

# EMERGENCY AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

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

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DATE: June 29, 2001  
2001-14-51

Transmitted as follows is Emergency Airworthiness Directive (AD) 2001-14-51 for the attention of all owners and operators of General Aviation aircraft equipped with certain UPS Aviation Technologies, Inc., Model Apollo SL30 very-high-frequency navigation/communication (VHF NAV/COMM) radios.

## Background

The FAA has received a report from the equipment manufacturer indicating that, during installation of a certain UPS Aviation Technologies, Inc., Model Apollo SL30 VHF NAV/COMM radio on a General Aviation aircraft, the installer noted that the radio was providing incorrect radial bearing information. Subsequent testing by the equipment manufacturer revealed that the bearing information was off by 14 degrees.

This incorrect bearing information has been attributed to an error in Digital Signal Processor (DSP) Software Version Number 1.00, as installed on Apollo SL30 VHF NAV/COMM radios having part number 430-6040-300 or 430-6040-301. If the radio receives a signal from a very-high-frequency omnirange (VOR) ground station that deviates from the standard 30-Hertz signal, the error in the software causes the radio to incorrectly decode the bearing of the station. Because the occurrence of the error is dependent on the signal coming from a given station and not on the radio itself, the pilot may not necessarily know if the bearing information is incorrect. This condition, if not corrected, could lead the pilot to use incorrect bearing information, which could result in inaccurate navigation information.

The FAA has granted field approvals for installation of these radios on various makes and models of General Aviation aircraft, so any General Aviation aircraft with a UPS Aviation Technologies, Inc., Model Apollo SL30 VHF NAV/COMM radio with the part numbers listed above may be subject to the unsafe condition addressed by this AD.

## Explanation of Relevant Service Information

The FAA has reviewed and approved UPS Aviation Technologies, Inc., Service Bulletin SB2001-003, dated June 29, 2001. That service bulletin describes procedures for determining what version of software the Apollo SL30 VHF NAV/COMM radio is using. If the radio is using DSP Software Version Number 1.00, the service bulletin says to install a placard to inform the pilot that use of the radio's VOR function for navigation is prohibited. The placard must be installed so that it is within view of the pilot during operation of the aircraft.

## Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of this same type design, this AD is issued to require determination of the version of software being used by the UPS Aviation Technologies, Inc., Model Apollo SL30 VHF NAV/COMM radio, and installation of a placard to prohibit use of the radio's VOR function for navigation, if necessary.

### Interim Action

This is considered to be interim action. The equipment manufacturer has advised that it currently is developing a software update that will positively address the unsafe condition addressed by this AD. Once this software update is developed, approved, and available, the FAA may consider additional rulemaking.

### Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this AD effective in less than 30 days.

This rule is issued under 49 U.S.C. Section 44701 (formerly section 601 of the Federal Aviation Act of 1958) pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this AD.

**2001-14-51 UPS AVIATION TECHNOLOGIES, INC.:** Docket No. 2001-NM-225-AD.

**Applicability:** All General Aviation aircraft equipped with a UPS Aviation Technologies, Inc., Model Apollo SL30 very-high-frequency navigation/communication (VHF NAV/COMM) radio having part number 430-6040-300 or 430-6040-301; certificated in any category.

**Note 1:** This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Compliance:** Required as indicated, unless accomplished previously.

To prevent use of incorrect bearing information by the pilot, which could result in inaccurate navigation information, accomplish the following:

#### Installation of Placard

- (a) Before further flight after receipt of this AD, determine what version of Digital Signal Processor (DSP) Software the UPS Aviation Technologies, Inc., Model Apollo SL30 VHF NAV/COMM radio is using, according to the following procedure:

#### “Placing Unit In System Mode

**Operation Summary** (Refer to page 4 of operation manual)

#### Power On

Turn the SL30 on. Either turn the Power/Volume knob clockwise to turn the power on or, if installed, turn on the master switch that powers the radios. The SL30 will go through a short initialization routine and then briefly display the last VOR check date.

**System Info** (Refer to page 26 of operation manual)

System Info provides information about the Software versions and the Display Intensity.

1. Press **SYS** and turn the **LARGE** knob if necessary to the System Info page. Press **ENT**.
2. In the System Info function turn the **LARGE** knob to Nav Software Version.
3. Turn the **SMALL** knob to left (counterclockwise) to view DSP Software Version.”

Note 2: The procedure specified in paragraph (a) of this AD is identical to the "PROCEDURE" section of UPS Aviation Technologies, Inc., Service Bulletin SB2001-003, dated June 29, 2001.

(b) If the radio is using DSP Software Version Number 1.00, before further flight, do the actions in paragraphs (b)(1) and (b)(2) of this AD.

(1) Attach on or place near the SL30 within view of the pilot a placard that reads as follows:  
"USE OF SL30 VOR FUNCTION FOR NAVIGATION PROHIBITED."

(2) Insert a copy of this AD into the Limitations Section of the FAA-approved Airplane Flight Manual. Spares

(c) After receipt of this AD, no one may install on any airplane a UPS Aviation Technologies, Inc., Model Apollo SL30 VHF NAV/COMM radio, having part number 430-6040-300 or 430-6040-301; unless the requirements of this AD are accomplished.

#### Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Avionics Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

#### Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

#### Effective Date

(f) AD 2001-14-51, issued on June 29, 2001, becomes effective upon receipt.

#### For Further Information

For further information contact: Susan Letcher, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2670; fax (425) 227-1181.

Issued in Renton, Washington, on June 29, 2001.

Original signed by: Vi L. Lipski, Manager, Transport Airplane Directorate, Aircraft Certification Service.