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## TAKIN' AIM AT RADAR GUNS

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PENNSYLVANIA STATE troopers have written thousands of speeding tickets with radar guns that a state police expert says are so defective they would clock a roadside rock at 70 mph.

The manufacturer of the Genesis radar gun - a hand-held unit widely used by cops across the nation - has offered to fix the problem, which can cause faulty speed readings, for free. But Pennsylvania State Police officials say the guns are "exceptionally accurate" and don't need to be fixed.

State police - the only cops in Pennsylvania allowed by law to use radar to write speeding tickets - have ticketed more than 200,000 motorists for speeding since troopers began complaining about erroneous readings from their Genesis radar guns in late 2002. Those tickets have cost motorists more than \$26 million in fines, according to state court figures.

Some of those motorists were wrongly nailed for speeding with the error-prone radar guns, but it's impossible to tell which tickets were bad, according to court testimony from the state police official who oversaw the maintenance and performance of radar equipment for 11 years.

State cops own 572 Genesis radar guns and 399 radar units made by another company, state police records show. Police records don't correlate radar-gun type to speeding tickets, so it's unclear how many tickets are called into question. State troopers use radar for about 87 percent of the speeding tickets they issue, records show.

"There's no doubt the state police are using defective equipment and John Q. Public is being screwed," said Harrisburg lawyer J. Michael Sheldon, who represents a man who beat his speeding ticket after testimony about the radar gun's flaw.

"Once the state police discovered the problem, they should have corrected it," he said. "But the bottom line is they didn't and they continue to use defective equipment. Meanwhile, people are being ticketed for speeding, having their insurance raised and possibly losing their licenses, and that is just flat-out wrong."

The radar problem exploded in September, when a motorist who was certain he had been wrongly ticketed for speeding hired Sheldon and sued. Sheldon subpoenaed Timothy Shingara, who then oversaw the maintenance and performance of the state police radar equipment, to testify at the motorist's Cumberland County court trial.

Shingara testified that the Genesis radar gun sometimes malfunctions when plugged into the cigarette lighter of a 2003 or 2004 Ford Crown Victoria - the primary state police patrol car. State cops own 1,225 Crown Victorias from those years, according to the state Department of General Services.

According to a transcript of the Sept. 4, 2003, trial, Shingara explained that the Crown Victoria's electrical system labors to power the array of modern police equipment. Under the heavy electrical load, the alternator, which recharges the car battery, runs constantly and produces an electrical noise, he said.

"You probably heard in the years past on your radios - it's called 'alternator whining' - a whining sound in your car radio," Shingara testified. "The Genesis radar interprets that as speed readings in the 70-mile-an-hour range."

In other words, the radar gun could clock a rock at 70 mph because the gun is reading the alternator whine, not the rock's speed, he testified.

The expert said he discovered the problem in fall 2002 after troopers began complaining that the radar guns sometimes gave what they suspected were faulty speed readings of 70 to 72 mph. After testing the suspect radar guns at state-approved labs, he said, technicians identified the intermittent problem.

"The problem with this is one gun would work fine in one car; you put it in another car and it will exhibit this problem," he testified.

Decatur Electronics, the maker of the gun, acknowledges the problem and has recommended a solution, he testified.

"Our division has the fix and has recommended to headquarters to implement it," Shingara said.

He encountered a similar problem with Genesis guns in 1999. Then, state police and the radar manufacturer installed a simple fix, he said.

State police brass reacted immediately to Shingara's testimony. Lt. Col. Ralph Periandi ordered a moratorium on the use of

### DN GRAPHIC:

How it works - and  
sometimes doesn't

Genesis radar on Sept. 4, the day Shingara testified in court.

State police engineers tested the Genesis guns further, said Periandi in a recent telephone conference call with a reporter and six other state police officials, and could find no problem. He lifted the moratorium on Dec. 12.

Though Periandi acknowledged that Decatur Electronics had recommended a fix for the Genesis radar guns, he said it was not necessary.

Periandi also attacked his own expert, saying Shingara's testimony about the Genesis problem had been "incorrect."

"These units are exceptionally accurate and they are equipped with an internal override that blocks any frequency noise when they're operated properly," Periandi said.

Motorists who have gotten speeding tickets from troopers since 1999, he said, "should not have concerns they had an erroneous speeding ticket. If they received a speeding ticket on a radar violation, they were accurately monitored."

However, a source with extensive knowledge of the state police radar problem said the testing about which Periandi was referring would not have detected the Genesis radar glitch. The problem and the proposed fix are well-documented within the state police hierarchy, said the source.

Sheldon, the attorney, called Periandi's comments "rubbish."

"They don't want this story to get out," Sheldon said. "Can you imagine how many people are going to be challenging speeding tickets from the state police now? There's a problem and I think there's a cover-up."

Shingara was transferred away from radar duties after his testimony, which Sheldon says was a "retaliatory act" proving his cover-up claim. The department is trying to find a way to fire him, too, sources said.

In the meantime, Shingara's job title, radio-telecommunications specialist II, remains unchanged. In late September, said state police spokesman Jack Lewis, radar oversight was shifted from the state police Bureau of Technology Services, where Shingara works, to the Bureau of Patrol.

"The change was made because the Bureau of Patrol actually oversees day-to-day operation of the radar units," said Lewis. He said the shift had nothing to do with Shingara's testimony in court, and he would not comment on whether the department was trying to fire Shingara.

Shingara, 55, has more than 30 years of experience in radio telecommunications and is certified by the National Highway Traffic Safety Administration to teach the operation of traffic radar in Pennsylvania.

The state police code of conduct prohibits him from talking with the media. He referred inquiries to Lewis.

Robert Sanner, president of Decatur Electronics in Decatur, Ill., said he was unaware of Shingara's testimony. He said he met with Pennsylvania State Police officials two or three months ago, but would not elaborate.

"I am not going to tell you anything," he said recently. "That's their business, not mine. The state police are handling it. I don't know what their details are. I have told them in the past that if you have a problem, we'll help you fix it."

The International Association of Chiefs of Police, which represents most of America's 17,000 police agencies, still has the Genesis radar gun on its approved list. The organization is unaware of the Pennsylvania problems, a spokesman said.

Decatur Electronics is one of the four largest radar-gun manufacturers in the United States and has hundreds of police-agency clients around the world. Eighty percent of police agencies in North America use the Ford Crown Victoria as their main patrol vehicle, according to Ford.

The events that led to Shingara's stunning testimony began the evening of Nov. 29, 2002, the day after Thanksgiving.

Shortly after 8 p.m., Brent Hanlin set out for his father's hunting camp in Perry County, a yearly ritual for him and some male relatives.

He left his Cumberland County home and drove east on Route 533, a poorly lit road made worse because of a mist. His dashboard lights, which had been flickering, stopped working altogether. As he passed an intersection, he saw a car's lights come on. A minute later, he saw a police car's flashing lights in his mirror.

He pulled over, puzzled, he said, because he was certain he had not been exceeding the 45-mph speed limit.

Trooper Gregory Styers, who was using a hand-held Genesis radar gun and driving a 2003 Ford Crown Victoria, told Hanlin he'd clocked his 1994 VW Jetta going 70 mph, according to Styers' testimony at the trial.

Hanlin denied it. He became agitated, insisting he had not been speeding and searched the car for his registration and proof of insurance.

"I kept looking and he kept getting agitated that I hadn't found them yet," said Hanlin, now 33. "Finally he got mad and said, 'If you don't find the papers I'm going to put you under arrest.'"

The trooper charged Hanlin with disorderly conduct and resisting arrest, and took him to jail for the night.

Hanlin, still insisting he had not been speeding, decided to fight the charges.

"I never go 70, which is what he said I was going," he said.

He called famed defense lawyer William Costopolous, who referred him to Sheldon. Sheldon soon began "putting two and two together," he said.

"Brent was just so vehement about only doing 45," said Sheldon. "After I drove through that intersection a couple of times I started thinking about it, and it's not a place where you could at night smartly do 70 miles an hour."

Sheldon called the state police and asked who their expert was on the performance of radar guns. He was told it was Shingara. He subpoenaed Shingara for the trial.

"I played a hunch," Sheldon said.

Two of Shingara's bosses - Kathy Skiles, director of the Technical Support Division, and Mark Wrightstone, telecommunications supervisor - were present for Shingara's testimony, Sheldon said.

Before Shingara took the witness stand, Cumberland County Assistant District Attorney Jaime Keating asked Sheldon to explain to the court why the expert's testimony was relevant.

Common Pleas Judge Edward Guido Jr. ordered the jury out of the room to hear what Shingara had to say.

After Shingara revealed the problems with the Genesis radar guns, the prosecutor withdrew Hanlin's speeding charge.

Keating said he had withdrawn the speeding charge "in part" because of what Shingara had said.

In the end, Hanlin was convicted of resisting arrest and acquitted of disorderly conduct. He was put on a year's probation and fined \$500.

"I really wanted to appeal it. I just don't have the money," Hanlin said. "I have a wife and a young daughter. They're more important.

"I am happy that the truth is coming out about the radar gun," he added. "That really helps me feel like something good came out of this. I just hope they fix the problem."

Former State Police Commissioner Paul Evanko announced the purchases of the Genesis radar guns with fanfare on Dec. 29, 1997.

"Radar has no equal as a reliable and effective tool in the enforcement of speed-limit laws," Evanko said then. "Now the department has more equipment than ever before to ensure that drivers respect speed limits throughout the commonwealth."

The Genesis guns cost the state police \$617 each, records show. The purchase of them was controversial within the department, according to a source familiar with the decision-making process. The guns were chosen over higher-quality models because Decatur Electronics was the lowest bidder, the source said.

In 1999, troopers began sending the Genesis guns back to the radar labs because the troopers were getting "phantom readings" in the 70-mph range when the guns weren't pointing at anything, the source said.

Shingara testified at Hanlin's trial that he soon discovered that the Crown Victoria electrical system was the culprit. When the radar gun is plugged into the idling car's cigarette lighter, Shingara said, the gun was reading the alternator whine, not the radar signal.

Radar technicians fixed that problem with a simple electronic filter that was small enough to fit inside the gun itself. The public was never alerted to the problem.

When troopers began sending the guns back in fall 2002 with similar complaints, the problem wasn't so easy to fix, the source said.

By then, the lights, the mobile computer units, the radios and the other electrical equipment in the police cars put such a strain on the car's electrical system that the filters that fixed the earlier problem would not work, the source said.

Two possible solutions have been proposed to the state police, including a free battery pack that would allow troopers to operate the radar gun without plugging it into the car's cigarette lighter. State police have rejected the fix.

"I don't know why," the source said. "Other than that it would be an embarrassment for the state police to say they've made a mistake and for the past year-and-a-half, a high percentage of their tickets are not valid."

Meanwhile, troopers continue to write speeding tickets, even though many have become aware their radar gun is not working right but do not know what's wrong, said the source.

"That's what's frustrating," the source said. "You have these guys out there trying to do their job, and you're giving them crap to do it. They're made to trust the equipment and the equipment doesn't work."

**produce electricity, resulting in a steady whine.**

**Pressing a trigger sends a radar signal out . . .**

**The radar signal goes out . . .**

**. . . if the signal hits a car, the signal returns and is read by the radar gun. The difference between the two signals is used to calculate the speed of the car.**

**. . . but the radar gun reads the alternator whine instead of the returning signal.**

**GENESIS HAND-HELD RADAR GUN**

- Manufactured by Decatur Electronics, of Decatur, Ill.
- One of four major radar manufacturers for U.S. police departments.
- Pennsylvania State Police own 572 Genesis guns.
- Average cost: \$617

**FORD CROWN VICTORIA POLICE INTERCEPTOR**

- Pennsylvania State Police own 1,225 2003 and 2004 Crown Victorias.
- 80 percent of the police vehicles in North America are Ford Crown Victorias.

SOURCES: Daily News research, Cars.com

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