

OPERATION MANUAL



sensoro
ALPHA/ALPHA+

**DIGITAL VEHICLE COMPASS
& RADAR/LASER DETECTOR**



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CONGRATULATIONS!



You have acquired the SENSORO ALPHA/ALPHA+ from PNI Corporation, the first English and Spanish speaking radar/laser detector with a built-in digital compass. The SENSORO ALPHA/ALPHA+ incorporates the same compass technology used in built-in compasses for GM, Ford, and Chrysler vehicles, to provide highly accurate and reliable compass readings in a radar/laser detector.

Features

- **PATENTED DIGITAL COMPASS** displays direction information with numeric digits (345°, 350°, etc.) and eight cardinal points (N, NE, E, etc.)
- **BILINGUAL VOICE WARNING** alerts you in English and Spanish
- **PROTECTION** against all radar bands (X, K, and superwide Ka)
- **360° LASER COVERAGE** protects you against laser guns in all directions
- **VG-2** protects you by being invisible to radar detector *detectors*
- **SAFETY WARNING SYSTEM** alerts you to hazard and safety information, including road construction, emergency vehicles, and travel information
- **TWO SEPARATE CITY MODES** (“CITY1” and “CITY2”) in addition to highway mode virtually eliminate false radar alerts
- **ADDITIONAL CITY MODE** (“CITY3”) to delete X-band reports and eliminate most false radar alerts



PACKAGE CONTENTS

- **USER SELECTABLE** brightness, language, voice on/off, mute on/off, and volume control
- **TEXT DISPLAY** Eight-character text display shows safety warnings, radar alerts, laser alerts, and compass heading
- **EASY MOUNTING** Mounts easily to any windshield
- **POWER CONNECTION** plugs into your 12-volt lighter socket, power cord included

Package contents

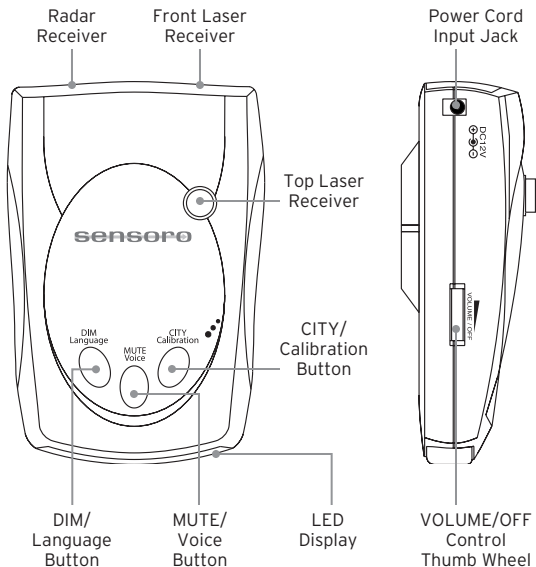
Your SENSORO ALPHA/ALPHA+ package includes the following components:

- The SENSORO ALPHA/ALPHA+ digital compass and talking radar/laser detector
- Mounting bracket with suction cups for windshield installation
- Coiled 12-volt DC power cord
- Extra power cord fuse
- Operation manual

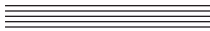
SENSORO ALPHA+ package also includes the following component:

- Dual socket 12-volt DC adapter for installation to your vehicle's fuse panel

IDENTIFYING PARTS OF THE UNIT



INSTALLING THE UNIT



Mounting guidelines

The SENSORO ALPHA/ALPHA+ can be mounted on your windshield using the bracket provided.

- Mount on the windshield in a centered location that will not obstruct the view of the driver and is within reach, so the buttons can be easily accessed.
- Do not mount behind windshield wipers, metal surfaces, ornaments, or mirrored sunscreen glass, as these affect radar/laser signals. Tinted glass does not affect radar/laser signal reception.
- Do not mount close to strong stereo speakers, as this affects compass accuracy.



Conceal the SENSORO ALPHA/ALPHA+ when you leave your vehicle to prevent theft and to minimize the unit's exposure to extreme temperatures, which can temporarily impair performance.

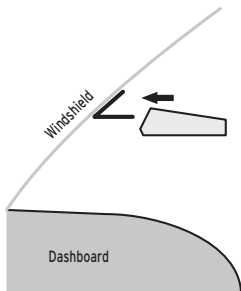


INSTALLING THE UNIT



Windshield mounting

1. Install the suction cups onto the windshield mounting bracket by sliding them into their holes (if not pre-installed).
2. Press the bracket base firmly against the windshield until the suction cups securely take hold.
3. Slide the detector into its slot located on the top back of the detector.



4. Bend the angle of the windshield mounting bracket, if necessary, to adjust for best viewing and detection angle.
5. Plug the small connector of the power cord into the 12-volt DC power input jack located on the side of the detector.
6. Plug the lighter adapter into the lighter socket.



RADAR OPERATION



Power on

Turn the **VOLUME/OFF** thumb wheel control on. The SENSORO ALPHA/ALPHA+ goes through a self test pattern sequence and displays the last mode previously set in memory.

Functions and modes

Volume/on/off

Use the **VOLUME/OFF** thumb wheel, located on the side of the SENSORO ALPHA/ALPHA+, to turn the unit on or off or to adjust volume level.

Dim mode

Press the **DIM** button repeatedly for less than two seconds each time to toggle between the four levels of brightness modes.

 *Dim mode reduces the brightness of the display. When a signal is detected, alerts are displayed in full brightness, regardless of dim mode. Then the display returns to the previously selected dimmer setting.*

Language mode

Press and hold the **Language** button repeatedly for more than two seconds each time to toggle between “ENGLISH VOICE WARNING” and “SPANISH VOICE WARNING.”

Mute mode

Press the **MUTE** button repeatedly for less than two seconds each time to toggle between “MUTE ON” and “MUTE OFF.”

 *You may also adjust the audio level by using the **VOLUME/OFF** thumb wheel.*



RADAR OPERATION

 *“MUTE ON” will silence the audio alarm for the duration of the existing signal and for any new alert received within 30 seconds of the last signal. Then the unit automatically resets itself to “MUTE OFF,” so the next signal threat can be received. “MUTE OFF” manually restores the audio alert of radar signals.*

Voice warning mode

Press and hold the **Voice** button repeatedly for more than two seconds each time to toggle between “VOICE WARNING ON” and “VOICE WARNING OFF.”

City mode

Press the **CITY** button repeatedly for less than two seconds each time to toggle through signal sensitivity modes “HIGHWAY,” “CITY1,” “CITY2,” and “CITY3.”

 *X-band, occupied by police radar, is also shared for other uses, such as automatic door openers like the ones used at supermarkets, burglar alarms, terrestrial microwave emission, RF braking systems, and other devices. In addition, other radar detectors in close proximity may falsely alert your detector. To reduce false alerts, the SENSORO ALPHA/ALPHA+ has three city filtering settings. Each move (from “HIGHWAY” to “CITY1” and “CITY1” to “CITY2”) will give you the rejection of X-band alarms by approximately 20%.*

 *“CITY3” will have the SENSORO ALPHA/ALPHA+ not report X-band radar signals at all. For best protection from all radar bands, always drive in “HIGHWAY” mode.*

RADAR OPERATION



Tutorial mode

The SENSORO ALPHA/ALPHA+ has a tutorial mode intended to familiarize you with the various visual displays and distinct audible alerts the unit performs. Perform the following steps to begin the tutorial mode:

1. Turn the unit off with the **VOLUME/OFF** thumb wheel.
2. Press and hold both the **DIM** and **CITY** buttons while simultaneously turning the unit on with the **VOLUME/OFF** thumb wheel. The SENSORO ALPHA/ALPHA+ enters the tutorial mode after four beeps and displays “TUTORIAL” and “MODE.”
3. Press the **DIM** button repeatedly and the unit will briefly demonstrate the various audio and visual detecting operations listed below:

X-band detected operation: X >>>>9

K-band detected operation: K >>>>9

Ka-band detected operation: KA>>>>9

Laser detected operation: LASER

SWS detected operation: ROADWORK
ZONE ADVISORY
WEATHER HAZARD
TRAVEL INFO
VEHICLE WARNING

4. Press the **CITY** button to exit the tutorial mode.



RADAR OPERATION



Invisible to VG-2

VG-2, also called the radar detector *detector*, is an interceptor used by officers to identify vehicles equipped with radar detectors in instances and locations where they are not legal (such as in vehicles over 10,000 pounds or in Virginia and Washington D.C.). The VG-2 interceptor works by detecting emissions generated by radar detectors within a certain frequency range. The SENSORO ALPHA/ALPHA+ operates on a frequency outside of this range. So it's *invisible* to — and therefore undetectable by — VG-2.

Detection alerts

The SENSORO ALPHA/ALPHA+ notifies you of the type of signal it receives (X, K, Ka, laser, etc.) by using different audio and visual alerts for each signal.

X, K, or Ka alerts

When an X-, K-, or Ka-band radar signal is detected, the radar band type and the signal strength are displayed together. The radar audio alert is activated continuously for the duration of the signal. Four indicators illuminate sequentially on the display to indicate signal strength. Numeric digits, ranging from 1 to 9, also indicate signal strength (1 is weakest, 9 is strongest). Here is an example:

KA>>>>9

Laser alert

When a laser signal is detected, the laser audio alert is activated for about three seconds, and the display shows the following:

LASER



RADAR OPERATION

Instant-on alert

When an instant-on monitoring signal is detected, the instant-on audio alert is activated for about three seconds and the display shows X-, K-, or Ka-band alerts.

 *An “instant-on” alert signal is not another radar band; it is a means by which an officer triggers the radar gun on and off in usually less than two seconds. Instant-on radar signals are often used by officers in combination with VG-2 signals.*

Safety Warning Systems (SWS™)

When a safety radar signal is detected the safety audio alert is activated for about three seconds and the display shows any of the following five different safety warnings:

ROADWORK
ZONE ADVISORY
WEATHER HAZARD
TRAVEL INFO
VEHICLE WARNING

Safety Warning Systems are transmitters used by emergency services and work crews to alert drivers to many different emergency or hazardous conditions in the area. Presently, there are a few safety radar transmitters in use, and these alerts should be infrequent. As SWS™ transmitters increase by governmental agencies, expect more frequent safety alerts from your SENSORO ALPHA/ALPHA+.

COMPASS OPERATION



The SENSORO ALPHA/ALPHA+ must be calibrated for accurate heading information. Calibration allows the unit to separate the earth's field from the magnetic fields generated by your vehicle. Before beginning calibration, the SENSORO ALPHA/ALPHA+ must be installed in your vehicle in the location you wish to use it.

When to calibrate

- When the unit is used for the first time in a vehicle
- When the unit is mounted in a different location than where previously calibrated

Calibrating the unit

1. Press the **Calibration** button for approximately three seconds and then release immediately when you hear the unit beep. The display will read "START YOUR CALIBRATION" and will flash "TURN TWICE" consecutively.
2. Turn your vehicle in two circles (see note on next page).
3. Press and release the **Calibration** button. The display will read "CALIBRATION COMPLETED" before returning to its previous mode setting. Calibration is now complete!

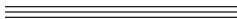
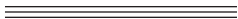
COMPASS OPERATION



Calibration should be performed on a level surface. The size of the circles or the direction your vehicle is pointing when beginning or ending the circles does not matter. The circles do not need to be perfect circles but must be completed in the same direction. It is also important that each circle takes a minimum of 20 seconds, but less than one minute to complete.

Compass display

The compass displays eight cardinal points (N, NE, E, SE, S, SW, W, NW) and the corresponding numeric heading in five-degree increments (340°, 345°, etc.).



CARE AND MAINTENANCE



Here are some tips to help you care for your SENSORO ALPHA/ALPHA+:

- To deter theft, remove your SENSORO ALPHA/ALPHA+ from your windshield or dashboard when you leave your vehicle.
- Avoid extended exposure to direct sunlight. Remove your SENSORO ALPHA/ALPHA+ from your windshield when your vehicle is parked for an extended period of time. On hot days the temperature inside your vehicle can reach levels that could damage your SENSORO ALPHA/ALPHA+.
- Do not expose the SENSORO ALPHA/ALPHA+ to rain, moisture, spray cleaners, or liquids that could damage the internal circuitry of the detector.

Fuse replacement

The lighter socket adapter of the power cord has a replaceable 2-Amp SAG fuse located below the silver tip. To check or replace the fuse, *slowly* and *carefully* unscrew the tip of the plug, making sure the spring and silver tip located inside the plug do not fly out when you remove the cap. Check fuse and replace if necessary.

Your SENSORO ALPHA/ALPHA+ is designed for reliable service. However, if you encounter a problem, refer to the **Troubleshooting** section that follows before making a service call.



TROUBLESHOOTING

The SENSORO ALPHA/ALPHA+ will not power up.

- Make sure the **VOLUME/OFF** thumb wheel is turned on.
- Check all power cord connections.
- Check fuse in lighter socket adapter and replace if necessary.
- Check lighter socket. Clean if dirty.
- Check your vehicle's fuse panel (refer to your vehicle's manual).

When calibrating the compass, the SENSORO ALPHA/ALPHA+ displays "CALIBRATION COMPLETED" instead of "TURN TWICE."

- You are holding the **Calibration** button for longer than three seconds in step one of the calibration instructions. (See **Calibrating the unit.**) Make sure you release the **Calibration** button immediately when you hear the unit beep.

The SENSORO ALPHA/ALPHA+ did not alert when passing an officer.

- Not all police cars have radar/laser, or it may not be in use at that time.

TROUBLESHOOTING

The SENSORO ALPHA/ALPHA+ signal is weak.

- Set the unit to “HIGHWAY” mode.
- Make sure the unit is level to the road.
- Make sure the radar window or the top laser receiver is not obstructed. Move the SENSORO ALPHA/ALPHA+ if necessary.

The SENSORO ALPHA/ALPHA+ beeps over bumps or when using vehicle's equipment or electrical accessories, such as brakes, windshield wipers, power windows, etc.

- Check power cord for loose connections.
- Vehicle has electrical noise. Install a filter capacitor (470 μ F; 35-volt, or larger capacitance value) on the back of the lighter socket across the power connection.

SPECIFICATIONS

Radar

Receiver type:	Dual conversion superheterodyne
Antenna type:	Linear polarized, self-contained
Detector type:	Scanning frequency discriminator
Frequency operation:	X-band; 10.525 GHz $\pm$ 50 MHz K-band; 24.150 GHz $\pm$ 100 MHz Ka-band (superwide); 34.700 GHz $\pm$ 1,300 MHz Safety radar; 24.100 GHz

Laser

Receiver type:	Pulsed laser signal receiver
Detector type:	Digital signal processor pulse width discriminator
Optical sensor:	Dual convex condenser lens and high speed photo diode detector

Compass

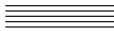
Accuracy:	5 degrees
Resolution:	5 degrees

General

Temperature range:	-4°F to 140°F (-20°C to 60°C)
Power requirements:	12V to 16V DC, 310 mA, negative ground
Dimensions:	1.3" H x 2.7" W x 4.3" L
Weight:	5.0 ounces

Specifications are typical, individual units may vary. Specifications are subject to change without notice. Performance may vary with driving behaviors and driving environments. U.S. patents apply: #5,497,148. Other patents pending.

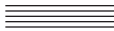
SERVICE AND REPLACEMENT



For fastest service, contact or return your SENSORO ALPHA/ALPHA+ to the place of purchase. If you wish to return the unit for replacement or repair to PNI Corporation, please follow the following procedures:

1. Products returned to PNI must be pre-authorized by PNI with an RMA (return material authorization) number marked on the outside of the package. Obtain an RMA number by contacting PNI Corporation:
 - By phone: 1 (888) 422-6672 (toll-free in the U.S. only) or at (707) 566-2260
 - By fax: (707) 566-2261
 - By e-mail: sales@pnicorp.com
2. Provide a proof of purchase, such as a mechanical reproduction or carbon copy of a sales receipt. If you send your original receipt, it cannot be returned. Proof of purchase must show printed date of purchase, model number, and place of purchase. Once you have acquired an RMA number, pack the unit securely to prevent damage in transit. If possible, use the original packing material and box. Be sure to send the entire product.
3. Ship prepaid and insured by way of a traceable carrier such as United Parcel Service (UPS), Roadway Parcel Service (RPS), or First Class Mail to avoid loss in transit.

SERVICE AND REPLACEMENT



4. With the issued RMA number written on the outside of your package, send your proof of purchase and description of the problem to the following address:

PNI Corporation

5464 Skylane Boulevard, Suite A

Santa Rosa, CA 95403-1084

5. Type or print your name and address where the replacement should be delivered. After receipt of your documents and unit, a replacement unit will be sent to you. Please allow two to three weeks from receipt of your returned product to delivery of your replacement.

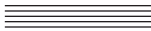


**Alpha/Alpha+
QJ3-IFS-11423**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

In addition, any changes or modifications to this product, which are not expressly approved by PNI Corporation in writing, could void the user's authority to operate this product.

WARRANTY INFORMATION



LIMITED WARRANTIES; LIMITATION OF LIABILITY for Sensoro radar detectors, models Alpha and Alpha+

ALPHA: PNI Corporation (“PNI”) manufactures its products from parts and components that are new or equivalent to new in performance and warrants to the original user that this product will be free of defects in workmanship and materials for one (1) year from the date of purchase.

ALPHA+: PNI Corporation (“PNI”) manufactures its products from parts and components that are new or equivalent to new in performance and warrants to the original user that this product will be free of defects in workmanship and materials for three (3) years from the date of purchase.

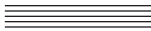
This warranty does not cover wear and tear due to normal use, or damage to the product as the result of improper usage, neglect of care, alteration, accident or unauthorized repair.

If the product is found by PNI to be defective, PNI’s entire liability and your exclusive remedy for breach of warranty shall be that PNI will repair or replace the product and return the product or its replacement to you at no charge, provided that you ship the product to PNI at your expense with a description of the defect and subject to the other conditions of this warranty. Should the product prove to be irreparable, PNI may substitute an equivalent product of the same or similar style and of a value not in excess of the original purchase price of your instrument.

PNI warrants the repaired or replacement product to be free from defects in material and workmanship on the same terms as the product originally purchased.

This warranty will be void if the products, serial number or other identification marks have been defaced, damaged or removed. This warranty does not cover wear and tear due to normal use, or damage to the product as the result of improper usage, neglect of care, alteration, accident or unauthorized repair, nor does this warranty apply to the battery necessary to operate the product.

WARRANTY INFORMATION



This warranty is extended to the original retail purchaser only and may not be transferred or assigned to subsequent owners. In order to validate your warranty, you must provide proof of purchase acceptable to PNI together with the product shipped for warranty repair/replacement.

Products returned to PNI must be pre-authorized by PNI with an RMA (return material authorization) number marked on the outside of the package. Please refer to the Service and Replacement section for PNI Corporation contact information.

THE FOREGOING WARRANTY IS GIVEN IN LIEU OF AND PNI DISCLAIMS ALL OTHER WARRANTIES OR REPRESENTATIONS, EXPRESSED OR IMPLIED, IN FACT OR IN LAW, WITH RESPECT TO THIS PRODUCT, INCLUDING, BUT NOT LIMITED TO, (1) THE IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, OR (2) THAT USE OF THE PRODUCT WILL BE UNINTERRUPTED AND ERROR FREE.

PNI shall have no liability for any indirect or speculative damages (including, but not limited to, consequential, incidental and special damages) relating to the use of or inability to use this product, whether arising out of contract, negligence, tort, or under any warranty theory, or for infringement of any other party's intellectual property rights, irrespective of whether PNI had advance notice of the possibility of any such damages, including, but not limited to, loss of use, revenue or profit. In no event shall PNI's total liability for all claims regarding the product exceed the price paid for the product. PNI neither assumes nor authorizes anyone to assume for it any other liabilities.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.



PNI Corporation

www.pnicorp.com