

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division
Washington, D.C. 20594

December 12, 2017

Global Positioning System Device

Specialist's Factual Report

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1. EVENT

Location: Chariton, Iowa
Date: September 7, 2017
Aircraft/ID: Piper PA-46-310P
Registration: N465JM
Operator: Private
NTSB Number: CEN16FA361

2. EVENT SUMMARY

On August 7, 2016, about 1219 central daylight time, a Piper PA 46-310P airplane, N465JM, registered to Wolf Aviation LLC of West Des Moines, Iowa, was destroyed when it impacted terrain after an in-flight breakup in the vicinity of Williamson, Iowa. The private pilot, who was the sole occupant, sustained fatal injuries. The cross-country flight was being conducted under the provisions of 14 *Code of Federal Regulations* Part 91. No flight plan was filed and instrument meteorological conditions prevailed in the area. The airplane was in receipt of VFR flight following services just prior to the accident. The flight originated about 1130 from the Johnson County Executive Airport (OJC), Olathe, Kansas, and was en route to the Ankeny Regional Airport (IKV), Ankeny, Iowa, when the accident occurred.

3. DETAILS OF DEVICE INVESTIGATION

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

Device: Appareo Stratus 2S
Device Serial Number: 2S003083

Figures 1 and 2 show the condition of the device as it arrived in the laboratory. The device exhibited substantial damage due to impact forces. The device's internal memory component was removed, imaged, and decoded using laboratory hardware and software.

3.1. Device Description

The Appareo Stratus 2S is a battery-operated ADS-B receiver with Global Positioning System (GPS) capability designed to interface with an iPad, iPhone, or iPod Touch running the ForeFlight Mobile application via Wi-Fi. The Stratus uses ADS-B to provide

access to NEXRAD radar, METARs, TAFs, NOTAMs and other FAA products via the ForeFlight application installed on a mobile device. The Stratus supports limited reception and display of ADS-B traffic information. Certain models include a complete Attitude Heading Reference System (AHRS) that permits supplemental attitude information on the connected mobile device.

Stratus PRX V2 units with firmware version 1.6 and later can record up to 20 hours of flight data at a rate of 5 samples per second. The records consist of the following parameters:

- GPS 3-D position
- Altitude
- Groundspeed
- AHRS Pitch, Roll and Yaw
- AHRS 3-D accelerations
- Heading
- Ground Track

3.2. Data Description

The device did not record any data from the date of the accident. No accident-related information was extracted from the device.



Figure 1. Photo of Appareo Stratus 2S (Front)



Figure 2. Photo of Appareo Stratus 2S (Back)