

# BEL Pro RX55

**BELTRONICS**<sup>TM</sup>  
*Professional Series*

5442 West Chester Road  
West Chester, Ohio  
45069 USA

Made in Canada  
Printed in USA  
121RX55-0REV



**BELTRONICS**<sup>TM</sup>  
*Professional Series*

Owner's Manual

## Congratulations

Your new BEL Pro RX55 is the most advanced radar and laser detector available.

The RX55 includes full X, K, and SuperWide Ka radar protection, front and rear laser detection, Digital Signal Processing for superior range and falsing rejection, our patented Mute and AutoMute, audible and visual band alerts, and all the performance you'd expect from Beltronics.

In addition, the new BEL Pro RX55 introduces a new level of performance and innovative features.

- New long-range radar performance
- Multiple laser sensors for improved long-range detection
- Exclusive Programming lets you instantly set 7 features
- Exclusive AutoScan™ mode, plus Highway and City settings
- 280 LED Text-Matrix Display for easy to read messages
- Detects and decodes all Safety Radar signals
- New VG-2 Alert/Auto Shutoff
- Optional SmartPlug compatible
- Optional Laser Pack compatible

If you've used a radar detector before, a review of the Quick Reference Guide on pages 4 and 5, and the Programming information on pages 12 and 13 will briefly explain the new features.

If this is your first detector, please read the manual in detail to get the most out of your RX55's performance and features.

Please drive safely.

### FCC Note:

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

## Quick Reference Card

Remove card along perforations

### BEL Pro RX55 Quick Reference Card

There are 7 user-selectable options so you can customize your RX55 for your own preferences.

The buttons labeled CITY and BRT are also used to enter the Program Mode, REVIEW your current program settings, and to CHANGE any settings as desired. The words PROGRAM, RVW and CHG are located on the top of the detector.

#### How to use Programming

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

**2 Then press the RVW button to REVIEW the current settings.** (You can either tap the button to change from item to item, or hold the button to scroll through the items).

**3 Press the CHG button to change any setting.** (You can either tap the button to change from setting to setting, or hold the button to scroll through all the options).

**4 To leave Program Mode, simply wait 8 seconds without pressing any button.** (The unit will display Complete, beep 4 times, and return to normal operation).

#### Factory Default Settings

To reset RX55 to its original factory settings, press and hold the "CITY" and "BRT" buttons while turning the power on. The RX55's display will provide a "Reset" message, accompanied by an audible alert, acknowledging the reset.

**An example of Programming**  
Here is how you would turn RX55's AutoMute feature off.

**1** Enter the Program Mode by holding both the CITY and BRT buttons down for 2 seconds. *The RX55 will beep twice and display Program.*

**2** Press and hold the RVW button. *The RX55 will scroll through the categories, starting with Power-on indication (PwrOn), then Power-on sequence (PwrOn), Voice (VoiceOn), and then AutoMute (aMute).*

**3** Release the RVW button when the RX55 shows the AutoMute item. *Since the factory setting is for AutoMute to be on, the RX55 will display aMute ON.*

*(If you accidentally don't release the RVW button in time, and the RX55 goes to the next category, hold the RVW button down again, and after the RX55 scrolls through all categories, it will begin again at the top of the list.)*

**4** Press the CHG button to change from aMute ON to aMute OFF.

**5** To complete the Programming, simply wait 8 seconds without pressing any button, or press the PWR button. *The RX55 will display Complete, beep, and return to normal operation.*

Remove card along perforations

## Quick Reference Card

▼ Remove card along perforations ▼

### BEL Pro RX55 Quick Reference Card

Press the **REV** button  
to go from one category  
to the next

Press the **CHG** button  
to change your setting  
within a category

PILOT (Power-on indication)	Pilot HWY Pilot H Pilot V	* Full word: Highway or AutoScan or City Letter: H or A or C Vehicle voltage
POWER-ON SEQUENCE	PwrOn STD PwrOn FST	* Standard power-on sequence Fast power-on sequence
VOICE	Voice ON Voice OFF	* Voice alerts on Voice alerts off
AUTOMUTE	aMute ON aMute OFF	* AutoMute on AutoMute off
CITY MODE SENSITIVITY	City STD City LoX City NoX	* Standard City mode sensitivity Low X band sensitivity in City Mode No X band sensitivity in City Mode
SWS	SWS Off SWS On	* SWS detection off SWS detection on
VG2 (radar detector detector)	VG2 Off VG2 On	* VG2 detection off VG2 detection on

Remove card along perforations

## Table of Contents

<b>Quick Reference Guide</b>	<b>4-5</b>	<b>Programming</b>	<b>12-16</b>
<b>Installation</b>	<b>6-7</b>	• How to use Programming	12
• Power Connection	6	• Example of Programming	12
• Mounting Location	6	• Overview of Programming	13
• Windshield Mount	7	• Details of Programming	14-16
<b>Controls and Features</b>	<b>8-11</b>	<b>Technical Details</b>	<b>17-23</b>
• Power and volume control	8	• Specifications	17
• Power-on indication	8	• Interpreting Alerts	18-20
• Voice Alerts	8	• How Radar Works	20
• AutoMute	8	• How Laser Works	21
• Mute	8	• How Safety Radar Works	22-23
• Highway / AutoScan / City Switch	8-9	<b>Service</b>	<b>24-27</b>
• Brightness	9	• Troubleshooting	24-25
• Dark Mode	9	• Service	26
• Audible Alerts	9	• Registration	27
• Signal Strength Meter	10	• Warranty and Accessories	29
• VG2	11		

### To begin using your RX55, just follow these simple steps

- 1** Plug the telephone jack end of the power cord into the side jack of the detector, and plug the lighter adapter end of the power cord into your car's lighter socket.
- 2** Mount your RX55 on the windshield using the supplied windshield mount.
- 3** Press the PWR button on the top left side to turn it on.
- 4** Press and hold the Mute/Volume button to adjust the volume.

Please read the manual to fully understand RX55's operation and features.

#### QuickMount Slot

Insert RX55's adjustable Windshield mount into this slot. *Page 6-7*

#### QuickMount Button

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

#### City Button

Switches between Highway, AutoScan and City settings. In general, we recommend AutoScan. *Page 8*

#### Power Button

Press the PWR button to turn the RX55 on or off. *Page 8*

#### AutoMute

RX55's patented AutoMute automatically reduces the volume level of the audio alert after a brief period. *Page 8*. If you prefer, you can turn AutoMute off. *Page 12*

#### Programming

RX55 is ready to go, just plug it in and turn it on. But you can also easily change 7 features for your preferences. Press the CITY and BRT buttons located on the top case to enter the Program Mode, then easily Review or Change your settings. *Page 12-16*

#### Radar Antenna and Laser Lens

The rear panel of your RX55 should have a clear view of the road ahead. For best performance, do not mount the RX55 directly behind windshield wipers or tinted areas. *Page 6*

#### Rear Laser Port

Receives laser signals from behind the vehicle.

#### Earphone Jack

Accepts standard 3.5mm earphone.

#### Brightness Button

Press to adjust display brightness. There are three brightness settings, plus Dark Mode. *Page 9*

In the Dark Mode, the power-on indication will be changed to a dim "AD," "HD," or "CD" (indicating AutoScan, Highway, or City Dark). In the Dark Mode, RX55's meter will not display during an alert, only the audio will alert you. *Page 9*

#### Power Jack

Plug power cord or optional SmartPlug into this connector. *Pages 6, 10, 29*

#### Alphanumeric Matrix Display

RX55's display will show Highway, AutoScan, or City as its power-on indication. If you prefer, you can choose other power-on indications. *Page 12-14*

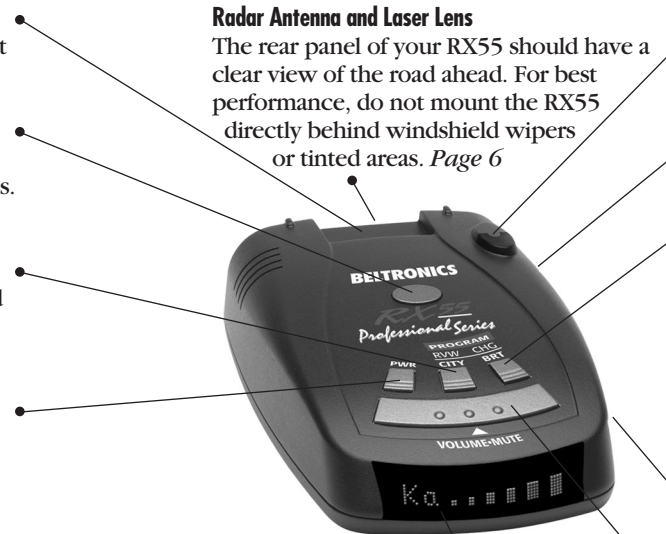
During an alert, the display will indicate radar band, and a precise bar graph of signal strength. *Page 10*

Note: In the Dark Mode the display will not light during an alert. *Page 9*

The display can also show Safety Radar text messages. *Page 22-23*

#### Volume / Mute Button

Press and hold to adjust the volume level. Briefly press this button (top front) to silence the audio for a specific alert. (The audio will alert you to the next encounter.) *Page 8*



### Power Connection

To power the RX55, plug the small end of the supplied coiled power cord into the telephone-type power jack on RX55's right side, and plug the lighter adapter into your vehicle's lighter socket or accessory socket.

RX55 operates on 12 volts DC negative ground only. The lighter plug provided is standard size and will work in most vehicles. Of course, your lighter socket must be clean and properly connected for proper operation.

Note: depending on your vehicle, the lighter socket power may either be continuously on, or it may be switched on and off with your ignition switch.

RX55's standard lighter adapter has an integral fuseholder. If it is ever necessary to replace the fuse, simply unscrew the tip of the lighter plug and replace the fuse with an identical 2 amp fuse.

### Optional power cords

See the Accessories section for details on our optional SmartPlug.

### Mounting Location

**WARNING:** BELTRONICS cannot anticipate the many ways the RX55 can be mounted. It is important that you mount RX55 where it will not impair your view nor present a hazard in case of an accident.

### Where to mount RX55

For optimum detection performance, we recommend the following:

- Using the Windshield Mount, mount your RX55 level, a few inches above the dashboard, and high enough on your front windshield to provide a clear view of the road from the front and rear.
- Mount RX55 away from windshield wipers, other solid objects, and heavily tinted areas that might obstruct the radar antenna or laser lens.

### Windshield Mount

RX55's QuickMount windshield bracket is designed for unobtrusive and hassle-free mounting.

**1** Depress the QuickMount button on the top of RX55 (by the word BELTRONICS) and slide the QuickMount bracket into the slot until it is locked into the position which best fits the angle of your windshield (there are four settings available). For extremely horizontal or extremely sloped windshields, the QuickMount bracket can be bent.

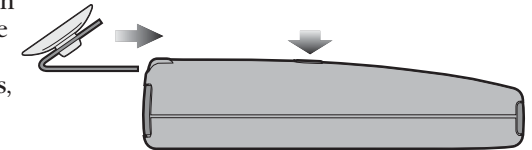
To ensure that the suction cups adhere to the windshield firmly, be sure to keep both your windshield and the suction cups clean.

**2** To adjust RX55 on your windshield, use the QuickMount button located on the top of the RX55, and slide RX55 forward or backward to obtain a level horizontal position.

When installed and adjusted properly, the back top edge of the RX55 should rest solidly against your windshield.

### Caution!

A few vehicles (including some Porsches) have windshields with a soft anti-lacerative coating on the inside surface. Use of suction cups will permanently mar this coating. Consult your dealership or the vehicle owner's manual to determine if your windshield has this coating.



### User's Tip

You can leave the QuickMount bracket in place on your windshield, and easily remove the RX55 by pressing the adjustment button and sliding it off the mount. Again, be sure to position the bracket where it won't present a hazard in the event of an accident. Additional mounts are available.

### Power On/Off

To turn the RX55 on, press the PWR button on the left side of the top case. When you turn the RX55 on, it goes through a sequence of alerts.

If you prefer, you may program your RX55 for a shorter power-on sequence. See the Programming section for details.

### Power-on indication

After RX55's start-up sequence is complete, the alphanumeric display will show Highway, City, or AutoScan to indicate which sensitivity mode is selected.

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

### Voice

The RX55 has our Digital Voice feature, which provides a digital voice announcement of the band being detecting.

If you prefer, you can turn the Digital Voice feature off in programming. See Programming section for details.

### AutoMute

Your RX55 has our patented AutoMute feature. After RX55 alerts you to a radar encounter at the volume you have selected, the AutoMute feature will automatically reduce the volume to a lower level. This keeps you informed without the annoyance of a continuous full-volume alert.

If you prefer, you can turn the AutoMute feature off. See the Programming section for details.

### Volume / Mute Button

To adjust the alert tone volume, press and hold the Volume/Mute bar located on the top case until display shows visual of volume level.

The Mute button, located on RX55's top case, allows you to silence the audio alert during a radar encounter.

To mute the audio for a single specific signal, briefly press the Volume/Mute button. After that radar encounter has passed, the mute will automatically reset and the audio will alert you to the next encounter.

### Highway / AutoScan / City Button

The City button selects RX55's sensitivity mode. We recommend the AutoScan mode for most driving.

The RX55's AutoScan mode provides long-range warning, with minimum false alarms. In this mode, the RX55's internal computer continuously analyzes all incoming signals and intelligently adjusts the sensitivity circuits.

You can also select conventional Highway and City modes. When driving in urban areas where annoying X-band intrusion alarms and door openers are common, City mode can be engaged to lower X-band sensitivity and reduce X-band alerts. Full sensitivity is maintained on all other bands. You can customize the RX55's City mode sensitivity. See the Programming section for details.

### Brightness

The RX55's BRT button is located on the top right, and selects the brightness of the display. There are four settings: Maximum, Medium, Minimum, and Dark. Press the BRT button to select your preferred brightness.

### Dark Mode

When you select the Dark mode with the BRT button, RX55 changes to a very inconspicuous power-on indication: a very dim AD, HD, or CD. (In this display, the A, H, or C indicates AutoScan, Highway, or City, and the D indicates Dark.)

When RX55 is in the Dark mode, the display will not show visual alerts when RX55 detects signals. Only the audible alert will tell you of detected signals.

### Audible Alerts

#### *For Radar signals:*

RX55 uses a Geiger-counter-like sound (and digital voice if programmed) to indicate the signal strength and type of radar signal being encountered.

When you encounter radar, a distinct audible alert will sound and occur faster as the signal gets stronger. This allows you to judge the distance from the signal source without taking your eyes from the road.

Each band has a distinct tone for easy identification.

X-band = chirping tone

K-band = buzzing tone

Ka-band = double-chirp tone

#### *For Laser signals:*

Since laser signals are a possible threat no matter how weak, RX55 alerts you to all laser signals with a full laser alert.

#### *For Safety signals:*

RX55 will alert you to these signals with a double-buzz tone (and digital voice if programmed) with a corresponding text message. A complete listing of the text messages is on page 23.



### Power Connector

RX55's new power jack uses a telephone-type connector. This new 6-pin connector works with the included coiled cord, and with our optional new SmartPlug.

The SmartPlug is a special power cord that has a power-on indicator, a bright alert light that warns of radar or laser, and a convenient mute button right on the plug.

It's the perfect addition for any car where reaching the detector mute button on the windshield is a stretch. And for discreet night driving, put the RX55 in the Dark Mode, and use the SmartPlug for your visual alerts. Other drivers won't know you have a detector.

Two versions are available: A SmartPlug that plugs into your lighter socket and has a coiled cord, and a Direct-wire SmartPlug module that you wire into your electrical system, with an 8 foot straight cord to route to your RX55.

For more information or to order, call us toll-free at 1-800-341-2288.

### Signal Strength Meter

RX55's alphanumeric display consists of 280 individual LEDs, to provide an intuitive ultra-bright display of signal strength and text messages.

RX55's standard bar-graph signal strength meter only displays information on a single radar signal. If there are multiple signals present, the RX55's internal computer determines which is the most important threat to show on the bar-graph meter.

When RX55 detects radar, it displays the band (X, K, or Ka), and a precise bar graph of the signal strength. When RX55 detects a laser signal, the display will show "Laser."

NOTE: If you are operating the RX55 in Dark mode, the display will not light when a signal is detected – only the audio alert will be heard.

### VG2

If the VG2 band (Radar detector detector) is turned on, VG2 units will be detected with an audible and visual alert. Once detected, the RX55's internal oscillator will shut down for a period of time, making it undetectable. The RX55's receiver will then periodically turn back on to see if the VG2 unit is still present. If not, RX55 will return to normal operation.

NOTE: With VG2 detection on, other radar detectors could be detected as well.

## Programming

There are 7 user-selectable options so you can customize your RX55 for your own preferences. The buttons labeled CITY and BRT are also used to enter the Program Mode, REVIEW (RVW) your current program settings, and to CHANGE (CHG) any settings as desired. The words PROGRAM, RVW, and CHG are located on the top of the detector, and are highlighted graphically. Pages 14-16 explain each option in more detail.

### How to use Programming

**1 To enter Program Mode, press and hold the CITY and BRT buttons down for 2 seconds.** (The unit will beep, and display the word “Program”).

**2 Then press the RVW button to review the current settings.** (You can either tap the button to change from item to item, or hold the button to scroll through the items).

**3 Press the CHG button to change any setting.** (You can either tap the button to change from setting to setting, or hold the button to scroll through all the options).

**4 To leave the Program Mode, simply wait 8 seconds without pressing any button, or press the PWR button.** (The unit will display Complete, beep, and return to normal operation).

### An example

Here is how you would turn RX55's AutoMute feature off.

**1** Enter the Program Mode by holding both the CITY and BRT buttons down for 2 seconds. *The RX55 will beep twice and display Program.*

**2** Then hold the RVW button down. *The RX55 will scroll through the categories, starting with Pilot (PilotHwy), then Power-on sequence (PwrOnSTD), then Voice (Voice On), and then AutoMute (aMute).*

**3** Release the RVW button when RX55 shows the AutoMute item. *Since the factory setting is for AutoMute to be on, RX55 will display aMute ON.*

*(If you accidentally don't release the RVW button in time, and the RX55 goes to the next category, hold the RVW button down again, and after RX55 scrolls through all categories, it will begin again at the top of the list.)*

**4** Press the CHG button to change from aMute ON to aMute OFF.

**5** To complete the Programming, simply wait 8 seconds without pressing any button, or press the PWR button. *The RX55 will display Complete, beep, and return to normal operation.*

## Overview of Programming

Press the RVW button to go from one category to the next		Press the CHG button to change your setting within a category
PILOT (Power-on indication)	Pilot HWY Pilot H Pilot V	*Full word: Highway or AutoScan or City Letter: H or A or C Vehicle voltage
POWER-ON SEQUENCE	PwrOn STD PwrOn FST	*Standard power-on sequence Fast power-on sequence
VOICE	Voice ON Voice OFF	*Voice alerts on Voice alerts off
AUTOMUTE	aMute ON aMute OFF	*AutoMute on AutoMute off
CITY MODE SENSITIVITY	City STD City LoX City NoX	*Standard City mode sensitivity Low X band sensitivity in City Mode No X band sensitivity in City Mode
SWS	SWS Off SWS On	*SWS detection off SWS detection on
VG2 (radar detector detector)	VG2 Off VG2 On	*VG2 detection off VG2 detection on

### \*Factory Default Settings

To reset RX55 to its original factory settings, press and hold the “CITY” and “BRT,” buttons while turning the power on. The RX55's display will provide a “Reset” message, accompanied by an audible alert, acknowledging the reset.



### Pilot (Power-on indication)

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

#### Pilot HWY (Full description)

In this setting, RX55 will display “Highway,” “City,” or “AutoScan” as its power-on indication. (factory default)

#### Pilot H (Letter)

In this setting, RX55 will display “H” for Highway, “C” for City, and “A” for AutoScan.

#### Pilot V (Vehicle voltage)

In this setting, the RX55 will provide “H” for Highway, “C” for City and “A” for AutoScan, and the vehicle’s voltage. If the vehicle’s voltage drops below 10.5 volts, a low voltage warning will be displayed, followed by an audible alert. A high voltage warning is also provided when the vehicle’s voltage exceeds 16.0 volts.

### Power-on Sequence

#### PwrOnSTD (Standard)

In this setting, each time you turn on the RX55, it will display “BEL RX55,” “Laser,” “Ka-band,” “K-band,” “X-band,” “Safety,” and any changes to factory settings. (factory default)

#### PwrOnFST (Fast power-on)

In this setting, the RX55 will only provide a brief audible tone, and will display any non-factory settings.

### Voice

#### Voice On (Voice alerts on)

In this setting, all radar, laser, and SWS (if programmed on) alerts will be accompanied by a digital voice.

#### Voice Off (Voice alerts off)

In this setting, only the audio tones will be heard during an alert or SWS message.

### AutoMute

#### aMute On (AutoMute on)

In this setting, RX55’s audio alerts will initially be at the volume you set, but after a few seconds, the RX55 will automatically reduce the volume level, to keep you informed, but not annoyed. (factory default)

#### aMuteOff (AutoMute off)

With AutoMute off, RX55’s audio alerts will remain at the volume you set for the duration of the radar encounter.

### City Mode Sensitivity

#### City STD (Standard)

In this setting, when you put RX55 in the City mode, X-band sensitivity is significantly reduced, to reduce annoyance from X-band intrusion alarms and motion sensors. (factory default)

#### City LoX (Low X band sensitivity)

In this setting, when you put RX55 in the City mode, X-band sensitivity is reduced more than the standard setting. This will reduce X band alarms from other sources even further, but also significantly reduces range to X band traffic radar.

#### City NoX (No X band sensitivity)

In this setting, when you put RX55 in the City mode, it will not respond to any X band signals. **WARNING: Only choose this setting if you are absolutely certain that there are no X band traffic radar units where you drive.**

NOTE: These settings only apply when RX55 is operated in City mode. X-band sensitivity is not affected when used in “AutoScan,” or “Highway” modes.

Safety Warning System

sws Off  
Safety Warning System detection off.  
(factory default)

sws On  
In this setting, safety messages will be  
detected in areas using this technology.

VG-2 Alert

VG2 Off  
VG2 alert detection off. (factory default)

VG2 On  
VG2 alert detection on. In this setting, RX55  
will alert you to VG2 signals and  
automatically shut the detector off for  
approximately 15 seconds. Once the VG2  
signal has passed, RX55 will automatically  
return to normal operation.

**NOTE: When VG2 alert is on, other  
radar detectors can be detected as well.**

Features and Specifications

Operating Bands

- X-band 10.525 GHz ± 25 MHz
- K-band 24.150 GHz ± 100 MHz
- Ka-band 34.700 GHz ± 1300 MHz
- Laser 904nm, 33 MHz bandwidth

Radar Receiver / Detector Type

- Superheterodyne
- Scanning Frequency Discriminator
- Digital Signal Processing (DSP)

Laser Detection

- Quantum Limited Video Receiver
- Multiple Laser Diodes

Display

- 280 LED Matrix/Text
- Bar Graph
- 3-Level Dimming, plus Dark Mode

Power Requirement

- 12VDC, Negative Ground
- Optional SmartPlug Compatible

Programmable Features

- Pilot
- Power-On Sequence
- Voice Alerts
- AutoMute
- City Mode Sensitivity
- Safety Warning System Alerts
- VG2 Alert

Sensitivity Control

- AutoScan™, Highway and City

Dimensions (Inches)

- 1.1 H x 2.75 W x 4.75 L

Patented Technology

RX55 is covered by one or more of the  
following US patents.  
6,614,385 6,587,068 6,400,305 6,249,218  
6,069,580 5,668,554 5,600,132 5,587,916  
5,559,508 5,365,055 5,347,120 5,446,923  
5,402,087 5,305,007 5,206,500 5,164,729  
5,134,406 5,111,207 5,079,553 5,049,885  
5,049,884 4,961,074 4,954,828 4,952,937  
4,952,936 4,939,521 4,896,855 4,887,753  
4,862,175 4,750,215 4,686,499 4,631,542  
4,630,054 4,625,210 4,613,989 4,604,529  
4,583,057 4,581,769 4,571,593 4,313,216  
D314,178 D313,365 D310,167 D308,837  
D296,771 D288,418 D253,752

RX55 is also covered by one or more of the  
following Canadian patents:  
1,295,715 1,295,714 1,187,602 1,187,586

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

### Interpreting Alerts

Although the RX55 has a comprehensive warning system and this handbook is as complete as we can make it, only experience will teach you what to expect from your RX55 and how to interpret what it tells you. The specific type of radar being

used, the type of transmission (continuous or instant-on) and the location of the radar source affect the radar alerts you receive.

The following examples will give you an introduction to understanding the RX55's warning system for radar, laser and safety alerts.

#### Alert

The RX55 begins to sound slowly, then the rate of alert increases. The Signal Meter ramps accordingly.

RX55 emits short alerts for a few seconds and then falls silent only to briefly alert and fall silent again.

RX55 suddenly sounds a continuous tone for the appropriate band received. All segments in the Signal Strength Meter are lit.

A brief laser alert.

RX55 receives weak signals. These signals may be a little stronger as you pass large, roadside objects. The signals increase in frequency.

#### Explanation

You are approaching a continuous radar source aimed in your direction.

An instant-on radar source is being used ahead of you and out of your view.

An instant-on radar source or laser source is being used nearby. This kind of alert requires immediate attention!

Laser is being used in the area. Because laser is inherently difficult to detect, any laser alert may indicate a source very close by.

A moving patrol car with continuous radar is overtaking you from behind. Because these signals are reflected (reflections are increased by large objects), they may or may not eventually melt into a solid point even when the patrol car is directly behind you.

### Alert

RX55 alerts slowly for a while and then abruptly jumps to a strong alert.

RX55 alerts intermittently. Rate and strength of alerts may be consistent or vary wildly.

RX55 alerts intermittently. Rate and strength of signal increases with each alert.

RX55 gives an X-band, or K-band alert intermittently.

### Explanation

You are approaching a radar unit concealed by a hill or an obstructed curve.

A patrol car is traveling in front of you with a radar source aimed forward. Because signals are sometimes reflected off of large objects and sometimes not, the alerts may seem inconsistent.

A patrol car is approaching from the other direction, sampling traffic with instant-on radar. Such alerts should be taken seriously.

You are driving through an area populated with radar motion sensors (door openers, burglar alarms, etc.). Since these transmitters are usually contained inside buildings or aimed toward OR away from you, they are typically not as strong or lasting as a real radar encounter.

**CAUTION:** Since the characteristics of these alerts may be similar to some of the preceding examples, over confidence in an unfamiliar area can be dangerous. Likewise, if an alert in a commonly traveled area is suddenly stronger or on a different band than usual, speed radar may be set up nearby.

### How Radar Works

Traffic radar, which consists of microwaves, travels in straight lines and is easily reflected by objects such as cars, trucks, even guardrails and overpasses. Radar works by directing its microwave beam down the road. As your vehicle travels into range, the microwave beam bounces off your car, and the radar antenna looks for the reflections. Using the Doppler Principle, the radar equipment then calculates your speed by comparing the frequency of the reflection of your car to the original frequency of the beam sent out.

Traffic radar has limitations, the most significant of these being that it typically can monitor only one target at a time. If there is more than one vehicle within range, it is up to the radar operator to decide which target is producing the strongest reflection. Since the strength of the reflection is affected by both the size of the vehicle and its proximity to the antenna, it is difficult for the radar operator to determine if the signal is from a sports car nearby or a semi-truck several hundred feet away.

Radar range also depends on the power of the radar equipment itself. The strength of the radar unit's beam diminishes with distance. The farther the radar has to travel, the less energy it has for speed detection.

Because intrusion alarms and motion sensors often operate on the same frequency as X-Band radar, your RX55 will occasionally receive non-police radar signals. Since these X-Band transmitters are usually contained inside of a building, or aimed toward the ground, they will generally produce much weaker readings than will a true radar encounter. As you become familiar with the sources of these pseudo alarms in your daily driving, they will serve as confirmation that your RX55's radar detection abilities are fully operational.

### How "POP" Works

"POP" mode is a relatively new feature for radar gun manufacturers. It works by transmitting an extremely short burst, within the allocated band, to identify speeding vehicles in traffic. Once the target is identified, or "POPPED," the gun is then turned to its normal operating mode to provide a vehicle tracking history, (required by law).

### How Laser (Lidar) Works

Laser speed detection is actually LIDAR (Light Detection and Ranging). LIDAR guns project a beam of invisible infrared light. The signal is a series of very short infrared light energy pulses, which move, in a straight line, reflecting off your car and returning to the gun. LIDAR uses these light pulses to measure the distance to a vehicle. Speed is then calculated by measuring how quickly these pulses are reflected given the known speed of light.

LIDAR (or laser) is a newer technology and is not as widespread as conventional radar, therefore, you may not encounter laser on a daily basis. And unlike radar detection, laser detection is not prone to false alarms. Because LIDAR transmits a much narrower beam than does radar, it is much more accurate in its ability to distinguish between targets and is also more difficult to detect. **AS A RESULT, EVEN THE BRIEFEST LASER ALERT SHOULD BE TAKEN SERIOUSLY.**

There are limitations to LIDAR equipment. LIDAR is much more sensitive to weather conditions than RADAR, and a LIDAR gun's range will be decreased by anything affecting visibility such as rain, fog, or smoke. A LIDAR gun cannot operate through glass and it must be stationary in order to get an accurate reading. Because LIDAR must have a clear line of sight and is subject to cosine error (an inaccuracy, which increases as the angle between the gun and the vehicle, increases) police typically use LIDAR equipment parallel to the road or from an overpass. LIDAR can be used day or night.

### How Safety Radar Works

Safety Warning System, or SWS, uses a modified K-band radar signal. The SWS safety radar system has 64 possible messages (60 currently allocated). The SWS messages your RX55 can display are listed on the facing page.

From the factory, your RX55 is programmed with SWS decoding OFF. If SWS is used in your area, your RX55 will display the safety messages associated with the signal. If you wish to detect this system, use the Programming feature to turn RX55's SWS decoding ON.

NOTE: Some of the safety messages have been condensed, so that each message can be displayed on one or two screens on RX55's eight-character display.

Since Safety radar technology is relatively new, and the number of transmitters in operation is not yet widespread, you will not receive Safety signals on a daily basis. Do not be surprised if you encounter emergency vehicles, road hazards and railroad crossings that are unequipped with these transmitters. As Safety transmitters become more prevalent (the number of operating transmitters is growing every day), these Safety radar signals will become more common.

For more information and details about SWS safety radar, visit their web site at [www.safetyradar.com](http://www.safetyradar.com).

### SWS Text Messages

#### 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 Center Lane Closed Ahead
- 11 Left Lane Closed Ahead
- 12 *For future use*

#### Highway Hazard Zone Advisory

- 13 Stationary Police Vehicle Ahead
- 14 Train Approaching/At Crossing
- 15 Low Overpass Ahead
- 16 Drawbridge Up
- 17 Observe Drawbridge 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
- 31 Stationary Emergency Vehicle Ahead
- 32 *For future use*

### 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 Blinding Snow Whiteout Ahead
- 42 *For future use*

#### 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*

#### Fast/Slow Moving Vehicles

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

## Problem

RX55 beeps briefly at the same location every day, but no radar source is in sight.

RX55 does not seem sensitive to radar or laser.

RX55 did not alert when a police car was in view.

RX55 did not provide a Safety signal while within range of an emergency vehicle.

RX55's display is not working.

RX55's audible alerts are less loud after the first few alerts.

RX55 bounces or sags on windshield.

RX55's power-on sequence reoccurs while you are driving.

Your 14-year old son has changed all 7 of the Programming options.

## Solution

- An X-band motion sensor or intrusion alarm is located within range of your route. With time, you will learn predictable patterns of these signals.

- Make sure that windshield wipers do not block RX55's radar antenna and that the laser lens is not behind tinted areas.
- Determine if your vehicle has an Instaclear®, ElectriClear® or solar reflective windshield which may deflect radar or laser signals.
- RX55 may be in City Mode. (Radar signals only)

- VASCAR (Visual Average Speed Computer and Recorder) a stopwatch method of speed detection, may be in use.
- Officer may not have radar or laser unit turned on.

- Safety transmitters may not be commonly used in your area.

- Press the BRT button to deactivate Dark Mode.

- RX55 is in AutoMute Mode. See page 8 for details.

- RX55 is not making contact with the windshield to provide stability. While holding down RX55's QuickMount button, slide RX55 toward the windshield so that the back top edge makes firm contact.

- A loose power connection or dirty lighter socket can cause RX55 to be briefly disconnected.

You can return all of the programming options to the factory defaults by holding down the CITY and BRT buttons while turning the power on.

## Problem

RX55 will not turn on.

RX55 feels very warm.

## Solution

- Check to make sure that the RX55 is turned on.
- Check that vehicle ignition is ON.
- Check that vehicle lighter socket is functional.
- Try RX55 in another vehicle.

- It is normal for RX55 to feel warm.

## Explanation of Displays

AD	Sensitivity control is in AutoScan, display is in Dark mode (page 9)
HD	Sensitivity control is in Highway mode, display is in Dark mode (page 9)
CD	Sensitivity control is in City mode, display is in Dark mode (page 9)
<i>No display</i>	RX55 is in the Dark mode (page 9, 16)
PilotHWY	One of the many programming messages (pages 12-16)
WorkZone	One of the many Safety Radar messages (pages 22-23)
Caution	RX55 has detected a Safety Radar Signal, but the signal isn't yet strong enough to decode the specific safety message (page 22-23)
VG2	RX55 has detected a VG2 unit (radar detector detector)



### Service Procedure

If your RX55 ever needs service, please follow these simple steps:

- 1 Check the troubleshooting section of this manual. It may have a solution to your problem.
- 2 Call us at 1-800-341-2288. We may be able to solve your problem over the phone. If the problem requires that you send your RX55 to the factory for repair, we will provide you with a Service Order Number, which must be included on the outside of your shipping box.

Enclose the following information with your RX55:

- Your Service Order Number
- Your name and return address
- Your daytime telephone number
- A description of the problem you are experiencing.

### Out Of Warranty Repairs

For out of warranty repairs, include prepayment in the amount you were quoted by the Beltronics Customer Service Representative. If the detector has been damaged, abused or modified, the repair cost will be calculated on a parts and labor basis. If it exceeds the basic repair charge, you will be contacted with a quotation. If the additional payment is not received within 30 days (or if you notify us that you choose not to have your RX55 repaired at the price quoted), your RX55 will be returned, without repair. Payment can be made by check, money order, or credit card.

Ship RX55 and Power Cord To:

BELTRONICS  
Customer Service Department  
Service Order Number \_\_\_\_\_  
5442 West Chester Road  
West Chester, Ohio 45069

For your own protection, we recommend that you ship your RX55 postpaid and insured. Insist on a proof of delivery, and keep the receipt until the return of your RX55.

Register  
online:  
@  
www.  
beltronicspro  
.com

Remove card along perforations

## BELTRONICS PRODUCT REGISTRATION CARD BELTRONICS™

▲ If you purchased your detector directly from BELTRONICS, you do not need to fill this out.

▲ If you did not purchase your detector directly from BELTRONICS, please fill out this section and return to us, or register online at our web address: [www.beltronics.com](http://www.beltronics.com).

1. First Name: \_\_\_\_\_ Middle Initial: \_\_\_\_\_ Last Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_  
Phone Number (In case we have a question) \_\_\_\_\_
2. Product Purchased: \_\_\_\_\_ Model: \_\_\_\_\_ Serial Number: \_\_\_\_\_
3. Place of Purchase: \_\_\_\_\_ Date: \_\_\_\_\_ Price: \_\_\_\_\_
4. Primary reason for purchasing this BELTRONICS product: \_\_\_\_\_

## Warranty and Accessories

### BELTRONICS One Year Limited Warranty

BELTRONICS warrants your RX55 against all defects in materials and workmanship for a period of one (1) year from the date of the original purchase, subject to the following terms and conditions:

The sole responsibility of BELTRONICS under this Warranty is limited to either repair or, at the option of BELTRONICS, replacement of the RX55 detector. There are no expressed or implied warranties, including those of fitness for a particular purpose or merchantability, which extend beyond the face hereof. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

BELTRONICS is not liable for any incidental or consequential damages arising from the use, misuse, or mounting of the RX55. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This Warranty gives you specific rights. You may have other legal rights which vary from state to state. This Warranty does not apply if the serial number on the housing of the RX55 has been removed, or if your RX55 has been subjected to physical abuse, improper installation, or modification.

### Accessories

The following accessories and replacement parts are available for BEL Pro RX55.

#### Replacement coiled cord

\$14.00

#### Direct-wire

\$10.00

#### Soft Carrying Case

\$12.00

#### SmartPlug (coiled)

\$29.95

#### SmartPlug (direct-wire)

\$29.95

SmartPlug is a special power cord that has a power-on indicator, a bright alert light that warns of radar or laser, and a convenient mute button right on the plug.

It's the perfect addition for any car where reaching the detector mute button on the windshield is a stretch. And for discreet night driving, put RX55 in the Dark Mode, and use the SmartPlug for your visual alerts. Other cars won't know you have a detector.

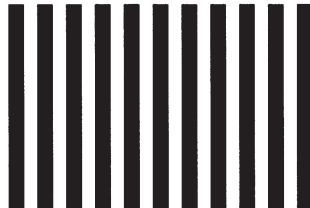
Two versions are available: A coiled SmartPlug that plugs into your lighter socket (shown), and a Direct-wire SmartPlug module that you wire into your electrical system, with an 8 foot straight cord to route to your RX55.

See all of our products and accessories at [www.beltronicspro.com](http://www.beltronicspro.com)

Remove card along perforations



NO POSTAGE  
NECESSARY  
IF MAILED  
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 INC  
5442 WEST CHESTER RD  
WEST CHESTER OH 45069-9789

