



RMR-C430

Radar and Laser Detector
Radar and Laser Scrambler
Owners Manual

SPECIFICATIONS:

Radar & Laser Detector:

Frequencies:	10.525 GHz 24.125 GHz 33-36 GHz 904 Nano-meter
Sensitivity:	X-112 Dbm K-110 Dbm Ka-wide-102 Dbm Laser < 200 nano-watt
Alarm:	Separate for each Band Variable alarm for Range
Controls:	Volume, On/Off, Dim, Mute, City/Highway, Test
VG-2:	Frequency Plan
Size:	1.4" x 3.0" x 4.4"

The RMR-C430 detector is a full-featured radar and laser detector. It detects 360° radar and laser.

The radar detector is a dual conversion scanning superheterodyne receiver with separate alarms for each of the radar bands, dim function, city/highway and mute select. It detects front and rear laser and radar.

Other:

One-Year Ticket Rebate Program
Three-Year Warranty

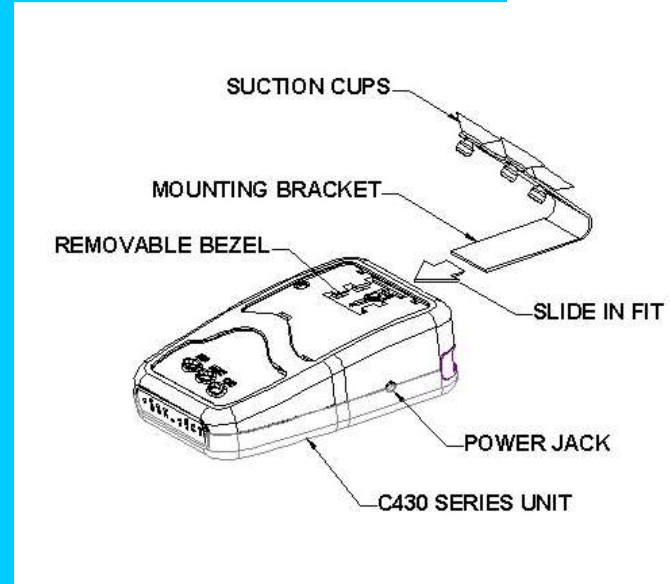
This product has been designed and certified to comply with Part 15 of the FCC Rules. Any changes or modifications not expressly approved by Rocky Mountain Radar may void your authority to use this product. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Radar detectors are **not** legal in Washington D.C. Virginia or most provinces in Canada.

Installation:

- 1) Complete, sign, and mail Ticket Rebate Registration card.
- 2) Attach the windshield bracket to the RMR-C430 detector. Align the edge on the bracket with the slot opening on the front of the case. Slide the bracket gently into the case until it locks into place.
- 3) Place the windshield bracket in the upper center portion of the windshield. The ideal position will be just below the rear view mirror. Then press firmly to seat suction cups. Note: Tinted glass may degrade the laser performance.
- 4) Bend the windshield bracket mount to a level position.
- 5) The RMR-C430 will hang from the bottom of the bracket and must have an unobstructed view of the road ahead.
- 6) Insert the small end of the power cord gently into the power jack on the right side of the unit and the large end into the cigarette lighter receptacle.

Remote mounting is not recommended.

Hard wire: Remove cigarette lighter plug. Connect the black with white stripe wire to +12 Volts, and then connect the solid black wire to ground.



CONTROLS: There are 3 buttons on top of the RMR-C430, Dim, Mute and City.

Dim: Press the Dim button for one second to dim the alarm lights. There are 3 levels of brightness. To brighten the alarm lights press the dim button again.

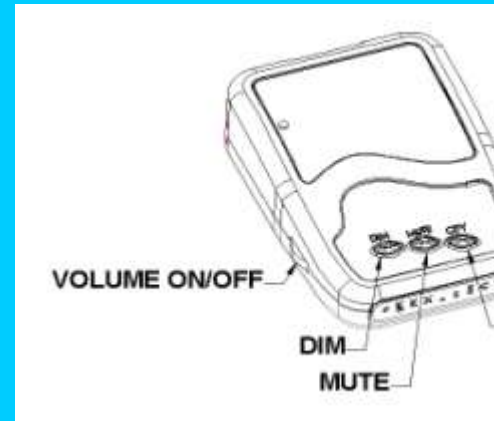
Mute: Press the Mute button for one second to disable the alarm speaker for quiet operation. To reactivate the alarm speaker press the Mute button again for one second.

City: Press the City button for one second to reduce false alarms in high RF noise areas. The yellow City light will illuminate to show activation.

Reminder! The RMR-C430 will memorize the settings of the features above when the unit is powered off. Be sure to readjust the settings to your normal preferences.

Power and Volume: Power is provided through the thumb wheel switch on the left side of the unit. Rotate the wheel forward to turn on and increase the volume for the alarm.

Rocky Mountain Radar does not condone the use of excessive speed on the highways, nor does it endorse breaking the speed limit laws of the United States of America. Please drive safely when using this or any other electronic product in your car.



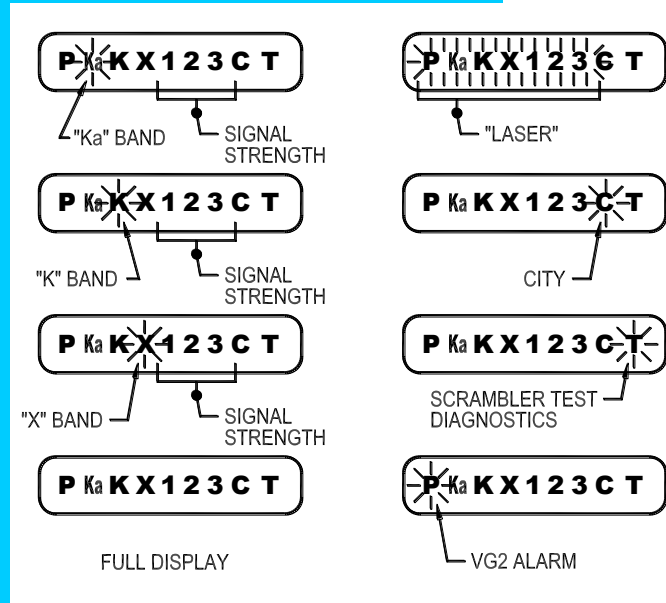
Alarms: A separate alert tone will sound for each band of Radar encountered with a different colored light, (Ka-Amber), (K-Yellow), (X-Green) illuminated. Tone frequency will increase as signal strength becomes stronger.

All alarm lights (X, K, Ka) will flash when Laser is detected.

Signal Strength: Signal Strength will be first indicated by the illumination of the LED of the band detected, then the three red LED's. When all three are illuminated the signal is strongest.

VG-2: VG-2 detection is indicated with a separate alarm along with the green power light blinking. The detector is undetectable by VG-2.

Diagnostics: The RMR-C430 has a full internal automatic diagnostic system. If the power light goes off and remains off, check the 2-amp fuse in the power cord by unscrewing the silver tip and removing the fuse. If the fuse is good (wire inside the fuse unbroken), return the unit for service.



Interchangeable Color Bezel Panels:

The RMR-C430 model has optional removable color panels. To remove the panel use a small screwdriver, insert under front of panel (see diagram) and pry upward gently. To replace, insert rear of panel tabs in slots on unit and press down. Panel should click and fit firmly in place if properly installed.

Colored panels have no effect on the performance of your unit. (Fig A)

Selectable VG-2:

To **activate** VG-2 detection turn the unit on. After the self-test has completed, press and hold the City button down for 3~5 seconds until the unit beeps three times. VG-2 detection is now activated. To **deactivate** press and hold the City button for 3~5 seconds until the unit buzzes once. VG-2 is now off.

Selectable Tones: The RMR-C430 has selectable tones. Press and hold the Mute button for 3~5 seconds to change the tone.

Auto Memory: The RMR-C430 has an automatic memory. Any settings enabled when the unit is turned off will still be enabled when the unit is turned back on.



Fig. A

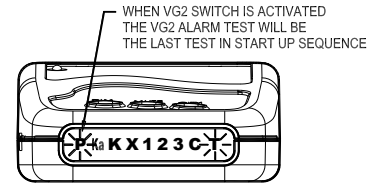
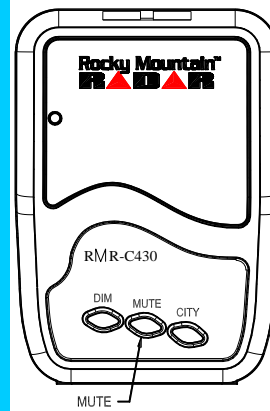


Fig. B

SPECIFICATIONS:

Radar Scrambler:

Frequencies: 8.0-38.2 GHz

Antenna: Dual ridge cast waveguide

Mixer: Custom MM wave Schottky

Doppler: Pseudo Random Digital Noise

Lidar Scrambler:

Full laser coverage using asynchronous pulse position modulation to confuse the lidar computer.

How does it work?

The Rocky Mountain Radar scramblers are full-featured radar and laser scramblers combining active laser and passive radar scrambling capabilities.

The radar scrambling circuit mixes Pseudo Random Digital Noise (PRDN) with the incoming police radar signal and reflects it back to the radar gun. The computer in the radar gun must receive eight identical, consecutive readings before it will display your speed. All the different speeds contained in the

White Noise confuse the computer in the radar gun so it does not display any speed. This effect duplicates the normal operation the officer often sees.

Since it is normal to occasionally lose the target speed, the officer is not suspicious. Reasonable care should be used as flagrant violators could still be caught with an estimated speed.

The laser scrambling circuit transmits a series of pulses at the same wavelength used by the police laser guns (Lidar), which are electronically timed at about 100 feet apart. When the pulses pass through the windshield they can lose up to 50% of their power. The power output is 6 to 10 times that needed to trigger the detector in the laser gun. Lidar sends out laser pulses and measures how long it takes to hit your car and come back. From the speed of light it can determine your *range*. It sends out several more pulses and calculates your speed from the change in distance over time. The Rocky Mountain Radar scramblers only allow the Lidar to see up to 100 feet so it is unable to calculate your speed.

SCRAMBLER ACTIVATION:

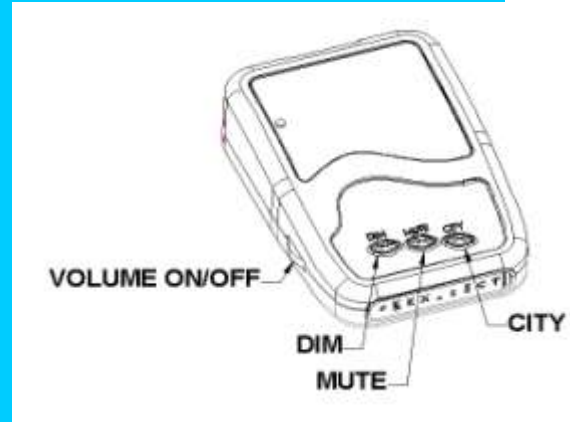
All scramblers are factory set to the OFF position.

RMR-C430 to turn the scrambler on/off, power off the unit, press and hold the City button down while turning power back on the unit.

If the scrambler is on, the “T” LED light will be included in the start up sequence. If the scrambler is off, the “T” LED light will not be included in the start up sequence. The “T” LED light is the test diagnostics for the scrambler.

SCRAMBLER OPERATION:

Drive normally. When the detector sounds an alert, take your foot off the gas, check your speed, adjust if necessary, and resume driving. Do not apply brakes unless you are grossly exceeding the speed limit. The scrambler will disable the radar long enough for you to adjust speed safely, if necessary.



Important information:

When driving in states that ban scramblers – turn off the scrambler function. Detectors are legal in all states except Virginia and Washington D.C. With the scrambler off, this unit is only a detector.

IS IT LEGAL?

The Rocky Mountain Radar scramblers conform to all FCC rules and regulations. Part 15 of the FCC code regulates consumer products that may leak or transmit radio frequency energy into the atmosphere. Since the scramblers are not transmitters, these sections do not apply.

The radar scrambler is a *reflective receiver* and has no emissions. **It does not transmit**, but uses the police radar gun's own signal as a carrier of its information. The laser scrambler transmits a series of light pulses. There are no laws regarding the transmission of invisible light.

Rocky Mountain Radar does not condone the use of excessive speed on the highways, nor does it endorse breaking the speed limit laws of the United States of America. Please drive safely when using this or any other electronic product in your car.

The Rocky Mountain Radar scramblers are designed to give you radar and laser scrambling from the front half of the car.

FREQUENTLY ASKED QUESTIONS

• *Can I test it with roadside trailer radars?*

The trailers you see on the side of the road that show your speed are not legal to write tickets. They do not contain the sophisticated sampling computers that are in police radar guns. Since our units confuse the computer and there is none, they will not work reliably against the trailers.

• *Can the police detect it?*

The radar and laser scramblers do not have RF emissions and cannot be detected.

• *What states are they NOT legal in?*

The Rocky Mountain Radar scramblers are **not** legal in Colorado, Utah, California, Nebraska, Oklahoma, Minnesota, Illinois, Tennessee, South Carolina

(unless the selectable scrambler feature is set to off) and Virginia. The Rocky Mountain Radar detectors are **not** legal in commercial vehicles in most states. Use caution in these states.

• *What is Punch-Through?*

The signal reflected by the car gets stronger the closer the target is to the radar gun. The Rocky Mountain Radar scrambler uses the radar signal as a carrier and reflects it through a high-gain antenna. It will work only as long as the scrambling signal is greater than the signal from the target. Punch-through is when these signals are equal or within 50-200 feet.

• *What is the effective range?*

The radar scrambler works at four to six times the range of the radar gun. The laser scrambler is effective at more than two times the Lidar range.

• *How do I know the scrambler is working?*

When you turn the unit on and it goes through the self-test (a series of tones), to confirm all the circuits in the scrambler are working correctly.

• *Why won't my unit turn on?*

Check the following:

- 1) The on/off thumbwheel on the side of the unit
- 2) The fuse in the power cord. (To check the fuse in the power cord, unscrew the silver tip end that plugs into the cigarette lighter. If the fuse is blown, replace with a 2 amp fast burning fuse).
- 3) The fuse for your cigarette lighter
- 4) If it is none of these, return the unit to the manufacturer for repair/replace at our discretion.

For a complete list of FAQ's please visit our website www.rockymountainradar.com

Warranty

The RMR-C430 is guaranteed against defects in workmanship and materials for 36 months from the date of purchase. Should any malfunction occur, the unit will be repaired or replaced by the factory at no charge.

Returns should be sent freight prepaid with an explanation of the problem, your **physical address** (no PO Boxes), **proof of purchase, and telephone number. If the unit is out of warranty there is a \$62.00 service fee and a 90 day warranty on repairs.**

Send to: Rocky Mountain Radar
6469 Doniphan Drive
El Paso, TX 79932
Phone: 915-587-0307
Fax: 915-587-6408

We do not accept COD shipments. We do not accept freight collect shipments

Accessories

The following accessories are available:

Windshield mount	\$ 5.00
Suction Cups (set of 2)	\$ 2.00
2 amp fuses (two each)	\$ 2.00
Power Cord 9ft. straight	\$ 5.00
Owners Manual*	\$ 3.50
Set of Colored Bezel Panels (5)	\$ 5.00

A **\$10.00** shipping and handling fee will be added to the total of each order.

*Free download at www.rockymountainradar.com

VISA/MC and Discover Accepted

TAMPER FEE

Tampering with, disassembly, water damage, or modification of this product voids the warranty and a tamper fee of **\$150.00 will be charged to repair it. Unit is not weather or waterproof.**

Manufactured Exclusively by Rocky Mountain Radar in the USA
www.rockymountainradar.com