



FIELD TESTING SUMMARY

K40 PRODUCT LINE

Products Evaluated- K40 provided Speed Measurement Laboratories, Inc. its complete product line for field evaluation including the Undetectable remote model, the RD650VG-2 dash model, and the Laser DefuserPlus laser countermeasure. Field testing of the product line was completed over a three month period, May-July. Radar and laser guns were operated by a certified, active police officer with over twenty-five years experience writing radar and laser citations.

Product Features/History/Analysis- K40's Undetectable remote detector is marketed exclusively through auto dealers and the aftermarket 12 volt installation market. This detector requires installation with the radar antenna(s) mounted behind the grill or cowlings and the in-cabin control panel mounted under the dash or custom mounted into the dashboard. The Undetectable is unique compared to other evaluated remotes as it is the **only** model capable of front and rear radar antenna reception, coupled with K40's Laser DefuserPlus laser receiver/transceiver countermeasure. With front and rear radar antennas, the K40 **honestly** provides 360 degree protection. The Laser DefuserPlus is designed to receive a police laser gun transmission at 904 nanometers, notify the driver both visually and audibly, and emit a return pulse rate the laser gun cannot understand, resulting in no laser speed reading by the laser gun. Considering covert mounting, front/rear reception, and laser protection, the K40 Undetectable is our pick of remote detectors. K40's dash model RD650VG-2 plugs into the cigarette lighter and mounts on the dashboard or windshield. In SML's field evaluation the RD650VG-2 had the lowest false alert rate of any of the thirteen competitive radar detectors when exposed to a false alert rich section of Interstate 10 in metropolitan El Paso, TX.



Radar/Laser Field Testing- The biggest threat from radar guns is how they are used. Officers are trained to trigger the radar guns for approximately one or two seconds to obtain a speed reading of a target vehicle. This is called "Instant On Radar" or "Pulsed Radar." Radar guns are not left in the constant transmit mode, and seldom are they used past 1,000 feet for legal and practical reasons. The measure of a radar detector is its ability to pick up the "Instant On" radar signal well in advance of the radar gun's location, i.e. hear him do it to someone else before he does it to you. In our field test, the test vehicle containing the K40 Undetectable and the dash model RD650VG-2 were placed at a cone 1/2 mile (2,640 feet) from the radar gun's firing position. A target vehicle moved toward a cone placed at 1/4 mile (1,320 feet) and was hit with X band (10.525 Ghz), K band (24.150 Ghz), and Ka band (34.7 Ghz) instant on signals to obtain a speed reading. The SML staff member in the K40 equipped car then reported if the K40 detectors correctly reported the different radar gun transmissions. Both the K40 Undetectable and RD650VG-2 correctly reported all the different radar guns at least **twice** the normal targeting range of the radar guns used with the K40 equipped car at 1/2 mile. At 60 mph this would allow fifteen (15) seconds for the driver to adjust their speed after notification of radar use by the K40 detectors (60 mph x 1.46 = 87.5 fps / 1320 ft. = 15.06 seconds).

Police laser guns are aimed at the front license plate. In the seventeen states without a front license plate, laser guns are aimed at the vehicle's headlight. At 500 feet the diameter of a laser beam is only 18 inches and this infrared, monochromatic, one milliradian, laser emission does not scatter like a police radar signal, i.e. if you are in a trailing vehicle, you receive no advanced warning to laser being aimed at the vehicle in front of you. The Laser DefuserPlus is contained in a license plate mounting frame and mounts to the front and/or rear license plate frame. In states without a front plate, the Laser DefuserPlus' modular design allows mounting without the license plate frame. Laser is seldom used past 1,000 feet for practical and legal reasons (see Judge Reginald Stanton's ruling New Jersey Superior Court 1998). Most commonly, laser targets vehicles approximately 700 feet from their location. In SML's field testing, cones were placed on the test course at 700 and 500 feet. The K40 Laser DefuserPlus



equipped target vehicle was driven at two different speeds, 30 mph and 60 mph, toward the cones. When the driver arrived at a cone, they would notify the laser officer by radio and the officer would fire the laser gun. The officer used multiple aiming points, first the front license plate and then the headlights. The DefuserPlus was run two times in each category or a total of ninety-six (96) runs at the six laser guns used: Kustom Pro II, Kustom Pro III, Stalker LZ-1, UltraLyte LR, LTI 20/20 Marksman, Laser Atlanta L-1. In the ninety-six (96) tries, only twice did any of the laser guns get a speed reading on the Laser DefuserPlus target vehicle.

Based upon our field evaluation, K40 detectors and Laser DefuserPlus perform as advertised providing superior protection against police radar and laser guns.