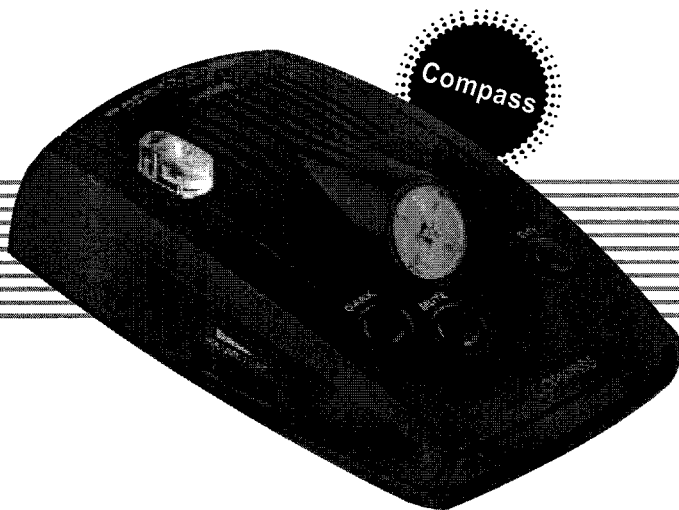




**360 Degree Laser / Safety / Radar
Detector : LRD - 7050V**

Owner's Manual



Manufactured for Early Warning™
SK Global America, Inc.

WELCOME

Thank you for choosing Early Warning LRD-7050V - the world's most sophisticated radar / laser detection.

The Early Warning 360 Degree LRD-7050V is a completely integrated radar/laser detector that responds not only to all the radar guns in use today, including "Stalker", and the new mph bee 36A, radar gun but also to the other latest development in speed monitoring devices-the laser gun.

What are the important features?

The model provides distinct visual, audio alerts, and digital voice alert to warn you of the presence of X, K, and Ka* - Band radar guns in the front and rear of you.

The model has its compass that shows 8 different directions.

The model makes your detector invisible to the VG-2* radar detector when it senses VG-2 operation.

The model alerts you to the presence of potential road hazards, and emergency vehicles signaled by Safety Alert System* transmission.

*will be explained in the following pages.

- X, K, and Ka : page "30"
- VG-2 : page "19"
- Safety Alert System : page "21"

Note.



Federal and Local Regulations:

The FCC passed the Communications Act in 1934 to give all citizens the right to receive all types of radio transmissions. The same radio frequencies used by police radar are also used by other devices, such as automatic door openers, burglar alarms, and some amateur radio equipment. Since the LRD-7050V is just a radio receiver tuned to a specific portion of the public radio spectrum, it is protected under this act.

Some local, state and federal regulations may prohibit the use of this detection device. Please check with authorities regarding the use of this device before operating it.

GUIDE OVERVIEW

Getting Started

Once the box is opened, this section will show you where to begin. We will explain what came with your new detector and show you how to install the unit to your car.(page "7-15")


The Basics

What do all those buttons and lights mean? How do I actually start using the detector? In this section, we'll answer those questions and teach you everything necessary to start using your new detector.(page "16-17")

Using Different Modes

Read "Using Different Modes", and we will explain how to set different modes such as DARK mode, CITY mode VG-2 mode. You will learn how and when to use the specific modes.(page "18-20")

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.



GUIDE OVERVIEW

Using Safety Alert

This Early Warning Detector has Safety Alert System placed in itself to alert you to the presence of potential road hazards, and emergency vehicles signaled by a Safety Alert System transmission.(page “21~22”)

Reference

We will provide answers to frequently asked questions and have specific information about the detector.(page “23~33”)

Warranty

When you need warranty service and other customer request, turn to page “34”. We will explain everything from what this warranty covers to how to get warranty service.

Introduction

Guide Overview	3
----------------------	---

Getting started

Package Content Options	7
Installing Detectors	8
Detector Overview	12
Function Keys	13
Other Functions	13

The Basics

Turning Your Detecotr on	16
Reading The Indicators	17

Using Different Modes

Using the TUTORIAL mode	18
Using the DARK mode	19
Using the VG-2 mode	19
Using the CITY mode	20
Using the MEMORY RETENTION	20

Using Safety Alert & Safety Warning

What the SA is.....	21
How to use the features	22

Reference Information

Trouble Shooting.....	23
Care and Maintenance.....	25
Frequently Asked Questions and Answers	26
Specific Information.....	33

Warranty

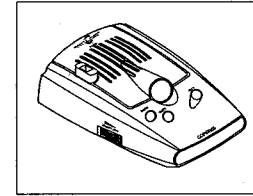
Warranty covers and for how long.....	34
Warranty conditions	34
What this warranty does not cover	35
How to get warranty service.....	35

Getting Started

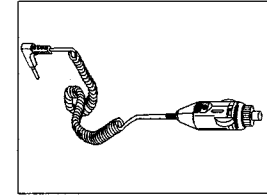
In this chapter we will explain how to:

- Install detectors.
- Use different functions.

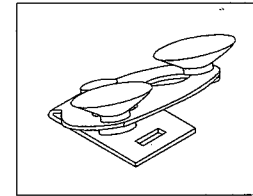
Package Content



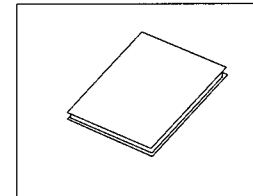
LRD 7050V



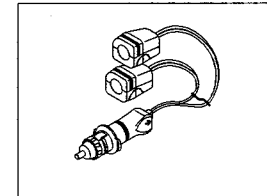
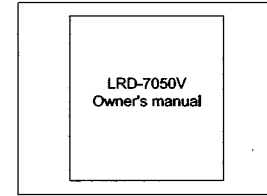
Power Cord



Windshield Bracket w/Suctions Cups and Bumper



Hook and Fastener Tape



Dual Plug

Installing Detectors

Mounting Guidelines

For the best performance, select the proper location for the unit where it has a direct view of the road. The radar antenna is located behind the rear panel of the unit and the laser detection lenses are located behind the rear panel of the unit and the front window. The antenna and sensors should not be obstructed by metal or metallic surfaces and should be pointed at the horizon for accurate long-range detection.

- Choose a location that does not block the driver's vision.
- Mount the detector in a leveled position.
- Do not mount the detector behind metal surfaces, windshield antenna, wiper blades, ornaments, or mirrored glass.
- Heated windshields, currently available as an option on some Ford(Instaclear) or GM(electriclear) vehicles act as an impenetrable barrier to radar signals.
- Do not mount the detector where the driver or passenger might collide in the case of an abrupt halt.

Note : Whichever mounting method you choose, remember to place the radar detector out of view when you leave your vehicle. This keeps the detector out of sight from thieves and prevents exposure to extremely high temperatures, which can temporarily impair your detector's performance.

Note : If necessary, you may adjust the bracket to the proper angle by bending it. To remove your detector, pull up the detector from the front pulling it towards you.

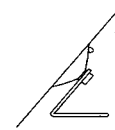
Caution : On some newer model cars, a plastic safety coating has been applied to the windshield. The suction cups may leave permanent marks on the windshield once they are removed. Check your vehicle owner's manual to see if your car has the plastic safety coating.

Installing Detectors

Mounting Types

A. On Windshield

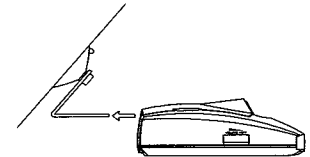
1. Attach bracket to windshield.



2. Bend bracket for correct detection angle.

3. Plug power cord into detector.

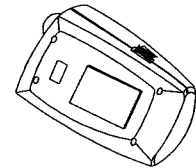
4. Attach bracket to detector.



5. Plug power cord into cigarette lighter.

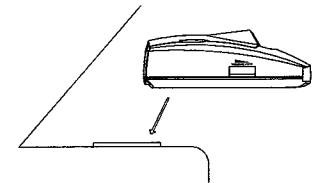
B. On Dash

1. Peel Protective paper off one side of look-loop.



2. Tape on detector's bottom.

3. Peel top paper off.
Place detector on dash.



Plug power cord into detector and cigarette lighter.

Installing Detectors

Power Connection

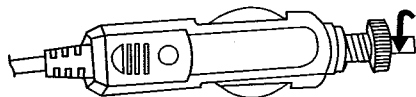
Your detector is designed to operate on most 12V DC negative ground vehicle electrical system. The power cord provided with the unit has a cigarette lighter socket plug at one end and a small connector on the other.

1. Insert the small connector into the jack on the side of the unit.
2. Insert the other end into the cigarette lighter socket of your vehicle.

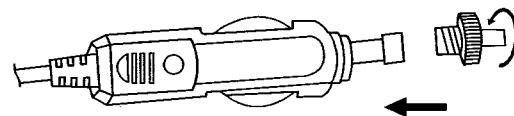
Replacing fuse

If the detector does not operate when you turn it on, remove the adapter from the cigarette lighter socket and carefully check the socket for debris. Also, check the fuse in the adapter and your vehicle's fuse box.

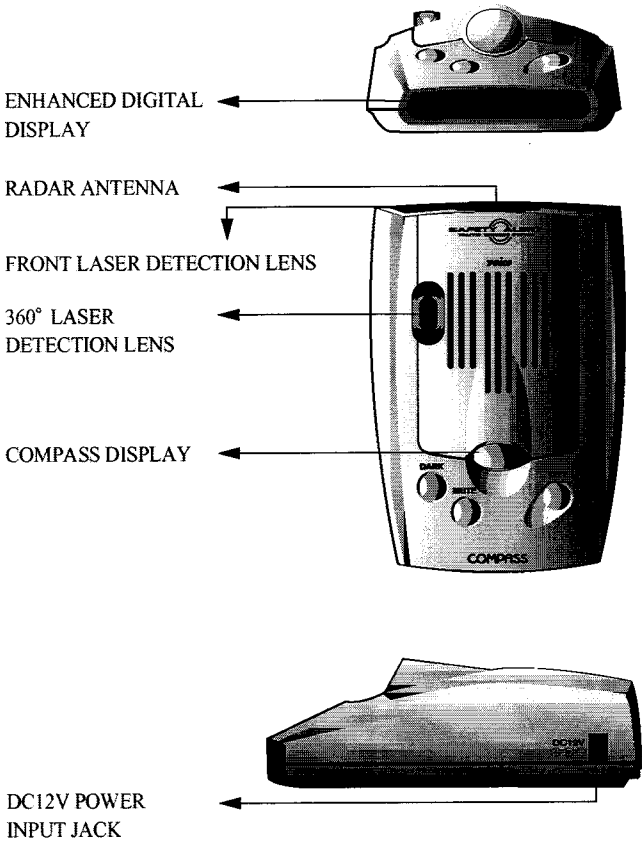
1. To replace the fuse, unscrew the top of the plug.



2. Remove and check the fuse to see if it has blown and then replace it.



Detector Overview



Detector Overview

Function Keys



Turns the unit ON and OFF and controls the volume level.



Controls illumination of display as DIM or DARK Setting.



Silences the audio alarm and sets the unit to VG2 mode.
20 seconds after mute, the unit goes to its previous mode.
(Turn to page "19" to learn more about VG2)



Turns the city mode on and off to reduce false alarms while driving in the city.

Connects the DC power cord.

Enhanced Digital Display Displays your input from the buttons, information recalled from memory, and other messages.

Radar Antenna Receives incoming radar signals.

Front Laser Detection Lens Receives incoming laser signals from the front.

360 Degree Laser Detection Lens Receives incoming laser signals from rear and sides.

Compass Displays 8 different headings : N, E, S, W, NE, NW, SE, SW, Make sure to calibrate the unit before using this unit.

Calibrating the Electronic Compass

When?

You must calibrate when:

- It is being used for the first time.
- It is being used in a different location.

Why?

You must calibrate the electronic compass in your area before using it. The calibration allows the electronic compass to separate the earth's magnetic field from the magnetic fields generated by external influences such as your vehicle so that the electronic compass provides accurate heading information.

Before beginning the calibration, you must install the detector in your vehicle. The calibration is best performed on a leveled section of pavement, such as an empty parking lot.

How?

1. Press CITY for more than 3 seconds until the voice says, **"Please turn your vehicle twice."**
 - During Calibration the compass displays as follows:
NS On → EW OFF → NS OFF → EW ON
 - When Calibration is finished, the compass displays:
Dim → Bright → Dim → Bright
2. With the detector mounted in your vehicle, turn the steering wheel all the way to the right or left and continue driving in a circular motion. Then press CITY.
3. If the calibration is complete, The voice says, **"Calibration Complete"**.
4. If the voice says, **"Please calibrate again"**, repeat the procedure.

Note : To achieve calibration, two circles must be made and it must be performed on a level surface in less than 2 minutes.

The Basics

In this chapter we will explain how to:

- turn your detector ON.
- read the indicators.

Turning Your Detector On

1. **Plug** Plug power cord in detector.

Power Cord

2. **Plug** Plug power cord into cigarette lighter.

Power Cord

3. **Rotate** Rotate ON-OFF Volume control to the
ON/OFF left(away from you).

Power Up Display

Once activated, each time you turn your detector ON, your detector performs a short self-test to make sure it is operational.

Reading the Indicators

Reading Rader / Laser Speed Gun

Power



- Voice Alert says, "Welcome, Buckle your seat belt"

Radar(X / K / Ka)



- Voice Alert says, "X or K or Ka band detected"

Note:Different beep sounds for each radar signals.

Laser(UltraLyte / Lti-2020 / Pro Laser)



- Voice Alert says, "Laser detected"

Note:Different beep sounds for each Laser detection.

Using Different Modes

In this chapter, we will explain why and when to:

- use TUTORIAL mode
- use DARK mode
- use VG-2 mode
- use CITY mode
- use MEMORY RETENTION

TUTORIAL

When?

Your detector has the tutorial mode to demonstrate all of its alert indicators. In tutorial mode, you can check the status of all the indicators and the single digit display.

How?

To start the tutorial mode, turn on the detector while holding down DARK and CITY. The tutorial mode starts when the detector sounds 3 beeps and P blinks on the Display.

To select the demonstration for each alert, press DARK. The detector displays each alert indicator along with its corresponding audio alert.

To finish the tutorial mode, press CITY at any time except when the voice alarm is operating.

DARK

You can select from three levels of brightness for your radar detector: bright, dim, and dark. Once you set the display brightness, the detector retains the setting until you change it.

VG-2

To turn VG-2 ON/OFF, hold down MUTE until the unit says "VG-2 ON/OFF"

What is VG-2?

Police uses a VG-2 gun to find out whether you use radar detector or not. VG-2 detection is necessary to detect the police VG-2 gun. LRD-7050V is undetectable by a police VG-2 gun and gives you alert when VG-2 is in use near your vehicle. We recommend not to use radar detector where it is illegal. You should check whether it is legal to use radar detector in your state.



- Press the MUTE button until V appears on the display:
Voice Alert says "VG-2 On".

- Press the MUTE button again until disappears on the display:
Voice Alert says "VG-2 Off".

CITY

Why?

Your detector has two operating modes: city and highway. In city mode, the detector requires a stronger X-, K-, Ka-band signal before it sounds or displays an alert.

When?

CITY mode helps prevent false alerts in tightly populated areas where radar signals can bounce off surrounding structures. The city mode has no effect on laser alert or instant-on radar.

MEMORY RETENTION

Your detector retains operational settings in memory without power, when you turn on your detector, the setting will be the same as when you turn it off.

Using Safety Alert

In this chapter, we will explain :

- what the SA is
- how to use the feature.

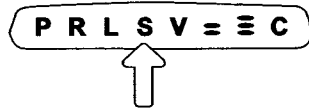
What is the Safety Alert?

This systems is low- powered transmitters used by some emergency services and road crews to alert drives to hazardous conditions. The Safety Alert system can indicate stationary, moving or railroad hazards. Radar detectors that are Safely Alert compatible indicate the presence of a safety Alert signal. While this system is not in widespread use yet, there are already several different radar detector models that can detect this systems. The system has the potential to dramatically increase a driver's awareness to road hazards, and decrease the potential for traffic accidents.

Note : 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 a 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 pre-cautions 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 pre-cautions while using this product, and to observe and follow all applicable traffic laws.

How to use the features?

Safety Alert



① Stationary Hazard Detection

- Voice Alert says, "Caution, Road Hazard".

② Emergency Vehicle Detection

- Voice Alert says, "Caution, Emergency Vehicle".

③ Moving Train Detection

- Voice Alert says, "Caution, Moving Train".

Reference Information

In this chapter we will explain:

- Trouble Shooting
- Care & Maintenance
- Frequently Asked Questions and Answers
- Specific Information

Trouble Shooting

Problem	What to Do
The detector does not turn on.	
<ul style="list-style-type: none">• Be sure all power connection are secure.• The cigarett-lighter socket might be dirty. Clean it with fine emery cloth to ensure a good, clean connection• Check the fuse in the power cord's cigarette lighter plug.• Check the fuse that controls power to ypur vehicle's cigarette-lighter socket.	

The detector gives a false alert when you use vehicle accessories such as power windows, motorized mirrors, brakes, and so on.

- Check the vehicle's electrical system for loose connections, including the main battery cable and alternator connections.
- Install a filter capacitor(1000mF, 35 volts, on the back of the cigarette lights socket, across the power connections.)

The detector performs the self-test, but does not respond to radar signals when you see a police car.

- A police car might not be equipped with radar (see Frequently Asked Q & A for more information).
- Police might be using VASCAR-type speed detection (see Frequently Asked Q & A for more information).

The detector has poor laser detection range.

- Be sure the laser detection lens is not blocked.
- Be sure the detector is properly mounted.
- Use lens-cleaning solution to clean the laser detection lens.

Care & Maintenance

Your LRD-7050V is example of superior design and craftsmanship.

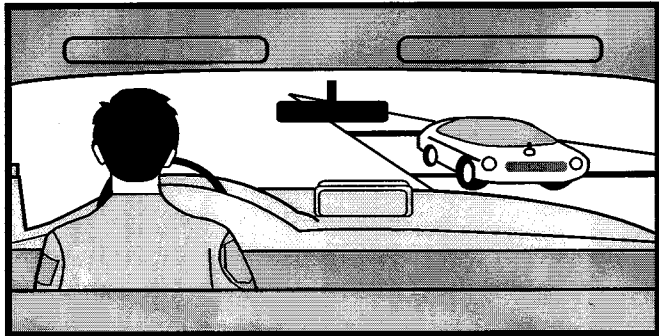
The following suggestions will help you care for your detector so you can enjoy it for years.

- Never leave your detector on the windshield or dashboard when your vehicle is left parked. The temperature in the vehicle during the summer can reach levels above what is considered to be safe for this detector.
- To make you less susceptible to break-in and theft, remove the detector from your windshield or dashboard when you leave your vehicle.
- Do not expose the detector to moisture, rain dew, road splash, or other liquids that can damage the internal components and reduce the sensitivity of the detector.

Frequently Asked Questions & Answers

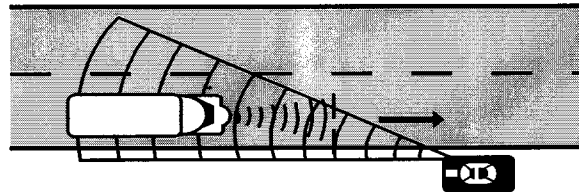
WHAT IS VASCAR?

VASCAR is an acronym for Visual Average Speed Computer and Recorder. VASCAR is little more than a combination stopwatch and measuring device. In its simplest application, the police officer uses the VASCAR to measure a section of road. The officer then starts the VASCAR when a vehicle enters the section and stops the VASCAR when it leaves the section. The VASCAR displays the vehicle's average speed over the section of road.



HOW DOES THE TRAFFIC RADAR WORK?

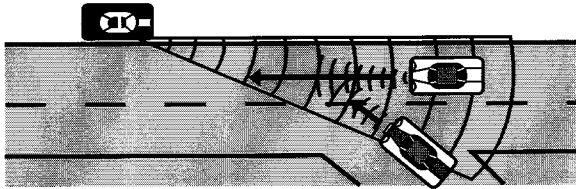
A RADAR (Radio Detecting And Ranging) device bounces a radio signal off of a moving object, such as a car. The reflected signal is picked up by a receiver. Traffic radar receivers measure the frequency difference between the original and reflected signals. This frequency difference is converted into a speed, which appears on the receiver's display.



Radar signals, like other types of radio signals, travel in straight lines until they hit an object that either absorbs, reflects, or refracts the signal. Radar receivers cannot see around curves or over hills, so a vehicle must be in the receiver's *line of sight* for traffic radar to get a speed measurement.

IS RADAR ALWAYS ACCURATE?

Usually, yes. A well-maintained, properly-tested radar receiver, used by a professional operator, can be accurate to within $\frac{1}{10}$ of a mile per hour.



The radar signal spans all traffic going in both directions. Aimed at an object less than $\frac{1}{4}$ mile away, the beam can be as wide as six or eight lanes of traffic. The radar receiver reports on the strongest signal it picks up. Vehicle size and shape can make a difference (a big truck reflects a stronger signal than a motorcycle or small car). This means that the radar receiver can sometimes pick up a reading from a vehicle other than the one intended by the operator.

ARE RADAR DETECTORS LEGAL?

It is legal to use radar detectors in all vehicles weighting 10,000 lbs in most of the U.S. However, regulations prohibit radar detectors in several states. If you are , check with your local law enforcement agency.

WHAT ARE THE DIFFERENT RADAR BANDS?

There are three bands in use for traffic radar: X, K, and Ka.

X-Band - This was the first band used for traffic radar. It was introduced during the 1960s and uses a frequency of 10.625 GHz (gigahertz). (Many other devices, such as automatic door openers and alarm systems, use this same frequency range. Most false alerts occur because of these non-traffic X-band devices.)

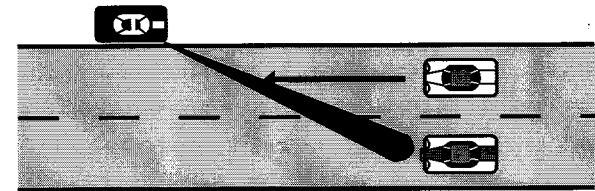
K-Band - Approved for use in the mid 1970s, K-band traffic radar units are lower powered and more difficult to detect than X-band. K-band traffic radar operates at 24.15 GHz. Also, K-band is shared with other devices.

Ka-Band - Put into use in 1987, the original Ka-band traffic radar devices could operate on a limited set of frequencies. In 1990 the FCC approved Wideband Ka, which permitted these devices to operate between 34.2 and 35.2 GHz. Now Super Wideband Ka devices operate on any frequency between 33.4 and 36.0 GHz.

HOW DOES LIDAR WORK?

The latest addition to the police officer's speed detection arsenal is LIDAR (Laser Infrared Detection And Ranging). To measure a vehicle's speed, LIDAR times how long it takes a light pulse to travel from the LIDAR gun to the vehicle and back. From the information, LIDAR can quickly find the distance between the gun and the vehicle. By making several measurements and comparing the distance the vehicle traveled between measurements, LIDAR very accurately determines the vehicle's speed.

LIDAR uses a laser beam of invisible infrared light. The beam reflects off any flat surface on your vehicle. Since the beam is very narrow, it is impossible for any laser detector to indicate how far away the LIDAR source is.



From the illustration, you see that a vehicle (right lane) can receive little or no signal while a vehicle nearby (left lane) is targeted. By moving the LIDAR gun only slightly, the vehicle in the right lane could be targeted and its speed could be determined in less than a second.

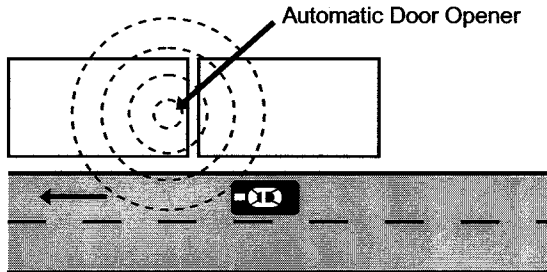
Specific Information

ARE LASER DETECTORS LEGAL?

Laser detectors are legal in all states as of April, 1995.

WHAT CAUSES FALSE ALERT?

Ideally, a detector should only alert in the presence of police radar. However, because other devices share the X-and K-band with police radar, false alerts sometimes occur. Generally, a false signal produces only a short audio and visual alert. Since they are most often weak, it is possible to drive out of the signal's range very quickly and receive only a brief alert.



Although many times you can easily identify the probable source of the false signal (supermarket, bank, commercial building, and so on), you should exercise caution until you can verify the source. The X- and K-band alert pattern caused by a non-police source can look like the first alert caused by actual police radar. For this reason, you should always take the appropriate action whenever your detector sounds an alert.

RADAR

Receiver Type : Dual conversion Superheterodyne

Antenna Type : Linear polarized, Self-Contained Antenna

Detector Type : Scanning Frequency Discriminator

Frequency of Operation : 10.525GHz / \pm 50MHz(X-Band)

24.150GHz / \pm 100MHz(K-Band)

34.700GHz / \pm 1,300MHz

(Ka SuperWideband)

24.110GHz / \pm 24.230GHz

(Emergency Vehicle)

24.070GHz / \pm 24.230GHz

(Road Hazards)

24.110GHz / \pm 24.190GHz(Train)

LASER

Receiver Type : Pulsed Laser Signal Receiver

Detector Type : Digital Signal Processor Pulse
Width Discriminator

Opto Sensor : Dual Convex Condenser Lens and High Speed Photo
Diode Detector

Spectral Response : 800~1,100 nm

GENERAL

Temperature Range : -4 to 158° F(-20 to 70° C)

Power Requirements : 12 ~ 16V DC, 310mA(Negative Ground)

Dimensions(HWD) : 1.3" \times 2.7" \times 4.3"

Weight :5.0 oz

Specifications are typical : individual units might vary.

Specifications are subject to change without notice.

One or more U.S. patents apply : #5,497,148.

Other patents pending.

Warranty

In this chapter we will explain :

- What this warranty covers and for how long.
- Warranty conditions.
- What this warranty does not cover.
- How to get warranty service.
- Return Process.

I . WHAT THIS WARRANTY COVERS AND FOR HOW LONG:

SK global America, Inc. Warrants, for one year, to the original retail owner, this radar detector to be free from defects in materials and craftsmanship with only the limitations or exclusive set out below. This warranty to the original user shall terminate and be of no further effects 12 months after the date of the original retail sale.

II . WARRANTY CONDITION

In the event that the product does not conform to this warranty at any time while this warranty is effect, warrantor will repair the defect and return it to you without charge for parts, service, or any other cost incurred by warrantor in connection with the performance of this warranty. The one year limited warranty set forth above is the sole and entire warranty pertaining to the

product and is in lieu of and excludes all other warranties of any nature whatsoever, whether express, implied, or arising by operation of law including, but not limited to any implied warranties of merchant ability of fitness for a particular purpose. This warranty does not cover or provide for the reimbursement or payment of incidental or consequential damages. Some states do not allow this exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you.

III . WHAT THIS WARRANTY DOES NOT COVER.

The warranty is invalid if the product is (a) damaged or not maintained as reasonable or necessary, (b) modified, altered, or used as part of any conversion kits, subassemblies, or any configuration not sold by SKGA, (c) improperly installed, (d) repaired by someone other than an authorized service center for a defect or malfunction covered by this warranty, (e) used in any conjunction with equipment or parts or as part of any system not manufactured by SKGA, (f) programmed, or service by anyone other than SKGA, (g) and if the serial number is altered, defaced, or removed.

IV . HOW TO GET WARRANTY SERVICE

When you need service, please follow the following procedures.
1) To obtain a return authorization number, you will need a proof

of purchase, such as a mechanical reproduction or carbon copy of a sales receipt. If you send your original receipt, it cannot be returned.

2) Send your proof-of-purchase, and description of the problem.

Type or print your name and address (not a P.O.BOX) where the replacement should be delivered. Proof-of-purchase must show printed date of purchase, model no. and place of purchase.

3) Send above document the following address

SK GLOBAL AMERIC, INC.

ATTN.:Electronics Department

110 EAST 55TH SREET NEW YORK, NY 10022

TEL : 212-906-8251

Note : DO NOT SEND YOUR RADAR DETECTOR TO THIS ADDRESS. WE ARE NOT RESPONSIBLE FOR THE RADAR DETECTORS RECEIVED AT THE ADDRESS ABOVE.

4) After receipt of your documents, we send you a return authorization number and shipping label by mail. At this time, you will be notified as to where I send your unit.

5) When you receive the return authorization and shipping label,

pack the unit securely to prevent damage in transit. If possible, use the original packing material and box. Be sure to send the entire product. For example, a radar detector must include the DC power cord and any other parts(bracket, etc.) that were furnished with the product.

6) Ship prepaid and insured by way of a traceable carrier : such as United Parcel Service(UPS) Roadway Parcel Service(RPS), or First Class Mail to avoid loss in transit.

7) Upon receipt of your unit, a replacement unit will be sent to you approximately 2 weeks after we receive your non-functioning unit.