

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division
Washington, D.C. 20594

November 1, 2018

Electronic Devices

Specialist's Factual Report
by Gerald Kawamoto

1. EVENT

Location: Umatilla, Florida
Date: September 28, 2017
Aircraft: Andys Gyroplane
Registration: N152AH
Operator: Private
NTSB Number: ERA17FA339

On September 28, 2017, about 1122 eastern daylight time, an amateur built gyroplane, N152AH, impacted a wooded area near Umatilla, Florida. The private pilot was fatally injured and the gyroplane was destroyed. The gyroplane was being operated under the provisions of 14 *Code of Federal Regulations* (CFR) Part 91 as a personal flight. Visual meteorological conditions prevailed at the time and no flight plan was filed for the local flight which originated about 1 hour 22 minutes earlier from Bob White Field Airport (X61), Zellwood, Florida.

2. DETAILS OF INVESTIGATION

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

Device 1: **LG G5**
Device 1 Serial Number: **N/A**
Device 2: **Main Rotor Tachometer**
Device 2 Serial Number: **N/A**
Device 3: **Engine Tachometer**
Device 3 Serial Number: **N/A**

2.1. LG G5 Device Description

Personal Electronic Devices (PEDs) are a category of devices comprised primarily of portable computing devices and mobile phones. Portable computing devices are typically capable of internet access, email, messaging services, and can run user-installed applications to perform specific tasks. Depending on the model, mobile phones can perform many of the same tasks as portable computing devices, plus have voice call and

text messaging capabilities. PED user and system data is typically stored on non-volatile memory (NVM)¹ and can be accessed through manufacturer-provided interfaces.

2.1.1. LG G5 Data Recovery

Upon arrival at the NTSB Vehicle Recorder Laboratory, an external examination revealed that the unit had sustained impact damage resulting in a cracked screen. Figure 1 shows the LG G5 as received. The device's SIM card was removed and the device was powered inside a Faraday cage to prevent connection with a network. The unit powered on normally and information was extracted to a PC via the built-in USB port.



Figure 1. LG G5 as received.

2.1.2. LG G5 Data Description

Upon powering on, Avare was shown in the phone's recently used applications. Avare is an open source aviation application for phones and tablets using the Android Operating System. The application can store flight tracking data to the device if the user has enabled the "Tracks" function. On the date of the accident the "Tracks" function was disabled and no flight data was stored to the device's memory. No photos or videos on the date of the accident were recorded on the device.

¹ Non-volatile memory is semiconductor memory that does not require external power for data retention.

2.2. Tachometer Device Description

A tachometer is an instrument used to measure the rotation or revolution speed of objects such as in motors and other machines. The device indicates the revolutions per minute (RPM) performed by the objects.

2.2.1. Tachometer Data Recovery

Upon arrival at the Vehicle Recorder Laboratory, an exterior examination revealed the engine and main rotor tachometers had sustained impact damage. Neither tachometer contained NVM so there was no data available to be recovered. Figure 2 shows the tachometers as received.

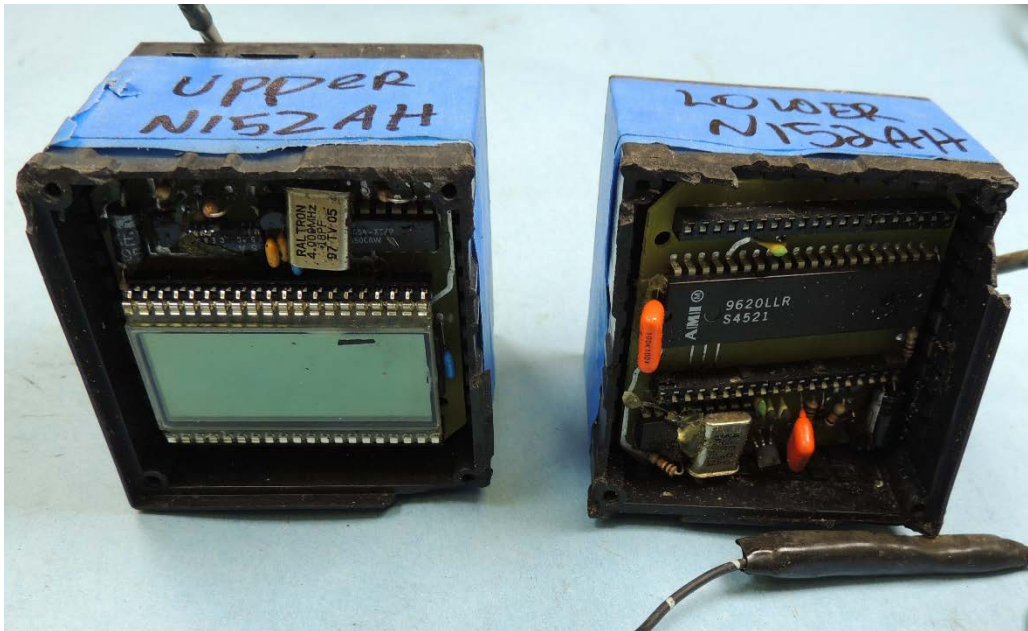


Figure 2. Tachometers as received.