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DRDO's black box can eject from crashing plane & float

Chennai: Learning from past air crashes, DRDO has developed an ejectable and floating black box for planes. The machine will eject from an aircraft when it sinks after an accident and will get activated after coming in contact with water. Developed as part of 'Make in India' initiative, the product, aimed for use on planes and submarines, has received "notice of allowance for patent" in the US and Russia.

The product can prevent situations like the AN32 crash where in spite of using deep-sea probes, authorities were not able to trace debris in the sea. The ejectable black box becomes crucial for an aircraft as majority of the air routes are over the high seas where currents carry away crash debris making them difficult to find.

BSAT - Ejectable Black Box Recorder with Satellite Transmitter — has been developed and tested by Naval Science and Technology Laboratory of DRDO in Visakhapatnam. It attracted attention from experts at an exhibition "Science for Soldier" organised in Chennai at the CVRDe in Avadi.

Officials said the black box was developed based on the tracking technology currently used to detect torpedoes. DRDO decided to develop it further and has perfected it for an aircraft. It aims to export the product after receiving approvals.

"In most of the air crashes in the sea, the conventional black boxes fail probably because they sink to the bottom of the ocean which could be thousands of metres deep and also get affected by the currents or damaged in the impact of the crash. BSAT is designed to overcome all these hassles. It will eject the moment a plane touches the water and float. It can also be tethered to the flight so that some portion of the debris be retrieved," an official said.

It has a good use in defence as it can send out signals when a submarine sinks, but its chief use would be in civil aviation. "The invention is good because it will help find the location of the crash and retrieve flight information stored in the black box," said air safety expert and former pilot Captain Mohan Ranganathan.

A black box stores data including speed, altitude and other parameters of the aircraft when it is flying. The information is crucial to piece together the cause of an accident. Airbus and European aviation regulator are planning to have ejectable black boxes on commercial airliners in the next two years. Ranganathan said implementation of the new technology has to be hastened. Retrofitting of such equipment in aircraft will require permission and certification from Federal Aviation Agency.