

VECTOR 960

VECTOR 940

THE NEXT GENERATION IN DIGITAL PERFORMANCE

► Operating Instructions



Model V960



Model V940



BELTRONICS™

CONGRATULATIONS!

Thank you for purchasing one of BEL's VECTOR SERIES Radar/Laser/Safety Detectors. BEL's VECTOR SERIES offers Driver Selectable Features, Digital Voice, Text Messages and the best possible X, K and Super Wideband Ka radar sensitivity available. Enjoy your new detector and be sure to obey all laws where ever you may travel.

Remember, owning a Radar detector does not give you a license to speed. Alerts from a Radar detector serve as an effective reminder to check your speed. Laws vary throughout the USA governing the use of a Radar detector. It is your responsibility to follow these laws.

SOFTWARE UPGRADABLE

VECTOR 960 and VECTOR 940 contain Flash Technology which provides the highest capability to be reprogrammed as the threat of new police traffic radar monitoring technologies emerge. Please ensure that you promptly send in your Consumer Information card. This will ensure you are notified about new traffic monitoring technologies as they emerge.

SHADOW TECHNOLOGY® II

VECTOR 960 and VECTOR 940 contain Shadow Technology® II making them undetectable to the Interceptor VG-2 Radar Detector Detector.

VECTOR 960 and VECTOR 940 provide Driver Selectable Features. Driver Selectable Features allow you to “customize” how alerts will be presented to you.

4 Operating Modes VECTOR 960

3 Operating Modes VECTOR 940

1. NORMAL Mode

A lengthy power up test sequence; text messages identify alerts received, i.e. “X Band”.

2. MODIFICATIONS Mode

Full Power-up test sequence; presents ONLY those General Selectable Features which you have altered from factory pre-set. Text messages identify alerts received.

3. QUICK START Mode

No test sequence; unit immediately shows last used traveling mode: “AutoScan™”, “Highway”, “City X” “City ALL”, Text messages identify alerts received.

4. TECH Mode (V960 only)

Full Power-up text sequence. Text messages identify band received followed by ACTUAL police traffic radar or Laser frequency, i.e., “24.150” to confirm K band.

Operating Modes are selected using the PWR button. (see page 5.)

7 General Selectable Features VECTOR 960

6 General Selectable Features VECTOR 940

1. AutoMute ON or OFF

2. Radar/Laser Digital Voice or Tone (Model V960)

2. Radar/Laser/SWS™ Digital Voice or Tone (Model V940)

3. Safety Warning System™ ON/OFF

4. Safety Warning System™ Digital Voice ON or OFF (Model V960)

5. Audio/Visual Scroll Rate: FAST or SLOW

6. Inverted Display Option ON or OFF

7. AutoScan™, “Highway”, “City X” or “City ALL.”

General Selectable Features are accessed by pressing the PWR and CTY buttons simultaneously, when the unit is OFF. (see page 14.)
Note: for convenience AutoScan™ is accessed using the CTY button. (see page 9.)

Table of Contents

Profile of Features	4
Getting Started	5
➤ Power-Up Test Sequence/Start-Up Mode	5
➤ Tutorial Mode	7
➤ Set and Forget Memory	8
➤ Reset to Factory Settings	8
➤ DRK (Bright/Dim/Dark) Button	8
➤ AUD (Auto-Mute/Volume Control) Button ...	9
➤ CTY (City/Highway) Button	9
Selectable Features	11
➤ Entering Selectable Features Mode	14
Installation	14
➤ General Guidelines	14
Understanding Radar, Laser and SWS™	17
Interpretation of Alerts	18
➤ Radar Alerts	18
➤ Instant-On/Pulsed Radar Alert	21
➤ Typical False Alert (Radar)	21
➤ Laser Alerts	21
➤ Safety Warning System® (SWS™) Alerts	22
Performance Verification	24
➤ Conditions That Affect Radar Alerts	24
➤ Conditions That Affect Laser Alerts	24
Troubleshooting	25
Limited Warranty	26
Service	27
➤ Warranty Service	27
➤ Post Warranty Service	28
Accessories	29

Profile of Features



- 1. PWR (Power/Start-Up Mode) Button:** pressing and holding PWR will turn the unit on. Continuing to press the PWR button will scroll through the start-up mode options: **NORMAL**, **MODS** (Modifications), **Q-START** (Quick Start), **TECH MODE** (Model V960 only) plus **TUTORIAL MODE**.
- 2. Text Message Display:** communicates all mode selections (i.e. **DIM**, **DARK**, **CITY**, **HIGHWAY** and **AUTOMUTE**) and confirms Radar band and signal strength, presence of Laser and **SWS™** messages received.
- 3. DRK (Bright/Dim/Dark) Button:** provides bright, dark and fully adjustable dim settings of the Text Display for discreet night travel. Audio alerts are not affected.
- 4. CTY (City/Highway/AutoScan) Button:** choose between Autoscan™, Highway, City X or City ALL (X/K/Ka) filtration modes.
- 5. AUD (Auto-Mute/Volume Control) Button:** provides manual muting of all Radar and sws™ alerts. Pressing and holding the AUD button will change the audio level.
- 6. Antenna Opening:** Radar and sws™ signals are received by a patented diecast antenna with integrated transition to microstrip mixer.

Note: Model V960 pictured

7. **Laser Optical Sensors:** collect Laser signals from in front and behind.
8. **Audio Alert Speaker:** all audible alerts and Digital Voice Messages are emitted from this location.
9. **Power Jack:** using the straight or coiled cord, VECTOR 960 and VECTOR 940 operate in any vehicle with a 13.8 volt DC negative ground system (*10.5 volt to 15.5 volt range*).

Getting Started

► Power-Up Test Sequence/Start-Up Mode

Using the supplied straight or coiled power cord, place the end with the “elbow” shaped jack into the receptacle on the side of the detector; the opposite end of the cord connects to the cigarette barrel. Plug the cigarette barrel into your vehicle’s cigarette plug, or the secondary receptacle if your vehicle is so equipped. Press the PWR button to turn the unit ON. Depending upon the Operating Mode selected, the power up test sequence and confirmation of Radar/Laser/SWS™ alerts will be relayed to you as follows:

► NORMAL (Factory Pre-Set Mode)

A lengthy, power up test sequence that displays audio and text messages for Laser, Ka, K, X and Safety Warning System® (SWS™) followed by the status of the General Selectable Features each time the unit is turned on. When complete, unit is ready for operation and will display Radar, Laser and SWS™ messages when signals are detected. Normal Mode is recommended when first using your VECTOR 985.

► MODS (Modifications Mode)

Presents audio and text messages for Laser, Ka, K, X and Safety Warning System® (SWS™), followed by ONLY those General Selectable Features which have been modified by the user from their Factory pre-set

state each time unit is turned on. Unit is ready for operation and will display Radar, Laser and SWS™ messages when signals are detected.

► **Q-START (Quick-Start Mode)**

Unit will bypass the power up test sequence and will display the last selected traveling mode: “AutoScan™” (factory default) “Highway”, “City X” or “City ALL”. Q-Start is recommended when you are comfortable with the detector and do not require a rundown of sample messages. Unit is ready for operation and will display Radar, Laser and SWS™ messages when signals are detected.

► **TECH MODE (VECTOR 960 only)**

Presents audio and text messages followed by the display of the ACTUAL frequency of the received radar bandwidth and Laser. Unit is ready for operation and will display Radar, Laser and SWS™ messages – including actual frequencies – when signals are detected.

Sample alerts while operating in Tech Mode:

Laser Alert: “LASER 900NM”

X Band Alert: “X BAND” followed by “10.525”

K Band Alert: “K BAND” followed by “24.150”

Ka Band Alert: “Ka BAND” followed by any frequency between 33.4 – 36.0 GHz

Whichever Operating mode you select, **VECTOR 960** and **VECTOR 940** will be in standby mode and ready to detect traffic Radar, Laser and SWS™ signals. The display will show “**AutoScan™**” (factory pre-set which is suitable for ALL driving conditions, unless you change this to “**Highway**”, “**City X**”, or “**City ALL**” (see page 9).

► TUTORIAL MODE

The Tutorial Mode allows you to become more familiar with all audible and visual alerts. The message “**TUTORIAL**” appears in the display followed by the audio and corresponding Text Message for “**LASER**”, “**Ka AUDIO**”, “**K AUDIO**”, “**X AUDIO**”, sample Radar alert and “**SAFETY WARNING SYSTEM SAMPLE ALERTS**”. Three sample SWS™ messages are then presented in the display along with the corresponding Digital Voice Messages:

Note: sample radar and SWS™ messages are random. Presentation of alerts will differ than what is printed based on operation mode selected. Tutorial Mode will cycle continuously until PWR is pressed to exit this mode.

Sample 1 “**ACCIDENT AHEAD**”

Sample 2 “**HIGHWAY WORKCREW AHEAD**”

Sample 3 “**POLICE IN PURSUIT**”

You can access the complete list of SWS™ messages by pressing the **AUD** button. “**MSG 1**” will appear in the display once **AUD** is pressed. Pressing the **AUD** button a second time will allow you to listen to the SWS™ message while viewing it in the display. (to move forward in the list, press the **CTY** button; to move backward in the list, press the **DRK** button). Continue the steps above to play all 60 SWS™ messages.

*Note: VECTOR 940 provides Digital Voice and Text Messages for the FIVE SWS™ categories only and NOT the individual messages for each category. For example, “**MSG 1**” will play the category, **Highway Construction/Maintenance**. This heading will play for all 11 messages. Refer to the enclosed card for the other category messages.*

To exit Tutorial Mode, press the **PWR** button and your unit will be on and ready to receive signals.

► **Set and Forget Memory**

Any time your unit is turned off or unplugged from the cigarette lighter socket, all feature settings you have selected are retained in the unit's memory. Set and Forget Memory eliminates the need to reset your preferred feature settings each time your unit is turned off and then back on.

► **Reset to Factory Settings**

You can reset your unit to factory settings for Start-Up mode, volume, DRK, AUD, CTY and General Selectable Features. To reset, press and hold the **CTY** button until the display shows "**RESET**". Two "beeps" will sound and your unit will cycle through the **NORMAL** Start-Up Mode.

► **DRK (Bright/Dim/Dark) Button**

The **DRK** button allows selection of a bright, fully adjustable dim or dark mode. Your unit is factory preset to full bright display. To engage dim mode, press and hold the **DRK** button. The display will cycle through various levels of dim illumination. Release the button at your chosen level. To engage dark mode, press the **DRK** button a second time. A single "beep" coupled with the brief illumination of "**DARK**" on the display confirms your selection. You'll notice an "**As**" (AutoScan™), "**H**" (Highway mode), "**Cx**" (City mode) or "**CA**" (City ALL) remains dim to confirm your unit is receiving power. To return to a full bright setting, press the **DRK** button a third time; two "beeps" confirm this selection. Use of the **DRK** button does not affect audio alerts.

Important—if you press the the DRK button and do not receive audible confirmation, the audio level has been set too low.

► AUD (Auto-Mute/Volume Control) Button

- Manual Muting of Audio Alerts (Radar and SWS™)

Whether Auto-Mute is selected on or off in Selectable Features, the audio alerts can be completely muted by pressing the AUD button during an alert. The display will briefly show “QUIET”. No audible alert will be heard as long as the signal is present. The unit will remain in manual mute mode for approximately 12 seconds from the last received alert.

Note—because Laser alerts are not lengthy or sustained, muting is not required (see page 21)

- Volume Control

Press and hold the AUD button to engage the volume control; the volume will cycle high to low. Release the AUD button when you have reached your desired audio setting.

► CTY (City/Highway) Button

The CTY button has four functions:

1. AutoScan™ Mode
2. Highway Mode
3. City X Filtration Mode
4. City X/K/Ka Filtration Mode

- AutoScan™ Mode:

VECTOR 960 and VECTOR 940 are factory shipped with AutoScan™ engaged. Autoscan™ is designed to automatically adjust sensitivity to X and K Band Radar whatever your driving environment. Whether driving in densely populated urban areas or “wide open” rural areas, AutoScan™ will automatically reject virtually all

false signals which are shared with traffic Radar on X and K Bands such as door openers and security systems. AutoScan™ is a “no-fuss” means of achieving optimum signal selectivity.

► Highway:

Select Highway mode when traveling in rural or highway environments for maximum X, K, Super Wideband Ka sensitivity.

► City X Mode:

Select City X mode when traveling in moderate city conditions of travel, and some level of X band filtration is required. Once engaged, weak X band signals encountered will produce no audible alert until the signal strength reaches a preset level. However, visual alerts will be processed the instant an X band signal is detected, keeping you quietly informed. Since most “false” X band signals are weak, the use of the CTY mode allows you to drive out of their range before they reach the preset level and trigger a full audio alert.

► City All Mode (X, K, Super Wideband Ka):

This mode is ideal for use in areas where a high level of microwave transmissions can cause falsing on all three Radar bands. In City All mode, your unit will provide an initial short alert coupled with visual confirmation of the band detected and signal strength in the display. No further audible alert is provided until the signal strength reaches a preset level. When no audio alert is provided, the visual alert keeps you quietly informed.

Description of Selectable Features

There are a total of 11 Driver Selectable Features for VECTOR 960 and 9 Driver Selectable Features for VECTOR 940. These features may be selected depending upon your driving environment and preference.

1. AutoMute **ON** or **OFF**
2. Radar/Laser Digital Voice or Tone
(Model V960)
2. Radar/Laser/ SWS™ Digital Voice or Tone
(Model V940*)
3. Safety Warning System® **ON/OFF**
4. Safety Warning System® Digital **VOICE** or **TONE** (Model V960)
5. Audio/Visual Scroll Rate **FAST** or **SLOW**
6. Inverted Display Option **ON/OFF**
7. AutoScan™
(accessed using CTY Button)
8. Normal Mode
(Note: 8-11 accessed using PWR Button)
9. Modifications Mode
10. Q-Start
11. Tech Mode

**Display references Radar and Laser only, but does include SWS™ voice as well.*

► **Feature 1 – AutoMute On or Off**

With “**Amute on**”, your unit will provide several X, K or Super Wideband Ka audio alerts followed by the Digital Voice announcement of the signal detected. After the Digital Voice announcement, a “clicking” tone keeps you quietly informed for as long as the signal is present. This clicking becomes more rapid as the strength of the Radar signal increases. “**Amute on**” enables you to conveniently monitor extended encounters without having to manually mute or adjust the volume setting.

With “**Amuteoff**”, your unit will provide a continuous series of X, K, Super Wideband Ka audio alerts and Digital Voice announcements of the signal detected. Digital Voice prompts are provided once after the initial audio alert. This standard setting is often preferred when background noise in a vehicle is loud. Factory setting is “**Amuteoff**”.

Note: because of its urgency, Laser alerts are not affected by this mode.

► **Feature 2 – Radar/Laser Digital Voice Prompts**

With “**Voice on**”, unit will provide Digital Voice prompts followed by “beeps” when X/K/Ka and Laser signals are detected. With “**Voiceoff**”, unit will sound unique audio tones only. Factory setting is “**Voice on**”.

Note: For Model V940, the Digital Voice Feature of the five SWS™ categories is included with the Radar/Laser Voice Feature.

► **Feature 3 – Safety Warning System® (SWS™)**

With “**SWSon**”, unit will provide a message when signals from SWS™ transmitters are detected. Factory setting is “**SWSon**”.

► **Feature 4 – Safety Warning System® Voice or Tone**
(Model V960)

When “**SWSvoice**” is selected, unit will provide Digital Voice announcements when SWS™ transmitters are detected. Factory setting is “**SWSvoice**”. When “**SWSstone**” is selected, Digital Voice is replaced by tone/clicking only. Factory setting is “**SWSvoice**”.

► **Feature 5 – Audio/Visual Scroll Rate**

When “**SCRslow**” is selected, unit will provide a slow cycling of audio/visual messages. When “**SCRfast**” is selected, unit will provide a fast cycling of audio/visual messages. Factory setting is “**SCRslow**”.

► **Feature 6– Inverted Display Feature**

When selected, your unit can be mounted to the visor using the hook & loop fastener upside down and the display will remain right reading. “Upside down” mounting may allow for easier access to the unit’s functions.

Note: Inverted display is ON when the check mark symbol is FLASHING; inverted display is OFF when the underscore line is flashing.

Entering Selectable Features Mode

1. With the unit **OFF**, press and hold the **PWR** and **CTY** buttons simultaneously. The word **"FEATURES"** will appear in the display, followed by the status of the first Selectable Feature.
2. Press the **AUD** button to make your selection.
3. Press the **CTY** button to move to the next Selectable Feature. To move backward in the list, press the **DRK** button.
4. Press the **PWR** button to exit Selectable Features mode. To confirm your unit is ready for operation, and what mode of travel your unit is operating, the display will read: **"AutoScan"**, **"Highway"**, **"City X"** or **City ALL**.

Installation

► General Guidelines

Do not mount your unit directly behind windshield wipers or mirrored sunscreens which block Radar and Laser signals and substantially reduce warning range. Unlike "after market" mirrored sun-screens, regular tinted glass does not affect Radar reception. Radar signals are also reflected by "heated windshields" known as Instaclear® and ElectriClear® available as an option on some vehicles. This type of windshield makes any dash, visor or windshield mounted detector ineffective. *(If in doubt, check with an appropriate dealership to see if this applies to your vehicle.)*

To achieve optimum performance, regardless of which mounting position you choose, follow the basic steps on the following page.

1. Consider occupant safety when selecting a mounting location. Choose a location where the unit will not be hazardous in case of an accident.
2. For optimum detection, position your unit with a clear, unobstructed view of the road from the front and rear.
3. Do not allow the unit to make contact with the windshield. This will eliminate unnecessary vibration.
4. Avoid placing your unit in direct sunlight. During the summer, interior temperatures of an enclosed vehicle can sometimes reach temperatures that will cause premature aging of the unit.
5. Your detector is not waterproof; exposure to water may cause damage and your warranty will be void.

► Dash Mounting

You can mount your unit to a level area of your vehicle's dash using the hook and loop fastener or the four, non-skid dash mounting pads provided.

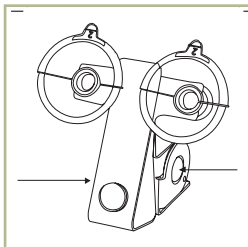
► Windshield Mounting

1. Remove the mounting cover on the top of the detector by pressing on the raised dots and pushing outward.
2. Insert the "grooved" cover plate supplied until it locks into place.
3. Clean the desired area of the windshield, and adhere the windshield/visor bracket by pressing on the suction cups.
4. Slide the detector onto the mounting bracket until it "locks" into place.

5. To adjust the angle of the bracket, squeeze and hold the circular “buttons” on the sides of the bracket; this will allow you to angle the bracket to your windshield.

Note—some vehicles have a plastic coating on the inside of the windshield designed to protect occupants in case of an accident. Use of the

windshield bracket on this type of windshield can permanently mark the surface. Check with your dealer if you are unsure whether your vehicle is equipped with this type of windshield.



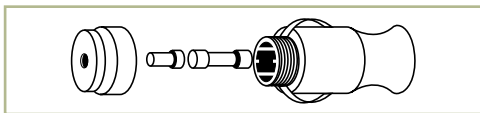
► Visor Mounting

1. Remove the two suction cups and follow steps 1, 2, 4 and 5.
2. Clip the detector to the edge of the sun visor nearest the windshield.

► Fuse Replacement

If the fuse has blown, remove the tip from the lighter plug followed by the old fuse. Replace the fuse with a 1-amp, 3AG fuse. Defeating the fuse protection can damage your unit or your vehicle's electrical system and will void your warranty.

Note—the tip is in two pieces; be careful not to lose either piece or the spring inside the holder. (See diagram below).



► Three Radar Frequencies

Three microwave frequencies have been allocated by the FCC (Federal Communications Commission) and are used for traffic Radar. They are:

- X Band: 10.525 GHz
- K Band: 24.150GHz
- Super Wideband Ka: 33.4 GHz to 36.0 GHz

Both X and K bands are well known to motorists who have traveled with Radar detectors. Introduced first was X band Radar which became common during the 1960s. In the mid 1970s the lower powered, more difficult to detect K band Radar was introduced. In 1987, FCC approval was given for Radar equipment using a third frequency, Ka. In response to this, BELTRONICS introduced the first Radar detectors capable of detecting X, K and Ka Band signals. In late 1990, FCC approval was given to Wideband Ka: 34.2 GHz to 35.2 GHz. Once again, BEL responded with Wideband Ka detection. Today, BEL's **VECTOR SERIES** detects the complete Super Wideband Ka frequency allotted for police monitoring—33.4 GHz to 36.0 GHz.

► Total Tracking Laser™ (TTL™)

Unlike Radar signals, which are highly reflective, Laser signals have very poor reflective characteristics. Many of today's Laser detectors do not have the high sensitivity necessary to detect Laser within a large "field of view". Your unit incorporates BEL's number one rated Laser detection. Twin Laser ports detect energy far outside the main Laser beam—including off-axis signals—providing the largest achievable 360° "field of view." The alerts provided by your unit are the same whether signals are received from the front or rear.

► **Safety Warning System® (SWS™)—What is it?**

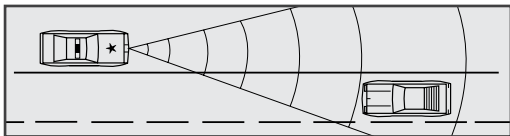
The Radio Association Defending Airwave Rights, Inc. (R.A.D.A.R.) conceived and developed the Safety Warning System®. The concept behind this system is to warn motorists of potential road hazards by employing Safety Warning System® transmitters in areas such as construction zones, accident sites and detours. These SWS™ transmitters operate within the 24 GHz portion of the K band frequency, and broadcast uniquely coded signals that are detected by your unit.

Interpretation of Alerts

► **Radar Alerts**

The alerts provided by your unit are affected both by the type of transmission (continuous wave or instant-on), and the position of the Radar source. Generally, when you drive closer to a Radar source, the intensity of the received signal increases, resulting in the increase of the number of bar graph segments as well as numerical digit 1-9 (Model V960 only) and a corresponding increase in the audio alert rate. Described below are five common types of Radar encounters and the alerts you will typically receive.

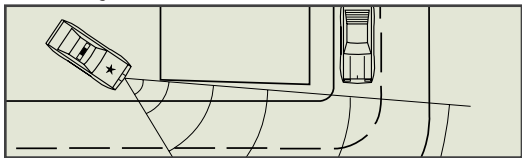
1. **Stationary or moving Radar, straight ahead or aimed in your direction**



Since Radar signals travel in a straight line, this Radar encounter potentially offers maximum warning range. Once the signal is received, the initial warning consists of an X, K or Super Wideband Ka audio

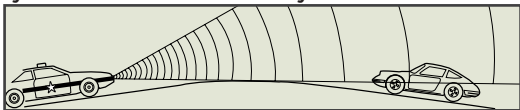
alert coupled with simultaneous identification of the Radar band (X, K or Ka) and signal strength in the Text Display. The number of bar graph segments displayed depends upon the strength of the signal received. As the strength of the Radar signal increases, the audio alert becomes more rapid and the bar graph will display the maximum number of five segments indicating maximum signal strength. Assuming the Radar signal remains uninterrupted, the audible and visual alerts will clearly indicate a “weak” signal becoming stronger as you drive closer to the Radar source. Remember, when the police Radar source is moving toward you, the Radar signal strength will increase much more rapidly than if you are approaching a stationary source.

2. Stationary Radar aimed around a corner



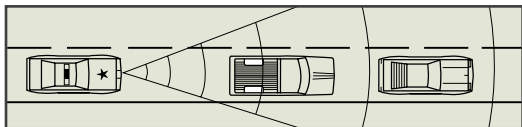
Under this circumstance, reaction time is considerably reduced. Since the Radar signals are transmitted across your line of travel, there is generally no signal available to receive until you are relatively close to the source. Once an alert is received, expect the strength of the signal to increase very quickly. Advanced warning in this situation may be reduced.

3. Stationary Radar concealed by the crest of a hill aimed in your direction



Radar signals travel in a straight line and do not pass through earth. Consequently, police Radar aimed at the crest of a steep hill cannot be received until you are at or near the top. Warning time may be minimal (as in situation #2) since a strong signal is not present until you are near the crest of the hill. At this point, you may be nearly in the police officer's line of sight. When cresting a hill, a weak initial alert followed very quickly by a full alert is typical. This alert pattern requires prompt attention.

4. Moving Radar behind you, traveling in the same direction



Police Radar signals transmitted from behind your vehicle can be received when reflected by objects in front of you such as large signs, bridges and trucks. As you drive, the size and configuration of these objects are constantly changing causing the strength of any reflected Radar signal received to vary. A strong, uninterrupted alert indicates the patrol car is close behind.

► Instant-On/Pulsed Radar

This type of signal appears suddenly when a Radar unit is “triggered”. The instant-on alert consists of an intense, three second audio “burst”, coupled with the type of band detected, signal strength digit 1-9 (V960 only) and flashing of the signal strength bar graph in the display.

Instant-on/pulsed alert to Ka band

Ka 9 ■■■■■ (V960) **Ka** ■■■■■ (V940)

► Typical False Alert (Radar)

Ideally, a Radar detector should only alert in the presence of police Radar. However, because other devices share X band with police Radar, false alerts sometimes occur. Generally, a false signal produces only a short audio and visual alert. Since they are most often weak, it is possible to drive out of the signal’s range very quickly and receive only a brief alert. Although many times the probable source of the false signal can be identified (supermarket, bank, commercial building, etc.), caution is advised until the source can be confirmed. The X band alert pattern caused by a non-police source can look like the initial alert produced by actual police Radar. For this reason appropriate action is required any time an alert is received.

► Laser Alerts

When Laser is detected, the display will flash “**LASER**” coupled with a distinct Laser audio alert. If a vehicle is a long distance from the source of Laser pulses, fewer pulses will generally be received. The closer the vehicle is to the source of Laser pulses, the greater the likelihood of receiving a steady stream of Laser pulses. The reason for this is the aiming stability of the Laser gun and the fact that it is difficult to hold the gun absolutely still. Any movement of the gun results in motion of the beam at the target. The further the target, the

greater the displacement of the beam and the shorter the dwell time of the beam at the target point. Therefore, there is the possibility of receiving only a few Laser pulses. Due to these characteristics, all Laser alerts should be taken seriously.

► Safety Warning System® (SWS™) Alerts

With the Safety Warning System® feature **ON** and an SWS™ transmitter in use, your detector will provide a unique, 2 second SWS™ tone coupled with a Safety Warning System® category word (i.e. “**HazdZone**” indicating Highway Hazard Zone Advisory) to quickly orient you to the type of situation ahead. This introductory message is followed by a specific Text Message (i.e. “**SHARP CURVE AHEAD**”) and Digital Voice Message which is repeated twice. After the Digital Voice, the unit will continue to present the message and provide the “clicking” tone for as long as an SWS™ signal is detected. If two separate SWS™ messages are received, each message is presented twice before the “clicking” resumes.

You can replay the last SWS™ message received by pressing the **DRK** button within 30 seconds of receiving an SWS™ alert. Both Digital Voice and Text Message are replayed.

If you have selected “**SWStone**” (Digital Voice off), your unit will show just the Text Message (see Selectable Features, page 11).

Note—the end of a multiple word SWS™ message is indicated by an asterisk.

VECTOR 940 provides only Digital Voice and Text Messages for the FIVE SWS™ categories and not all 60 individual messages.

Abbreviated SWS™ Category Words

“HwyWork”

confirms Highway Construction/Maintenance
(messages 1–11)

“HazdZone”

confirms Highway Hazard Zone Advisory
(messages 13–31)

“Weather”

confirms Weather Related Hazards
(messages 33–41)

“TravInfo”

confirms Travel Information/Convenience
(messages 43–59)

“Movins”

confirms Emergency/Slow Moving Vehicles in transit
(messages 61–64)

“Message Unknown”

confirms incomplete or unknown messages

Note—for a complete listing of the five Safety Warning System® categories and corresponding messages, please refer to the Safety Warning System® Alert Card enclosed with your manual.

► Conditions that Affect Radar Alerts

If you feel your unit is not alerting properly, keep in mind that there are many conditions that influence the intensity or duration of an alert:

1. The police are using instant-on/pulsed Radar, in which case no signal is transmitted until visual contact has been made with your vehicle. For detection of this signal, you must rely on reflected signals from Radar directed at traffic traveling ahead of you.
2. The police Radar unit is positioned perpendicular to the road, around a curve, or just over the crest of a hill thus significantly reducing the reception range.
3. The highway traffic between your vehicle and the police Radar source is heavy. This blocks/reflects transmitted signals. The presence of several large trucks between you and the police Radar unit could also significantly reduce reception.
4. Rain or humid weather conditions can absorb transmitted signals before they reach your vehicle, again reducing detection range.
5. The police Radar unit is not properly tuned and is transmitting outside the fcc allocated X, K or Super Wideband Ka frequency ranges.

► Conditions that Affect Laser Alerts

If you feel your unit is not properly alerting to the presence of Laser signals, keep in mind that rain, fog, high humidity and traffic conditions can affect the range that the Laser beam can be detected.

Troubleshooting

► Solutions for Common Problems

If your unit is not operating properly, please refer to the outline below.

Problem	Possible Cause	Corrective Procedure
Unit not receiving power	Plug not properly inserted	Reinsert plug and rotate
	Fuse in power cord is defective	Replace with 1 amp 250 Volt 3ag fuse (see page16)
	Lighter socket not clean and negatively grounded	Consult your dealer or a professional mechanic
	Fuse or electrical wiring for lighter socket defective	Consult your dealer or a professional mechanic
"Poor detection range"	Antenna/lens opening partially blocked	Reposition unit with unobstructed view of road ahead and behind.
	Radar signals unable to pass through windshield	Determine whether your vehicle has a "heated windshield" known as Instaclear® or ElectriClear®, or is covered with a metallic sun screen.
Erratic or frequent alerts sources	High concentration of non-police X band	Use CTY mode or CTY all
		Review section in this manual on Performance Verification
Partial or no display	Dim or dark mode engaged	Disengage dim or dark mode

If you experience a problem with your unit that is not covered in this outline please call, Monday to Friday, 8:30 am–4:30 pm EST, for assistance:

1-800-341-2288 USA 1-800-268-3994 CANADA

Limited Warranty

1-Year Warranty—VECTOR 960 / VECTOR 940

1. This warranty covers all defects in materials and workmanship. This warranty does not apply if the unit has been subject to physical abuse, improper installation, modification, or if the housing or serial number of the unit has been removed.
2. The enforceability of this warranty is limited to the original consumer purchaser and is not transferable to, or enforceable by, any subsequent owner.
3. In the event of a defect, malfunction or other failure to conform to this warranty, BELTRONICS will, at its sole discretion, repair or replace the unit at no charge. You are responsible for all shipping costs in connection with warranty service pursuant to this warranty.
4. This warranty commences on the date of retail purchase and shall be effective for a period of one year.
5. There are no express warranties covering the unit other than those set forth in this warranty. All implied warranties are limited to the period of this warranty and no warranties, expressed or implied, extend beyond this period. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

6. BELTRONICS will in no event be liable for any consequential, incidental, indirect or special damages (including, but not limited to, lost profits) arising out of or in connection with the use, misuse, or function of the unit. Some states do not allow the exclusion of limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
7. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.
8. You must provide a copy of a dated sales receipt for your unit in order to receive service under warranty.

Service

► Warranty Service

If you feel your detector is not functioning properly please review this manual, particularly the section on Performance Verification. If you still feel service is required, please follow the instructions below.

1. To obtain service during the warranty period, please call the appropriate number below to obtain an RA number and shipping instructions. Remember to return your detector postage paid, insured and in suitable packaging.
1-800-341-2288 USA
1-800-268-3994 CAN
2. For your own protection, obtain a proof of delivery receipt. Shipping costs are your responsibility.

3. Enclose with your unit the following information:
 - (a) Your name, complete return address and written description of the problem. (No P. O. Box please.)
 - (b) A telephone number where you can be reached during regular business hours.
 - (c) A copy of your dated sales receipt.

► **Post-Warranty Service**

The following arrangements apply if the warranty period has expired or you are not able to provide a copy of your dated sales receipt indicating purchase within the last twelve months.

1. To return your unit, follow steps 1 through 3 (b) under Warranty Service.
2. Enclose with your unit \$85 US or \$115 Canadian to cover inspection and postage return. Prices subject to change without notice.

Accessories

If you require any additional accessories, replacement accessories or any accessory which is not included with your unit, call to order or for more information:

Monday to Friday, 8:30 am–4:30 pm est.

1-800-341-2288 USA 1-800-268-3994 CANADA

DESCRIPTION	MODEL NUMBER	COST USA	COST CANADA
•Suction Cup Kit (2)	DA-6	\$ 2.95	\$ 3.95
•Straight Power Cord (12')	DA-16	\$ 9.95	\$ 11.95
•Coiled Power Cord (8')	DA-17	\$11.95	\$ 16.95
•Power Cord Fuses (2)	DA-19	\$ 3.95	\$ 5.95
•Hook & Loop Fastener	DA-20	\$ 2.95	\$ 3.95
•Visor/Windshield Bracket	DA-100	\$12.95	\$ 16.95
•4 Non-Skid Dash Mounting Pads	DA-1000	\$ 2.95	\$ 3.95
•Soft Travel Case	DA-62	\$13.95	\$ 19.95
•Anodized Aluminum Travel Case	DA-101	\$24.95	\$ 32.95
•Owner's Manual	V960/940	n/c	n/c

Prices subject to change without notice.



Head Office
2422 Dunwin Drive
Mississauga, Ontario
Canada L5L 1J9
Tel: (905) 828-1002 Fax: (905) 828-2951
www.beltronics.com

This product is subject to one or more of the following patents:

United States

#4,571,593	#4,625,210	#4,630,054	#4,939,521
#4,952,936	#4,961,074	#5,402,087	#5,446,923
#5,587,916	#5,600,132		

Canada

#1,187,586	#1,187,602	#1,295,714	#1,295,715
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Other Patents Pending

Safety Warning System® L.C.—Patents Pending

Printed in Canada

273004-10



Fundamental Mixer Technology, FMT and Shadow Technology are registered trademarks of BELTRONICS USA, Inc. VECTOR 960, VECTOR 940, Total Tracking Laser, TTL and AutoScan are trademarks of BELTRONICS USA, Inc. Safety Warning System is a registered trademark of Safety Warning System L.C.

List of Safety Warning System™ (sws™) Alerts

Text Display Models: each word, coupled with sws™ audio alert, is displayed until entire sws™ message is conveyed.

Digital Voice Models: specific message is announced when sws™ signal is detected.

Digital Display Models: digits 1-5, coupled with unique audio alert, indicate sws™ message category.

LED Display Models: LEDs (1-4) in signal strength display, coupled with unique audio alert, indicate sws™ message category (refer to your owner's manual for category and corresponding LED).

Category 1

Highway Construction or Maintenance

- 1) Work Zone Ahead
- 2) Road Closed Ahead/Follow Detour
- 3) Bridge Closed Ahead/Follow Detour
- 4) Highway Work Crews Ahead
- 5) Utility Work Crews Ahead
- 6) All Traffic Follow Detour Ahead
- 7) All Trucks Follow Detour Ahead
- 8) All Traffic Exit Ahead
- 9) Right Lane Closed Ahead
- 10) Centre Lane Closed Ahead
- 11) Left Lane Closed Ahead
- 12) for future use

Category 2

Highway Hazard Zone Advisory

- 13) Stationary Police Vehicle Ahead
- 14) Train Approaching/At Crossing
- 15) Low Overpass Ahead
- 16) Drawbridge Up
- 17) Observe Bridge Weight Limit
- 18) Rock Slide Area Ahead
- 19) School Zone Ahead
- 20) Road Narrows Ahead
- 21) Sharp Curve Ahead
- 22) Pedestrian Crossing Ahead
- 23) Deer/Moose Crossing
- 24) Blind/Deaf Child Area
- 25) Steep Grade Ahead/Truck Use Low Gear
- 26) Accident Ahead
- 27) Poor Road Surface Ahead
- 28) School Bus Loading/Unloading
- 29) No passing Zone
- 30) Dangerous Intersection Ahead

continued on back...

- 31) Stationary Emergency Vehicle Ahead
- 32) *for future use*

Category 3

Weather Related Hazards

- 33) High Wind Ahead
- 34) Severe Weather Ahead
- 35) Heavy Fog Ahead
- 36) High Water/Flooding Ahead
- 37) Ice On Bridge Ahead
- 38) Ice On Road Ahead
- 39) Blowing Dust Ahead
- 40) Blowing Sand Ahead
- 41) Blowing Snow Whiteout Ahead
- 42) *for future use*

Category 4

Travel Information/Convenience

- 43) Rest Area Ahead
- 44) Rest Area With Service Ahead
- 45) 24 Hour Fuel Service Ahead
- 46) Inspection Station Open
- 47) Inspection Station Closed
- 48) Reduced Speed Area Ahead
- 49) Speed Limit Enforced
- 50) Hazardous Materials Exit Ahead
- 51) Congestion Ahead/Expect Delay
- 52) Expect 10 Minute Delay
- 53) Expect 20 Minute Delay
- 54) Expect 30 Minute Delay
- 55) Expect 1 Hour Delay
- 56) Traffic Alert/Tune AM Radio
- 57) Pay Toll Ahead
- 58) Trucks Exit Right
- 59) Trucks Exit Left
- 60) *for future use*

Category 5

Fast/Slow Moving Vehicles

- 61) Emergency Vehicle In Transit
- 62) Police In Pursuit
- 63) Oversize Vehicle In Transit
- 64) Slow Moving Vehicle

VECTOR 940 Quick Reference Guide

We suggest that you read the entire manual before referring to this guide.

Basic Operation – Plug and Go

1. Plug the unit into your vehicle's cigarette lighter socket using the power cord.
2. Press PWR to turn the unit ON.
3. VECTOR 940 will be in the **NORMAL** Operating Mode and will display "AutoScan™" after the power up test sequence.
4. Unit is ready for operation and will confirm detection of X, K and Super Wideband Ka Radar; Laser and SWS™ signals via Text Display and Digital Voice.
5. Selectable Features are Factory Preset as follows:

- | | |
|--------------------------------------|----------------------------------|
| 1. AutoMute OFF | 4. Audio/Visual Scroll Rate Slow |
| 2. Radar/Laser/SWS™ Digital Voice ON | 5. Inverted Display OFF |
| 3. Safety Warning System™ ON | |



Radar Alert



Laser Alert



Feature Selection



sws™ Advisory

Advanced Operation

1. To select Operating Mode/Start-up test sequence, press and hold the **PWR** button when the unit is **ON**. Display will cycle through:
 - a) **NORMAL** (displays all information.)
 - b) **MODS** (Full power up test sequence followed by selectable features you've altered from factory pre-set.)
 - c) **Q-START** (No power up test sequence displays just mode of travel "AutoScan™", "Highway", "City X", "City ALL".)
2. Press the **CTY** button to select proper mode for your area of travel:
 - a) **AutoScan™**: Automatically optimizes X and K sensitivity for minimal falsing in any driving environment.
 - b) **Highway**: Ideal for highway travel.
 - c) **City X**: Ideal for "downtown" urban areas.
 - d) **City ALL** (X, K, Ka): ideal for highly congested city travel.
3. To access **Selectable Features Mode**, with the unit **OFF**, press and hold the **PWR** and **CTY** buttons simultaneously. Press the **AUD** button to make your selection.
 - a) Press **CTY** to move forward in the list.
 - b) Press **DRK** to move backward in the list.
 - c) Press **PWR** to save your selections.
4. Press and hold **CTY** button to reset unit.

Also... Did you know. . .

BELTRONICS manufactures the only golf swing speed measuring device that operates on the principle of RADAR.

SWING
MATE

Whether you're a scratch golfer or just learning, SwingMate will promote swing consistency and increase driving distance. And that leads to strokes off your game. SwingMate is the most sophisticated and accurate swing speed measuring device on the market today. In fact, it's used by both Titleist and Taylor Made in their custom club fitting program.

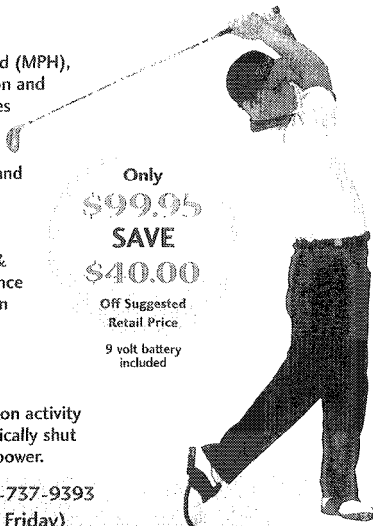
Features Includes:

- **Digital Display:**
Communicates clubhead speed (MPH), distance (Yards), club selection and indicates when battery requires replacement
- **Memory Button:**
Stores up to 10 swing speeds and calculates the average of these speeds.
- **Dist/Club Button:**
Displays club selection (iron & wood) and provides the distance the ball should travel based on your swing speed.
- **Auto Shut-off:**
If SwingMate® is left on for a period of longer than five minutes, and no swing or button activity is made, the unit will automatically shut itself off to conserve battery power.

Call to order today! 1-800-737-9393
(8am - 6pm EST, Monday - Friday)

Visa, Mastercard, Discover, American Express or check accepted.

➡ Cite the following BEL loyalty number upon ordering 02G460-VT ◀



Only
~~\$99.95~~
SAVE
\$40.00

Off Suggested
Retail Price.

9 volt battery
included



BELTRONICS™

Leadership through Innovation and Technology®

IMPORTANT INFORMATION

CONCERNING THIS PRODUCT

If you require additional *information, accessories or service* for this product, please contact BELTRONICS for prompt assistance. *Thank you.*

USA

MONDAY-FRIDAY 8AM-4:30PM EST
1-800-341-2288

CANADA

MONDAY-FRIDAY 8AM-4:30PM EST
1-800-268-3994

This product reflects the commitment to innovation and leading edge technology which has been the hallmark of BELTRONICS for over 30 years. By combining advanced designs and quality manufacturing processes we are able to produce state-of-the-art electronic products which deliver outstanding performance and a level of satisfaction which exceeds the expectations of customers world wide.

THANK YOU FOR PURCHASING THIS PRODUCT FROM
BELTRONICS

BELTRONICS is an ISO 9001 registered company



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IN THE
UNITED STATES



BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO 300 WEST CHESTER OH

POSTAGE WILL BE PAID BY ADDRESSEE

**ATTN CUSTOMER SERVICE
BELTRONICS USA, INC.
5442 West Chester Road
West Chester, Ohio 45069-9789**



*Drawing rules: Each month, one on-line registration will be selected. Employees of BELTRONICS and their families are not eligible to win. Offer void where prohibited by law and expires 12/31/03. BELTRONICS reserves the right to select merchandise prizes. For notice of winners, send a self-addressed, stamped envelope to: BELTRONICS USA, Monthly Contest Winners, 5442 West Chester Road, West Chester, Ohio 45069-9789

**Go on-line to fill out this customer card!
www.beltronics.com
On-line registration automatically enters you
into a monthly draw for a free gift valued at \$100.00***

NEW!

Effectively notify you of potential, future product upgrades.

***BELTRONICS can:
By completing and returning this card,***

CUSTOMER INFORMATION CARD



(seal edge with tape)

IMPORTANT: Please complete the information below and return within 10 days.

- ① 1. Mr. 2. Mrs. 3. Ms 4. Miss

First Name: _____ Initial: _____ Last Name: _____
Address: (Number and street) _____ Apt. #: _____
City: _____ State: _____ Zip: _____

- ② Phone Number: _____ ③ Date of Purchase: _____
Month Day Year

④ Serial Number _____
(located under unit or on the box)

- ⑤ Model Number (check one)
990 985 975R 970 960 950 946 940 936 926 916 906 LP904 other _____

- ⑥ Where did you purchase this BEL product?
Car Audio Specialist Electronics Specialist Electronics Superstore Catalog/e-commerce
Store Name: _____ Address _____
City _____ State _____ Zip _____

- ⑦ In what vehicle will this BELTRONICS product primarily be used?
Make: _____ (example: Ford) Model: _____ (example: Mustang) Year: _____ (example: 1995)

- ⑧ What is your preferred mounting method?
1. Visor
2. Windshield
3. Dash

- ⑬ Which best describes your household income?
1. Under \$15,000 5. \$50,000-\$74,999
2. \$15,000 - \$24,999 6. \$75,000-\$99,999
3. \$25,000-34,999 7. \$100,000-\$149,999
4. \$35,000-49,999 8. Over \$150,000

- ⑨ Is this product:
1. A first-time purchase?
2. An additional purchase?
3. A replacement?
4. A gift?

- ⑩ What other brands did you consider buying?
1. Cobra 4. Escort/Passport
2. Whistler 5. Other
3. Uniden 6. No other Brand

⑭ Date of your birth: _____
Year

- ⑪ If you've owned a detector before, which one?
1. BEL 4. Escort/Passport
2. Cobra 5. Whistler
3. Uniden 6. Other

- ⑮ Education (Please check which category applies):
1. High School 3. Completed College
2. Some College 4. Graduate School

- ⑫ In which of the following magazines have you seen an advertisement for BEL detectors?
1. Car and Driver 6. Popular Science
2. Road & Track 7. Popular Mechanics
3. Automobile 8. Airline Magazine
4. Motortrend 9. Overdrive
5. Mens Health 10. Other: _____

- ⑯ What is your occupation?
1. Self Employed/Owner 7. Student
2. Professional/Technical 8. Homemaker
3. Clerical/Service Worker 9. Retired
4. Middle Management 10. Sales/Marketing
5. Upper Management 11. Laborer/Tradesman
6. Professional Driver 12. Military