SCobra[®] band

Operating Instructions for your Cobra® 9 Band® Extra Sensory Detection®

Radar/Laser Detector Model ESD-9150



Introduction



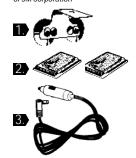
How to Use Your Cobra ESD Radar/Laser Detector



and Strobe Alert™

Use of this product is not intended to, and does not ensure that the motorist and any passenger will not be involved in a traffic accident. It is only intended to alert the motorist that an emergency or service vehicle equipped with a CODE 3,Strobe (Opticom* or Tomar Preemption System) or Cobra Safety Alert Transmitter is in the area as defined by the range of the product. Please call your local Fire/Police department to verify if coverage exists in your area. Motorists are expected to exercise all due caution while using this product, and to observe and follow all applicable traffic laws. Operators of emergency or service vehicles are also expected to exercise all due caution while using this product, and to observe and follow all applicable traffic laws.

*Opticom is a registered trademark of 3M Corporation



Introduction

Congratulations! You have just purchased the most sophisticated RADAR/LASER DETECTOR available today. This booklet contains instructions and information designed so that you will be able to understand how the Cobra ESD-9150 works and how radar and (LIDAR) laser are used. Enjoy your Cobra ESD-9150 Radar/Laser Detector and **drive safely**.

Federal Law Governing Use of Radar Detectors

It is not against Federal Law to receive radar transmissions on your COBRA Radar Detector. The Communications Act of 1934 guarantees your right to receive radio transmissions on any frequency. Local laws that contravene the Communications Act of 1934, while illegal, may be enforced by your local law enforcement officials until and unless they are prohibited from doing so by Federal Court action.

WARNING: Before leaving your car, make sure that you conceal your radar detector. This will reduce the possibility of break-in and theft of your unit.

Included with your ESD-9150

- Windshield Bracket
- 2. Hook and Loop Material
- 3. Power Cord

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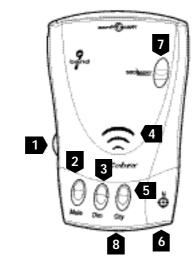
Features of This Product

- 8-point Electronic Compass
- Safety Alert® Traffic Warning System
- 360° Strobe Alert™
- Separate Visual and Audio Alarms
- Signal Strength Indicators
- LaserEye® 360° Detection
- VG-2 Undetectable
- Auto and Manual Muting
- 3 Level Dim Button
- · Superior Audio Volume
- Adjustable Windshield Mounting Bracket

Controls and Indicators

Our Thanks to You

- On/Off Volume Control
- 2. Mute Button
- 3. Dim Button
- 4. Audio Alerts Speaker
- 5. Highway/City Button
- 6. Compass Direction Indicators
- 7. LaserEye®
- 8. Band/ Signal Strength Indicators
- 9. Windshield Bracket Mount
- 10. 12V DC Power Jack







Thank you for purchasing the Cobra ESD-9150 Radar/Laser Detector. Properly used, this Cobra product will give you many years of reliable service.

Customer Support

Should you encounter any problems with the product or not understand its many features, please refer to this owner's manual. If, after referring to the manual, you still need help, call Cobra Customer Service at 773.889.3087.

Cobra Customer Service

Live operators are available M-F 8:00 am - 6:00 pm Central Standard Time at: 773.889.3087

Automated Technical Assistance available 24 hours a day, seven days a week. E-mail questions to: productinfo@cobra.com

Cobra on the World Wide Web: Frequently Asked Questions (FAQ) can be found on-line at: www.cobra.com Installation

Location

Location

Selecting the proper location to mount the Cobra ESD-9150 is very important for optimum performance. Both radar and laser transmissions pass through glass but not through other objects. For this reason the Cobra ESD-9150 lenses must not be blocked. It should have a view of the rear window to take advantage of LaserEye® 360° detection. It is best to locate your detector as low on the front windshield as possible.

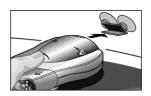
Examples of metal in the windshield area that can block or weaken incoming radar/laser signals:

- 1. Windshield wiper blades.
- 2. Mirrored sun screens.
- Regular tinted glass does not affect radar reception, although the darker tint at the top of the tinted windshield prevents laser light from penetrating.
- 4. Heated windshields, currently available as an option for some Ford® (Instaclear) and GM® (Electriclear vehicles act as an impenetrable barrier to radar signals). If in doubt, check with your dealer to see if this applies to your vehicle.

Windshield Mounting



Attach cups to bracket.



3 Attach detector to bracket.



2 Attach bracket to

windshield.

4 Bend bracket for correct detection angle (if needed). Do not use the ESD-9150 to bend bracket.



5 Plug power cord into detector.



6 Plug power cord into cigarette lighter.

Windshield Mounting

Quick Start

Dash Mounting

Note

It will be easy for you to remove and reinstall your Cobra ESD-9150 detector at any time using this hook and loop material on the dashboard.

Remember: Without the means to adjust the angle of the detector (when mounted as above), be sure you that your Cobra ESD-9150 has a level, clear view of the road before you attach the hook and loop material.

Dash Mounting



 Peel protective paper off one side of hook and loop material.



2 Place on dash.



3 Peel top paper off.



Place detector on hook and loop pad.



Plug power cord into detector.



6 Plug power cord into cigarette lighter.

Turn On and Adjust Volume



• Rotate ON-OFF Volume Control to left (away from you). Three beeps will be heard and all LEDs will light up in sequence.
A compass LED will remain lit to indicate the unit power is ON.

Turn On and Adjust Volume

Note

Display Brightness, City/ Highway, Muting, VG-2 Audio Alert On/Off settings and compass calibration data are retained in memory even when unit is turned OFF or removed from power source.

Note

The compass must be calibrated before initial use. For more detailed instructions on compass calibration, see page 13.

Set Display Brightness

LED Displays

Note

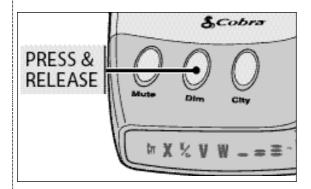
A three level display brightness is provided for dusk or night driving. For more detailed operation instructions on set display brightness, see page 10.

Note

The factory default mode is Bright setting.

Set Display Brightness

Select from three levels of LED brightness for your Cobra ESD-9150 display: Bright, Dim and Dark.

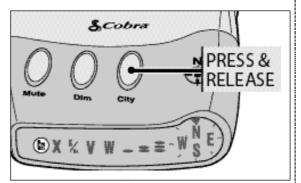


Press and release Dim button to select Dim setting. Press and release Dim button twice to select Dark setting. Press and release Dim button a third time to select Bright setting.

Set Highway/City Mode

City Mode

For urban driving–reduces number of X-Band audible alerts.



1 Press and release CITY button.

(ITY LED will illuminate while in City mode.

Highway Mode

For all other driving

1 Press and release OCITY button again. A double beep confirms highway mode.

Set Highway/ City Mode

Note

The factory default mode is Highway setting. For more detailed operation instructions on set highway/city mode, see page 11.

Turning

On Your

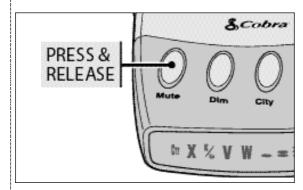
ESD-9150

Set Muting Mode

Set Muting Mode

Auto Muting

Automatically reduces volume of alert in progress after 4 seconds.



Note

The factory default mode is Auto Muting. For more detailed operation instructions on setting muting mode, see page 12.

Manual Muting

• Press and release MUTE button to reduce volume of alert in progress.

To Switch Between Modes

Press and release MUTE Button when no signal is being received, to switch from Manual to Auto Mute.

Turning On Your ESD-9150



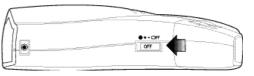


Plug power cord into detector.

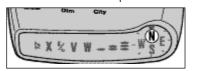
Plug power cord into cigarette lighter.

Note

The compass must be calibrated before initial use. For more detailed instructions on compass calibration, see page 13.



Rotate ON-OFF Volume Control to the left (away from you). Three power ON confirmation beeps will be heard and all LEDs will light up from left to right in sequence.
One of the compass LEDs will remain lit to indicate the unit power is ON.



ON mode

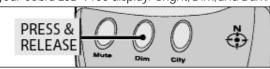
Dim Button

Note

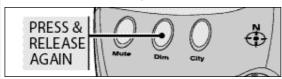
Bright = "Beep-Beep" Dim = "Beep" Dark = "Beep"

Dim Button

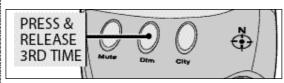
You may select from three levels of brightness for your Cobra ESD-9150 display: Bright, Dim, and Dark.



Press and release DIM button to reduce the LED display brightness to Dim.A single beep confirms dim LED brightness.



2 Press and release ODIM button again to turn LED display off. A single beep confirms no LED display. The compass LED(s) will stay on dim.

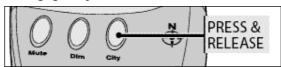


3 Press and release ☐DIM button a third time to return led display to Bright.A double beep confirms normal LED brightness.

Highway/City Mode

The Highway/City function is controlled by a 2-step button. In the City mode, false radar alerts will be reduced.

To engage City Mode:



• Press and release OCITY button and the IT LED on the front of the unit will illuminate. A single beep confirms City mode.



CITY LED will illuminate while in CITY mode.

To reactivate the Highway Mode:

Press and release CCITY button again.
 A double beep confirms Highway Mode.

Highway/City Mode

Note

Use City Mode in or near cities where there are many sources of false radar signals such as microwave relay towers and automatic door openers. This will filter out weak signals.

Note

City = "Beep" Highway = "Beep-Beep" Operation

Detection

Muting Mode

Note

Mute="Beep" Auto Mute="Beep-Beep"

Note

In either mode, the next alarm will begin with normal volume. The ESD-9150 will retain the chosen mode while OFF.

Memory Set

Your Cobra ESD-9150 features an automatic internal electronic memory system. It will automatically "remember" your settings when the unit is turned "OFF" or removed from power source.

Muting Mode

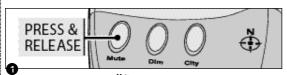
The ESD-9150 offers two Mute Modes; Auto and Manual. To switch between these modes:

Auto Mode



• Press and release MUTE button when no signal is being received to turn Auto Mute on and off. In Auto mode, the alarm will be reduced in volume after four seconds.

Manual Mode



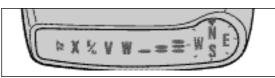
Press and release MUTE button anytime to turn off the audio alert.

Memory Set

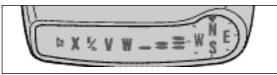
Automatically remembers settings of Display Brightness, City/Highway, Muting, VG-2 Audio Alert On/Off settings and Compass calibration data.

Calibrate Compass

The compass in your ESD-9150 must be calibrated before initial use to give accurate directions. Calibration allows the compass electronics to measure and store information about the magnetic fields from your vehicle.



1 Press City button for a minimum of 2 seconds. A single beep confirmation tone is heard and the compass directional LEDs will flash clockwise to indicate the unit is in calibration-ready mode.



2 Drive your car in a circle twice and then *press* Ocity. Two confirmation beeps are heard and all compass LEDs will flash twice to indicate calibration is completed. The correct compass direction will be displayed. The display provides 8 primary directions; N, NE, E, SE, S, SW, W and NW.

Calibrate Compass

Note

If you decide to re-locate your ESD-9150 to a different location in your vehicle or move it to another vehicle, the compass must be recalibrated.

Note

Your compass may not give a correct reading if you are inside any enclosure, building or close to a large metal tractor trailer, truck or train. Your compass will work again correctly as soon as you get a way from these locations. There is no need to calibrate your compass again.

(12

Begin Band Detection

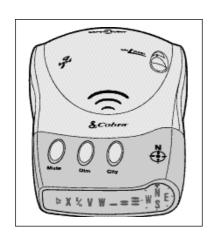
Band Detection

This detector is designed to detect X, K, Superwide Ka Band Radar, Laser (including LTI 20-20*,Ultra Lyte* and ProLaser* technologies), VG-2, Safety Alert and Strobe Alert* signals. *360* Detection

Audible Alarm Speaker

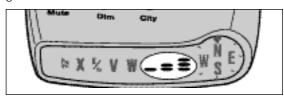
Audible Alarm Audible Alarm Speaker

A different alert tone will sound for X, K, Ka, Laser (plus a distinctly different tone for each of the three laser signals: LTI 20-20, Ultra Lyte and ProLaser), VG-2, and Safety/Strobe Alert signals.



Radar

The display will show the band (X,K/Ka). The signal strength will first be indicated by the band being illuminated, then by signal strength LEDs which increase in size as you approach the radar gun. At the same time the frequency of the beeps will increase. Distinct tones will also be generated for each band.



Instant-On Detection

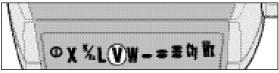
The Cobra ESD-9150 is also designed to detect Instant-on speed monitoring signals. **Immediate action is required when warning is given.**

Radar

VG-2 Alert

VG-2 Undetectable

The Cobra ESD 9150 is undetectable by police VG-2 detection devices. It will alert you when one is in use near your vehicle. During this time, the unit is still on full alert and able to detect other signals.



The VG-2 LED on the front of the unit will illuminate.

Note

Operation of the VG-2 Audio Alert may be selected by the user. The factory default setting is in the "ON" position.

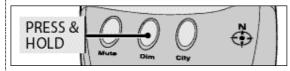
Note

VG-2 Audio Alert On= "Beep" VG-2 Audio Alert Off= "Beep-Beep"

VG-2 Audio Alert

To turn VG-2 Audio Alert "OFF", press and hold the Dim Button for 2 seconds. A single confirmation beep is heard, indicating the VG-2 Audio Alert has been disabled.

To turn the VG-2 Audio Alert "ON", press and hold the Dim Button for 2 seconds again. A double confirmation beep is heard, indicating VG-2 Audio Alert has been activated.



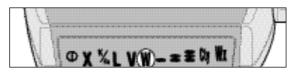
Safety Alert® Traffic Warning System and Strobe Alert™

Indicator "W" is illuminated whenever a signal from a Safety Alert® or Strobe Alert™ transmitters are received.



Laser

Indicator "W" is illuminated.



Laser will trigger 3 distinct audible alerts; one each for LTI 20-20, Ultra Lyte and ProLaser.

Safety Alert® Traffic Warning System and Strobe Alert™

Laser Detection with 360° LaserEye®

Note

The display does not indicate signal strength for VG-2, Safety, Strobe, and Laser alerts.

Radar/VG-2/ Laser Alerts

Radar/VG-2/Laser Alerts

Type of Audible Signal	Interpretation and Response
Your COBRA ESD-9150 starts to signal slowly, then increases in rate very rapidly.	Most likely police radar. FULL ALERT.
Your COBRA ESD-9150 signals just once.	Most likely a false source, or could be pulsed radar. Exercise Caution .
Very fast signal rate instantly.	Radar or VG-2 close by has been suddenly switched on. FULL ALERT .
Slow signal rate as you approach hill or bridge. Sharp increase in signal rate as you reach hill or bridge.	Most likely police radar on other side of hill or bridge. FULL ALERT .
Short-term, weak signaling; series of such signals.	Most likely a false radar source. Exercise Caution.
Laser will trigger 3 distinct audible signals;one each for LTI 20-20,Ultra Lyte and ProLaser.	Use Full Caution . There are no false laser signals.
Safety Alert and Strobe Alert have their own unique *European Emergency* signal.	An emergency vehicle is approaching, you are in the vicinity of a railroad crossing, or you are approaching a road hazard (construction site, accident scene, etc.).

Facts About the Safety Alert® Traffic Warning System

FCC-approved Safety Alert Transmitters emit microwave radar signals to indicate the presence of a safety-related concern. Depending on the frequency of these signals, as set on the transmitter, the outgoing signal can indicate whether the transmitter is on a speeding emergency vehicle or train, or at a stationary road hazard location. These microwave signals are located in the K-band and as a result, any radar detector which detects K-band radar will detect these Safety signals as standard K-band radar alerts. However, unlike a standard radar detector, your Cobra ESD-9150 is designed to differentiate between a standard K-band alert and a Safety Alert warning. Safety technology is relatively new so the number of transmitters in operation is still growing. You may not receive Safety Alert on a daily basis and should not be surprised to encounter some emergency vehicles, road hazards or trains not yet equipped with these transmitters, therefore failing to provide a signal. As Safety Transmitters become more prevalent (the number of operating transmitters is growing every day), these Safety Alerts will become more common. The Safety Alert Transmitter is in use in all 50 states in limited quantities.

Facts About Strobe Alert™

Alerts motorists to over 50,000 emergency vehicles equipped with strobe transmitters that activate red lights at traffic intersections in emergency high speed situations.

Facts About Safety Alert® Traffic Warning System

Note

Strobe Alert™ is available in over 1,000 cities and works with Tomar and Opticom systems. Call your local Fire/Police department for your area coverage or area in which you will be traveling.

Radar Frequencies

Radar Frequencies

There are now three frequencies that have been approved by the FCC (Federal Communications Commission) for use in speed monitoring equipment. They are:

X Band (10.525 GHz),K Band (24.150 GHz) Ka Band (33.400-36.000 GHz)

Your Cobra ESD-9150 can detect signals in all three radar bands including photo radar and STALKER radar which use the Ka band, and Cobra's Safety Alert signals on the K band.

Facts About LIDAR (Laser)

LIDARs must have a clear line of sight to target a vehicle during the entire

line of sight to target a vehicle during the entire measurement interval. Intervening objects such as signposts, utility poles, tree branches, etc., will prevent a valid speed reading.

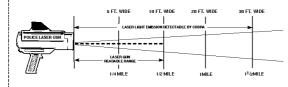
Facts About LIDAR (Laser)

What is LIDAR?

LIDAR stands for Light Detection And Ranging. While everyone refers to it as LASER the correct name is LIDAR.

How does LIDAR work?

LIDAR operates a lot like RADAR.Like RADAR,it spreads out. Not as quickly, but it does spread, as shown on the diagram below.



Does weather have any effect on LIDAR?

Yes, rain, snow, smoke, fog, and airborne dust particles will all reduce the effective range, and if sufficiently dense, may prevent its operation.

Can LIDAR operate through glass?

No, LIDAR guns cannot obtain readings through any glass. But the laser pulse can be received through glass to easily and quickly trigger a laser detector's alarm.

Can LIDAR operate while moving?

No, since LIDAR is line of sight, an officer cannot drive, aim, and shoot while driving.

Is a LIDAR DETECTOR legal to use?

Yes, it is legal in all 50 states.

Maintenance

Your COBRA ESD-9150 RADAR/LASER DETECTOR will give you years of trouble-free service with minimum maintenance.

Replacing Power Cord Fuse

Unscrew cap of cigarette lighter adapter and remove fuse. Replace with 1-ampere fuse only.

Troubleshooting

If your COBRA LASER DETECTOR ESD-9150 isn't operating, we suggest you make the following checks:

- 1. Is the power cord properly connected?
- 2. Is the fuse OK?
- 3. Is the cigarette lighter socket clean and free from corrosion?

Facts About LIDAR (Laser)

Maintenance

20

Specifications

Limited One Year Warranty

Specifications

GENERAL SPECIFICATIONS

A.FREQUENCIES

X BAND 10.525 GHz ± 50 MHz
 K BAND 24.150 GHz ± 100 MHz

3. Ka BAND 33.4 - 36.0 GHz

4. VG-2 11.4 GHz - 11.7 GHz

5. Safety Alert 24.07,24.11,24.19 GHz

6. LTI 20-20 Laser 300 THz - 375 THz

7. Strobe Alert 300 THz - 770 THz

8. Ultra Lyte Laser 300 THz - 375 THz

9. ProLaser 300 THz - 375 THz

B. UNIT DIMENSIONS

3.25"W x 1.375"H x 5"D

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 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 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 or replaced under warranty.

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.



Cobra Electronics Corporation

6500 West Cortland Street Chicago, Illinois 60707 www.cobra.com

Optional Accessories

Accessory Order Form



Straight 12V DC Power Cord Includes plug and fuse 420-080-N-001



Curled 12V DC Power Cord Includes plug and fuse 420-080-N-002



Windshield Mounting Bracket Includes suction cups 545-139-N-001

Item #	Description	Cost Ea.	Qty.	Amount
420-080-N-001	Straight 12V Power Cord			
420-080-N-002	Curled 12V Power Cord			
545-139-N-001	Windshield Mounting Bracket			

Prices subject to change without notice.

Tax Table

Illinois residents add 8.75% Indiana residents add 5% Michigan residents add 6 % Ohio residents add 6% Wisconsin residents add 5% Subtotal
(Tax if applicable)
Shipping/handling \$4.00

You Can Find These Fine Accessories At Your Local Cobra Dealer

If you wish, you can order directly from Cobra.

Order by phone

Call 773.889.3087 (Press 1 from the main menu) 8 a.m.-6 p.m., Monday through Friday, Central Standard Time.

Order by mail or fax

Call 773.889.3087 for pricing. Fill out order form on next page, and mail/fax directly to Cobra.

For credit card orders fill out order for m 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 (no stamps) payable to: Cobra Electronics 6500 West Cortland Street Chicago, IL 60707 Attn: Accessories Dept.	
Please print clearly		
Name		
Address (No P.O. Box)		
City	State	
Zip		
Telephone ()		
Credit Card No.	Exp. Date	
Customer Signature	•	
Circle One: Visa MasterCard	d Discover	

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



 $oldsymbol{\delta}_{\!\!\!0} Cobra^{\scriptscriptstyle{lpha}}$

© 2000 Cobra Electronics Corporation 6500 West Cortland Street Chicago, IL 60707 www.cobra.com

If You Think You Need Service

For technical assistance, please call our Automated Help Desk which can assist you by answering the most frequently asked questions about Cobra products.

(773) 889-3087

24 hours a day, 7 days a week.

A Consumer Service Representative can be reached through this same number 8:00 am - 6:00 pm, Monday through Friday, Central Standard Time

Technical assistance is also available on-line in the Frequently Asked Questions (FAQ) section at www.cobra.com or by e-mail to productinfo@cobra.com

If you think you need service call 773.889.3087

"If your product should require factory service please call Cobra first before sending your unit in. This will ensure the fastest turn-around time on your repair."

You may be asked to send your unit to the Cobra factory. It will be necessary to furnish the following in order 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 or a sales receipt. If you send the original receipt it cannot be returned.
- 2. Send the entire product.
- 3. Enclose a description of what is happening with the unit.Include a typed or clearly print name and address of where the unit is to be returned.
- 4. Pack unit securely to prevent damage in transit. If possible, use the original packing material.
- Ship prepaid and insured by way of a traceable carrier such as United Parcel Service (UPS) or First Class Mail to: Cobra Factory Service, Cobra Electronics Corporation,6500 West Cortland Street, Chicago, IL 60707.
- 6. If the unit is in warranty, upon receipt of your unit it will either be repaired or exchanged depending on the model. Please allow approximately 3 to 4 weeks before contacting us for status. If the unit is out of warranty a letter will automatically be sent informing you of the repair charge or replacement charge. If you have any questions, please call 773.889.3087 for assistance.

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The Cobra line of quality products also includes:

- Citizens Band Radios
- microTALK® Radios
- Radar/Laser Detectors
- GPS
- SafetyAlert®
 Traffic Warning Systems
- Accessories
- HighGear[™] Accessories

Nothing comes close to a Cobra™

EDS-9150 is covered by one or more of the following U.S. patents. Additional patents may be listed inside the product or pending. 5,497,148;5,594,432;5,612,685;6,078,279;6,094,148