

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division
Washington, D.C. 20594

November 5, 2018

Global Positioning System Device

Specialist's Factual Report
By Ben Hsu

1. EVENT

Location: Philipp, Mississippi
Date: August 16, 2017
Aircraft/ID: Air Tractor AT-502B
Registration: N6082B
Operator: Midway Air
NTSB Number: ERA17FA279

2. EVENT SUMMARY

On August 16, 2017, about 0620 central daylight time, an Air Tractor AT-502B, N6082B, was substantially damaged when it impacted wooded terrain near Philipp, Mississippi. The commercial pilot was fatally injured. The airplane was operated by Midway Air Service as an aerial application flight conducted under the provisions of 14 *Code of Federal Regulations* Part 137. Instrument meteorological conditions prevailed and no flight plan was filed for the planned local flight that departed from a private airstrip in Minter City, Mississippi, about 0610.

3. DETAILS OF DEVICE INVESTIGATION

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

Device: Hemisphere GPS MD M3 Bantam
Device Serial Number: 1505-JJ09121-0048

Figure 1 shows the condition of the device as it arrived in the laboratory. The device's internal memory was removed, imaged, and decoded using laboratory hardware and the manufacturer's software.

Figure 1. Photo of GPS Device



3.1. GPS Device Detailed Description

The Hemisphere GPS MD M3 Bantam is a 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 data extracted from the device included one session that matched the accident description. Data from August 16, 2017 is included in this report. Table 1 describes data parameters provided by the GPS device.

Table 1. GPS Data Parameters

Parameter Name	Parameter Description
Time	Time (CDT) for recorded data point (HH:MM:SS)
Latitude	Recorded Latitude (degrees)
Longitude	Recorded Longitude (degrees)
GPS Altitude	Recorded Altitude (feet)
Heading	Recorded heading (degrees)
Speed	Recorded ground speed (knots)
Temperature	Recorded air temperature (degrees Fahrenheit)

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

4. OVERLAYS AND TABULAR DATA

Figures 2 and 3 are graphical overlays generated using Google Earth showing, respectively, an overview of and the end of the recorded session.

Attachment 1 is the tabular data corresponding to the recorded session. The attachment is provided in electronic comma-separated value (CSV) format.

Figure 2. Overview of data recorded



Figure 3. End of data recorded

