

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division
Washington, D.C. 20594

November 25, 2020

Electronic Devices

Specialist's Factual Report by Gerald Kawamoto

1. EVENT

Location: Pleasant Plain, Ohio
Date: March 18, 2020
Aircraft: Piper PA-28
Registration: N3943T
Operator: Private
NTSB Number: CEN20LA127

2. DETAILS OF INVESTIGATION

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

Device 1:	Apple iPad Pro
Device 1 Serial Number:	DMPT78K1H1MJ
Device 2:	Apple iPhone X
Device 2 Serial Number:	359411083844478
Device 3:	Apple iPod Touch
Device 3 Serial Number:	CCQN607SFMJG
Device 4:	S-Tec Pitch Computer (P/N: 01261-5-14)
Device 4 Serial Number:	01261-1326-07[?]14A (Partial)
Device 5:	Sporty's SP-400
Device 5 Serial Number:	14391
Device 6:	Piper Autocontrol III
Device 6 Serial Number:	3820

2.1. Device Description and Data Recovery

Apple iPad Pro, Apple iPhone X, Apple iPod Touch

Personal Electronic Devices (PEDs) are a category of devices comprised primarily of portable computing devices and mobile phones. Portable computing devices are typically capable of taking photos and videos, internet access, email, messaging services, and can run user-installed applications to perform specific tasks. PED user and system data is typically stored on non-volatile memory (NVM) and can be accessed through manufacturer-provided interfaces.¹

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

External examinations of the three PED devices revealed the devices has sustained impact damage resulting in inoperability, as shown in Figures 1 through 3. Further internal examinations revealed broken components and additional damage due to moisture. Due to the damage of the devices, no data were recovered.



Figure 1. iPad Air as received.



Figure 2. iPhone X as received.



Figure 3. iPod Touch as received.

S-Tec Pitch Computer

The S-Tec Pitch Computer is one part of a multi part S-Tec Autopilot system. The device was intact and no major external damage was visible, as shown in Figure 4. The internal components of the device were examined and there was no presence of NVM, thus no data were recovered.



Figure 4. S-Tec Pitch Computer as received (left). Internal components (right).

Sporty's SP-400

The Sporty's SP-400 is a handheld NAV/COM aviation radio. The device had sustained heavy impact damage, as shown in Figure 5, rendering it inoperable, thus no data were recovered.



Figure 5. Front and Back of the Sporty's SP-400 as received.

Piper Autocontrol III

The Piper Autocontrol III is a lightweight automatic flight system. The device had sustained impact and moisture damage, as shown in Figure 6. The internal components of the device were examined and there was no presence of NVM, thus no data were recovered.



Figure 6. Piper Autocontrol III as received (top). Internal components (bottom).