

113TH CONGRESS
2^D SESSION

H. R. 5337

To direct the Administrator of the Federal Aviation Administration to issue regulations to improve flight recorder and aircraft crash location requirements on certain commercial passenger aircraft in accordance with new International Civil Aviation Organization flight recorder standards.

IN THE HOUSE OF REPRESENTATIVES

JULY 31, 2014

Mr. DUNCAN of Tennessee (for himself, Mr. PRICE of North Carolina, and Mr. PASCRELL) introduced the following bill; which was referred to the Committee on Transportation and Infrastructure

A BILL

To direct the Administrator of the Federal Aviation Administration to issue regulations to improve flight recorder and aircraft crash location requirements on certain commercial passenger aircraft in accordance with new International Civil Aviation Organization flight recorder standards.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Safe Aviation and
5 Flight Enhancement Act of 2014”.

1 **SEC. 2. FINDINGS.**

2 Congress finds the following:

3 (1) Whereas in 2012 the International Civil
4 Aviation Organization (“ICAO”) adopted a standard
5 requiring all new aircraft with a maximum certifi-
6 cated take-off mass over 15,000 kilograms for which
7 a type certificate is issued on or after 1 January,
8 2016, and which are required to be equipped with
9 both a digital flight recorder (referred to in this Act
10 as “FDR”), and a cockpit voice recorder (“CVR”),
11 to be equipped with 2 combination FDR/CVR re-
12 corder systems.

13 (2) It is in the public’s best interest that the
14 second combination FDR/CVR system installed
15 under the new ICAO standard uses a deployable
16 combination FDR/CVR/Emergency Locator Trans-
17 mitter (“ELT”) system to: maximize survivability;
18 prevent the need for underwater recovery of both
19 black boxes in water incidents; improve timely loca-
20 tion of the aircraft, accident site and survivors; and
21 to ensure rapid recovery of the FDR/CVR data for
22 timely safety and security analysis in all crash sce-
23 narios.

24 (3) Deployable recorder systems combine an
25 FDR, a CVR, and ELT into one crash hardened,
26 survivable “black box”, which releases from the air-

1 craft upon crash impact with land, water, and in the
2 event of in-air explosion, enabling it to avoid the
3 crash impact site and float indefinitely on water to
4 avoid time-consuming and costly underwater search
5 efforts.

6 (4) Deployable FDR/CVR/ELT black boxes
7 send a distress alert tracking signal to the free,
8 global constellation of Search and Rescue (SAR) sat-
9 ellite transponders known as COSPAS–SARSAT;
10 providing the position of the aircraft at point of im-
11 pact, aircraft tail number, country of origin, and lo-
12 cation of the deployable FDR/CVR/ELT black box
13 for quick recovery and analysis.

14 (5) Recent commercial aviation accidents exem-
15 plify a growing trend in difficult and costly under-
16 water aircraft CVR/FDR location and recovery ef-
17 forts:

18 (A) March 8, 2014, Malaysia Airlines
19 Flight 370, disappeared with 239 passengers
20 and crew. International search and recovery ef-
21 forts for the aircraft and black boxes are ongo-
22 ing involving 29 nations and hundreds of mil-
23 lions of dollars in resources, estimated to result
24 in the most expensive search and recovery mis-
25 sion in aviation history.

1 (B) June 1, 2009, Air France Flight 447,
2 crashed into the Atlantic Ocean with 216 pas-
3 sengers and 12 crew members. Despite locating
4 aircraft wreckage within 5 days, it still took
5 nearly two years and an estimated cost of over
6 \$160,000,000 to recover the FDR and CVR
7 from the bottom of the Atlantic Ocean at a
8 depth of 12,000 feet.

9 (C) June 30, 2009, Yemenia Airlines
10 IY626, crashed off of the coast of Comoros,
11 with 152 passengers and aircrew. The sole sur-
12 vivor, a 12-year-old girl, was found clinging to
13 wreckage after floating in the ocean for thirteen
14 hours. Her accounts estimated 30 to 40 pas-
15 sengers survived the crash but succumbed to
16 hypothermia due to the delay in locating the
17 downed aircraft. The FDR and CVR were not
18 recovered until nearly two months later, at a
19 depth of 3,900 feet.

20 (D) January 1, 2007, Adam Air Flight
21 574, carrying 102 passengers and aircrew
22 crashed off the coast of Indonesia. The FDR
23 and CVR were located nearly one month later,
24 but could not be recovered until seven months
25 later on due to the difficulty of the underwater

1 environment. The FDR and CVR were found at
2 a depth of 6,600 feet and 4,600 feet apart.

3 (6) Countries with extensive search and rescue
4 capabilities, such as Australia, Brazil, Canada, Den-
5 mark, Japan, Norway, United Kingdom, and the
6 United States, have equipped military platforms, in-
7 cluding commercial equivalent aircraft with auto-
8 matic deployable black box technology.

9 (7) Following the crash of Air France Flight
10 447, the French Bureau d'Enquêtes et d'Analyses
11 (BEA) led the International Flight Data Recovery
12 Working Group, consisting of over 100 safety ex-
13 perts, that scored deployable FDR/CVR/ELT sys-
14 tems the highest among all evaluated technologies to
15 improve aircraft and black box localization and re-
16 covery.

17 (8) There are no recurring service/data fees as-
18 sociated with the use of deployable FDR/CVR/ELT
19 systems. The COSPAS–SARSAT satellites, network
20 and supporting infrastructure that receives the alert
21 signal from the deployable FDR/CVR/ELT with the
22 aircraft crash location and black box location is a
23 free, global safety service managed by governments
24 around the world.

1 (9) In accordance with Public Law 110–53,
2 (Implementing Recommendations of the 9/11 Com-
3 mission Act of 2007), the Transportation Security
4 Administration conducted a pilot program that suc-
5 cessfully tested in concept, the ability of automatic
6 deployable recorder systems to improve rapid access
7 to flight data following commercial aviation crashes,
8 while also providing localization of downed aircraft
9 and potential survivors.

10 **SEC. 3. REGULATIONS REQUIRING DEPLOYABLE RECORD-**
11 **ERS AND OTHER PURPOSES.**

12 (a) REGULATIONS.—Not later than 1 year after the
13 date of enactment of this Act, the Administrator of the
14 Federal Aviation Administration shall issue regulations
15 that require all commercial passenger aircraft defined
16 under this Act be equipped with a deployable recorder sys-
17 tem as the second combination FDR/CVR recorder system
18 installed under International Civil Aviation Organization
19 Annex 6, Part I, Amendment 35—6.3.4.5.2 Combination
20 Recorders.

21 (b) SCHEDULE FOR COMPLIANCE.—The regulations
22 under subsection (a) shall require the installation of the
23 automatic deployable recorder system required under this
24 section on commercial aircraft that are ordered by an air
25 carrier on or after January 1, 2016.

1 (c) DEFINITIONS.—In this Act, the following defini-
2 tions apply:

3 (1) COMMERCIAL AIRCRAFT.—The term “com-
4 mercial passenger aircraft” means a jet aircraft with
5 a maximum certificated take-off mass over 15,000
6 kilograms, and which are required to be equipped
7 with 2 combination FDR/CVR recorder systems in
8 accordance with ICAO Annex 6, Part I, Amendment
9 6.3.4.5.2.

10 (2) DEPLOYABLE RECORDER SYSTEM.—The
11 term “deployable recorder system” means a flight
12 data recorder, cockpit voice recorder, and emergency
13 locator transmitter housed in one crash protected,
14 floatable unit that meets the performance specifica-
15 tions for a Deployable Recorder system under
16 United States Federal Aviation Administration
17 Technical Standard Order 123c (CVR), Technical
18 Standard Order 124c (FDR), and Minimum Oper-
19 ational Performance Specifications for Deployable
20 Recorders under EUROCAE ED–112A and all sub-
21 sequent updates to such requirements.

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