K40 ELECTRONICS™

RD850
OWNER'S MANUAL

Portable
All Band
Radar/Laser
Detector

Part # 121RD8-00
03/03

Total immunity from speeding tickets.

We'll pay any radar or laser speeding ticket(s) you get for one year after purchase.

Total guarantee of performance.

If your new RD850 does not outperform any other radar/laser detector you've owned, return it to your dealer within seven days for full product credit.

Total guarantee of quality workmanship.

We'll pay for any and all repairs or replacement of defective parts for 12 months after purchase.

To take full advantage of our guarantee, be sure to fill out and mail the registration card included in your RD850 carton.

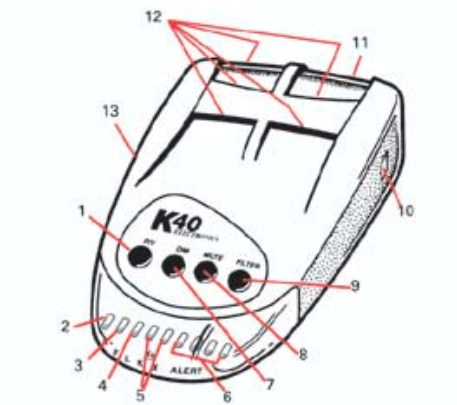
Table of Contents

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

Why the RD850 is the world's finest

These advanced features set this detector apart from all the others.

- Super Wideband Ka: Gives you complete detection of the entire Ka bandwidth-33.4 to 36.0 GHz.
- Intermediate Frequency Rejection: Rejects common sources of false alerts caused by intermediate frequency interference.
- VG-2 Shield: Prevents detection by the Interceptor VG-2 (Radar Detector Detector).
- Front and Rear Laser Tracking: gives you optimum warning time by detecting laser signals from the front and rear. Also detects off-axis laser signals.
- Laser Detection Verification: Distinguishes between the true laser and other optical and electromagnetic interference.



1. Power/Volume (P/V) Button: Press to turn unit on. Activates an audio/visual test pattern at the same time. Can also change audio volume setting *(see page 7).*
2. Power-on Indicator: LED illuminates green to indicate unit is receiving power.
3. Filter Mode Indicator: LED illuminates green when Filter mode is engaged.
4. Laser Indicator: LED illuminates red to confirm detection of laser signals.
5. Visual Alerts: The radar band received is indicated by the illumination of red LED for K band, the amber LED for X band, and both LEDs to indicate detection of Super Wideband Ka.
6. Signal Alert Indicator: Four red LEDs illuminate as the strength of the police radar signal increases. A scatter pattern of the four red LEDs confirms laser signals.
7. DIM Button: Pressing this once dims the LEDs for X/K/Super Wideband Ka, Power-On, Filter, and signal alert strength. Pressing a second time shuts off all LEDs and the power indicator remains dim. Audio alerts are not affected *(see page 7).*
8. MUTE Button: Pressing this once replaces the continuous audio alert tone with a clicking sound. Pressing this a second time returns the audio to a continuous alert. To completely mute the X, K or Super Wideband Ka audible alerts during a radar encounter, press MUTE. Laser audio alerts are not affected *(see page 8).*
9. FILTER Button: Press to reduce unwanted X band radar alerts. Does not reduce sensitivity *(see page 9).*

10. Power Jack: Using the straight or coiled cord, the RD850 operates in any vehicle with a 13.8 v DC negative ground system.

11. Antenna Opening: Receives radar signals at the back end. Features a patented diecast antenna with integrated transition to microstrip mixer.

12. Optical Openings: Sensitive photo diodes receive laser signals from both the front and the rear.

13. Audio Alert Speaker: Emits separate audio warnings for X, K, Super Wideband Ka radar, Instant-On/ Pulsed radar and laser.

Using the RD850

Automatic Start-Up Test Sequence

An automatic test sequence occurs every time you turn on the RD850.

1. The green power LED illuminates.

2. The red laser signal indicator LED illuminates, the laser alert LEDs flash in a scatter pattern and the laser audio alert tone (high-pitched beeping) sounds.

3. The amber X band signal indicator LED illuminates and the X band “tweet” tone sounds.

4. The red K band signal indicator LED illuminates and the K band “chirp” tone sounds.

5. Both red K band and amber X band signal indicator LEDs illuminate and the Ka band “buzz” tone sounds.

Reset to Factory Settings

You can reset your unit to factory setting for volume, DIM, MUTE, FILTER and Selectable Features. With the unit OFF, press the MUTE, FILTER and P/V buttons simultaneously. Two “beeps” confirm factory settings are reset. Your unit is now ON and ready for operation.

Memory Retention for Preferred Settings

There is no need to reset your preferred settings every time your unit is turned on.

The settings for volume, DIM, MUTE and FILTER that were present before the unit was turned off will remain intact.

Keep in mind that regardless of the DIM mode setting, all LEDs will fully illuminate during the start-up test sequence. This provides visual confirmation that the visual display is working.

Setting the Audio Level

After the RD850 is turned on, the audio level can be adjusted by pressing and holding the P/V button down. This will cause the audio level to cycle low to high.

As the audio level goes through its cycle, the radar alert LEDs will provide a visual indication of the audio level.

For example, illumination of all LEDs indicates maximum loudness. Illumination of two or three LEDs corresponds to lower audio ranges. When you hear the audio level you prefer, release the P/V button.

To confirm your audio settings, simply press the MUTE button twice.

Audio Alerts

Separate and distinct audio alerts let you identify whether the signal received is X, K, Super Wideband Ka radar, or laser. Each audio alert is confirmed by the corresponding X, K, Super Wideband Ka radar, or laser visual alert.

“Instant On” Audio Visual Alerts

When an “instant on” radar signal is detected, your RD850 will emit a high pitched, rapid “beep” accompanied by flashing alert LEDs. This will be followed by the specific band tone and LED indicators.

VG-2 Audio Visual Alert

The RD850 is electrically shielded to prevent detection from the VG-2 (radar detector detector). When your RD850 detects a VG-2 signal, it will emit a brief, high pitched alert accompanied by alternate flashing of the outside signal strength.

DIM Button

This button allows you to select either a "dim" or "dark" mode when you don't want full or partial illumination of the LEDs. To dim all LEDs, press the DIM button once. This reduces the illumination by one half. To completely cancel the illumination of the LEDs, press DIM a second time. The green power (P) indicator remains "dim" to indicate your unit is operating.

Note: The DIM button provides audible confirmation when it is pressed. If you push it and do not hear this audible confirmation, it means your audio level is set too low or has been turned completely off.

For full illumination of all LEDs, press DIM a third time. This button does not affect the audio alerts.

MUTE Button

Lets you select three different audio functions:

1) Continuous Audio Alert Pattern for radar and laser.
2) Audio-Mute Alert Pattern for radar only.
3) Manual Muting of Audio Alerts for radar only.

The RD850 has been preset to provide a continuous series of either X, K, Super Wideband Ka, or laser alerts when police radar or laser is detected. This setting is useful when background noise in a vehicle is loud.

Laser alerts are brief and very urgent. They will override the mute setting.

Automatic Muting

To engage the automatic muting circuit, press the mute button until a single beep is heard. The

alert pattern activated by this mode consists of several X, K, SuperWide Band Ka alerts followed by a muted clicking. The clicking becomes more rapid as the strength of the radar signal increases.

With this mode, the automatic mute pattern will be repeated each time a new radar signal is detected. The Automatic Muting enables you to monitor extended or frequent radar encounters without adjusting the volume setting. For continuous audio alert patterns, press the mute button until a double beep is heard.

Manual Muting

The X, K or Super Wideband Ka audio alerts can be completely muted during a radar encounter by pressing the MUTE button. This will occur regardless of the MUTE mode selected (continuous or automatic muting). Manual muting an audio warning will not change your previous MUTE setting.

Confirming Volume Level

For audible confirmation of your selected audio level, press the MUTE button twice.

FILTER Button

This button activates a mode which, without loss of sensitivity, effectively reduces unwanted audio alerts caused by intrusion alarms, door openers and other devices that operate on the same frequency as police radar.

To engage the filter system, press the filter button until a single beep is heard and the green filter light (next to the power on green light) is illuminated. Once engaged, weak non-police radar signals will produce no audible alert until the signal strength reaches a preset level. Visual alerts, however, will be displayed the instant a signal is detected to keep you quietly informed. In addition, reception of instant-on radar will produce the special instant-on alert.

To use the radar detector with the filter system tuned off, press the filter button until a double beep is heard. The filter mode has no effect on the reception of laser signals.

Installing the RD850

Important Information

The RD850 will operate effectively whether mounted on your vehicle's dashboard, visor or windshield. Be sure not to mount the unit directly behind the windshield wipers or mirrored sunscreens which can block radar and laser signals and substantially reduce warning range.

Conventional tinted glass will not affect radar reception, but aftermarket mirrored sunscreens can create some blockage.

Use of the unit on cars equipped with the optional Instaclear® and ElectriClear® windshields is to be avoided entirely. These "heated windshields" reflect radar signals and make any dash, visor or windshield mounted detector ineffective.

For maximum performance in any of the three mounting positions, follow these basic steps:

1. When selecting a mounting location, consider occupant safety. Choose a location where the unit will not be hazardous in case of an accident.

2. Be sure to position the RD850 with a clear, unobstructed view of the road from the front and rear.

3. To eliminate unnecessary vibration, do not allow the unit to make contact with the windshield.

4. Always place the unit so that the control panel is clearly visible.

(K40 Electronics recommends keeping the detector out of sight when not in use. This will reduce the possibility of a break-in.)

Instaclear® is a registered trademark of the Ford Motor Company.
ElectriClear® is a registered trademark of Libbey, Owens, Ford, and Delco-Remy

Care of your unit

1. Avoid placing the RD850 in direct sunlight. The summertime temperatures of an enclosed vehicle may reach extremes that can cause premature aging of the unit.

2. Avoid exposure to water. The detector is not waterproof.

3. Always use reasonable care when transporting your unit from one vehicle to another.

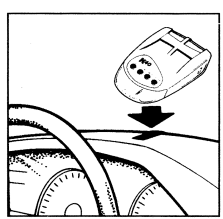
Mounting on the Dash

1. Select a relatively level area on your dash. Make sure it's convenient and gives your unit an unobstructed view of the road from the front and rear.

2. After making sure the area selected is clean and dry, adhere the soft portion of the enclosed fastener to this area and the corresponding hard portion to the bottom of you unit.

3. Fasten the unit to the dash by placing the fastener pieces together.

4. Unit is now ready to be connected to the power source.



Using the Bracket Attachment

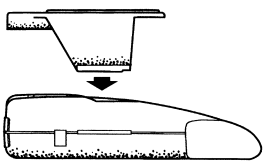
The mounting bracket is modular and made to be used with either the visor clip assembly or the windshield mount assembly.

Mounting on the Visor

1. The bracket and visor clip are preassembled and ready to be positioned on the unit. Snap the bracket onto the unit from the top. The channels on each side of the unit are designed to "lock" the bracket in place.

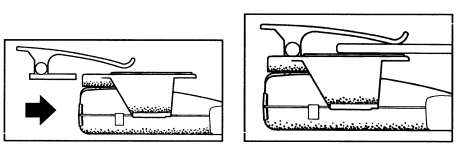
2. When you've attached the bracket to the unit, clip the unit to the sun visor from the edge nearest the windshield so the display end of the unit faces you.

3. Unit is now ready to be connected to the power source. The straight power cord provided is generally best for this type of installation.



Mounting on the Windshield

1. To use the windshield mount assembly, first remove the visor clip from the bracket. To do this, simply place both thumbs on the clip and push it out of the retaining socket. The windshield mount assembly is now ready to be inserted.



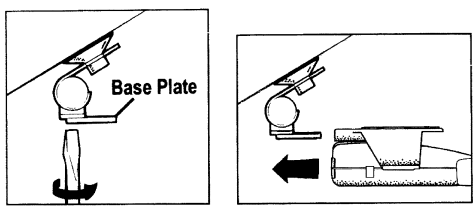
2. Before connecting the bracket to the windshield mount assembly, align the groove in each suction cup base with each slot and slide outwards until the suction cup locks in place.

3. Clean the selected windshield area. Then position the bracket on the windshield and press firmly on each suction cup to generate adequate suction.

4. Once in the desired location, adjust the rectangular base plate so that it is level. Use a screwdriver or small coin to tighten the screw on the bottom of the base plate to prevent it from moving.

5. Snap the bracket onto the unit with the opening of the socket facing away from you. Next, attach the bracket to the windshield suction cup assembly. The base plate slides into the retaining socket on the top of the bracket.

6. The properly mounted unit should be level with the control panel facing you.



7. Detector is now ready to receive power. Depending on the position selected, either the coiled or straight power cord may be used.

Important: Some newer vehicles have a plastic coating on the inside of the windshield designed to protect occupants in case of an accident. Putting the windshield bracket on this type of windshield can permanently damage the surface. If in doubt about whether your vehicle is equipped with this type of windshield, check with your dealer.

Cigarette Lighter Connection

Your RD850 detector operates on 13.8 volts DC and can receive power from the cigarette lighter socket. The cigarette lighter plug has been designed to fit universally in all sockets. Be sure the socket is clean and well grounded for proper operation.

Direct Fuse Box Connection

Your unit may also be wired directly to your vehicle's fuse box. The steps are listed below.

Caution: Improper fuse box installation can cause permanent damage to your unit which will invalidate your warranty. If you are unsure of this procedure, consult a professional electrical technician or installation center.

1. Make sure your vehicle is negatively grounded and operates on 12 volts.

2. Obtain a fuse holder and a 1 amp fuse from an automotive or electrical supply store. Be sure to insert the fuse into the holder.

3. With the detector unplugged, cut the cord near the cigarette lighter plug and discard the plug. Separate as much as is required of the black half of the cord (-) from the white and black half (+), and strip off approximately 1/2" of insulation from each end. *(Keep in mind that some power cords identify the (+) lead with a "ribbed stripe" or in some manner other than color.)*

4. Form the positive lead (+) by connecting one end of the lead from the in-line fuse holder to the positive lead (+) of the power cord. Make certain that the connection is properly insulated.

5. Now connect the opposite end of the in-line fuse holder lead to a suitable positive switched location *(ie, one that is on when your car is on and off when your car is off).* The black wire from your power cord is the negative ground, and should be attached to a clean metal portion of the vehicle frame.

Troubleshooting Guide

If your RD850 is not receiving power or not operating as it should. consult this guide.

Problem	Possible Cause	Corrective Procedure
Unit not receiving power	Improperly inserted plug	Reinsert plug and rotate
	Defect in power cord	Replace fuse with 1 amp 250 Volt 3AG fuse
	Lighter socket not clean and negatively grounded	Consult your dealer or a professional mechanic
	Defective fuse or electrical wiring for lighter socket	Consult your dealer or a professional mechanic
Low detection range	Partially blocked Antenna/ Lens opening	Reposition with unobstructed view of the road ahead
	Radar signals unable to pass through windshield	Determine whether your vehicle has a heated windshield *(see page 10)* or is covered with a metallic sunscreen
Erratic or frequent alerts	High concentration of non-police X band sources	Use FILTER Mode