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15 BAND ULTRA

Operating Instructions

**15 BAND™
ULTRA PERFORMANCE
DIGITAL RADAR/LASER
DETECTOR WITH XTREME
RANGE SUPERHETERODYNE®
TECHNOLOGY**

XRS 979

Printed in China
Part No. 480-512-P
Version C

Important Information and Customer Assistance

Important Information •

Federal Laws Governing the Use of Radar Detectors
It is not against federal law to receive radar transmissions with your Cobra radar/
laser detector. The Communications Act of 1924 guarantees your right to receive
radio transmissions on any frequency. Local laws that contravene this Act, while
illegal, may be enforced by your local law enforcement officials until and unless
they are prohibited from doing so by federal court action.

Safety/Strobe Alert
Use of this product is not intended to, and does not, ensure that motorists or
passengers will not be involved in traffic accidents. It is only intended to alert
the motorist that an emergency vehicle equipped with a Cobra Safety Alert,
3M or strobe transmitter is within range as defined by that product. Please call
local fire and police departments to learn if coverage exists in your area.

Safe Driving
Motorists, as well as operators of emergency or service vehicles, are expected to
exercise all due caution while using this product, and to obey all applicable traffic laws.

Security of Your Vehicle
Before leaving your vehicle, always remember to conceal your radar detector
in order to reduce the possibility of break-in and theft.

Customer Assistance

Customer Assistance •
Should you encounter any problems with this product, or not understand its many features,
please refer to this owner's manual. If you require further assistance after reading this
manual, Cobra Electronics offers the following customer assistance services:

For Assistance in the U.S.A.
Automated Help Desk English only. 24 hours a day, 7 days a week 773-889-3087 (phone).

Customer Assistance Operators English and Spanish. 8:00 a.m. to 5:30 p.m. Central Time
Mon. through Fri. (except holidays) 773-889-3087 (phone).

Questions English and Spanish. Faxes can be received at 773-622-2269 (fax).

Technical Assistance English only. www.cobra.com (on-line: Frequently Asked
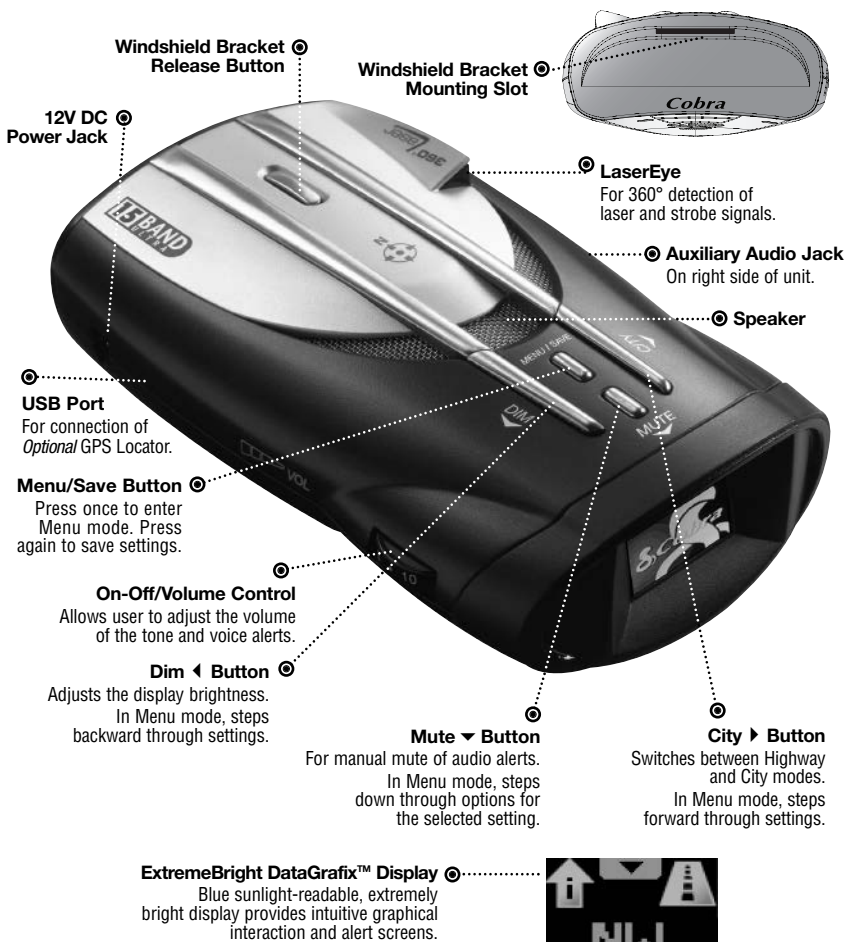Questions). English and Spanish. product info@cobra.com (e-mail).

For Assistance Outside the U.S.A.
Contact Your Local Dealer

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Chicago, Illinois 60707 USA
www.cobra.com

Nothing Comes Close to a Cobra®   A1

Controls, Indicators, Connections and Display

Windshield Bracket Release Button

Windshield Bracket Mounting Slot

12V DC Power Jack

LaserEye
For 360° detection of laser and strobe signals.

Auxiliary Audio Jack
On right side of unit.

Speaker

USB Port
For connection of *Optional* GPS Locator.

Menu/Save Button
Press once to enter Menu mode. Press again to save settings.

On-Off/Volume Control
Allows user to adjust the volume of the tone and voice alerts.

Dim ◀ Button
Adjusts the display brightness. In Menu mode, steps backward through settings.

Mute ▼ Button
For manual mute of audio alerts. In Menu mode, steps down through options for the selected setting.

City ▶ Button
Switches between Highway and City modes. In Menu mode, steps forward through settings.

ExtremeBright DataGrafix™ Display
Blue sunlight-readable, extremely bright display provides intuitive graphical interaction and alert screens.

Congratulations! You've made a smart choice by purchasing an ultra performance digital radar/laser detector from Cobra. Just look at some of the sophisticated features and capabilities your new unit includes:

Xtreme Range Superheterodyne Technology
With super-fast sweep circuitry, XRS provides extra detection range and the best possible advance warning to even the fastest radar guns

Ultra Performance
Provides advanced warning with extra detection range

Detection and Separate Alerts
For radar signals (X, K, Ka and Ku bands, with signal strength indicated), Laser signals, Safety Alert signals, Strobe Alert signals, VG-2 signals, Spectre I & IV+ signals

8-Point Magnetic Compass
Displays direction of travel

LaserEye
For 360° detection of laser and strobe signals

Instant-On Ready
Detects radar guns with "instant-On" (very fast) speed monitoring capabilities

Pop Detection
Detects the latest super-fast instant-On single pulse radar guns

Voice or Tone Alert
With adjustable volume

ExtremeBright DataGrafix™ Display
Easy-to-read graphical user interface

IntelliShield Highway/City Modes
Reduces falsing in urban areas with Highway mode and three levels of City mode settings

Safety Alert
Traffic warning system distinguishes important safety alerts from other K band signals

Strobe Alert
Emergency vehicle warning system

Manual Mute or Auto Mute
A mute function of audio alerts

IntelliMute
A mute function which automatically reduces false audio alerts by sensing engine RPMs

IntelliMute Pro
Prevents detection by radar detector detectors (RDDs) when traveling at slower speeds

SmartPower
A timed power saving function that saves your car's battery

EasySet Menu
User-friendly mode selection and setting with visual guidance

Car Battery Voltage
Displays your car battery voltage

Low Car Battery Voltage Warning
Alert can be provided when voltage goes below 11.9 volts

Auxiliary Audio Jack
For external speaker connection

Mounting
Mounts easily on windshield or dashboard

***Optional* GPS Ready** (See page 33)
The *Optional* GPS Locator unit adds: Photo Enforced, Caution and User Location Alerts; Speed Alert; GPS Compass and Vehicle Location (Latitude & Longitude)

IntelliScope
Uses *Optional* GPS Locator to show direction of Location Based Alerts relative to your moving vehicle

⚠️ **WARNING**
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Item #	Description
RDA GPSL55	Plug-in GPS Locator Unit
420-030-N-001	Straight 12V Power Cord
420-026-N-001	Coiled 12V Power Cord
545-159-N-001	Windshield Mounting Bracket
CLP-2B	Dual Port Power Adapter

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Contents

This manual describes the simple steps for mounting, setting up and using your detector. It also provides helpful information about how radar and laser guns are used and how you can interpret the alerts you receive.

Before you begin your installation, please read the Important Information section on page A1 and use the descriptions and feature lists on pages A2 and A3 to become familiar with your new detector.

About Your Detector

Display

This detector's innovative new display provides more, easier-to-use information than any technology to date. Using an OLED (Organic Light Emitting Diode) screen, the display offers large graphical alerts to signals as they are detected.

Do not be alarmed by the nearly blank display you see when you first turn the unit On. The detector will function and alerts will appear as signals are detected. You can also elect to turn On the built-in Compass, IntelliMute and IntelliMute Pro, so that they appear during normal operation. The initial and startup screens are shown on page 6.

EasySet Menu

EasySet Menu lets you conveniently customize the operation of your detector by changing the settings. You may want to start using the detector with the factory settings and then make changes after you are more familiar with the unit.

About This Manual

Once the detector is in use, the modular descriptions in this manual can be used as a ready reference to individual topics as needed. Each topic is completely covered in its section and cross-references to related topics are included where appropriate.

Installation

Where to Mount Your Unit

You will get optimum performance from your detector if you mount it at a point approximately in the center of the vehicle, as low as possible on the front windshield without obstructing the unit's view of the road either to the front or rear. You can also mount it directly on the dashboard.

| Windshield Mounting | Dashboard Mounting |
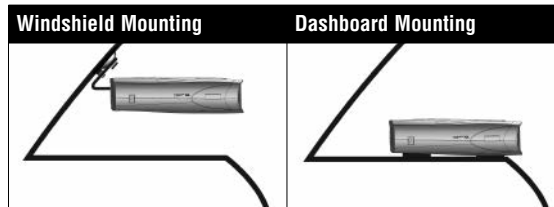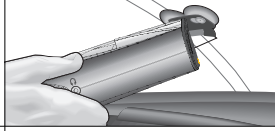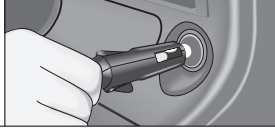
The unit's lens must not be blocked and the LaserEye should have a clear view out the back window to allow 360° detection.

The LaserEye Should Have a Clear View
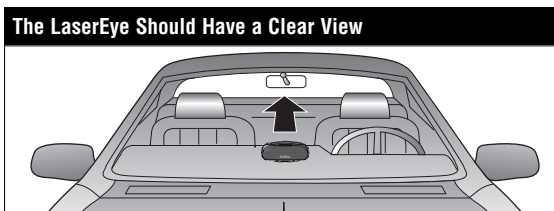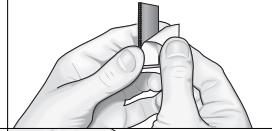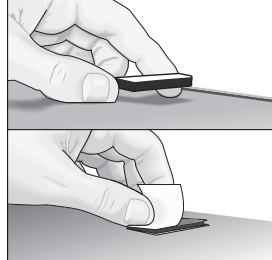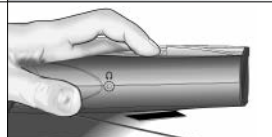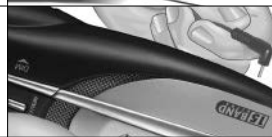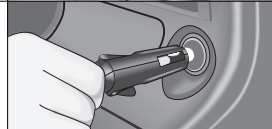
Radar and laser signals pass through glass but not through other materials and objects. Objects that can block or weaken incoming signals include:

- Windshield wiper blades
- Mirrored sun screens
- Dark tinting at the top of the windshield
- Heated windshields currently available on some vehicles (Instaclear for Ford, Electriclear for GM). Consult your dealer to see if you have this option.

Windshield Mounting

1. Attach the rubber cups to the bracket.	
2. Make sure the rubber cups and your windshield are clean.	
3. Push the bracket firmly onto the windshield.	
4. Attach the detector to the bracket. **Check that the unit is parallel to the road's surface.**	
5. To adjust the angle if necessary, gently push or pull on the bracket to bend it. DO NOT use the detector to bend the bracket.	
6. Plug the power cord into the detector.	
7. Plug the cigarette lighter adapter on the power cord into your vehicle's cigarette lighter.	
8. You can temporarily remove the detector whenever you wish by depressing the bracket release button and sliding it off the bracket.	

Dashboard Mounting

1. Place the detector on the dashboard to find a location where the unit has a clear view of the road **and is parallel to the road's surface**. The angle CANNOT be adjusted after mounting.	
2. Remove the paper backing from one side of the hook-and-loop fastener.	
3. Attach the pad to the dashboard at your chosen location and remove the other paper backing.	
4. Attach the detector to the hook-and-loop fastener. You can remove and reattach the unit as often as you like.	
5. Plug the power cord into the detector.	
6. Plug the cigarette lighter adapter on the power cord into your vehicle's cigarette lighter.	

Power On/Off and Audio Volume

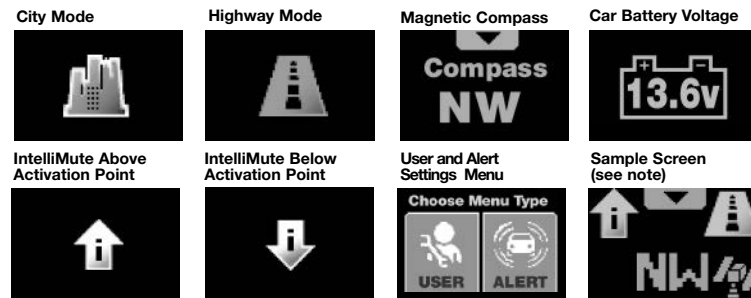| To Turn on the Unit and Adjust the Audio Volume			
Rotate the **On-Off/Volume** control clockwise (away from you). Unit will cycle through the Power On / Self Test.	**Tone**	**Visual Display**	**Voice**
	None	*S. Cobra*	**None**
Alert settings changed from factory defaults will scroll; those still at defaults will not show.	Three beeps	POP DETECTION ON	**Testing,** then three beeps
Shows only when the *Optional* GPS Locator is installed. See page 31 for more information.	**None**	GPS Signal OK!	**None**
Standby screen will show City or Highway icon and others as they are activated. See note.	**None**	NW	**System Ready**
Display changes to Display Timeout after 30 seconds (factory default).	**None**		**None**

NOTE
When the system is first turned On from new, only the CIty or Highway icon will show on the screen because the Magnetic Compass, IntelliMute and IntelliMute Pro functions are set to Off at the factory. These icons will be added to the Standby screen when turned On as described on pages 10, 17 and 19. The satellite icon will show only if the *Optional* GPS Locator is installed.

NOTE
In some vehicles, power is supplied to the cigarette lighter even while the ignition is Off. If this is the case with your vehicle and you have turned the SmartPower Off, you should turn Off or unplug your detector when parking for lengthy periods. Cobra recommends leaving SmartPower at the factory setting, which is On. See page 21.

Standby Screen Icons

Your detector uses the following icons to indicate modes and functions when set:

City Mode | **Highway Mode** | **Magnetic Compass** | **Car Battery Voltage**

Compass NW · 13.6v

IntelliMute Above Activation Point | **IntelliMute Below Activation Point** | **User and Alert Settings Menu** | **Sample Screen (see note)**

Choose Menu Type USER ALERT · NW

NOTE
For example, the sample screen indicates that IntelliMute is active, the Compass is calibrated and your system is set to Highway mode. The satellite icon will show only if the *Optional* GPS Locator is installed.

Main Standby Screen
↓
I-Mute/I-Mute Pro City/Hwy Mode
↓
Car Voltage
↓
Compass
↓
Speed ✱
↓
Latitude/Longitude ✱

Standby Screens

Press **Mute ▾** while the down arrowhead is displayed at the top center of any Standby screen to cycle through and select a different screen. The Standby screens will be displayed in the order shown to the left.

NOTE
Last Standby screen viewed will be displayed when exiting Display Timeout mode.

NOTE
Compass will display if either the magnetic compass in the detector unit is turned On and calibrated or the *Optional* GPS Locator unit is installed and receiving a signal. Speed and and Latitude/Longitude (marked with an *) will display only if the *Optional* GPS Locator unit is installed and receiving a signal.

Nothing Comes Close to a Cobra® 7
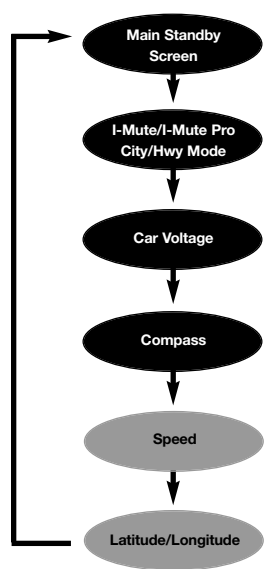
Standby Screens

Main Standby Screen
Displays the maximum possible information about the detector and its settings. The GPS icon will show only if the *Optional* GPS Locator unit is connected.

I-Mute or I-Mute Pro and City or Hwy Mode
Displays the status of alert filtering (City mode) and automatic muting (IntelliMute or IntelliMute Pro mode). See pages 10 and 17 to set these features.

Car Voltage
Displays voltage level of your car battery. See page 23 for Voltage Warning information.

Compass
The compass indicates driving direction if either the magnetic compass in the detector unit is turned On and calibrated or the *Optional* GPS Locator unit is installed and receiving a signal. If neither is active, the center of the compass icon will show two bars.

Speed
If the *Optional* GPS Locator unit is installed and receiving a signal, the vehicle's speed will be shown. (You can select mph or km/h in Menu mode.) See page 34 for Speed Alert information.
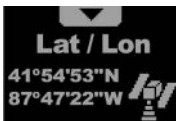
Lat/Lon
If the *Optional* GPS Locator unit is installed and receiving a signal, the vehicle's present location will be shown.

Display Control

Illumination
The display illumination intensity can be adjusted to suit driving conditions:

- **Bright** for daytime driving. (Factory default is Bright, then Display Timeout after 30 seconds.)
- **Dim** for dusk driving.
- **Dimmer** for night driving.
- **Dark** to blank the screen for discreet use. In this mode, alerts will sound, but not show. (A dot will blink at the center of the screen to indicate the detector is ON.)

You can adjust the illumination by pressing the **Dim ◀** button to step through the levels in the sequence listed above.

Dim ◀ Button
Press and release

Display Timeout
Your detector has a **Display Timeout** mode. When Display Timeout is turned On (factory default is 30 seconds), the screen will change to Dark from Bright, Dim, or Dimmer after the time interval selected in Menu mode (see page 12). The Display Timeout setting can be changed so the display is always On.

In Display Timeout mode, the display will show a small dot moving slowly back and forth near the center of the screen to indicate the unit is turned On.

NOTE
While at the Dark level under timer control, any alert will turn On the display at the last brightness setting (Bright, Dim or Dimmer). Touching any button will also turn On the the display.

IntelliShield Highway/City Modes

Your detector is equipped with IntelliShield false signal rejection technology which consists of a **Highway** mode and three different levels of **City** modes: City X, City X Beep Off and City X+K.

Highway mode provides full response to all signals detected. The City modes reduce false alerts while you are driving in or near urban areas where there are many sources for conflicting X or K band signals such as microwave towers and automatic door openers. The factory setting is Highway. The factory City mode default setting is City X; it can be changed in Menu mode (see page 12).

You can toggle between Highway and City modes by pressing the **City ▶** button.

⊙ **City ▶ Button**
Press and release

NOTE
When you change to City mode, the unit will enter whichever city default mode is set at the time.

Muting an Alert

Your detector allows you to quickly turn Off an **Audio Alert** by momentarily pressing the **Mute ▼** button. If you press the **Mute ▼** button a second time during the alert, the Audio Alert will be turned back On. After the current alert is gone, the next alert will be heard.

Mute ▼ Button ⊙
Press and release

Two other features are incorporated in your detector to automatically mute or reduce the volume of alerts. See pages 14 and 16 for Intellimute and Auto Mute modes.

Auxiliary Audio Jack

The **Auxiliary Audio Jack** can be used to connect external speakers in environments with high ambient noise levels. The internal speaker will be disconnected. (This uses a mini stereo audio connector.)

⊙ **Auxiliary Audio Jack**

EasySet Menu

EasySet Menu gives you quick and easy access to all the settings on your detector. It is used to select both:

- User Settings (see page 16)
- Alert Settings (see page 22)

Refer also to the Menu Flow Diagrams on pages 14 and 15 for User Settings and Alert Settings to easily navigate to the setting you want to change. All settings are stored in memory when the power is turned Off and will be recalled when the power is turned back On.

NOTE
You cannot enter Menu mode during an alert. The unit will not detect signals while in Menu mode.

During menu setting, if no buttons are pressed for 15 seconds, the unit will automatically exit Menu mode and save the most recent settings.

If power is turned Off while in Menu mode, settings are saved to those in effect **before** Menu mode was entered.

EasySet Menu Buttons:

- **Menu/Save** button – Opens the Menu mode and Saves changes made to settings.

- **Mute ▼** button – Changes the option at the selected setting.

- **Dim ◀** button – Moves counterclockwise through a setting loop.

- **City ▶** button – Moves clockwise through a setting loop.

To use EasySet Menu:

1. Press and release the **Menu/Save** button to reach the opening menu screen.

2. Choose whether you want to change:

    a. User Settings – press the **Dim ◀** button to enter the User Setting loop shown on page 14.

    b. Alert Settings – press the **City ▶** button to enter the Alert Setting loop shown on page 15.

3. Press the **Dim ◀** or **City ▶** buttons to step backward or forward through the chosen settings loop until the desired setting is reached.

4. Press the **Mute ▼** button to toggle the setting On or Off or to step through its multiple choices. When some settings are turned On, adjustments can be made by pressing the **Dim ◀** or **City ▶** buttons to reach the desired value. Each setting will be retained when you step to the next setting.

5. Repeat steps 3 and 4 to move to and set the next desired setting(s).

6. Press the **Menu/Save** button when finished to save the settings and exit EasySet Menu mode. Or, simply wait 15 seconds without pressing any buttons.

User Settings Menu

User Menu allows you to adjust the unit's display and sounds to your preferences. The **User Settings** can be selected using the **Dim ◀** and **City ▶** buttons by scrolling through the settings as shown in the menu flow diagram below. Tones, voice prompts and visual displays will help during the process. After selecting a setting, use the **Mute ▼** button to choose an option within the setting.

NOTE
When you choose User Settings (page 13, step 2a), the system displays whichever setting was last changed.
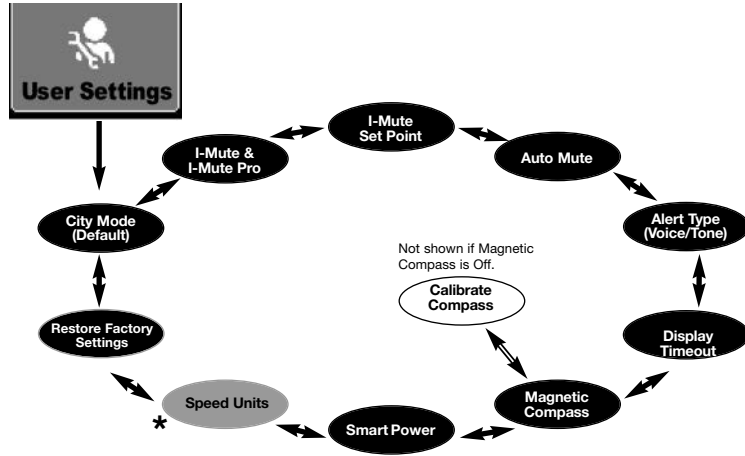
NOTE
Those marked with an * only show if an *Optional* GPS Locator is installed.

Alert Settings Menu

Alert Menu allows you to selectively turn On or Off detection of some signals. The **Alert Settings** can be selected using the **Dim ◀** and **City ▶** buttons by scrolling through the settings as shown in the menu flow diagram below. Tones, voice prompts and visual displays will help during the process. After selecting a setting, use the **Mute ▼** button to choose an option within the setting.

NOTE
When you choose Alert Settings (page 13, Step 2b), the system displays whichever setting was last changed.
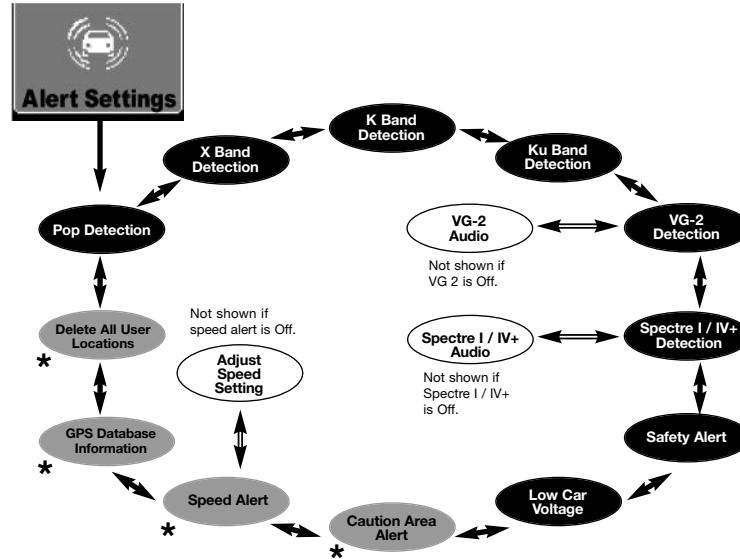

NOTE
Those marked with an * only show if an *Optional* GPS Locator is installed.

User Settings •

IntelliShield City Mode Default

City Mode Default makes three levels of **Audio Alert** suppression available when you toggle from **Highway** to **City** mode (see page 10). The factory setting is City X.

City X sounds a single beep when an x band signal is first detected. The alert then sounds when signal strength reaches level 3.

City X+K combines the City X mode with prevention of K band audio alerts until the signal strength reaches level 2.

City X Beep Off blocks all X band audio alerts until the signal strength reaches level 3.

The City Mode Default can be changed in Menu mode. It can also be changed at any time the detector is in Standby mode:

1. Press and hold the **City ▸** button for at least two seconds. The three City modes will be sequentially displayed for three seconds each as long as the button is pressed.

2. Release the **City ▸** button while the desired City mode is displayed to set that mode as the default.

IntelliMute and IntelliMute Pro Modes

IntelliMute and **IntelliMute Pro** are two features that are active at slow speeds and when your vehicle is stopped. Both depend on your detector sensing the vehicle's engine "revs" (RPMs) to function. Either feature can be turned On in Menu mode, but not both at the same time. The factory settings are IntelliMute Off and IntelliMute Pro Off.

After turning On IntelliMute or IntelliMute Pro, you must then set an Activation Point for your engine's RPMs (see page 18). Whenever the RPMs are below that point, IntelliMute will begin muting or IntelliMute Pro will turn Off the radar detection circuits. The Activation Point will be stored in memory and recalled each time the power is turned On.

NOTE
IntelliMute and IntelliMute Pro may not work with some vehicles because the unit cannot sense the engine's RPMs. In such a case, Auto Mute and City mode can reduce some unwanted audio alerts.

IntelliMute Mode

IntelliMute allows you to avoid audio alerts you don't need to hear because you are stopped or moving slowly. By sensing the RPMs of your engine, IntelliMute knows when you are at low speed and automatically mutes alerts (except for strobe signals from emergency vehicles). It works with all City and Auto Mute modes.

The IntelliMute icon will appear in the display when IntelliMute is On and the activation point has been set. Whenever engine RPMs are below the Activation Point, the arrow points down. When RPMs are above the Activation Point the arrow points up.

Below Activation Point

Above Activation Point

IntelliMute Pro Mode

IntelliMute Pro prevents detection by radar detector detectors (RDDs) such as VG-2, Spectre I and Spectre IV+ when traveling at slower speeds. It is intended for use by experienced users only.

When IntelliMute Pro is turned On, and engine RPMs are below the IntelliMute Pro Activation Point, your detector's radar detection circuits are turned Off to prevent detection by RDDs.

The IntelliMute Pro icon will appear in the display when IntelliMute Pro is On and the Activation Point has been set. Whenever engine RPMs are below the Activation Point, the arrow points down with the "i" blinking. When RPMs are above the Activation Point the arrow points up with the "i" blinking.

Below Activation Point

Above Activation Point

⚠ **CAUTION**
When Intellimute Pro is On, **NO** radar signals will be detected and **NO** alerts will be given at RPMs **below** the IntelliMute Pro activation point.

Set Activation Point

After the detector is installed in your vehicle and **IntelliMute** or **IntelliMute Pro** is turned On using Menu mode, press the **City ▶** button to advance to the IntelliMute Set Point screen where the Activation Point can be set.

At the Set Point screen:

1. Press the **Mute ▼** button to advance to the Setup screen.
2. Press and hold the vehicle accelerator at the desired engine RPMs.
3. Press the **Mute ▼** button to complete the setting process.

The system will store the engine RPM setting and provide a completion message on the display as well as a tone or voice message.

NOTE
If the unit is unable to sense usable pulses within three seconds or if you do not set a rev point within 30 seconds of beginning the setup, IntelliMute or IntelliMute Pro will indicate an error. If you do not try again within five seconds, it will automatically turn Off. The unit will provide corresponding messages for these conditions.

Once an activation point has been set, you can easily change it by going to IntelliMute / IntelliMute Pro in User Settings Menu and repeating the three-step setup process.

If, for any reason, the unit stops sensing your engine's revs, IntelliMute or IntelliMute Pro will indicate an error and automatically turn Off.

NOTE
When initially choosing your IntelliMute or IntelliMute Pro Activation Point, a setting of approximately 300 to 600 RPMs above idle is recommended.

NOTE
The rev point must be reset if you use your detector in a different vehicle.

CAUTION
Do not attempt to set the rev point while driving. Your vehicle should be parked and idling to avoid a collision during the process.

Auto Mute Mode

When **Auto Mute** is On, it automatically reduces the audio volume of all alerts after they have sounded for four seconds. The signals will remain muted for as long as the signal is detected. When Auto Mute is Off, the alerts will sound at full volume for as long as the signal is detected. The factory setting for Auto Mute is On.

Voice or Tone Mode

You can set your detector to sound alerts and confirm menu settings with either a **Voice** or a **Tone** Alert. Voice Alert provides voice messages in addition to tones. Tone Alert provides tones only. The factory setting is Voice Alert.

Display Timeout

Display Timeout determines how long the Standby screen is illuminated before switching the unit to Dark. The factory default is 30 seconds.

You can set the time interval to 15 seconds, 30 seconds, one minute, three minutes or Always On (display never turns Off).

Compass Mode

Your detector includes an internal 8-point Magnetic **Compass** that can continuously display your current direction of travel: N, NE, E, SE, S, SW, W or NW. The factory setting for Compass is Off.

Before the Compass will work properly, it must be calibrated (see page 20). Calibration allows the Compass electronics to measure and store information about the magnetic fields generated by your vehicle so direction indications will be accurate.
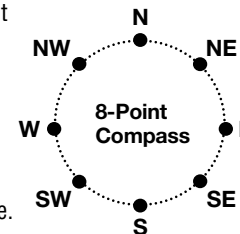
A Compass icon and directional heading will appear in the display when the Compass is On and calibrated.

The Compass will remain accurately calibrated as long as your detector is mounted in the same place in your vehicle. If you change the location where the unit is mounted or move it to another vehicle, you must recalibrate the Compass. You should also recalibrate the Compass if you suspect it is providing inaccurate directions.

The Compass temporarily may not provide accurate readings if you are inside a building or enclosure, or are close to a large metal tractor/trailer, truck or train. Once you are away from such a location, the Compass will work correctly again.

If the *Optional* GPS Locator is installed and receiving a signal, its Compass function will override the magnetic Compass except when the GPS signal is lost.

Set Compass

After the detector is installed in your vehicle and **Compass** is turned On using Menu mode, the system will automatically advance to the Set Compass calibration screen from which the calibration can be performed.

⚠ **WARNING**
Before calibrating the Compass, go to a large parking lot or other safe, low-traffic area.

When the instructions direct you to drive in two circles, make two complete loops (in either direction) from any starting orientation at any convenient speed. The loops need not be perfect and can be circles, small squares, four three-point turns or any pattern that makes at least two complete turns within two minutes of starting the maneuver.

From the Calibrate Compass screen:

1. Press the **Mute** ▼ button to begin compass calibration.

2. Drive your vehicle in two circles.

3. Press the **Mute** ▼ button to complete the setting process.

The system will store the calibration data and provide a completion message on the display as well as a tone or voice message.

◐ **NOTE**
If you do not press the **Mute** ▼ button within two minutes after beginning the Set Compass process, Compass calibration will automatically terminate. The unit will provide a corresponding message.

Once the initial calibration is complete, you can go to Set Compass in User Settings Menu and recalibrate the Compass as needed by repeating the three-step calibration process.

SmartPower Mode

Your detector includes the **SmartPower** feature that, when turned On, will put the unit into Low Power mode 15 minutes after the car's engine has been turned Off.

Before SmartPower enters Low Power mode, you will hear three beeps and SmartPower will flash on the display. To return the unit to Normal Power mode and exit Low Power mode, start the car, press any button or turn the unit Off and then On again. The factory setting is SmartPower On.

SmartPower Entering Standby Mode (Flashing)

Speed Units

If an *Optional* GPS Locator unit is installed, you can select between mph and km/h as the units of speed to be displayed. The factory setting is mph.

Restore Factory Settings

From the **Restore Factory Settings** screen, you can quickly and conveniently restore your detector to its original settings. Confirmation messages are provided during the process.

Alert Settings

Pop Alert
When **Pop Detect** mode is On, Pop radar signals will be detected and an alert will be given. During the alert, the unit will continue to detect other signals. The factory setting is Pop Detect Off.

X Band Alert
When **X Band Detect** mode is On, X Band radar signals will be detected and an alert will be given. During the alert, the unit will continue to detect other signals. The factory setting is X Band Detect On.

K Band Alert
When **K Band Detect** mode is On, K Band radar signals will be detected and an alert will be given. During the alert, the unit will continue to detect other signals. The factory setting is K Band Detect On.

Ku Band Alert
When **Ku Band Detect** mode is On, Ku Band radar signals will be detected and an alert will be given. During the alert, the unit will continue to detect other signals. The factory setting is Ku Band Detect Off.

VG-2 Alert
The detector is undetectable by VG-2 detection devices and can alert you when such a device is in use near your vehicle. When **VG-2 Detect** mode is On, VG-2 signals will be detected and an alert will be given. During the alert, the unit will continue to detect other signals. The factory setting is VG-2 Detect Off.

VG-2 Audio Mode
When **VG-2 Audio** mode is On, alerts will be sounded as well as being displayed on the screen. This setting is only available if VG-2 Alert is on. The factory setting is VG-2 Audio Off.

Spectre I & IV+ Alerts
Police use radar detector detectors (RDDs) to spot users of radar detectors. Your detector is able to identify signals from **Spectre I** and **Spectre IV+** RDDs and can provide alerts when any of these or similar devices are in use near your vehicle.

Your detector **can** be spotted by Spectre IV+ RDDs, but is invisible to Spectre I RDDs. You can choose whether you want to be alerted to Spectre I & IV+ RDD signals. The factory setting is Spectre Detect Off.

Spectre Audio Mode
When **Spectre Audio** mode is On, alerts will be sounded as well as being displayed on the screen. This setting is only available if Spectre Alert is On. The factory setting is Spectre Audio Off.

Safety Alert
When **Safety Alert** mode is On, Safety Alert radar signals will be detected and an alert will be given. During the alert, the unit will continue to detect other signals. The factory setting is Safety Alert On.

Car Battery Low Voltage Warning
In addition to displaying system voltage, your detector can provide a warning that battery voltage is low so that timely steps can be taken to correct the problem. The **Car Battery Low** alert is triggered when the voltage drops below 11.9 volts. Following the alert, the unit enters SmartPower mode to avoid further draining your car battery (see above).The factory setting is Car Battery Low Voltage Warning is On.

Detection

Signals Detected
The tables on the following pages show the types of **Signals** your detector will detect, as well as the visual alerts it provides for each of them.

Audio Alerts
A distinctly different **Alert** tone is used for each type of signal detected (including separate tones for each laser signal). For X, K, Ka and Ku band radar signals, the tones will repeat faster as you approach the signal source. The repeat rate of the tones gives you useful information about the signal detected. See responding to alerts on page 27.

Visual Display
An indication of the type of signal detected will appear in the **OLED Data Display**. During X, K, Ka and Ku alerts, you will also see the numbers from one to five, indicating the strength of the signal detected.

Signal Strength

Signal Strength = 1	Signal Strength = 2	Signal Strength = 3	Signal Strength = 4	Signal Strength = 5
RADAR Ka1	RADAR Ka2	RADAR Ka3	RADAR Ka4	RADAR Ka5

(Weakest Signal)   **(Strongest Signal)**

Radar Signals and Visual Displays

Type of Signal	Visual Display	Voice
X Band Radar	RADAR X 1	X Alert
K Band Radar	RADAR K 2	K Alert
Ka Band Radar	RADAR Ka3	Ka Alert
Ku Band Radar	RADAR Ku4	Ku Alert
Pop Radar Mode	RADAR POP	Pop Alert

Laser Signals and Visual Displays

Type of Signal	Visual Display	Voice
LTI 20-20*	20 / 20 L	Laser Alert
LTI Ultra-Lyte*	UltraLyte L	Laser Alert
Kustom Signals ProLaser*	ProLaser L	Laser Alert
Kustom Signals ProLaser III*	ProLaser 3 L	Laser Alert
Stalker LIDAR*	Stalker L	Laser Alert
Laser Atlanta – Speedlaser*	SpeedLaser L	Laser Alert
Laser – Other	LASER L	Laser Alert

* Your detector provides 360˚ detection of these signals.

NOTE
Beep rate changes with different laser alerts.

Strobe Alert Signals and Visual Displays

* Your detector provides 360° detection of these signals.

Type of Signal	Visual Display	Voice
3M Opticom or Tomar*	EMERGENCY *EV*	**Emergency Vehicle Approaching**

Safety Alert Signals and Visual Displays

Type of Signal	Visual Display	Voice
Emergency Vehicles	EMERGENCY EV	**Emergency Vehicle Approaching**
Road Hazards	ROAD HAZARD RH	**Road Hazard Ahead**
Trains	RAILROAD RR	**Train Approaching**

VG-2 and Spectre I & IV+ Alert Signals and Visual Displays

Type of Signal	Visual Display	Voice
VG-2 Alert	RADAR VG2	**VG-2 Alert**
Spectre I	RADAR SP1	**Spectre Alert**
Spectre IV+	RADAR SP4	**Spectre Alert**

NOTE There are different tones for each alert.

Instant-On Detection

Your detector is designed to detect **Instant-On** speed monitoring signals, which can suddenly appear at full strength.

NOTE
You should take appropriate action immediately whenever an instant-On alert is given.

Pop Detection

Your detector is designed to detect single pulse mode radars. These radars are designed to have a low probability of detection. You should note that these radar guns have a much shorter range while in this mode.

Responding to Alerts

Description	Interpretation	Recommended Response
Tone repeats slowly at first, then speeds up rapidly.	Probably police radar.	FULL ALERT
Tone sounds one time only.	Probably a false alarm, but possibly pulsed radar, Spectre I or VG-2 nearby.	Exercise caution
Tone instantly begins repeating rapidly.	Radar, Spectre I or VG-2 nearby has been activated suddenly.	FULL ALERT
Pop mode tone.	Pop mode gun very close.	FULL ALERT
Tone repeats slowly as you approach a hill or bridge, then speeds up sharply as you reach it.	Probably police radar beyond the hill or bridge.	FULL ALERT
Tone repeats slowly for a short period.	Probably a false alarm.	Exercise caution
Any type of laser alert.	Laser alerts are never false alarms.	FULL ALERT
Any Safety Alert or Strobe Alert.	You are nearing an emergency vehicle, railroad crossing, or road hazard (construction, accident, etc.).	Exercise caution

Understanding Radar and Laser •

Radar Speed Monitoring Systems

Three band frequencies have been approved by the Federal Communications Commission (FCC) for use by speed monitoring radar equipment:

X band	10.525 GHz
K band	24.150 GHz
Ka band	33.400 – 36.00 GHz

Your detector detects signals in all three radar bands, plus Ku band (13.435 GHz), which is an approved frequency used in parts of Europe and Asia.

VG-2 and Spectre I & IV+

VG-2 and **Spectre I & IV+** are radar detector detectors (RDDs) that work by detecting low-level signals emitted by most radar detectors. Your detector does not emit signals that can be spotted by VG-2 and Spectre I RDDs. However, your detector **can** be spotted by Spectre IV+ RDDs. Your unit detects signals from these or similar devices and will alert you when such a device is in use near your vehicle.

Safety Alert Traffic Warning System

FCC-approved **Safety Alert** transmitters emit microwave radar signals that indicate the presence of a safety-related concern. Depending on the frequency of the signal emitted, it can indicate a speeding emergency vehicle or train, or a stationary road hazard.

Because these microwave signals are within the K band frequency, most conventional radar detectors will detect Safety Alert signals as standard K band radar. Your detector, however, is designed to differentiate between standard K band and Safety Alert signals, and give separate alerts for each.

Safety Alert technology is relatively new. Safety Alert transmitters can be found in limited numbers in all 50 states, but the number is growing. Depending on your location, you may not receive these alerts regularly and may often encounter emergency vehicles, trains and road hazards without being alerted. As the number of transmitters increases, these alerts will become more common.

When you receive such an alert, please watch for emergency vehicles ahead of you, on cross streets and behind you. If you see an emergency vehicle approaching, please pull over to the right side of the road and allow it to pass.

Strobe Alert

Special strobes mounted on the light bars of authorized emergency vehicles (fire trucks, police cars, ambulances) automatically change traffic signals as the vehicle approaches an intersection. These strobes and the special strobe detectors located on the traffic signals, introduced fairly recently by 3M and Tomar, are already in use in more than 1000 cities nationwide. Cobra's exclusive **Strobe Alert** detector will detect these special strobes and give an emergency vehicle alert.

When you receive such an alert, please watch for an approaching emergency vehicle and pull over to allow it to pass. To inquire about coverage in your area, contact your local fire and police departments.

LIDAR (Laser)

The correct name for the technology that most people refer to as laser is actually **LIDAR**, which stands for Light Detection and Ranging.

LIDAR operates much like radar. Its signal spreads out like a radar signal, though not as widely. Unlike radar, LIDAR must have a clear line of sight to its target vehicle throughout the entire measurement interval. Obstructions such as sign posts, utility poles, tree branches, etc., will prevent valid speed measurement.

Some common questions about LIDAR include:

- **Does weather have any affect on LIDAR?**
  Yes. Rain, snow, smoke, fog, or airborne dust particles will reduce the effective range of LIDAR and can, if dense enough, prevent its operation.

- **Can LIDAR operate through glass?**
  Yes. Newer LIDAR guns can obtain readings through most types of glass. However, the laser pulse also can be received through glass to trigger an alarm by your detector.

- **Can LIDAR operate while in motion?**
  No. Because LIDAR operates by line of sight, the person using it cannot drive the vehicle, aim and operate the gun all at the same time.

- **Is it legal for police to use LIDAR?**
  Yes, LIDAR is allowed to be used in all 50 States by police. Your detector detects LIDAR (laser).

Pop Radar Guns

The Pop mode **Radar Gun** is a single pulse Doppler radar that is a feature of a K and Ka (Bee III Ka radar gun) band Instant-On radar gun. It uses a single short time pulse to measure the target vehicle's speed. Despite the fact that the short, single pulse makes the unit very sensitive to officer hand and vehicle movement and reduces the range of the gun in Pop mode to 50% of its range in Continuous Wave mode, this feature is added in an attempt to make the radar gun invisible to Radar Detectors.

Although your detector can sense Pop signals beyond the effective range of Pop radar guns, there will be a signal to sense only if a gun is triggered. In addition, the Pop mode receiver section is more prone to false alerts because of its extra sensitivity. This is especially so in urban areas. As a result, you should consider using the Pop Detect mode only in highway and rural situations. Cobra Electronics has included a user selectable On or Off Pop Detect mode.

Maintenance

Maintenance of Your Radar Detector

Your detector is designed and built to give you years of trouble-free performance without the need for service. No routine **Maintenance** is required.

If your unit does not appear to be operating properly, please follow these troubleshooting steps:

- Make sure the power cord is properly connected.

- Make sure the socket of your vehicle's cigarette lighter is clean and free of corrosion.

- Make sure the power cord's cigarette lighter adapter is firmly seated in your cigarette lighter.

- Check the power cord fuse. (Unscrew the ribbed end cap of the cigarette lighter adapter and examine the fuse. If required, replace it with a 2-amp fuse only.)

Specifications

Band and Frequencies

Band	Frequencies		
X Band	10.525	± 0.050	GHz
K Band	24.125	± 0.125	GHz
Safety Alert Traffic Warning System	24.070	± 0.010	GHz
	24.110	± 0.010	GHz
	24.190	± 0.010	GHz
	24.230	± 0.010	GHz
Ka Band	34.700	± 1.300	GHz
Ku Band	13.435	± 0.050	GHz
VG-2	11.500	± 0.250	GHz
Spectre I	13.300	± 0.200	GHz
Spectre IV+	Not Disclosed		
Laser	910	± 50	nm
Strobe	700	± 300	nm

This radar detector is covered by one or more of the following U.S. patents: 5,497,148; 5,594,432; 5,612,685; 6,078,279; 6,094,148; 6,621,447. Additional patents may be listed inside the product or pending.

Optional **Global Position System Locator**

Overview

The *Optional* GPS Locator unit monitors vehicle location using the GPS satellite system to add features to your detector. Whenever it is installed and GPS signals are available, it:

■ Provides alerts as you approach photo-enforced intersections and locations with fixed red light or speed cameras, as well as areas where increased caution should be exercised (such as high-accident intersections). The built-in database can be updated at Cobra's website to stay current with photo-enforced locations and caution areas. See www.cobra.com/AURA for details.

■ Allows you to identify and store up to 1,000 Alert Locations in addition to those in the database .

■ Provides speed and direction of travel information using GPS-based data.

■ Allows you to see the position (latitude and longitude) of your vehicle.
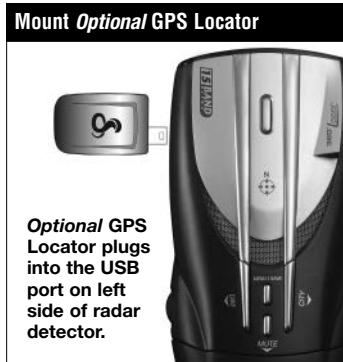
Mount *Optional* GPS Locator

To Mount the *Optional* GPS Locator

If you purchase the GPS Locator unit, it will need to be mounted on the detector.

Simply plug the GPS Locator into the USB socket on the left side of the detector.

An additional requirement for the GPS Locator is that it needs to "see the sky." The satellites of the Global Positioning System send signals that the GPS Locator

Optional **GPS Locator plugs into the USB port on left side of radar detector.**

uses to determine its position on earth. Those signals can be blocked or weakened by incoming signals which may include windshield wiper blades, mirrored sun screens, dark tinting at the top of the windshield and heated windshields currently available on some vehicles (Instaclear for Ford, Electriclear for GM). Consult your dealer to see if you have this option.

No external power connection is needed for the GPS Locator; it is powered from the detector unit. (See page 3 for instructions on mounting your radar detector to your vehicle.)

Initial Satellite Lock

When the *Optional* GPS Locator is first used or after a prolonged period of nonuse, the GPS Locator needs more time to detect the Global Position System satellites.

1. After installation of the GPS Locator, turn the detector unit On with the vehicle in an area clear of obstructions to the sky.

2. Keep the detector turned On for at least 15 minutes to allow fast satellite acquisition in subsequent power-ups. The vehicle can be moving as long as it is in an area where the GPS Locator can "see the sky."

GPS Locator Status
The GPS icon changes to indicate received signal status:

NOTE
When GPS signal is lost at the Speed and Lat/Lon screens, the satellite icon will change and the data lines will be filled with dashes.

Optional **GPS Locator Activated Alerts**

In addition to the alerts provided by the detector, the GPS Locator provides alerts based on vehicle location and information in the GPS Locator databases.

Photo Enforcement Alerts
Whenever your vehicle approaches a photo enforced location (automated speed and red light cameras) contained in the built-in GPS Locator database, an alarm will be provided with a unique chime and the camera icon will become progressively larger as you approach the location.

Caution Area Alerts
If you have turned Caution Area Alert On, whenever your vehicle approaches a caution area (such as speed traps and high-accident intersections) contained in the built-in GPS Locator database, an alarm will be provided with a unique chime and the Caution icon will become progressively larger as you approach the location. The factory setting is Caution Area Alert Off.

User Location Alerts

The system can store up to 1,000 User Location Alerts to provide warnings at locations not included in the built-in GPS Locator database. Whenever your vehicle approaches a user set location, an alarm will be provided with a unique chime and the flag icon will become progressively larger as you approach the location.

- **To set a User Location:** Press and hold the **Menu/Save** button for at least two seconds when the vehicle is at a location you want to save.
- **To delete a specific User Location:** Press and hold the **Menu/Save** button for at least two seconds while at that location and the User Location Alert is sounding. A specific location can be deleted *only* while at that location.
- **To delete all User Locations:** When an *Optional* GPS Locator unit is installed, you can delete all user-entered Location Alerts in Menu mode (see page 15).

Speed Alert

When a GPS Locator unit is installed and receiving a signal and Speed Alert mode is turned On, the detector will sound an alert whenever the vehicle's speed exceeds the set point you have selected. The speed settings can be adjusted in 5 mph or km/h increments. The factory setting is Speed Alert Off. Speed units can be selected as a User setting. See pages 14 and 15 for User and Alert Menus.

Vehicle Location

When a GPS Locator unit is installed and receiving a signal, you can determine the position (latitude and longitude) of your vehicle from the Lat/Lon standby screen. See page 8.

Compass

When a GPS Locator unit is installed and receiving a signal, you can see your direction of travel based on the GPS system. The GPS compass overrides the magnetic compass except when the GPS signal is lost.

GPS Database Information

When a GPS Locator unit is installed, you can view the version and date on which the installed database of Photo Enforcement and Caution Area Locations was updated. To update the database, go to Cobra's website (**http://aura.cobra.com**) and follow the online instructions.
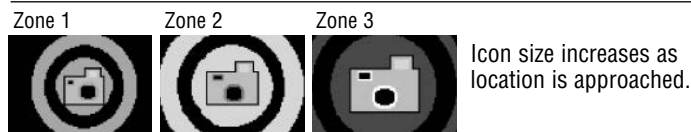
Detection

When a **Photo Enforcement, Caution Area or User Location Alert** is activated, the icon provides a progressively more urgent message as the Location is approached:

- At first, the icon is small.
- Upon closer approach, the icon increases to medium size.
- When near the Location, the icon becomes large.

Photo Enforcement Alert

Zone 1   Zone 2   Zone 3

Icon size increases as location is approached.

Caution Area Alert

Zone 1   Zone 2   Zone 3

Icon size increases as location is approached.

User Location Alert

Zone 1   Zone 2   Zone 3

Icon size increases as location is approached.
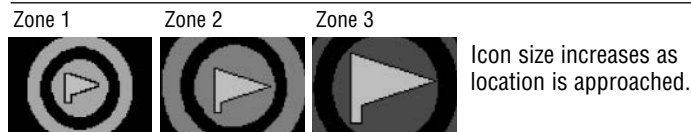
IntelliScope

In conjunction with detection of a Location Based Alert, **IntelliScope** provides information about the direction of the Location relative to your moving vehicle.

The following descriptions use a **Photo Enforced** location as an example. In **Caution Areas** and **User Locations** their signal icons and related text will substitute for the Photo Enforced ones shown in these examples.

Three screens will sequence on the display to identify the type and direction of the location generating the alert. The continuous part of the sequence will repeat as long as the alert is active.

Screen Sequence In Zone 1 For Location Straight Ahead

As a location is approached, the arrows will point to the location while alternating with the alert icon and text as shown in the sequence below.
The sequence will repeat as long as the alert is active.

Begin Alert

Continuous Alert

IntelliScope Alert Arrow Sequence For A Location Directly Ahead

While approaching a Photo Enforcement Location on your route that is directly ahead.

Zone 1   Zone 2   Zone 3

NOTE The arrow disappears in Zone 3 when you are close to the Location.

IntelliScope Alert Arrow Sequence When You Turn Toward The Location

While approaching a Photo Enforcement Location involving a turn onto a cross street where it is located.

Zone 1   Zone 2   Zone 3

NOTE The arrow disappears in Zone 3 when you are close to the Location.

IntelliScope Alert Arrow Sequence When A Location Is Off Your Route

While approaching and passing a Photo Enforcement Location that is some distance away to the right of your route.

Zone 1   Zone 2

NOTE The signal never enters Zone 3 since you never come close to the Location.

Limited 1-Year Warranty

For Products Purchased in the U.S.A.

Cobra Electronics Corporation warrants that its Cobra 15 Band Radar/Laser Detectors, and the component parts thereof, will be free of defects in workmanship and materials for a period of one year from the date of first consumer purchase. This warranty may be enforced by the first consumer purchaser, provided that the product is utilized within the U.S.A.

Cobra will, without charge, repair or replace, at its option, defective 15 Band Radar/Laser Detectors, products or component parts upon delivery to the Cobra Factory Service Department, accompanied by proof of the date of first consumer purchase, such as a duplicated copy of a sales receipt.

You must pay any initial shipping charges required to ship the product for warranty service, but the return charges will be at Cobra's expense, if the product is repaired or replaced under warranty.

This warranty gives you specific rights, and you may also have other rights which vary from state to state.

Exclusions: This limited warranty does not apply:

1. To any product damaged by accident.

2. In the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs.

3. If the serial number has been altered, defaced or removed.

4. If the owner of the product resides outside the U.S.A.

All implied warranties, including warranties of merchantability and fitness for a particular purpose are limited in duration to the length of this warranty.

Cobra shall not be liable for any incidental, consequential or other damages; including, without limitation, damages resulting from loss of use or cost of installation.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

Product Service

For any questions about operating or installing this new Cobra product, or if parts are missing…**PLEASE CALL COBRA FIRST…**do not return this product to the store. See customer assistance on page A1.

If this product should require factory service, please call Cobra before sending the product. This will ensure the fastest turn-around time on any repair. If Cobra asks that the product be sent to its factory, the following must be furnished to have the product serviced and returned:

1. For Warranty Repair include some form of proof-of-purchase, such as a mechanical reproduction or carbon of a sales receipt. Make sure the date of purchase and product model number are clearly readable. If the originals are sent, they cannot be returned;

2. Send the entire product;

3. Enclose a description of what is happening with the product. Include a typed or clearly printed name and address of where the product is to be returned, with phone number (required for shipment);

4. Pack product securely to prevent damage in transit. If possible, use the original packing material;

5. Ship prepaid and insured by way of a traceable carrier such as United Parcel Service (UPS) or Priority Mail to avoid loss in transit to: Cobra Factory Service, Cobra Electronics Corporation, 6500 West Cortland Street, Chicago, Illinois 60707 U.S.A.;

6. If the product is in warranty, upon receipt of the product it will either be repaired or exchanged depending on the model. Please allow approximately 3 – 4 weeks before contacting Cobra for status. If the product is out of warranty, a letter will automatically be sent with information as to the repair charge or replacement charge.

For any questions, please call 773-889-3087 for assistance.

Customer Assistance

Optional Accessories •

You can find quality Cobra products and accessories at your local Cobra dealer, or in the U.S.A., you can order directly from Cobra. See order info on page 41.

**Plug-in GPS
Locator Unit**

Item #RDA GPSL55

Straight 12V DC Power Cord
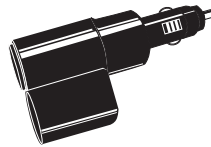
Includes plug and fuse
Item #420-030-N-001

Windshield Mounting Bracket

Includes suction cups
Item #545-159-N-001

Coiled 12V DC Power Cord

Includes plug and fuse
Item #420-026-N-001

Dual Port Power Adapter

Includes adjustable plug
(up to 90°) and fuse

Item #CLP-2B