

## A Witness, Tucked Under The Dashboard

*An electric box found in many cars records data that can be used in accident investigations.*

After a day of golf and an evening of drinking at the country club, the 2001 Corvette headed home.

Just after 10 PM the Corvette slammed into the back of a Ford Escort with such force that the Escort's rear axle was pushed forward into the driver's seat. The two cars locked in a deadly embrace, traveled 100 feet before the Escort broke away. The Corvette went 800 feet further, ending up in a field. The driver of the Escort died later that night. Accident investigators estimated the Corvette's speed at more than 100 MPH, in the 45 MPH zone. And there was a silent witness to back the investigator up.

Hidden under the Corvette's radio, in the center of dashboard, was a 3-by-5 inch electronic box. Little known to the public — but an increasingly important source of evidence for police — the device recorded data from the Corvette for the five seconds before impact.

Since 1999, millions of automobiles made by General Motors Corp., including the Corvette, have been equipped with what the company calls a Sensing and Diagnostic Module. Industry insiders say that as many a dozen other manufacturers install similar technology under different labels. Each device is commonly called the "black box."

Accident investigators decoded the data available from the module: the engine's revolution, whether brake was depressed, whether the driver's seat belt was buckled, how far down the gas pedal was pushed, and the speed — 106 MPH. It was part of the evidence used to charge the driver of the Corvette with

vehicular homicide while driving drunk. The driver initially challenged the data, prosecutors said. But then he pledged guilty and was sentenced to seven years in prison.

The black box wasn't meant to be a tool for criminal investigators when GM first put the modules in its cars in 1990. It was designed to gather information to be used to improve air bag systems.

They could take a computer and model and crash a car, but they were interested in real-world crashes, said B.J. Turner, a former Alabama state trooper, now a consultant who gives black-box seminars to police.

Generally, all newer cars with air bags are equipped with modules that determine when the bags are deployed. But only the data from GM cars is readily available to law enforcement.

Throughout the 1990's, information reentered by the module could be analyzed only by GM. But a few years ago, the automaker allowed a California company, Vetronics Corp., to manufacture decoders for general use. When they became available in March 2000, police investigators were able to perform their own analyses.

"It's an unbiased witness to an accident," said James Kerr, Vetronix's program director. "I don't foresee it replacing accident investigation, but it will become a powerful tool once it's on all vehicles."

The Institute of Electrical Electronics Engineers, based in Piscataway, N.J., is working on a universal standard for car data

recorders, and hopes to have a proposal next year.

Prosecutors and lawyers often are not very familiar with the devices.

Don Slavik, a Milwaukee lawyer who specializes in product liability involving automobiles, said the black box's notoriety was a recent development. A convention of the Association of Trial Lawyers of America featured a session titled "The Black Box: It's Not Just in Airplanes Anymore." "Many lawyers are unaware of its existence, when the fact is it can resolve things much faster," said Slavik, who has taught and written about the black box.

Legal experts agree that the box cannot stand alone in court," Turner said. "The policeman does all his work, comes up with his figure, then downloads the data from the car. If it comes within a few miles per hours, it adds great credence to his findings."

Information from the device has been challenged in courts around the nation both on validity of data and invasion of privacy.

"To the extent that people have not been apprised that the black boxes [are] in their vehicles, we think there's a privacy issue," said Stefan Presser, legal director of the American Civil Liberties Union's Philadelphia chapter. "Now I understand, if you read...the owner's manual, you're told these boxes are in there. But I dare say the average person doesn't read the manual that closely."

Slavik agreed that it can "smack of Big Brother is watching, with all cars someday having a recording device." Car manufacturers have taken the position that the black box's contents belong to the vehicles owner. But prosecutors

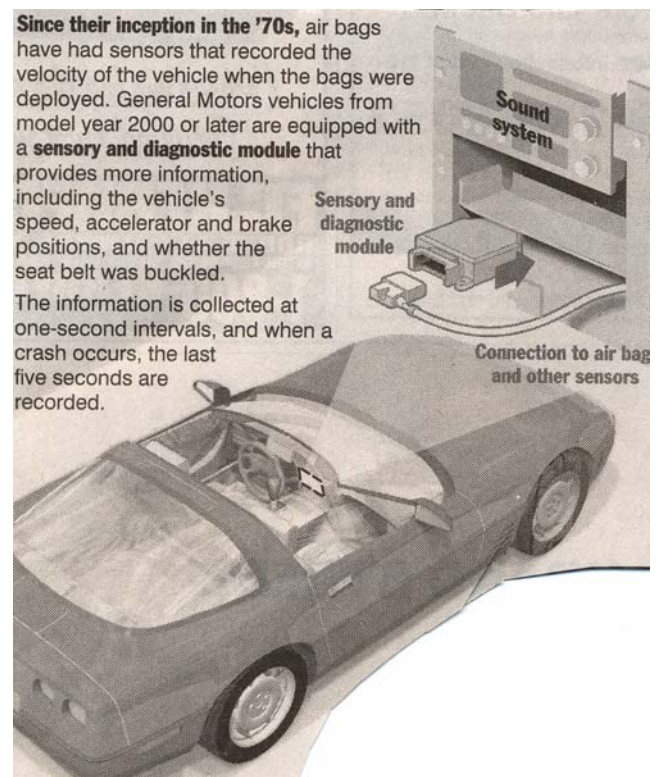
say collecting the box's data for a case is like any other evidence gathering.

"It's possible that some of the issues may have to be sorted out by court decisions" Turner said "But the question always is, did you have the legal authority — either a search warrant or consent — and justification to conduct a search for a piece of evidence? If you can demonstrate that, there should be no problem."

Turner believes that part of the concern over the devices has been raised because "so much mythology and legend has developed in a relatively short amount of time."

You have to remember: It doesn't record anything unless you're in a crash, " he said

"It can't tell where your kids were last night, or what you've been doing the last six days.



Story and illustration from the Philadelphia Inquirer, June 2, 2002