CONTENTS

Ⅰ. MODEL FEATURES AND CONTROLS

- Real Tone Alert
- X, K, Ka Super Wideband Detection
- All Laser Detection
- 360° Laser Detectability
- Instant – On/Pulsed Radar Alert
- Smart Text LCD Display
- User Programmable
- Memory Retention
- Signal Strength Meter
- Visual & Audible Alarms
- Electronic Power On/Off Switch with Volume Control
- External Jack for External Laser Censors
- Mute Mode
- Hwy Nox /Hwy NoXK/ City /Cty Nox /Cty NoXK Mode
- GPS Function Mode

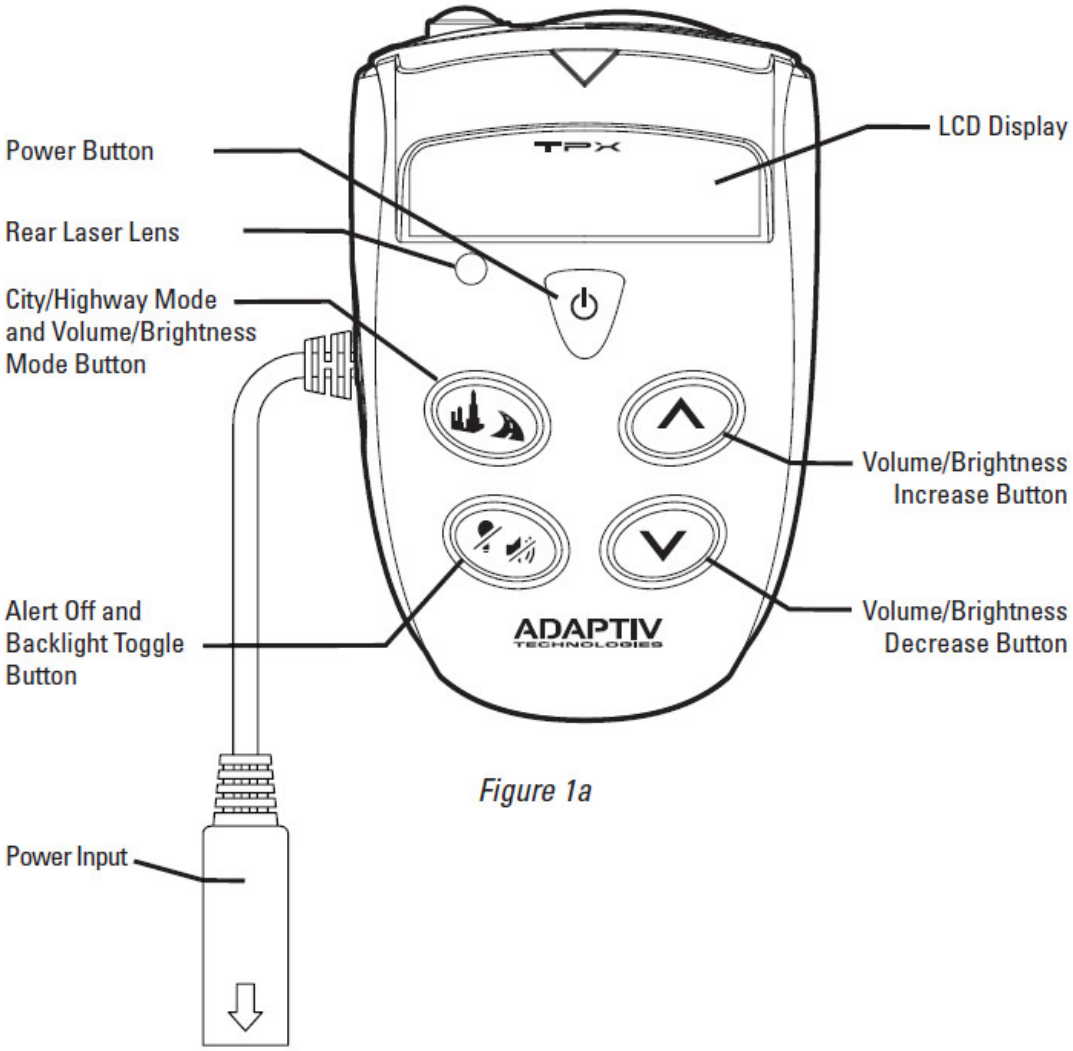


Figure 1a

1. Bracket Lock/Release Button – Easy lock/release of the mounting bracket.
2. Power Jack – Connection for the power cord and power cable ass'y.
3. Speaker – Provides distinct audio alarms for X, K, Ka band radar and laser.
4. Power & MENU Button – Turns unit on/off and menu setting.
5. High Visibility Text Display – Provides distinct visual confirmation of signals strength, signal band identification and indicates engaged modes of operation.
6. MUTE Button – Pressing MUTE during a radar/laser encounter silences audio alerts.
7. CITY Button – Reduces the annoyance of false alerts typically encountered in urban driving areas.
8.Volume Control(+,–) – Adjusts audio level
9. Laser Lens (Rear) – An integrated optical waveguide provides superior detection of laser signals transmitted from behind
10. Laser Lens (Front) – High gain optical lens array provides increased sensitivity and field of view for leading edge laser detection.
11. Radar Antenna – Compact, high-efficiency antenna receives radar signals.
12. Mounting Bracket Location – Slot holds mounting bracket firmly.

13. EXT – Port for external laser censor connection

II. ACCESSORIES INCLUDED WITH RADAR DETECTOR

- Owner's Manual
- Power Cord & Power Din Cable
- Usb Cable & down load adapter Cable
- Visual alert Cable
- Mounting kit
- Hook & Loop Fasteners
- Wireless Headset

III. MOUNTING INSTALLATION

- Windshield Mounting
- Dash Board Mounting
- Power connection

IV.OPERATION GUIDE

Buttons

- Buttons to have adequate tactile feel and size to be actuated while using riding gloves.
- Backlit - blue
- Button Functions:
    - Button 1 (top right)- Volume Increase and Brightness Increase.

- Button 2 (bottom right) – Volume Decrease and Brightness Decrease
- Button 3 (top center) – Power On/Off.
- Button 4 –City/Highway and Volume / Brightness Mode
- Button 5 – Mute and Visual Indicator Intensity Off and backlights on/off.

"long" means about 2-3 sec

• Power on & Self test

Press the Power Button for 2 seconds to turn the unit on or off

Start Up

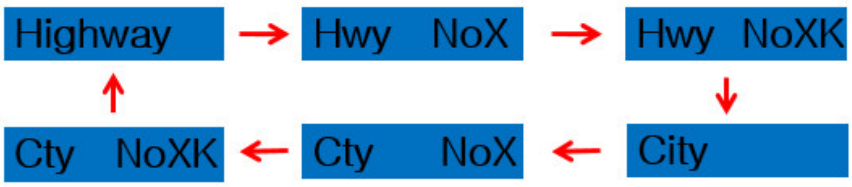
"Adaptiv " will be scrolled across the LCD display, entering from the right and exiting at the left, and it will scroll all the way through:

Then self test will start, where each band will be displayed accompanying its alerted sound:

Then the display that the system is ready:

*CONNECT : GPS fix("ding dong" sound alert 1sec display

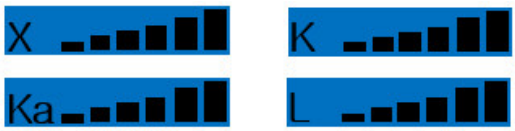
Radar MODE Setting Functions



- Hwy NoX MODE: Highway mode X BAND no detection
- Hwy NoXK MODE: Highway mode X ,K BAND no detection
-City MODE: Radar signal initial double beep and until mute radar signal 4 level double beep countinuous signal strength
-Cty NoX MODE: City mode X BAND no detection
-Cty NoXK MODE: City mode X,K BAND no detection

Main Unit Functions

When radar or laser signals are detected, the detected band and its strength will be displayed, along with its distinct sound alert.



Power Button

Press the Power Button for 2 seconds to turn the unit on or off.

Mode Button_(upper left button)

For City/Highway Mode, each time this button is pressed it will toggle between “City” and “Highway” modes, and the display will display the mode setting selected. A beep will be emitted with each mode change.

For Peripheral Control Mode, each time this button is pressed for 2 or more seconds it will toggle between “Headset Volume Control” (Vol), and “Visual Alert Brightness Control” (LED) with the following displays:

The display for the toggled Peripheral Control Mode will only be displayed on the LCD for 2 seconds, then the display will revert back to either “City” or “Highway”, unless a signal is being detected.

The Peripheral Control Mode affects how the “Up” and “Down” buttons function, which will be explained later in this document.

Alert Off/Dim Button (lower left button)

If a radar or laser signal is detected, pressing this button will temporarily mute all audio alerts (main unit and headset) and stop the LEDs on the Visual Alert from flashing. Audio and visual alerts will be stopped for the duration of the detected signal and any new signals detected within the next seconds. When this button is pressed,

will be displayed for 1 second, and the detected radar or laser signal will return to the LCD display.

When this button is pressed for 2 or more seconds, it will toggle the backlight on the Main Unit buttons on/off.

Up and Down Buttons (upper and lower right buttons)

The “Up” and “Down” buttons control the volume of the Main Unit and the Headset, and the LED brightness of the Visual Alert. When each is pressed for 1 or more seconds, the increase or decrease in the volume/brightness will increase or decrease continuously until the maximum or minimum volume level is reached. The system will remember the last volume setting each time it is turned on, except for the Visual Alert, where auto-setting is the default (explained below).

When “Headset Control Mode” is selected, the “Up” and “Down” buttons control the volume on the Main Unit and the Headset. For each level the volume is raised/lowered, the Main Unit and the Headset will emit a corresponding volume. The display is as follows:

The Main Unit has a photo-sensor and it automatically controls the brightness setting on the Visual Alert. The auto-setting is the default setting on the Visual Alert each time the unit is turned on. However, it can be over-ridden by the user with a push of the “Up” or the “Down” button if “Visual Alert Control Mode” is selected. When “Visual Alert Control Mode” is selected, the “Up” and “Down” buttons control the LED brightness on the Visual Alert. Each time the button is pressed, the Main Unit will emit a beep and the Visual Alert will double flash a corresponding brightness. The auto-setting function can be turned back on by the user by select the “lowest” setting on the “Down” button. The display is as follows:

Other:Tx Opertion

The Main Units must operate properly and not interfere with each other when multiple units are being used in the same vicinity (>2m).

The Main Unit will emit a beep every time a button is pressed (except Alert Off).
The transmitter format is system data /band ID and signal strength data .
The Main unit only operation transmitter (418Mhz):
*Main Unit function press operation example mode change and volume up &down.(Manual Tx)
* When Main Unit radar/laser signal detector is Tx formatted transmitter.(Semi Auto)

GPS Function Opertion

1. GPS functions will work only after the connection to the satellites is established.
"SRCH" will be displayed during the GPS signal reception.

2. The first time this unit is Power ON, it may take about one minute to make link with the satellites. (Cold start) (If unit is not positioned correctly, the time can be extended.)
However, from the next time, the time to catch Satellite will be
-Within 3 seconds (Hot start) : Unit power on again within two hours after power Off.
-Within 40 seconds.(Warm start) : Unit power on again within 24 hours after power Off.
3.Car Driving GPS function operation show display & beep sound alert.

Wireless Headset:Rx Opertion

The Power Button on the Headset has an LED backlight. It will flash once every 3 seconds when it is turned on. It will have a double flash every 3 seconds when it is in communication with the Main Unit. The Headset will have an auto-shut off capability if it is not in communication with the Main Unit after 15 minutes.

The Headset will beep each time a function button on the Main Unit is pressed.
The Headset will emit the exact same beeps as the Main Unit.
The Headset must not transmit or receive interference from other radar detectors or Headsets at distances greater than or equal to 7meters.

Visual Alert

The Visual Alert will flash each time a function button on the Main Unit is pressed.

LED Intensity to be adjustable from Main Unit buttons as well as photo sensor.

Flash frequency to correlate with signal strength.

Memory Retention

Electronically remembers all your own settings for a certain period of time after power-off.

V. TROUBLESHOOTING GUIDE

PROBLEM: No display or audio.

- Check fuse in the plug and replace if necessary with a 2 amp type.
- Check fuse for lighter socket; replace if necessary.
- Make sure lighter socket is clean.

PROBLEM: Unit alarms when vehicle hits bumps.

- Check for loose lighter socket; tighten and clean.
- Check connections at both ends of power cord. Substitute another cord to determine if cord is defective. Return defective cord to the factory.

PROBLEM: Unit alarms when using vehicle equipment or electrical accessories (brakes, power mirrors/windows, directionals, horn, etc.).

- Vehicle's electrical system, including battery and alternator, may have electrical noise. Install a filter capacitor (470mfd. 25 volt or larger capacitance value) on the back of the lighter socket.

Factory setting

All user features can be reset to factory settings. Please follow below steps for reset.

1. Unplug Power Cord from unit
2. Press and hold Power and Mute/City Key.
3. Plug Power Cord into unit.
4. Wait for 2 beeps.
5. Release Power and Mute button. Unit is now reset

- Factory reset -

- Highway Mode On.
- Dim/Dark Mode to full illumination of display.

VI. SPEED MONITORING DEVICES

Radar speed gun

A radar gun operates by transmitting radio waves at certain frequencies which reflect off objects and are then picked up by the radar gun's receiving section. When a radar beam reflects off a moving target, a measurable frequency shift occurs. The radar unit converts this shift into miles per hour to determine your vehicle's speed.

Laser speed gun

It's well documented that many radar guns cannot reliably provide the speed of a targeted vehicle that is traveling in a group of vehicles. In contrast, a laser gun can target a specific vehicle out of a line of traffic and determine its speed.
The advantage of laser over radar in terms of target identification is the result of the laser gun's narrow beam. A radar transmission can cover more than a four-lane highway at a distance of 1,000 feet, compared with a laser transmission which covers about 6 feet at the same distance.
For best protection, keep these points in mind:

• Because your vehicle's license plate or headlights are the laser gun's primary targets, mounting your detector on the dashboard can improve laser detection at short range.
• Do not follow closely behind any vehicle you cannot see through. If you can't see past a vehicle ahead of you, chances are your detector won't either.
• The receiving range of your laser detector will not be the
same as a radar detector. Laser guns are most often used at
short range

VII. MAINTENANCE

Care And Maintenance

During the summer months, avoid prolonged exposure to direct sunlight by removing your unit from the dash when your vehicle is parked for an extended period of time.
Do not spray water, cleaners or polishes directly onto the unit. The spray may penetrate through the openings and damage the unit. Also, do not use any abrasive cleaners on the unit's exterior.

Fuse Replacement

The lighter socket plug is equipped with a replaceable 2 amp 3AG fuse located behind the silver tip. To replace the fuse, carefully unscrew the tip of the plug. (IMPORTANT: Unscrew slowly. The tip contains a spring which may fly out when disassembling.) Insert the new fuse with the spring and screw on the tip.

With use, cap on plug may loosen. Retighten occasionally.

Safety Precautions

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generate, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio, TV technical for help.
- Only shielded interface cable should be used.

Finally, any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the users authority to operate such equipment.

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 of this device.

CAUTION

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE WARNING

- Changes and modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- It is desirable that it be installed and operated with at least 20cm or more between the radiator and person's body(excluding extremities:hand,wrists,feet, and ankles)

*FCC ID : VWV-P0101

VIII. SPECIFICATIONS

• General

Dimensions:	75mm(W)x 115mm(L) x 48mm(H)
Weight:	198g
Power Requirement:	CAR Battery 12- 15V DC
Temperature Range:	Operating -20°C to +80°C
	Storage -40°C to +100°C

• Laser Detector

Receiver Type	Pulse Laser Signal Receiver
Sensor Front End	Convex Condenser Lens
Detector Type	Pulse Width Discriminator
Receiver Bandwidth	30 MHz
Spectral Response	800- 1100 nm

• Radar Detector

Receiver Type	Double Conversion Superheterodyne
Detector Type	Scanning Frequency Discriminator
Antenna Type	Linear Polarization
Frequency of Operation	10.525 GHz ± 50 MHz (X Band)
	24.150 GHz ± 100 MHz (K Band)
	34.700 GHz ± 1300 MHz (Ka Band)

• GPS Detector

Receiver Type& Freq.	L1 Frequency C/A code. 1575.42MHz
GPS Chipset	ublox chipset ver.8.0
Antenna Type	PATCH Antenna (Linear Polarization)

• Transmitter Freqency(Tx)

Transmitter	Manual Tx & Semi Auto
	418.00 MHz ± 75 KHz
Moudulation	ASK(Amplitude shift keying)
Transmitter used in device	SAW(surface acoustic wave) RESONATOR
	ITF4180
Transmission power	typ. -25 dBm(<-20 dBm)
Tolerance of transmission frequency	± 20 ppm
Modulation contents	Digital data
Data rate	16Bit/70ms

• Wirelwss HEADSET(Rx)

Receiver Type	Oscillator conversion
Detector Type	Scanning Frequency Discriminator
Antenna Type	Linear Polarization
Frequency of Operation	418.00 MHz ± 5 MHz
Power Requirement	3V DC Battery (CR-2450)