Speed measurement

Speeding is always an essential part of evidence before the court in a DUI (Driving Under the Influence) case. Police departments currently use four primary speed measurement devices: Each method has its own advantages and disadvantages.

Speedometer Clocks: are still the least expensive method of clocking speeders and can be extremely effective. The patrol car speedometer is used to pace vehicles. The most important component of this method is an accurate speedometer that is factory certified; it can be calibrated several ways: via the fifth wheel attached to the rear of the vehicle; using a stopwatch that has been certified to clock the patrol car over a measured course; or using a dynamometer, which allows the patrol vehicle wheels to rotate in place while the speedometer is checked against the device for discrepancy.

RADAR: an acronym for "Radio Detection And Ranging," radar involves the transmission of electromagnetic waves that reflect off a moving object. When the wave is reflected, it changes frequency and is interpreted by the radar unit in a speed calculation. This change is referred to as the Doppler effect. In the simplest terms, the Doppler effect explains how as a sound gets closer to a person, it gets louder. Radar may be used in both moving and stationary modes.

Average Speed Computers: are devices that use a programmed computer to measure speed by dividing the distance travelled by the time it took to travel the distance. They are typically mounted in police patrol cars and can be used in both a moving and stationary mode.

LIDAR (Light Detection And Ranging): uses an infrared light wave emitted at frequencies that allow the beam to be focused into an extremely narrow target area. The devices are usually operated in the hand-held mode. Although they can be used through the glass it reduces the device's range; therefore, an open window or exterior use is preferred.

(Taken from http://www.dui1.com/Dui_Lawyers_Driving14.htm)

EXCERCISES

1 True or false?

a. Speedometer clocks are very expensive but extremely effective. T F

b. RADAR is an acronym for "Radio Detection And Ranging". T F

c. Average Speed Computers are attached to a wheel of a police patrol car. T F

d. Lidar has to be used from behind glass. T F

2 Complete.

Speeding is always an ..... part of evidence before the ..... in a DUI case. Police ..... currently use four primary speed measurement .....: Speedometer Clocks, RADAR, ... Speed Computers, and LIDAR. Speedometer Clocks are the ..... expensive method, Radar uses ..... . waves, and LIDAR uses infrared .....

least • important • electromagnetic • court • departments • devices • light • average

3 Match questions and answers.

QUESTIONS		ANSWERS	
A	What is the most important component of the least expensive speed measurement device?	1	It changes frequency; this change is used by the radar to calculate speed.
B	What happens to the electromagnetic wave emitted by a RADAR when it is reflected?	2	An accurate factory certified speedometer is the most important component of a speedometer clock.
C	What is a LIDAR? How are these devices commonly used?	3	It is a device that uses an infrared light wave to calculate speed. These devices are usually operated in a hand-held mode.

A	B	C .....