

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division
Washington, D.C. 20594

December 28, 2016

Personal Electronic Devices

Specialist's Factual Report By Jane Foster

1. EVENT SUMMARY

Location: Seville, Florida
Date: October 10, 2015
Aircraft: Cessna 172S
Registration: N5295Y
Operator: Private
NTSB Number: ERA16LA008

On October 10, 2015, at 1500 eastern daylight time, a Cessna 172S, N5295Y, was substantially damaged after a loss of control during a low altitude maneuver near Seville, Florida. The commercial pilot and pilot-rated passenger sustained serious injuries, and the rear passenger was fatally injured. The airplane was registered to Mike Bravo LLC., and operated under the provisions of 14 *Code of Federal Regulations* Part 91 as a personal flight. Visual meteorological conditions were reported near the accident site about the time of the accident, and no flight plan was filed. The local flight originated from Daytona Beach International Airport (DAB), Daytona, Florida at 1314.

2. DETAILS OF INVESTIGATION

The National Transportation Safety Board (NTSB) Vehicle Recorder Division received the following personal electronic devices (PEDs):

Device Manufacturer/Model:	Samsung Galaxy S6 Edge
Serial Number:	Unknown

Device Manufacturer/Model:	Apple iPod Touch
Serial Number:	C3VDRF1QDCP7

Device Manufacturer/Model:	Apple iPad Mini
Serial Number:	F4KLT035FLMP

Device Manufacturer/Model:	Motorola Razr
Serial Number:	Unknown

2.1. 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.

2.2. Data Recovery

Upon arrival at the Vehicle Recorder Division, an examination revealed the iPad mini and the Motorola Razr had sustained minor impact damage. These two devices required a surrogate for download. The Samsung Galaxy S6 Edge and the iPod touch were able to be powered on normally and read out using laboratory software. Figure 1 shows the Samsung Galaxy S6 Edge as received. Figure 2 shows the iPod touch as received. Figure 3 shows the extent of the damage to the iPad mini. The screen was shattered and the body of the device was bent due to impact. Figure 4 shows the extent of the damage to the Motorola Razr. The screen was cracked and could not display images.

Figure 1. Front and back of Samsung Galaxy S6 Edge as received.



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

Figure 2. Front and back of iPod touch as received.



Figure 3. Front and back of iPad mini as received.



Figure 4. Front and back of Motorola Razr as received.



3. DEVICE INVESTIGATIONS

3.1. Galaxy S6 Edge

This device is capable of storing data in the non-volatile memory. There is an optional security feature that requires a user-password to unlock the device and access functions and stored data.

Power was applied to the device and it was evident that the user-password security feature was enabled. According to the Investigator-in-charge, the password was not obtainable so the device's functions and any stored data were not accessible. It is unknown whether there were any stored data pertinent to the event. No further attempts were made to access the data.

3.2. Apple iPod Touch

There were no data pertinent to the event recorded on the device.

3.3. Apple iPad Mini

The Apple iPad mini had Foreflight version 7.3.2 installed, but no tracklogs were recorded. The data logging feature of the Foreflight application can be activated or deactivated by the user. The device was not configured to record. The most recently accessed screen views in Foreflight are shown in figures 5, 6, and 7.

Figure 5. Most recently accessed "Airports" screen on Apple iPad Mini.

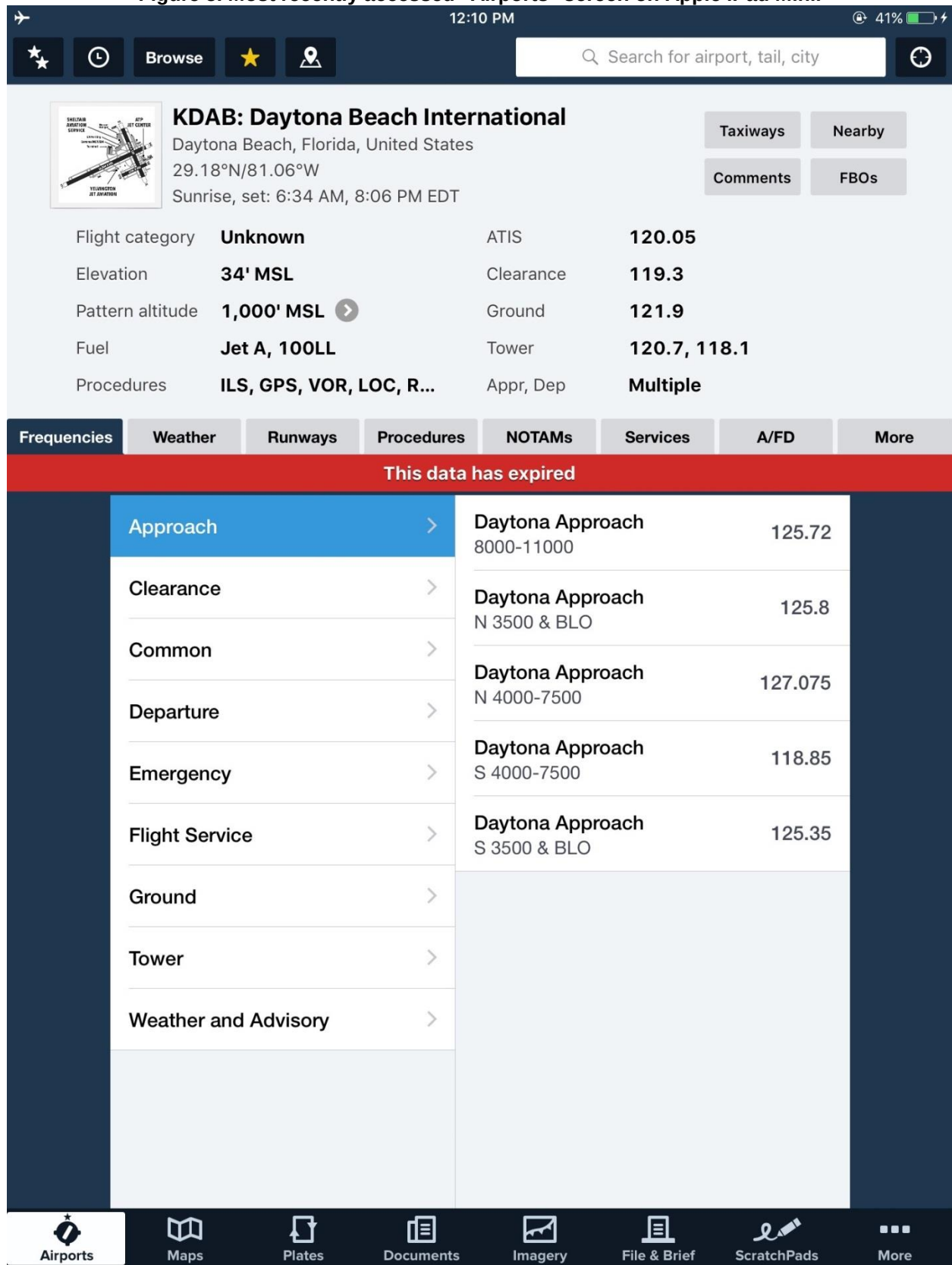


Figure 6. Most recently accessed "Maps" screen on Apple iPad Mini.

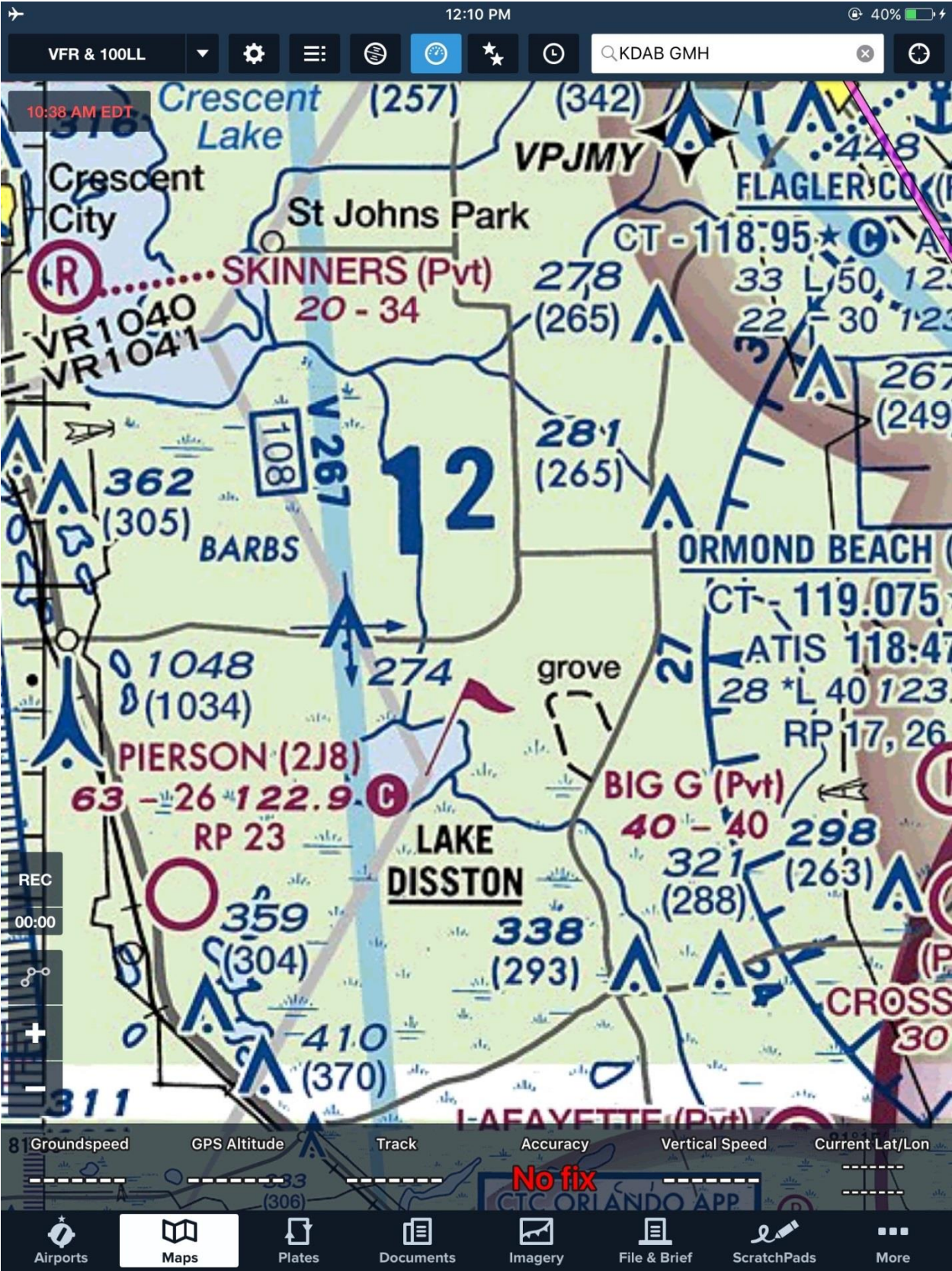
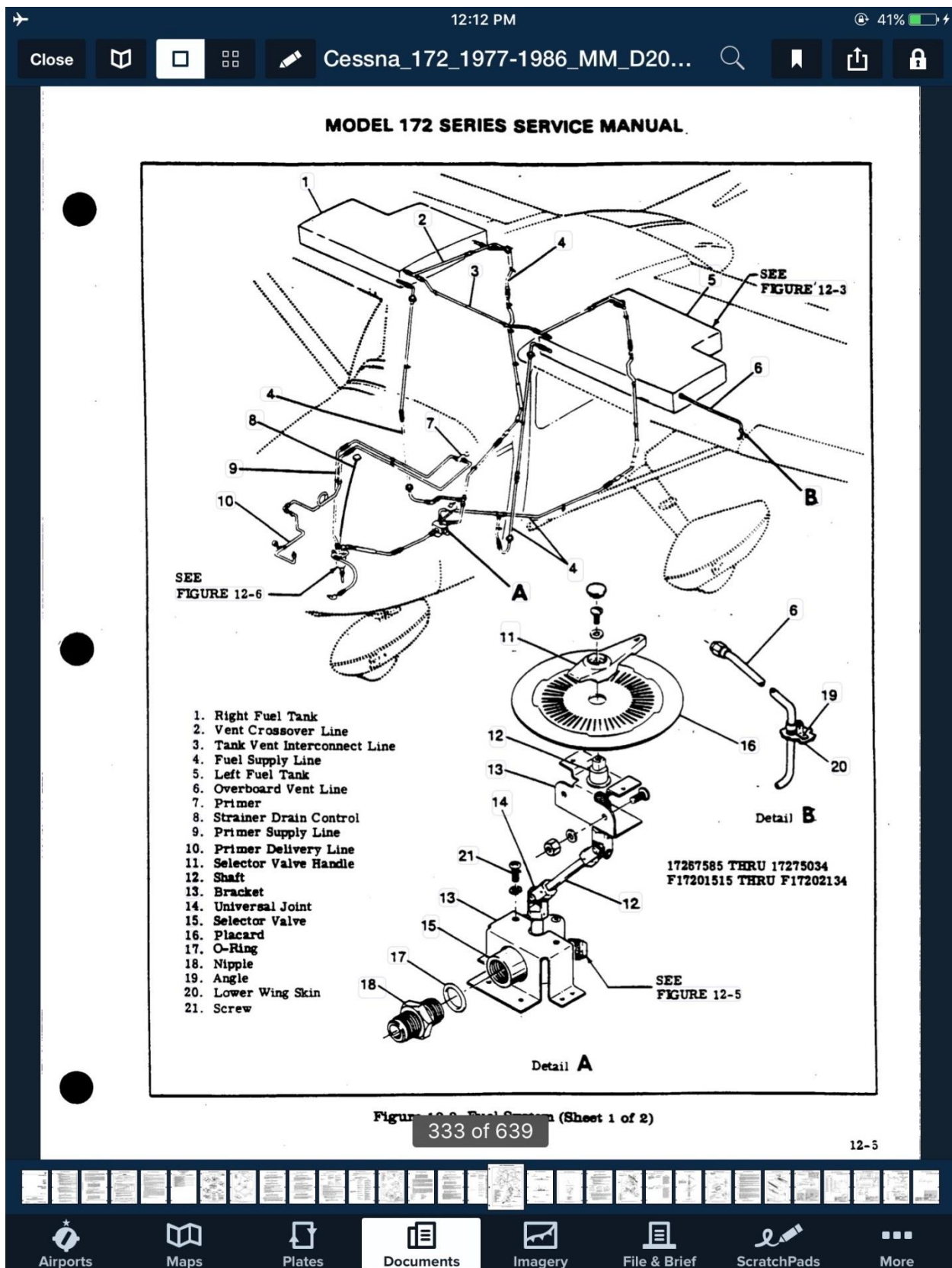


Figure 7. Most recently accessed "Documents" screen on Apple iPad Mini.



3.4. Motorola Razr

This device is capable of storing data in non-volatile memory. The extent of the damage precluded normal recovery procedures and additional attempts were unsuccessful in yielding usable data. Therefore, no data pertinent to the event were recovered.