Cobra®

Operating Instructions for Your
Cobra® 11 Band™ Extra Sensory Detection®

RADAR/LASER
DETECTOR

MODEL **ESD – 9870**

11 BAND
ULTRA

Nu th

Nothing comes close to a Cobra®

Important Information

Federal Laws Governing the Use of Radar Detectors

It is not against federal law to receive radar transmissions with your Cobra radar 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 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 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.

WARNING

Modifications or parts substitutions not approved by Cobra Electronics Corporation may violate FCC Rules and void your authority to operate this equipment.

Customer Support

In this user's manual, you should find all the information you need to install and operate your detector. If you require further assistance after reading through this manual, Cobra Electronics offers the following customer support services:

Automated Help Desk is available in English only 24 hours a day, 7 days a week at 773-889-3087.

Customer Service Operators are available in English or Spanish at 773-889-3087 Monday through Friday, 8:00 a.m. to 6:00 p.m. CST.

Questions can be faxed in English or Spanish to 773-622-2269.

Automated Technical Assistance is available in English or Spanish 24 hours, 7 days a week via e-mail at: productinfo@cobra.com

On-line answers to frequently asked questions can be found in English only at: www.cobra.com.

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RADAR/LASER DETECTOR

MODEL **ESD–9870**

Congratulations

You've made a smart choice by purchasing the ESD-9870 radar/laser detector from Cobra. Just look at some of the sophisticated features and capabilities your new unit includes:

- **ULTRA-SENSITIVITY**
- Detects and provides separate alerts for:
  - radar signals (X, K, and Ka bands, with signal strength indicated)
  - laser signals
  - emergency vehicle safety and strobe alert signals
  - VG-2 signals
  - Spectre signals
- **8-POINT COMPASS** displays direction of travel
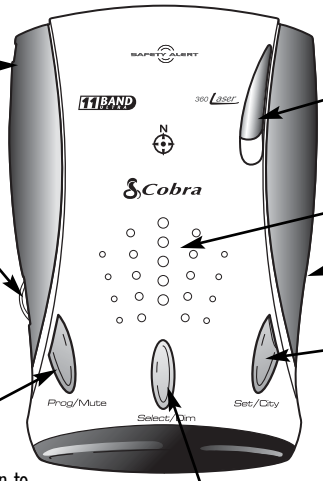- **LASEREYE** for 360° detection of laser and strobe signals

- **"INSTANT-ON"** speed monitoring detection
- **BEE III POP** single pulse detection
- **VOICE ALERT MODE** or **TONE ALERT MODE** with adjustable volume
- **DIGIVIEW DATA DISPLAY** with easy-to-read alpha/numeric dot matrix text readout
- **3 CITY MODES** or **HIGHWAY MODE** to reduce false alerts
- **SAFETY ALERT** Traffic Warning System
- **STROBE ALERT**
- **INTELLIMUTE** a mute function which automatically reduces false alerts by sensing engine RPMs

- **SMARTPOWER** a timed power saving function that saves your car's battery.
- **MANUAL MUTE** or **AUTO MUTE** of audio alerts
- **EASYSET** programming menu
- **AUXILIARY AUDIO JACK** for external speaker connection
- Distinguishes important safety alerts from other K band signals
- Mounts easily on windshield or dashboard

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

12V DC POWER JACK

LASEREYE for 360° detection of laser and strobe signals.

ON-OFF/VOLUME control allows you to adjust the volume of the TONE alerts.

SPEAKER

AUXILIARY AUDIO JACK

SET/CITY button for CITY or HIGHWAY modes for fewer false alerts (and to change user mode settings while programming).

PROGRAM/MUTE button to manually mute audio alerts (and to enter programming mode).

SELECT/DIM button to adjust the display brightness for easy reading (and to scroll through user mode settings while programming).

Prog/Mute   Select/Dim   Set/City

NW   c
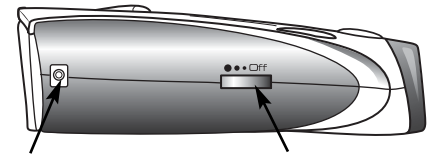
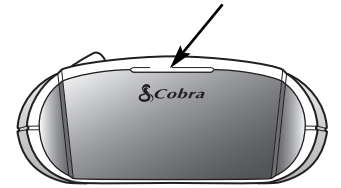12V DC POWER JACK   ON-OFF/VOLUME control
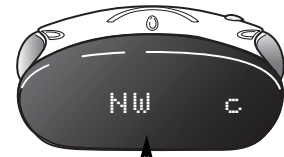
alpha/numeric dot matrix text display showing*:

user mode settings

programming instructions

signal strength indicators

CITY/HIGHWAY mode indicators

radar, VG-2, Spectre and safety/strobe indicators

*See "Operations" (pages 5-19) for more information about display features.

windshield bracket mount slot

Table of Contents

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.
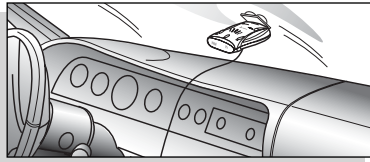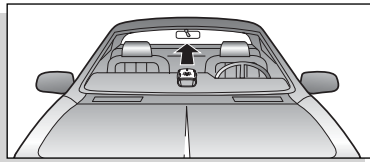

Windshield mounting
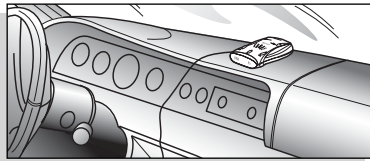
Dashboard mounting

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

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.
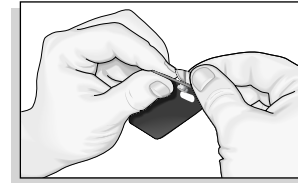
2. Make sure the rubber cups and your windshield are clean.

3. Push the bracket firmly onto the windshield.
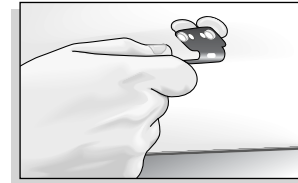
4. Attach the detector to the bracket. Check the angle of the unit.
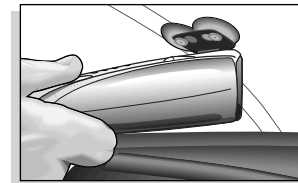
5. To adjust the angle if necessary, gently push or pull on the bracket to bend it. DO NOT use the detector to bend the bracket.
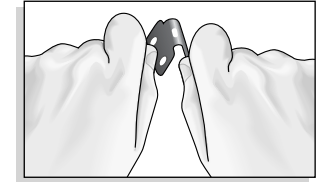
6. Plug the power cord into the detector.
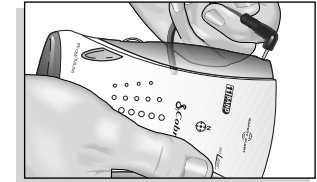
7. Plug the cigarette lighter adapter on the power cord into your vehicle's cigarette lighter.
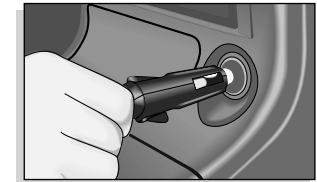
8. You can temporarily remove the detector whenever you wish by sliding it off of the bracket.

Dashboard Mounting

1. Place the detector on the dashboard to find a location where the unit has a clear, level view of the road. The angle can NOT be adjusted after mounting.

2. Remove the paper backing from one side of the hook-and-loop fastener.
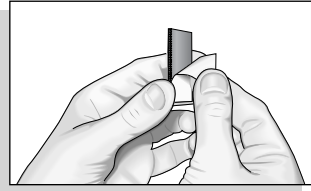
3. Attach the pad to the dashboard at your chosen location and remove the other paper backing.
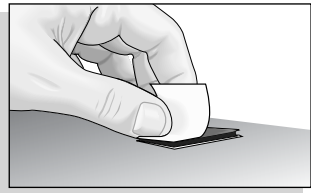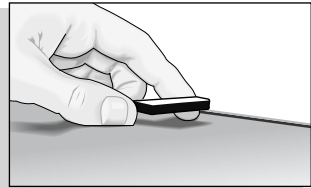
4. Attach the detector to the hook-and-loop fastener. You can remove and reattach the unit as often as you like.
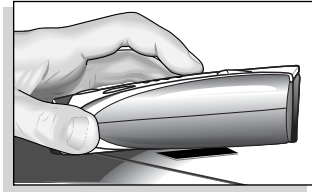
5. Plug the power cord into the detector.
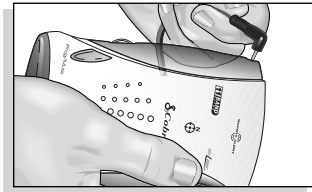
6. Plug the cigarette lighter adapter on the power cord into your vehicle's cigarette lighter.
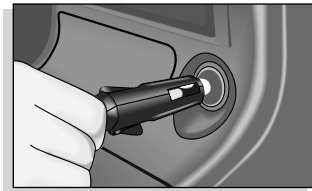
Turning Your Unit On

1. Turn on the unit and adjust audio volume by rotating the ON-OFF/VOLUME CONTROL DIAL clockwise (away from you).
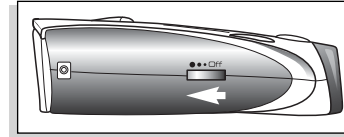
2. You will see and hear the messages "**TESTING**" (3 beeps will sound), then "**SYSTEM READY**", then "**VOICE ALERT**", indicating that the power is on.

Testing

System Ready

Voice Alert

3. The display will cycle through the user mode settings (City X, City X Beep Off, City X+K or Highway; IntelliMute and SmartPower status).

4. Start-up is complete when the display continuously shows the current compass direction (N, NE, E, SE, S, SW, W, or NW) plus single letters indicating current user mode settings ("**c**" = City mode, "**c**" = City X Beep Off mode, "**c**" = City X+K mode, "**h**" = Highway mode, "**i**" = IntelliMute on).

NW   h

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, you should make sure to utilize the SmartPower feature of your detector.

EasySet Programming

All user mode settings on your detector can be changed by using Program mode. When changing the settings, please keep in mind:
• Buttons can have multiple functions.
• All settings will be stored in memory when the power is turned off and recalled when the power is turned back on.

In general, the procedure for using Program mode is as follows:

Prog/Mute   Set/City
      Select/Dim

1. Press and hold the PROG/MUTE button for 2 seconds to enter Program mode. You will hear "start program" in Voice Alert mode or 3 beeps in Tone mode and "**PROGRAM**" will appear in the display. Then brief programming instructions will scroll through the display two times.
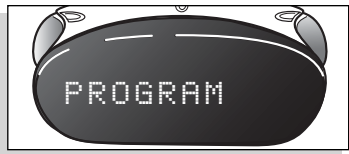
PROGRAM

2. While the programming instructions are scrolling, press and release the SELECT/DIM button to cycle through the

user modes. As each mode is displayed, the current setting for that mode will be shown.

3. With the user mode you wish to change displayed, press and release the SET/CITY button to change the setting. You will hear the current mode setting in Voice Alert mode or either 1 or 2 beeps in Tone mode, depending on your selection. To move to the next selection, press SELECT/DIM again.

4. When you have finished programming any or all of the user modes, press and release the PROG/MUTE button to exit Program mode. Or simply wait 10 seconds without pushing any buttons. When you exit Program mode, the new setting will automatically be saved, you will hear "exit program" in Voice Alert mode or Tone mode and "**EXIT PROGRAM**" and "**Settings Saved!**" will appear in the display.
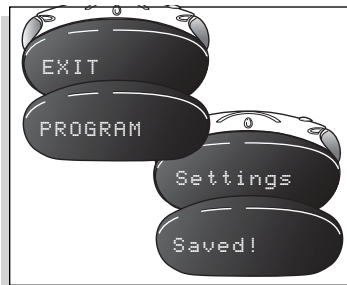
EXIT
PROGRAM
Settings
Saved!

NOTE: You cannot enter Program mode during an alert. The unit will not detect signals while in Program mode. During programming, if no buttons are pushed for 10 seconds, the unit will automatically exit Program mode and save the last settings.

Programming User Modes

The table below shows you how to program all user modes and the settings you can choose from.

NOTE: On the following pages, you will find more detailed explanations of each setting.

EasySet Programming Menu

1. Press and release the PROG/MUTE button to enter Program mode.	
2. Press and release the SELECT/DIM button to cycle through the user modes. Current mode setting is displayed.	**3.** Press and release the SET/CITY button to choose the desired setting for each user mode.

| MODE	SETTING VISUAL	RESULT
Set City Mode Default*	**City X**	A single beep sounds when the signal is first detected.
	City X Beep Off	Audio for all X band alerts are blocked until signal strength reaches level 3.
	City X + K	Combines the City X mode with prevention of K band audio alerts until signal strength reaches level 1.
IntelliMute Mode	**Intelli Mute On**	All alerts (except for strobe signals from emergency vehicles) are automatically muted below the engine rev point you set.
	Intelli Mute Off	Normal operation.
Set IntelliMute RPMs *(not shown if IntelliMute is off)*	**Press SET at desired RPMs...** *(see page 12 to set activation point)*	Allows you to set the engine rev point when using IntelliMute.

EasySet Programming Menu (continued)

MODE	SETTING VISUAL	RESULT
Auto Mute Mode	**AutoMute On**	The audio volume of all alerts will be automatically muted after 4 seconds for as long as the signal is detected.
	AutoMute Off	All alerts will sound at full volume for as long as the signal is detected.
Voice Alert or Tone Mode	**Voice Alert**	Voice is heard for alerts and confirmation of user settings.
	Tone Alert	Tone is heard for alerts and confirmation of user settings.
Set Compass	**Drive in 2 circles...** *(see page 15 to calibrate compass)*	Allows you to calibrate the compass.
Pop Ka Detect Mode	**Pop On**	The unit will detect Pop Ka signals.
	Pop Off	The unit will not detect Pop Ka signals.
VG-2 Detect Mode	**VG-2 On**	The unit will detect VG-2 signals.
	VG-2 Off	The unit will not detect VG-2 signals.
VG-2 Detect Audio Mode *(not shown if VG-2 Detect is off)*	**VG-2 Audio On**	With VG-2 Detect On, the unit will give audible alerts for VG-2 signals.
	VG-2 Audio Off	With VG-2 Detect On, the unit will give only visual alerts for VG-2 signals.
Spectre Detect Mode	**Spectre On**	The unit will detect Spectre signals.
	Spectre Off	The unit will not detect Spectre signals.
Spectre Detect Audio Mode *(not shown if Spectre Detect is off)*	**Spectre Audio On**	With Spectre Detect On, the unit will give audible alerts for Spectre signals.
	Spectre Audio Off	With Spectre Detect On, the unit will give only visual alerts for Spectre signals.
SmartPower Mode	**Smart Power On**	Turns SmartPower on.
	Smart Power Off	Turns SmartPower off.
Set Display Dim Mode Default*	**Dim**	Partially dimmed for dusk or night driving.
	Dimmer	More dimmed for dusk or night driving.
	Dark	Display is off.
Restore Factory Settings	**Are you sure? Press SET to confirm...**	Resets user modes and settings to factory default.
Exit Program	**EXIT PROGRAM Settings Saved!**	Allows you to exit Program mode.

* The settings for these user modes can also be changed with the one-button method. See the description of each user mode (following) for details.

Highway/City Mode

Your detector has a Highway mode and three different levels of City modes: City X, City X Beep Off and City X+K. City X mode sounds a single beep when the signal is first detected. City X Beep Off mode prevents all X band audio alerts until the signal strength reaches level 3. City X+K mode combines the City X mode with prevention of K band audio alerts until the signal strength reads level 1. This will 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.

Press and release the SET/CITY button to switch between Highway mode or City mode (City X, City X Beep Off or City X+K mode). In Highway mode you will hear "highway" in Voice Alert mode or 2 beeps in Tone mode and "**h**" will appear in the display. In City mode (City X, City X Beep Off or City X+K mode) you will hear "city" in Voice Alert mode or 1 beep in Tone mode and "**c**" will appear in the display.
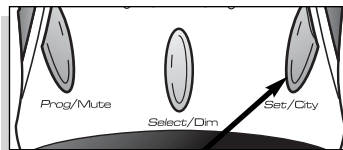
SET/CITY button

City X, City X Beep Off, City X+K modes

Highway mode

Press and hold the SET/CITY button to set the City mode default. The three City modes will cycle as long as the SET/CITY button is held. When the SET/CITY button is released, the City mode currently displayed will be set. (See page 7 for instructions on using the Program mode to select a City mode default.)
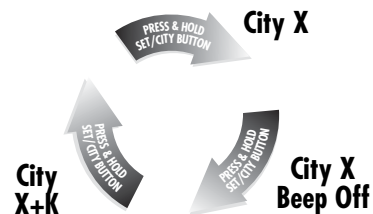
The factory setting is Highway. The factory City mode default setting is City X.

IntelliMute

IntelliMute is a unique new feature of the detector that allows you to avoid alerts you don't need to hear because you are stopped or moving slowly. By sensing the "revs" (RPMs) of your engine, IntelliMute knows when you are at low speed and automatically mutes all alerts (except for strobe signals from emergency vehicles).

Before IntelliMute will work, you must set an activation point for your engine's revs (see page 12). Whenever the revs are below that point, IntelliMute will begin muting. The activation point will be stored in memory and recalled each time power is turned on.

When you turn IntelliMute on you will hear "intelli mute on" in Voice Alert mode or 2 beeps in Tone mode and "**i**" will appear in the display. When you turn IntelliMute off you will hear "intelli mute off" in Voice Alert mode and 1 beep in Tone mode. (See page 7 for instructions using the Program mode to turn IntelliMute mode on or off.)
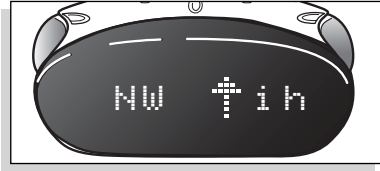
The factory setting is IntelliMute off.

NOTE: IntelliMute may not work with some vehicles because it cannot sense the engine's revs. In such cases, you can reduce unwanted audio alerts by using Auto Mute and City modes when appropriate.

What to Remember While Using IntelliMute

IntelliMute works with all City and Auto Mute modes.

Whenever engine revs are below the activation point, an arrow pointing down will appear in the display.
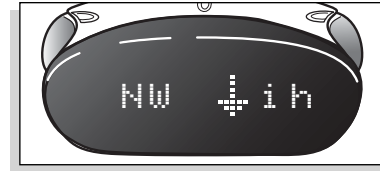
Above the activation point, an arrow pointing up will appear.
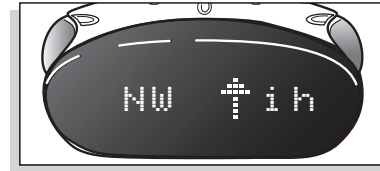
If, for any reason, the unit stops sensing your engine's revs, IntelliMute will indicate an error and automatically turn off.

The rev point you set will be stored in the unit's memory when power is turned off, and recalled each time the power is turned on.

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

Important: When initially choosing your IntelliMute activation point, a setting of approximately 300 to 600 RPMs above idle is recommended. You can reset the activation point at any time to fit your individual preferences and driving style.

Setting the IntelliMute Activation Point

Your detector must be installed in your vehicle.

IntelliMute *must be turned on.*

Caution: Do not attempt to set the rev point while driving. Your vehicle should be *parked* and *idling.*

1.

Procedure	Tone	Voice	Visual Display
In Program mode, go to Set IntelliMute. Press and release the **SET/CITY** button to begin setting IntelliMute RPMs.	2 beeps	"set engine revs"	Set IntelliMute Press SET at desired RPMs...

Press SET a

2.

Procedure	Tone	Voice	Visual Display
Rev your engine to the level you wish to set. Rev the engine slightly above idle and hold revs steady for 2 seconds.	none	none	none
NOTE: *If the unit is unable to sense usable pulses within three seconds, IntelliMute will indicate an error and automatically turn off.*	1 beep	"intelli mute not set, please try again" "intelli mute off"	IntelliMute not set... Please try again... Intelli Mute Off

e not set...

Please try a

Intelli

Mute

Off

3.
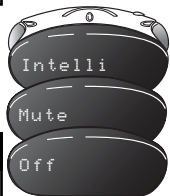
Procedure	Tone	Voice	Visual Display
At the desired rev level, press and release the **SET/CITY** button.	3 beeps	"intelli mute set"	Intelli Mute SET!
NOTE: *If you do not set a rev point within 20 seconds of beginning these steps, IntelliMute will indicate an error and automatically turn off.*	1 beep	"intelli mute not set, please try again" "intelli mute off"	IntelliMute not set... Please try again... Intelli Off

Intelli

Mute

Set!

4.

Procedure	Tone	Voice	Visual Display
Press and release either the **SELECT/DIM** button to proceed to the next user mode or the **PROG/MUTE** button to exit the Program mode.	none	none	none

Auto Mute Mode

Auto Mute will automatically reduce the audio volume of all alerts after 4 seconds for as long as the signal is detected. When you turn Auto Mute mode on or off you will hear "auto mute on" in Voice Alert mode or 2 beeps in Tone mode for Auto Mute on and "auto mute off" in Voice Alert mode or 1 beep in Tone mode for Auto Mute off. (See page 7 for instructions on using the Program mode to turn Auto Mute on or off.)

The factory setting for Auto Mute is on.

Muting an Alert

Your detector allows you to quickly turn off an audio alert by momentarily pressing and releasing the PROG/MUTE button. If you press and release the PROG/MUTE button a second time during the alert, the audio alert will be turned back on.

PROG/MUTE button
Press and release
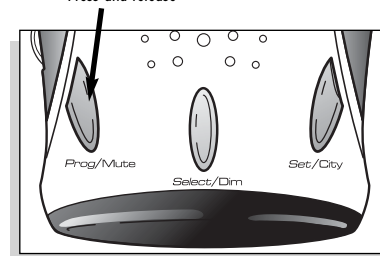
Voice Alert Mode and Tone Mode

You can set your detector to sound alerts and confirm user settings with either a voice or a tone. When you turn Voice Alert mode on you will hear "voice alert". When you turn Tone mode on you will hear 1 beep (voice alerts will be turned off). (See page 7 for instructions on using the Program mode to select Voice Alert mode or Tone mode.)

The factory setting is Voice Alert mode.

Auxiliary Audio Jack

Use to connect an external speaker in environments with high ambient noise levels. The internal speaker will be disconnected.

Compass

Your detector includes an internal 8-point compass that will continuously display your current direction of travel: N, NE, E, SE, S, SW, W, or NW.

Calibrating the Compass

Important: Before using it for the first time, you must calibrate the compass to provide accurate indications of direction. (See page 15 for instructions using the Program mode to select Set Compass.)

Calibration allows the compass electronics to measure and store information about the magnetic fields generated by your vehicle.

The compass will remain accurately calibrated as long as your unit 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.

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.

To calibrate the compass:

1.

Procedure	Tone	Voice	Visual Display
In Program mode, go to Set Compass. Press and hold the **SET/CITY** button to begin setting the compass.	2 beeps	"set compass"	**Set Compass** **Drive in 2 circles…** **Press SET when done…**

2.

Procedure	Tone	Voice	Visual Display
Within 2 minutes, drive your vehicle in a circle twice, then press the **SET/CITY** button again.	3 beeps	"compass set"	**Compass Set!** for 2 seconds followed by direction of travel (**N**, **NE**, **E**, **SE**, **S**, **SW**, **W**, or **NW**)
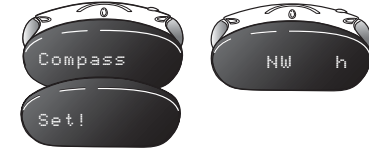
	Tone	Voice	Visual Display
NOTE: *If you do not press the SET/CITY button within 2 minutes, compass calibration will automatically terminate*	1 beep	"compass not set… please try again"	**Compass not set…** **Please try again…** for 2 seconds

3.

Procedure	Tone	Voice	Visual Display
Press and release either the **SELECT/DIM** button to proceed to the next user mode or the **PROG/MUTE** button to exit Program mode.	none	none	none

Pop Alert

Pop Alert will alert you of Ka band Pop signals. During the alert, the unit continues to detect other signals.

When you turn Pop Ka Detect on or off you will hear "Ka pop on" in Voice Alert mode or 2 beeps in Tone mode for Pop detection on and "Ka pop off" in Voice Alert mode or 1 beep in Tone mode for Pop detection off. (See page 7 for instructions on using the Program Mode to turn Pop Ka Detect on and off.)

The factory setting is Pop Ka Detect off.

VG-2 Alert

The detector is undetectable by police VG-2 detection devices, and will alert you when such a device is in use near your vehicle. During the alert, the unit continues to detect other signals. You can choose whether or not you want your unit to show VG-2 alerts. With VG-2 Detect mode on, you can also choose whether or not you want your unit to sound audible VG-2 alerts.

When you turn VG-2 Detect mode on or off, you will hear "VG-2 on" in Voice Alert mode or 2 beeps in Tone mode for VG-2 detection on and "VG-2 off" in Voice Alert mode or 1 beep in Tone mode for VG-2 detection off. (See page 7 for instructions on using the Program Mode to turn VG-2 alerts on and off.)

When you turn VG-2 Detect Audio on or off you will hear "VG-2 audio on" in Voice Alert mode or 2 beeps in Tone mode for VG-2 audio on and "VG-2 audio off" in Voice Alert mode or 1 beep in Tone mode for VG-2 audio off. (See page 7 for instructions on using the Program Mode to turn VG-2 audio on and off.)

The factory settings are VG-2 Detect on, VG-2 Detect Audio on.

Spectre Alert

The detector is undetectable by police Spectre detection devices, and will alert you when such a device is in use near your vehicle. During the alert, the unit continues to detect other signals. You can choose whether or not you want your unit to show Spectre alerts. With Spectre Detect mode on, you can also choose whether or not you want your unit to sound audible Spectre alerts.

When you turn Spectre Detect mode on or off you will hear "spectre on" in Voice Alert mode or 2 beeps in Tone mode for Spectre detection on and "spectre off" in Voice Alert mode or 1 beep in Tone mode for Spectre detection off. (See page 7 for instructions on using the Program Mode to turn Spectre alerts on and off.)

When you turn Spectre audio on or off, you will hear "spectre audio on" in Voice Alert mode or 2 beeps in Tone mode for Spectre audio on and "spectre audio off" in Voice Alert mode or 1 beep in Tone mode for Spectre audio off. (See page 7 for instructions on using the Program Mode to turn Spectre audio on and off.)

The factory settings are Spectre Detect on, Spectre Detect Audio on.

SmartPower

Your detector includes the SmartPower feature that, when activated, will put the unit into standby mode (low power) for about 30 minutes after the car's engine has been turned off. After 30 minutes in standby mode, the unit will automatically turn off.

To return the unit to normal power mode or exit standby mode, start the car, press any button or turn the unit off and then on again.

When you turn SmartPower mode on or off you will hear "smart power on" in Voice Alert mode or 2 beeps in Tone mode for SmartPower on and "smart power off" in Voice Alert mode or 1 beep in Tone mode for SmartPower off. (See page 7 for instructions on using the Program mode to turn SmartPower mode on or off.)

Before the unit enters standby mode, you will hear 1 beep in Voice Alert mode or Tone mode and "**Pwr Save**" will appear in the display. Press any button to exit standby mode or return to normal power mode.
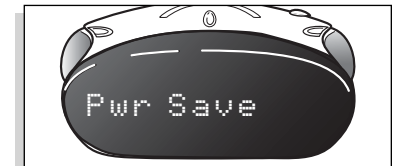
The factory setting is SmartPower on.

DigiView Data Display Brightness

Your detector has a Bright display mode (for daytime driving) and 3 levels of Dim display modes (Dim for dusk driving, Dimmer for night driving and Dark where no visual alerts will be displayed) to control the display's brightness levels.

Dark indicator

Press and release the SELECT/DIM button to switch between Bright mode and Dim mode. In Bright mode you will hear "bright" in Voice Alert mode or 2 beeps in Tone mode. In Dim mode (Dim, Dimmer or Dark mode) you will hear "dim", "dimmer" or "dark" in Voice Alert mode or 1 beep in Tone mode.

SELECT/DIM button

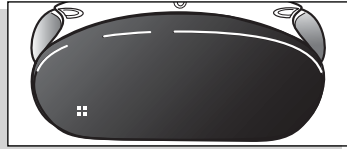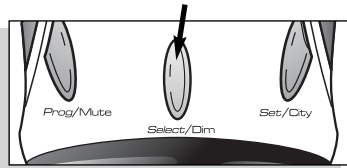Press and hold the SELECT/DIM button to set the Dim mode default. The three Dim display modes will cycle as long as the SELECT/DIM button is held. When the SELECT/DIM button is released, the Dim mode currently displayed will be set. (See page 7 for instructions on using the Program mode to select a Dim mode default.)

Dim

PRESS & HOLD SELECT/DIM BUTTON

Dark

PRESS & HOLD SELECT/DIM BUTTON

Dimmer

PRESS & HOLD SELECT/DIM BUTTON
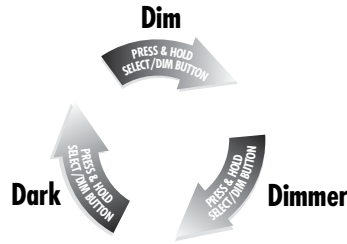
The factory setting is Bright. The factory Dim mode default setting is Dimmer.

Signals Detected

The tables on the following pages show you the types of signals your detector will detect, as well as voice and visual alerts it provides for each one.

Audio Alerts

In Voice Alert mode you will first hear several tones, then a voice message announcing the type of signal detected, followed by more tones. In Tone mode, you will hear the tones only.

In both Voice Alert and Tone modes, a distinctly different alert tone is used for each type of signal detected (including separate tones for each laser signal). For X, K, and Ka 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, page 22.)

Visual Display

An indication of the type of signal detected will appear in the DigiView Data Display. During X, K, and Ka alerts, you will also see from 1 to 5 vertical bars, indicating the strength of the signal detected.

SIGNAL STRENGTH CHART
Weakest Signal
⬛⬛⬛⬛⬛   1
⬛⬛⬛⬛⬛ ⬛⬛⬛⬛⬛   2
⬛⬛⬛⬛⬛ ⬛⬛⬛⬛⬛ ⬛⬛⬛⬛⬛   3
⬛⬛⬛⬛⬛ ⬛⬛⬛⬛⬛ ⬛⬛⬛⬛⬛ ⬛⬛⬛⬛⬛   4
⬛⬛⬛⬛⬛ ⬛⬛⬛⬛⬛ ⬛⬛⬛⬛⬛ ⬛⬛⬛⬛⬛ ⬛⬛⬛⬛⬛ 5
Strongest Signal

Type of Signal		Voice	Visual Display
Radar	X band radar	"**X alert**"	**X**
	K band radar	"**K alert**"	**K**
	Ka band radar	"**Ka alert**"	**Ka**
	Ka band Pop	"**pop alert**"	**Pop!**

X ._.∎∎∎5   K ._.∎∎∎5   Ka._.∎∎∎5   Pop!

Type of Signal		Voice	Visual Display
Laser*	LTI 20-20*	"**laser alert**"	**Laser 20/20…**
	LTI Ultra-Lyte*	"**laser alert**"	**Laser UltraLyte…**
	Kustom Signals ProLaser*	"**laser alert**"	**Laser Pro Laser…**
	Kustom Signals ProLaser III*	"**laser alert**"	**Laser Pro Laser 3…**

PLEASE NOTE: *Beep rate changes with different laser alerts*

Laser 20/20...   Laser UltraLyte...   Laser Pro Laser...   Laser Pro Laser 3..

Type of Signal	Voice	Visual Display
Strobe Alert*	3M Opticom or Tomar	"**emergency vehicle approaching**"
		Emergency Vehicle… (flashing)

PLEASE NOTE: *There are different tones for each Safety Alert*

Emergency V

Type of Signal	Voice	Visual Display
Safety Alert	emergency vehicles	"**emergency vehicle approaching**"	**Emergency Vehicle…**
	road hazards	"**road hazard ahead**"	**Road Hazard**
	trains	"**train approaching**"	**Train**

PLEASE NOTE: *There are different tones for each Safety Alert*

Emergency V   Road Hazard   Train

Type of Signal	Voice	Visual Display
VG-2 Alert	Interceptor VG-2	"**VG-2 alert**"	**VG2**

VG2

Type of Signal	Voice	Visual Display
Spectre	Spectre	"**spectre alert**"	**Spectre**

Spectre

Instant-On Detection

Your detector is designed to detect instant-on speed monitoring signals, which can suddenly appear at near full strength.

You should take appropriate action immediately whenever an alert is given.

Bee III 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	exercise caution
tone instantly begins repeating rapidly	radar, VG-2 or Spectre nearby has been activated suddenly	FULL ALERT
Pop mode tone	Bee III Pop mode 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

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.

VG-2 and Spectre

VG-2 and Spectre are "detector detectors" that work by detecting low-level signals emitted by most radar detectors. Your detector does not emit signals that can be detected by VG-2 or Spectre, but does detect VG-2 and Spectre signals and will alert you when a device is in use near your vehicle, if you so choose.

Safety Alert Traffic Warning System

SAFETY ALERT 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 quickly. 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.

Pop Radar Guns

The Pop mode radar gun is a single pulse Doppler radar that is a feature of a Ka band Instant On radar gun. It uses a single short time pulse (<100 msec.) 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.

While your purchased radar detector will detect this mode of operation in excess of it's range of operation, the very nature of the Pop signals also means that the Pop mode receiver section is more prone to false alerts than the Continuous Wave portions of the Detector. In recognition of the fact that the Pop mode guns are new and limited in distribution, Cobra Electronics has included a user selectable on or off Pop Ka Detect mode.

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 LIDAR legal to use?

Yes. It is legal in all 50 states.

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 1-amp fuse only.)

Customer Service

Technical assistance in English and/or Spanish for your unit through one of our customer support services:

Automated Help Desk is available is English only 24 hours a day, 7 days a week at 773-889-3087.

Customer Service Operators are available in English or Spanish at 773-889-3087 Monday through Friday, 8:00 a.m. to 6:00 p.m. CST.

Questions can be faxed in English or Spanish to 773-622-2269.

Automated Technical Assistance is available in English or Spanish 24 hours, 7 days a week via e-mail at: productinfo@cobra.com

On-line answers to frequently asked questions can be found in English only at: www.cobra.com.

For assistance outside the USA, please contact your local dealer.

Product Service

If you suspect that your unit requires service, please call 773-889-3087 BEFORE shipping it to Cobra. This will ensure that you receive service as quickly as possible.

If you are asked to send your unit to the Cobra factory, please follow these steps:

1. Send the complete unit, including power cord. (It is not necessary to include the mounting bracket.)

2. For warranty repair, enclose some form of proof-of-purchase, such as a photocopy or carbon copy of a sales receipt. If you send the original receipt, it cannot be returned.

3. Enclose a typed or clearly written description of the problem you are having with your unit, plus the name and address where you want the unit returned.

4. Pack the unit securely to prevent damage during transit. If possible, use the original packing materials.

5. Ship prepaid and insured using a traceable carrier such as United Parcel Service (UPS), Federal Express, or Priority mail with delivery confirmation. Ship to:

**Cobra Factory Service
Cobra Electronics Corporation
6500 West Cortland Street
Chicago, IL 60707 USA**

6. Please allow 3 to 4 weeks before contacting us about the status of your service. Call 773-889-3087 for assistance.

If your unit is under warranty, it will either be repaired or replaced upon receipt, depending on the model. If your unit is out of warranty, you will receive a letter informing you of the repair or replacement charge.

Cobra Electronics Corporation
6500 West Cortland Street, Chicago, Illinois 60707 USA
www.cobra.com

COBRA ELECTRONICS CORPORATION
warrants that its Cobra 11 Band Ultra Radar/ Laser Detectors, and the component parts thereof, will be free of defects in workmanship and materials for period of one (1) 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 11 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.

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
Laser	910	± 50	nm
Strobe	700	± 300	nm
Unit Dimensions & Weight			
Dimensions	3 $\frac{3}{16}$"W x 1 $\frac{5}{16}$"H x 4 $\frac{11}{16}$"D		
Weight	170 grams		

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. Additional patents may be listed inside the product or pending.

You can find these fine accessories at your local Cobra dealer. If you wish, you can order directly from Cobra.
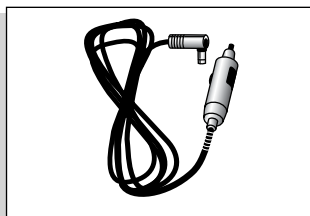
To order by phone

Call **773.889.3087**
(Press 1 from the main menu 8 a.m.-6 p.m. M-F CST.)

To order by mail or fax

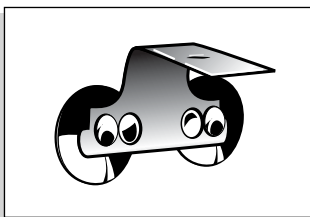Please fill out order form on next page, and mail/fax directly to Cobra.
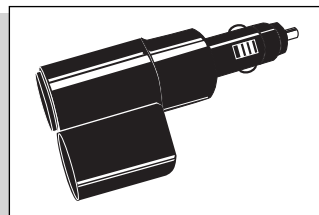
To order online

Go to www.cobra.com.

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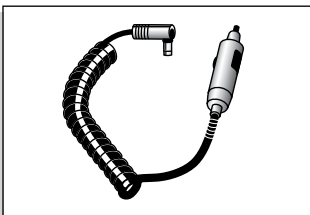
Includes plug and fuse
420-030-N-001

Windshield Mounting Bracket

Includes suction cups
545-139-N-001

Dual Port Power Adapter

Includes adjustable plug (up to 90°) and fuse CLP-2B

Curled 12V DC Power Cord

Includes plug and fuse
420-026-N-001

Item #	Description	Cost Ea.	Qty.	Amount
420-030-N-001	Straight 12V Power Cord			
420-026-N-001	Curled 12V Power Cord			
545-139-N-001	Windshield Mounting Bracket			
CLP-2B	Dual Port Power Adapter			

Prices subject to change without notice.

Subtotal	
(Tax if applicable)	
Shipping/handling	$4.00
Total	

Tax Table

California residents add 7.25%
Illinois residents add 8.75%
Indiana residents add 6%
Michigan residents add 6%
Ohio residents add 5%
Wisconsin residents add 5%

For credit card orders fill out order form and fax to: **773.622.2269** or call **773.889.3087** (Press 1 from the main menu) 8:00 am - 6:00 pm, M-F, CST.

Make check or money order payable to:
Cobra Electronics
6500 West Cortland Street
Chicago, IL 60707 USA
Attn: Accessories Dept.

To order online, please visit our website at:
www.cobra.com

Please print clearly

Name

Address (No P.O. Box)

City ___ State

Zip

Telephone (___)

Credit Card No. ___ Exp. Date

Circle One: Visa   MasterCard   Discover

Customer Signature

Allow 2-3 weeks for delivery. Offer valid in Continental U.S. only.

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Radar/Laser Detectors

GPS

Safety Alert®
Traffic Warning Systems

Accessories

HighGear™ Accessories

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to order any of our products,
please visit our website:

www.cobra.com

<u>Nothing</u> comes close to a Cobra®