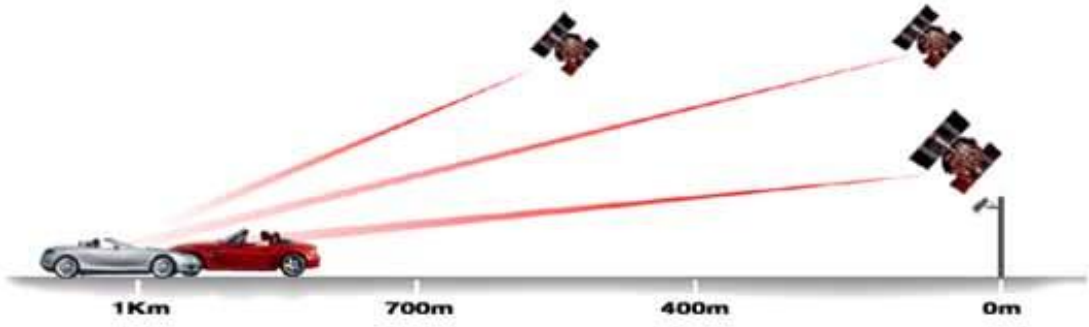
Where to mount GPS & radar detector

For optimum detection performance, we recommend the following:

• Using the supplied windshield mount, mount your ***GPS & radar detector*** 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.

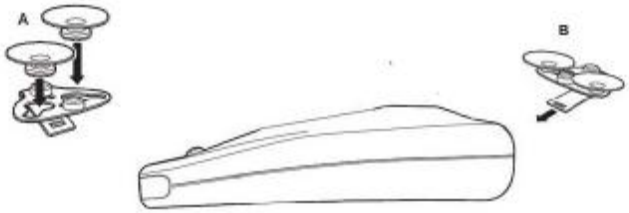
• Mount the ***GPS & radar detector*** away from windshield wipers, other solid objects, and heavily tinted areas that might obstruct the radar antenna or laser lens.

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



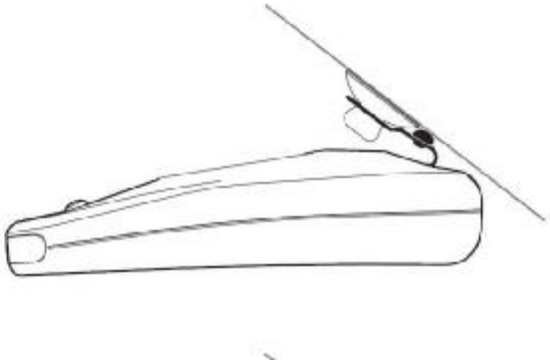
Windshield Mount

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



1 Depress the adjustment button on the top of the ***GPS & radar detector*** and slide the bracket into the slot until it is locked into the position which best fits the angle of your windshield (There are two options of installation available: Windshield mount or Dashboard mounting). For extremely horizontal or extremely sloped windshields, the bracket can also be bent to the correct angle.

However, we suggest that you do not bend the bracket when it is connected to the GPS device.
To ensure that the suction cups adhere to the windshield firmly, be sure to keep both your windshield and the suction cups clean.



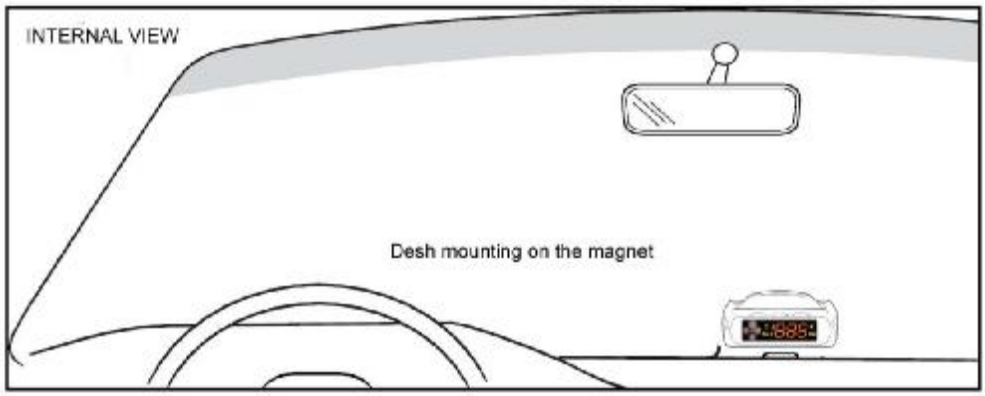
2 To adjust the ***GPS & radar detector*** on your windshield, use the Easy Mount adjustment button located on the top of the ***GPS & radar detector***, and slide ***GPS & radar detector*** forward or backward to obtain a level horizontal position.
When installed and adjusted properly, the back top edge of the ***GPS & radar detector*** should rest solidly against your windshield.

User's Tip

You can leave the bracket in place on your windshield, and easily remove the ***GPS & radar detector*** 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.

Dashboard mounting

Make sure to keep your location clean for fixing the magnet, there is a 3M sticker at button of magnet to paste on the desk. Position the ***GPS Radar Detector*** on the magnet to prevent the unit from sliding to fix firmly on the dashboard.



1.4 Product Notification- Using Tips

Update the *GPS & radar detector* 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 ***GPS & radar detector***'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 ***GPS & radar detector*** to ensure you will be warned of the most up to date information available. We recommend updating your database once a month.

Switched on for the first time

The ***GPS & radar detector*** 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.

After power the device, ***GPS Radar Detector*** will be searching for the satellite lock. Once the satellite lock is achieved, a voice alert will confirm “Have a nice driving” and display the time or your current speed.

The first time your ***GPS Radar Detector*** 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 ***GPS Radar Detector*** regularly, subsequent satellite lock will be greatly reduced; normally between 5 seconds and 2 minutes.

GPS’s Speed

The ***GPS & radar detector*** 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 ***GPS & radar detector*** 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 ***GPS Radar Detector*** uses the **Smart AI** database which contains details of dangerous areas and high risk accident locations that have been designated by the Police and government authorities, often by the placement of safety cameras. When you are approaching a location that is stored in the **Smart**

AI database, the ***GPS Radar Detector*** 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 **GPS & radar detector** 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

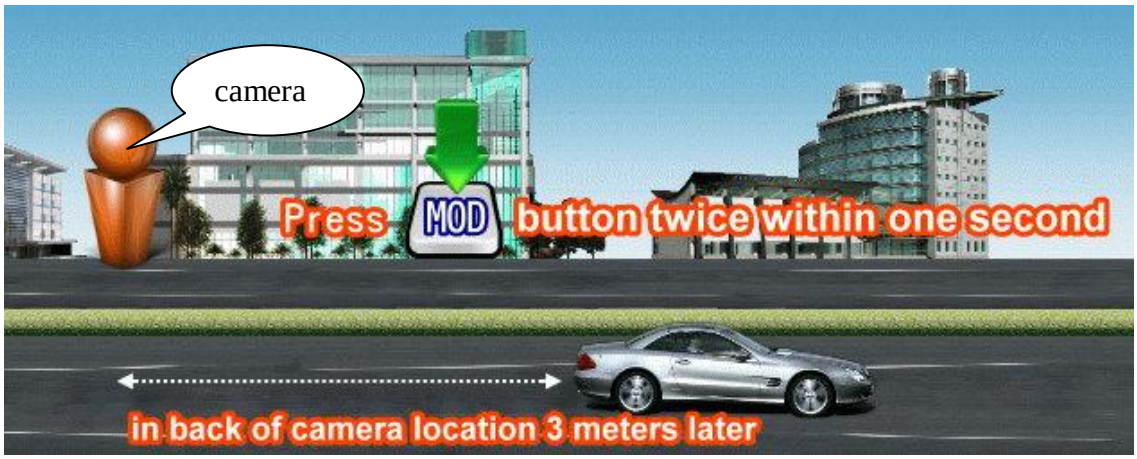
The ***GPS & radar detector*** can store up to 256 Personal Locations. The user can store any personal locations easily. It provides to store the fixed camera, traps camera, dangerous areas, red light camera and high risk accident locations etc.

◆To add a POI, when to press the “MOD” button? Ex. POI is a point of interest.

1) In front of a fixed camera location or a hazard area, please press MOD button one time within one second to save coordinate in front of the target(camera) 5 meters before. You can hear a message” P.O.I save completely” at the same direction of your travel when P.O.I save successfully. Next time

you approach the target, a message “approaching a P.O.I location” will alert you. See below the illustration.

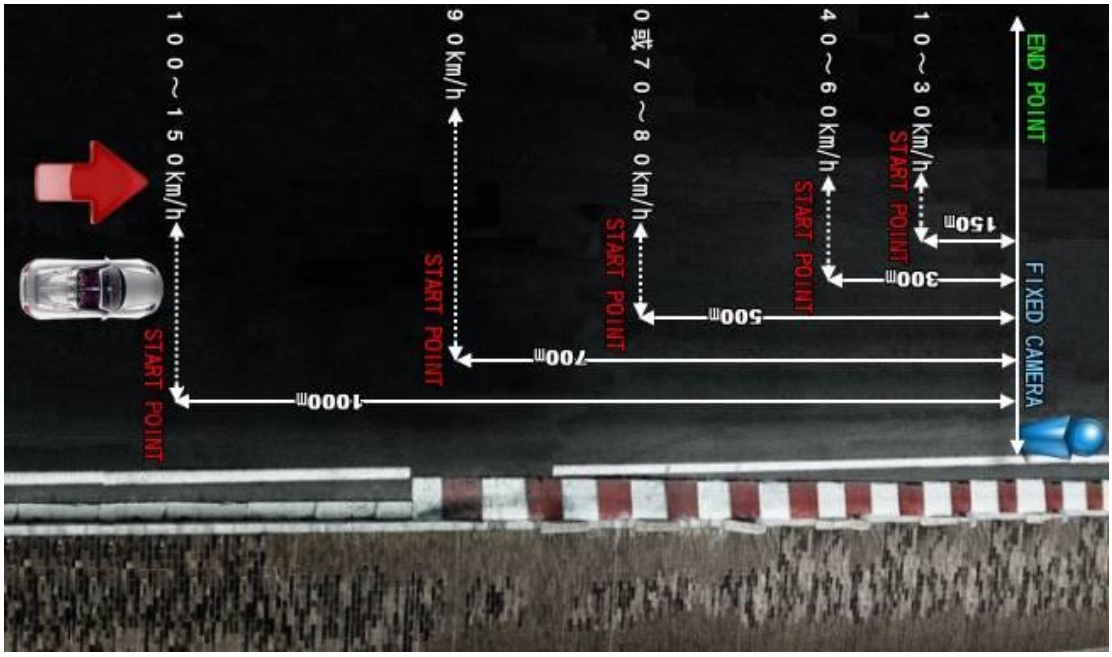
2) If there is a fixed camera location or a hazard area located at the reverse direction of your travel. Press POI button twice within one second to save coordinate on the spot of the cam or 3 metres later after passing the cam. Then keep driving to get a reverse POI. You can hear a message “ P.O.I the start point with direction, and then a flash distance till the range of alerts distance is reached, and then you will hear another message “ P.O.I saved successfully with the end point direction”. See below the illustration.



◆ How to save the P.O.I database?

GPS Radar Detector *has* a memory to store the range of alert according to the over-speed setting. Warning distance depends on the over speed value. You can easily adjust the over speed limit alert from 0 to 160km/h. Below is a table to tell you the warning distance you will receive when you set the over speed value. For example, if you don’t use the over-speed alerts function, the default of over speed setting is 0km/h with 500 metres. This is a factory default setting, and it cannot offer the over speed limit alerts. However, you can press the “MOD” button to store POI location. In other words, you can decide the warning ranges by setting the over speed value.

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. In other words, we will not 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?

Hold and press the SET button about 3 seconds and press once within 1 second to set the over speed limit. Change the over speed limit value by Up or Down buttons. You can choose the over speed value from 0 to 160 km/hr. After 4-5 seconds, ***GPS Radar Detector*** will decide a range of alert distance automatically. When approaching the target of fixed camera location or mobile camera location, simply

press “MOD” button one time within one second, ***GPS Radar Detector*** will store the coordinate of the same direction of your travel.

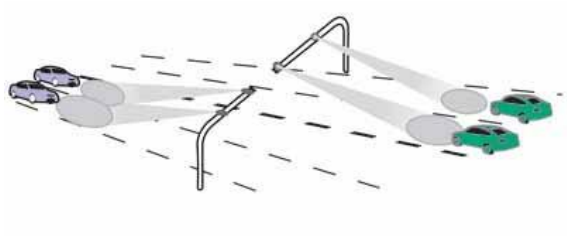
If the fixed camera location is at the reverse direction of travel, you can press “MOD” button twice within 1 second, it will store the reverse direction of P.O.I database. You don’t waste time to make a U turn. It’s an easy way to collect database of the fixed camera or mobile camera on the reverse lane on the highway.

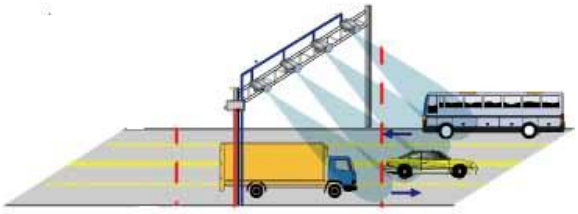
◆One direction/Two directions of speed cams alert

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. Store fixed camera location or a hazard area POI and report any information, simply go to our website http://update.gpscamera.org or email detailed 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 Download Speed cams from the server

◆ **How to update database from our server,**

Step 1 (To perform once after initial purchase):

Microsoft Windows Vista (X64) users

When you connect the ***GPS Radar Detector*** to your PC, Vista will automatically install the necessary USB driver or you can download the driver PL-2303 USB-to-Serial (122KB). Follow the on screen instructions. If the necessary USB driver is not installed automatically, it is also available from the link 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 connect the ***GPS Radar Detector*** to your PC, Vista will automatically install the necessary USB driver or you can 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 ***GPS Radar Detector*** to your PC yet. **Install the USB driver BEFORE connecting the *GPS Radar Detector* to your PC.**

Before you update your ***GPS Radar Detector*** or it is the first time you update the device, 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 ***GPS Radar Detector*** to your computer before installing the USB driver, you should unplug the ***GPS Radar Detector*** and restart your computer.

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

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

Before you update your ***GPS Radar Detector*** 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)

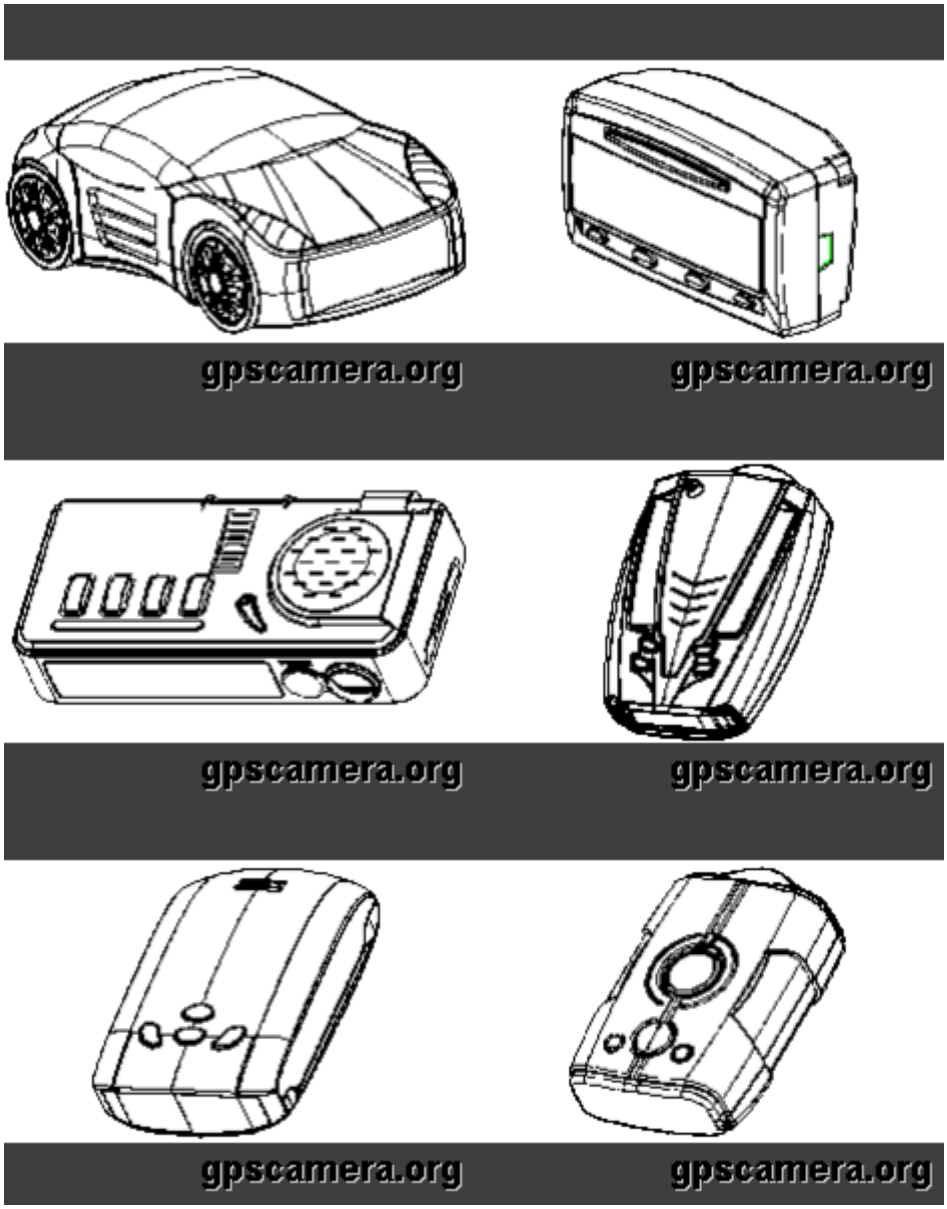
If you have connected your ***GPS Radar Detector*** to your computer before installing the USB driver, you should unplug the ***GPS Radar Detector*** and restart your computer.

Step 2 (To be performed at monthly intervals):

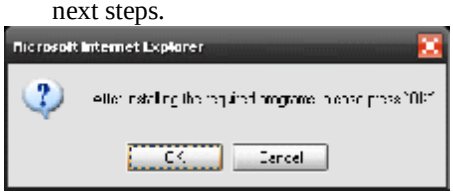
To update the ***GPS Radar Detector*** with the latest Smart AI database, you should connect the ***GPS Radar Detector*** to your computer, make sure that your computer is connected to the Internet, then double click the application photo icon on http://update.gpscamera.org

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

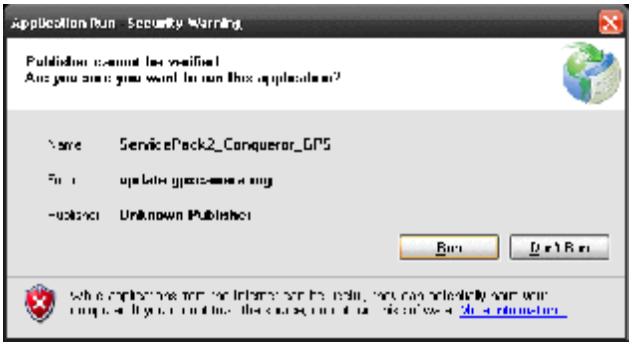
1. Please ***double click*** the device you wish to update.



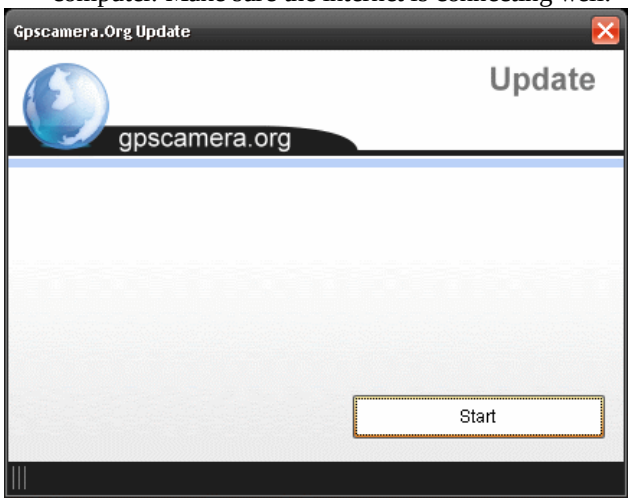
2. After double click on the device, there is a message like below. Please press Ok button to accept the next steps.



3. You can see the application Run-Security Warning message, please press Run button to accept the next steps too.

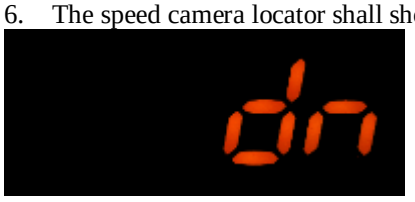


4. The main update program process, before you press start button, you shall connect with device to PC computer. Make sure the internet is connecting well.

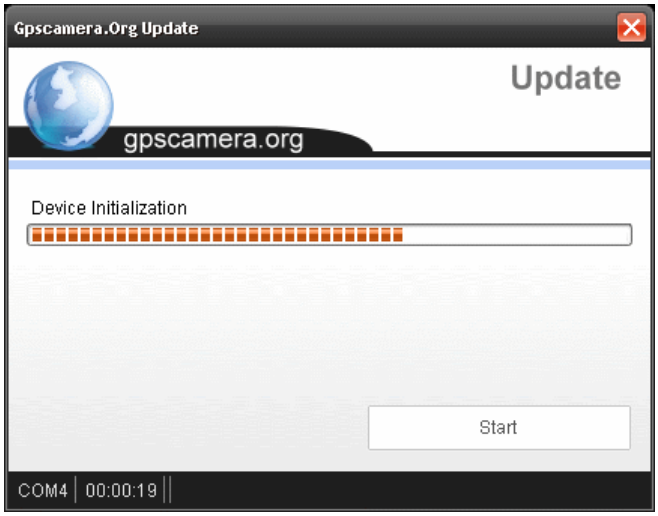


5. Connect the USB download cable from PC to GPS camera locator.

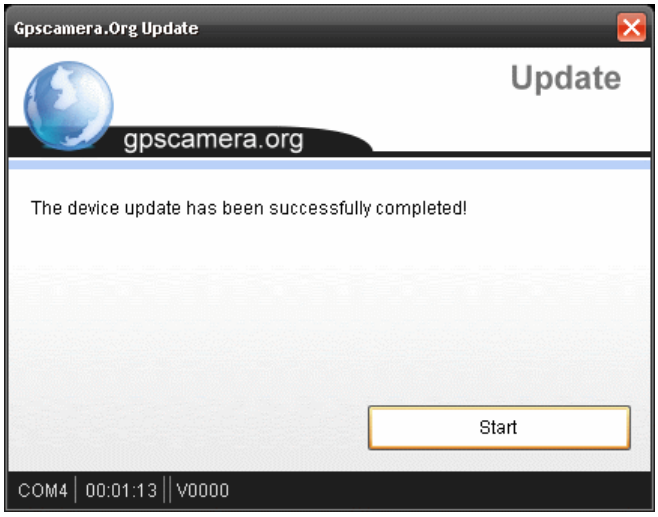
6. The speed camera locator shall show the system at download model



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



8. Please wait for several minutes. If download completely, you can receive the message below. And you can remove the USB cable from PC.

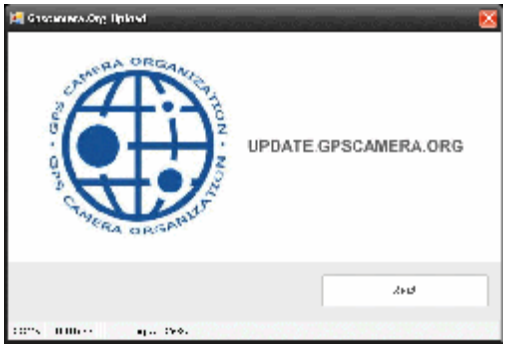


1.7 Upload personal locations to the server

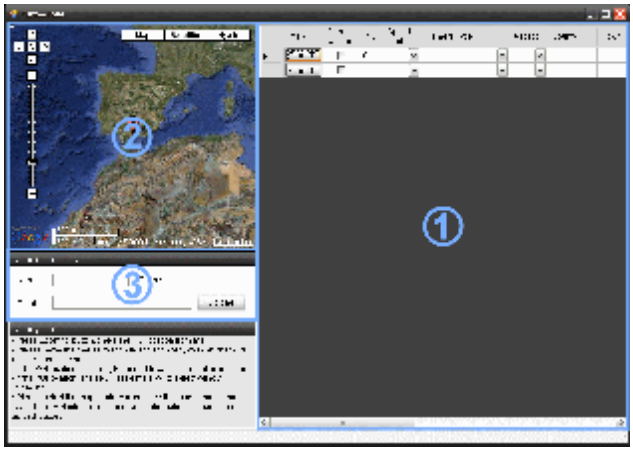
◆ **How to upload the POI of database from GPS *Radar Detector* to the server,**

Store fixed camera location or a hazard area POI and report any information, simply visit our website http://update.gpscamera.org or email us detailed 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.

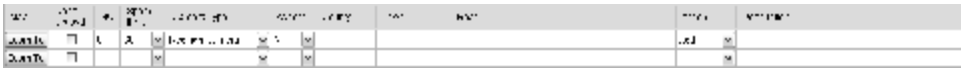
Please ***double click*** read button, waiting a moment for checking POI of database from GPS Radar Detector.



After uploading database for GPS & radar detector, you can see the POI table.



(1) Fill information in detail at the table below:



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 the server.
3. You can edit some information about the speed limit, camera type, headin of POI direction, County, Town, Road etc. and fill in the location address in detail according to the 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 the 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 to add a new speed camera

Remove—Mark POI to delete a Speed camera

Revise—Mark POI with modify some information

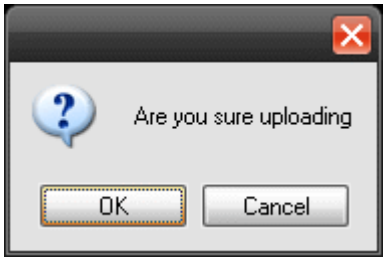
(2)How to check if the pinpoint location is correct?

Double click the zoom button, and you can review the POI location from Google map.

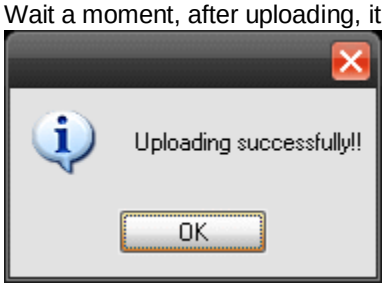
Three type of maps which provide Google map

(3)Before uploading database, please fill in the user information in detail and then send it out. The Customer Service Desk would possibly contact with you if necessary. We will verify the info, and then share to other user later.

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
-
- coordinate location
- Low power auto warning to a car battery (lower than 11 volts)
- indications of satellite signal status, date, time, and battery power
- camera and safety mode selectable functions
- intelligent volume control
- intelligent sensitivity control
- user-selectable preferences
- Bright/Dim mode selectable
- high-resolution display

- auto brightness control
- Completely immune to the VG-2 and Spectre III "detector-detector"
- Mute,& SmartMute
- built-in smart GPS antenna
- simple cigar 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
- camera mode/safety driving mode(with or w/o speed limit mode) selectable

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 (KPH/MPH/SMPH)
- Voice and Tone mode selectable
- Auto Brightness Control
- Highway, Auto and City Mode
- GPS speed adjustable to match the car speed indication
- POI deletion available
- Time Zone selection available
- Radar/Laser Bands
- Auto Calibration Circuitry
- Mute 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

Power Cable 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 download port

Internet access

GPS Receiver

- Chipset: MTK chipset digital processor
- Channel: 20
- Tracking sensitivity: -162dbm
- Cold start: 40 sec.
- Warm start: 10 sec.
- Hot start: 3 sec.

3.Main Manual

3.1 Button

1) SET Button 1 (Function button)

2) UP Button 2 (+ and Up)

3) DN Button 3 (- and Dn)

4) MOD 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

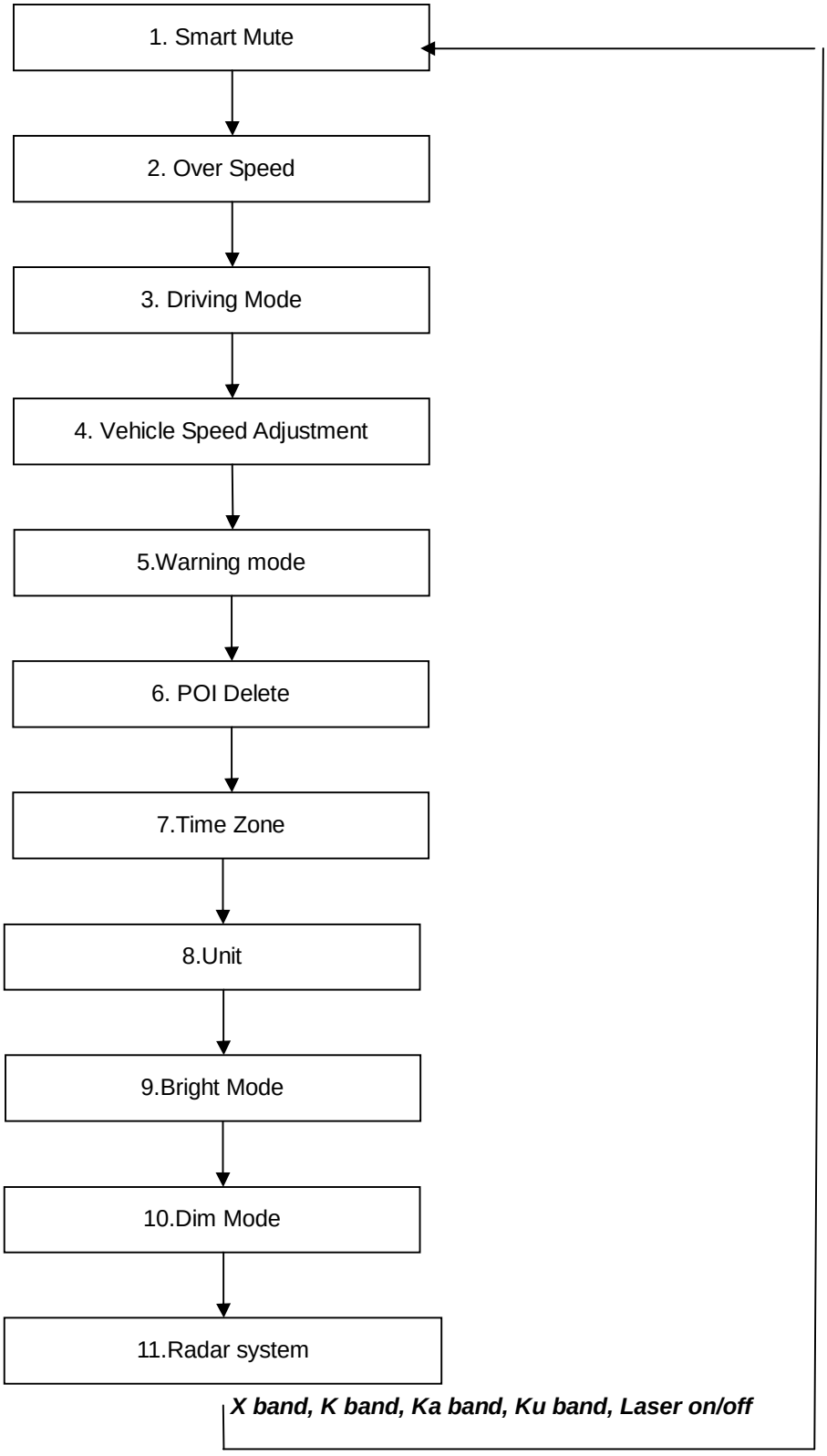
12) MCX External GPS antenna connector

13) Extension performance in front of lens

3.2 Button functions

Functions:

Press and hold **SET** button about 2-3 seconds to enter the main menu. It will lead you to User Setup mode. Press and hold the SET button for 1 second, it will lead you to the next set up mode.



Note:

1. *Press **SET** Button* about *2-3 seconds to enter the main menu. This allows the user to change the setting according to their need.*

2. *Scroll through the menu options by pressing SET Button 1 second each time. - you do not need to wait for voice confirmation of each section.*
3. *Change the settings of an individual menu function by pressing Up or Down Button.*
4. *Save any changes to your settings by waiting 4-5 seconds (Save). You will then return to the normal driving display. You will also exit the main menu once you have cycled through all the available menu functions.*

*SET Button **(Menu)** After entering the main menu, press SET one time per second to proceed to the next menu function.*
*UP Button **(+)** Up*
*DN Button **(-)** Down.*
*MOD Button **(Return)** return to the normal driving display.*

LONG KEY(press SET for 3 seconds) : Move to User Set up mode

1. **Smart Mute** In order to reduce 99 % of any microwave interference from auto doors, communication towel signals etc., we are suggesting the speed limit set as the city's minimum speed. In Asia, the downtown maximum speed limit is 40km/h. If you set at 40 km/h, it will be mute all the way when you drive under 40km/h. You will not hear any alert even if the radar detector detects any microwave signals. As you drive under 40 km/h, it does not make any sense for an alert. You can set the value from 0 ~160 km/h. Radar alerts are not sounded below this speed setting, however, radar alerts are displayed visually at all speeds. Factory default: 50km/hr

2. **Over Speed** A warning is given continuously when you are over your selected maximum speed. If the car's speed exceeds your over speed setting, a warning is given - "Attention. Over speed. Please slow down". The over speed value is selectable from 0 ~160 km/h. You are recommended to set the over speed value as the maximum speed limit on the road. An over speed alert will be played in the following instances:
   1) If your speed rises above the over speed setting.
   2) If you are travelling above the over speed setting after an event (such as return to the normal driving display after navigating the menu, or at the end of a radar alert), the warning will play as an additional reminder.
   3) Regardless of the over speed value setting, the warning will also play if you are driving above the speed limit at a camera site (if known).
   For example, if the over speed alert is set at 80 km/hr, but you drive towards a camera in a 50 km/hr zone at 60 km/hr, the over speed alert warning will

still play.

3. **Driving Mode** It provides selectivity of the speed cams warning and reduces some false alerts when you are driving along the highway without warning the speed limit below 70 km/per hour.
   "All mode": this is factory default. On All (highway and City) mode, the device warns you when approaching all kinds of Speed cams.
   "LO mode": City mode. To reduce false alerts when you are driving in downtown without warning of speed cams with the speed limit＞70km/hr. In other words, it alerts with the lower speed limit only.
   "HI mode": Highway mode. This function allows you to reduce false alerts when you are driving on the highway without warning the speed cams with the speed limit ≤ 70km/per hour. In other words, it alerts with the higher speed limit of speed cams only.
4. **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 with the speed on the dashboard.

5. **Warning mode** It offers different tones and sound levels of warning. There are four types of warning mode: speaking voice with tone, speaking voice only, speaking voice with continuous tones (no matter over speed or not), and music only without a voice.

   1. At C0 mode, approaching the speed cams location when the speed exceeds the speed cam's speed limit, the GPS device will spread out the tone sound "ding_dong" per second after a voice of camera mode. Factory default: C0
   2. At C1 mode, approaching the speed cams location when the speed exceeds the speed cam's speed limit, the GPS device will spread out a voice of camera mode only without the tone.
   3. When the mode was fixed at C2 mode, approaching the speed cams location, the GPS device will spread out a voice of camera mode and then with continuous tone sound.
   4. When the mode was fixed at C3 mode, approaching the speed cams location, the GPS device will spread out only the music without a camera mode voice.

6. **Point of interesting (P.O.I.) Delete** It offers users to delete any existing P.O.I.

3 ways to delete POI

①. When entering a POI area, press and hold the POI button 3 secs to delete that signal POI. The GPS device will spread out a message “POI delete successfully” .

② To login POI delete function, and then press the Up and Down button about 3 seconds to delete a certain number of POI. The GPS device will spread out a message” POI delete successfully”.

③ Press and hold MOD(POI) button over 3 seconds to delete all POI database at one time. The GPS device will spread out a message” POI delete successfully”.

7. **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 down to select time zone. Adjust the clock to the correct time zone for your country. Factory default setting = 8= UMT (China Beijing Time).

8. **Unit** 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 **U0**= Kilometres per hour.
   When the mode was fixed at **U1**mode, the speed unit is fixed at Mile per hour, the speed master of the GPS device will apply for MPH.

9. **Bright Mode** The LED display should be bright during the day due to the sunlight. Log into Bright Mode and press Up or Down button to change the value. (Range of adjustment: A1 to A12 & P1 to P12) A→A.M. P→P.M Factory default: A6 (6:00a.m.)

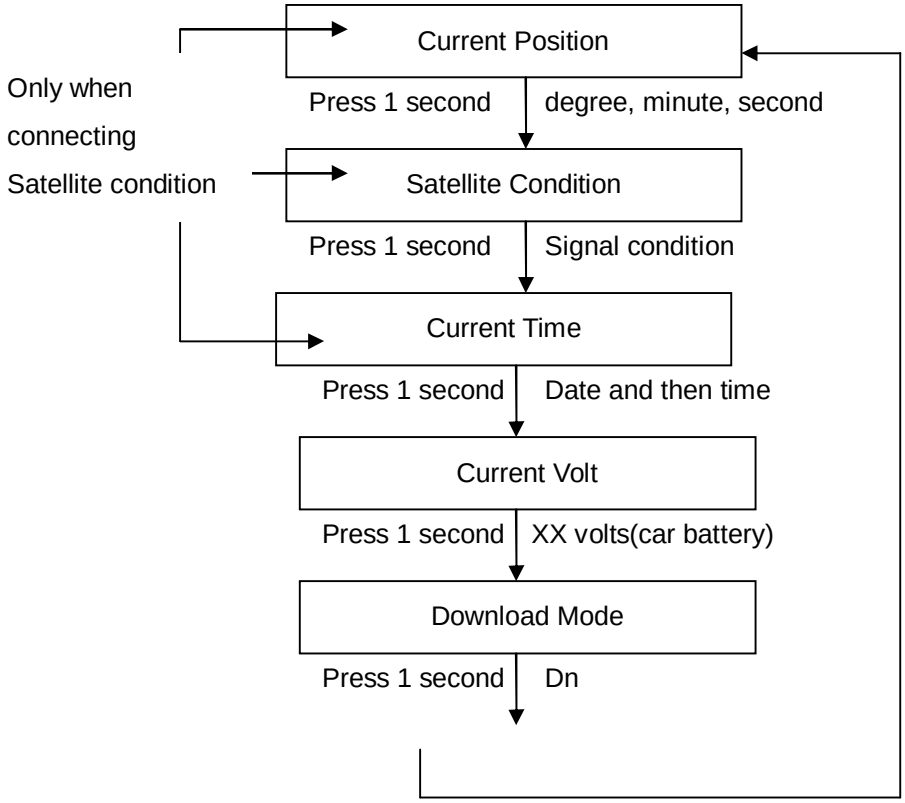
10. **Dim Mode** The LED display should be dim during the night. Log into Dim mode and press Up or Down button to change the value. (Range of adjustment: A1 to A12 & P1 to P12) A→A.M. P→P.M Factory default: P6 (6:00p.m.)

11. **Radar system** turn on or off X band, K band, Ku band, Ka band, laser separately by pressing Up or down button

3.3 Modes

SET button works to check information:

Press and hold SET Button about 1 second to enter information checking mode. It will lead you to check some important information. When you are at the status of information checking mode selection, press the SET Button 1 second again and it will lead you to the next information che cking mode.



When selecting, all functions are programmed to run in a cycle. If there is no following action t aken 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 **GPS Radar Detector** to display your current position. When you get lost, it offers the information of your position to get emergency help in accidents anywhere.

2. **Satellite condition**- show you the satellite condition on the display. Sometimes the GPS based model is dysfunctional. It is not necessarily out of order. It could be a poor communication with satellites.
3. **Current time** – display the current day and time
4. **Current volt** – check the car's battery voltage. When the power of battery is under 11.0 volts, a warning is given – "the battery is too low". GPS based model offers this friendly function to you at anytime and anywhere.
5. **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.

MOD Key

Store up to 256 GPS locations for personal reminders of your own hazard locations. Next time you drive past this location, it will work as a safety reminder. An alert will play when you are driving towards this location.

Note:

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

A. SHORT KEY of MOD button: store any point of Interest

I. When the fixed camera is located at the same driving direction, press the MOD button 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 MOD button twice within I second and the location data of the fixed camera will be stored automatically. You do not need to make a U turn to add this reverse POI.

B. LONG KEY of MOD button: Mode Selection

Press and hold this key for 2-3 seconds and the mode will be changed.

Available setting: camera mode (speed limit mode), safe driving mode (speed limit mode).

Warning of the device

Hold and press the MOD button about 3 seconds, log into next mode.

A. Safety driving, speed limit mode. It warns not only the speed cams but also the black spot locations with the speed limit. If you are driving in a zone with speed limit of 50km/hr, and you drive 60km/hr, the device will warn you about over-speeding.

B. Camera, speed limit mode. It only warns speed cams with the speed limit.

If you are driving in a zone with speed limit of 50km/hr, and you drive 60km/hr, the device will warn you about over-speeding.

C. Safety driving mode. It warns not only the speed cams but also the black spot without telling the speed limit. If you are driving toward a fixed camera with speed limit of 50km/hr, and you drive 60km/hr, the device will only tell you that there is a fixed camera ahead.

However, it does not warn you about over-speeding.

D. Camera mode: It warns speed cams without telling the speed limit.

If you are driving toward a fixed camera with speed limit of 50km/hr, and you drive 60km/hr, the device will tell you that there is a fixed camera ahead. However, it does not warn you about over-speeding.

Factory default: Safety driving, speed limit mode

2. Down Key

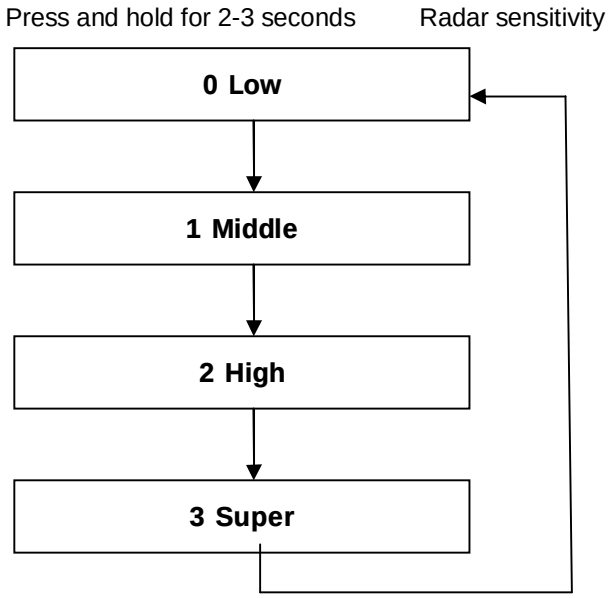
A. SHORT KEY of up button : volume Down

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

Mute: When GPS Radar Detector detects the radar signal, Press this button one second, the device will be mute within the range of this signal.

B. LONG KEY of down button:

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



3. Up Key

A. SHORT KEY : Volume Up

Standby mode: Press Up button 1 second; it will turn up the volume level.

Mute: When GPS Radar Detector detect the radar signal, press short this key 1 sec, it will mute the device.

B. LONG KEY :

Press and hold the Down button for 2-3seconds, it will increase the radar Detect sensitivity.

3.4 Factory reset procedure

Reset the GPS & radar detector 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 MOD button and then switch on the power. When you see the display flashes, release the MOD button. You will hear “default” after the greeting message.

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.

GPS & radar detector 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.

How does Fixed Speed Cameras 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.

GPS & radar detector 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 programmes.

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 **GPS & radar detector** 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 GPS & radar detector 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.