

## OPERATION

### Stay Alert Feature

The Stay Alert Feature is designed to test a driver's alertness. To engage (when the unit is not alarming):

- Press and hold the City button for approximately 2 seconds. Release the button during or immediately after the alert is given.

Display Shows: 

Within 30-60 seconds, two beeps are sounded; to show alertness, the driver must press either the City, Menu, or Quiet buttons within 3-5 seconds. If a button is pressed within 3-5 seconds, the cycle is repeated. If a button is not pressed within 3-5 seconds, an alarm sounds.

Display Shows: 

- Press the Dark button to exit the Stay Alert feature.

**WARNING!!!** Stay Alert is NOT intended as a substitute for adequate rest. You should NOT operate a vehicle if you are drowsy. During extended periods of vehicle operation, you should take frequent breaks. Improper reliance on the Stay Alert feature may result in vehicle damage, personal injury or death.

NEVER OPERATE  
A VEHICLE  
IF YOU ARE  
DROWSY!

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## SPEED MONITORING

### Laser Facts

It's well documented that many radar guns cannot reliably provide the speed of a targeted vehicle that is traveling in a group of vehicles. In contrast, a laser gun can target a specific vehicle out of a line of traffic and determine its speed. The advantage of laser over radar in terms of target identification is the result of the laser gun's narrow beam. A radar gun's transmission can cover more than a four-lane highway at a distance of 1,000 feet, compared with a laser gun's transmission which covers about 3 feet at the same distance. For best protection, keep these points in mind:

- Because the vehicle's license plate or headlights are the laser gun's primary targets, mounting the Whistler detector on the dashboard can improve laser detection at short range.
- Do not follow closely behind any vehicle you cannot see through. If you can't see past a vehicle ahead of you, chances are your detector can't either.
- The receiving range of your laser detector will not be the same as a radar detector.
- Laser guns are most often used at short range.

Whistler Laser-Radar detectors receive all current laser guns which operate at a laser wavelength of 905 +/- 50nm including but not limited to the following:

- Ultra Lyte
- LTI 20-20
- LTI TruSpeed® S
- Laser Ally
- Pro Laser™ I III
- Laser Atlanta® Stealth Mode

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## OPERATION

### Teach/Tutorial Mode

Provides simulated alerts for each type of signal.

- Press City and Quiet buttons simultaneously

- Display Shows: 

- Press Dark button to exit.

### Alert Priority

When two or more signals are received at the same time, the alert priority is:

- Laser
- Speed Radar
- Safety Warning System™

**Example:** If X band is alerting, then suddenly a laser signal is detected, the laser warning will override the X band alert.

### Safety Warning System™

In communities where transmitters are located, the Safety Warning System™ provides over 60 text messages. When SWS™ is detected the audio alert is geiger counter-like.

### Safety Warning System Text Message

Example: Poor - Road - Surface.

**NOTE:** Not all areas have Safety Warning System™ transmitters.

### Intellircod® Ready

The optional INTELLICORD® power cable allows the user to remotely control two of the following detector features (Power On/Off, City Modes, Dim/Dark, Mark Waypoint and Quiet/Auto Quiet) with a press of a button located on the power cable's plug. See option mode for selecting the functions to work with the INTELLICORD®.

### Reset Features

All user features can be reset to factory settings.

- Unplug the Power Cord from the unit.
- Press and hold the Power and Quiet buttons.
- Plug the Power Cord into the unit.
- Wait for 2 beeps.

Release the Power and Quiet buttons.

**Unit is now reset to the following features and settings.**

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## SPEED MONITORING

### Laser Tips

If you are the targeted vehicle, a laser gun can often determine your speed within a few seconds after you receive an alert. In this situation, there is generally no time to safely adjust your speed. However, if you are traveling near or behind the targeted vehicle and receive an alert, response time should be sufficient. Any laser alert, regardless of duration, requires immediate action.

### Radar Facts

A radar gun operates by transmitting radio waves at certain frequencies which reflect off objects and are picked up by the radar gun's receiving section. When a radar beam reflects off a moving target, a measurable frequency shift occurs. The radar unit converts this shift into miles per hour to determine your vehicle's speed. Currently, the FCC (Federal Communications Commission) permits operation of traffic radar guns at X Band (10.500 - 10.550 GHz), K Band (24.050 - 24.250 GHz), and Ka Band (33.400 - 36.000 GHz).

**Note:** A radar detector will only alarm if an officer is transmitting on any one of the above radar bands.

### Other Speed Detection Systems

Several techniques other than radar or laser are used to measure vehicle speeds. When these methods are being used, no detector can provide a warning. These techniques include:

- Pacing** - A patrol car drives behind you and matches your driving speed.
- Vascar/Aircraft** - The police measure the time it takes your vehicle to travel a known distance.

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## OPERATION

### Default factory settings are:

- S1: (For Intellircod®) Quiet feature
- S2: (For Intellircod®) Power ON or OFF
- ADIM: ON (Auto Dim ON)
- HIGHWAY Mode
- Dim/Dark Mode to full illumination of display.
- Auto Quiet Mode OFF
- SWS™ OFF
- Vehicle Battery Saver ON
- Full Power Up sequence
- Default TONE 3
- All Bands ON
- LASER LSID
- All Laser Windows ON
- POP™ OFF
- Voice® ON
- LED Periscopes to BLNK
- X/K Filter 1
- Ka Filter 1
- TFSR OFF
- GPS ON

-GPS Related Features-

- GMT -5
- DST OFF
- Heading Voice OFF
- Clock ON
- Compass ON
- Unit of Measure ENG
- Over Speed CLEARED
- High Speed CLEARED
- Odometer CLEARED
- ET CLEARED
- Auto Quiet Speed 0
- Auto Filter Speed 0
- Alarm Radius: 400
- Delete Radius: 400

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## SPEED MONITORING

### Radar Detector Detectors: VG-2, Spectre

The Interceptor VG-2 or simply VG-2, is one type of microwave receiver used by Police to detect signals radiated by the local oscillator of a radar detector. Because its purpose is to identify persons driving with radar detectors, these devices are known as a "radar detector detector" (RDD).

An RDD is the primary tool used by the police to identify radar detector equipped vehicles. If caught in a state or country where detectors are illegal (see page 20), drivers risk losing their radar detector and receiving a fine. In addition, instant-on radar is almost always used in combination with an RDD, leaving unsuspecting motorists vulnerable to receive two tickets; one potential for speeding, and the other for possession of a detector. **Note:** The newest tool Police have to detect radar detectors is called Spectre. Spectre can detect the majority of undetectable (VG-2) laser/radar detectors on the market.

**It is the responsibility of the individual radar detector user to know and understand the laws in your area regarding the legality of the use of radar detectors.**

## WARRANTY INFORMATION

### Consumer Warranty

This Whistler Laser-Radar detector is warranted to the original purchaser for a period of two years from the date of original purchase against all defects in materials and workmanship. This limited warranty is void if the unit is abused, modified, installed improperly, or if the housing and/or serial numbers have been removed. There are no express warranties covering this product other than those set forth in this warranty. All express or implied warranties for this product are limited to the above time. Whistler is not liable for damages arising from the use, misuse, or operation of this product.

**Note:** Units that cannot be repaired will be replaced with the same or similar model. Replacement unit's warranty will be based on the original unit's purchase date.

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## OPERATION

Whistler has two features that will assist the driving enthusiast to further identify threats from laser and Ka band radar guns.

**Ka RSID (Ka Radar Signal Identifier)**  
Identify the difference between the likelihood of a Ka threat vs. the likelihood of a Ka false from another source (possible radar detector). Ka RSID feature will educate you to the common Ka speed radar guns by displaying and announcing the nominal police radar frequencies of 33.8GHz / 34.0GHz / 34.3GHz / 34.7GHz / 35.5GHz. Ka alerts that do not fall into the common Ka speed radar windows will be reported only as Ka. **NOTE:** This product is not a frequency counter. The unit will categorize the received Ka signal and select the appropriate information. Treat every Ka alert with caution.

### LSID (Laser Signal Identifier)

Identify the Laser gun's pulse rate or PPS (Pulses Per Second) that is transmitted by the speed laser gun. LSID may also be used to identify other forms of laser sources such as LACC (Laser Assisted Cruise Control) systems found in some high end vehicles. If the Laser PPS information displayed is due to another source such as local airports or LACC, LSID allows you to Lock Out this rate from giving you the continuous audio alert during this and any new encounter of the same rate. To Lock Out a PPS, press the Quiet button during the Laser alert. This will place an \* on the screen beside the PPS rate and Lock Out this signature ID. Any new encounter with the same Laser Signature ID will provide the display information and two quick beeps. **NOTE:** Common Laser PPS rates used in the USA are 100 / 125 / 130 / 200 / 238 / 380Hz. Other Laser PPS rates used outside the USA include 600Hz. **Caution:** Do not lock out a PPS rate if it is close to known speed laser guns.

### Segmented Selectable Laser Receiver

If these alerts are bothersome, you may wish to make note of the PPS rate for these occurrences. The laser validation windows are separated into segments allowing for customization.

Segment Pulse Rate  
Laser Area 1: 20Hz to 950Hz  
Laser Area 2: 2600Hz to 3200Hz  
Laser Area 3: 3800Hz to 4200Hz  
Laser Area 1 covers the traditional laser guns used in North America. Laser Area 2 and 3 cover laser guns recently approved for use in North America. You can change the selection from yes to no individually in option mode.

### POP™ Mode Alerts

Because POP™ Mode radar utilizes the same K or Ka band frequencies, POP™ Mode Alerts will be displayed as regular radar alerts.

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## WARRANTY INFORMATION

### Service Under Warranty

During the warranty period, defective units will be repaired without charge to the purchaser when returned with a dated store receipt to the address below. Units returned without a dated store receipt will be handled as described in section "Service Out Of Warranty." Due to the specialized equipment necessary for testing a Laser-Radar receiver, there are no authorized service stations for Whistler brand detectors other than Whistler.

When returning a unit for service, please follow these instructions:

- Ship the unit in the original carton or in a suitable sturdy equivalent, fully insured, with return receipt requested to:

**Whistler Repair Dept.**  
1412 South 1st St.  
Rogers, AR. 72756

Please allow 3 weeks for turn around time.

**Important:** Whistler will not assume responsibility for loss or damage incurred in shipping. Therefore, please ship your unit insured with return receipt requested. **CODs will not be accepted!**

- Include with your unit the following information, clearly printed:
  - Your name and street address (for shipping via UPS), a daytime telephone number and an email address, if applicable.
  - A detailed description of the problem (e.g., "Unit performs self-test but does not respond to radar").
  - A copy of your dated store receipt or bill of sale.

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## OPERATION

### Updating the Database

Follow the steps below to update the Laser-Radar Detector.

**Step 1:** Remove the Laser-Radar Detector from the vehicle and bring it to your PC. **Note:** You do not need to power the Laser-Radar Detector to update it.

**Step 2:** Download the update program and install it on your PC. **Note:** Program is not MAC compatible

**Step 3:** Download and save the .msc file downloaded to your PC. Create a folder for the unit so you can store future updates and save this file into the newly created folder.

**DO NOT RENAME THE .msc FILE OR TRY TO OPEN IT!**

**Step 4:** Open the update program and plug the USB cable into the Laser-Radar Detector.

**Step 5:** Click the "Open File" button on the update program and locate the saved file from Step 3. Click the "DB Update" button to install the file.

**Step 6:** When update is complete, close the update program, unplug the USB cable and the Laser-Radar Detector is ready with the new updates.

## LASER/RADAR ALERTS

### Speed Radar Audio/Visual Alerts

When X, K or Ka is detected, the band ID and signal strength are displayed. The audio alert is continuous and has a geiger counter-like pattern. The faster the beep, the closer or stronger the radar source.

### Laser Audio/Visual Alerts

When a laser signal is detected the audio alert is continuous for a minimum of 3 seconds.

Displays Shows: 

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## WARRANTY INFORMATION

- Be certain your unit is returned with its serial number. For reference, please write your unit's serial number in the space provided on page 27 of this manual.

Units without serial numbers are not covered under warranty.

**Important:** To validate that your unit is within the warranty period, make sure you keep a copy of your dated store receipt. You may register your warranty online at [www.whistlergroup.com](http://www.whistlergroup.com), however, for warranty verification purposes, a copy of your dated store receipt must accompany any unit sent in for warranty work.

### Service Out of Warranty

Units will be repaired at "out of warranty" service rates when:

- The unit's original warranty has expired.
- A dated store receipt is not supplied.
- The unit has been returned without its serial number.
- The unit has been abused, modified, installed improperly, or had its housing removed.

The minimum out of warranty service fee for your Whistler detector is \$85.00 (U.S.). If you require out of warranty service, please return your unit as outlined in the section "Service Under Warranty" along with a certified check or money order. Payment may also be made by MasterCard, VISA, or American Express; **personal checks are not accepted.**

**In the event repairs cannot be covered by the minimum service fee, you will be contacted by a Whistler technical service specialist who will outline options available to you.**



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## LASER/RADAR ALERTS

### Pulse Protection®

Pulse (or instant-on) radar is more difficult to detect than conventional radar because it remains 'off' until activated to measure the speed of a targeted vehicle. When a pulse type transmission is detected, your Whistler detector sounds an urgent 3-second audio warning.

Displays Shows: 

After the 3-second pulse alert, the standard alert pattern continues for as long as the signal is present. It is important to respond promptly to a pulse alert, since warning time may be minimal.

## TROUBLESHOOTING

Your Whistler detector is expertly engineered and designed to exacting quality standards to provide you with reliable, trouble-free operation. If your unit has been correctly installed following the guidelines in this manual, but is not operating optimally, please refer to the troubleshooting guide below.

**PROBLEM: No display or audio.**

- Check fuse in plug; replace if necessary with a 3 amp, 3AG type.
- Check fuse for lighter socket; replace if necessary.
- Make sure lighter socket is clean.

**PROBLEM: Unit alarms when vehicle hits bumps.**

- Check for loose lighter socket; tighten and clean.
- Check connections at both ends of the power cord. Substitute another cord to determine if the cord is defective. Return defective cord to the factory.

**PROBLEM: Audio alerts are not loud enough.**

- Cancel Auto Quiet Mode or City Mode.
- Check audio level setting (see page 8 ).
- Check Speed Selectable Auto Quiet setting in option mode.

**PROBLEM: Unit falses too much.**

- If alarms are POP Ka, switch POP Mode to off.
- If the above option doesn't help, use a higher Filter setting.
- If alarms are X or K band and due to radar based traffic flow sensors or radar based vehicle blind spot detectors, turn TFSR on.

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## WARRANTY INFORMATION

If you elect not to have your unit repaired, it will be returned to you along with your certified check or money order.

**Important:** When returning your unit for service, be certain to include a daytime telephone number and an email address (if applicable).

### Customer Service

If you have questions concerning the operation of your Whistler detector, or require service during or after the warranty period, please call Customer Service at: **1-800-531-0004**  
Representatives are available to answer your questions Monday - Friday from 8:00 a.m. to 5:00 p.m. (CT) or visit the F.A.Q.'s at [www.whistlergroup.com](http://www.whistlergroup.com).

## SPECIFICATIONS

### Laser Wavelength:

905 +/- 50 nanometers (nm)

### Radar Frequencies:

10.500 - 10.550 GHz (X Band)  
24.050 - 24.250 GHz (K Band )  
33.400 - 36.000 GHz (Ka Superwideband)

### Operating Temperature Range:

-10°C to +70°C (-41 F to +158 F)

### Power Requirements:

Operational 12 to 15 volts DC, 250mA nominal Vehicle Battery Saver, 30mA nominal.

### Patents can be viewed here:

[www.whistlergroup.com/pat](http://www.whistlergroup.com/pat)

POP™ Mode is a trademark of MPH Industries, Inc.  
SWS™ Mode is a trademark of Safety Warning Systems L.C.

Specifications are subject to change without notice.

write serial number in the space provided

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## TROUBLESHOOTING

If difficulties occur which cannot be solved by information in this Troubleshooting Guide, please call Whistler Customer Service at 1-800-531-0004 or visit our F.A.Q. page at [www.whistlergroup.com](http://www.whistlergroup.com), before returning your unit for service.

### Care and Maintenance

During the summer months, avoid prolonged exposure to direct sunlight by removing your unit from the dash when your vehicle is parked for an extended period of time. Do not spray water, cleaners, or polishes directly onto the unit. The spray may penetrate through the openings and damage the unit. Also, do not use any abrasive cleaners on the unit's exterior.

### Are Detectors Legal?

#### In Most States YES.

Laser-Radar detectors are legal in every state (except Virginia and Washington, D.C., which have local regulations restricting the use of radar receivers in any vehicle) when used in automobiles or light trucks (under 10,000 lbs.). The Federal Highway Administration (FHWA) issued a regulation, effective January, 1994 which prohibits radar and laser detector use in vehicles over 10,000 lbs. Prior to the FHWA regulation, laws existed in New York restricting the use of radar detectors in trucks over 18,000 lbs. and in Illinois in trucks over 26,000 lbs.

### FCC Information

#### FCC ID: HSXWH20

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- this device may not cause harmful interference,
- this device must accept any interference received, including interference that may cause undesired operation.

**Important:** FCC requirements state that changes or modifications not expressly approved by Whistler could void the user's authority to operate the equipment.

### POP™ Mode

POP™ Mode is a feature on some radar guns operating on K and Ka bands. When the gun is in POP™ Mode and activated, a brief burst of energy, less than 1/15 of a second, is transmitted and the vehicle's speed is quickly acquired. A detector without POP™ Mode detection capability cannot respond to this brief transmission.

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## USER MANUAL

# CR90 HIGH PERFORMANCE LASER-RADAR DETECTOR

### The Whistler Group Corporate Headquarters

1716 SW Commerce Dr. Ste. 8 • Bentonville, AR 72712  
Tel 479.273.6012 • Fax 479.273.2927

### Customer Return Center

1412 South 1st St. • Rogers, AR 72756  
Customer Service Tel 800.531.0004

[www.whistlergroup.com](http://www.whistlergroup.com)

P/N 260044 09A15 ©2015 The Whistler Group, Inc.



# WHISTLER



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Dear Whistler Customer,

If you have questions concerning the operation of this Whistler product please call:

**Customer Service**  
**1-800-531-0004**

Monday - Friday • 8:00 am - 5:00 pm CT  
or visit our website

**www.whistlergroup.com**

Please keep the receipt in a safe place. You may register your product online at www.whistlergroup.com. For warranty verification purposes, a copy of your dated store receipt must still accompany any unit sent in for warranty work. If the unit is returned without a dated store receipt, an out of warranty service charge applies. **Note:** Our warranty period begins at the time of purchase. The warranty is validated only by the dated store receipt! Please record the serial number of the unit in the space provided on page 27 of this manual.

To fully acquaint yourself with the operation of your Whistler detector and to better understand the differences between detecting radar, laser, and safety radar signals, we recommend reading this entire manual or visiting our F.A.Q. page on our website www.whistlergroup.com

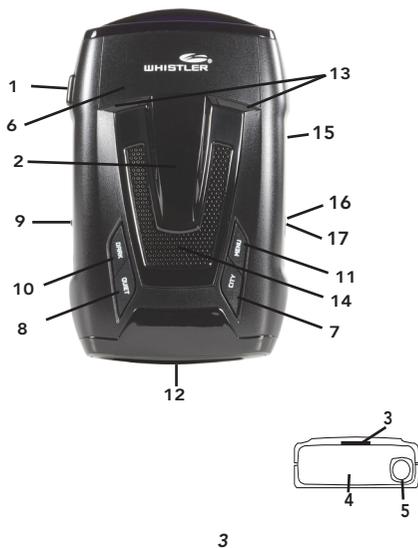
Enjoy your Whistler detector and please drive safely.

Sincerely,  
The Whistler Group, Inc.

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## OPERATION

### Power On Self Test

To turn the unit ON or OFF, gently press the center of the Power/Volume button into the side of the unit.

Each time your Whistler detector is turned on, an automatic self-test sequence confirms that the speaker, visual displays are functional.

To turn the unit off:

- Press and release PWR briefly and the display will show a 5 second count down before powering off. If you pressed the power button by mistake, press the PWR button again during this 5 second period will cancel power down.
- If the unit is powered by a switched 12 volt source the unit will turn off when the ignition key is removed.

### Audio Level Adjustment

To change the audio level:

- Move Power/Volume button back to increase audio level.
- Move Power/Volume button forward to decrease audio level. As audio level is adjusted, beeps are provided and the display indicates volume level.

### Integrated Real Voice®

Real Voice® will be used to articulate the following:

1. Band Identification
2. Safety Warning System™ categories
3. Feature Selection
4. Compass Heading (N, S, E, W)

### Auto Quiet Mode

Auto Quiet mode reduces the selected audio level to level (1) approximately 5 seconds after a radar or safety warning system signal is detected. The alert for any new signal within 20 seconds will resume at level (1). Auto Quiet mode does not affect laser alerts.

- Press Quiet (before a signal is detected) to engage Auto Quiet mode.
- Once the Auto Quiet mode is engaged, you may cancel the audio alarm by pressing Quiet.
- Press Quiet (when the unit is not alarming) to cancel Auto Quiet mode.

### Quiet Mode

Quiet mode cancels audio during an alert and any new alert within 20 seconds. After 20 seconds of no radar signal detected, the audio alerts are restored.

- Press Quiet to cancel the audio.
- Press Quiet a second time during an alert to restore the standard audio alert pattern.

## OPERATION

### Speed Selectable Auto Quiet

Traveling below the speed selected in option mode will engage Auto Quiet mode. **Note:** Enter Option Mode to set Speed Selectable Auto Quiet.

### External Audio Jack

The 2.5mm external stereo audio jack can be used to connect an external speaker or headphones in environments with high ambient noise levels. The internal speaker will be disabled.

### City/City 1/City 2 Mode

Whistler's Three Stage City Mode is designed to reduce the annoyance of automatic door openers, intrusion alarms and other devices which share frequencies with police radar. Generally, X band is used for these devices.

- Press City button to cancel Highway Mode and engage City Mode.
- Press City button again to enter City 1 Mode.
- Press City button again to enter City 2 Mode.
- Press City button a fourth time to cancel City 2 Mode and returns the unit to Highway Mode.

In City Mode, weak speed/safety warning system™ signals give an initial alarm of two beeps, and then remains quiet unless the signal becomes very strong. When the signal strength increases, two additional beeps are provided. City 1 and City 2 Modes operate the same as Highway Mode, but in City 1 Mode, only the X band sensitivity is lowered. In City 2 Mode, X-band is not detected.

**Caution:** Some towns/small cities may still be using X band radar. City Modes do not change the audio alert for laser.

### Highway Mode

Highway mode provides full audio warnings any time radar (X, K, Ka, Safety Warning System™) or laser signals are detected, and is recommended for open road driving.

For more information on City and Highway modes, please visit our F.A.Q. page on our website: [www.whistlergroup.com](http://www.whistlergroup.com)

## OPERATION

### Alert Periscopes

Whistler's Alert Periscopes provide an added attention getting visual alert. The two extra LEDs flash on and off when the unit alarms to provide a unique visual alert. This alert can be programmed, through the Option Select Mode ON, OFF or FLASHING during alerts.

### Dim/Dark Mode

Dim/Dark Mode reduces the illumination of the display.

- Press the Dark button to reduce illumination to a Dim setting.
- Press the Dark button a second time engages Dark Mode. The display illumination is further reduced.

Dim or Dark Mode can be engaged during an alert. In Dark Mode, the display goes dark for as long as a signal is being detected and for 20 seconds after, then the display returns to the dimmer setting.

- Press the Dark button a third time to restore full illumination to the display.

### Auto Dim

The Auto Dim feature automatically switches the illumination of the text display between the bright and dim settings according to the GPS time of 7am and 7pm so that the text display will always be easy to read. To manually override the auto dim feature, use the dark button on the unit. Enter Option Select Mode to turn off the auto dim feature.

### Understanding the Display

The unit's display can be set up to indicate a Cardinal Point Heading, Mode of Operation (Highway and City modes) and Clock.



## FEATURE DESCRIPTIONS

1. **Bracket Release Button** – provides quick and easy release of the mounting bracket.
2. **Speaker** – provides distinct audio warnings.
3. **Mounting Bracket Location** – slot holds mounting bracket firmly.
4. **Radar Antenna** – compact, high-efficiency antenna receives radar signals.
5. **Front Laser** – high gain optical lens provides increased sensitivity and field of view for leading-edge laser detection.
6. **Rear Laser** – an integrated optical waveguide provides superior detection of laser signals transmitted from behind.
7. **City Button** - reduces the annoyance of false alerts typically encountered in urban driving areas.
8. **Quiet Button** - pressing QUIET before a signal is detected engages Auto Quiet Mode which automatically reduces the audio level after the initial warning to a low audio level setting. Pressing QUIET during a radar/laser encounter silences audio alerts, while allowing visual alerts to keep you informed.
9. **Power / Volume Control** – gently press this button in to turn the unit on/off. Move back or forward to adjust the audio level.
10. **Dim / Dark** - engages Dim/Dark modes.
11. **Menu Button** - enters Option Select Mode.
12. **OLED Text Display** – provides distinct visual confirmation of signals detected, signal strength, and indicates engaged modes of operation.
13. **Alert Periscopes** - provide an additional attention getting visual alert.

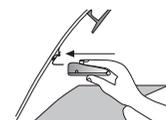
## FEATURE DESCRIPTIONS

14. **GPS Antenna** - provides Traffic Camera alerts as well as other speed selective settings.
15. **Power Jack** – provides connection for the power cord.
16. **USB Jack** – provides connection to a PC for data updates.
17. **External Audio Jack** – a 2.5mm size jack for external audio use.

## INSTALLATION

### Mounting Guidelines

- Mount the unit as low as possible near the center of the windshield.
- Do not mount the unit behind wipers, ornaments, mirrored sunscreens, etc. These obstructions have metal surfaces which can affect radar and laser signals and reduce critical warning time. (Regular tinted glass does not affect reception).
- Some windshields have an Instaclear™ or Electriclear™ type coating, which affect radar signals. Consult your dealer or the owner's manual supplied with your vehicle to determine if your windshield has this coating.
- Avoid placing the unit in direct contact with the windshield.
- To reduce the possibility of theft, conceal the unit when not in use.



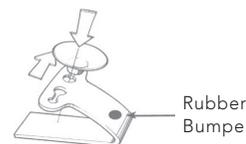
Windshield Mounting

**IMPORTANT:** Make sure the unit is level

## INSTALLATION

### Windshield Mounting

- Install the two suction cups and rubber bumper onto the bracket by fitting them into their holes.
- Press the suction cups onto the windshield at the location you have chosen.



**Important:** Some newer cars have a plastic safety coating on the inside of the windshield. The windshield bracket may leave permanent marks on this type of surface. To find out if your vehicle has this type of windshield, check the vehicle's owner's manual or ask your dealer. We recommend that you do not leave the suction cup bracket on the window in direct sunlight. If the detector is removed, this may cause blistering of the dash in some vehicles.

- Slide the detector onto the bracket until it locks into place.
- If necessary, the unit may be leveled by bending the windshield bracket. Press the bracket release button and remove the detector before bending.

## INSTALLATION

### Power Cord Connection

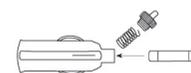
- Plug the small end of the power cord into the unit's power jack.
- Plug the large end into the vehicle's cigarette lighter socket.

**Note:** Cord fits tightly into detector. When installing the cord, expect some resistance.

The USB can charge an ipad, iphone, smartphone, MP3 or tablet. The output for the USB port is 1A.

### Fuse Replacement

The lighter socket plug is equipped with a replaceable 3 amp, 3AG fuse located behind the silver tip. To replace the fuse, carefully unscrew the tip of the plug.



**IMPORTANT:** Unscrew slowly. The tip contains a spring which may fly out when disassembling. Insert the new fuse with the spring and screw on the tip. With use, the screw cap on the plug may loosen. Retighten it occasionally.

## OPERATION

### Setting Saver

Setting Saver stores your personalized settings so that when the detector is turned off and then on again, you do not have to re-enter them.

### Feature Engaged Confirmation

Each time a button is pressed, one beep confirms feature "on", two beeps confirm feature "off".

### Vehicle Battery Saver Mode

The Vehicle Battery Saver Mode automatically shuts off the detector after 3 hours. The timer is reset if the detector is turned off, unplugged or any button is pressed before the timer has expired. The detector will alert you with an audible and visual warning before it shuts off. During this warning, you can momentarily reset the timer by pressing any button. If the unit has automatically turned off, press the Power button to turn the unit back on. Refer to "Option Select Mode" for instructions for changing the battery saver mode options.

### Red Light/SpeedCamera Detection

This unit is capable of alerting to these locations with the updatable database.

### Getting a Satellite Lock

Powering up, the unit will begin its search for satellites. During this time, the unit will flash the satellite icon on the display. Please allow several minutes for the unit to lock onto the satellites. This delay is normal when the unit is turned on at least 50 miles from when the unit last received a satellite lock or if several days have passed since its last usage.

**NOTE:** Driving while initially searching for satellites will take longer than if you are stationary. Acquiring satellites takes much longer the first time.

### Camera Alerts

When approaching a known camera, the unit will provide the type of alert (Red Light Camera, Traffic Camera, Speed Camera, or User Location). Example: the display will show TRF CAM then count down the distance to the camera. Once past the camera location, the unit will provide a beep-beep audio tone and the word PASS will be shown on the display.

## OPERATION

### Manual Entry (Waypoint)

The unit will save a special location (i.e., a new red light camera or even a "trap") if you enter it manually. The unit will store 1000 user locations. **NOTE:** Manual entries must be approximately 330 feet apart to prevent overlapping locations. To manually enter a location, simply press and hold the PWR button and the unit will beep to confirm. Manual entries can be deleted within a certain radius (selected in Option Select Mode). Once a radius is selected the data can be deleted within the selected Radius or they all can be deleted completely from memory.

### X/K and Ka Filter Modes

There are times when a radar detector in another vehicle, can emit a frequency which can cause your detector to falsely alert. These Filter Modes allow you to select the level needed for your area to minimize the occurrences of these false alerts. X/K and Ka Filter Mode factory default settings should provide adequate filtering for most conditions. If you experience excessive alerts due to radar detectors in other vehicles, increase the Filter level for the band received. See Option Selection Mode to change the filter settings.

### Speed Selectable Filter Mode

Traveling below the speed selected in option mode will apply the maximum Filter. **Note:** Enter Option Mode to set Speed Selectable Filter.

### Ka Max Mode

Ka Max Mode provides enhanced Ka sensitivity increased protection. This mode can be selected with or without RSID. See Option Select Mode for changing Ka options.

### Traffic Flow Signal Rejection (TFSR)

Recently, many new products operate on X or K band causing nuisance alerts to radar detectors. Some of these are radar based Traffic Monitoring Systems mounted to poles alongside the highway and others are K Band Lane Change Assistants and Blind Spot Detectors found on some automobiles. When turned on in option mode, helps eliminate excessive alerts from erroneous X and K-band sources. Traffic flow monitoring systems are getting more common. Many of these systems generate radar signals to measure the flow of traffic across multiple lanes. Most detectors will alert you to it unnecessarily. This rejection feature examines the incoming signal and will aid in reducing the alerts to such sources.

**We suggest you turn TFSR on if you are experiencing excessive X or K band false alerts every half mile or so along stretches of roadway that contain these traffic flow sensors.**

## OPTION SELECT MODE

### Option Select Mode

Press the Menu button to enter Option Select Mode. Each press of the Menu button changes to the next selectable feature. The Dark (D) button and the Quiet (Q) button turns the feature ON/OFF or Blinking for example. A button must be pressed within 20 seconds or Option Select Mode will automatically be exited.

Feature	Display Shows	To Change: D=Dark Q=Quiet	Option
QUIET	S1: Quiet	D or Q to select	Remote Control of Dim, City, Quiet, Power, Waypoint Functions
POWER	S2: Power	D or Q to select	Remote Control of Dim, City, Quiet, Power, Waypoint Functions
TONE	TONE 3	D or Q to select	Tone 1, 2, 3 (3 Different Tone Patterns)
TEST	TEST ON	D = ON Q = OFF	ON = X, K, Ka Audio Tones OFF = One Beep During Power Up
X BAND	X = ON	D = ON Q = OFF	X Band ON (default) X Band OFF
K BAND	K = ON	D = ON Q = OFF	K Band ON (default) K Band OFF
Ka BAND	Ka NORM	D or Q to select	Ka Band (RSID,NORM, OFF,MAX,MAXID)
LASER	LSR LSID	D or Q to select	LASER (NORM,OFF,LSID)
LASER AREA 1	.02-.95 Y	D or Q to select	Laser Ana 1 ON (default) Laser Ana 1 OFF
LASER AREA 2	2.6-3.2 Y	D or Q to select	Laser Ana 2 ON (default) Laser Ana 2 OFF
LASER AREA 3	3.8-4.2 Y	D or Q to select	Laser Ana 3 ON (default) Laser Ana 3 OFF
SWS™	SWS OFF	D = ON Q = OFF	Turn SWS™ ON Turn SWS™ OFF (default)
VOICE®	VOICE ON	D = ON Q = OFF	Real VOICE™ Engaged Real VOICE™ Disengaged
POP™	POP OFF	D = ON Q = OFF	POP ON POP OFF (default)