

ESCORT®

ESCORT®



DRIVE SMARTER™

Designed in the USA
Manufactured in Canada

ESCORT Inc.
5440 West Chester Road
West Chester OH 45069
USA

800.433.3487
www.EscortRadar.com

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REDLINE

DUAL ANTENNAE

INCREDIBLE RANGE

R A D A R • L A S E R • S A F E T Y • D E T E C T O R

Owner's Manual



The ESCORT RedLine

is the most advanced radar, laser and safety detector ever designed by ESCORT.

The ESCORT RedLine includes full X, K, SuperWide Ka, and Safety Warning System radar capability, front and rear laser detection, dual antennae with varactor-tuned (VTO) microwave receiver, digital signal processing (DSP) for superior range and reduced false alarms, our patented Mute and AutoMute, audible and visual band alerts, and all the performance you'd expect from ESCORT.

In addition, the ESCORT RedLine introduces the follow revolutionary features:

- Dual antennae with varactor-tuned receiver provides the longest range possible against all radar threats.
- Exclusive TotalShield Technology for the ultimate in undetectability.
- Programmable Alert Lamp for additional visual indication of alerts.
- New high and low voltage warning is given any time the vehicle's voltage goes above 16.5 volts, or drops below 10.5 volts.

- Easy-to-use Preferences lets you customize up to 8 features.
- Exclusive AutoMode logic which intelligently reduces unwanted false alarms, plus Highway and Auto NoX settings.
- Ultra-bright text-display provides easy to read information from any angle.
- SpecDisplay provides actual numeric radar frequency for any radar signal.
- New Programmable Bands (on/off).
- Detects and decodes up to 64 Safety Warning System messages.
- Includes new coiled SmartCord, which provides convenient mute button right on the plug.

If you've used a radar detector before, a review of the Quick Reference Guide on pages 4 and 5, and the Preferences information on pages 12 and 13 will briefly explain the new features.

If this is your first detector, please read the manual in detail to get the most out of your RedLine's outstanding performance and innovative features.

Please drive safely.

FCC NOTE: Modifications not expressly approved by the manufacturer could void the user's FCC granted authority to operate the equipment.

▼ Remove card along perforations ▼

ESCORT RedLine Quick Reference Card

There are 8 user-selectable options so you can customize your RedLine for your own preferences.

The buttons labeled VOLUME/MUTE and SENS are also used to enter the Program Mode, REVIEW your current program settings, and to CHANGE any settings as desired. The abbreviations PGM, RVW, and CHG are located below the buttons and are highlighted in graphics.

How to use Preferences

- 1 To enter Program Mode, press and hold both VOLUME/MUTE and SENS buttons down for 2 seconds.** The unit will beep twice, and will display the word **Pr^{ef}s**.
- 2 Then press the RVW button to review the current settings.** You can either tap the button to change from item to item, or hold the button to scroll through the items.
- 3 Press the CHG button to change any setting.** You can either tap the button to change from setting to setting, or hold the button to scroll through all the options.
- 4 To leave Preferences, simply wait 8 seconds without pressing any button.** The unit will display **Complete** and return to normal operation.

Factory Default Settings

To reset the RedLine to its original factory settings, press and hold the "VOLUME/MUTE," and "SENS," buttons while turning the power on. RedLine will display a **Reset** message, accompanied by an audible alert acknowledging the reset.

An example:

Here is how you would turn RedLine's AutoMute feature off:

- 1 Enter the Program Mode by holding both the VOLUME/MUTE and SENS buttons down for 2 seconds. RedLine will beep twice and display **Pr^{ef}s**.
- 2 Then hold the RVW button down. The RedLine will scroll through the categories, starting with power-on indication (**Pi^lo^t**), then Brightness (**Br^t**), alert lamp (**Fl^amp**), Power-on sequence (**Pwr^on**), Signal Strength meter (**Me^ter**), and then AutoMute (**aMute**).
- 3 Release the RVW button when the RedLine shows the aMute item. Since the factory setting for AutoMute is on, RedLine will display **aMute ON**.

Note: If you accidentally don't release the RVW button in time, and RedLine goes to the next category, simply hold the RVW button down again, and scroll through the categories again until aMute is displayed.

- 4 Press the CHG button to change from **aMute ON** to **aMute OFF**.
- 5 To complete Preferences, simply wait 8 seconds without pressing any button. The display will read **Complete** and return to normal operation.

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Quick Reference Card



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ESCORT RedLine Quick Reference Card

Press the **RVW** button to go from one category to the next

Press the **CHG** button to change your setting within a category

PILOT (Power-on indication)	Pilot HwY Pilot H Pilot H.> Pilot U	* Full word: Highway or Auto or AutoNoX Letter: H or A or ANX Letter, with scanning dot Vehicle voltage
BRIGHTNESS	Brt Auto Brt Min Brt Med Brt Max Brt Dark	* Automatic Minimum Medium Maximum Full dark
ALAMP (Alert Lamp)	Alamp ON Alamp OFF	* Alert Lamp on Alert Lamp off
POWER-ON SEQUENCE	PwrOn FST PwrOn STD	* Fast power-on sequence Standard power-on sequence
SIGNAL STRENGTH METER	Meter STD Meter EXP Meter SPC	* Standard signal strength meter ExpertMeter SpecDisplay
AUTOMUTE	aMute ON aMute OFF	* AutoMute on AutoMute off
VOICE	Voice ON Voice OFF	* Voices on Voices off
BANDS	Bands OFT Bands MOD	* Default settings One or more bands disabled

Turn bands ON or OFF by pressing and holding the SENS button

X	ON or OFF (default is on)
K	ON or OFF (default is on)
Ka	ON or OFF (default is on)
PDP	ON or OFF (default is off)
SWS	ON or OFF (default is off)
LSR	ON or OFF (default is on)
TSR	ON or OFF (default is off)

▼ Remove card along perforations ▼


* Factory Default Settings

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Quick Reference Guide

To begin using your RedLine, just follow these simple steps

- 1 Plug the small end of the power cord into the side jack of the detector, and plug the large end of the power cord into your car's lighter socket.
- 2 Mount RedLine on your windshield using the supplied windshield Mount.
- 3 Press the PWR  button, located on the left side of the control panel, to turn RedLine on.
- 4 Press and hold the VOLUME/MUTE button to adjust the volume level.

Please read the manual to fully understand RedLine's operation and features.

QuickMount Slot
Insert RedLine's adjustable Windshield Mount into this slot.
Page 7

QuickMount Button
Press the release button and slide the Windshield Mount into one of its four locking positions.
Page 7

Power
Press the PWR  button to turn RedLine on.

Volume
Press and hold the VOLUME/MUTE button to adjust the alert volume level.
Page 8

AutoMute
RedLine's patented AutoMute automatically reduces the volume level of the audio alert after a brief period. If you prefer, you can turn AutoMute off.
Page 8

Radar Antennae and Laser Lens
The rear panel of your RedLine should have a clear view of the road. For the best performance, do not mount the RedLine directly behind windshield wipers or tinted areas.
Page 6

Rear Laser Port
Receives laser signals from behind the vehicle.

Power Jack
Plug the power cord into this connector.
Page 10

Earphone Jack
Accepts standard 3.5mm earphone.

VOLUME/MUTE Button
Briefly press this button (below the display) to silence the audio for a specific alert. (The audio will alert you to the next encounter.)
Page 8

Sensitivity Button (SENS)
Switches between Highway, Auto, and Auto NoX settings. In general, we recommend the Highway for the best performance.
Page 8

Alert Lamp
Indicates radar or laser alert.

Preferences
RedLine is ready to go out of the box, just plug it in and turn it on. But you can also easily change 8 features for your preferences.
Pages 12-16



Alphanumeric Display
RedLine's display will show Highway, Auto, or Auto NoX as its power-on indication. If you prefer, you can choose other power-on indications.
Pages 12-14

During an alert, the display will indicate radar band, and a precise bar graph of signal strength.

Page 10

NOTE: In the Dark Mode the display will not light during an alert.
Page 9

Installation

Power Connection

To apply power to the RedLine, plug the small end of the power cord, (telephone-type connector) into the modular jack on the RedLine's right side, and plug the lighter plug adapter into your vehicle's lighter socket or accessory socket.

Your RedLine operates on 12 volts DC negative ground only. The lighter plug provided is a standard size and will work in most vehicles. However, some vehicles may require the optional European sleeve to ensure a snug fit. If so, simply call our service department to order one. This sleeve slides over the power cord's lighter plug adapter. Of course, your lighter socket must be clean and properly connected for proper operation.

NOTE: Depending on your vehicle, the lighter socket may either be continuously on, or switched on and off with your ignition.

Optional power cords

See the Accessories section for details on our optional coiled SmartCord or Direct-wire power cords.

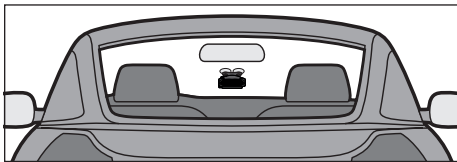
Mounting Location

WARNING: ESCORT cannot anticipate the many ways RedLine can be mounted. It is important that you mount RedLine where it will not impair your view nor present a hazard in case of an accident.

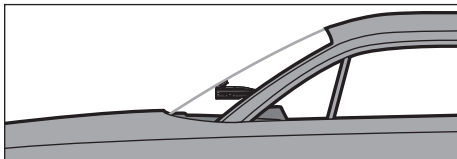
Where to mount RedLine

For optimum detection performance, we recommend the following:

- Using the Windshield QuickMount, mount your RedLine level and high enough on your front windshield to provide a clear view of the road from the front and rear.



- Mount RedLine away from windshield wipers, other solid objects, and heavily tinted areas that might obstruct the radar antennae or laser lens.

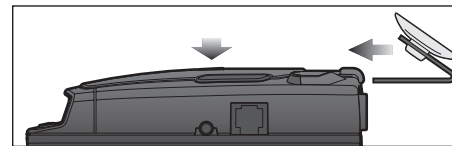


Windshield Mount

Windshield Mount

RedLine's QuickMount Windshield Bracket is designed for unobtrusive and hassle-free mounting.

- 1 Depress the adjustment button on the top of the RedLine (by the word ESCORT) and slide the QuickMount Bracket into the slot until it is locked into the position which best fits the angle of your windshield (there are four settings available). For extremely horizontal or extremely sloped windshields, the QuickMount Bracket can be bent.



To ensure that the suction cups adhere to the windshield firmly, be sure to keep both your windshield and the suction cups clean.

- 2 To adjust the RedLine on your windshield, use the QuickMount adjustment button located on the top of the RedLine, and slide RedLine forward or backward to obtain a level position.


When installed and adjusted properly, the back top edge of the RedLine should rest solidly against your windshield.

User's Tip

You can leave the QuickMount Bracket in place on your windshield, and easily remove RedLine by pressing the adjustment button and sliding RedLine off the mount. Again, be sure to position the bracket where it won't present a hazard in the event of an accident. Additional mounts are available.

CAUTION! A few vehicles (including some Porsches) have windshields with a soft anti-lacerative coating on the inside surface. Use of suction cups will permanently mar this coating. Consult your dealership or the vehicle owner's manual to determine if your windshield has this coating.

Power

To turn RedLine on or off, press the PWR  button located on the control panel. When you turn RedLine on, it provides a quick audible tone to confirm it's working.

If you prefer, you may program your RedLine for a longer power-on sequence. See the Preferences section for details.

Volume

Press and hold the VOLUME/MUTE button located on the detector or the Mute button on SmartCord to adjust RedLine's alert volume level. The audio will ramp up and down, accompanied by a bar-graph on the display. Once you've reached your preferred audio level, simply release the button.

Power-on Indication

After RedLine's start-up sequence is complete, the alphanumeric display will show Highway, Auto, or Auto NoX to indicate which sensitivity mode is selected.

If you prefer, you can select alternate power-on displays. See Preferences for details.

Voice Alerts

RedLine provides digital voice announcements of radar and laser bands detected. If Safety Radar (SWS) is turned on, a safety message will also be announced. See the Preferences section for details.

AutoMute

RedLine has our patented AutoMute feature. After you encounter an alert at the volume you selected, the AutoMute feature will automatically reduce the volume to a lower level. This keeps you informed without the annoyance of a continuous full-volume alert.

If you prefer, you can turn the AutoMute feature off. See Preferences for details.

Mute

The VOLUME/MUTE button, located center on the RedLine's control panel, allows you to silence the audio alert during a radar encounter.

To mute the audio for a single specific signal, briefly press the VOLUME/MUTE Button on the detector or the Mute button located on the SmartCord. After that encounter has passed, the audio will automatically reset to your previously selected audio level.

Sensitivity Button

The "SENS" button selects RedLine's sensitivity mode. We recommend Highway for the best overall performance. RedLine's "Auto" mode provides long-range warning, but uses patented logic to minimize false alarms from automatic door openers etc. In this mode, RedLine's internal computer continuously analyzes all incoming signals and intelligently filters them..

You can also select Auto NoX mode.

This is particular helpful when driving in urban areas where annoying X-band intrusion alarms and door openers are common. Auto NoX mode can be engaged to turn off X-band completely to eliminate these alerts. Full sensitivity is maintained on all other bands.

See the Preferences section for details.

Brightness

RedLine's display brightness is controlled by a photocell located behind the front display lens. This photocell will automatically adjust the display based on the ambient light in your vehicle. If you prefer, you can select a fixed brightness level, including Full Dark Mode.

See the Preferences section for details.

Dark

When RedLine is in Dark mode, the display will not show visual alerts and the alert lamp will not flash when it detects signals. Only the audible alert tones will tell you a signal has been detected.

Audible Alerts

For Radar signals:

RedLine uses a geiger-counter-like sound to indicate the signal strength and type of radar signal being encountered. When you encounter radar, RedLine's audible alert will sound and occur faster as the signal gets stronger. This allows you to judge the distance from the signal source without taking your eyes from the road.

Each band has a distinct tone for easy identification:

- X-band = beeping
- K-band = brap
- Ka-band = double-brap
- POP = full double brap

For Laser signals:

Since laser signals are a possible threat no matter how weak, RedLine alerts you to these bands at full signal strength.

For POP signals:

Since POP signals are a possible threat no matter how weak, RedLine alerts you to these bands at full signal strength.

For Safety Radar Signals:

RedLine will alert you to these signals with a double-beep tone, and a corresponding text message. A complete list of the text messages is on page 23.

Power Connector

RedLine's power jack uses a telephone-type connector. This 4-conductor connector only works with the included SmartCord or optional direct-wire or our standard power cord.

For more information or to order, call us toll-free at 1-800-433-3487.

Signal Strength Meter

RedLine's alphanumeric display consists of 280 individual LEDs, to provide an intuitive ultra-bright display of signal strength and text messages.

RedLine's standard bar-graph signal strength meter only displays information on a single radar signal. If there are multiple signals present, RedLine's internal computer determines which signal is the most important threat to show on the bar-graph meter.

When RedLine detects radar, it displays the band (X, K, or Ka), and a precise bar-graph of the signal strength. When RedLine detects a laser signal, the display will show "LASER." When it detects a POP signal, the display will show "POP."

NOTE: If you are operating RedLine in the Dark mode, the display will not light when a signal is detected—only the audio and the flashing alert lamp on the SmartCord.

ExpertMeter

RedLine's ExpertMeter option is an advanced display for experienced detector users. Please use RedLine for a few weeks to get familiar with its other features before using ExpertMeter.

To use the ExpertMeter instead of the bar graph signal strength meter, you must select MeterExp in Preferences (see pages 14-16).

RedLine's ExpertMeter simultaneously tracks up to 8 radar signals. It provides detailed information on up to (2) Ka-band, (2) K-band, and (4) X-band signals.

ExpertMeter can help you spot a change in your normal driving environment; for example, a traffic radar unit being operated in an area where there are normally other signals present.

ExpertMeter is actually a miniature spectrum analyzer. It shows what band each signal is on and its relative signal strength.

The image shows a digital display with the text 'KAII KII XIIII' in a monospaced font. The 'KAII' is the tallest, followed by 'KII', and 'XIIII' is the shortest.

Above is the ExpertMeter display if RedLine was detecting 2 strong Ka-band, 2 strong K-band, and 4 strong X-band signals.

As you can see, there are vertical lines after each band designator. Each line shows a signal being detected. The height of each line shows the relative signal strength of that signal.

NOTE: If you use ExpertMeter, the brief signal shown in the power-on sequence when you turn on your RedLine will also be in ExpertMeter: an X with a single vertical line.

A few more examples will help you better see how the ExpertMeter works.

The image shows a digital display with the text 'KI XII' in a monospaced font. 'KI' is the tallest, and 'XII' is shorter.

Here ExpertMeter shows 1 strong K-band signal, and three X-band signals, two strong and one weak.

The image shows a digital display with the text 'KAI XIIII' in a monospaced font. 'KAI' is the tallest, and 'XIIII' is the shortest.

Here ExpertMeter shows 1 strong Ka-band signal, and three weak X-band signals.

The image shows a digital display with the text 'X' in a monospaced font. The 'X' is very short.

On very weak signals, there will be no vertical line. This shows a very weak X-band signal.

ExpertMeter Details

The band designators (X, K, Ka) will stay on the display for a few seconds after the signal has passed. This allows you to see what the unit detected, even on very brief signals.

However, the vertical lines representing individual signals continuously change (several times a second) to give you a continuous instantaneous view of all radar signals present.

SpecDisplay

The RedLine's SpecDisplay option is for the experienced detector user. In this mode, the RedLine will display the actual numeric frequency of the radar signal being received.

The image shows a digital display with the text 'K 24.150' in a monospaced font.

SpecDisplay shows one K-band signal at 24.150 gigahertz.

NOTE: Even long-time detector users will require some amount of time to get familiar with this new level of information about detected signals.

How To Use Preferences

How to customize RedLine with Preferences

There are 8 user-selectable options so you can customize your RedLine for your own preferences. The buttons labeled VOLUME/MUTE and SENS are also used to enter Preferences, REVIEW your current program settings, and to CHANGE any settings as desired. The words PGM, RVW, and CHG are located next to the buttons, and are highlighted in colored graphics. Pages 14-16 explain each option in more detail.

1 How to use Preferences

To enter Preferences, press and hold both the VOLUME/MUTE and SENS buttons down for 2 seconds. The unit will display the word Prefs.

2 Then press the RVW button to review the current settings. Simply tap the button to change from item to item.

3 Press the CHG button to change any setting. You can either tap the button to change from setting to setting, or hold the button to scroll through all the options.

4 To leave Preferences, simply wait 8 seconds without pressing any button, or press the PWR button (⏻). The unit will display Complete and return to normal operation.

An example

Here is how you would turn RedLine's AutoMute feature off.

1 Enter Preferences by holding both the VOLUME/MUTE and SENS buttons down for 2 seconds. *RedLine will beep display Prefs.*

2 Then hold the RVW button down. *RedLine will scroll through the categories, starting with Pilot, Brightness, Alert Lamp (Alamp), Power-on sequence (PwrOn), Signal strength meter (Meter), and then AutoMute (aMute).*

3 Release the RVW button when RedLine shows the AutoMute item. *Since the factory setting is for AutoMute to be on, RedLine will display aMute ON.*

If you accidentally don't release the RVW button in time, and RedLine goes to the next category, simply hold the RVW button down again and it will scroll through all of the categories.

4 Press the CHG button to change from aMute ON to aMute OFF.

5 To complete or exit Preferences, simply wait 8 seconds without pressing any button, or press the PWR button (⏻). *RedLine will display Complete and return to normal operation.*

Overview of Preferences

Press the RVW button to go from one category to the next

Press the CHG button to change your setting within a category

PILOT LIGHT (Power-on indication)	Pilot HWY Pilot H Pilot H.> Pilot U	* Full word: Highway or Auto or AutoNoX Letter: H or A or C Letter, with scanning dot Vehicle voltage
BRIGHTNESS	Brnt Auto Brnt Min Brnt Med Brnt Max Brnt Dark	* Automatic Minimum Medium Maximum Full Dark
ALAMP (Alert Lamp)	Alamp ON Alamp OFF	* Alert Lamp on Alert Lamp off
POWER-ON SEQUENCE	PwrOn FST PwrOn STD	* Fast power-on sequence Standard power-on sequence
SIGNAL STRENGTH METER	Meter STD Meter EXP Meter SPC	* Standard signal strength meter ExpertMeter SpecDisplay
AUTOMUTE	aMute ON aMute OFF	* AutoMute on AutoMute off
VOICE	Voice ON Voice OFF	* Voices on Voices off
BANDS	Bands DFT Bands MOD	* Default settings One or more bands disabled

* Factory Default Settings

To reset the RedLine to its original factory settings, press and hold the "VOLUME/MUTE," and "SENS," buttons while turning the power on. RedLine will display a Reset message, accompanied by an audible alert acknowledging the reset.

Turn bands ON or OFF by pressing and holding the SENS button

X	ON or OFF (default is on)
K	ON or OFF (default is on)
Ka	ON or OFF (default is on)
POP	ON or OFF (default is off)
SWS	ON or OFF (default is off)
LSR	ON or OFF (default is on)
TSR	ON or OFF (default is off)

Details of Preferences Options

Pilot (Power-on indication)

NOTE: When you are using the Dark mode, the display will only show ESCORT, REDLINE momentarily.

PilotHWY (Full description)

In this setting, RedLine will display “Highway,” “Auto,” or “Auto NoX” as its power-on indication. (factory default)

Pilot H (Letter)

In this setting, RedLine will display “H” for Highway, “A” for Auto and “ANX” for Auto NoX.

Pilot H.> (Scanning dot)

In this setting, RedLine will display “H” for Highway, “A” for Auto and “ANX” for Auto NoX with a scrolling dot afterwards.

Pilot V (Vehicle voltage)

In this setting, the RedLine will continually display “H” for Highway, “A” for Auto, and “ANX” for Auto NoX, plus the vehicle’s voltage.

NOTE: A high or low voltage warning is given any time the vehicle’s voltage goes above 16.5 volts, or drops below 10.5 volts. This feature is always on, regardless of the Pilot setting.

Brightness

BrtAuto (Factory default)

In this setting, the brightness for the display is controlled automatically by a sensor that measures the ambient light in the vehicle. Sunlight will increase the brightness level, while dim or no light (night driving) will decrease the brightness.

BrtMin

In this setting, the display is set to a minimum light level. This setting is retained in memory even if the power is turned off.

BrtMed

In this setting, the display is set to a medium light level. This setting is retained in memory even if the power is turned off.

BrtMax

In this setting, the display is set to a maximum light level. This setting is retained in memory even if the power is turned off.

BrtDark

In this setting, the display will be totally dark. The supplied SmartPlug will provide the only visual indication that the RedLine is operational.

Alamp

Alamp On (Alert lamp on)

In this setting, the Alert Lamp will flash on and off during an alert.

AlampOFF (Alert lamp off)

In this setting, the Alert Lamp will not flash on and off during an alert.

Power-on Sequence

PwrOnFST (Fast power-on)

In this setting, RedLine will provide a single X-band tone if the factory default settings have not been changed.

If any of the factory default band settings have been disabled, a double X-band tone and corresponding message (i.e. “X OFF”), will alert you that one or more bands have been turned off. (factory default)

PwrOnSTD (Long)

In this setting, each time you turn RedLine, it will display “ESCORT”, “ REDLINE,” “LASER,” “Ka-band,” “K-band,” “X-band,” followed by a brief X-band alert. (factory default)

If any of the factory default bands have been disabled, a double X-band tone and corresponding message (i.e. “X OFF”), will alert you that one or more bands have been turned off.

Signal Strength Meter

MeterSTD (Standard meter)

In this setting, the meter displays the band of the received signal, and a bar-graph will show the relative signal strength. (factory default)

MeterEXP (ExpertMeter)

In this setting, the meter will simultaneously track multiple radar signals, including relative signal strength for each.

NOTE: ExpertMeter is explained in more detail on pages 10-11.

MeterSPC (SpecDisplay meter)

In this setting, the meter displays the actual numeric frequency of the radar signal received.

NOTE: The Spec Display feature is explained in more detail on page 11.

Details of Preference Options

AutoMute

AutoMute ON (AutoMute on)

In this setting, the RedLine's audio alerts will initially be heard at the volume you set, but after a few seconds, the RedLine will automatically reduce the volume level, to keep you informed, but not annoyed. (factory default)

AutoMute OFF (AutoMute off)

With AutoMute off, RedLine's audio alerts will remain at the volume you set for the duration of the radar encounter.

Voice

Voice ON (Voice announcements on)

In this setting, all radar, laser, and SWS messages (if programmed) will be announced using a digital voice. (factory default)

Voice OFF (Voice announcements off)

In this setting, only the distinct audio tone will be heard when a radar, Laser, or SWS message is detected.

Bands

Bands DFT

In this setting, the factory default settings for radar and laser are monitored.

This is the factory setting, and it is highly recommended that you use your RedLine in this mode.

Bands MOD

In this setting, RedLine will warn you with an audible alert, and associated text message stating which band has changed from the original factory setting (i.e. "SWS ON"). This warning is displayed during the start up sequence (standard or fast).

WARNING: Do not turn off a band unless you are absolutely certain that there are no traffic radar units using that specific band in your area.

NOTE: These settings only apply when RedLine is operated in Auto NoX mode. X-band sensitivity is not affected when used in "Auto," or "Highway" modes.

Specifications

Features and Specifications

Operating Bands

- X-band 10.525 GHz \pm 25 MHz
- K-band 24.150 GHz \pm 100 MHz
- Ka-band 34.700 GHz \pm 1300 MHz
- Laser 904nm, 33 MHz bandwidth

Radar Receiver / Detector Type

- Twin Antennae
- Superheterodyne, VTO
- Scanning Frequency Discriminator
- Digital Signal Processing (DSP)

Laser Detection

- Quantum Limited Video Receiver
- Multiple Laser Sensor Diodes

Display Type

- 280 LED Alphanumeric
- Bar Graph, ExpertMeter or SpecDisplay
- 4 Levels of Brightness Control, Plus Dark Mode

Power Requirement

- 12VDC, Negative Ground
- SmartCord Power Cord (included)

Preferences

- Power-On Indication
- Brightness
- Alert Lamp
- Power-on Sequence
- Signal Strength Meter
- AutoMute
- Voice Alerts
- Radar / Laser Bands

Sensitivity Control

- Highway, Auto and Auto NoX

Auto Calibration Circuitry

TotalShield™ Technology

Dimensions (Inches)

- 1.25 H x 2.75 W x 4.75 L

Patented Technology

RedLine is covered by one or more of the following patents:

U.S. Patents

7,098,844 6,836,238 6,779,765 6,693,578
6,670,905 6,614,385 6,587,068 6,400,305
6,249,218 6,127,962 6,069,580 5,668,554
5,600,132 5,587,916 5,559,508 5,446,923
5,402,087 5,365,055 5,347,120 5,305,007
5,206,500 5,164,729 5,134,406 5,111,207
5,079,553 5,049,885 5,049,884 4,961,074
4,954,828 4,952,937 4,952,936 4,939,521
4,896,855 4,887,753 4,862,175 4,750,215
4,686,499 4,631,542 4,630,054 4,625,210
4,613,989 4,604,529 4,583,057 4,581,769
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Canadian Patents

2,337,077 2,330,964 1,295,715 1,295,714
1,187,602 1,187,586

European Patents

1,145,030 1,090,456

Other patents pending.

Interpreting Alerts

Although RedLine has a comprehensive warning system and this handbook is as complete as we can make it, only experience will teach you what to expect from your RedLine and how to interpret what it tells you. The specific type of radar being used, the type of

Alert

RedLine begins to sound slowly, then the rate of alert increases. The Signal Meter ramps accordingly.

RedLine emits short alerts for a few seconds and then falls silent only to briefly alert and fall silent again.

RedLine suddenly sounds a continuous tone for the appropriate band received. All segments in the Signal Strength Meter are displayed.

A brief laser alert.

RedLine receives weak signals. These signals may be a little stronger as you pass large, roadside objects. The signals increase in frequency.

RedLine alerts slowly for awhile and then abruptly jumps to a strong alert.

transmission (continuous or instant-on) and the location of the radar source affects the radar alerts you receive.

The following examples will give you an introduction to understanding RedLine's warning system for radar, laser and safety alerts.

Explanation

You are approaching a continuous radar source aimed in your direction.

An instant-on radar source is being used ahead of you and out of your view.

An instant-on radar source or laser source is being used nearby. This kind of alert requires immediate attention!

Laser is being used in the area. Because laser is inherently difficult to detect, any laser alert may indicate a source very close by.

A moving patrol car with continuous radar is overtaking you from behind. Because these signals are reflected (reflections are increased by large objects), they may or may not eventually melt into a solid point even when the patrol car is directly behind you.

You are approaching a radar unit concealed by a hill or an obstructed curve.

Alert

RedLine alerts intermittently. Rate and strength of alerts may be consistent or vary wildly.

RedLine alerts intermittently. Rate and strength of signal increases with each alert.

RedLine gives an X-band alert intermittently.

Explanation

A patrol car is traveling in front of you with a radar source aimed forward. Because signals are sometimes reflected off of large objects and sometimes not, the alerts may seem inconsistent.

A patrol car is approaching from the other direction, sampling traffic with instant-on radar. Such alerts should be taken seriously.

You are driving through an area populated with radar motion sensors (door openers, burglar alarms, etc.). Since these transmitters are usually contained inside buildings or aimed toward OR away from you, they are typically not as strong or as long as a real radar encounter.

CAUTION: Since the characteristics of these alerts may be similar to some of the preceding examples, overconfidence in an unfamiliar area can be dangerous. Likewise, if an alert in a commonly traveled area is suddenly stronger or on a different band than usual, speed radar may be set up nearby.

How Radar Works

Traffic radar, which consists of microwaves, travels in straight lines and is easily reflected by objects such as cars, trucks, even guardrails and overpasses. Radar works by directing its microwave beam down the road. As your vehicle travels into range, the microwave beam bounces off your car, and the radar antenna looks for the reflections. Using the Doppler Principle, the radar equipment then calculates your speed by comparing the frequency of the reflection of your car to the original frequency of the beam sent out.

Traffic radar has limitations, the most significant of these being that it typically can monitor only one target at a time. If there is more than one vehicle within range, it is up to the radar operator to decide which target is producing the strongest reflection. Since the strength of the reflection is affected by both the size of the vehicle and its proximity to the antenna, it is difficult for the radar operator to determine if the signal is from a sports car nearby or a semi-truck several hundred feet away.

Radar range also depends on the power of the radar equipment itself. The strength of the radar unit's beam diminishes with distance. The farther the radar has to travel, the less energy it has for speed detection.

Because intrusion alarms and motion sensors often operate on the same frequency as X-Band radar, your RedLine will occasionally receive non-police radar signals. Since these X-Band transmitters are usually contained inside of a building, or aimed toward the ground, they will generally produce much weaker readings than will a true radar encounter. As you become familiar with the sources of these pseudo alarms in your daily driving, they will serve as confirmation that your RedLine's radar detection abilities are fully operational.

How "POP" Works

"POP" mode is a relatively new feature for radar manufacturers. It works by transmitting an extremely short burst (approximately half a second) within the allocated band, to identify speeding vehicles in traffic. Once the target is identified, or "POPPED", the gun is then turned to its normal operating mode to provide a vehicle tracking history, (required by law).

How Laser (Lidar) Works

Laser speed detection is actually LIDAR (Light Detection and Ranging). LIDAR guns project a beam of invisible infrared light. The signal is a series of very short infrared light energy pulses, which move, in a straight line, reflecting off your car and returning to the gun. LIDAR uses these light pulses to measure the distance to a vehicle. Speed is then calculated by measuring how quickly these pulses are reflected given the known speed of light.

LIDAR (or laser) is a newer technology and is not as widespread as conventional radar, therefore, you may not encounter laser on a daily basis. And unlike radar detection, laser detection is not prone to false alarms. Because LIDAR transmits a much narrower beam than does radar, it is much more accurate in its ability to distinguish between targets and is also more difficult to detect. ***AS A RESULT, EVEN THE BRIEFEST LASER ALERT SHOULD BE TAKEN SERIOUSLY.***

There are limitations to LIDAR equipment. LIDAR is much more sensitive to weather conditions than RADAR, and a LIDAR gun's range will be decreased by anything affecting visibility such as rain, fog, or smoke. A LIDAR gun cannot operate through glass and it must be stationary in order to get an accurate reading. Because LIDAR must have a clear line of sight and is subject to cosine error (an inaccuracy, which increases as the angle between the gun and the vehicle, increases) police typically use LIDAR equipment parallel to the road or from an overpass. LIDAR can be used day or night.

How SWS Works

Safety Warning System, or SWS, uses a modified K-band radar signal. The SWS safety radar system has 64 possible messages (60 currently allocated). The SWS messages your RedLine can display are listed on the facing page.

From the factory, your RedLine is programmed with SWS decoding ON. If SWS is used in your area, your RedLine will display the safety messages associated with the signal. If you do not wish to detect this system, use the Preferences feature to turn RedLine's SWS decoding OFF.

NOTE: Some of the safety messages have been condensed, so that each message can be displayed on one or two screens on RedLine's eight-character display.

Since Safety radar technology is relatively new, and the number of transmitters in operation is not yet widespread, you will not receive Safety signals on a daily basis. Do not be surprised if you encounter emergency vehicles, road hazards and railroad crossings that are unequipped with these transmitters. As Safety transmitters become more prevalent (the number of operating transmitters is growing every day), these Safety radar signals will become more common.

SWS Text Messages

Highway Construction or Maintenance

- 1 Work Zone Ahead
- 2 Road Closed Ahead/Follow Detour
- 3 Bridge Closed Ahead/Follow Detour
- 4 Highway Work Crews Ahead
- 5 Utility Work Crews Ahead
- 6 All Traffic Follow Detour Ahead
- 7 All Trucks Follow Detour Ahead
- 8 All Traffic Exit Ahead
- 9 Right Lane Closed Ahead
- 10 Center Lane Closed Ahead
- 11 Left Lane Closed Ahead
- 12 *For future use*

Highway Hazard Zone Advisory

- 13 Stationary Police Vehicle Ahead
- 14 Train Approaching/At Crossing
- 15 Low Overpass Ahead
- 16 Drawbridge Up
- 17 Observe Drawbridge Weight Limit
- 18 Rock Slide Area Ahead
- 19 School Zone Ahead
- 20 Road Narrows Ahead
- 21 Sharp Curve Ahead
- 22 Pedestrian Crossing Ahead
- 23 Deer/Moose Crossing
- 24 Blind/Deaf Child Area
- 25 Steep Grade Ahead/Truck Use Low Gear
- 26 Accident Ahead
- 27 Poor Road Surface Ahead
- 28 School Bus Loading/Unloading
- 29 No Passing Zone
- 30 Dangerous Intersection Ahead
- 31 Stationary Emergency Vehicle Ahead
- 32 *For future use*

Weather Related Hazards

- 33 High Wind Ahead
- 34 Severe Weather Ahead
- 35 Heavy Fog Ahead
- 36 High Water/Flooding Ahead
- 37 Ice On Bridge Ahead
- 38 Ice On Road Ahead
- 39 Blowing Dust Ahead
- 40 Blowing Sand Ahead
- 41 Blinding Snow Whiteout Ahead
- 42 *For future use*

Travel Information/Convenience

- 43 Rest Area Ahead
- 44 Rest Area With Service Ahead
- 45 24 Hour Fuel Service Ahead
- 46 Inspection Station Open
- 47 Inspection Station Closed
- 48 Reduced Speed Area Ahead
- 49 Speed Limit Enforced
- 50 Hazardous Materials Exit Ahead
- 51 Congestion Ahead/Expect Delay
- 52 Expect 10 Minute Delay
- 53 Expect 20 Minute Delay
- 54 Expect 30 Minute Delay
- 55 Expect 1 Hour Delay
- 56 Traffic Alert/Tune AM Radio
- 57 Pay Toll Ahead
- 58 Trucks Exit Right
- 59 Trucks Exit Left
- 60 *For future use*

Fast/Slow Moving Vehicles

- 61 Emergency Vehicle In Transit
- 62 Police In Pursuit
- 63 Oversize Vehicle In Transit
- 64 Slow Moving Vehicle

Troubleshooting

Problem	Solution
RedLine beeps briefly at the same location every day, but no radar source is in sight.	<ul style="list-style-type: none">• An X-band motion sensor or intrusion alarm is located within range of your route. With time, you will learn predictable patterns of these signals.
RedLine does not seem sensitive to radar or laser.	<ul style="list-style-type: none">• Make sure that windshield wipers do not block RedLine's radar antennae and that the laser lens is not behind tinted areas.• Determine if your vehicle has an Instaclear[®], ElectriClear[®] or solar reflective windshield which may deflect radar or laser signals.• RedLine may be in City Mode.
RedLine did not alert when a police car was in view.	<ul style="list-style-type: none">• VASCAR (Visual Average Speed Computer and Recorder), a stopwatch method of speed detection, may be in use.• Officer may not have radar or laser unit turned on.
RedLine did not provide a Safety Signal while within range of an emergency vehicle.	<ul style="list-style-type: none">• Safety transmitters may not be commonly used in your area.
RedLine's display is not working.	<ul style="list-style-type: none">• Change Preferences to deactivate Dark Mode.
RedLine's audible alerts are less loud after the first few alerts.	<ul style="list-style-type: none">• RedLine is in AutoMute Mode. See page 8 for details.
RedLine bounces or sags on windshield.	<ul style="list-style-type: none">• RedLine is not making contact with the windshield to provide stability. While holding down RedLine's QuickMount button, slide RedLine further back toward the windshield so that the back top edge makes firm contact.
RedLine's power-on sequence reoccurs while you are driving.	<ul style="list-style-type: none">• A loose power connection or dirty lighter socket can cause RedLine to be briefly disconnected.

Problem	Solution
Your 14-year old son has changed all 8 of the Preferences options.	<ul style="list-style-type: none">• You can return all of the Preferences options to the factory defaults by holding down the VOLUME/MUTE and SENS buttons while you turn RedLine on.
RedLine will not turn on.	<ul style="list-style-type: none">• Check the PWR is on.• Check that vehicle ignition is ON.• Check that vehicle lighter socket is functional.• Try RedLine in another vehicle.
RedLine feels very warm.	<ul style="list-style-type: none">• It is normal for RedLine to feel warm.

Explanation of Displays

<i>No display</i>	RedLine is in the Dark mode (pages 9, 14)
<i>PilotHWY</i>	One of the many Preferences messages (pages 12-16)
<i>WorkZone</i>	One of the many Safety Radar messages (pages 22-23)
<i>Caution</i>	RedLine has detected a Safety Radar Signal, but the signal isn't yet strong enough to decode the specific safety message (pages 22-23)
<i>Service Required</i>	RedLine has failed the calibration test. Contact ESCORT for repair

Service

Service Procedure

If your RedLine ever needs service, please follow these simple steps:

- 1 Check the troubleshooting section of this manual. It may have a solution to your problem.
- 2 Call us at **1-800-543-1608**. We may be able to solve your problem over the phone. If the problem requires that you send your RedLine to the factory for repair, we will provide you with a Service Order Number, which must be included on the outside of your shipping box.

Enclose the following information with your RedLine:

- Your Service Order Number
- Your name and return address
- Your daytime telephone number
- A description of the problem you are experiencing

Out Of Warranty Repairs

For out of warranty repairs, include prepayment in the amount you were quoted by the ESCORT Customer Service Representative. If the detector has been damaged, abused or modified, the repair cost will be calculated on a parts and labor basis. If it exceeds the basic repair charge, you will be contacted with a quotation. If the additional payment is not received within 30 days (or if you notify us that you choose not to have your RedLine repaired at the price quoted), your RedLine will be returned, without repair. Payment can be made by check, money order, or credit card.

Mail RedLine and Power Cord To:

ESCORT
Customer Service Department
Service Order Number _____
5440 West Chester Road
West Chester OH 45069

For your own protection, we recommend that you ship your RedLine postpaid and insured. Insist on a proof of delivery, and keep the receipt until the return of your RedLine.

Register
online:

@WWW

EscortRadar.com

▼ Remove card along perforations ▼

ESCORT PRODUCT REGISTRATION CARD

ESCORT®

- ▲ If you purchased your detector directly from ESCORT, you do not need to fill this out.
- ▲ If you did not purchase your detector directly from ESCORT, please fill out this section and return to us or register online at our web address: www.EscortRadar.com

1. First Name: _____ Middle Initial _____ Last Name _____

Address _____

City _____

State _____

Zip _____

Phone Number (In case we have a question) _____

2. Product Purchased _____ Model _____ Serial Number _____

3. Place of Purchase _____ Date _____ Price _____

4. Primary reason for purchasing this ESCORT product _____

Warranty

ESCORT One Year Limited Warranty

ESCORT warrants your RedLine against all defects in materials and workmanship for a period of one (1) year from the date of the original purchase, subject to the following terms and conditions: The sole responsibility of ESCORT under this Warranty is limited to either repair or, at the option of ESCORT, replacement of RedLine detector. There are no expressed or implied warranties, including those of fitness for a particular purpose or merchantability, which extend beyond the face hereof. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. ESCORT is not liable for any incidental or consequential damages arising from the use, misuse, or mounting of RedLine. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific rights. You may have other legal rights, which vary, from state to state. This Warranty does not apply if the serial number on the housing of the RedLine has been removed, or if your RedLine has been subjected to physical abuse, improper installation, or modification.

Accessories

Accessories

The following accessories and replacement parts are available for ESCORT RedLine:

<i>Coiled SmartCord</i>	\$29.95
<i>Direct-wire SmartCord</i>	\$29.95
<i>Standard Coiled Power Cord</i>	\$14.00
<i>Direct-wire Power Cord</i>	\$10.00
<i>Accessory Kit</i>	\$14.95
<i>Extra Windshield Mount</i>	\$4.00
<i>Carrying Case</i>	\$29.95

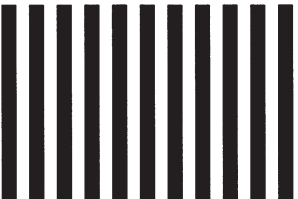
ESCORT Extended Service Plan

ESCORT offers an optional extended service plan. Contact ESCORT for details.

▼ Remove card along perforations ▼



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WEST CHESTER OH 45069-9789

