

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

September 27, 2016

Personal Electronic Device (PED)

Specialist's Factual Report
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1. EVENT SUMMARY

Location: Helena, Montana
Date: August 19, 2015
Aircraft: Cessna 172P
Registration: N62731
Operator: Private
NTSB Number: WPR15FA247

2. GROUP

A group was not convened.

3. DETAILS OF INVESTIGATION

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

Device Manufacturer/Model:	ZTE Valet Smartphone
Serial Number:	327B40943F4A

3.1. Device Description

The ZTE Valet Smartphone is a personal electronic device (PED) capable of internet access, email, messaging services, and can run user-installed applications to perform specific tasks. The device can perform many of the same tasks as portable computing devices, plus have voice call and text messaging capabilities. PED user and system data is typically stored on non-volatile memory¹ and can be accessed through manufacturer-provided interfaces.

3.2. Device Condition

Upon arrival at the Vehicle Recorder Laboratory, an examination revealed the unit had sustained significant impact damage, as shown in figure 1. As shown in figure 1, the

¹ Non-volatile memory is memory that does not require external power to retain information.

removable microSD card was catastrophically damaged. An internal inspection revealed the non-volatile memory chip (SAMSUNG KMSJS000KM-B308) was intact, as shown in figure 2. The chip was removed, the 153-ball grid array repaired, and a binary chip image was extracted using a Xeltek Superpro 6100 Universal Programmer with socket adapter DX5104. The binary chip image was decoded using commercial forensic software.



Figure 1. Photos of damaged unit.



Figure 2. Internal inspection and non-volatile memory chip.

3.3. Data Description

The data extracted included text messages, phone call history, and photos. None of the information were pertinent to the accident.