



U.S. Department
of Transportation
**Federal Aviation
Administration**

SAFO

Safety Alert for Operators

SAFO 07004
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Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO.

Subject: Garmin GPS-WAAS Models (GNS and GPS) 400W and 500W Series Units Determined Incompatible with Avidyne EXP5000 Primary Flight Displays.

Purpose: This SAFO informs aircraft owners, operators, and FAA certificated entities of functional incompatibilities between Avidyne EXP5000 Primary Flight Displays (“Avidyne PFDs”) and newly installed Garmin GPS-WAAS navigators or Garmin 400/500 series units upgraded to Garmin 400W and 500W series units (commonly referred to in this SAFO as “Garmin GPS-WAAS navigators”).

Background: On Friday, May 4, 2007, Avidyne issued a mandatory service bulletin (MSB) detailing information about known operational incompatibilities between Garmin GPS-WAAS navigators and Avidyne PFDs. The MSB identifies operational limitations, addresses functional incompatibilities, and advises against new or upgraded installations of Garmin GPS-WAAS navigators when integrated with Avidyne PFDs.

Discussion: Garmin recently introduced new models and upgrades to its 400/500 series GPS navigators, including the GNS 430 and GNS 530 models, which use the Wide Area Augmentation System (WAAS) with GPS. The new models are referred to as 400W/500W series and are available both as new production and as upgrades to previously installed units. Garmin GPS-WAAS navigators make use of extended precision of course deviation while on GPS approaches, but extended precision is not a design feature of the Avidyne PFD. As a result, the PFD may erroneously display unreliable HSI or CDI resulting in a continuously centered needle.

Originally installed Garmin 400/500 series navigators, unless upgraded, are compatible with Avidyne PFDs. As of this date, there is no information in either Garmin’s installation instructions or Avidyne’s installation data to indicate compatibility of the upgraded equipment, nor is there any approval basis in an approved model list (AML) STC held by Garmin or Avidyne, or any TC held by any airplane manufacturer.

Recommended Action: Directors of operations and pilots should not perform GPS approaches of any type, including VOR overlay approaches substituting GPS with Garmin GPS-WAAS navigators, when an Avidyne PFD is installed. Localizer, ILS, and VOR approaches may be flown without adverse effects. Certificated repair stations and installers should not install Garmin GPS-WAAS navigators with integrated Avidyne PFDs until Avidyne resolves the incompatibility.

Contact: Questions or comments on this SAFO should be addressed to the Aircraft Maintenance Division, AFS-300, (202)-267-1675. The MSB is available at <http://www.avidyne.com/index.asp>.