

Upgraded ELTs Urged

Operators of general aviation aircraft should be required to install upgraded emergency locator transmitters (ELTs) with features that provide more precise information about aircraft location, the U.S. National Transportation Safety Board (NTSB) says.

In a safety recommendation to the U.S. Federal Aviation Administration (FAA), the NTSB said that the 406-megahertz (MHz) ELTs should be installed “at the earliest possible

opportunity.” The NTSB noted that the worldwide satellite search-and-rescue system will stop processing alerts for older 121.5-MHz ELT signals on Feb. 1, 2009, and suggested that the FAA consider establishing a compliance date for the upgrade before then.

The 121.5-MHz signal is an analog signal emitted by ELTs and other devices, including pizza ovens and stadium scoreboards; as a result, every time a 121.5-MHz signal is detected by satellites, it must be

verified. Data show that more than 99 percent of these signals are “false or non-emergency alerts,” the U.S. National Oceanic and Atmospheric Administration (NOAA) says.

In contrast, a 406-MHz ELT emits a digital signal “that allows for a unique identification code to be transmitted along with its distress signal,” the NTSB said. “Because

each identification code is unique and required by law to be registered in a NOAA database, rescue authorities can immediately identify exactly which aircraft is in trouble and, more importantly, get in touch with the emergency point of contact registered to the aircraft’s ELT. This allows the rescue coordination centers to quickly confirm whether the distress is real and thus begin to mobilize appropriate [search-and-rescue] authorities.”

Signals from a 406-MHz ELT are stronger than those from a 121.5-MHz ELT, and are accurate to within 1 to 3 nm (2 to 6 km); in comparison, the position indicated by a 121.5-MHz ELT is accurate to within 12 to 15 nm (22 to 28 km).

Because a federal law currently requires installation of either a 121.5-MHz ELT or a 406-MHz ELT, the NTSB recommendation asks the FAA to “seek authority from Congress to require the installation” of 406-MHz devices.



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Disorientation

The crew of a McDonnell Douglas MD-83 deviated from their approach course to Dublin Airport after mistaking the red obstacle lights on the roof of a nearby building for runway approach lights, the Irish Air Accident Investigation Unit (AAIU) says.

A preliminary AAIU report on the Aug. 16, 2007, incident said that as the airplane deviated to the left of the approach course for Runway 34 and descended below the minimum descent altitude, an air traffic controller issued instructions to turn right and climb and then provided radar vectors for an approach and landing on Runway 16.

During the subsequent investigation, AAIU personnel conducted a series of approaches to Runway 34 and found that the four red obstacle lights atop a 16-story building located southwest of the runway threshold “appeared at night to resemble the red and white lights of a runway approach light system,” the report said.

As a result of the investigation, the Irish Aviation Authority (IAA) issued an operations notice for Dublin Airport to require that “when Runway 34 is in use, all ATIS [automatic terminal information service] broadcasts will include the following phraseology: Caution — lights on a building 1.5 nm [2.8 km]

southwest of the threshold of Runway 34 have the potential to disorientate flight crews.”

Also as a result of the investigation, the AAIU recommended an IAA review of the suitability of the obstacle lighting on the building.



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Automatic Heat

Following a 2005 icing incident involving a Boeing 717-200, the U.S. National Transportation Safety Board (NTSB) has recommended requiring that air data sensor heating systems on all new airplanes be designed so that they activate automatically after engine start.

The NTSB, in a safety recommendation to the U.S. Federal Aviation Administration (FAA), said that the FAA should require the change for all new airplanes certificated under U.S. Federal Aviation Regulations Part 25, "Airworthiness Standards: Transport Category Airplanes." In addition, the NTSB recommended modification of existing airplanes certificated under Part 25 to incorporate automatic activation of the system whenever possible. If modification is not possible, flight deck warnings should provide "an upgraded warning associated with the failure to activate the heating system," the NTSB said.

In the May 12, 2005, incident, the crew of a Midwest Airlines 717 experienced unreliable airspeed indications while climbing through 19,000 ft in heavy rain and icing conditions. After experiencing "significant gains and losses of altitude," the crew declared an emergency, regained control and diverted to Kirksville, Missouri, U.S. None of the 80 people in the airplane was injured in the incident, and the airplane was not damaged.

The NTSB said that its investigation, which is continuing, has focused on the air data sensor heating system, which heats the pitot probes that provide airspeed indications on the flight deck. Pilots of 717s must activate the air data sensor heating system manually, as a pre-takeoff checklist item; cockpit warnings and advisories serve as reminders.

"The Safety Board was unable to determine from available evidence whether the pilots activated the air data heating system before the event," the NTSB said. However, analysis of data from the flight data recorder revealed "differences in airspeed between the captain's and first officer's flight displays and rates of airspeed change [that are] consistent with a lack of air data sensor heating while the airplane climbed into colder temperatures."

Tests revealed no deficiencies in the pitot/static system, the air data sensor heating system or airspeed indication systems, and the absence of such deficiencies "suggests that the lack of pitot probe heating ... was caused by ... the flight crew's failure to activate the system," the NTSB said. The cockpit warnings and advisories had been ineffective, the NTSB added.



U.S. National Aeronautics and Space Administration

Improvement Strategy

The International Civil Aviation Organization (ICAO), working with African civil aviation authorities and the air transport industry, has developed a new strategy to improve aviation safety in Africa. The policy has been endorsed by representatives of 40 states in ICAO's African region and by other members of the aviation community.



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The *Comprehensive Regional Implementation Plan for Aviation Safety in Africa* represents "the most coordinated and inclusive effort ever to deal with the very serious safety challenges facing the majority of African states," said Roberto Kobeh González, president of the Council of ICAO.

The plan emphasizes a "holistic and systemic approach" to safety improvements and calls for identification of safety risks, development of prioritized recommended actions and continuous monitoring and evaluation, ICAO said.

The plan will combine elements of ICAO's Global Aviation Safety Plan and the industry's Global Aviation Safety Roadmap to "focus on activities with the highest return for improving safety," ICAO said.

European Safety Initiative

The European General Aviation Safety Team (EGAST), designed to serve as a forum for the sharing of safety data and best practices, has held its first meeting in Cologne, Germany.

EGAST includes representatives of manufacturers, regulators, flying clubs, accident investigators, international organizations and researchers, and is intended to help revitalize general aviation.

EGAST is part of the European Strategic Safety Initiative (ESSI), which was established in 2006 to enhance European aviation safety through analysis of safety data, coordination of safety initiatives around the world and implementation of cost-effective action plans.

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Turning Down the Heat

Helicopter operators should be warned of the dangers of using standard refueling nozzles during “hot” refueling, or refueling while an engine is running, the Irish Air Accident Investigation Unit (AAIU) says.

In a safety recommendation to the Irish Aviation Authority (IAA), the AAIU said that the IAA should issue an aeronautical information circular to disseminate the warning, as well as to prohibit the hot refueling of helicopters if the fuel pump does not have a refueling nozzle with a vapor seal.

“Using a standard nozzle, the fuel displaces vapor in the tank, causing the vapor to exit through the filling point,” the AAIU said. “The filling point is invariably located high on the side of the helicopter, close to the engine. Consequently, flammable vapor exiting at the filling point can be ignited by the hot engine exhaust, or by ingestion into the engine(s), if the helicopter is refueled while the engine is running.”

The safety recommendation was prompted by AAIU’s ongoing investigation of the Sept. 23, 2006, hot refueling of a Eurocopter AS 350 at a helicopter landing site in County Kildare and the helicopter’s subsequent off-field landing because of low fuel. The report said

that, because a pilot must remain at the flight controls during hot refueling, he or she cannot visually check the contents of the fuel tanks to ensure that they contain sufficient fuel for the planned flight. The investigation was continuing.



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Managing Risks

The Civil Aviation Safety Authority of Australia (CASA) is seeking input from the aviation community on the emerging risks of passenger operations. The information, being collected over the next three to five years, will be used to aid in development of longer-term risk management programs, CASA said.

“These may be risks within the aviation industry which are present now and are likely to increase, or are not yet present but are likely to emerge over the next three to five years,” CASA said. “They may emerge either through changes to the operational task which the supporting

systems have not adapted to, or cases where the supporting systems themselves have deteriorated and are no longer controlling risks as well as they did before.”

The information is being solicited online at <casa.gov.au/corporat/emergingrisk/index.htm>.



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In Other News ...

The **European Union (EU)** has added two airlines to its list of those banned for safety reasons. The September revision of the EU “blacklist” added Ukrainian Mediterranean Airlines, based in Ukraine, and Mahan Air, based in Iran. ...

Mick Quinn has been named deputy CEO of operations at the Civil Aviation Safety Authority of Australia; he is a veteran air safety official at Qantas and the Emirates Group and a former executive director of rail safety regulation in New South Wales. ... Capt. **Henry P. “Hank” Krakowski**, formerly vice president of flight operations for United Airlines, has been named chief operating officer of the U.S. Federal Aviation Administration.

Compiled and edited by Linda Werfelman.