

Simulator training flaws tied to airline crashes

By [Alan Levin](#), USA TODAY

Flaws in flight simulator training helped trigger some of the worst airline accidents in the past decade, according to a USA TODAY analysis of federal accident records.

More than half of the 522 fatalities in U.S. airline accidents since 2000 have been linked to problems with simulators, devices that are used nearly universally to train the nation's airline pilots, the records show.

Simulator training is credited with saving thousands of lives. But the problem, according to [National Transportation Safety Board \(NTSB\)](#) case files and safety experts, is that in rare but critical instances they can trick pilots into habits that lead to catastrophic mistakes.

Last month, the NTSB blamed deficient simulator training in part for the Dec. 20, 2008, crash of a [Continental Airlines](#) jet in Denver.

NTSB: Pilots need air-hazard skills

TRAINING: Current simulators can mislead pilots

The [Boeing](#) 737-500 skidded off a runway at high speed and burst into flames because of the pilot's inability to steer while trying to take off in gusty cross-winds, the NTSB ruled. Six people suffered severe injuries.

Investigators also found that many airline simulators, including Continental's, made such takeoffs seem far easier than in the real world. To make matters worse, the airline and its trainers were never told the simulators were inaccurate, the safety board found.

"That's a problem," said Kevin Darcy, an aviation safety consultant and former chief accident investigator with Boeing. "It's really important to know how that data is programmed and where the holes are. Otherwise you are fooling yourself."

Simulators revolutionized training starting in the 1970s by allowing airlines to train pilots almost exclusively on the ground.

However, as realistic as they may seem, simulators are only as good as the data used to program them. Current simulators aren't accurate when a plane goes out of control, which has prevented their use in training for the leading killer in commercial aviation.

Buoyed by recent scientific research, the NTSB voted earlier this year to urge federal regulators to improve simulators so that they can instruct pilots how to regain control in an emergency.

The NTSB has repeatedly raised concerns since the 1990s about the potential for simulators to give pilots a false impression of how their aircraft work. Simulator training was cited in some of the deadliest accidents in the past decade. Among them:

- After a [Colgan Air](#) plane went out of control and killed 50 people died near Buffalo on Feb. 12, 2009, the NTSB found that airline simulators needed to be improved to give pilots better training in such emergencies.
- On Nov. 12, 2001, an [American Airlines](#) pilot's aggressive use of the rudder caused his jet to break.