



## EASA Safety Information Bulletin

**SIB No.:** 2010-33R1  
**Issued:** 26 June 2015

**Subject:** **Automation Policy - Mode Awareness and Energy State Management**

**Ref. Publication:** Commercial Aviation Safety Team (CAST) Safety Enhancement 30 Revision-5, August 2008: "Mode Awareness and Energy State Management Aspects of Flight Deck Automation", Final Report.

CAST/PARC Report Operational Use of Flight Path Management Systems, Oct 2013, published by FAA.

SIB 2013-02 Stall and Stick Pusher Training.

SIB 2013-05 Manual Flight Training and Operations.

SIB 2014-17 Aeroplane Mode Awareness During Final Approach.

ED Decision 2015/012/R of 4 May 2015 AMC-GM to Part-ORO (Issue 2 Amdt 2) and GM to Part-Definitions (Amdt 3) addressing Upset Prevention and Recovery Training (UPRT).

**Revision 1:** This SIB revises and replaces EASA SIB 2010-33 dated 18 November 2010, due to the development of regulatory material and in order to refer to the other subject-related SIBs. This SIB has been also revised to extend its scope.

**Applicability:** Commercial Air Transport operators of turbine-powered aeroplanes fitted with advanced flight deck automation capabilities.

**Description:** This Safety Information Bulletin (SIB) is issued to remind air operators of the importance of air crews continuing to be aware of mode awareness and to provide information useful for developing an Automation Policy. This SIB is based on significant amount of safety data collected through pilots' reporting programmes and accident investigation information, and on literature review performed mostly by PARC/PARC in the United States.

Automation has contributed substantially to the sustained improvement of flight safety. Automation increases the

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timeliness and precision of routine procedures reducing the opportunity for errors and the associated risks to the safety of the flight.

Nevertheless, automation has its limits. Critically, in complex and highly automated aircraft, flight crews can lose mode awareness or may not understand the interaction between a mode of automation and a particular phase of flight or pilot input. Such confusion can lead to the mismanagement of the energy state of the aircraft or to the aircraft deviating from the intended flight path.

More information about Mode Awareness and Energy State Management can be found in CAST Safety Enhancement (SE) 30 Revision 5. This document also contains a sample automation policy based on a set of common industry practices that are known to be effective that should be referred to when preparing an Automation Policy.

CAST Report on SE 30 Revision 5 was complemented in 2013 by CAST/PARC Report Operational Use of Flight Path Management Systems, Oct 2013, published by FAA. Central concept is flight path management through proper use of automation and of manual flying instead of automation management (a more restrictive concept).

Several EASA Safety Information Bulletins have been published on related subjects and the Agency published in 2015 regulatory material addressing Upset Prevention and Recovery Training (UPRT). Adequate flight path management and automation management contribute preventing stall and upset in the first place.

**Note:** This SIB on Automation Policy is prepared in a context, in which air operators are requested to provide an Operations Manual which should contain Flight Procedures, one of them being related to the policy on the use of autopilot and auto throttle for aircraft fitted with these systems in accordance with the Regulation (EU) No. 965/2012, ORO.MLR.100, (a) 8.3.18.

#### Recommendation(s):

Air operators are recommended to:

- Prepare, in cooperation with airplane manufacturers, an Automation Policy which should in particular address the seven following topics:
  - Philosophy
  - Levels of automation
  - Situational awareness
  - Communication and coordination
  - Verification
  - System and Crew Monitoring
  - Workload and System Use

A core philosophy of “**FLY THE AIRPLANE**” should permeate the automation policy prepared by air operators.

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- If an Automation Policy already exists, assess the policy against the above topics and identify any needed changes.
- Ensure that each topic is regularly reinforced in operating procedures and training programs.
- Regularly train staff on the Automation Policy and related operating procedures, including flight manual emergency procedures.
- Regularly review the Automation Policy and related operating procedures for continuous safety improvement.

**Contact(s):**

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