ESCORT

PASSPORT® 8500

SuperCharged Performance

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

Congratulations

The Passport 8500 is the most advanced radar, laser and safety detector available.

The Passport 8500 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 Passport 8500 introduces a new level of revolutionary performance and innovative features.

- Breakthrough long-range radar and laser detection circuitry
- Advanced EZ-Programming lets you customize 9 features
- AutoSensitivity mode, plus Highway and City settings
- Ultra-bright alphanumeric Display with 280 LEDs
- ExpertMeter tracks and displays up to 8 radar signals simultaneously
- New SpecDisplay provides actual numeric radar frequency
- New Programmable Bands (on/off)
- Detects Safety Warning System signals
- Includes coiled SmartCord

If you've used a radar detector before, a review of the Quick Reference Guide on pages 4 and 5, and the EZ-Programming 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 Passport's outstanding performance and innovative features.

Please drive safely.

Remove card along perforations

Passport 8500 Quick Reference Card

There are 9 user-selectable options so you can customize your Passport 8500 for your own preferences.

The buttons labeled CITY and DIM are also used to enter the Program Mode, REVIEW your current program settings, and to CHANGE any settings as desired. The words PROGRAM, REVIEW, and CHANGE are located on the top of the detector, and are highlighted in blue graphics.

How to use EZ-Programming

1 **To enter Program Mode, press and hold both top buttons down for 2 seconds.** (The unit will beep twice, and will display the word "Program").

2 **Then press the REVIEW 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 CHANGE 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).

Factory Default Settings
To reset Passport to its original factory settings, press and hold the "CITY," "DIM," and "MUTE" buttons while turning the power on. Passport's display will provide a "Reset" message, accompanied by an audible alert. All known data will be reset.

An example
For example, here is how you would turn Passport's AutoMute feature off.

1 Enter the Program Mode by holding both the city and dim buttons down for 2 seconds. *Passport will beep twice and display* `Program`.

2 Then hold the REVIEW button down. *Passport will scroll through the categories, starting with Pilot Light (*`Pilot`*), then Power-on sequence (*`PwrOn`*), then Signal strength meter (*`Meter`*), and then AutoMute (*`aMute`*).*

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

(If you accidentally don't release the Review button in time, and Passport goes to the next category, hold the Review button down again, and after Passport scrolls through all categories, it will begin again at the top of the list.)

4 Press the CHANGE button to change from `aMute ON` to `aMute OFF`.

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

Remove card along perforations

EZ-Programming Details ▶

Quick Reference Card

▼ *Remove card along perforations* ▼

Passport 8500 Quick Reference Card

Press the REVIEW button to go from one category to the next → ← **Press the CHANGE button to change your setting within a category**

PILOT LIGHT (Power-on indication)	Pilot HWY	*Full word: Highway or Auto or City
	Pilot H	Letter: H or A or C
	Pilot H.>	Letter, with scanning dot
	Pilot +	Symbol: + or • or –
	Pilot +.>	Letter, with scanning dot
	Pilot +>	Scanning symbol
	Pilot V	Vehicle voltage
POWER-ON SEQUENCE	PwrOn STD	*Standard power-on sequence
	PwrOn FST	Fast power-on sequence
SIGNAL STRENGTH METER	Meter STD	*Standard signal strength meter
	Meter EXP	Expert Meter
	Meter SPC	SpecDisplay
AUTOMUTE	aMute ON	*AutoMute on
	aMute OFF	AutoMute off
AUDIOTONES	Tone STD	*Standard tones
	Tone LOUD	Loud tones
CITY MODE SENSITIVITY	City STD	*Standard City mode sensitivity
	City LoX	Low X band sensitivity in City Mode
	City NoX	No X band sensitivity in City Mode
BRIGHTNESS	Brt LAST	*Last brightness used
	Brt MIN	Minimum brightness when turned on
	Brt MED	Medium brightness when turned on
	Brt MAX	Maximum brightness when turned on
	Brt DARK	Dark Mode when Passport turned on
DARK MODE	DARK LAST	*Standard Dark: shows HD, AD, CD
	DARK LAST	All Dark, no display
BANDS	Bands ALL	*All bands enabled
	Bands MOD	One or more bands are disabled

Turn bands "ON" or "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

◀ *Remove card along perforations* ◀

*Factory Default Settings

Table of Contents

Quick Reference Guide

To begin using your Passport, 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 your Passport on the windshield using the supplied windshield mount.

3. Rotate the volume thumbwheel on Passport's left side to turn Passport on and adjust the volume.

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

EasyMount Slot
Insert Passport's adjustable Windshield mount into this slot. *Page 7*

Rear Laser Port
Receives laser signals from behind the vehicle.

EasyMount Button
Press the button, and slide the Windshield mount into one of its four locking positions. *Page 7*

City Button
Switches between AutoSensitivity, City, and Highway settings. In general, we recommend the Auto mode. *Page 8*

Power / Volume Control
Rotate the thumbwheel to turn Passport on and set the volume. *Page 8*

AutoMute
Passport'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*

Quick Reference Guide

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

Alphanumeric Display
Passport's display will show Highway, Auto, or City as its power-on indication. If you prefer, you can choose other power-on indications. *Page 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*

Earphone Jack
Accepts standard 3.5mm earphone.

Power Jack
Plug the SmartCord into this connector. *Page 6*

Dim Button
Press to adjust display brightness. There are three brightness settings, plus Dark Mode.

In the Dark Mode, the power-on indication will be changed to a dim "AD," "HD," or "CD" (indicating Auto, Highway, or City Dark). In the Dark Mode, Passport's meter will not display during an alert, only the audio will alert you. *Page 9*

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

EZ-Programming
Passport is ready to go, just plug it in and turn it on. But you can also easily change 9 features for your preferences. *Page 12-16*

Power Connection and Mounting Location

Power Connection

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

Passport 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 enclosed sleeve to ensure a snug fit. If so, simply slide the sleeve over the SmartCord'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 power may either be continuously on, or it may be switched on and off with your ignition switch.

Optional power cords

See the Accessories section for details on our optional Direct-wire SmartCord.

Mounting Location

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

Where to mount Passport

For optimum detection performance, we recommend the following:

• Using the Windshield Mount, mount your Passport level, and high enough on your front windshield to provide a clear view of the road from the front and rear.

• Mount Passport away from windshield wipers, other solid objects, and heavily tinted areas that might obstruct the radar antenna or laser lens.

Windshield Mount

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

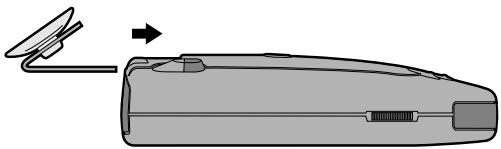
1 Depress the adjustment button on the top of Passport (by the word ESCORT) and slide the EasyMount bracket into the slot until it is locked into the position which best fits the angle of your windshield (there are four settings available). For extremely horizontal or extremely sloped windshields, the 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 Passport on your windshield, use the EasyMount adjustment button located on the top of the Passport, and slide Passport forward or backward to obtain a level horizontal position.

When installed and adjusted properly, the back top edge of Passport 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 Passport by pressing the adjustment button and sliding Passport 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.

Power and volume control

To turn Passport on and adjust the alert tone volume level, rotate the thumbwheel on Passport's left side. Turn the control away from you to increase the audio volume. When you turn Passport on, it goes through a sequence of alerts.

If you prefer, you may program your Passport for a shorter power-on sequence. See the EZ-Programming section for details.

Power-on indication

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

If you prefer, you can select alternate power-on displays. See the EZ-Programming section for details.

AutoMute

Your Passport has our patented AutoMute feature. After Passport 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 for details.

Mute

The Mute button, located on Passport's front panel, 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.

Auto / Highway / City Switch

The City button selects Passport's sensitivity mode. We recommend the Auto (AutoSensitivity) mode for most driving.

Passport's AutoSensitivity mode provides long-range warning, with minimum false alarms. In this mode, Passport's internal computer continuously analyzes all incoming signals and intelligently adjusts the sensitivity circuits.

You can also select conventional Highway and City 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 Passport's City mode sensitivity. See the EZ-Programming section for details.

Dim / Dark Switch

Passport's Dim button selects the brightness of Passport's display. There are four settings: Maximum, Medium, Minimum, and Dark. Press the Dim button to select your preferred brightness.

If you prefer, you can have Passport always turn on at a specific brightness. See the EZ-Programming section for details.

Dark Mode

When you select the Dark mode with the Dim switch, Passport changes to a very inconspicuous power-on indication: a very dim AD, HD, or CD. (In this display, the A, H, or C indicates Auto, Highway, or City, and the D indicates Dark.)

When Passport is in the Dark mode, the display will not show visual alerts when Passport detects signals. Only the audible alert will tell you of detected signals.

If you prefer, you can have Passport's display totally dark, (see the EZ-Programming section) and use the visual alerts on the SmartCord.

Audible Alerts

For Radar signals:

Passport 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 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-brap tone

For Laser signals:

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

For Safety signals:

Passport 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 23.

Power Connector

Passport's power jack uses a telephone-type connector. This 4-conductor connector only works with the included coiled SmartCord, or the optional Direct-wire SmartCord.

The coiled SmartCord is a special power cord that has a power-on indicator (which only lights up when the 8500 is turned on), a bright alert light that warns of radar or laser, and a convenient mute button right on the plug. It's perfect for any car where reaching the detector's mute button on the windshield is a stretch. For discreet night driving, put Passport in the Dark mode, and use the SmartCord for your visual alerts. Other drivers won't know you have a detector.

An optional Direct-wire SmartCord is also available. This version includes a small display module, which can be wired directly into your electrical system, with a 10 foot straight cord to route to your Passport.

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

Signal Strength Meter

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

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

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

NOTE: If you are operating Passport 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

Passport's ExpertMeter option is an advanced display for experienced detector users. Please use Passport 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 ExpertMeter in Passport's EZ-Programming (see page 12-15).

Passport'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.

Above is the ExpertMeter Display if Passport 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 Passport 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.

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

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

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.

SpecDisplay

Passport 8500's new SpecDisplay option is also for the experienced detector user. In this mode, Passport will display the actual numeric frequency of the radar signal being received.

SpecDisplay shows one K-band signal at 24.150 gigahertz.

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

There are 9 user-selectable options so you can customize your Passport 8500 for your own preferences. The buttons labeled CITY and DIM are also used to enter the Program Mode, REVIEW your current program settings, and to CHANGE any settings as desired. The words PROGRAM, REVIEW, and CHANGE are located on the top of the detector, and are highlighted in dark blue graphics. Pages 14-16 explain each option in more detail.

How to use EZ-Programming

1 **To enter Program Mode, press and hold both top buttons down for 2 seconds.** (The unit will beep twice, and will display the word "Program").

2 **Then press the REVIEW 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 CHANGE 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).

An example

For example, here is how you would turn Passport's AutoMute feature off.

1 Enter the Program Mode by holding both the city and dim buttons down for 2 seconds. *Passport will beep twice and display* Program.

2 Then hold the REVIEW button down. *Passport will scroll through the categories, starting with Pilot Light (*Pilot*), then Power-on sequence (*PwrOn*), then Signal strength meter (*Meter*), and then AutoMute (*aMute*).*

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

(If you accidentally don't release the Review button in time, and Passport goes to the next category, hold the Review button down again, and after Passport scrolls through all categories, it will begin again at the top of the list.)

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

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

Overview of EZ-Programming Options

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

Press the CHANGE button to change your setting within a category

PILOT LIGHT (Power-on indication)	Pilot HWY	*Full word: Highway or Auto or City
	Pilot H	Letter: H or A or C
	Pilot H.>	Letter, with scanning dot
	Pilot +	Symbol: + or • or –
	Pilot +.>	Letter, with scanning dot
	Pilot +>	Scanning symbol
	Pilot V	Vehicle voltage
POWER-ON SEQUENCE	PwrOn STD	*Standard power-on sequence
	PwrOn FST	Fast power-on sequence
SIGNAL STRENGTH METER	Meter STD	*Standard signal strength meter
	Meter EXP	Expert Meter
	Meter SPC	SpecDisplay
AUTOMUTE	aMute ON	*AutoMute on
	aMute OFF	AutoMute off
AUDIOTONES	Tone STD	*Standard tones
	Tone LOUD	Loud tones
CITY MODE SENSITIVITY	City STD	*Standard City mode sensitivity
	City LoX	Low X band sensitivity in City Mode
	City NoX	No X band sensitivity in City Mode
BRIGHTNESS	Brt LAST	*Last brightness used
	Brt MIN	Minimum brightness when turned on
	Brt MED	Medium brightness when turned on
	Brt MAX	Maximum brightness when turned on
	Brt DARK	Dark Mode when Passport turned on
DARK MODE	DARK LAST	*Standard Dark: shows HD, AD, CD
	DARK LAST	All Dark, no display
BANDS	Bands ALL	*All bands enabled
	Bands MOD	One or more bands are disabled

Turn bands "ON" or "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

***Factory Default Settings**
To reset Passport to its original factory settings, press and hold the "CITY," "DIM," and "MUTE" buttons while turning the power on. Passport's display will provide a "Reset" message, accompanied by an audible alert, acknowledging the reset.

Pilot Light (Power-on indication)

Note: When you are using the Dark mode, the display will only show HD, AD, or CD, (Highway-Dark, Auto-Dark, or City-Dark).

`PilotHWY` (Full description)
In this setting, Passport will display "Highway," "City," or "Auto" as its power-on indication. (factory default)

`Pilot H` (Letter)
In this setting, Passport will display "H" for Highway, "C" for City, and "A" for Auto.

`Pilot H.>` (Letter with scanning dot)
In this setting, Passport 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, Passport will display "+" for Highway, "." for Auto, and "–" for City.

`Pilot+.>` (Symbol with scanning dot)
In this setting, Passport 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, Passport will display "+" for Highway, "." for Auto, and "–" for City. Each will continuously scroll across the display.

`Pilot V` (Vehicle voltage)
In this setting, Passport will continually display "H" for Highway, "C" for City, and "A" for Auto, and the vehicle's voltage. If the vehicle's voltage drops below 10.5 volts, a low voltage warning is displayed, followed by an audible alert. A high voltage warning is also given if the voltage goes above 16.5 volts. The high-voltage warning is also followed by an audible alert.

Power-on Sequence

`PwrOnSTD` (Standard)
In this setting, each time you turn on Passport, it will display "Passport 8500," "LASER," "Ka-band," "K-band," "X-band," followed by a brief X-band alert. (factory default) 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.

`PwrOnFST` (Fast power-on)
In this setting, Passport 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.

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 (ExpertMeter)
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 pages 10-11.

MeterSPC (SpecDisplay meter)
In this setting, the meter displays the actual numeric frequency of the radar signal received.

Note: The SpecDisplay feature is explained in more detail on page 11.

AutoMute

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

aMuteOFF (AutoMute off)
With AutoMute off, Passport'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.

City Mode Sensitivity

City STD (Standard)
In this setting, when you put Passport 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 Passport 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 Passport in the City mode, Passport 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 Passport is operated in City mode. X-band sensitivity is not affected when used in "Auto," or "Highway" modes.

Brightness

Brt LAST (last)
In this setting, when you turn on Passport, the display will be the last brightness you had selected during operation with the dim button. (factory default)

Brt MIN (minimum)
In this setting, each time you turn on Passport, the display will be at the lowest brightness.

Brt MED (medium)
In this setting, each time you turn on Passport, the display will be at the medium brightness.

Brt MAX (maximum)
In this setting, each time you turn on Passport, the display will be at the maximum brightness.

Brt DARK (dark)
In this setting, each time you turn on Passport, the display will be in the dark mode. This is recommended only when using Passport's SmartCord so you have a visual indication to confirm that Passport is operational.

Dark Mode

Dark STD (standard)
In this setting, when you select the dark mode, the only display will be a very dim HD, AD, or CD, indicating Highway-Dark, Auto-Dark, or City-Dark). (factory default)

Dark ALL (all)
In this setting, when you select the dark mode using the dim button, Passport's display will be totally dark, without even displaying any power-on indication. In this setting, Passport's SmartCord will provide the only visual indication to confirm that Passport is operational.

Bands

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

BandsMOD
In this setting, Passport will warn you with an audible alert, and associated text message stating which band is turned off (i.e. "SWS OFF"). This warning is displayed during the start up sequence (standard or fast).

WARNING: Only modify bands if you are absolutely certain that there are no traffic radar units using that specific band in your area.

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
- 280 AlGaAs LED Alphanumeric
- Bar Graph, ExpertMeter, or SpecDisplay
- 3-Level Dimming, plus Dark Mode

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

Programmable Features
- Power-On Indication
- Power-On Sequence
- Signal Strength Meter
- AutoMute
- Audio Tones
- City Mode Sensitivity
- Display Brightness
- Dark Mode
- Radar / Laser Bands

Sensitivity Control
- AutoSensitivity, Highway and City

Auto Calibration Circuitry

SmartShield VG2 Immunity

Dimensions (Inches)
- 1.25 H x 2.85 W x 5.32 L

Patented Technology
Passport is covered by one or more of the following US patents.
6,069,580 5,600,132 5,587,916 5,668,554
5,559,508 5,365,055 5,347,120 5,446,923
5,402,087 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

Passport is also covered by one or more of the following Canadian patents:
1,295,715 1,295,714 1,187,602 1,187,586

Other patents pending. Additional patents may be listed inside the product.

Interpreting Alerts

Although Passport 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 Passport and how to interpret what it tells you. The specific type of radar being used, the type of transmission (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 Passport's warning system for radar, laser and safety alerts.

Alert	Explanation
Passport begins to sound slowly, then the rate of alert increases until the alert becomes a solid tone. The Signal Meter ramps accordingly.	You are approaching a continuous radar source aimed in your direction.
Passport emits short alerts for a few seconds and then falls silent only to briefly alert and fall silent again.	An instant-on radar source is being used ahead of you and out of your view.
Passport suddenly sounds a continuous tone for the appropriate band received. All segments in the Signal Strength Meter are lit.	An instant-on radar source or laser source is being used nearby. This kind of alert requires immediate attention!
A brief laser alert.	Laser is being used in the area. Because laser is inherently difficult to detect, any laser alert may indicate a source very close by.
Passport receives weak signals. These signals may be a little stronger as you pass large, roadside objects. The signals increase in frequency.	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.
Passport alerts slowly for awhile and then abruptly jumps to a strong alert.	You are approaching a radar unit concealed by a hill or an obstructed curve.

Interpreting Alerts

Alert	Explanation
Passport alerts intermittently. Rate and strength of alerts may be consistent or vary wildly.	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.
Passport alerts intermittently. Rate and strength of signal increases with each alert.	A patrol car is approaching from the other direction, sampling traffic with instant-on radar. Such alerts should be taken seriously.
Passport gives an X-band alert intermittently.	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 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 Passport 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 Passport’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.

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 Passport can display are listed on the facing page.

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

For more information and details about SWS safety radar, visit their web site at www.safetyradar.com.

SWS 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	SchoolBus	60	Future	Use
29	DontPass		61	Emerg	Veh Moving
30	Dangrous	Intrsect	62	Police	Pursuit
31	Emergncy	Vehicle	63	Oversize	Vehicle
32	Future	Use	64	SloMovng	Vehicle

Troubleshooting

Problem	Solution
Passport beeps briefly at the same location every day, but no radar source is in sight.	• 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.
Passport does not seem sensitive to radar or laser.	• Make sure that windshield wipers do not block Passport'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. • Passport may be in City Mode.
Passport did not alert when a police car was in view.	• 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.
Passport did not provide a Safety signal while within range of an emergency vehicle.	• Safety transmitters may not be commonly used in your area.
Passport's display is not working.	• Press the Dim button to deactivate Dark Mode.
Passport's audible alerts are less loud after the first few alerts.	• Passport is in AutoMute Mode. See page 8 for details.
Passport bounces or sags on windshield.	• Passport is not making contact with the windshield to provide stability. While holding down Passport's EasyMount button, slide Passport further back toward the windshield so that the back top edge makes firm contact.
Passport's power-on sequence reoccurs while you are driving.	• A loose power connection or dirty lighter socket can cause Passport to be briefly disconnected.
Your 14-year old son has changed all 9 of the EZ-Programming options.	You can return all of the programming options to the factory defaults by holding down the City, Dim, and Mute buttons while you turn Passport on.

Problem	Solution
Passport will not turn on.	• Check that volume control is ON. • Check that vehicle ignition is ON. • Check that vehicle lighter socket is functional. • Try Passport in another vehicle.
Passport feels very warm.	• It is normal for Passport to feel warm.

Explanation of Displays

AD	Sensitivity control is in Auto mode, display is in Dark mode (page 9)
HD	Sensitivity control is in Highway mode, display is in Dark mode (page 9)
CD	Sensitivity control is in City mode, display is in Dark mode (page 9)
No display	Passport is in the Dark mode, and is programmed for Dark All (page 9, 16)
PilotHWY	One of the many programming messages (pages 12-16)
WorkZone	One of the many Safety Radar messages (pages 22-23)
Caution	Passport has detected a Safety Radar Signal, but the signal isn't yet strong enough to decode the specific safety message (page 22-23)
X|, *or* K|, *or* KA| *etc.*	Passport has been programmed in the ExpertMeter Mode (page 10-11)
Self Cal	Passport is running a self-calibration test.
Service Required	Passport has failed the calibration test. Contact Escort for repair.

Service Procedure

If Your Passport 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 Passport 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 Passport :

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

Mail Passport and Power Cord 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 Passport postpaid and insured. Insist on a proof of delivery, and keep the receipt until the return of your Passport.

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_____

   _____

   _____

Remove card along perforations

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BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO 300 WEST CHESTER OH

POSTAGE WILL BE PAID BY ADDRESSEE

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ESCORT INC
5440 WEST CHESTER RD
WEST CHESTER OH 45069-9789

ESCORT One Year Limited Warranty

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

Escort Extended Service Plan

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

Accessories

The following accessories and replacement parts are available for Passport 8500.

***Standard Coiled SmartCord*.....$29.95**

***Direct-wire SmartCord*.....$29.95**

***Accessory Kit*.....$19.95**

***Visor Clip*.....$4.00**

***8500 Travel Case*.....$19.95**

ESCORT®

Designed and printed in the USA

Escort Incorporated
5440 West Chester Road
West Chester Ohio 45069

Sales 800-433-3487
Service 800-543-1608
Fax 513-870-8509

www.escortradar.com