

**MUNICIPAL AND REGIONAL POLICE USE OF RADAR AND LIDAR TECHNOLOGY  
FOR SPEED ENFORCEMENT**

**STATEMENT TO HOUSE TRANSPORTATION COMMITTEE**

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**PRESENTED BY:**

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Good morning, Chairmen Taylor and Keller and members of the House Transportation Committee. I am Captain Beth Readler, Director of the Policy and Legislative Affairs Office of the Pennsylvania State Police and I am pleased to be testifying before you on the topic of the use of speed timing devices by municipal and regional police departments.

The ability for police officers to utilize the most advanced technology to ensure compliance with speeding laws is of paramount importance in the efforts to reduce deaths and serious bodily injuries attributed to crashes caused by excessive speed. According to PennDOT crash statistics, speed was a factor in 31,083 crashes, of which 458 were fatal, in 2016.

RADAR (Radio Detecting and Ranging) and LIDAR (Light Detection and Ranging) are two common tools available to the nation's law enforcement officers to attempt to prevent deaths and serious injuries caused by traffic crashes resulting from excessive speed. The use of RADAR is not new to Pennsylvania, nor is LIDAR unfamiliar throughout the nation. RADAR's utilization has been a large component of the Pennsylvania State Police's (PSP) speed enforcement program since 1961 in large part because of its accuracy and ease of use. A Trooper using RADAR would point the unit in the general direction of a target vehicle. Radio beams are emitted from the device in a cone shape covering approximate 80 yards at a range of approximately 1,000 feet and are then reflected off the target vehicle. The unit displays the speed from the strongest

return signal received, and an audible tone confirms the reading coming from the target vehicle. This, along with the officer's visual estimation of speed, ensures the correct vehicle is being targeted. In addition, the portability of a RADAR unit presents an advantage over some other types of speed detection devices in that it allows an officer to quickly set up enforcement operations or move to another location efficiently. Conversely, some methods of speed detection require a more lengthy process and require an officer to leave costly equipment unsupervised while they pursue a violator.

With LIDAR, ease of operation is another asset. An infrared laser beam is sent out from the unit. Speed is calculated by the length of time it takes for the beam to reflect off the vehicle and return to the unit. The laser beam is very narrow. At 1,000 feet, the laser beam is approximately three to four feet wide. At shorter distances, the beam's width is even less. LIDAR allows officers to pinpoint specific vehicles because of the narrow beam emitted by the device. Thus, an officer can observe the vehicle he or she thinks is traveling the fastest, target that vehicle and immediately obtain a speed reading, virtually eliminating any doubt of interference from other vehicles. It should be noted, however, that one limitation of LIDAR is that it cannot be utilized when a patrol vehicle is in motion, where RADAR can.

Since 2014, PSP has cited over 650,000 individuals for Speeding and approximately 93 percent of those citations involved the use of RADAR as the speed detection type. Even though PSP is aggressively enforcing violations for speeding using RADAR, Pennsylvania is ranked fourth in the nation behind Texas, California, and North

Carolina for most speeding-related traffic fatalities, according to a recent report by the National Highway Traffic Safety Administration. Therefore, it's crucial that all of the Commonwealth's police officers have the most efficient and commonly accepted technology and equipment at its disposal to attempt to keep its communities safe.

Under current law within Title 75, all Pennsylvania police officers are authorized to determine the rate of a vehicle's speed using a mechanical or electronic speed timing device. All police officers may also use electronic devices that calculate speed by measuring the elapsed time between measured points on a road surface. However, though speed enforcement initiatives by police departments in Pennsylvania may be conducted through the utilization of stopwatches, speedometers, and electronic devices such as VASCAR, Pennsylvania has the distinction of being the only state in the country that expressly prohibits the use of RADAR in speed detection by any police agency except the PSP. In addition, Pennsylvania is the only state in the nation that does not allow its police officers or State Troopers to use LIDAR for speed enforcement.

Furthermore, even though PSP is authorized to use RADAR for speed enforcement, it must only be conducted in a stationary mode as that is the only method currently authorized for use by PSP.

PSP believes the most effective speed enforcement programs would use a combination of RADAR, moving RADAR, and LIDAR. The Pennsylvania State Police is fully supportive of the use of RADAR and LIDAR by the Commonwealth's municipal and regional police departments. This would enable Pennsylvania to join the rest of the nation in using the latest technology to augment its enforcement programs. The acquisition of the most modern speed timing equipment available will greatly enhance Pennsylvania police officers' ability to detect and enforce speeding violations, thereby reducing the number of serious injury and fatal crashes in which excessive speed is the primary causal factor.

In closing, PSP would like to thank the Committee for its interest in the safety of citizens in the Commonwealth and I would be happy to answer any questions that you may have.