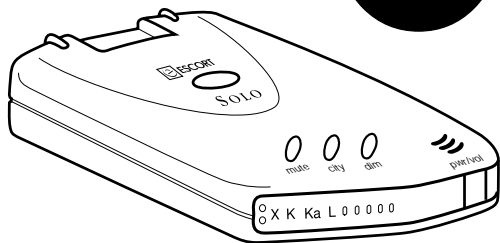


SOLO

CORDLESS RADAR/LASER DETECTOR

Check Quick
Reference Guide
inside cover !



OWNER'S MANUAL

MODEL RD-5110




ESCORT®

CONGRATULATIONS!

SOLO is the result of ESCORT's commitment to design and manufacture the best radar and laser detection products available. Created for drivers who desire the ultimate in mobility, SOLO's cordless design eliminates the need for a power cord, recharger, or add-on battery pack. Simply mount SOLO on your windshield and turn it on.

SOLO uses only a fraction of the power of a conventional detector and two standard AA alkaline batteries will economically provide months of high-performance detection. Most drivers will need to replace SOLO's batteries only a few times a year at a cost of only two or three cents per hour of use.

SOLO comes with all of ESCORT's most sophisticated technologies including our matchless DPR™ anti-falsing circuitry; true Digital Signal Processing; SafetyPilot™ road safety system; SmartShield™ VG2 protection and the incomparable performance you've come to expect from ESCORT. Among SOLO's features are long-range warning on all radar and laser bands, Mute, AutoMute, patented SmartMute™; high-visibility display, differentiated audible and visual alerts, 4-level Dim, 4-level City, Memory retention, battery status indicator, battery-preserving AutoOff, optional power cord back-up, patented Easy-Mount system—all in the most compact and portable format available.

 SOLO was designed and manufactured in the USA. We are proud to offer this product and pleased to have you as our customer.

Please drive safely.

AUTOMUTE PROMOTES DRIVING PLEASURE

SOLO is shipped with AutoMute engaged to provide you with the advantages of audible alerts but with minimal distraction. With AutoMute, the audio for the first four audible tones or four seconds (whichever is longer) in an alert situation will be emitted at the volume level you have set. All subsequent audible tones from the same alert situation will automatically be emitted at a lower volume level. After the signal has passed, your SOLO will automatically reset to the volume level you have set. (If you prefer full audio for the duration of all alert situations, AutoMute can be easily disengaged: see page 5 for more details.)

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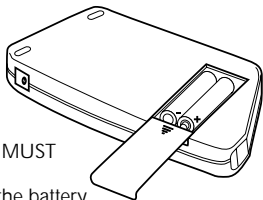
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IMPORTANT BATTERY INFORMATION

SOLO is designed to operate on two standard AA alkaline batteries. AA lithium batteries and AA alkaline rechargeable batteries may also be used, however the resulting battery life will vary. We do not recommend using NiCad rechargeable batteries.

Installing SOLO's Batteries

- 1 Make sure SOLO is turned off.
- 2 Turn SOLO upside down. Depress the battery door and sliding in the direction of the arrow, remove door from the battery compartment.
- 3 Remove any old batteries (both batteries **MUST** be replaced at the same time).
- 4 Observing the polarity indication inside the battery compartment, insert two fresh AA alkaline batteries.
- 5 Replace battery door.
- 6 Turn SOLO on to verify correct battery installation.



NOTE: Please dispose of used batteries properly in accordance with federal, state and local requirements.

Battery Life

SOLO's efficient design provides the typical driver with about 50 hours of battery life from two AA alkaline batteries. Battery life is affected by many variables, including the brand and age of the batteries, the ambient temperature, how many and what type of alerts SOLO receives (weak signals use less battery power than full alerts). In addition, the way you use SOLO's alert system will affect the battery life (low audio volume uses less power than full volume, and Dim mode uses less power than normal mode). The approximate battery life figures we quote are based on laboratory testing, using fresh batteries. Your specific conditions and usage may result in longer or shorter battery life.

Battery Life Indication

As discussed in the Signal Meter section on page 7, remaining battery life is displayed on SOLO's Signal Meter both at power up and power down. **NOTE:** Extreme temperature conditions can cause SOLO's Battery Life Indication to be inaccurate until SOLO's temperature returns to normal.

REGARDLESS OF YOUR ACTUAL BATTERY LIFE, SOLO'S PERFORMANCE WILL NOT DEGRADE AS BATTERY VOLTAGE BEGINS TO DROP. SOLO IS DESIGNED TO SHUT DOWN BEFORE PERFORMANCE IS IMPAIRED BY WEAK BATTERIES.

For best battery performance:

- Purchase fresh, name brand batteries.
- Store batteries in their original packaging before use to prevent the

IMPORTANT BATTERY INFORMATION

battery contacts from shorting against metal objects.

- Never mix old and new batteries in SOLO or any device.
- Since batteries last longest if used at room temperature, use SOLO at room temperature whenever possible.
- Turn off SOLO when not in use.

AutoOff

SOLO has a special automatic shut-off feature to conserve battery life in case you forget to turn SOLO off. (Please refer to page 4 for an explanation of the AutoOff circuit.)

NOTE: The presence of even a weak signal can cause SOLO to remain on. Turn SOLO off whenever you leave your car as the AutoOff circuit turns SOLO off after 45 minutes ONLY if no signals are detected. A passing police car or a nearby motion sensor could be enough to keep SOLO on, thereby draining your batteries.

NOTE: We recommend using only standard AA alkaline batteries for the most consistent battery life. While AA lithium batteries and AA alkaline rechargeable batteries may also be used, the resulting battery life will vary. We do NOT recommend NiCad rechargeable batteries.

WARNING

Do not leave SOLO in direct sunlight in a parked vehicle, as it may exceed the battery's temperature limit and damage the batteries and the detector. This damage is not covered by SOLO's warranty.

Low Battery Warning

When SOLO's batteries have only approximately six hours of battery life remaining, SOLO will sound two "bleeps" and flash the entire Signal Strength Meter every five minutes. SOLO's batteries should be replaced at this time since performance begins to decline once the batteries are within the warning range. The amount of battery life remaining depends, to a large extent, on how many alerts you receive and how your SOLO is being used. If you are unable to replace SOLO's batteries at the start of the Low Battery warning, consider lowering your SOLO's audio volume and utilizing the AutoMute, Mute and Dim features to prolong battery life.

Optional Power Cord

SOLO's power jack allows you to power SOLO using an optional Power Cord. SOLO is designed for 3V operation and its unique circuitry will not accommodate a standard 12V power cord. Using any cord other than the Power Cord/Converter Set designed specifically for SOLO may cause damage not covered by warranty. To order a SOLO Power Cord/Converter, call 1-800-433-3487 toll-free.

WARNING

SOLO should never be directly wired to any power source, particularly a 12V automotive source. Use ONLY with SOLO's 3V power converter.

WARNING

ESCORT CANNOT ANTICIPATE THE MANY WAYS SOLO CAN BE MOUNTED. IT IS IMPORTANT THAT YOU MOUNT SOLO WHERE IT WILL NOT IMPAIR YOUR VIEW NOR PRESENT A HAZARD IN CASE OF AN ACCIDENT.

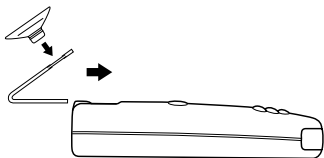
For optimum detection performance, we recommend the following:

- Using the Windshield Mount, mount SOLO relatively level and high enough on your front windshield to provide a clear view of the road from the front and rear.
- Mount SOLO away from windshield wipers, other solid objects and heavily tinted areas that might obstruct the radar antenna or laser lens.
- Keep the laser lens at the rear of SOLO clean. To clean, apply a small amount of eyeglass cleaning solution with a soft cloth.

Mounting SOLO to Your Windshield:

SOLO's patented EasyMount windshield bracket is designed for unobtrusive and hassle-free mounting.

- 1 Insert each suction cup into large end of bracket hole and rotate cup outward, locking into place.
- 2 Depress the adjustment button on the top of SOLO and slide EasyMount bracket into the slot until mount is locked into the position which best fits the angle of your windshield. (For extremely horizontal or extremely sloped windshields, the EasyMount bracket can be bent.)
- 3 Mount SOLO on your windshield. Use the adjustment button to slide SOLO forward or backward to a horizontal position. **WHEN ADJUSTED PROPERLY AND TO MINIMIZE BOUNCING, THE BACK TOP EDGE OF SOLO SHOULD REST SOLIDLY AGAINST YOUR WINDSHIELD.**

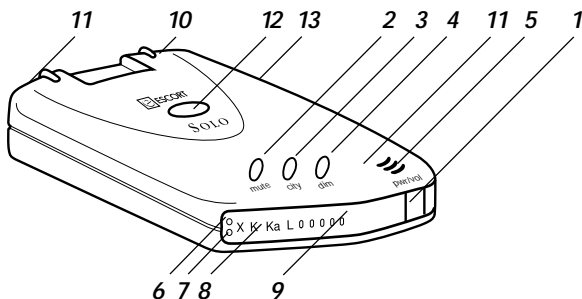


To ensure that the suction cups adhere to the windshield firmly, be sure to keep both your windshield and the suction cups clean.

CAUTION!

Some windshields have an "anti-lacerative" coating. Use of suction cups could permanently mar the coating. Consult your dealership or the vehicle's owner's manual to determine if your windshield has this coating.

CONTROLS AND INDICATORS



MEMORY RETENTION FOR PREFERRED SETTINGS

Keep the factory preset settings for Volume, Dim, AutoMute, City and other programmable features or select your own with SOLO's on-board computer. Your selected settings stay in SOLO's Memory even when it's turned off or the batteries are changed. For more information on SOLO's programmable options, the first in the industry, see page 8.

1 POWER AND VOLUME *To turn SOLO on and off:* briefly press the Power/Volume Button. The Power-On indicator blinks to show SOLO is on and there will be a five-second test alert followed by a two-second display of remaining battery life on the Signal Meter. Battery life is also displayed each time you turn SOLO off. (Battery status indication is more thoroughly discussed in the Signal Meter section on page 7.) The five-second test alert can be bypassed and blinking Power-On indicator can be made continuous (see *Programmable Options* on page 8 for more information).

To adjust audio volume: Press and hold the Power/Volume Button. SOLO will cycle through the 10 volume levels and show the relative audio level on the Signal Meter. To reverse the direction of the audio level, briefly release and press again. Once the volume level has been changed, a two second hold time will be engaged to allow you to further modify volume without turning SOLO off. Once selected, the volume setting will be retained in SOLO's memory.

AUTOOFF SOLO has an automatic shut-off feature to conserve battery life in case you forget to turn SOLO off. If SOLO does not detect any signals for 45 minutes, it assumes that it is not in use and you have forgotten to turn it off. SOLO will sound a declining "power-down" alert and then turn itself off in five seconds. To keep SOLO from turning off (such as when you are driving through a very remote area where alerts are infrequent), press any of SOLO's buttons. SOLO will

sound a "double-bing" confirming that it will remain on. (*AutoOff can be "permanently" deselected. See Programmable Options on page 8 for more information.*)

NOTE: Since the presence of even an extremely weak signal will keep SOLO on, turn SOLO off whenever you leave your car to prevent the batteries from being drained.

- 2 **MUTE** *To mute the audio for a single specific signal:* Briefly press the Mute Button. After the signal has passed, SOLO will automatically reset for the next alert. If a new signal is encountered during the signal you have just muted, SOLO's patented SmartMute™ reverts to full audio to ensure that you do not miss this new signal.

AUTO MUTE SOLO is shipped with AutoMute engaged. In AutoMute mode, the audio for the first four audible tones or four seconds (whichever is longer) in an alert situation will be emitted at your selected volume level and all subsequent audible tones during the same alert will be emitted at a lower volume level. After the signal has passed, SOLO automatically resets to the volume level you have set. (*AutoMute can be deselected. See Programmable Options on page 8 for more information.*)

- 3 **HIGHWAY/CITY MODE** Each time you turn SOLO on, the last Highway/City mode selected is the one which is automatically engaged. We recommend driving in Highway mode most of the time for maximum sensitivity. 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. *To select City Mode:* Briefly press the City Button. The City Indicator will blink and SOLO's X-band sensitivity level will be lowered to a level to suit most urban driving environments. Three other City Mode levels are available for more problematic urban environments (*see Programmable Options on page 8 for more information*). Also, the City Indicator can be programmed to not blink and light solid (*see Programmable Options on page 8 for more information*). *To return to Highway Sensitivity:* Briefly press the City Button again.
- 4 **DIM MODES** *To adjust SOLO's display:* Briefly press the Dim Button. With each press, SOLO will cycle through the four display settings as follows: 1st press = Full Dark, 2nd press = Low, 3rd press = Medium, 4th press = High. SOLO is preset at our factory on High (Full Bright). Your most recent selection is retained in SOLO's memory until you select a different brightness level as the default. (*See Programmable Options on page 8 for more information on how to store a display default.*)

CONTROLS AND INDICATORS

5 AUDIBLE ALERTS *For Radar and Laser signals:* SOLO uses a geiger-counter-like sound to indicate the signal strength and type of radar or laser signal being encountered. When you encounter radar or laser, a distinct Audible Alert will sound and occur faster as the signal gets stronger. 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-bleep tone, Laser = chirp tone. Please see page 12 for details on the typical behavior of various radar and laser signals.

For Safety signals: Each type of safety signal has its own distinctive brap tone. Emergency Vehicle = rapid braps, Railroad Crossing = repetitive brap, Road Hazard = repetitive double brap. THE PRESENCE OF ONE OF THESE SIGNALS INDICATES A DANGEROUS DRIVING CONDITION. Be particularly alert and aware of what's going on around you. (For more information on SOLO's SafetyPilot™ and the use of Safety transmitters, please see page 15.)

6 POWER-ON INDICATOR When your SOLO is turned on, the Power-On Indicator will illuminate.

7 CITY INDICATOR The City Indicator will light whenever City mode is selected.

8 BAND INDICATORS When a radar or laser signal is detected, the appropriate Band Indicator will light to show which type of signal is being detected; "X" for X-band, "K" for K-band, "Ka" for Ka-band or "L" for laser.

9 SIGNAL METER The Signal Meter consists of 5 red LEDs and provides the following information.

Signal Strength: The more meter lights lit during a radar or laser encounter, the stronger and closer the signal.

Type of Safety Signal: Safety Signals are displayed as shown below.

EMERGENCY VEHICLE



Signal Meter scans quickly from right to left.

ROAD HAZARD



All Signal Meter lights double-flash simultaneously.

RAILROAD



First two Signal Meter Lights alternate flashing with last two Signal Meter Lights.

Battery Life Indication: Remaining battery life is displayed on the Signal Meter for 2 seconds both at power-up (after the five-second test alert) and at power-down. NOTE: Extreme temperature conditions can cause SOLO's Battery Life Indication to be inaccurate until SOLO's temperature returns to normal.



5 LEDs lit = 80% of battery life remains



4 LEDs lit = 60% to 80% of battery remains



3 LEDs lit = 40% to 60% of battery life remains



2 LEDs lit = 20% to 40% of battery life remains



1 LED lit = less than 20% of battery life remains

Low Battery Warning: When approximately six hours of battery life remains, SOLO will sound two short "bleeps" and flash the entire Signal Meter every five minutes to indicate the batteries need replacing. The amount of battery life remaining depends, to a large extent, on how many alerts you receive and how SOLO is being used. If you are unable to replace SOLO's batteries at the start of the Low Battery warning and do not have a SOLO Power Cord, lower SOLO's audio volume and utilize AutoMute or Mute and Dim to prolong battery life.

- 10 RADAR ANTENNA** The antenna detects incoming radar signals.
- 11 LASER LENSES** Dual lenses provide 360 degree protection.
- 12 MOUNTING ADJUSTMENT BUTTON** This button allows you to adjust the mounting bracket to suit your driving environment. Please refer to page 3 for a complete explanation on mounting.
- 13 POWER JACK** Allows you the option of using a power cord in place of the battery power source in order to provide back-up or alternative power for your SOLO through your vehicle's cigarette lighter. *(SOLO's unique circuitry will not accommodate a standard 12V power cord. Using any cord other than the Power Cord designed specifically for SOLO may cause damage not covered by warranty. To order a SOLO Power Cord, call 1-800-433-3487 toll-free.)*

PROGRAMMABLE OPTIONS

SOLO's features are preset for optimum performance and battery life but you may change some settings to better suit your specific needs. Once a setting is stored into memory, it remains until you decide to reprogram it.

OPTION	WHEN TO USE	HOW TO SELECT
Disengage AutoMute	If you prefer full audio volume for the duration of alerts. NOTE: Any single alert may still be muted by briefly pressing the Mute button during that alert.	Press and HOLD the Mute button. A "bing" tone will confirm your selection. To re-engage AutoMute, press and hold the Mute button again. A "double-bing" tone will confirm your return to AutoMute.
Bypass five-second test alert	If you find the power-on test alert bothersome. If you wish to preserve a bit more battery life.	Press and HOLD the Mute button at the same time you turn SOLO on to replace the five-second sequence with a one-second alert. Repeat operation to re-engage the full test alert.
Non-blinking Power-On Indicator and City Indicator	If you find the blinking Power-On and City Indicators too bothersome. WARNING: Selecting this option will reduce your battery life.	Press and HOLD the Dim button at the same time you turn SOLO on. The Power-On Indicator will light continuously while SOLO is on. The City Indicator will light continuously while SOLO is in City mode.
Disengage AutoOff	If you drive in an remote area where alerts are very infrequent, this option keeps SOLO from trying to turn itself off due to lack of signals.	Press and HOLD the Mute and Dim buttons at the same time when SOLO is on. A "bing" tone confirms your selection. Repeat to re-engage AutoOff. A "double-bing" tone will confirm your selection.
Select a default brightness setting for SOLO's display	Assures SOLO returns to your favorite brightness setting each time you turn it on. (If no brightness level is selected, SOLO will use the last one selected.)	Press and HOLD the Dim Button at the selected brightness level. A "double-bing" tone will confirm your selected default.

OPTION	WHEN TO USE	HOW TO SELECT
Select an alternative X-band sensitivity level for City Mode	If you drive in an urban area where non-police X-band alerts from motion sensors and intrusion alarms are prevalent, this option allows you to select an X-band sensitivity level below the standard City Mode setting.	Press and HOLD the City button. SOLO will cycle through the 4 available City sensitivity levels and display relative X-band sensitivity on the Signal Meter (as shown below). Release button at your preferred setting.

Signal Meter LEDS LIGHT UP IN THE PATTERNS INDICATED AS YOU ADJUST CITY LEVELS

- **Level 4** *Moderately reduced X-band sensitivity. Best suited to suburban environments where intruding signals are occasional.*
- **Level 3** *Significantly reduced X-band sensitivity. SOLO's default setting and best suited to typical driving environments.*
- **Level 2** *Drastically reduced X-band sensitivity. For use in downtown areas which are aggressively populated with intruding signals.*
- **Level 1** *Zero X-band sensitivity. To be used ONLY in those rare locations where X-band radar is not used.*

Select alternate audio tones	Allows you to select alternative audio tones (owners of earlier ESCORT detectors will recognize these tones as the more "classic" style used in the past).	Press and HOLD the Dim and City buttons at the same time you turn SOLO on. Repeat operation to re-select the factory default audio tones.
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Returning To SOLO's Factory Preset Settings

You may re-engage SOLO's factory preset settings at any time. To do so, press and HOLD the Mute, City and Dim buttons at the same time as you turn SOLO on.

TUTORIAL MODE

SOLO is equipped with a Tutorial mode to demonstrate all of the alerts and settings below in order to better familiarize you with them. To access the tutorial mode, simultaneously press and hold the Mute and City buttons as you turn SOLO on. SOLO will then demonstrate each of the following:

FEATURE	DEMONSTRATION
Laser Alert	Laser indicator lights as signal meter ramps down. Laser audio sounds.
Ka-band Alert	Ka indicator lights as signal meter ramps down. Ka audio sounds.
K-band Alert	K indicator lights as signal meter ramps down. K audio sounds.
X-band Alert	X indicator lights as signal meter ramps down. X audio sounds.
AutoMute	As SOLO simulates an X-band encounter, AutoMute is demonstrated when audio automatically reduces after first several tones.
Emergency Vehicle Alert	Signal Meter scans swiftly right to left. Emergency Vehicle audio sounds.
Railroad Alert	Two end Signal Meter positions alternate flashing (like a railroad crossing sign).
Road Hazard Alert	Entire Signal Meter double-flashes. Road Hazard audio sounds.
Cycling of four City settings	Shows how four available City settings are indicated on the Signal Meter as city level is selected.
Cycling of four Dim settings	Shows how four available Dim/Dark settings are indicated on the Signal Meter as the display brightness level is selected.
Cycling of ten Volume settings	Shows how ten available Volume settings are indicated on the Signal Meter as volume level is selected.
Low Battery Warning	Signal Meter flashes as two short "bleep" tones sound.
AutoOff Warning	SOLO sounds a declining "power down" alert and SOLO turns off.

RECEIVER TYPE

RADAR: Double Conversion Superheterodyne Voltage
Controlled Oscillator (VCO)
LASER: Quantum Limited Video Receiver

ANTENNA TYPE

RADAR & SAFETY: Self-Contained, Die-Cast Horn, Linear Polarization
(compatible with circular polarization)
LASER: Infrared Photodiode with Fresnel Lens and
Refractive/Prismatic Element

DETECTOR TYPE

RADAR & SAFETY: Scanning Frequency Discriminator
LASER: Video Envelope

OPERATING FREQUENCIES & WAVELENGTHS

X-band: 10.525 GHz (center)
K-band and Safety: 24.150 GHz (center)
Ka-band: 34.7 GHz (center)
Laser: 900 NanoMeters (center)

BANDWIDTHS

Radar and Safety:
X-band: 50 MHz
K-band and Safety: 200 MHz
Ka-band: 2.60 GHz
Laser: 33MHz

ALERT HOLD TIME 4 Seconds

DIMENSIONS 1.2 inches x 2.85 inches x 5.06 inches

OPERATING TEMPERATURE RANGE

With Alkaline Batteries: -18C to 55C (0F to 131F)
With Power Cord Only: -18C to 70C (0F to 158F)

STORAGE TEMPERATURE RANGE

With Alkaline Batteries: -40C to 55C (-40F to 131F)
With Power Cord Only: -40C to 85C (-40F to 185F)

POWER REQUIREMENT

Two Standard AA Batteries or Power Cord which converts 12V to 3V

SIGNAL PROCESSING

Digital Signal Processing (DSP)

Specifications are subject to change without notice.

INTERPRETING ALERTS

Although SOLO 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 and how to interpret what it “tells” you. The radar alerts you receive are affected by the type of radar being used, the type of transmission (continuous or instant-on) and the location of the radar source. The following examples will give you an introduction to understanding SOLO’s warning system for radar, laser and safety alerts.

ALERT

SOLO begins to sound slowly, then the rate of alerts increase until a solid tone is achieved. The Signal Meter ramps accordingly.

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

SOLO suddenly sounds a continuous tone for the appropriate band received. All LEDs in the Signal Meter are lit.

A brief laser alert.

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

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

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, even a weak laser alert may indicate a source very close by. Any laser alert requires immediate attention!

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

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

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

SOLO gives an X-band alert intermittently.

SOLO braps rapidly and the Signal Meter scans from right to left.

SOLO sounds a repetitive "double-brap" and the entire Signal Meter flashes.

SOLO sounds a repetitive "brap" and the two LEDs on each end of the Signal Meter alternate flashing.

EXPLANATION

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, overconfidence in an unfamiliar area can be dangerous. Likewise, if an alert in a commonly travelled area is suddenly stronger or on a different band than usual, speed radar may be set up nearby.

A fast-travelling emergency vehicle is in the vicinity.

You are approaching a hazardous road condition such as an accident site or construction.

You are approaching a dangerous railroad crossing.

HOW RADAR & LASER WORK

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 behind.

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 will occasionally receive non-police radar signals. Since these X-Band transmitters are usually contained inside of buildings 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'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 AND WEAKEST 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 SAFETY SIGNALS WORKS

FCC-approved Safety signal transmitters emit microwave radar signals to indicate the presence of a safety-related concern. Depending on the frequency location of these signals as set on the transmitter, the outgoing signal can indicate whether the transmitter is located in a speeding emergency vehicle, at a road hazard location or at a railroad crossing.

These dual-frequency microwave signals are located in the K-bandwidth and, as a result, any radar detector which detects K-Band radar will detect these Safety signals as standard K-Band radar alerts. However, unlike standard radar detectors, your SOLO is designed to distinguish between a standard K-Band alert and a Safety signal alert. It will also demonstrate which type of Safety signal is being received: Emergency Vehicle, Road Hazard or Railroad.

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

IF YOU EVER HAVE QUESTIONS ABOUT THE PERFORMANCE OR OPERATION OF YOUR SOLO, PLEASE CALL TOLL-FREE 1-800-543-1608.

TROUBLESHOOTING

PROBLEM

SOLO will not turn on when Power Button is pressed.

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

SOLO does not seem sensitive to radar or laser.

SOLO did not alert when a police car was in view.

SOLO did not provide a Safety signal at a hazardous road condition, railroad crossing or while within range of an emergency vehicle.

SOLO alerts for Ka radar when no radar source is in sight.

SOLUTION

- Check to make sure batteries are not missing.
- Batteries may need replacing.
- Batteries may be installed improperly.
- SOLO is functioning properly. 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 SOLO's radar antenna is not blocked by windshield wipers or solid objects or that the laser lens is not behind tinted areas.
- Determine if your vehicle has an Instaclear™, ElectriClear® or solar energy reflective windshield which may deflect radar or laser signals.
- SOLO may be in City Mode.
- VASCAR, 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.
- Falsing on this band is virtually non-existent. Take all Ka alerts seriously. There may be an instant-on radar source out of sight. Only a small number of products operate in the Ka band which may cause an occasional false alert.

PROBLEM

Signal Meter registers but no audible alert sounds.

SOLO's display is not working.

SOLO's audible alerts are less loud after the first few alerts.

All Signal Meter lights flash occasionally and SOLO "bleeps" twice each time.

SOLO bounces or sags on windshield.

SOLO no longer provides the full test alert when turned on.

SOLUTION

- SOLO is probably in City mode where X-band alerts are purposefully reduced.
- Briefly press the Dim button to deactivate Dark Mode.
- SOLO is in AutoMute Mode. See page 5 for details.
- SOLO's batteries are low. Replace batteries as described on page 1.
- SOLO is not making contact with the windshield to provide stability. While holding down SOLO's EasyMount button, slide SOLO further back toward the windshield so that the back top edge makes firm contact. See page 3 for details.
- Suction cups may be worn and need replacing. To order replacement suction cups, call 1-800-433-3487.
- You have inadvertently bypassed the test alert. To re-engage full test alert, press and hold the Mute button at the same time you are turning SOLO on.

SERVICE

IF YOUR SOLO 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 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:

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

MAIL YOUR SOLO To:

ESCORT

Customer Service Department

Service Order Number _____

5440 West Chester Road

West Chester, Ohio 45069

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

ESCORT ONE YEAR LIMITED WARRANTY

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

TO OBTAIN WARRANTY SERVICE, PLEASE FOLLOW THE SERVICE PROCEDURE OUTLINED ON PAGE 18.

ACCESSORIES AND OPTIONS

To order additional or replacement accessories, call ESCORT toll-free at 1-800-433-3487. The following optional accessories are also available for SOLO:

SOLO POWER CORD

Provides back-up or alternative power for your SOLO through your vehicle's cigarette lighter. *NOTE: SOLO is designed for 3V operation and its unique circuitry will not accommodate a standard 12V power cord. Using any cord other than the Power Cord/Converter Set designed specifically for SOLO may cause damage not covered by warranty.)*

VISOR CLIP

Allows you to mount SOLO on your vehicle's sun visor.

NOTE: Due to obstruction by tinting and vehicle headliner, visor mounting can substantially reduce laser detection range.

HOOK AND LOOP FASTENER

Allows you to mount SOLO to your vehicle's dashboard.

NOTE: The adhesive backing used on the Hook and Loop Fastener can permanently mar your vehicle's dashboard.

CARRYING CASE

Soft case keeps SOLO protected when not in use.

EscortPlus Club benefits are subject to change without notice.



SOLO is designed and manufactured in the USA.

ESCORT

5440 West Chester Road
West Chester, Ohio 45069

CUSTOMER SERVICE: (800) 543-1608

SALES: (800) 433-3487

Manufactured under one or more of the following U.S. Patents:

4,313,216 4,581,769 4,583,057 4,604,529 4,613,989 4,631,542
4,686,499 4,750,215 4,862,175 4,887,753 4,896,855 4,952,937
4,954,828 5,049,884 5,049,885.

Other Patents Pending.

Product, accessory and features, specifications and pricing are subject to change without notice.

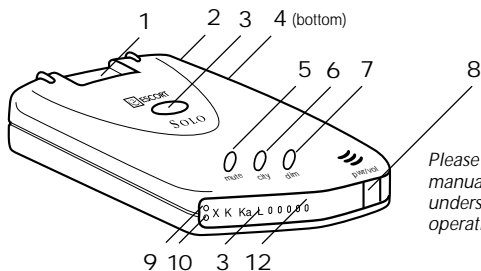


QUICK REFERENCE GUIDE

To begin using your SOLO, just follow these three simple steps:

- a *Insert two standard AA alkaline batteries into the battery compartment.*
- b *Mount your SOLO on the windshield using the windshield mount.*
- c *Press the Power-On button to turn SOLO on.*

-
- 1 **EasyMount Slot** (page 3)
Windshield mount is inserted here.
 - 2 **Power Jack** (page 7)
Use optional Power Cord for back-up power source. To purchase, call toll-free 1-800-433-3487.
 - 3 **EasyMount Button** (page 7)
Press and slide the windshield mount to adjust mount angle.
 - 4 **Battery Compartment** (page 1)
Uses 2 AA alkaline batteries.
 - 5 **Mute Button** (page 5)
Briefly press to mute the audio for a specific alert. Press and hold to disengage or re-engage AutoMute.
 - 6 **City Button** (page 6)
Briefly press to engage to reduce alerts from X-band intrusion alarms and door openers common in urban areas. Press and hold to adjust X-band sensitivity through four possible city sensitivity options to your preferred City setting.
 - 7 **Dim Button** (page 5)
Briefly press to adjust display brightness.
 - 8 **Power/Volume** (page 4)
Briefly press to turn SOLO on. Press and hold to adjust SOLO's audio volume. Once on, briefly press to turn SOLO off.
 - 9 **Power-On Light** (page 4)
Blinks when SOLO is on.
 - 10 **City Indicator** (page 5)
Blinks when City mode is selected.
 - 11 **Band Indicators** (page 6)
Lights to indicate type of signal detected: X, K, Ka or L.
 - 12 **Signal Meter** (page 6)
LEDs indicate incoming signal strength or the type of safety signal. Displays remaining battery life at both power-up and power-down.



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