

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

April 3, 2015

Electronic Devices Factual Report

Specialist's Factual Report
By George Haralampopoulos

1. EVENT SUMMARY

Location: Steamboat Springs, Colorado
Date: August 9, 2014
Aircraft: Piper PA 28R-201
Registration: N3509M
Operator: Journeys Aviation Flying Club
NTSB Number: CEN14FA414

On August 9, 2014, about 1100 mountain daylight time, a Piper PA 28R-201 airplane, N3509M, impacted mountainous terrain near Steamboat Springs, Colorado. The pilot and passenger were fatally injured. The airplane sustained substantial damage. The airplane was registered to VSP Aviators LLC and operated by Journeys Aviation Flying Club under the provisions of 14 Code of Federal Regulations Part 91 as an instructional flight. Visual meteorological conditions prevailed at the time of the accident and no flight plan was filed. The cross country flight originated from the Steamboat Springs Airport (KSBS), Steamboat Spring, Colorado, about 1045 and was enroute to the Boulder Municipal Airport (KBDU), Boulder, Colorado.

2. DETAILS OF RECORDER INVESTIGATION

The National Transportation Safety Board's (NTSB) Vehicle Recorder Laboratory received the following devices:

Manufacturer/Model:	Garmin GNS 530
Serial Number:	78412859
Manufacturer/Model:	Apple iPad Mini (1)
Serial Number:	DLXLV31PFLMP
Manufacturer/Model:	Apple iPad Mini (2)
Serial Number:	F4KLV34SFLMN
Manufacturer/Model:	Go Pro Hero 3
Serial Number:	Unknown

2.1 Garmin GNS 530 Device Condition

Upon arrival at the NTSB Vehicle Recorder Laboratory, an exterior examination revealed the unit received noticeable impact damage (figure 1). External power applied resulted in no response by the unit. No data was recovered from the device.

Figure 1. Front face of Garmin GNS 530 as received.



2.2 Apple iPad Mini 1 Device Condition

Upon arrival at the NTSB Vehicle Recorder Laboratory, an exterior examination revealed the device received heavy impact damage with a cracked and shattered screen (figure 2). An interior inspection revealed debris on the circuit board containing the non-volatile memory (NVM).

The circuit board was removed and cleaned of biohazard by abrasively applying a mixture of filtrated water and ethanol. The circuit board was then placed in a vacuum oven to remove excess moisture at a temperature of 176 degrees Fahrenheit for 4 hours.

The cleaned circuit board was placed in a surrogate iPad mini. Several attempts to power the surrogate unit with the accident circuit board were unsuccessful. No data was recovered from the device.

Figure 2. Front face of iPad mini as received.



2.3 Apple iPad Mini 2 Device Condition

Upon arrival at the NTSB Vehicle Recorder Laboratory, an exterior examination revealed the device received heavy impact damage with noticeable bending throughout the device. An interior inspection revealed the circuit board containing the device's NVM had sustained deformation from flexure damage. Due to the impact damage, no recovery could be attempted and no data was obtained from the device.

2.4 Go Pro Hero 3 Device Condition

Upon arrival at the NTSB Vehicle Recorder Laboratory, an exterior examination (figure 3) revealed the device received minimal impact damage. The internal micro SD card containing the device's image data was located and removed.

Files were downloaded from the micro SD card. Two picture files were located and dated past the accident day. The pictures were determined to be from first responders to the accident scene. No data pertinent to the investigation were found.

Figure 3. Front face of GoPro Hero 3+ as received.

