

# Doppler effect case study

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It is used in law-enforcement to measure the speed of moving vehicles and is often used in professional spectator sport, for such things as the measurement of the speed of pitched baseballs, runners and tennis serves. A radar speed gun is Doppler radar unit that may be hand-held, vehicle-mounted or static.

It measures the speed of the objects at which it is pointed by detecting a change in frequency of the returned radar signal caused by the Doppler Effect, whereby the frequency of the returned signal is increased in proportion to the object's speed of approach if the object is approaching, and lowered if the object is receding.

Such devices are frequently used for speed limit enforcement, although more modern LIDAR speed measurement instruments, which use pulsed laser light instead of radar, have begun to replace radar guns in the past decade, because of limitations associated with small radar systems. The radar speed gun was invented by Bryce K. Brown of Decatur Electronics in March 1954, and was first used in Chicago, Illinois in April 1954. Patrolman Leonard the new device.

Baldy was the TLS officer to issue a SP inning ticket using Radar gun ideology was first introduced after World War II in the 1950's, and made a more popular commodity during the 1950's with the creations of interstate highways. In fact the invention of the radar gun the new highways would have looked more like the Daytona 500 race track rather than Interstate 95. The popularity grew when in 1954 the first radar gun produced by Decatur Electronics was used by police forces across the country.

Even with the introduction of accurate radar being introduced in 1954, and radar use becoming more popular, the idea did not truly take off until the 1960's. Much like radio which uses different signals to work, so too does the radar gun. However, rather than AM, FM, XML radio channels it is X, K, and Aka frequencies being received by the radar guns.

When radar guns became a standard for police to monitor highway speed the radar gun was using an X band frequency was used throughout the 1960's and this would not change with any momentum until 1972. The frequency type was shifted to K band.

After K band, the frequencies on radar guns were shifted to Aka bands, thus creating a more powerful, and accurate reading by police forces. X band covers frequency levels between 8-12 Gigahertz, K band covers between 18-26.5 GHz, and Aka band covers frequency levels between Radar itself is a very scientifically advanced technology and in itself is very hysterics as well as fascinating. Scientists learned how to put this advanced technology in to a tracking form, and the technology with both radar and the gun. Ninth the radar have truly soared. Which might leave people wondering what exactly a radar gun is?

Radar is an acronym for Radio Detection and Ranging and the gun itself is a radio transmitter and receiver.

It works by pointing at an object and sending out signal and returning the same signal. It does so by aiming its signal at the moving object and then having its signal bounce back off of the moving object creating the agreement of speed in which the object is moving. The radar gun was

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invented by Bryce K. Brown of Decatur Electronics in March 1954 and first used in Chicago, Illinois. Brown along with a team of scientists was looking for a more effective way for police forces to track speeds and catch offenders.

The success rate of Brown's Invention was astounding, and over the years changes were made and different devices were added to make the radar gun more effective.

Decatur Electronics to this day still manufacture and supply the majority of police forces with their radar guns and other radar technologies. MANILA, Philippines—Angered by the death of a prominent Journalist in a road collision, the Metropolitan Manila Development Authority (MAD) on Sunday said it was planning to equip its motorcycle units with radar speed guns to go after speeding motorists, particularly passenger bus drivers.

MAD Chair Francis Toleration also announced he would meet with the agency's task force overseeing the implementation of traffic rules along Commonwealth Avenue in Guenon C TTY, where the accident that killed Journalist Chit Estella occurred on Friday night. " We will also introduce the use of speed radars on board our motorcycle units," lentoid said in a radio interview. " These will identify violators and once they are pulled over, we can have the violation tickets printed and issued to drivers. The driver of the Universal Bus Line unit that rammed the taxicab carrying Estella has been identified and criminal charges will be filed against him on Monday in the Guenon City prosecutor's office, an official said.

Senior Supt. Arnold Santiago, Guenon City Police District Traffic Enforcement Group head, identified the driver as Daniel Espanola, 39, a native of Dave del Sure. Santiago denied reports that Espanola had been arrested. He said the police were also still looking for the driver of a second vehicle that hit Estella cab.

The officer on case, ESP.

Nelson Postal, said that ' arioso teams had been dispatched to locate the drivers and the bus conductor of the bus, who also fled the scene. Postal added they would study the video footages taken on Commonwealth Avenue at the time of the accident. The cab's driver survived with minor injuries. The MAD has initially armed traffic enforcers with radar guns to gauge the speed of vehicles passing on Commonwealth Avenue. It has enforced a 60-kilometer-per-hour speed limit on the thoroughfare starting in January. E number of road mishaps on Commonwealth Avenue has earned for it the label ' killer highway.

" METHODOLOGY An observational method is used in this study. In the Philippines, MAD or the Metro Manila Development Authority uses Radar Gun. Manual, Philippines ? Lawmakers attributed the continued accidents in Guenon City's Commonwealth Avenue to lack of radar speed guns to identify and apprehend those violating the 60 kph speed limit in the country's so-called killer highway. During the House Committee on Metro Manila Development, Novas Rep.