Installing and Using Your

Cobra®
6 BAND™

DETECTION SYSTEM
Model ESD™-6160CS

Cobra®

Cobra Electronics Corporation
6500 West Cortland Street,
Chicago, Illinois 60707

1. What You'll Need To Install The ESD-6160CS:

NOTE: Detailed instructions on opposite side

ESD-6160CS   Windshield Bracket   Hook and Loop Material (For on-dash mounting)   Power Cord
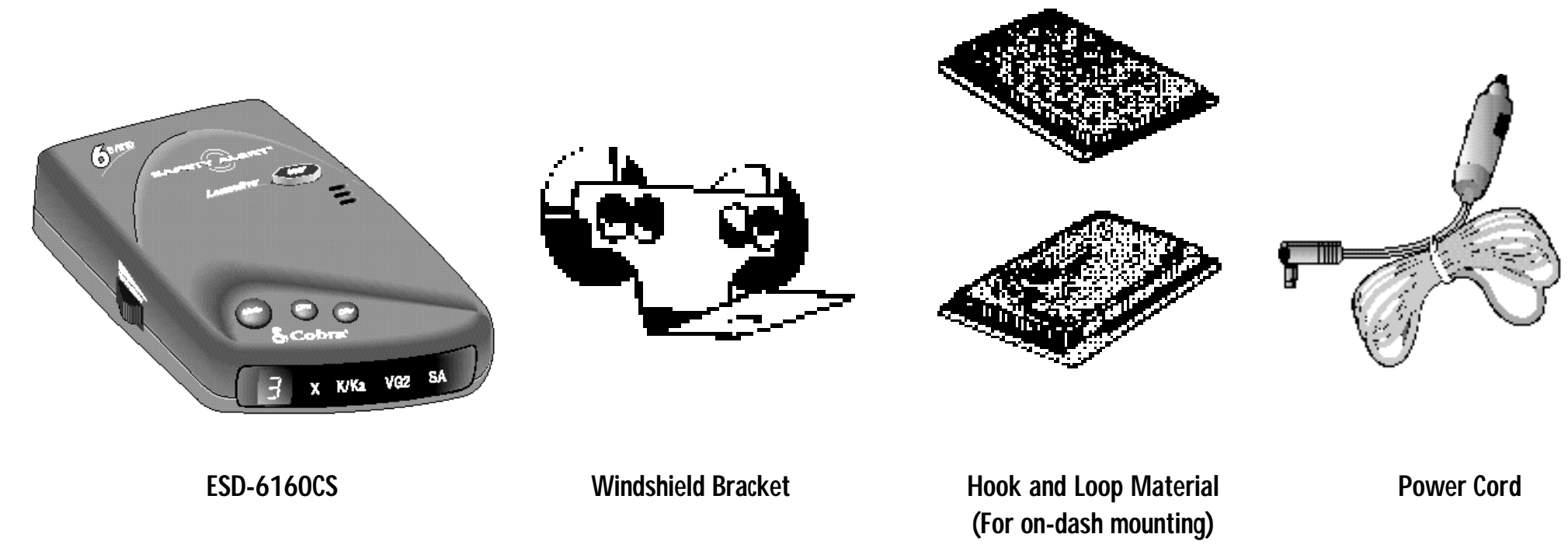
2. Installing The ESD-6160CS:

ON WINDSHIELD

ATTACH CLIPS 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

ON DASH

PEEL PROTECTIVE PAPER OFF ONE SIDE OF HOOK AND LOOP

PLACE ON DASH

PEEL TOP PAPER OFF

PLACE DETECTOR ON HOOK AND LOOP PAD

POWER CORD INTO DETECTOR

PLUG POWER CORD INTO CIGARETTE LIGHTER

NEED HELP?

Customer Assistance

If you have any questions about operating or installing your new Cobra product, or if you are missing parts...

Please Call Cobra First!

DO NOT RETURN THIS PRODUCT TO THE STORE

Call our Automated Help Desk at
(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 - 5:00 pm,
CST Monday through Friday (Except holidays)
Technical assistance is also available on-line in the Frequently Asked Question (FAQ) section at www.cobraelec.com or by e-mail to
productinfo@cobraelec.com

3. Operating The ESD-6160CS:

A. Turn On and Adjust Volume

The unit will chirp 3 times and the red single digit display will illuminate.

B. Set Display Brightness

NORMAL
DIM
DIMMER
DARK
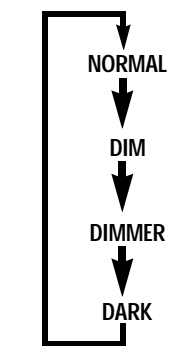
C. Set Highway/City Mode

CITY: For urban driving-reduces number of X-Band false audible alerts.

HIGHWAY: For all other driving.

D. Muting

Press to reduce volume of audible alert in progress.

E. LaserEye

360° Laser Detection

F. Indicators and Visual Alerts

Power
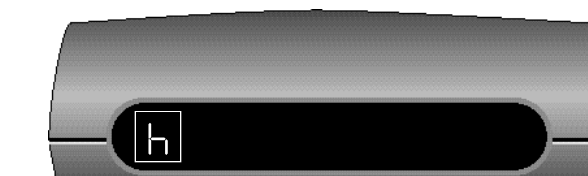
Either an ⒣, ⒠ or ⒞ will illuminate when the unit is on.

X Band Radar
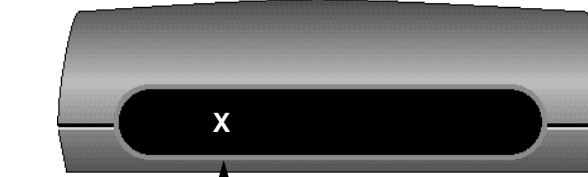
Blinks faster as source approaches

K and Ka Band Radar
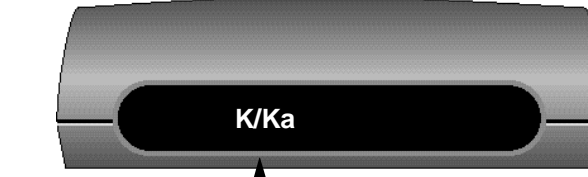
Blinks faster as source approaches

VG2
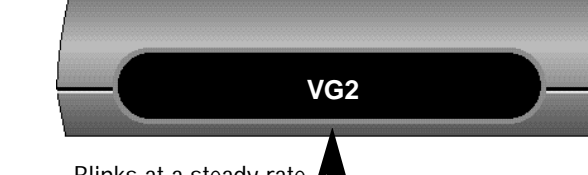
Blinks at a steady rate

Safety Alert® Traffic Warning System

E Emergency
H Road Hazard
R Railroad
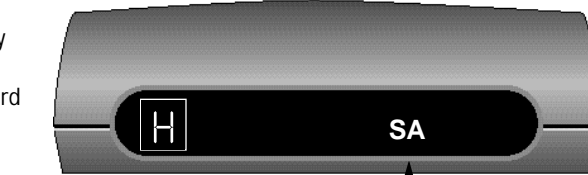
Both the red SA LED and the single digit display will illuminate for the Safety Alert signal.

Laser

Blinks at a steady rate

Highway/City Mode

Highway   City

I. 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®-6160CS works and how radar and (LIDAR) laser are used. Enjoy your Cobra ESD-6160CS 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.

SAFETY ALERT®
TRAFFIC WARNING SYSTEM

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 or Cobra Safety Alert Transmitter is in the area as defined by the range of the product. 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.

U.S. Patent No. 5,497,148

1.

---

c. **Mounting on Windshield**
To install the Cobra ESD-6160CS onto the windshield, simply press it firmly on to the glass. Sometimes the suction cups adhere better if they are slightly moistened. In cold weather, you may need to warm the suction cups before application.

d. **Adjustment**
If necessary to achieve correct angle,remove the detector from the bracket and the bracket from the windshield. Adjust the bracket by bending it.
DO NOT BEND THE BRACKET USING THE ESD-6160CS AS A LEVER.

e. **Removal**
To remove the Cobra ESD-6160CS from your windshield, release each suction cup by lifting one edge with your finger, or by pulling on tab.

2. Dashboard Mounting
Mounting your ESD-6160CS in the dashboard of your vehicle requires a clear, level unobstructed view of the road for the detector, without blocking the driver's vision. Select a mounting position that allows the detector to have a clear view of the road ahead. Using the hook and loop material provided, proceed as follows: (See illustration on reverse side)

a. Remove backing from one side and apply to dash.
b. Clean dashboard with common rubbing alcohol to remove dirt and grease. Remove backing from other side and place detector on top. Let adhesive set.

Note: With this hook and loop material dashboard mounting, it's easy for you to remove and reinstall your Cobra ESD-6160CS detector at any time.

Remember: Without means to adjust the angle of the detector (when mounted as above), be sure you that your Cobra ESD-6160CS has a level, clear view of the road before you attach the hook and loop material.

3.

II. Installation

A. Location

Selecting the proper location to mount the Cobra ESD-6160CS 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-6160CS lens must not be blocked, and it should have a view of the rear window to take advantage of LaserEye 360° detection. It is best to locate your detector in the middle of the front windshield.

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

1. Windshield wiper blades. Mount your Cobra ESD-6160CS so that it will NOT be behind the blades when they are at rest.
2. Mirrored sun screens. It is recommended that sun screens be removed, or they may impair the performance of your Cobra ESD-6160CS by acting as an impenetrable barrier to radar/laser signals.
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.)

B. Mounting

1. Windshield Mounting

The WINDSHIELD MOUNTING BRACKET offers convenient mounting to windshields and provides for easy movement of detector between vehicles.

Note: Some new vehicles have a soft plastic coating on the inside surface of the windshield. Suction cups can permanently mark this "anti-lacerative" coating. Check with your owner's manual to see if this applies to your vehicle.

a. Assemble suction cup on bracket by putting round "buttons" through larger holes in the bracket and pressing them toward the outside edges until they snap into position.
b. Install bracket to detector: align bracket with slot on rear of detector and slide bracket into opening. To remove bracket from detector, simply pull bracket out of slot.

2.

III. Operation

A. Band Detection

This detector is designed to detect X, K, Superwide Ka Band Radar, Laser, VG-2, and Safety Alert signals.

B. Single Digit LED Display

The ESD-6160CS' state-of-the-art LED single digit display presents clear visual messages even in sunlight. A four position DIM mode is provided for dusk or night driving (please see DIM BUTTON for details).

C. Signal Strength Meter

The single digit display shows the band signal strength in numeric form for X, K/Ka: 1 2 3 4 5. It does not show the signal strength for Laser, VG-2 or Safety Alert.

D. Audible Alarm Indicator

A different alert tone will sound for X, K, Ka, Laser, VG-2 and Safety Alert® signals.

E. Instant-on Detection

The Cobra ESD-6160CS is also designed to detect Instant-on speed monitoring signals. Immediate action is required when warning is given.

F. Power/Volume Control

Plug the Cobra ESD-6160CS power adapter cord into POWER connector. Insert other end into cigarette lighter of the vehicle. The POWER/VOLUME CONTROLon the left side of the Cobra ESD-6160CS controls power and regulates the audible alert volume. To turn on, turn the thumbwheel away from you. Each time the unit is turned on, an automatic test pattern takes place:

- This pattern consists of three chirps.
- The red single digit display will illuminate the **b** for Highway after the test sequence is completed.

G. VG-2 Undetectable

Some states or municipalities use devices referred to as "VG-2". The VG-2 device detects low level energy radiated by the internal oscillators of radar detectors. The VG-2 device also radiates a similar type of energy. The ESD-6160CS detects the VG-2's radiation before the VG-2 can detect the ESD-6160CS. The ESD-6160CS then briefly turns off its internal oscillator, rendering it invisible to the VG-2, and alerts you to VG-2's presence. During these short intervals, the ESD-6160CS is not able to receive radar or Safety Alert signals (laser reception is not affected). Once past the VG-2, the ESD-6160CS returns to normal operation.

4.

H. Band Alarm Indicators
When the Cobra ESD-6160CS detects an X-band radar signal, the red "X" Visual Alarm Indicator (LED) will flash in unison with the X-Band audio tone. When the ESD-6160CS detects either a K-band or a Ka-band radar signal, the yellow "K/Ka" Visual Alarm Indicator (LED) will flash in unison with the K or Ka Band audio tone. When the ESD-6160CS detects pulses of laser light, the red single digit display will illuminate **L** in unison with the Laser audio tone. When VG-2 is detected, the green "VG-2" Visual Alarm Indicator LED will flash in unison with the VG-2 audio tone. When a Safety Alert signal is detected, the red single digit display will illuminate **E** - EMERGENCY VEHICLE APPROACHING, **H** - ROAD HAZARD AHEAD, or **R** - RAILROAD in unison with its independent audio tone and red "SA" Visual Alarm Indicator (LED).

I. Muting Mode
The ESD-6160CS offers two MUTE modes-AUTO and MANUAL. To switch between them, press the MUTE button when NO signal is being received. In AUTO mode the alarm will be reduced in volume after three seconds automatically. In MANUAL mode, press the MUTE button to reduce the volume. The unit will automatically be set to the AUTO mode when turned on.

J. Highway/City
The Highway/City function is controlled by a 2-step momentary button. The Highway mode is automatically engaged when the unit is powered up. To engage City Mode, press down on the Highway/City button. The single digit display will illuminate a **C** to indicate the detector is in the CITY mode. The single digit display will illuminate an **h** to indicate the detector is in the HIGHWAY mode.
In the Highway Mode, your Cobra ESD-6160CS operates at full sensitivity on all three radar bands plus laser. The unit is automatically set to the Highway Mode.
In the City Mode, the X-band audio alert sensitivity is lowered to reduce false alerts. In or near cities, there are many sources of false radar signals. Microwave relay towers for telephone and TV signaling, anti-shoplifting systems and bank alarms–all are examples of false X-band sources.

K. Dim Button
You may select from four levels of brightness for your Cobra ESD-6160CS display: Normal, Dim, Dimmer and Dark. Each time you turn your ESD-6160CS on, the display is automatically set to full brightness. Pressing once on the Dim Button reduces the display's brightness to Dim; pressing a second time reduces the brightness to Dimmer; pressing a third time, the Dark mode, the single digit display will illuminate a **d** - DARK (Highway or City), and pressing a fourth time returns the display to Normal.

5.

IV. Detection Alert

A. Radar/VG-2/Laser Alerts

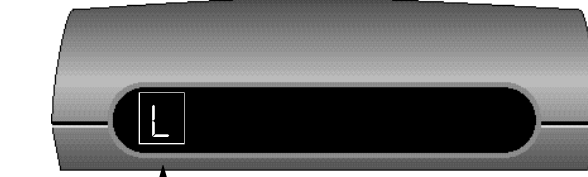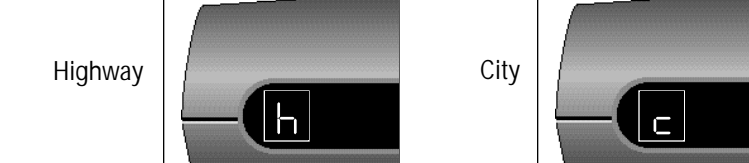| Type of Audible Signal	Interpretation and Response
Your COBRAESD-6160CS starts to signal slowly, then increases in rate very rapidly.	Most likely police radar. **FULLALERT.**
Your COBRAESD-6160CS signals just once.	Most likely a false source, or could be pulsed radar. **EXERCISE CAUTION.**
Very fast signal rate instantly.	Radar or VG-2 close by has been suddenly switched on. **FULLALERT.**
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. **FULLALERT.**
Short-term, weak signaling; series of such signals.	Most likely a false radar source. **EXERCISE CAUTION.**
Laser "chirps."	Take **FULLCAUTION.** There are no false laser signals.

B. 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 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-6160CS is designed to differentiate between a standard K-band alert and a Safety Alert.

Since Safety Alert® technology is relatively new and the number of transmitters in operation is not yet widespread, you may not receive Safety alerts on a daily basis and should not be surprised to encounter some emergency vehicles, road hazards and trains that are not yet equipped with these transmitters and therefore fail to provide a signal. As Safety Alert® transmitters become more prevalent (the number of operating transmitters is growing every day), these safety warnings will become more common.

6.

C. 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-6160CS can detect signals in all three bands including photo radar and STALKER radar which use the Ka band, Cobra Safety Alert signals on the K band, VG-2 and laser.

D. 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.

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.
- **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.

7.

V. Maintenance

Your COBRAESD-6160CS 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 COBRALASER DETECTOR ESD-6160CS 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?

Limited One Year Warranty

COBRA ELECTRONICS CORPORATION warrants that its COBRAradar detectors, and the component parts thereof, will be free of defects in workmanship and materials for a 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 radar detectors, products or component parts upon delivery to the COBRAfactory 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. For further details concerning procedures for obtaining service, see the "If You Think You Need Service" section of the Owner's Manual.

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 W. Cortland Street, Chicago, Illinois 60707

8.

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 turnaround 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 sales receipt. If you send the original receipt it cannot be returned.
2. Send the entire product. For example–must include detector, bracket with suction cups, and cord.
3. Enclose a description of what is happening with the unit. Include a typed or clearly printed 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 (to avoid loss in transit) such as United Parcel Service (UPS), Roadway Parcel Service (RPS), or First Class Insured Mail to Cobra Factory Service, Cobra Electronics Corporation, 6500 W. Cortland St., Chicago, IL 60707. Cobra is not responsible for units not received if package has not been properly insured.
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.

9.

COBRA RADAR DETECTOR ACCESSORIES

Description	Part No.	Cost Ea.	X Qty. = Amount
STRAIGHT DC POWER CORD Including plug/fuse for ESD-6160CS	420-080-N-001	$10.00	
CURLED TYPE POWER CORD For ESD-6160CS	420-080-N-002	$10.00	
WINDSHIELD MOUNTING BRACKET	545-139-N-001	$10.00	

(Prices subject to change without notice.)

☀☀ Illinois residents add 7%
  ☀☀ Cook County, ILresidents additional .75% (7.75% total)
    ☀☀ Chicago, ILresidents additional 1% (8.75% total)
☀☀ Indiana residents add 5%
☀☀ Michigan residents add 6%
☀☀ Ohio residents add 6%
☀☀ Wisconsin residents add appropriate %

Amount _____
(Tax if applicable**☀☀**) _____
Shipping/handling   **$4.00**
Total**☀** _____

Make check or money order (no stamps) payable to Cobra Electronics and mail with this order form to:
Cobra Accessories Dept.
6500 W. Cortland St., Chicago, IL 60707
Call 773-889-3087, or fax 773-622-2269 for credit card orders
Allow 4 to 6 weeks for delivery. Offer valid in Continental U.S. only.

Please print clearly:
Name _____
Address (Not P. O. Box) _____
City _____ State _____ Zip _____
Telephone No. (_____) _____
Credit Card No. _____Exp. Date _____
Customer Signature _____

Circle One:

Visa   MasterCard   Discover

Allow 4 to 6 weeks delivery. Offer valid in Continental U.S. only.

10.