

For it is a proven fact that exposure to extremes of temperature and weather conditions is often more hazardous to survival than injuries sustained during the crash itself.

A worldwide leader in making such fast location possible is **Spar Aerospace Ltd.**, the Canadian company that was a major player in Canada's pioneering Alouette 1 (1962) and Alouette II (1965) satellite programs. The same company that designed and manufactured the world-famous Canadarm which was used extensively during the capture, repair and deployment of the Hubble Space Telescope in December 1993.

Having supplied what are known as crash position locators, cockpit voice and flight data recorders around the world for both

military fixed and rotary wing aircraft for over 25 years, the company is designing and producing the next generation of such life saving devices.

Spar's flight data and cockpit voice recorder use solid state recorder technology to collect data on aircraft performance and have evolved into first-line diagnostic tools for accident prevention through regular monitoring of the recorded data.

A truly classic example of innovative engineering that is generating tremendous international interest, is the deployability of these recorders and locators. Deployment away from the aircraft avoids the intense destructive forces and fires which occur during an aircraft crash by separating and lifting an airfoil containing the recorder and locator away from the plane.

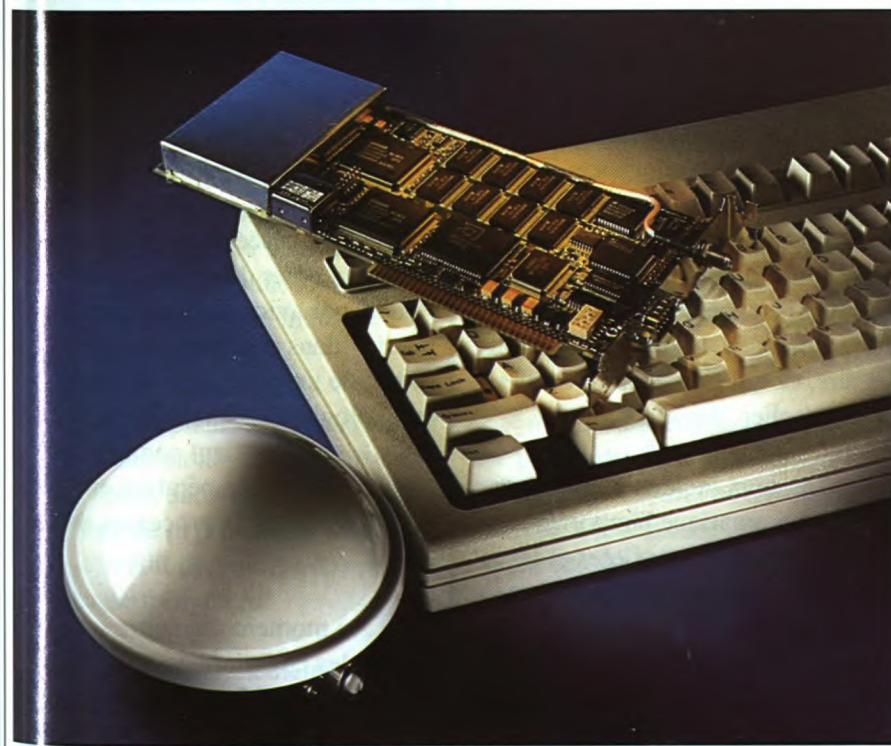
Tests have verified performance of deployable systems at supersonic speeds of Mach 1.2, that is at impacts of 100 feet per second, and shock loads that can exceed 4,000 G.

Typically flush-mounted to the exterior of the airframe, the airfoil can be integrated into new designs of aircraft or retrofitted. Once a deployment command is received, a release unit pushes the leading edge of the airfoil away from its mount and its forward speed creates aerodynamic lift which allows it to fly away.

Rapidly slowing to survive landing away from the crash site, the aerodynamic shape of the airfoil serves to limit penetration into soft surfaces such as swamp, wet snow or thin ice, ensuring transmissions regardless of terrain.

Once released, these new Spar systems immediately transmit a radio homing signal via satellite from the downed aircraft and a unique feature is their ability to float indefinitely on water while transmitting that signal.

Indicative of Spar's leading edge on such technology is the fact that these systems were selected in 1992 by the U.S. Navy for all new production F/A-18 aircraft and in May 1994, the company won a multi-million dollar contract from the U.S. Navy to upgrade such units on their fleet of P-3C maritime patrol aircraft. The contract called for the upgrade and supply of 173 Crash Position Locator (CPL) systems to replace existing units. ➔



NovAtel's GPS Card uses satellite-based radio signals to pinpoint location of aviation traffic.

La carte GPS brevetée de NovAtel émet des signaux de navigation d'un satellite pour localiser les mouvements du trafic aérien.