Ξradɛnsoᴲ

XP

High Performance, Long-Range Radar Detector

USER MANUAL

Foreword

Congratulations on your new investment! The *Radenso XP* was designed to deliver class-leading radar detection performance on all radar bands, coupled with the best false alert filtering in the industry.

The built-in Global Positioning System (GPS) feature allows you to lockout known false alerts or you can mark your own Points of Interest (POI) for future alerts. The world-class, directional GPS database includes all known Red-Light Cameras (RLC) and Speed Cameras in North America and is updated monthly.

Radenso XP features:

- LNA-equipped antenna board for highest possible sensitivity on all bands
- GPS enabled
- RJ11 power connector
- OLED display
- Ka Band segmentation (10 segments)
- Selectable X, K and Ka radar bands
- Selectable K Wide/Narrow
- Selectable Ka band POP (On/Off)
- Selectable driving modes (Highway, City and Auto City)
- Low power/Low frequency K band detection
- Blind Spot Monitoring (BSM) and Collision Avoidance System (CAS) filter
- Separate Traffic Sensor Rejection (TSR) filter
- 3-digit frequency display
- Multiple threat display
- Auto Mute with selectable Mute volume
- Low Speed Mute Mode for X and K bands
- Mute Mode to manually mute X and K bands until manually unmuted
- Auto City Mode with selectable speed increments and filter levels for each band
- Fully directional, world-class RLC/Speed Camera database with free, monthly updates
- Free firmware and database updates for life
- Voice alerts with over 260 different spoken messages
- Frequency voice alert announcement
- GPS lockouts
- Test Mode (full sensitivity, no filtering and no signal lag)
- 6 selectable display modes (Speed/Compass, Speed/Time, Speed/Voltage, Voltage, Time and Speed)
- VG2 undetectable
- Undetectable by Spectre IV/Elite (< 15 feet)
- Direct Wire power cord available (optional)
- 1 year manufacturer's warranty

Quick Start-up Guide

To start using your *Radenso XP* radar detector, follow these easy steps:

1. Slide the windshield mounting bracket into the Quick Mount slot at the front of the radar detector.
2. Insert the RJ11 connector of the power cord into the power jack of the *Radenso XP,* located on the left side. Insert the large 12V plug into the power socket of your vehicle.
3. Once connected to a 12V power source, the radar detector starts-up with a very brief start-up sequence.
4. Adjust the volume level by pressing and holding the **VOL-/CITY** or **VOL+/MARK** button for 2 seconds.

Radenso XP is now ready to go! To change default settings please reference the information below.

Factory Reset

1. Select "FACTORY RESET" in the Menu Mode to reset all settings back to their factory defaults, except GMT setting.

Firmware Update

1. Connect the radar detector to a Windows-based PC via mini USB cable and use the Firmware Update Manager program to download a new firmware to your *Radenso XP*, if available.
2. The Firmware Update Manager program can be found on the "Update" section of the *Radenso* homepage at http://radenso.com

Database Update

1. Connect the radar detector to a Windows-based PC via mini USB cable and use the DB Update Manager program to download the database file to your *Radenso XP*.
2. The DB Update Manager program can be found on the "Update" section of the *Radenso* homepage at http://radenso.com

Main Functions of *Radenso XP*

The *Radenso XP* is a very powerful windshield mounted radar detector. It's designed to protect the driver from speeding tickets/fines. The *Radenso XP* communicates with the driver in English, by audio and visual alerts. Its main functions are the detection of microwave radar signals (X, K, and Ka bands), laser guns, red-light cameras and fixed-speed cameras using a GPS database.

Button Operation & Connections

1. 360° Laser Sensor
2. Quick Mount Slot
3. Quick Mount Release
4. **PWR/MENU** button:
   - Short press: Power On/Off
   - Press and hold for 2 seconds: Enters Menu Mode
5. **VOL+/MARK** button:
   - Short press: Add or delete a POI (100 maximum) (Pressing button during RLC alert will permanently mute the alert)
   - Press and hold for 2 seconds: Change volume up (0 → 9)

6. **MUTE** button:
   - Short press: Toggle Mute Mode On/Off (Mute On will mute all X and K band signals)
   - Press and hold for 2 seconds: Add or delete Lockout location (200 maximum)
7. **VOL-/CITY** button:
   - Short press: Change driving mode (Highway → City → Auto City)
   - Press and hold for 2 seconds: Change volume down (9 → 0)
8. USB Port
9. RJ11 Power Jack

Menu Mode

1. Press and hold the **PWR/MENU** button for 2 seconds to enter Menu Mode.
2. **Beginner Mode** Menu (Default setting in **bold)**:

Menu Item	Menu Setting
Brightness	**Bright** ↔ Dim ↔ Dimmer ↔ Dark ↔ Smart Dark
SMART DARK	**Bright** ↔ Dim ↔ Dimmer
User Mode	**Beginner** ↔ Expert
X Band	**On** ↔ Off
K Band	**Wide** ↔ Narrow
Ka WIDE Band	**On** ↔ Off

LASER	**On** ↔ Off
TSR FILTER	**Off** ↔ On
Driving Display Mode	**Speed/Compass** ↔ Speed/Time ↔ Speed/Voltage ↔ Voltage ↔ Time ↔ Speed
Unit Mode	**English** ↔ Metric
GMT Setting	-12hr ↔ **-05hr** ↔ +12hr
LOW SPD MUTE (Low Speed Mute)	**Off**, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55 MPH or **Off**, 10, 20, 30, 40, 50, 60, 70, 80, 90 KM/H
Del ALL Usr POI? (Delete all POIs?)	Press *PWR/MENU* or *MUTE* button to delete
Del ALL Lockout? (Delete all lockouts?)	Press *PWR/MENU* or *MUTE* button to delete
FW VER (Firmware Version)	X.XX
DB VER (Database Version)	YY/MM/DD
FACTORY RESET?	Press *PWR/MENU* or *MUTE* button to reset
EXIT	Press *PWR/MENU* or *MUTE* button to exit

3. **Expert Mode** Menu (Default setting in **bold)**:

Menu Item	Menu Setting
Brightness	**Bright** ↔ Dim ↔ Dimmer ↔ Dark ↔ Smart Dark
SMART DARK	**Bright** ↔ Dim ↔ Dimmer
User Mode	Beginner ↔ **Expert**
X Band	**On** ↔ Off
K Band	**Wide** ↔ Narrow ↔ Off
Ka WIDE Band	**On** ↔ Off
Ka1 (33.392 - 33.704 GHz)	**On** ↔ Off
Ka2 (33.704 - 33.896 GHz)	**On** ↔ Off
Ka3 (33.886 - 34.198 GHz)	**On** ↔ Off
Ka4 (34.184 - 34.592 GHz)	**On** ↔ Off
Ka5 (34.592 - 34.808 GHz)	**On** ↔ Off
Ka6 (34.806 - 35.166 GHz)	**On** ↔ Off
Ka7 (35.143 - 35.383 GHz)	**On** ↔ Off
Ka8 (35.378 - 35.618 GHz)	**On** ↔ Off
Ka9 (35.595 - 35.835 GHz)	**On** ↔ Off
Ka10 (35.830 - 35.998 GHz)	**On** ↔ Off
LASER	**On** ↔ Off
POP	**Off** ↔ On
BSM FILTER	**On** ↔ Off
TSR FILTER	**Off** ↔ On
AUTO MUTE	0%, 20%, **40%**, 60%, 80%
Unit Mode	**English** <-> Metric
CITY MODE FILTER	X Filter: 0 ↔ 90% **(Default 40%)** K Filter: 0 ↔ 90% **(Default 20%)**

	Ka Filter: 0 ↔ 90% **(Default 0%)**
CITY MODE SPEED	City Speed Set: 10, 15, 20, 25, 30, 35, **40**, 45, 50, 55, 60 MPH or 10, 20, 30, 40, 50, **60**, 70, 80, 90, 100 KM/H
LOW SPEED MUTE	Low Speed Mute Set: Off, 5, 10, 15, **20,** 25, 30, 35, 40, 45, 50, 55 MPH or Off, 10, 20, **30**, 40, 50, 60, 70, 80, 90 KM/H
Display Mode	**Standard** ↔ Frequency ↔ Threat
Driving Display Mode	**Speed/Compass** ↔ Speed/Time ↔ Speed/Voltage ↔ Voltage ↔ Time ↔ Speed
GMT Setting	-12hr ↔ **-05hr** ↔ +12hr
RLC (Red-Light Camera)	**On** ↔ Off
SPEED CAM (Speed Camera)	**On** ↔ Off
RL&SPD CAM (Red-Light & Speed Camera)	**On** ↔ Off
USER POINT	**On** ↔ Off
GPS Warning Distance	**Normal** ↔ Farther ↔ Farthest ↔ Short
VOICE	**On** ↔ Off
GPS CONNECTED ANNOUNCEMENT	**On** ↔ Off
TEST	**Off** ↔ On
Del ALL Usr POI? (Delete all user POIs?)	Press *[PWR/MENU]* or *[MUTE]* button to delete
Del ALL Lockout? (Delete all lockouts?)	Press *[PWR/MENU]* or *[MUTE]* button to delete
FW VER (Firmware Version)	X.XX
DB VER (Database Version)	YY/MM/DD
FACTORY RESET?	Press *[PWR/MENU]* or *[MUTE]* button to reset
EXIT	Press *[PWR/MENU]* or *[MUTE]* button to exit

4. Menu control buttons
   - **PWR/MENU** button: Toggle upward
   - **VOL-/CITY** button: Change Menu setting or execute Menu function backward
   - **MUTE** button: Toggle downward
   - **VOL+/MARK** button: Change Menu setting or execute Menu function forward
5. Exit Menu
   - Select "EXIT" in Menu
   - Press and hold **PWR/MENU** button for 2 seconds
   - Radar detector will automatically exit Menu Mode if no button is pressed for 20 seconds

Alert Priorities

1. The radar detector will alert in the following priority order (highest to lowest):
   - POI detected alert and POI pass alert

- Laser:

LASER

- Ka band:
  - Standard:

  Ka 7 ▫▪▪▪

  - Frequency:

  Ka 3 33.771

- K band:
  - Standard:

  K   5 ▪

  - Frequency:

  K 2 24.094

- X band:
  - Standard:

  X   2 .

  - Frequency:

  X 1 10.497

- POI Limit Speed

Auto City Mode

1. Select Auto City Mode by pressing the **VOL-/CITY** button.
2. Auto City Mode operates as follows:
   - All radar alerts on X and K bands are completely muted and only displayed if the vehicle's speed is lower than the left speed setting (Low Speed Mute). It does NOT mute Ka band and Laser alerts.
   - Radar detector operates in City mode with reduced sensitivity as set in City Mode Filter if vehicle's speed is between left speed setting (Low Speed Mute) and right speed setting (City Mode Speed) **LOW SPEED MUTE : 30 CITY MODE SPEED : 60**.
   - Maximum detector sensitivity will be achieved above right speed setting (City Mode Speed). Radar detector operated with maximum sensitivity on all bands if vehicle's speed is over the right speed setting.
3. City Filter and City Mode Speed settings are always default in Beginner Mode.
4. City Filter and City Mode Speed settings can be changed in Expert Mode only.

Auto Shutdown

1. To prevent drainage of the vehicle's battery, the radar detector automatically shuts down after 30 minutes if the GPS doesn't detect vehicle movement. The radar detector will need to be manually turned on if it shuts down automatically.
2. If the radar detector is wired to a switched power source, it will shut down at the same time. The radar detector will start up automatically once the switched power source receives power.

Brightness Mode

1. Display brightness can be selected as follows:
   - BRIGHT: Full brightness
   - DIM: Reduced brightness
   - DIMMER: Further reduced brightness
   - DARK: The display turns off (completely dark). The display only turns on when a button is pressed.
   - SMART DARK: The display turns off (completely dark). The display turns on when a button is pressed or during an alert.

Brightness Mode: Smart Dark

1. Display brightness while in Smart Dark Mode can be selected as follows:
   - BRIGHT: Full brightness
   - DIM: Reduced brightness
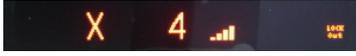   - DIMMER: Further reduced brightness

GPS Connected Message

1. A message displays along with a voice announcement when a GPS signal is acquired after start-up.
2. You can disable the voice announcement in the Menu (must be in Expert Mode).

GPS Error Message

1. A message displays if the radar detector does not receive a GPS signal for 30 seconds.

GPS Lockouts

1. Mute audio alerts (voice/tone) for radar within a 1,500 ft radius of the Lockout location.
2. Lockout display:
   - Entering a Lockout location:
   - "LOCKOUT" is shown in the lower right corner of the display .
3. POI alert operates only when GPS is connected.
4. Press and hold the **MUTE** button for 2 seconds to store or delete a Lockout location.

5. Select "Del ALL Lockout?" in the Menu to delete all Lockout locations registered in memory.

Mute Mode

1. Pressing the **MUTE** button during an alert will temporarily mute the detected signal and will automatically un-mute 20 seconds after the signal has passed, or if a new and/or different signal has been detected.
2. Pressing the **MUTE** button without the presence of an alert will permanently mute the radar detector on X and K bands until either manually un-muted, or after a new start-up cycle. Ka band and Laser alerts will NOT be muted in this mode.

Mute Mode: Auto

1. Auto Mute Mode is selectable and reduces the alert volume by 0%, 20%, 40%, 60% or 80%. (Default: 40%)
2. Radar bands (X, K and Ka) and POI Limit Speed: Current volume level stays for the first 3 seconds after the alert begins, afterwards, it's reduced to the selected Auto Mute level. Auto Mute is NOT applicable to Laser alerts.
3. Auto Mute ends 10 seconds after the alert ends. If the same radar frequency is detected, or the same POI Limit Speed alert begins within 10 seconds the radar detector keeps Auto Mute active.
4. If a different radar band is detected, or a different POI Limit Speed alert begins while Auto Mute is active, Auto Mute will be disabled and will revert back to the current volume level.

Mute Mode: Low Speed Mute

1. All radar alerts on X and K bands are completely muted and only displayed if vehicle's speed is below the Low Speed Mute setting. Radar detector does NOT mute Ka band and Laser alerts.
2. Low Speed Mute settings:
   - English (MPH): Off, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55 (Default: 20)
   - Metric (KM/H): Off, 10, 20, 30, 40, 50, 60, 70, 80, 90 (Default: 30)

Notifications

When a radar signal is detected, the driver will be alerted by a visual text warning and a voice/tone alert. The display and voice alert will indicate the detected radar band, frequency and signal strength. For additional alert awareness, the display will blink for 3 seconds and a beeping, warning tone will increase its intensity with increasing signal strength. The signal strength has 9 levels. The GPS alerts are reported by voice and text.

Point of Interest (POI)

1. Press the **VOL+/MARK** button to register a POI
2. Pressing the **VOL+/MARK** button during a POI alert will delete the POI
3. You can register up to 100 POIs

POI: Alert

1. POI alert announces when a database POI or user POI is detected.

2. POI alerts display the POI icon, distance to POI and current speed .

3. Display of POI "PASS" message with a voice announcement when passing a POI.

   3.1 Red-Light Camera

   3.2 Speed Camera

   3.3 User Point

4. No audio/visual alert when exiting from POI area without passing by POI.
5. POI warning distances:
   - SHORT: 400 ft or 135 m
   - NORMAL: 800 ft or 250 m
   - FARTHER: 1,250 ft or 400 m
   - FARTHEST: 1,650 ft or 500 m
6. POI direction Type:
   - Database POI: All-direction, Two-direction, Single-direction
   - User POI: Single-direction
7. POI alert operates only when GPS is connected.

POI: Limit Speed Alarm

1. POI Limit Speed alert operates when driving speed is over the POI speed limit.

2. POI Limit Speed alert message displays along with a voice announcement (Voice On) or tone (Voice Off).

3. The current driving speed blinks along with alert sounds until

   driving speed is under POI speed limit .

POI: Deleting all Points of Interest

1. You can select "Del ALL Usr POI?" in the Menu to delete all POIs registered in memory

Threat Display

1. If the radar detector detects more than one signal, the additional received signal/s will also be displayed **Ka5 K9** when display setting is set to "THREAT".
2. The display will show the 3 strongest signals in the following priority (highest to lowest):
   - Ka → K → X

User Setting Memory

1. All features selected and configured are stored in the radar detector's memory
2. If "MUTE ON" is enabled, it will revert back to "MUTE OFF" (default) after the radar detector restarts

Troubleshooting

Problem	Root Cause/Corrective Action
The radar detector will not turn on.	• Check if power cable is connected • Turn on ignition • Check the fuse located at the tip of the plug
Display is not turning on.	• Power cable is disconnected or switch has not been turned on • Display I set to "Dark" or "Smart Dark" Mode
The radar detector alerts visually but there are no voice or audio alerts.	• The alert volume is turned down; increase volume
The windshield mount does not adhere to the windshield.	• Clean the suction cups and windshield
The radar detector alerts to a signal but no police radar trap can be located.	• The radar detector could have received a false signal from a motion sensor; Lockout the known false location
The radar detector suddenly alerts with high intensity while driving on the Interstate although there's no police in sight.	• Radar operated traffic sensors are placed along your road; turn on Traffic Sensor Rejection (TSR) filter in the Menu
The radar detector starts alerting with low intensity following another vehicle.	• A vehicle near you is equipped with Blind Spot Mirror or Lane Assist feature; turn on Blind Spot Monitoring (BSM) filter in the Menu
The radar detector did not alert to approaching police vehicle.	• The officer is not operating radar equipment • One or more radar bands have been de-activated • You may have activated a speed limit in the

	menu and you were travelling below the set speed limit
The radar detector never alerts to radar or it alerts after passing a radar source.	• Your vehicle might be equipped with a metal coated windshield that prevents the reception of radio waves; check your local dealer • The speed limit setting in the Menu has been set above normal travel speed; turn off speed limit
The radar detector did not alert to a Red-Light or Speed Camera.	• Red-Light and/or Speed Cameras have been turned off in the Menu • The location is not yet stored in the database; check online for an update
The radar detector alerts to a Speed Camera or Red-Light Camera but no camera can be found.	• The location used to have a Speed or Red-Light Camera but it was removed • The camera is located on the other sides of the road, in opposite direction of travel

Technical Specifications

Detector Type:
- Dual conversion super-heterodyne receiver
- Linear polarized self-contained antenna
- Scanning frequency discriminator

Operating Frequency:
- X band: 10.475 – 10.575 GHz
- K band Wide: 23.950 – 24.250 GHz
- K band Narrow: 24.080 – 24.200 GHz
- Ka band Wide: 33.400 – 36.000 GHz

Technical Parameters:
- Operating temperature: -30° - +185° F
- Power requirement: 11V – 16V DC
  200mA Negative ground
- Dimensions: 72(W) x 116(L) x 34(H) mm
  2.83 x 4.57 x 1.34 inch
- Weight: 8.2 oz (200 g)

FCC Compliance

FCC NOTE

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

FCC ID: 2AEE3XP

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.

Warranty

One (1) Year Limited Warranty

Radenso warrants, for one year, to the original retail owner, this *Radenso* product to be free from defects in materials and craftsmanship with only the limitations or exclusions set out below.

Scope of Warranty:

From the date of original consumer purchase, and for the respective periods specified above, *Radenso* agrees to repair or replace, at its sole expense, all *Radenso* brand products purchased directly from *Radenso* or from an Authorized *Radenso* Dealer, which are defective in material and/or workmanship during ordinary consumer use. Repairs may be completed using new or refurbished parts that meet or exceed *Radenso* specifications for new parts. *Radenso*, at its sole discretion, may replace a product with a refurbished or reconditioned unit having comparable features and a limited consumer warranty.

Exclusions:

If you purchase a *Radenso* product from an unauthorized dealer, your *Radenso* warranty will not be valid**.**

This warranty does not apply with respect to the following:
1. Defects or damage caused by accident, fire/smoke, flood/water damage, power surge (or related electrical abnormalities), lightning or other acts of nature.
2. Defects or damage caused by abuse, misuse, negligence, accident, unauthorized product modification or service, or failure to observe the instructions contained in the user manual furnished at the time of original purchase.
3. Deterioration/failure due to corrosive atmosphere, including but not limited to; smoke, high humidity or extreme temperature.
4. Damage caused during shipment or handling.
5. Products purchased from anyone other than *Radenso* or an Independent *Radenso* Authorized Dealer. If you are uncertain as to whether a dealer is authorized, please contact *Radenso's* Customer Service.
6. Products that have had their serial numbers altered or removed.
7. Products purchased in "AS IS" condition or noted as "DEMO", "DISPLAY", "OPEN BOX", or "CLEARANCE".
8. Products that have been altered or repaired by anyone other than *Radenso* or a *Radenso* Authorized Service Center in a manner that has affected their performance, stability or reliability.
9. Accessories attached to or to be used with *Radenso* products, such as antennas, mounts, cables, etc.
10. Any product attached to or used with the *Radenso* product.
11. Packing materials and cosmetic items.
12. Installation and removal of *Radenso* products from the vehicle.
13. Maintenance, cleaning or periodic check-ups.

Obtaining Warranty Service:

If, after following the instructions in this User Manual, you are certain that the product is defective, pack the product carefully (preferably in its original packaging) and include evidence of original purchase and a note describing the defect.

The product should be shipped freight prepaid, by traceable means, or delivered, to warrantor at:

RADENSO RADAR
1100 SYCAMORE ST
1st FLOOR
CINCINNATI, OH 45202

Telephone: 1-888-723-3676
Monday → Friday
9 a.m. → 5 p.m. Eastern Time