

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

February 10, 2015

Enhanced Ground Proximity Warning System - Factual Report

**Specialist's Report
by George Haralampopoulos**

1. EVENT

Location: Palos Hills, Illinois
Date: October 12, 2014
Aircraft: Beechcraft 58
Operator: Private
Registration: N31EW
NTSB Number: CEN15FA009

On October 12, 2014, about 2240 central daylight time, a Beechcraft model 58 airplane, N31EW, piloted by a private pilot, was destroyed when it impacted trees and terrain in Palos Hills, Illinois. The pilot and two passengers sustained fatal injuries. The aircraft was registered to ARC Aviation LLC and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Marginal visual meteorological conditions prevailed for the flight, which was not on a flight plan. The flight originated about 2235 from the Midway International Airport (MDW), Chicago, Illinois, and was en route to the Lawrence Municipal Airport, Lawrence, Kansas.

2. DETAILS OF INVESTIGATION

The NTSB Vehicle Recorder Laboratory received the following device:

EGPWS Manufacturer/Model: Honeywell/Bendix King KGP-560
Serial Number: Not Available

2.1 Honeywell/Bendix King KGP-560 Device Description

The KGP-560 is an Enhanced Ground Proximity Warning System (EGPWS) built for general aviation and meets the requirements of TSO-C151b. The KGP-560 provides aural and visual alerts and warnings to the pilot to help reduce the risk of Controlled Flight into Terrain (CFIT).

The KGP-560 system consists of the following inputs: GPS, pressure altitude, and an optional temperature probe. The KGP-560 outputs to the following: audio panel, cockpit switches, illuminated annunciators, and an optional display interface.

The KGP-560 is designed to record events triggered by the EGPWS functions. Once a limit has been exceeded, a new event will be recorded at one sample per second that includes 20 seconds before and 10 seconds after the exceedance. Each record is identified by the unit's operating time, the mode that was exceeded, and a unique event number from the device.

2.2 Honeywell/Bendix King KGP-560 Data Recovery

Upon arrival at the Vehicle Recorder Laboratory, an exterior examination revealed the unit had sustained severe impact damage, including crushing and abrasion to the unit's housing (figure 1). An interior inspection revealed integrated circuits on the top level internal circuit board had been ejected from the board. The Compact Flash card containing the unit's non-volatile memory was located; however, the internal memory chip was cracked (figure 2). Due to the crack, no data could be recovered and no further work to the KGP-560 was performed.



Figure 1. Bendix King KGP-560 as received.

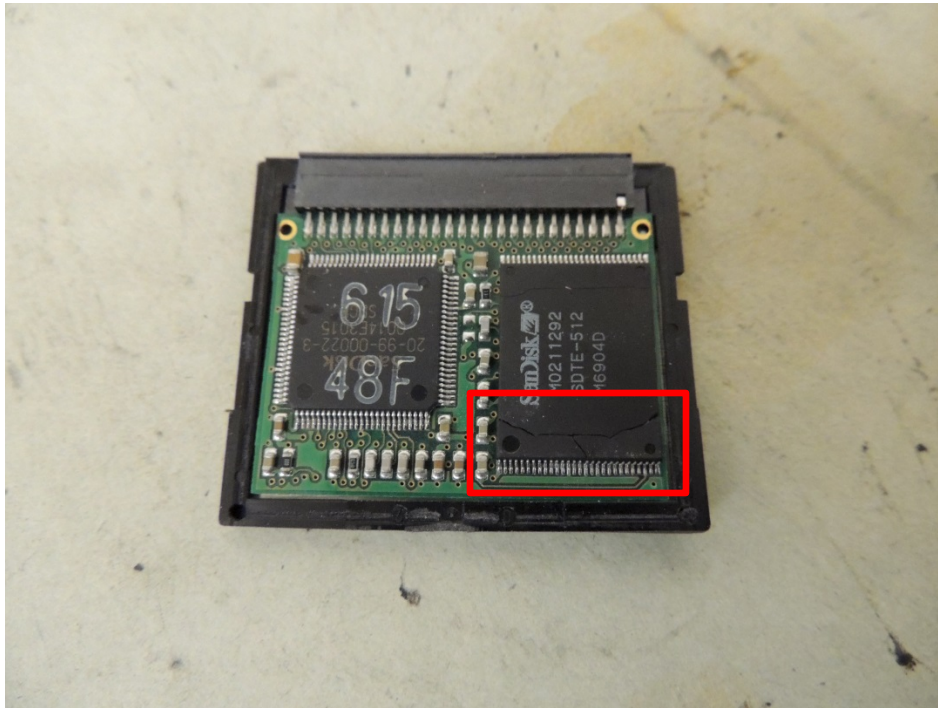


Figure 2. Compact Flash card from Bendix King KGP-560 highlighting crack.