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

November 30, 2018

Global Positioning System Device

Specialist's Factual Report
By Ben Hsu

1. EVENT

Location:	Williamsport, Indiana
Date:	January 27, 2018
Aircraft/ID:	Cessna 172F
Registration:	N8559U
Operator:	Private
NTSB Number:	CEN18FA088

2. EVENT SUMMARY

On January 27, 2018, at 0121 eastern standard time, a Cessna 172F, N8559U, collided with trees and terrain while maneuvering near Waynesboro, Indiana. The commercial pilot was fatally injured. The airplane was destroyed. The airplane was registered to a private individual and was being operated by a brokerage firm under the provisions of Title 14 *Code of Federal Regulations* Part 91 as a ferry flight. Visual meteorological conditions existed near the accident site at the time of the accident. Although no flight plan had been filed, the pilot was receiving flight following services. The flight originated from Rickenbacker International Airport (LCK), Columbus, Ohio, at 2141.

3. DETAILS OF DEVICE INVESTIGATION

The National Transportation Safety Board's (NTSB) Vehicle Recorder Division received the following Global Positioning System (GPS) device:

Device:	Garmin GPSMAP 796
Device Serial Number:	2CY006207

Figure 1 shows the condition of the device as it arrived in the laboratory. The device exhibited substantial damage due to impact forces and fire. The device's internal memory component was removed, imaged, and decoded using laboratory hardware and software.

3.1. Device Description

The Garmin GPSMAP 796 is a portable GPS receiver capable of storing date, route-of-flight, and flight-time information. A detailed tracklog – including latitude, longitude, date, time, and groundspeed information – is stored within the unit whenever the receiver has

a lock on the GPS navigation signal. All recorded data is stored in non-volatile memory.[1] The unit contains hardware and software permitting the download of recorded waypoint, route, and tracklog information to a PC via a built-in USB port. An internal battery is used as back-up power to the internal memory and real-time clock during those periods when main power is removed.

3.2. Data Description

The data extracted from the device included 10 sessions from June 3-4, 2016.[2] The device contained no data pertinent to the investigation.

Figure 1. Photo of Garmin GPSMAP 796

[1] Non-volatile memory is semiconductor memory that does not require external power for data retention.
[2] All dates and times are referenced to Coordinated Universal Time (UTC) unless otherwise specified.