

NATIONAL TRANSPORTATION SAFETY BOARD
Vehicle Recorder Division
Washington, D.C. 20594

December 7, 2021

Cockpit Display – Recorded Flight Data

Specialist's Factual Report
By Michael Portman

1. EVENT SUMMARY

Location: Port Orange, Florida
Date: September 29, 2021
Aircraft: Cessna 172S
Registration: N116SV
Operator: Aviation Pacific Flight Training School
NTSB Number: ERA21LA388

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 MFD SD Cards**
Recorder Serial Number: **Unknown**

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 and an SD card has to be installed in the upper slot of the MFD to record data. 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. The SD card typically used is 2 GB in size and can store over 1,000 flight hours.

¹ Databases can include terrain data, obstacle data, SafeTaxi charts, flight charts and airport terrain databases
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3.1.1. Data Recovery

The SD card was in good condition and the data were extracted normally from the recorder.

3.1.2. Data Description

The G1000 SD card received was retrieved from a unit that contained firmware version 563.14. Based on information from the manufacturer, the unit does not store data. Therefore, no accident pertinent flight data were recovered from this device.