

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

November 24, 2015

Global Positioning System (GPS) Device

Specialist's Factual Report
By Sean Payne

1. EVENT SUMMARY

Location: Carey, Idaho
Date: July 2, 2015
Aircraft: Piper PA-22
Registration: N8195C
Operator: Private
NTSB Number: WPR15FA206

On July 2, 2015, at an undetermined time, a Piper PA22, N8195C, collided with terrain near Carey, Idaho. The pilot was operating the airplane under the provisions of Title 14 *Code of Federal Regulations* (CFR) Part 91. The commercial pilot sustained fatal injuries. The airplane was destroyed during the accident sequence. The cross-country personal flight departed Moab, Utah, at 1726 mountain daylight time with a planned destination of Stanley, Idaho. Visual meteorological conditions (VMC) prevailed, and no flight plan had been filed.

2. GROUP

A group was not convened.

3. DETAILS OF INVESTIGATION

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

Recorder Manufacturer/Model: **Garmin Oregon 650t**
Recorder Serial Number: **30e007336**

3.1. Garmin Oregon 650t Description

The Garmin Oregon 650t is a portable GPS device with a 3 inch sunlight readable touch screen display. The device's screen allows for dual orientation, both in horizontal and vertical display modes, which change in reference to the device's position to the user. The 650t contains an 8 megapixel camera with a built in flash unit. The device is powered by two AA batteries or an included rechargeable internal NiMH¹ battery pack. The device comes preloaded with topographical maps for the United States. The unit contains a 3-axis compass with accelerometer and barometric altimeter sensor. The unit is capable of

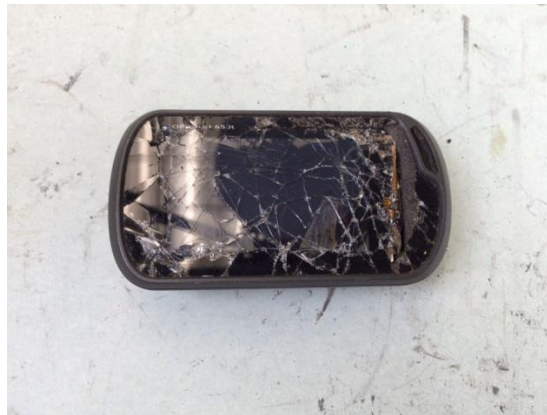
¹ NiMH – Nickle-metal hydride. A type of battery chemistry used in many popular portable electronic devices.

recordings GPS track history which can be accessed through the device or via manufacturer supported software.

3.1.1. Data Recovery

The GPS was delivered to the lab showing evidence of significant impact damage. The unit's touchscreen display was non-functional and is shown in figure 1. Power was applied to the device via a USB cable and the device powered normally without the functionality of the touchscreen display. The internal memory of the device was transferred to a PC via USB cable using the manufacturer's supported software. Figure 1 shows the as received condition of the Garmin Oregon 650t.

Figure 1. Exterior of Garmin Oregon 650t.



3.1.2. Data Description

The GPS device contained data for approximately 19 power cycles. The most recent record showed the unit last logged data on June 30, 2015. Most of the tracklog history contained within the device was not congruent with the device being used for aeronautical navigation purposes.