

**Title 14—Aeronautics and Space**  
**CHAPTER I—FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION**

[Docket No. 14450; Amdt. 121-119]

**PART 121—CERTIFICATION AND OPERATIONS: DOMESTIC FLAG, AND SUPPLEMENTAL AIR CARRIERS AND COMMERCIAL OPERATORS OF LARGE AIRCRAFT**

**Ground Proximity Warning Systems**

The purpose of this amendment to § 121.360 of Part 121 of the Federal aviation regulations is to provide that the ground proximity warning system required by that section must meet specific technical performance and environmental standards.

Interested persons have been afforded an opportunity to participate in the making of this amendment by a notice of proposed rule making (Notice 75-12) issued on March 6, 1975, and published in the Federal Register on March 10, 1975 (40 FR 11004). Due consideration has been given to all comments presented in response to the notice. These amendments and the reasons therefor are the same as those in Notice 75-12. Concurrently with the issue of Notice 75-12, the FAA issued a notice of proposed rule making, Notice 75-11, proposing to amend Part 37 of the Federal aviation regulations by adding a new Technical Standard Order for Ground Proximity Warning Equipment (TSO-C92).

The FAA received seven public comments in response to Notice 75-12. Several of the comments were directed only to the substance of proposed TSO-C92 contained in Notice 75-11. They are discussed in the preamble to Amendment 37-37 which is being issued concurrently with this amendment. Commentators speaking directly to the proposal in Notice 75-12 generally favored the adoption of the proposed amendment. Several commentators recommended changes to the proposal and those that involve matters within the scope of the notice are discussed hereinafter. Those recommendations that were not within the scope of the Notice will be retained by the FAA for future consideration.

One commentator expressed the concern that, if the proposed amendment were adopted, it would "grant approval only to TSO equipment and exclude the past practice of accepting component equipment as a part of type certification of an airplane." This is not the case, however. Under § 121.360(a), as amended herein, a ground proximity warning system need not be approved under TSO-C92. The system may still be approved in conjunction with the type certification procedures for the airplane, but it would have to meet the performance and environmental standards of TSO-C92.

Another commentator contended that prohibiting the use after January 1, 1977,

of equipment already approved for use under Part 121 and installed before the effective date of this amendment unduly penalizes those operators who provided the benefits of a ground proximity warning system in advance of a regulatory requirement. The commentator points out that currently installed equipment has demonstrated its effectiveness through many flight hours. In addition the commentator asserts that the proposal constrains the production and delivery of the FAA certified ground proximity warning systems currently in service which substantially meet the proposed requirements. Finally, the commentator states that the proposal does not recognize the airframe manufacturer caught with an inventory of non-TSO computers and the numerous drawing changes required to alter the production line to a configuration using TSO type computers. The commentator recommends that the installation of equipment that has been approved for installation under Part 121 be allowed until December 1, 1975, and that there not be a requirement that it be replaced at a later date by equipment meeting the performance and environmental standards of TSO-C92.

The FAA has determined that it would not be in the public interest to permit the continued use of ground proximity warning systems that do not meet the performance and environmental standards of TSO-C92. Moreover, information available to the FAA indicates that there is sufficient time before the December 1, 1975, compliance date of § 121.360(a) to modify existing equipment that does not meet those standards and has not been installed before the effective date of this amendment, and that the commentator should not have a problem meeting that compliance date. The FAA has determined that requiring the modification or replacement of equipment that has been approved for use under Part 121, and installed before the effective date of this amendment, before January 1, 1977, would not impose an unreasonable burden on any manufacturer or operator.

Another commentator objected to the proposed requirement that, whenever a ground proximity warning system required by § 121.360 is deactivated, an entry shall be made in the airplane maintenance record that includes the date and time of deactivation. The commentator suggests that the requirement serves no useful purpose. The FAA does not agree. The entry will ensure that the safety wire on the deactivation switch is replaced and that system malfunctions are noted.

Two commentators indicated confusion as to whether the ground proximity warning system may be included in the minimum equipment list in the manual of a Part 121 certificate holder. Amendment 121-114 which adopted § 121.360 also added a reference to that section in

§ 121.302(d)(3), which now prohibits the takeoff of any large turbine-powered airplane being operated under Part 121 unless the ground proximity warning system required by § 121.360 is in operable condition. However, as pointed out in the preamble to Amendment 121-114, § 121.327(c) will allow the continuation of a flight beyond a terminal point with the ground proximity warning system inoperative if the minimum equipment list and procedures for the continuation of flight are included in the certificate holder's manual.

(Sections 312(a), 601, 602, and 604 of the Federal Aviation Act of 1958; 49 U.S.C. 1354(a), 1421, 1422, and 1424. Section 6(c) of the Department of Transportation Act; 49 U.S.C. 1655(c).)

In consideration of the foregoing, § 121.360 of Part 121 of the Federal aviation regulations is amended, effective June 5, 1975, to read as follows:

**§ 121.360 -Ground proximity warning systems.**

(a) Except as provided in paragraph (b) of this section, after December 1, 1975, no person may operate a large turbine-powered airplane unless it is equipped with a ground proximity warning system that meets the performance and environmental standards of TSO-C92.

(b) Ground proximity warning systems approved for use under this Part and installed before June 5, 1975 may be used in lieu of equipment that meets the performance and environmental standards of TSO-C92 until January 1, 1977, except that the requirements of paragraph (c) of this section must be met.

(c) For the ground proximity warning system required by this section, the Airplane Flight Manual shall contain—

- (1) Appropriate procedures for—
  - (i) The use of the equipment;
  - (ii) Proper flight crew action with respect to the equipment;
  - (iii) Deactivation for planned abnormal and emergency conditions; and
- (2) An outline of all input sources that must be operating.

(d) No person may deactivate a ground proximity warning system required by this section except in accordance with procedures contained in the Airplane Flight Manual.

(e) Whenever a ground proximity warning system required by this section is deactivated, an entry shall be made in the airplane maintenance record that includes the date and time of deactivation.

Issued in Washington, D.C., on May 1, 1975.

JAMES E. DOW,  
Acting Administrator.

(As published in the Federal Register [40 F.R. 19638] on May 6, 1975).

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