

Unexplained Doppler Radar Readings

If a radar (any manufacturer or model) has unexplained readings, there are four main sources. See the table below for definitions and explanations.

Type of Unexplained Reading	Symptom	Caused by	How to test for this type of unexplained reading
Legitimate unseen moving or vibrating, or humming target	Normally, a continuous false speed (can be either a steady number and/or twice that number). If a weak signal, it can also be intermittent false readings.	There may be an unseen moving or vibrating object. Examples are fans, motors, and transformers, installed on poles or inside or outside buildings. A vibrating (from internal fan) automobile dashboard.	Normally this false signal will be directional. Point the gun in a different direction and it should disappear. If you are inside a building or vehicle, it may not be directional because of radar reflections from the building walls or vehicle windows. For suspected auto fan noise, varying the fan speed should show a varying radar speed reading.
Legitimate unseen radio or electronic signal	Depending upon how far the radar gun is located from the RFI source, the false readings can be either continuous or intermittent.	RFI from nearby electronic equipment or transmitters. Examples are nearby computers, scoreboards, radio & TV towers, televisions, or any other electronic equipment.	It is necessary to test the gun at another location - at least 1 km away from the possible interfering signal.
Microphonics	Mechanical vibrations (or scratching) of the radar gun housing, will produce momentary radar speed readings.	This is normal for some Radar guns – depending upon the model. To prevent this problem, don't scratch or tap the case while taking speed readings.	Scratch the case with your fingernail or a metal object. Tap the case with your finger or a metal object. The erroneous speeds will occur in tandem with the mechanical tapping or scratching. To prevent this problem, don't scratch or tap the case while taking speed readings or lay the gun on a vibrating surface.
Spurious Readings	Usually momentary false speed readings. It is not normal to see continuous false speed readings.	A poorly designed or defective radar gun can have random Spurious Readings. These readings are caused by internal electronic noise inside the electronic circuits of the gun itself.	To test for Spurious Readings, point the radar gun straight up, at an empty sky. Transmit continuous for several minutes (do not click the trigger). If radar speeds are shown, it is very likely that the gun is suffering from Spurious Readings and is either poorly designed or defective. <u>Make sure that insects, birds, or airplanes are not in the sky – the radar can see what you cannot see with your eyes.</u>

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