

ESCORT®

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CORDLESS



S2

Designed in the USA
ESCORT Inc.
5440 West Chester Road
West Chester OH 45069
Sales 800-433-3487
Service 800-543-1608
www.EscortRadar.com

SOLO

S2

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

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OWNER'S MANUAL

Congratulations

Your new Solo S2 is the most advanced cordless radar, laser and safety detector available.

The Solo S2 includes full X, K, SuperWide Ka, and Safety Warning System radar capability, front and rear laser detection, 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 Solo S2 introduces a new level of revolutionary cordless performance and innovative features:

- New long-range cordless performance for both radar and laser
- New AutoPower feature maximizes battery life
- New brilliant high-resolution LCD display with LED backlight
- Advanced EZ-Programming lets you customize up to 10 features
- Exclusive AutoSensitivity mode virtually eliminates false alarms, plus Highway and City settings
- ExpertMeter tracks and displays up to 8 radar signals simultaneously
- Detects and displays up to 64 Safety Warning System messages
- Compatible with Laser Shifter™ ZR3

If you've used a radar detector before, a review of the Quick Reference Guide on pages 6 and 7, and the EZ-Programming information on pages 14-19 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 Solo S2'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

Solo S2 Quick Reference Card

There are 10 user-selectable options so you can customize your Solo S2 for your own preferences.

The buttons labeled VOL and M (Mode) are also used to enter the Program Mode, REVIEW your current program settings, and to CHANGE any settings as desired. The words PGM, RVW, and CHG are located on the front of the detector, and are highlighted in blue graphics.

How to use EZ-Programming

1 To enter Program Mode, press and hold one of the VOL buttons and the M button down for 2 seconds. (The unit will beep twice, and will display the word "Program").

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 Program Mode, simply wait 8 seconds without pressing any button. (The unit will display Complete, beep 4 times, and return to normal operation).

Solo S2's Factory Settings

To reset Solo S2 to its original factory settings, press and hold the Mute and M (Mode) buttons while turning Solo S2 on. Solo S2's display will provide a "Reset" message, accompanied by an audible alert, acknowledging the reset.

An example of EZ-Programming:

Here is how you would turn Solo S2's AutoMute feature off.

1 Enter the Program Mode by holding one of the VOL buttons and the M button down for 2 seconds. *Solo S2 will beep twice and display Program.*

2 Then hold the RVW button down. *Solo S2 will scroll through the categories, starting with Contrast (Contr), then Pilot Light (Pilot), then Auto Power (aPwr), then Power-on sequence (PwrOn), then Signal Strength Meter (Meter), and then AutoMute (aMute).*

3 Release the RVW button when Solo S2 shows the AutoMute item. *Since the factory setting is for AutoMute to be on, Solo S2 will display aMute ON.*

If you accidentally don't release the RVW button in time, simply press the other VOL button to scroll back to the desired category.

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

5 To complete the Programming, simply wait 8 seconds without pressing any button. *Solo S2 will display Complete, beep 4 times, and return to normal operation.*

Remove card along perforations

Solo S2 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



CONTRAST	Contr 3	* Contrast level 3 Scrolls thru five contrast levels: 1-5
PILOT LIGHT <i>(Options using 12-volt SmartCord)</i>	Pilot HWY Pilot H Pilot H.> Pilot + Pilot +.> Pilot +>	* Full word: Highway or Auto or City Letter: H or A or C Letter, with scanning dot Symbol: + or + - Symbol, with scanning dot Scanning symbol
AUTO POWER	aPwr Motn aPwr Time aPwr Off	* Uses motion to turn Solo S2 off Uses time to turn Solo S2 off Turn Solo S2 on and off manually
POWER-ON SEQUENCE	PwrOn STD PwrOn FST	* Standard power-on sequence Fast power-on sequence
SIGNAL STRENGTH METER	Meter STD Meter EXP	* Standard signal strength meter Expert Meter
AUTOMUTE	aMute ON aMute OFF	* AutoMute on AutoMute off
AUDIOTONES	Tone STD Tone LOUD	* Standard tones Loud tones
CITY MODE SENSITIVITY	City STD City LoX City NoX	* Standard City mode sensitivity Low X band sensitivity in City Mode No X band sensitivity in City Mode
BRIGHTNESS	Br-t AUTO Br-t MIN Br-t MED Br-t MAX Br-t DARK	* Brightness is controlled automatically Minimum brightness when turned on Medium brightness when turned on Maximum brightness when turned on Full Dark Mode when turned on
BANDS	Bands ALL Bands MOD	* All bands enabled One or more bands are enabled
		Turn bands ON/OFF by pressing the mute button
	X ON or OFF K ON or OFF Ka ON or OFF LSR ON or OFF SWS ON or OFF UG2 ON or OFF	* X-band detection on * K-band detection on * Ka-band detection on * Laser detection on * SWS detection off * VG2 detection off

Remove card along perforations

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Quick Reference Guide

To begin using the Solo S2, just follow these simple steps:

- 1 Install (2) AA batteries (included) in the battery compartment. (Please note polarity)
- 2 Mount your Solo S2 on the windshield using the supplied windshield mount.
- 3 Press the Power button (PWR) located on the left side of the front panel.
- 4 Adjust the volume (VOL) by pressing the up and down buttons located to the right of the display.

Please read the manual to fully understand Solo S2's operation and features.

EasyMount Slot

Insert Solo S2's adjustable Windshield mount into this slot. Page 9

EasyRelease Button

Press the release button, and slide the Windshield mount into one of its four locking positions. Page 9

Rear Laser Port

Receives laser signals from behind the vehicle.

Power-On Indication

Three LED's (green, yellow, red) mounted between the PWR button and the display, indicate power (blinking in battery mode, solid when optional 12-volt power cord is used). These also indicate the sensitivity mode that the unit is in, ("H" for highway, "A" for AutoSensitivity, and "C" for city). Page 10

Power

Press the PWR button to turn Solo S2 on. Press and hold the PWR button to turn Solo S2 off. Page 10

AutoPwr Feature

The Solo S2 will automatically shut off once the vehicle has stopped moving for approximately 25 minutes. Page 16

Radar Antenna and Laser Lens

The rear panel of your Solo S2 should have a clear view of the road ahead. For best performance, do not mount Solo S2 directly behind windshield wipers or tinted areas.



Graphic LCD Display

During an alert, the display will turn on and indicate radar band, and a precise bar-graph of signal strength. Programming options and SWS messages are also displayed.

NOTE: When using Solo S2 in battery mode, the display will turn off automatically until a signal is detected, or you enter program mode. This maximizes battery life. When using the optional 12-volt SmartCord, the display will remain on and provide several pilot options for power-on indication. Page 16

12-volt Power Jack

For 12-volt operation, plug the optional SmartCord into this connector.

Mute / Battery Status Button

Briefly press this button (located on top) to silence the audio for a specific alert. Pages 10-11

Ear Phone Jack

A standard 1/8 inch (or 3.5 mm) earphone jack is located on the right front side of the Solo S2.

Mode Button

Switches sensitivity between Highway, AutoSensitivity, and City settings. In general, we recommend the AutoSensitivity mode. Page 11

Volume Control

Press the up or down button to adjust the S2's volume. Page 10

EZ-Programming

Solo S2 is ready to go, just plug it in and turn it on. If you prefer, you can also easily customize up to 10 features for your specific driving preferences. Pages 14-19

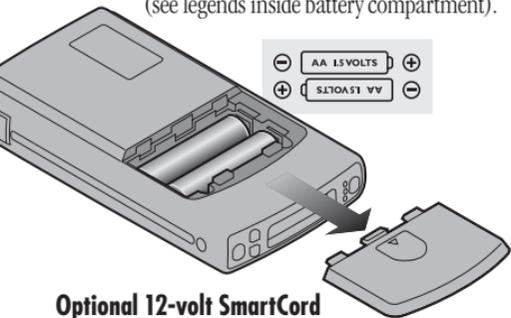
AutoMute

Solo S2'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 10

Installation

Battery Installation

Remove the battery door, located on the bottom of the detector, and install (2) AA batteries (supplied). Be sure to note the correct polarity for each battery (see legends inside battery compartment).



Optional 12-volt SmartCord

To power Solo S2 using 12-volts, simply remove the power connector plug, and insert the small end of the optional SmartCord, (telephone-type connector) into the modular jack on Solo S2's right side. Plug the lighter plug adapter into your vehicle's lighter socket or accessory socket.

The optional SmartCord allows you to operate the Solo S2 on 12 volts DC negative ground only. The lighter plug is a standard size and will work in most vehicles. Of course, your lighter socket must be clean and properly connected for proper operation.

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

See the Accessories section for details on how to order the optional 12-volt SmartCord.

Mounting Location

WARNING! ESCORT cannot anticipate the many ways Solo S2 can be mounted. It is important that you mount Solo S2 where it will not impair your view nor present a hazard in case of an accident.

Where to mount Solo S2

For optimum detection performance, we recommend the following:

- Using the supplied Windshield Mount, stick the suction cups to the windshield, and mount your Solo S2 level and high enough on your front windshield to provide a clear view of the road ahead.
- Mount Solo S2 away from windshield wipers, other solid objects, and heavily tinted areas that might obstruct the radar antenna or laser lens.

Windshield Mount

Solo S2's EasyMount windshield bracket is designed for unobtrusive and hassle-free mounting.

1 Depress the adjustment button on the top of Solo S2 (above the word "RELEASE") and slide the EasyMount bracket into the slot until mount 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 EasyMount bracket can be bent.

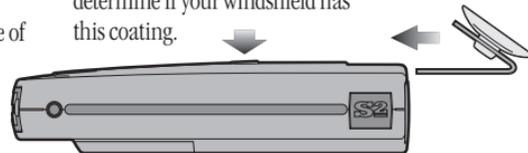
To ensure that the suction cups adhere to the windshield firmly, be sure to keep both your windshield and the suction cups clean.

2 To adjust Solo S2 on your windshield, use the EasyMount adjustment button located on the top of the Solo S2, and slide Solo S2 forward or backward to obtain a level horizontal position.

When installed and adjusted properly, the back top edge of the Solo S2 should rest solidly against your windshield.

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.



User's Tip

You can leave the EasyMount bracket in place on your windshield, and easily remove Solo S2 by pressing the adjustment button and sliding Solo S2 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.

Controls and Features

Power

To turn Solo S2 on, simply press the power button (PWR) located on the left side of the front panel. To turn the detector off, press and hold the same power button for approximately two (2) seconds.

AutoPwr (programmable)

To conserve battery life, the Solo S2 will automatically go to “sleep” after the vehicle has stopped moving for 25 minutes. If the vehicle starts to move within the next 30 minutes, your Solo S2 will “wake up” and prompt you, (both visually and audibly) to see if you want it back on. If so, simply press any button on the Solo S2, and it will return to normal operation.

If you do not press a button within 15 seconds of the prompt, the detector will shut down completely. To turn the Solo S2 back on, simply press the PWR button.

Volume Control

To adjust the alert tone volume level, press and hold the up or down arrow buttons located to the right of the display. Once the desired volume level is achieved, simply release the button. This volume level will be stored in memory.

Power-On Indication / Alert

Once Solo S2's start-up sequence is complete, one of three LEDs (Green, yellow, red) located between the PWR button and the display will begin to blink. This indicates that Solo S2 is operational, and indicates which sensitivity mode (Highway, Auto, or City) the detector is in.

If you are using the optional SmartCord for 12-volt power, you can select alternate power-on displays. See the EZ-Programming (page 16) section for details.

The red LED (AutoSensitivity mode) will flash as an alert lamp when a signal is detected.

Mute

The Mute button, located on the top case of the Solo S2, allows you to silence the audio alert during a radar encounter.

To mute the audio for a single specific signal, briefly press the Mute button. After that radar encounter has passed, the mute will automatically reset and the audio will alert you to the next encounter.

AutoMute

Your Solo S2 has our patented AutoMute feature. After Solo S2 alerts you to a radar encounter at the volume you have 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 the EZ-Programming section (page 17) for details.

SmartMute

Once a specific signal has been muted, ESCORT's exclusive SmartMute™ feature will intelligently prioritize any additional signals by band. If a new signal is detected, and it is a higher priority band than the muted one, Solo S2 will alert you at the preset volume you selected.

Battery Status / Voltage

The Mute button is also a battery status button. Simply press the Mute button at any time (without a signal present) and a battery status icon will appear, showing you the remaining life of the batteries. Each segment of this battery icon represents approximately 25% of the battery life.

When using the optional SmartCord for 12-volt operation, pressing the Mute button will provide the vehicles voltage.

Low Battery Warning

Once the batteries reach a specific voltage level, (approximately 1.7 volts) the Solo S2 will provide a low-battery warning. This warning consists of an audible alert, along with a corresponding message.

Mode Switch

The Mode switch selects the Solo S2's sensitivity. We recommend the Auto (AutoSensitivity) mode for most driving.

Solo S2's AutoSensitivity mode provides long-range warning, while virtually eliminating false alarms. In this mode, the Solo S2's internal computer continuously analyzes all incoming signals and intelligently determines which signals are real threats.

You can also select conventional Highway and City sensitivity modes. When driving in urban areas where annoying X-band intrusion alarms and door openers are common, City Mode can be engaged to lower X-band sensitivity and reduce X-band alerts. Full sensitivity is maintained on all other bands. You can customize Solo S2's City mode sensitivity. See the EZ-Programming section (page 18) for details.

Brightness Control

The Solo S2 provides four levels of brightness including automatic, minimum, medium, maximum and full dark mode. The Solo S2 is shipped using the automatic setting, which will adjust the brightness automatically based on the ambient light in your vehicle. You may also select one of the fixed brightness levels (min, med, max) in the EZ-Programming section. See page 18 for details.

Controls and Features

For more discreet operation, the Solo S2 also has a dark mode. In this mode, the display will not provide any visual alerts when it detects a signal. Only an audible alert will be heard. However, the display will operate normally when accessing the program mode. See the EZ-Programming section (page 18) for details.

NOTE: When using the optional 12-volt SmartCord while the Solo S2 is in dark mode, all visual alerts will be indicated on the SmartCord itself.

Audible Alerts

For Radar signals:

Solo S2 uses a Geiger-counter-like sound to indicate the signal strength and type of radar signal being encountered. When you encounter radar, a distinct Audible Alert will sound and increase in rate as the signal gets closer. When the signal is very strong, the Audible Alerts will blend into a solid tone. 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 = beep tone, K-band = raspy brap tone, Ka-band = double-brap tone.

For Laser signals:

Since Laser signals are a possible threat no matter how weak, Solo S2 alerts you to all laser signals with a full laser alert.

For Safety signals:

Solo S2 will alert you to these signals with a double-beep tone, and a corresponding text message. A complete listing of the text messages is on page 25.

Signal Strength Meter

Solo S2's alphanumeric graphic display provides an intuitive display of signal strength and text messages.

Solo S2's standard bar-graph signal strength meter only displays information on a single radar signal. If there are multiple signals present, Solo S2's internal computer determines which is the most important threat to show on the bar-graph meter.

When Solo S2 detects radar, it displays the band (X, K, or Ka), and a precise bar graph of the signal strength. When Solo S2 detects a laser signal, the display will show "LASER."

NOTE: If you are operating Solo S2 in Dark Mode, the display will not light when a signal is detected—only the audio alert will be heard.

ExpertMeter

Solo S2's ExpertMeter option is an advanced display for experienced detector users. Please use Solo S2 for a few weeks to get familiar with its other features before using ExpertMeter.

To use the ExpertMeter instead of the standard bar graph meter, select ExpertMeter in Solo S2's EZ-Programming (see page 17).

Solo S2's ExpertMeter simultaneously tracks up to 8 radar signals. It shows you 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.

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



KaII KII XIIII

Above is the ExpertMeter Display if Solo S2 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.

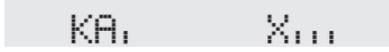
NOTE: If you use ExpertMeter, the brief signal shown in the power-on sequence when you turn on your Solo S2 will also be in ExpertMeter: an X with a single vertical line.

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



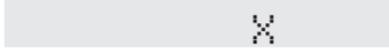
KI XII.

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



KaI XIII

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



X

On very weak signals, there will not be a vertical line at all. 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.

EZ-Programming

There are 10 user-selectable options so you can customize your Solo S2 for your own preferences. The Mode button (“M”) and the “VOL” buttons (up or down arrows) are used to enter the programming, REVIEW your current program settings, and to CHANGE any settings as desired. The letters “PGM” (program), RVW (review), and CHG (change) are located on the front of the detector, and are highlighted in blue graphics. Pages 16-19 explain each option in more detail.

How to use EZ-Programming

1 To enter Program Mode, press and hold either of the “VOL” (up or down) buttons, and the “M” (mode) down for 2 seconds. *The unit will beep twice, and will display the word “Program.”*

2 Then press the RVW button to review the current settings. *You can either tap the button to change from item to item, or press and 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 the Program Mode, simply wait 8 seconds without pressing any button. *The unit will display Complete, beep 4 times, and return to normal operation.*

To quickly reset Solo S2 to the factory program settings, press and hold the Mute and M (Mode) buttons while turning Solo S2 on.

Example of EZ-Programming

Here is how you would turn Solo S2’s AutoMute feature off.

- 1 Enter the Program Mode by holding one of the VOL buttons and “M” (mode) button down for 2 seconds. *Solo S2 will beep twice and display “Program.”*
- 2 Then hold the RVW button down. *Solo S2 will scroll through the categories, starting with Contrast, Pilot options, Auto-Power, Power-On sequence, Signal Strength Meter, AutoMute, Tones, City sensitivity, Brightness, and Bands.*
- 3 Release the RVW button when Solo S2 shows the AutoMute item. *Since the factory setting is for AutoMute to be on, Solo S2 will display “aMute ON.” (If you accidentally go to the next category, press the opposite “VOL” button to go back.)*
- 4 Press the CHG button to change from “aMuteON” to “aMuteOFF.”
- 5 To complete the Programming, simply wait 8 seconds without pressing any button. *Solo S2 will display Complete, beep 4 times, and return to normal operation.*

Overview of EZ-Programming

Press the **RVW** button to go your setting within a category

CONTRAST	Contr 3
PILOT LIGHT <i>(Options using 12-volt SmartCord)</i>	Pilot HWY Pilot H Pilot H.> Pilot + Pilot +.> Pilot +>
AUTO POWER	aPwr Motn aPwr Time aPwr Off
POWER-ON SEQUENCE	PwrOn STD PwrOn FST
SIGNAL STRENGTH METER	Meter STD Meter EXP
AUTOMUTE	aMute ON aMute OFF
AUDIOTONES	Tone STD Tone LOUD
CITY MODE SENSITIVITY	City STD City LoX City NoX
BRIGHTNESS	Brt AUTO Brt MIN Brt MED Brt MAX Brt DARK
BANDS	Bands ALL Bands MOD

*Solo S2’s Factory Settings

To reset Solo S2 to its original factory settings, press and hold the Mute and M (Mode) buttons while turning Solo S2 on. Solo S2’s display will provide a “Reset” message, accompanied by an audible alert, acknowledging the reset.

Press the **CHG** button to change from one category to the next

- * Contrast level 3
Scrolls thru five contrast levels: 1-5
- * Full word: Highway or Auto or City
Letter: H or A or C
Letter, with scanning dot
Symbol: + or • or –
Symbol, with scanning dot
Scanning symbol
- * Uses motion to turn Solo S2 off
Uses time to turn Solo S2 off
Turn Solo S2 on and off manually
- * Standard power-on sequence
Fast power-on sequence
- * Standard signal strength meter
Expert Meter
- * AutoMute on
AutoMute off
- * Standard tones
Loud tones
- * Standard City mode sensitivity
Low X-band sensitivity in City Mode
No X-band sensitivity in City Mode
- * Brightness is controlled automatically
Minimum brightness when turned on
Medium brightness when turned on
Maximum brightness when turned on
Full Dark Mode when turned on
- * All bands enabled
One or more bands are disabled
Turn bands “ON” or “OFF” by pressing the Mute button
- * X-band detection on
- * K-band detection on
- * Ka-band detection on
- * Laser detection on
- * SWS detection off
- * VG2 detection off

X	ON	or OFF
K	ON	or OFF
Ka	ON	or OFF
LSR	ON	or OFF
SWS	ON	or OFF
VG2	ON	or OFF

Details of EZ-Programming

Display Contrast

Contr 1-5 (Contrast adjustment)

In this setting, Solo S2 allows you to scroll through 5 levels of contrast adjustment for optimum viewing.

Pilot Light (12-volt power only)

PilotHWY (Full description)

In this setting, Solo S2 will display “Highway,” “City,” or “Auto” as its power-on indication. (factory default)

Pilot H (Letter)

In this setting, Solo S2 will display “H” for Highway, “C” for City, and “A” for Auto.

Pilot H. (Letter with scanning dot)

In this setting, Solo S2 will display “H” for Highway, “C” for City, and “A” for Auto. Also, a single dot will continuously scroll across the display.

Pilot+ (Symbol)

In this setting, Solo S2 will display “+” for Highway, “.” for Auto, and “-” for City.

Pilot+. (Symbol with scanning dot)

In this setting, Solo S2 will display “+” for Highway, “.” for Auto, and “-” for City. Also, a single dot will continuously scroll across the display.

Pilot+> (Scanning symbol)

In this setting, Solo S2 will display “+” for Highway, “.” for Auto, and “-” for City. Each will continuously scroll across the display.

Auto Power

aPwr Motn (Standard)

In this setting, Solo S2 maximizes battery life by intelligently shutting down once your vehicle has become motionless for approximately 25 minutes. After this time, the Solo S2 will go into a “sleep” mode for approximately 30 minutes. However, if the Solo S2 senses movement within this “sleep” time, the Solo S2 will wake up and prompt you (both audibly and visually) to see if you would like to return to an active mode. If yes, simply press any button.

If not, the Solo S2 will shut off completely, maximizing battery life.

aPwr Time

In this setting, Solo S2 will shut off completely after no signals are detected for approximately 45 minutes.

aPwr OFF

In this setting, Solo S2 requires that you turn it on and off manually using the PWR button.

Power-on Sequence

PwrOnSTD (Standard)

In this setting, each time you turn on Solo S2, it will display “Solo S2,” “LASER,” “Ka-band,” “K-band,” “X-band,” followed by a brief X-band alert. (factory default) If one or more bands are disabled, (see page 19) a message will appear alerting you if one or more bands are disabled, (ie. “X OFF”).

PwrOnFST (Fast power-on)

In this setting, Solo S2 will provide a single X-band tone if all bands are enabled. If any 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.

NOTE: If the batteries need to be replaced, a low-battery alert will be provided during both power-on sequences.

Signal Strength Meter

MeterSTD (Standard meter)

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

MeterEXP (Expert Meter)

In this setting, the meter simultaneously tracks multiple radar signals. It can display up to 2 Ka band, 2 K band, and 4 X band signals at the same time.

NOTE: The ExpertMeter feature is explained in more detail on page 13.

AutoMute

aMute ON (AutoMute on)

In this setting, Solo S2’s audio alerts will initially be at the volume you set, but after a few seconds, Solo S2 will automatically reduce the volume level, to keep you informed, but not annoyed. (factory default)

aMuteOFF (AutoMute off)

With AutoMute off, Solo S2’s audio alerts will remain at the volume you set for the duration of the radar encounter.

Audio Tones

Tone STD (Standard tones)

This setting uses more pleasing tones. (factory default)

ToneLOUD (Loud tones)

This setting uses tones that are more piercing. This setting is recommended for louder vehicles.

Details of EZ-Programming

City Mode Sensitivity

City STD (Standard)

In this setting, when you put Solo S2 in the City mode, X-band sensitivity is significantly reduced, to reduce annoyance from X-band intrusion alarms and motion sensors. (factory default)

City LoX (Low X-band sensitivity)

In this setting, when you put Solo S2 in the City mode, X-band sensitivity is reduced more than the standard setting. This will reduce X band alarms from other sources even further, but also significantly reduces range to X-band traffic radar.

City NoX (No X-band sensitivity)

In this setting, when you put Solo S2 in the City mode, Solo S2 will not respond to any X band signals.

WARNING: Only choose this setting if you are absolutely certain that there are no X band traffic radar units where you drive.

NOTE: These settings only apply when Solo S2 is operated in City mode. X-band sensitivity is not affected when used in “Auto,” or “Highway” modes.

Brightness

Brt Auto (Automatically adjusts)

In this setting, the Solo S2’s display and pilot lights will adjust automatically based on the vehicles interior brightness. (factory default)

Brt MIN (Minimum)

In this setting, each time you turn on Solo S2, the display will be at the lowest brightness.

Brt MED (Medium)

In this setting, each time you turn on Solo S2, the display will be at the medium brightness.

Brt MAX (Maximum)

In this setting, each time you turn on Solo S2, the display will be at the maximum brightness.

Brt Dark (Dark)

In this setting, Solo S2’s display will be totally dark, even during an alert. Only the audible alert will tell you of detected signals.

Bands ON/OFF

BandsALL

In this setting, all radar and laser frequencies are monitored. This is the factory setting, and it is highly recommended that you use your Solo S2 in this mode.

X ON (X-band detection on – factory default)

K ON (K-band detection on – factory default)

Ka ON (Ka-band detection on – factory default)

LSR ON (Laser detection on – factory default)

SWS OFF (Safety Warning Systems detection off – factory default)

VG2 OFF (VG2 detection off – factory default) If the VG2 band (Radar detector detector) is turned on, VG2 units will be detected with an audible and visual alert. Once detected, Solo S2’s internal oscillator will shut down for a period of time, making it undetectable. Solo S2’s oscillator will then periodically turn back on to see if the VG2 unit is still present. If not, Solo S2 will return to normal operation.

NOTE: With VG2 detection on, other radar detectors could be detected as well.

BandsMOD

If you live in an area where a specific band (e.g. SWS) is not currently used, you can turn that specific band off.

NOTE: DO NOT TURN ANY BANDS OFF UNLESS YOU ARE ABSOLUTELY SURE THAT BAND IS NOT USED IN YOUR AREA.

To disable, or turn a specific band off, enter program mode and scroll to the “BandsALL” category using the “REVIEW” button. Using the “CHANGE” button, select the specific band you wish to disable, or turn off, (e.g. “SWS ON”). Once you have selected the specific band, press the top-mounted Mute button to turn the band on/off.

NOTE: If you have turned off a band, Solo S2 will warn you with an audible alert, and associated text message stating which band is turned off, (e.g. “SWS OFF”). This warning is displayed during the start up sequence (standard or fast).

Technical Details

Interpreting Alerts

Although Solo S2 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 Solo S2 and how to interpret what it tells you. The specific type of radar being used, the

Alert

- Solo S2 begins to sound slowly, then the rate of alert increases until the alert becomes a solid tone. The Signal Meter ramps accordingly.
- Solo S2 emits short alerts for a few seconds and then falls silent only to briefly alert and fall silent again.
- Solo S2 suddenly sounds a continuous tone for the appropriate band received. All segments in the Signal Strength Meter are lit.
- A brief laser alert.
- Solo S2 receives weak signals. These signals may be a little stronger as you pass large, roadside objects. The signals increase in frequency.

type of trans-mission (continuous or instant-on) and the location of the radar source affect the radar alerts you receive.

The following examples will give you an introduction to understanding Solo S2'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.

Alert

- Solo S2 alerts slowly for awhile and then abruptly jumps to a strong alert.
- Solo S2 alerts intermittently. Rate and strength of alerts may be consistent or vary wildly.
- Solo S2 alerts intermittently. Rate and strength of signal increases with each alert.
- Solo S2 gives an X-band alert intermittently.

Explanation

- You are approaching a radar unit concealed by a hill or an obstructed curve.
- A patrol car is travelling 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 lasting as a real radar encounter.

CAUTION: Since the characteristics of these alerts may be similar to some of the preceding examples, over confidence 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.

Technical Details

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 Solo S2 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 Solo S2's radar detection abilities are fully operational.

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.

Technical Details

How Safety Radar 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 Solo S2 can display are listed on the facing page.

From the factory, your Solo S2 is programmed with SWS decoding OFF. If SWS is used in your area, your Solo S2 will display the safety messages associated with the signal. If you wish to detect this system, use the EZ-Programming feature to turn Solo S2's SWS decoding ON.

NOTE: some of the safety messages have been condensed, so that each message can be displayed on one or two screens on Solo S2's 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 Safety Radar Text Messages

1	WorkZone	33	HighWind
2	Road Closed	34	Severe Weather
3	Bridge Closed	35	HeavyFog
4	WorkCrew Highway	36	Flooding
5	WorkCrew Utility	37	BridgIce
6	Detour	38	RoadIce
7	Truck Detour	39	Dust Blowing
8	MustExit	40	Sand Blowing
9	Rtlane Closed	41	Blinding Snow
10	CntrLane Closed	42	Future Use
11	LeftLane Closed	43	RestArea
12	Future Use	44	RestArea w/servic
13	Police	45	24hrFuel
14	Train	46	Insp Stn Open
15	Low Overpass	47	Insp Stn Closed
16	BridgeUp	48	Reduced Speed
17	Bridge Wt Limit	49	Speed Enforced
18	RockSlid Area	50	HazMatls Exit
19	School Zone	51	Expect Delay
20	Road Narrows	52	10 Min Delay
21	Sharp Curve	53	20 Min Delay
22	Croswalk	54	30 Min Delay
23	Deer Crossing	55	1 Hour Delay
24	Blind or Deaf Kid	56	Traffic TunRadio
25	SteepUse LowGear	57	Pay Toll
26	Accident	58	Trucks ExitRght
27	PoorRoad Surface	59	Trucks ExitLeft
28	Loading ScholBus	60	Future Use
29	DontPass	61	Emerg Veh Moving
30	Dangrous Intrsect	62	Police Pursuit
31	Emergency Vehicle	63	Oversize Vehicle
32	Future Use	64	SloMovng Vehicle

Troubleshooting

Problem

• Solo S2 beeps briefly at the same location every day, but no radar source is in sight.

• Solo S2 does not seem sensitive to radar or laser.

• Solo S2 did not alert when a police car was in view.

• Solo S2 did not provide a Safety signal while within range of an emergency vehicle.

• Solo S2's display is not working.

• Solo S2's audible alerts are less loud after the first few alerts.

• Solo S2 bounces or sags on windshield.

Solution

• 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.

• Make sure that windshield wipers do not block Solo S2's radar antenna 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.
• Solo S2 may be in City Mode.

• 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.

• Safety transmitters may not be commonly used in your area.

• Solo S2 is in Full Dark Mode. See page 18 for details.

• Solo S2 is in AutoMute Mode. See page 10 for details.

• Solo S2 is not making contact with the windshield to provide stability. While holding down Solo S2's EasyRelease button, slide Solo S2 further back toward the windshield so that the back top edge makes firm contact.

Problem

• Solo S2's power-on sequence reoccurs while you are driving.

• Your 14-year old son has changed all 10 of the EZ-Programming options.

• Solo S2 will not turn on.

• Solo S2 feels very warm.

Solution

• A loose power connection or dirty lighter socket can cause Solo S2 to be briefly disconnected.

• You can return all of the programming options to the factory defaults by holding down the MUTE and MODE (M) buttons while you turn Solo S2 on.

• Check for proper battery installation.
• Install new batteries.

• It is normal for Solo S2 to feel warm when it's on.

Explanation of Displays

No display

Solo S2 is in the Dark mode, and is programmed for Full Dark (page 18)

PilotHWY

One of the many pilot programming messages (pages 16)

WorkZone

One of the many Safety Radar messages (pages 24-25)

Caution

Solo S2 has detected a Safety Radar Signal, but the signal isn't yet strong enough to decode the specific safety message (page 25)

XI, or KI, or KAI etc.

Solo S2 has been programmed in the ExpertMeter Mode (page 12-13)

VG2

Solo S2 has detected a VG2 unit (radar detector detector)

Service

Service Procedure

If your Solo S2 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 Solo S2 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 Solo S2:

- 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 Solo S2 repaired at the price quoted), your Solo S2 will be returned, without repair. Payment can be made by check, money order, or credit card.

Ship Solo S2 to:

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

For your own protection, we recommend that you ship your Solo S2 postpaid and insured. Insist on a proof of delivery, and keep the receipt until the return of your Solo S2.

Warranty and Accessories

ESCORT One Year Limited Warranty

ESCORT warrants your Solo S2 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 the Solo S2 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 the Solo S2. 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 Solo S2 has been removed, or if your Solo S2 has been subjected to physical abuse, improper installation, or modification.

ESCORT Extended Warranty

ESCORT offers an optional extended warranty plan. Contact ESCORT Sales for details at 800-433-3487.

Accessories

The following accessories and replacement parts are available for Solo S2:

Two versions of the 12-volt SmartCord are available: One SmartCord plugs into your lighter socket and has a coiled cord, and the other Direct-wire SmartCord module that you wire into your electrical system, with an 8 foot straight cord to route to your Solo S2.



- Optional 12-volt Coiled SmartCord • \$29.95
- Optional 12-volt Direct-wire SmartCord • \$29.95
- Solo S2 Travel Case • \$19.95
- Optional Laser Shifter ZR3



Specifications

Features and Specifications

Operating Bands

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

Radar Receiver / Detector Type

- Superheterodyne, GaAs FET VCO
- Scanning Frequency Discriminator
- Digital Signal Processing (DSP)

Laser Detection

- Quantum Limited Video Receiver
- Multiple Laser Sensor Diodes

Display Type

- Graphic LCD Display With LED Backlight
- Standard Bar Graph or ExpertMeter
- 5-Brightness Levels Including Automatic and Dark

Power Requirement

- 3 Volts DC, (2) "AA" batteries
- Optional 12-Volt SmartCord

Programmable Features

- Contrast Adjust
- Pilot Light
- Auto Power
- Power-On Sequence
- Signal Strength Meter
- AutoMute
- Audio Tones
- City Mode Sensitivity

- Display Brightness
 - Radar / Laser Bands
 - SWS and VG2 Alert
- #### Sensitivity Control
- Highway, AutoSensitivity and City

SmartMute

SmartShield VG2 Immunity

Dimensions (Inches)

1.25 (h) x 2.85 (w) x 5.32 (l)

Patented Technology

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

US 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	4,571,593
4,313,216	D314,178	D313,365	D310,167	D308,837
D296,771	D288,418	D253,752		

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
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Other patents pending.

Registration

Important Product Registration Information

If you purchased your Solo S2 directly from ESCORT, you are automatically registered with us.

If you did not purchase your Solo S2 directly from ESCORT, please register online at:

www.EscortRadar.com

Or, for your convenience, you may also fill out the enclosed registration card and return it to us postage pre-paid.

Thank you for your business.

Register
online:

@**www.**

EscortRadar.com



ESCORT®