

Cobra[®]

9
band

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

Radar/Laser Detector

Model ESD-9220 WX



Nothing comes close to a Cobra[™]

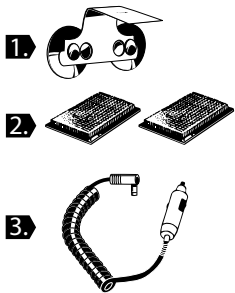
Introduction



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-9220 WX works and how radar and (LIDAR) laser are used. Enjoy your Cobra® ESD-9220 WX 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.

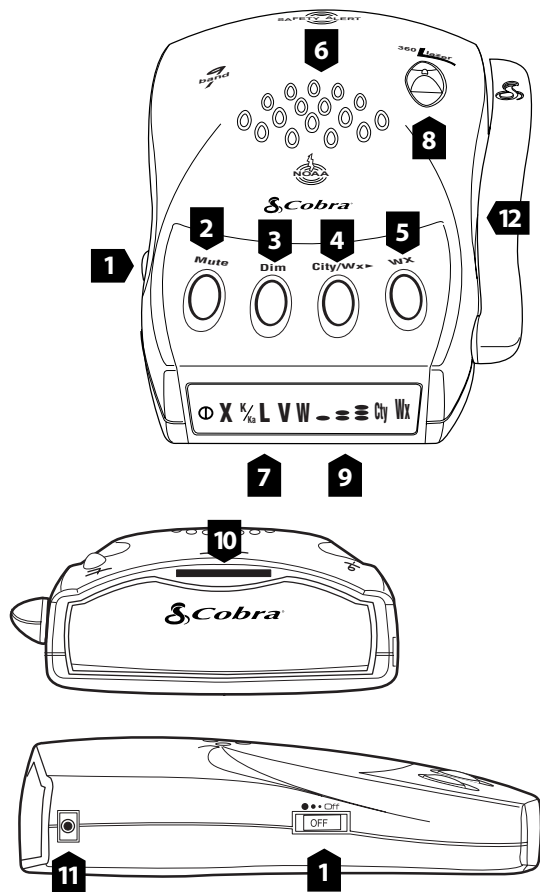
WARNING: Before leaving your car, make sure that you conceal your radar detector. This will reduce the possibility of break-in and theft of your unit.

Included with your ESD-9220 WX

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

Controls and Indicators

1. On/Off Volume Control
2. Mute Button
3. Dim Button
4. Highway/City/Wx Channel Step Button
5. Weather Button
6. Audio Alerts Speaker
7. Band Indicators
8. LaserEye®
9. Signal Strength LEDs
10. Windshield Bracket Mount
11. 12V DC Power Jack
12. Audio Jack



Thank you for purchasing the Cobra® ESD-9220 WX 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.

This device complies with Part 15 of the 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.

Cobra® Customer Service

Live operators are available Monday through Friday 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

Contents

Introduction	A1
Safety Alert®/Strobe Alert™	
Federal Law Governing Radar Detectors	
Included Accessories	
Controls & Indicators	A2
Our Thanks to You	A3
Customer Support.....	A3
Features	1
Installation	2
Quick Start	5
LED Displays.....	6
Operation	9
Turning On.....	9
Dim Button.....	10
Highway/City Mode.....	11
Muting Mode.....	12
Memory Set.....	12
Weather Radio.....	13
Detection	13
Band Detection.....	14
Audible Alarm Indicator.....	14
Radar.....	15
VG-2 Undetectable.....	16
Safety Alert®/Strobe Alert™.....	17
Laser Detection.....	17
Radar/VG-2/Laser Alerts.....	18
Facts About Safety Alert®/Strobe Alert™.....	19
Radar Frequencies.....	20
Facts About Lidar (Laser).....	20
Maintenance	21
Specifications	22
Limited One Year Warranty	23
Optional Accessories	24
Order Form	25
If You Think You Need Service	Back Cover

Features of This Product

- 10 Channel Weather Radio
- Weather Alert
- Voice Alert™
- 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

Location

Location

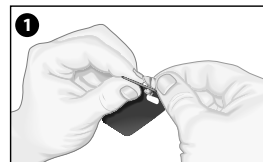
Selecting the proper location to mount the Cobra® ESD-9220 WX is very important for optimum performance. Both radar and laser transmissions pass through glass but not through other objects. For this reason the Cobra® ESD-9220 WX lenses must not be blocked. It should have a view of the rear window to 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.
3. 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

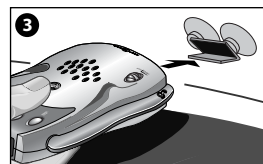
Windshield Mounting



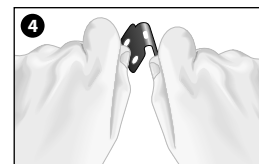
Attach cups to bracket.



Attach bracket to windshield.



Attach detector to bracket.



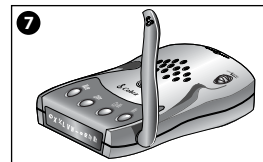
Bend bracket for correct detection angle (if needed).



Plug power cord into detector.



Plug power cord into cigarette lighter.



Place antenna in upright position for optimum reception of weather stations.



Place antenna facing towards dashboard if windshield angle prevents you from placing it upright.

Note

Adjust the bracket so that the tip of the antenna is at least an inch away from the dashboard.

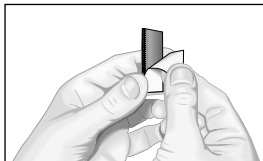
Dash Mounting

Note

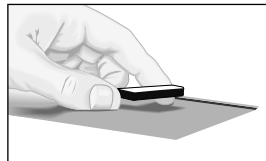
It will be easy for you to remove and reinstall your Cobra® ESD-9220 WX detector at any time using this hook and loop material on the dashboard.

Remember: Without the means to adjust the angle of the detector (when mounted as above), be sure you that your Cobra® ESD-9220 WX has a level, clear view of the road before you attach the hook and loop material.

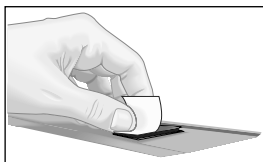
Dash Mounting



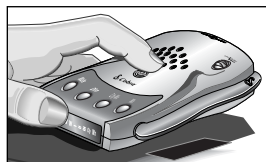
- 1 Peel protective paper off one side of hook and loop material.



- 2 Place on dash.



- 3 Peel top paper off.



- 4 Place detector on hook and loop pad.

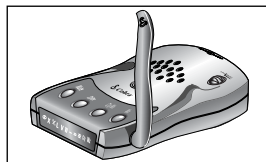


- 5 Plug power cord into detector.

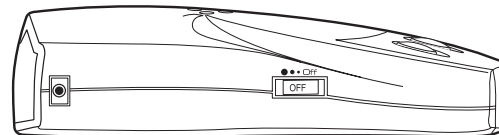


- 6 Plug power cord into cigarette lighter.

- 7 Place antenna in upright position for optimum reception of weather stations.



Turn On and Adjust Volume



- 1 Rotate ON-OFF Volume Control to left (away from you). In both Tone and Voice Modes, the unit will announce "Testing" followed by three beeps. All LEDs will light up from left to right in sequence and announce "System Ready."

Turn On and Adjust Volume

Note

Display Brightness, City/ Highway, Muting, VG-2 Audio Alert On/Off, Weather Radio On/Off (including last station tuned), Wx Alert On/Off settings are retained in memory even when unit is turned OFF or removed from power source.

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 setting is Bright Mode.

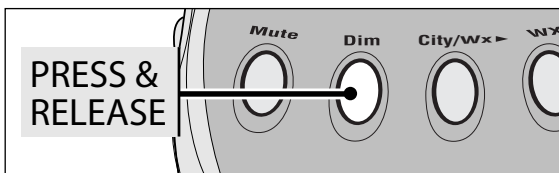
Set Highway/ City Mode




Note

The factory default setting is Highway Mode. For more detailed operation instructions on set Highway/City Mode, see page 11.

Set Display Brightness

Select from three levels of LED brightness for your Cobra® ESD-9220 WX display: Bright, Dim and Dark.

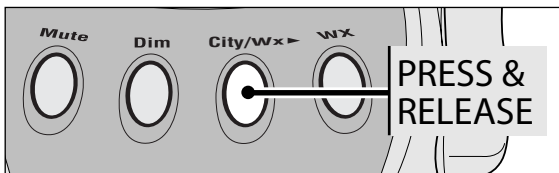


- 1 Press and release  Dim button to select Dim setting. Press and release  Dim button twice to select Dark setting. Press and release  Dim button a third time to select Bright setting.

Set Highway/City Mode

City Mode

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



- 1 Press and release  CITY/WX▶ button.

CITY CITY LED will illuminate while in City Mode. A single beep confirms City Mode.

Highway Mode

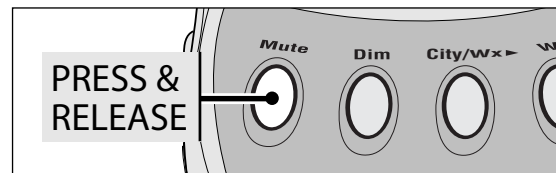
For all other driving.

- 1 Press and release  CITY/WX▶ button again. A double beep confirms Highway Mode.


Set Muting Mode

Auto Muting


Automatically reduces volume of alert in progress after 4 seconds.



Manual Muting

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

To Switch Between Modes

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

Set Highway/ City Mode

Set Muting Mode

Note

The factory default setting is Auto Mute Mode. For more detailed operation instructions on setting Mute Mode, see page 12.

Turning On Weather and Changing Stations




Note

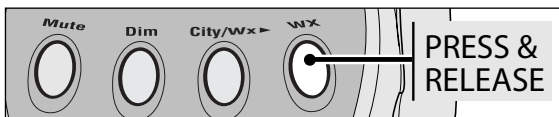
Both Weather On/Off and Weather Alert On/Off settings, including the last station you were listening to, are retained in memory even when unit is turned OFF.

Note


Factory default setting is Weather Off and Weather Alert Off Mode.

Turning on Weather and Changing Stations

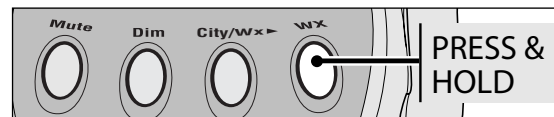
- 1 Press and release  Wx button to activate weather radio. When activated the Wx LED will come on and the unit will announce "Weather On" in Voice Mode or signal two beeps in Tone Mode.
- 2 If no station is heard, press and release  CITY/Wx▶ button to step through the 10 channels until a station is received and the Wx LED stays lit. The WxLED acts like a signal strength meter for the weather radio. When the signal is strong, the Wx LED will stay lit. If the station signal weakens, the Wx LED will flicker or if the signal is completely lost, the ESD-9220 WX will go into Radar Mode. When a station cannot be received, the unit will announce "Weather Signal Lost" in Voice Mode or signal one beep in Tone Mode and the Wx LED will turn Off.
- 3 Press and release  Wx button again to turn off weather radio. When deactivated the unit will announce "Weather Off" in Voice Mode or signal one beep in Tone Mode.




Set Weather Alert

- 1 Press  WX button for more than 2 seconds to activate Weather Alert. When activated the unit will announce "Weather Alert On" in Voice Mode or signal two beeps in Tone Mode. When in Wx Alert On Mode, the Wx LED will blink slowly, even though you do not hear the weather radio. If a Weather Alert is received, "Weather Alert On" will be heard in Voice Mode and then the Weather Station broadcast will be heard telling you about the severe weather.

Caution: Weather Alert will only operate if a Weather Station is being received and the WxLED is blinking. If the Wx LED stops blinking, you cannot receive a Wx Alert. If you have not received a weather station for 1 minute, "Weather Signal Lost" will be announced in Voice Mode or one beep will be heard in Tone Mode and the Wx LED will stop blinking. The ESD-9220 WX however, will still monitor for that station to return. If, after 5 minutes the station is not received, "Weather Alert Off" will be heard and the ESD-9220 WX will stop monitoring. Weather Alert can then be reset by turning on the Weather Radio and finding a different weather station.



- 2 Press  WX button again for more than 2 seconds to turn off Weather Alert. When deactivated the unit will announce "Weather Alert Off" in Voice Mode or signal one beep in Tone Mode and the Wx LED will stop blinking.

Set Weather Alert

Note

If you try to turn on Weather Alert and no station can be received, the unit will not go into Weather Alert Mode and announce "Weather Alert Off" in Voice Mode or one beep will be heard in Tone Mode and the Wx LED will not blink.

Turning On Your ESD-9220 WX

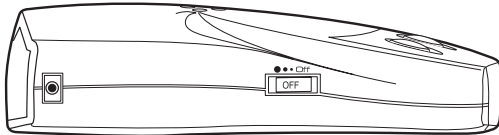
Turning On Your ESD-9220 WX



- 1 Plug power cord into detector.



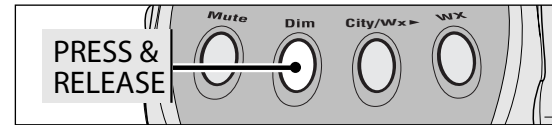
- 2 Plug power cord into cigarette lighter.



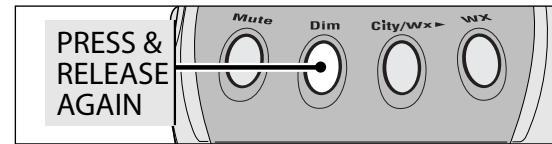
Rotate ON-OFF Volume Control to the left (away from you). In both Tone and Voice Modes, the unit will announce "Testing", followed by three beeps. This confirms Power ON. All LEDs will light up from left to right in sequence and announce "System Ready." The system indicates if Voice Alert™ or Tone Only Mode has been selected and if VG-2 Audio Alert is turned On or Off.

Dim Button

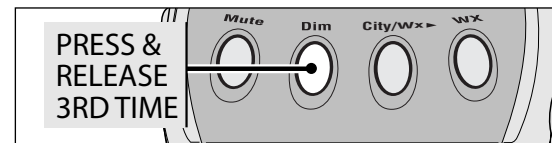
You may select from three levels of brightness for your Cobra® ESD-9200 WX display: Bright, Dim, and Dark.



- 1 Press and release ^{Dim} DIM button to reduce the LED display brightness to Dim. A single beep confirms dim LED brightness.



- 2 Press and release ^{Dim} DIM button again to turn LED display off. A single beep confirms no LED display. The power LED will stay on dim.



- 3 Press and release ^{Dim} DIM button a third time to return led display to Bright. A double beep confirms normal LED brightness.

Dim Button

Note

In Voice Alert™ Mode, the message "Bright, Dim, or Dark" will also be heard.

Note

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

Note

The factory default setting is Bright Mode.

Note

The ESD-9220 WX will retain the chosen Mode while OFF.

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

In Voice Alert™ Mode, the unit will announce “Highway” or “City” in Voice Mode.

Note

City = “Beep”
Highway = “Beep-Beep”
The factory default setting is Highway Mode.

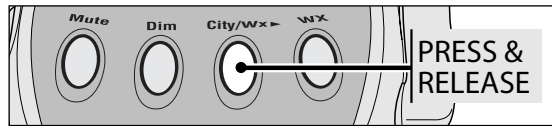
Note


The ESD-9220 WX will retain the chosen Mode while OFF.

Highway/City Mode

The Highway/City function is controlled by a 2-step button. The Highway Mode is automatically engaged when the unit is first powered up. In the City Mode, false radar alerts will be reduced.

To engage City Mode:



- 1 Press and release  CITY/Wx▶ button and the **CITY** LED on the front of the unit will illuminate. A single beep confirms City Mode. When a signal is received in City Mode the X LED will blink to show you are receiving a signal. The X-band alert audio will be muted until the signal strength indicator reaches the second level.



CITY CITY LED will illuminate while in CITY Mode.

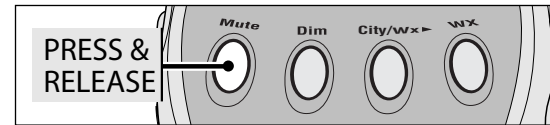
To reactivate the Highway Mode:


- 1 Press and release  CITY/Wx▶ button again. A double beep confirms Highway Mode.

Muting Mode

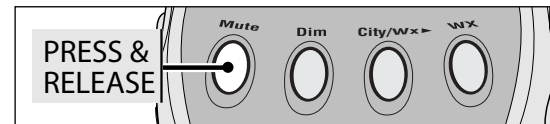
The ESD-9220 WX offers two Mute Modes; Auto and Manual. To switch between these Modes:

Auto Mode



- 1 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



- 1 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, Weather On/Off (including last received channel) and Weather Alert On/Off settings.

Muting Mode

Note

In Voice Alert™ Mode the unit will announce “Mute” for Manual Mute and “Auto Mute” for Auto Mute Mode.

Note

Mute = “Beep”
Auto Mute = “Beep-Beep”
The factory default setting is Auto Mute Mode.

Note

In either Mode, the next alarm will begin with normal volume. The ESD-9220 WX will retain the chosen Mode while OFF.

Memory Set

Your Cobra® ESD-9220 WX features an automatic internal electronic memory system. It will automatically “remember” your settings when the unit is turned “OFF” or removed from power source.

Turning On Weather and Changing Stations

Note




Both Weather On/Off and Weather Alert On/Off settings, including the last station you were listening to, are retained in memory even when unit is turned OFF.

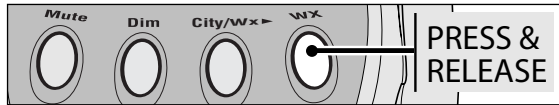
Note

Factory default setting is Weather Off and Weather Alert Off Mode.


Turning on Weather and Changing Stations

Your ESD-9220 WX will allow you to listen to any of more than 550 local weather stations in the US and Internationally. If any Radar, Laser, or Safety Alert® signal is detected while you are listening to Weather, it will automatically over-ride the weather station and give you that alert.

- 1 Press and release  WX button to activate weather radio. When activated the Wx LED will come on and the unit will announce "Weather On" in Voice Mode or signal two beeps in Tone Mode.
- 2 If no station is heard, press and release  CITY/Wx▶ button to step through the 10 channels until a station is received and the Wx LED stays lit. The WxLED acts like a signal strength meter for the weather radio. When the signal is strong, the Wx LED will stay lit. If the station signal weakens, the Wx LED will flicker or if the signal is completely lost, the ESD-9220 WX will go into Radar Mode. When a station cannot be received, the unit will announce "Weather Signal Lost" in Voice Mode or signal one beep in Tone Mode and the Wx LED will turn Off.
- 3 Press and release  WX button again to turn off weather radio. When deactivated the unit will announce "Weather Off" in Voice Mode or signal one beep in Tone Mode.




Set Weather Alert

- 1 Press  WX button for more than 2 seconds to activate Weather Alert. When activated the unit will announce "Weather Alert On" in Voice Mode or signal two beeps in Tone Mode. When in Wx Alert On Mode, the Wx LED will blink slowly, even though you do not hear the weather radio. If a Weather Alert is received, "Weather Alert On" will be heard in Voice Mode and then the Weather Station broadcast will be heard telling you about the severe weather.

Caution: Weather Alert will only operate if a Weather Station is being received and the WxLED is blinking. If the Wx LED stops blinking, you cannot receive a Wx Alert. If you have not received a weather station for 1 minute, "Weather Signal Lost" will be announced in Voice Mode or one beep will be heard in Tone Mode and the Wx LED will stop blinking. The ESD-9220 WX however, will still monitor for that station to return. If, after 5 minutes the station is not received, "Weather Alert Off" will be heard and the ESD-9220 WX will stop monitoring. Weather Alert can then be reset by turning on the Weather Radio and finding a different weather station.



- 2 Press  WX button again for more than 2 seconds to turn off Weather Alert. When deactivated the unit will announce "Weather Alert Off" in Voice Mode or signal one beep in Tone Mode and the Wx LED will stop blinking.

Set Weather Alert

Note

If you set your ESD-9220 WX to Weather Alert Mode, it will automatically turn on the Weather Radio if the US Weather Service calls a Severe Weather Alert. If you receive a Weather Alert, please listen to the broadcast and take their advice.

Note

If you try to turn on Weather Alert and no station can be received, the unit will not go into Weather Alert Mode and announce "Weather Alert Off" in Voice Mode or one beep will be heard in Tone Mode and the Wx LED will not blink.

Tone Alarm And Voice Alert™

Note

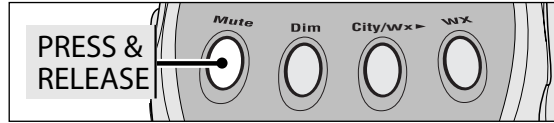
The factory default setting is Voice Alert™ Mode.


Auxiliary Audio Jack

Band Detection

Audible Alarm Speaker

Voice/Tone Settings



- 1 Press and hold  MUTE button for two seconds to change between Voice and Tone Alarms.

Auxiliary Audio Jack

Use to connect an external speaker to your Cobra® ESD-9220 WX in environments with high ambient noise levels. The internal speaker will be disconnected. The audio output will be voice or tone depending on your selection.

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.

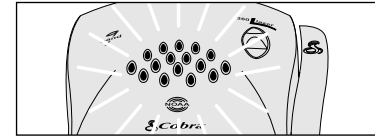
*360° Detection

Audible Alarm Speaker


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.

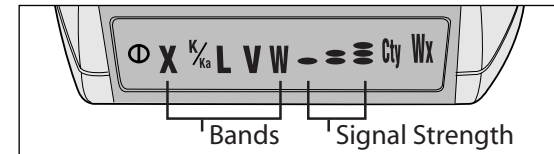
Voice Alert™

The ESD-9220 WX will also announce the reception of these signals with the statement, "Be careful...X Alert, K Alert, Ka Alert, Laser Alert, VG-2 Alert®, Emergency Vehicle Approaching, Road Hazard Ahead, Train Approaching, Weather Alert."



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-9220 WX is also designed to detect Instant-on speed monitoring signals.

Immediate action is required when warning is given.

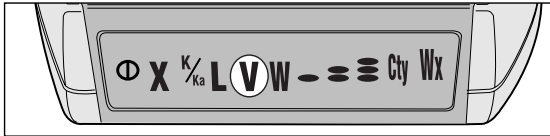
Voice Alert™

Radar

VG-2 Alert®

VG-2 Undetectable

The Cobra® ESD-9220 WX 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.

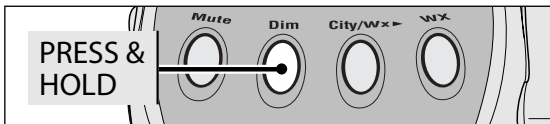


The **V** VG-2 LED on the front of the unit will illuminate.

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.



Note

In Voice Alert™ Mode, the unit will announce "VG-2 Audio On" when the VG-2 Audio Alert is activated and "VG-2 Audio Off" when VG-2 Audio Alert is deactivated. 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-Beep"
 VG-2 Audio Alert Off= "Beep"

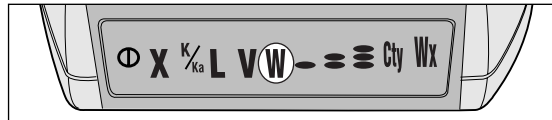
Safety Alert® Traffic Warning System and Strobe Alert™

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-9220 WX starts to signal slowly, then increases in rate very rapidly.	Most likely police radar. FULL ALERT.
Your COBRA® ESD-9220 WX 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-9220 WX 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-9220 WX 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 measurement interval. Intervening objects such as signposts, utility poles, tree branches, etc., will prevent a valid speed reading.

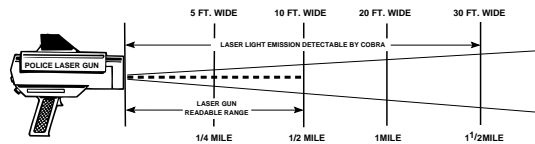
Facts About LIDAR (Laser)

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.



Facts About LIDAR (Laser)

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?

Yes, LIDAR guns can obtain readings through most glasses. The laser pulse, however, can also 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-9220 WX 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-9220 WX 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?

Maintenance

Specifications

GENERAL SPECIFICATIONS

A. FREQUENCIES

1. X BAND	10.525 GHz ± 50 MHz
2. 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
10. Weather Channels	162.275 162.500 162.400 162.525 162.425 162.550 162.450 162.650 162.475 162.775

B. UNIT DIMENSIONS

1.50" W x 3.25" H x 5.125" 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.

This warranty gives you specific legal 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.

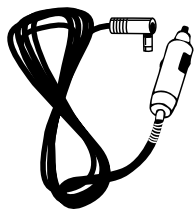


Cobra® Electronics Corporation

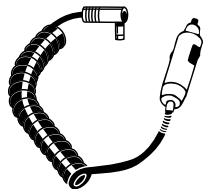
6500 West Cortland Street
Chicago, Illinois 60707 USA
www.cobra.com

Optional Accessories

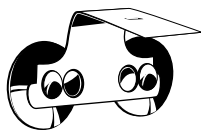
Accessory Order Form



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

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

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

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 5%
Wisconsin residents add 5%

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

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) 8:00am - 6:00pm, Monday through Friday Central Standard Time

Make check or money order (no stamps) payable to: Cobra Electronics 6500 West Cortland Street Chicago, IL 60707 USA 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 Discover

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



© 2000 Cobra® Electronics Corporation
6500 West Cortland Street
Chicago, IL 60707 USA
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.
5. 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 USA.
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.

Cobra® Electronics Corporation © 2000
Printed in Korea

Part No. 480-002-P

The Cobra® line of quality products also includes:

- **CB Radios**
- **microTalk® Radios**
- **Radar/Laser Detectors**
- **SafetyAlert® Traffic Warning Systems**
- **Accessories**
- **HighGear™ Accessories**

Nothing comes close to a Cobra™

EDS-9220 WX 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