

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division

Washington, D.C. 20594

April 6, 2018

Global Positioning System Device

Specialist's Factual Report

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1. EVENT SUMMARY

Location: Minden, Nevada
Date: August 07, 2016
Aircraft: AMS Flight Carat Motorglider
Registration: N11DY
Operator: Private
NTSB Number: WPR16FA160

On August 7, 2016, at an unknown time, an experimental AMS Flight D.O.O Carat A motor glider, N11DY, was substantially damaged when it impacted terrain about 7 nautical miles northeast of Minden-Tahoe Airport (MEV), Minden, Nevada. The private pilot was fatally injured. Visual meteorological conditions prevailed, and no flight plan was filed for the personal flight, which departed MEV at 1204 Pacific daylight time. The flight was conducted under the provisions of Title 14 *Code of Federal Regulations* Part 91.

2. GROUP

A group was not convened.

3. DETAILS OF INVESTIGATION

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

Device Manufacturer/Model:	Naviter Oudie
Serial Number:	unknown

3.1. Device Description

The Naviter Oudie is a handheld GPS that serves "Personal Gliding Assistant" for glider pilots. The device has a sunlight readable screen and comes with cables and accessories to mount in a variety of glider airframes. The device contains worldwide basemaps that allow the user to maintain situational awareness virtually anywhere across the globe. The device has an 8 GB built in flash memory that can store GPS flight information.

3.2. Data Recovery

The investigator-in-charge (IIC) provided 149 flight files from the device via an electronic file transfer.

3.3. Data Description

The flight files ranged in date from April 6, 2014 to August 7, 2016. The last file was determined to be the accident flight.

3.4. Parameters Provided

Table 1 describes data parameters provided by the GPS device. Date, Time, Latitude, Longitude, and GPS Altitude are recorded by the device. Groundspeed and Track are derived from the recorded parameters.

Table 1: GPS Data Parameters

Parameter Name	Parameter Description
Date	Date for recorded data point (MM/DD/YYYY)
Time	Time (UTC) for recorded data point (HH:MM:SS)
Latitude	Recorded Latitude (degrees)
Longitude	Recorded Longitude (degrees)
GPS Alt	Recorded GPS Altitude (feet)
Groundspeed	Average derived groundspeed (knots)
Track	Average derived true course (degrees)

3.5. OVERLAYS AND TABULAR DATA

Figure 1 shows an Google Earth overlay of the entire flight. The wreckage location is shown with a yellow pin.

The tracklog recovered showed the aircraft starting a takeoff roll around 19:04:53 UTC and quickly becoming airborne from Runway 34 at Minden-Tahoe Airport (KMEV), Minden, Nevada. The aircraft continued climbing and began a turn to the east around 19:06:45 UTC.

The aircraft continued east from KMEV at around 6,000 feet GPS altitude and continued to climb slightly as it encountered an area of terrain east of KMEV.

Around 19:12:00 UTC, the aircraft showed a GPS altitude of approximately 7,300 feet and started a series of tight spirals consistent with maneuvering in an area of thermal

activity. The aircraft was able to climb to about 8,500 feet GPS altitude during the series of turns.

Around 19:16:44, the aircraft ceased the tight turns and took a southerly heading at around 7,800 GPS altitude. Data recording ended at 19:17:18 as the aircraft was on a southwest heading.

Figure 2 is a Google Earth overlay of the final portion of recorded tracks as well as the GPS coordinates of the wreckage location.

A conversation with a representative of the manufacturer of the device revealed that approximately 1 minute of records could be lost in the device's volatile memory if an abrupt power loss or impact occurred. The user was not using a version of firmware that would have negated this scenario. No additional data was recovered.

Tabular data used to generate figures 1 and 2 are included as Attachment 1. This attachment is provided in electronic comma-delimited (.CSV) format.



Figure 1. Google Earth overlay showing an overview of the entire flight.

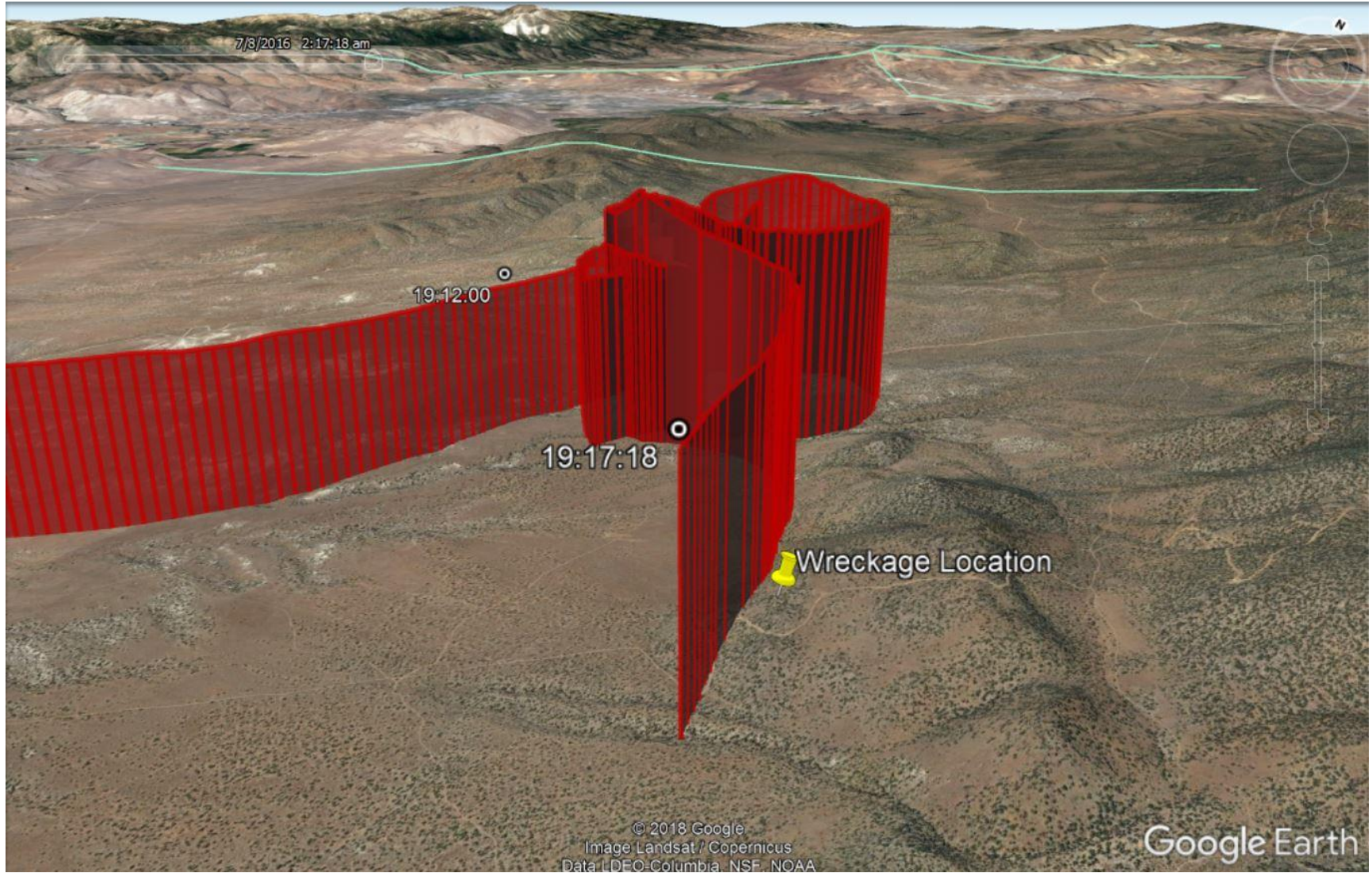


Figure 1. Google Earth overlay showing the final portion of flight as well as the wreckage location.