

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

December 1, 2021

Personal Electronic Device

Specialist's Factual Report
By W. Deven Chen

1. EVENT SUMMARY

Location: Missoula, Montana
Date: July 1, 2021
Aircraft: Cessna 172R
Registration: N2388L
Operator: Private
NTSB Number: WPR21FA258

2. GROUP

A group was not convened.

3. DETAILS OF INVESTIGATION

On September 8, 2021, the National Transportation Safety Board (NTSB) Vehicle Recorder Division received the following personal electronic device (PED):

Device Manufacturer/Model: **Apple iPad mini 5**
Serial Number: **Unknown**

3.1. Device Description

PEDs are a category of devices comprised primarily of portable computing devices and mobile phones. Portable computing devices are typically capable of internet access, email, messaging services, and can run user-installed applications to perform specific tasks. Depending on the model, mobile phones 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. Data Recovery

Upon arrival at the Vehicle Recorder Division, an exterior examination revealed that the device had sustained severe damage, as shown in Figure 1. The motherboard was removed from the device and found to have distortions on the substrate and had components dislodged from the board. The damaged motherboard is shown in Figure 2. The extent of

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

the damage precluded normal and advanced recovery procedures. Additional attempts were unsuccessful in yielding usable data. No data were recovered from the device.



Figure 1: Front and Back of the Apple iPad mini 5 as received.



Figure 2: Damaged iPad mini 5 motherboard.