

The Snoop in Your Coupe
Data Recorders Interest Parents, Police

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On a freeway north of Los Angeles, as Ryan Evans's sleek 1998 Honda Accord coupe speeds above 70 mph, the black box tucked under his front passenger seat grumbles a grating noise, warning the 18-year-old that he's going too fast.

If he doesn't ease up on the gas pedal within 10 seconds, the warning gets nastier. That's when Evans's souped-up "event data recorder" snitches on him. It will note the speeding incident, along with other dangerous driving behaviors, in a computer file.

"Most people's first response is, 'I don't want this in my car! It's an invasion!' But that all changes," says the Thousand Oaks, Calif., teenager. After 15 months of driving under close scrutiny of the black box, he is convinced he's a better driver.

Road Safety International, a Thousand Oaks firm that has sold 10,000 of its professional-grade recorders to paramedic, police and firefighter fleets, designed the cheaper consumer model that Evans is test-driving specifically for parents to install in their teenagers' cars. The modular components record data, such as seat-belt use, speed, hard braking, hard cornering, pedal-to-metal acceleration and throttle position, that can be uploaded to home computers using software that analyzes driving performance.

Sound futuristic? The \$280 RS-1000 black box went on sale yesterday after RSI's owner, Larry Selditz, unveiled it at the National Safety Council's conference in Chicago.

But that's only the beginning: In three months, an under-\$200 global positioning system accessory will be available to record where the car goes, "like bread crumbs on a road map," says Selditz. Next year, the communications module will allow parents to locate their teen drivers on an online map in real time.

"If my son says he's going to a friend's house to study tonight and he ends up going to the beach, I'm going to see that. If he speeds to the beach, I'm going to see that, too," says Selditz, who had the idea for the device when his son neared driving age.

"We're not trying to make their life miserable, and I won't tell you that they love it," he says. "But it really does change driving behaviors."

Selditz's projects are an advancement on the not-so-new factory-installed event data recorders (EDRs) that are now standard equipment in an estimated 25 million to 40 million automobiles in this country.

But those devices, probably one of the auto industry's most open secrets, are becoming the focus of privacy debates. Those questions are growing as law enforcement officials make greater use of the recorders in crash investigations and carmakers use their data as self defense against consumer allegations about poor-performing vehicles.

Until recently, however, few Americans even knew cars were equipped with the devices. A 2002 survey by the Insurance Research Council found that two-thirds of car buyers didn't have a clue about the data recorders.

"People say, 'What black box?' " says Susan Ferguson, senior vice president of research at the Insurance Institute for Highway Safety, the "crash-test dummy" group based in Arlington.

Rep. William Janklow's high-profile manslaughter case changed that last month, when authorities pulled the EDR from the South Dakota Republican's 1995 Cadillac, searching for information from the crash that killed a motorcyclist.

"EDRs in cars do not record conversation or long periods of time" -- as do the so-called "black boxes" on planes -- "only a snapshot of technical data of the car's operation in the seconds prior to collision," says General Motors spokesman Jim Schell, adding that the device in Janklow's car is too early a model to provide evidence to investigators.

GM, a leader in EDR technology, has been installing the nondescript silver devices in its air-bag-equipped vehicles since 1974. The brains that fire air bags at the right moment, those first EDRs also recorded minimal data in crashes to help auto engineers and safety experts analyze bag deployment. Starting with its 2000-year vehicles, GM tweaked its recorders to capture even more data, during the five or six seconds before a crash. The enhanced EDRs are now installed in all GM models.

Other carmakers install EDRs, too, but they emphasize that their systems collect less data than does GM's. Ford Motor Co. has EDRs in all cars, light trucks and SUVs manufactured in North America since the 2002 model year.

Toyota reportedly is testing enhanced EDRs. Saab, a unit of GM, started installing enhanced EDRs midway in its 2003 U.S. model production.

Carmakers don't talk much about EDRs, though GM, for example, has included information about the system in its owner's manuals since 1994 and plans to expand the section for its 2004 cars. Manufacturers say they worry that some owners might try to disconnect the EDRs, damaging a car's air bag system and breaking laws against tampering with car safety equipment.

Mercedes spokesman Fred Heiler says the company has developed super-EDR technology "sitting on the shelf. But we have made a corporate decision not to put it into our cars until government and society figure out what they're going to do with this information."

The EDR is something of a Pandora's box, where law enforcement, industry interests and privacy issues can be at odds.

Law enforcement and lawyers like EDR data because it can be even more telling than skid marks or car body damage. A Florida case last May could prove to be a benchmark. Recorder data showed Edwin Matos was traveling 114 mph when his Pontiac Firebird struck two teenage girls. Matos was convicted of vehicular manslaughter in their deaths.

"It is a powerful tool that's going to be used in criminal investigations in traffic homicide cases," says Michael Horowitz, the prosecutor in that case.

In Maryland, Montgomery County State's Attorney Douglas F. Gansler plans to introduce EDR evidence next month in the state's first hit-and-run case tried as a felony. "It has been used so rarely in criminal cases because when you have that kind of information, it very often leads to a plea," Gansler says.

Dave McAllister, who heads the Virginia Crash Investigation Team based at Virginia Commonwealth University, says his organization is releasing a report this week on the validity of EDR data in 20 deadly accidents in the state.

"The bottom line is the validity of the data captured in the EDR is highly accurate," especially when combined with physical evidence at the crash scene, McAllister says.

As a result of the study, all Virginia State Police now have the hardware to download EDR data.

The National Highway Transportation Safety Administration currently is considering a petition to require the enhanced EDR systems in all vehicles.

"If we don't have good data, we don't have good rules and programs," NHTSA Administrator Jeff Runge says, mentioning the potential for additional recorder capabilities, such as automatic crash location notification. "It would be very useful if all the EDRs captured that."

But that kind of thinking sets off warning alarms for privacy advocates. They worry that EDRs are just another entry in the network of monitoring technology that is intruding on everyday life -- from supermarket discount cards that track customer grocery-buying habits, to home computers that store records of every Web site visited, to speed-trap cameras.

Privacy advocate Stephen Keating is also troubled by the lack of disclosure about EDRs in cars. "The deployment of technology this widespread without any notice given to car owners puts [drivers] in a tough spot," says Keating, the executive director of the Privacy Foundation, a Denver-based research group.

Legal standing is another problem, he says. "If someone's in an accident, does the data belong to the driver? The insurance company? Law enforcement? The automaker? They're all going to want to get a piece of this action."

GM, for example, has used recorder data in legal battles and won. In a case decided a year ago in Illinois, Danielle Bachman sued GM, saying that when an airbag in her Chevrolet deployed improperly she crashed into a delivery van. Using EDR data, the company proved that the bag deployed on impact.

Spokesman Schell emphasizes, however, that GM's policy is to get owner permission to extract EDR data. "The only other way that data can be extracted is through a court order."

Julie Rochman, spokesperson for the American Insurance Association, says insurance companies aren't drooling over EDR data, as some skeptics suggest. "We don't have access to the data. There is no magic cable that insurers can just plug in and download it," she says.

A California bill, approved unanimously by the legislature and now awaiting Gov. Gray Davis's signature, would require carmakers to disclose that their vehicles have recorders and what data they track. It also would clarify that EDR data belongs to vehicle owners and can be accessed only with owner permission, by court order, or for safety research in which owners are anonymous.

"With any type of new technology, people start to imagine where is this all heading," Schell says.

But that's exactly what people should be imagining, says Lee Tien, the senior staff attorney at the Electronic Frontier Foundation, a San Francisco group.

He raises concerns that EDRs could be developed to gather driver location records or track car movement just as "enhanced 911" enables authorities to locate wireless callers.

"The EDRs will get a lot more Orwellian than they are now," Tien says. "This is not something that's 20 years off. This is very much a near-term thing."