

Why Traffic Radar Gets Wrong Readings

The greatest weakness of traffic radar is the way in which it gives its information. It has only one readout and it displays only one number. You can point the radar antenna down a two-lane road with traffic going in both directions. Vehicles can range in size from economy cars to semi trucks. And all the radar will show is one number.

Where does it get its one number? And how can the operator know which of the coming and going vehicles is responsible?

The truth is, often the operator cannot know for sure. He has to guess. This is the most serious of all of traffic radar's limitations. Because it's made to a low-bid price, it must necessarily be a relatively simple device. Without the modulated beam of military radar, traffic radar cannot distinguish between targets within range. Without the radar screen, it cannot identify for the operator which target it's reading.

At least the low power of traffic radar is an asset here in that it limits surveillance to line of sight.

Guessing The Offender

To make up for the lack of a modulated beam and the absence of a radar screen, traffic radar makers use the cheapest imaginable substitute. They simply program the electronics to disregard all but the strongest reflection in the case of stationary radar, all but the two strongest reflections in the case of moving radar. This is the method of all traffic radars. The number displayed on the readout comes from this simplification. It's up to the operator to decide which - if any - of the moving vehicles within range is producing the unseen reflection. If there is only one vehicle in range, probably that vehicle is responsible for the number, although it could be caused by an electrical interference or blowing trash or some other less obvious distraction to the microwaves.

If there is more than one vehicle in range, it's up to the operator to decide which one is producing the reflection. Is it the closest one to the antenna, or is it the largest one in the pack? In truth, it could be either, depending upon a host of subtleties.

A skilled operator intent on justice wouldn't write a ticket unless he was absolutely sure. A less skilled operator might write the ticket thinking he had the right answer, and be wrong. A careless operator intent on filling his quota might see the number and single out a likely perpetrator - the red sports car - and be done with it. When you deal with humans, you take your chances.

Because traffic radar is built to a low-cost target, it is not the infallible electronic instrument that it purports to be. And because operators have a tough time keeping track of invisible beams, traffic radar invites human error in vehicle identification.

No Government Standards

While military radar is produced to exact government standards to assure accuracy, traffic radar is not subject to any government standards whatsoever. In the late 1970's there was wide-spread publicity about radar error including a tree that was "clocked" at 86-mph. The National Highway Traffic Safety Administration (NHTSA) assigned to the National Bureau of Standards the task of testing all brands of traffic radar in use at the time, for the purpose of discovering the source of these errors and proposing federal standards to eliminate them. In January 1981, these proposed standards were published in the Federal Register. The newly-installed Reagan administration took no action on the proposal.

After three years of government inaction on the problem, the International Association of Chiefs of Police (IACP) provided non-government standards by which all traffic radar units could be tested to assure accuracy: Volume I of the standards was published in April, 1984, Volume II in June, 1984.

In June 1986, the traffic-radar manufacturers announced the formation of their own trade association, saying that they would not submit traffic radar units for IACP testing. *Instead, the radar makers would use their own standards.*

These industry standards have not been published thus far. So, in effect, there are no performance requirements for traffic radar, and the claims of 86-mph trees and 28-mph house have never been refuted.