

# NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division  
Washington, D.C. 20594

December 20, 2012

## 17 – Electronic Device Factual Report

Specialist's Factual Report  
by Bill Tuccio

### 1. EVENT

Location: Maryland Heights, Missouri  
Date: October 24, 2012  
Aircraft: Piper PA-28-140  
Registration: N55620  
Operator: Private  
NTSB Number: CEN13FA030

On October 24, 2012, about 2040 central daylight time, a Piper PA-28-140, N55620, was substantially damaged when it impacted Creve Coeur Lake, Maryland Heights, Missouri, under unknown circumstances. The airline transport certificated pilot and passenger were fatally injured. The airplane was registered to and operated by a private individual under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Night visual meteorological conditions prevailed for the flight, which operated on a visual flight rules flight plan. The flight originated from Delaware, Ohio, and was en route to Creve Coeur Airport (K1HO), St. Louis, Missouri.

### 2. DETAILS OF DEVICE INVESTIGATION

The Safety Board's Vehicle Recorder Division received the following device:

Device: Apple iPad 3  
Device Serial Number: DMPHH1S4DVGD

#### 2.1. Apple iPad 3 Device Description

The Apple iPad is a tablet computer with a high-resolution color touch-screen interface. All iPad devices support WiFi and Bluetooth connectivity, and use either 16, 32, or 64 GB of non-volatile memory for storage (depending on model). Some devices also support data connectivity via existing cell-phone networks. The iPad also includes front and back cameras. The iPad implements its functionality by running programs called "Apps" capable of supporting web-browsing, email, audio/video playback, contact and calendar management, and numerous other specialized functions. User-installed Apps can be used to support functionality for electronic flight bags, flight planning and filing,

aviation weather depiction, and electronic flight charts. Application data is stored in non-volatile memory and may include image, video, and position location information. Specialized application data may be stored in a proprietary file structure using numerous proprietary file formats. The amount and type of data stored varies based on the software version and configuration of the specific device.

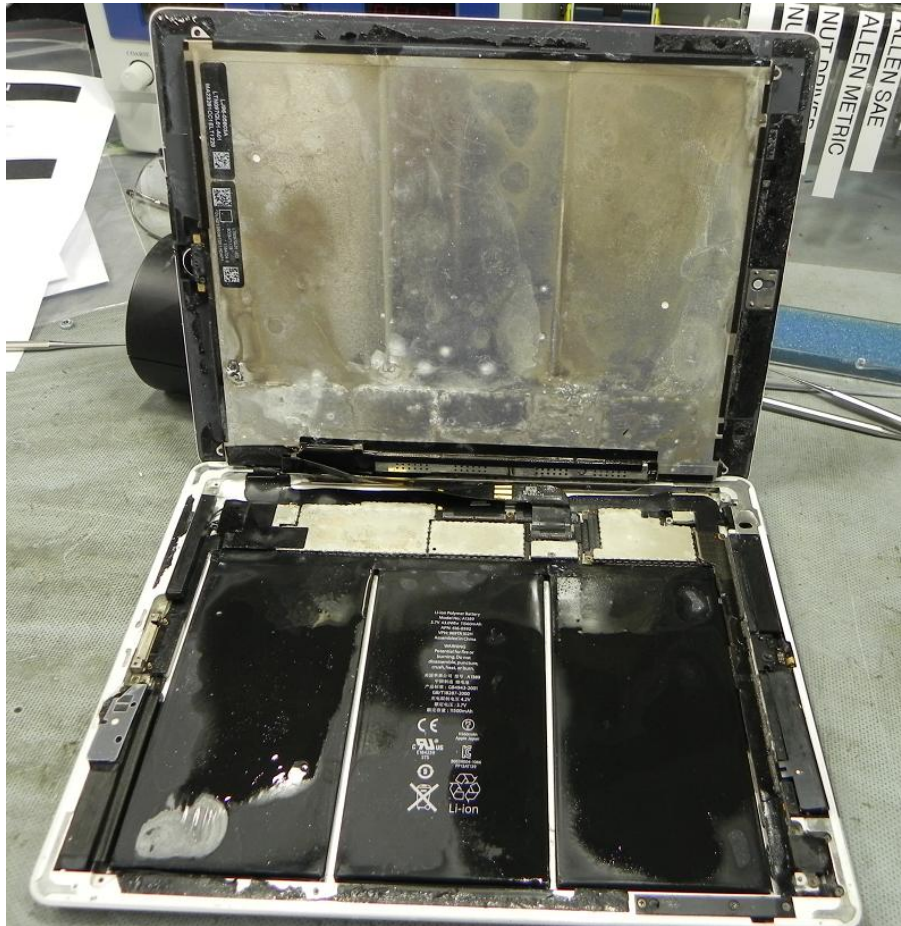
### **2.1.1. Apple iPad 3 Data Recovery**

Upon arrival at the Vehicle Recorder Laboratory, an exterior examination revealed that the unit had sustained damage due to water exposure, as shown in figure 1. The unit was disassembled, as shown in figure 2. The main batteries showed signs of damage, and numerous internal components showed signs of corrosion. The main circuit board was removed and cleaned. The main circuit board was installed in a functional surrogate iPad 3 and power was applied. No indications of operation were observed. No further recovery attempts were attempted.

**Figure 1. Apple iPad 3 - front.**



**Figure 2. Apple iPad 3 - internal.**



### **2.1.2. Apple iPad 3 Data Description**

No data was recovered from the unit.