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Radar/Laser Detectors

Safety Alert® Traffic Warning Systems

Truck-Specific Navigation Systems

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English



Operating Instructions



9 BAND®
RADAR/LASER DETECTOR WITH
EXTRA SENSORY DETECTION

ESD 7570

Printed in China
Part No. 480-661-P
Version B



Introduction

Important Information and Customer Assistance

Important Information

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.

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.

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. Do not attempt to change settings of the unit while in motion.

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. productinfo@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

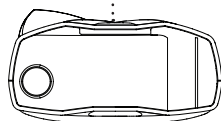
Nothing Comes Close to a Cobra®

A1

Nothing Comes Close to a Cobra®

Controls, Indicators and Connections

Windshield Bracket
Mounting Slot



LaserEye
For 360° detection of
laser signals.

Speaker



12V DC
Power Jack

On-Off/Volume Control
Allows you to adjust the
volume of the alerts.

Dim Button
For adjusting the
display brightness.

Mute Button
For manual mute
or auto mute of
audio alerts.

City Button
For City or Highway
modes to reduce
false alerts.



This device complies with part 15 of FCC rules: Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received including interference that may cause undesired operation.

Display

Radar Indicators Laser Indicator VG-2 and Safety Alert Indicator



Level 1 Indicator and Power Indicator Level 2 & 3 Indicator Level 4 & 5 Indicator City/Highway Mode Indicator



NOTE: In This Manual
When steady,
the display will
be shown:



When flashing,
the display will
be shown:



Product Features

Congratulations! You've made a smart choice by purchasing a 9 Band radar/laser detector from Cobra. Just look at some of the sophisticated features and capabilities your new unit includes:

Detection And Separate Alerts For:
Radar signals (X, K and Ka bands, with signal strength indicated), laser and VG-2 signals

LaserEye®
For 360° detection of laser signals

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

Tone Alerts
With adjustable volume

UltraBright™ Data Display
Is easy to read

City or Highway
Modes to reduce false alerts

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

Manual Mute Or Auto Mute
A mute function of audio alerts

Mounting
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.

Ordering From U.S.A.

Call 773-889-3087 for pricing or visit www.cobra.com.

For Credit Card Orders

Call 773-889-3087 [Press one from the main menu] 8:00 a.m. to 5:30 p.m. Central Time, Monday through Friday.

Make Check or Money Order Payable To
Cobra Electronics, Attn: Accessories Dept.,
6500 West Cortland Street, Chicago, IL 60707 U.S.A.

To Order Online

Please visit our website: www.cobra.com

Item#	Description
420-030-N-001	Straight 12V Power Cord
420-030-N-001	Coiled 12V Power Cord
545-159-N-001	Windshield Mounting Bracket
CLP-2B	Dual Port Power Adapter

Trademark Acknowledgement

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Your Detector

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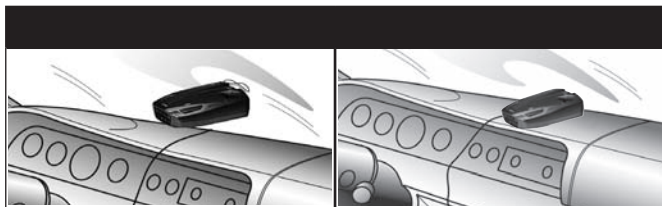
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Installation

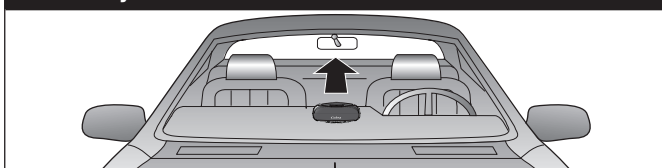
Where to Mount Your Unit

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.



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

Attach the rubber cups to the bracket.



Make sure the rubber cups and your windshield are clean.

Push the bracket firmly onto the windshield.



Attach the detector to the bracket.



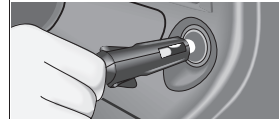
To adjust the angle if necessary, gently push or pull on the bracket to bend it. **DO NOT** use the detector to bend the bracket.



Plug the power cord into the detector.



Plug the cigarette lighter adapter on the power cord into your vehicle's cigarette lighter.

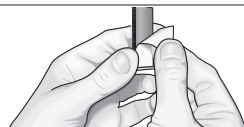


You can temporarily remove the detector whenever you wish by depressing the bracket release button and sliding it off the bracket.

Dashboard Mounting

1. Place the detector on the dashboard to find a location where the unit has a clear, level 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.



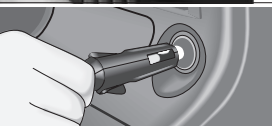
4. Attach the detector to the hook-and-loop fastener. You can remove and reattach the unit as often as you like.



5. Plug the power cord into the detector.



6. Plug the cigarette lighter adapter on the power cord into your vehicle's cigarette lighter.



Getting Started



Power Indicator Screen



To Turn On The Unit And Adjust The Audio Volume

Rotate the **On-Off/Volume** control clockwise (away from you).

Audio	Visual Display
Three beeps	The LED in the lower left corner of the screen will light to indicate that the power is On.



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 turn Off or unplug your detector when parking for lengthy periods.

Settings

When changing the Settings on your detector, please keep in mind:

- Each time the unit is turned On the factory settings of **Highway** and **Auto Mute-On** will be set. They can be changed while the unit is in use as described in the following sections.

Highway/City Mode

Setting your detector to **City** mode delays all X band audio alerts at lower signal strength levels. (A single beep will sound when the signal is first detected.) This will reduce false alerts while you are driving in, or near, urban areas where there are many sources for conflicting X band signals such as microwave towers and automatic door openers.

To change settings, follow the procedure listed below, which indicates what you will see and hear as you complete each step. The factory setting is **Highway** mode.

Highway Mode



City Mode



City Button
Press and
release



To Change From Highway Mode To City Mode

Press and release the City button.	Audio	Visual Display
	One beep	C LED Lights

To Change From City Mode To Highway Mode

Press and release the City button again.	Audio	Visual Display
	Two beeps	Audio Only

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.

Auto Mute Mode

Auto Mute will automatically reduce the audio volume of all alerts after four seconds for as long as the signal is detected. The factory setting for Auto Mute is On.



Mute Button
Press and
release

To Turn Auto Mute Off

Press and release the Mute button while no alert is occurring.	Audio	Visual Display
	One beep	Audio Only

To Turn Auto Mute On

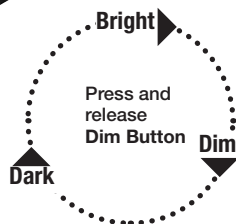
Press and release the Mute button again while no alert is occurring.	Audio	Visual Display
	Two beeps	Audio Only



Dim Button   City Button
.....  Mute Button

Data Display Brightness

You can choose from three settings for **Brightness** of the display. Repeatedly push the **Dim** button to cycle through the settings. In **Dark** mode the power LED will blink slowly to indicate that power is On. The factory setting is Bright.



VG-2 Alert Settings

Police use radar detector detectors (RDDs) to spot users of radar detectors. Your detector is able to identify signals from **VG-2** RDDs and can provide alerts when any of these or similar devices are in use near your vehicle.

Your detector is invisible to VG-2 RDDs. You can choose whether you want to be alerted to VG-2 RDD signals. The factory setting for VG-2 alert is Off.

To Turn VG-2 Alerts On and Off

While no signal is being detected, press and hold the Dim button for four seconds.	Audio	Visual Display
	On = One Beep	V/S Flashes Once
	Off = Two beeps	V/S Flashes Twice

Radar Alert Settings

The detector allows you to choose whether it will show alerts on the **X**, **K** and **Ka** Bands. The factory settings are: X, K, and Ka Band On.

To Turn X Band On and Off

While no signal is being detected, press and hold both the Dim and Mute buttons for four seconds.	Audio	Visual Display
	X On = Two beeps	X/K LED Flashes Twice
	X Off = One beep	X/K LED Flashes Once

To Turn K Band On and Off

While no signal is being detected, press and hold both the Mute and City buttons for four seconds.	Audio	Visual Display
	K On = Two beeps	X/K Flashes Twice
	K Off = One beep	X/K Flashes Once

To Turn Ka Band On and Off

While no signal is being detected, press and hold the Dim and City buttons for four seconds.	Audio	Visual Display
	Ka On = Two beeps	Ka Flashes Twice
	Ka Off = One beep	Ka Flashes Once



Signals Detected

The tables on the following pages show you 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 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 on page 13.)

Visual Display

An indication of the type of signal detected and, for radar signals, the signal strength will appear in the UltraBright Data Display. Radar signal strength will be indicated by steady, flashing, or a combination of steady and flashing LEDs as shown in the signal strength chart below.



NOTE: In This Manual

When steady, the display will be shown:



When flashing, the display will be shown:



Signal Strength Chart

Signal Strength = 1
(Weakest Signal)



Signal Strength = 2



Signal Strength = 3



Signal Strength = 4



Signal Strength = 5 (Strongest Signal)



Radar Signals and Visual Displays

Type of Signal	Visual Display
X Band Radar	X/K is Steady & lower LEDs show signal strength
K Band Radar	X/K is Steady & lower LEDs show signal strength
Ka Band Radar	Ka is Steady & lower LEDs show signal strength

X Signal Detected
Signal Strength = 1



K Signal Detected
Signal Strength = 3



Ka Signal Detected
Signal Strength = 5



Laser Signals and Visual Displays

Type of Signal	Visual Display
LTI 20-20*	L is Steady
LTI Laser*	L is Steady
Kustom Signals Laser 340*	L is Steady
Kustom Signals Laser*	L is Steady
Stalker LIDAR*	L is Steady
Laser Atlanta SpeedLaser/Kustom Signals-ProLaser II*	L is Steady

* Your detector provides 360° detection of these signals.

Laser Signal Detected





Visual Display (continued)

Safety Alert

Type of Signal	Visual Display
Emergency Vehicles	V/S is Steady

Safety Alert Detected



VG-2 Alert

Type of Signal	Visual Display
VG-2 RDD	VG-2 is Steady

VG-2 RDD Detected



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.



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 or VG-2 nearby.	Exercise caution
Tone instantly begins repeating rapidly.	Radar or VG-2 nearby has been activated suddenly.	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
A safety alert.	You are nearing an emergency vehicle.	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

VG-2 is a “detector detector” that works by detecting low-level signals emitted by most radar detectors. Your detector does not emit signals that can be detected by VG-2, but does detect VG-2 signals and will alert you when 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 an emergency vehicle.

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 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.



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).



Maintenance

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
VG-2	11.500	± 0.250	GHz
Laser	910	± 50	nm



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

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.

Limited 1-Year Warranty

For Products Purchased in the U.S.A.

Cobra Electronics Corporation warrants that its Cobra 9 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 9 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. 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 Insured 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.

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 21.



**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°) & fuse
Item #CLP-2B