

# **NATIONAL TRANSPORTATION SAFETY BOARD**

Vehicle Recorder Division  
Washington, D.C. 20594

April 22, 2022

## **Cockpit Display - Recorded Flight Data**

**Specialist's Factual Report**  
**By Charles Cates**

### **1. EVENT SUMMARY**

Location: Walsenburg, Colorado  
Date: December 8, 2021  
Aircraft: Vans RV-4  
Registration: N456MC  
Operator: Private  
NTSB Number: CEN22FA064

### **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: | <b>Dynon SV-D1000</b> |
| Serial Number:             | <b>7514</b>           |

#### **3.1. Device Description**

The Dynon SV-D1000 is an uncertified 10" wide screen display suitable for mounting in the cockpit of non-type certificated aircraft. Its capabilities include engine monitoring, synthetic vision, moving map, traffic, airport diagrams, autopilot control, and radio integration.

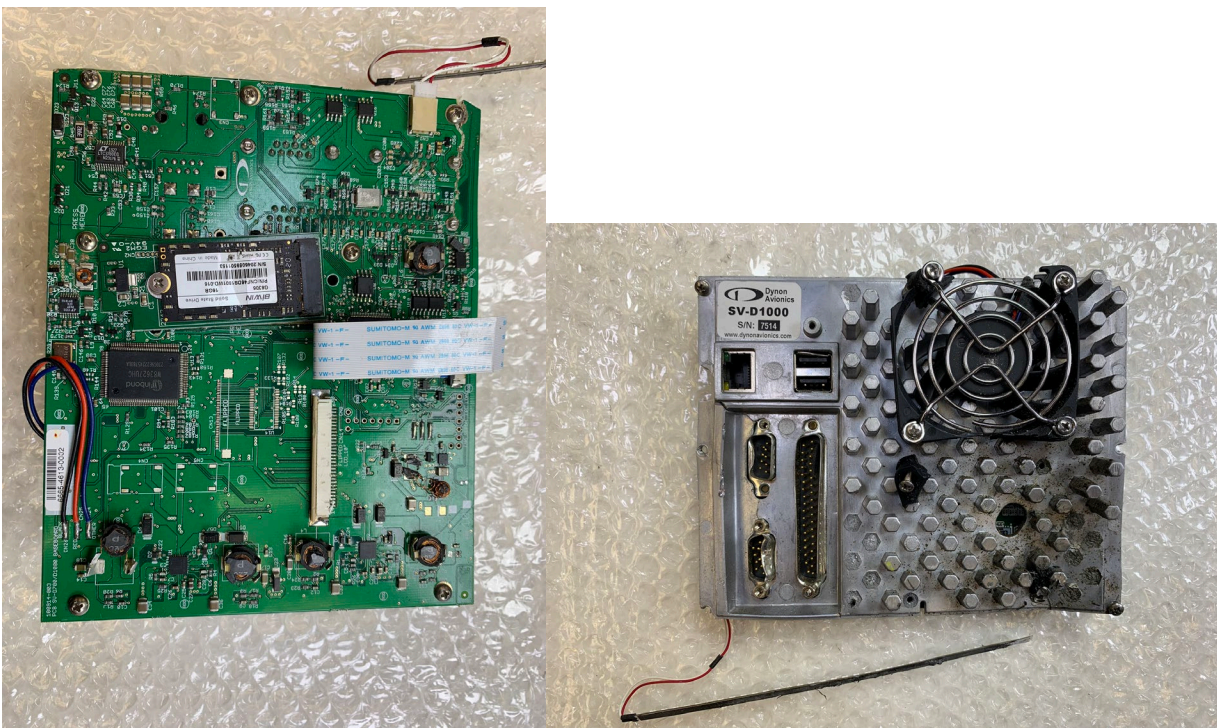
The display receives input from multiple modules for flight instrumentation including modules for air data/attitude/heading (ADHARS), engine monitoring (EMS), GPS, Transponder, radios, and intercoms.

Data is recorded on a Serial-ATA based Disk on Module (DOM) mounted to the main memory board. The DOM contains a user-configurable log file that can record

between 2-150 hours of data at sampling rates ranging from 0.1-16 Hz. There is also an alert log file that is recorded whenever the device triggers any kind of alert and a "Black Box" recent flight data log file which contains the most recent 15 minutes of flight recorded at 16 Hz.

### 3.2. Device Condition

Upon arrival at the Vehicle Recorder Laboratory, an examination revealed the unit had sustained impact damage and the display was missing from the device. The extent of the damage is shown in figure 1.



**Figure 1.** Photos of front and rear of damaged unit, as received.

### 3.3. Data Description

This device stores data in the non-volatile memory (NVM)<sup>1</sup>. However, further examination of the device revealed that the NVM was damaged in the crash. 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.

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