

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division
Washington, D.C. 20594

December 22, 2015

Cockpit Display – Recorded Flight Data

Specialist's Factual Report By Jane Foster

1. EVENT SUMMARY

Location: Atlantic Ocean
Date: September 10, 2015
Aircraft: Mooney M20T
Registration: N370MM
Operator: Private
NTSB Number: ERA15LA349

On September 10, 2015, about 1445 eastern daylight time, a Mooney M20T, N370MM, sustained substantial damage when it impacted the Atlantic Ocean off the coast of Atlantic City, New Jersey. The commercial pilot was fatally injured. Day visual meteorological conditions prevailed and an instrument flight rules flight plan had been filed for the personal flight. The flight was conducted under the provisions of Title 14 *Code of Federal Regulations* Part 91. The flight originated from Gaylord Regional Airport (GLR), Gaylord, Michigan, around 1220, with an intended destination of Atlantic City International Airport (ACY), Atlantic City, New Jersey.

2. RECORDED FLIGHT DATA GROUP

A recorded flight data group was not convened.

3. DETAILS OF INVESTIGATION

The National Transportation Safety Board (NTSB) Vehicle Recorder Division received the following devices:

Recorder Manufacturer/Model: **Garmin G1000 SD card**
Recorder Serial Number: **Unknown**

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3.1. Garmin G1000 SD Data Card Description

The Garmin G1000 Integrated Flight Deck is a collection of multiple avionics units which include flight displays, air data computers, attitude/heading reference system (AHRS), communications and other systems. A typical installation includes a primary flight display (PFD) and a multi-function display (MFD). Each display includes two SD card slots, an upper and a lower slot. The lower SD card slot is used by the system for software updates and various databases¹.

Depending on the display unit software, the aircraft can include a data logging feature. The data logging feature must be enabled by the aircraft operator. If the data logging feature is available and enabled, a SD card has to be installed in the upper slot of the MFD. Depending on the airframe and engine combination as many as 64 parameters can be stored at a rate of one sample per second (1Hz). According to the manufacturer of the display unit, one flight hour can be stored in approximately 2 MB.

3.1.1. Data Recovery

The SD cards were in good condition and the data were extracted normally from the recorder. Figures 1 and 2 show the fronts and backs of the SD cards.



Figure 1. Front of three SD cards as received.

¹ Databases can include terrain data, obstacle data, SafeTaxi charts, flight charts and airport terrain databases



Figure 2. Back of three SD cards as received.

3.1.2. Data Description

The G1000 SD cards contained firmware version and navigation databases that did not record data. No accident related data was recovered from the SD cards.