

File

Cancelled

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ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

SUBJECT: ACCIDENTAL OR UNAUTHORIZED ACTIVATION OF EMERGENCY
LOCATOR TRANSMITTERS (ELT)

1. **PURPOSE.** This circular alerts the general aviation community to the harmful effects of accidental or unauthorized activation of emergency locator transmitters, to the penalties that can be imposed for the unauthorized activation of these devices, and suggests means of containing or controlling radiated energy on the emergency frequencies during testing.
 2. **BACKGROUND.** On 29 December 1970, the Congress amended the Federal Aviation Act of 1958 to require the installation of an "emergency locator beacon" on most U.S.-registered civil airplanes. The FAA has implemented this new statute by adopting several amendments to the Federal Aviation Regulations. Among other actions, two new regulations were adopted: FAR 91.52 and FAR 37.200 (TSO-C91).
 - a. FAR 91.52 prohibits (with certain exceptions) the operation, after 30 December 1971, of a U.S.-registered civil airplane that was manufactured or imported after that date unless it is equipped with an emergency locator transmitter that meets specified standards. FAR 91.52 also prohibits (again with certain exceptions) the operation, after 30 December 1973, of any other U.S.-registered civil airplane unless it is so equipped. FAR 37.200 (TSO-C91) contains the specified standards.
 - b. It is evident that any accidental or unauthorized activation of an ELT will generate an emergency signal that cannot be distinguished from the real thing, leading to expensive and frustrating searches. Moreover, the false ELT signal could tie up the emergency frequencies so that a genuine emergency signal would not be picked up. And if the false ELT signal is transmitted on or near an airport, it may render some radio communications channels useless.
 - c. Federal Aviation Administration's implementing regulations were
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aimed, in part, at reducing the probability of accidental ELT activation. What constitutes authorized ELT operation is dealt with in Federal Communications Commission regulations.

3. DISCUSSION.

- a. As a result of the recent Congressional legislation and requests by the Civil Air Patrol, the North American Rockwell Corporation and the Federal Aviation Administration, the Federal Communications Commission is amending Parts 1, 2, and 87 of their rules, Docket No. 19385, in the following particular:
 - (1) An ELT installed aboard an airplane must have a radio station license but there is expected to be no filing fee for the license when FCC rules are adopted, provided the ELT does not have voice capability. A station license and an operator's license are required and filing fees must be paid on those ELTs which have voice capability. In addition, if an ELT has voice capability, a separate and independent radio transmitter and receiver, operating on a frequency or frequencies other than 121.5 and 243 megahertz, must be installed in the airplane for routine communications.
- b. The pilot in command of an airplane equipped with an ELT is held responsible by the FCC, as station licensee or station operator for any unauthorized use of the ELT. (Personnel making the installation of an ELT or maintaining it are held responsible for any unauthorized activation of the device during the actual period of installation or maintenance.) Fines and imprisonment are prescribed by the Communications Act of 1934 for the willful transmission of unauthorized signals on the emergency frequencies of 121.5 and 243 megahertz.
- c. Maintenance testing of an ELT should be conducted in a screen room or metal enclosure to ensure that electromagnetic energy is not radiated during repairs, thereby causing a false search procedure to be initiated. Any necessary testing of an ELT, external to a shielded enclosure, e.g., installed in an airplane, should be performed as described in e below.
- d. Prior to the installation of an ELT in an airplane, it may be operationally tested in a screen room or metal enclosure to determine that it is in working order. It is good practice to have a radio receiver, tuned to 121.5 megahertz, close at hand during an installation to monitor this frequency. In the event that an ELT is inadvertently activated, it should be turned off at once.
- e. Any testing that may be necessary should be conducted always in such a way that electromagnetic energy is not radiated, if at all possible. Realizing, however, that this is not always possible, in all instances, aircraft operational testing may be performed in accordance with the following procedures:

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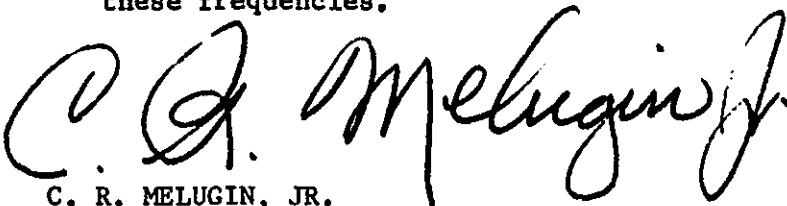
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- (1) Tests should be no longer than three audio sweeps.
 - (2) If the antenna is removable, a dummy load should be substituted during the test.
 - (3) Tests should be conducted only within the time period made up of the first five minutes after any hour.
 - (4) If the operational tests must be made at a time not included within the first five minutes after the hour, the tests should be coordinated with the closest FAA tower or Flight Service Station.
- f. Emergency locator transmitters used in connection with design, manufacture, demonstration or training should not operate on 121.5 megahertz or 243 megahertz. These units should use off-set crystals. The frequencies of 121.6, 121.65, 121.7, 121.75, 121.8, 121.85, and 121.9 megahertz may be used for these purposes as specified in Part 87 of the Federal Communication Rules provided that the user obtains the proper FCC operator's and station licenses; coordination is established with the appropriate FAA Regional Frequency Management Office (see Appendix 1) prior to activating each test period; and no harmful interference is caused to voice communications on these frequencies.



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