

Cancelled

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ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

SUBJECT: COMMUNICATION INTERFERENCE CAUSED BY UNINTENTIONAL RADIO TRANSMISSIONS

1. PURPOSE.

This advisory circular alerts the aviation community to the potential hazards created by unintentional radio transmissions from airborne, mobile, and ground based radio transmitters and gives guidance on alleviating ensuing hazards.

2. BACKGROUND.

In 1970 the Federal Aviation Administration noted a need to eliminate unintentional radio emissions and proposed that the Federal Communications Commission eliminate the present exemption of aircraft stations from Part 87.75(d), which requires a radiation indicator. The FCC issued a Notice and received much adverse comment. FAA then requested FCC to withdraw the proposal pending further investigation of the magnitude of the problem. In the meantime this advisory circular is intended to publicize the problem and availability of the warning devices.

3. DISCUSSION.

a. Unintentional emissions from radio transmitters in the aviation services are caused by microphone buttons sticking in the "on" position after being keyed or activated for transmissions, operators sitting on microphones and depressing the "push to talk" buttons, microphones wedged in seats, equipment malfunction and water present in microphone circuits of mobile and ground

based transmitters. These conditions can, and have, occurred without the knowledge of the operator.

b. Air traffic control facilities monitor a large number of transmissions on several frequencies. Interruption of service or interference on these frequencies presents a safety hazard and levies an economic burden on other operators due to the inevitable delays the frequency blockages create.

c. One means of reducing the problems would be to install a visual monitor on aviation service transmitters. Such devices are on the market today and are reasonably economical to purchase and install. They consist of a remote warning light when r-f energy is radiated. As a service tool they also indicate when transmitted power is weakened or when modulation circuits malfunction.

d. Benefits gained by the installation of a visual monitor are:

(1) Reduce operating costs due to equipment malfunction by reducing repair and down time.

(2) Prevent premature failure of equipment since most aviation service transmitters are not designed for continuous service operation.

(3) Verify transmitter operation or malfunction during preflight and inflight situations.

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4. GUIDANCE.

a. This advisory circular should be posted in a conspicuous location in all FAA Flight Service Station pilot briefing areas, airport operations offices, airlines operations offices and offices responsible for the administration and operation of airport mobile vehicles and traffic control areas, including line maintenance buildings. A sticker type placard should be posted in a conspicuous place on every radio equipped airport vehicle to read, in essence, "IS YOUR MICROPHONE BUTTON STUCK?"

b. Operators planning installation of new communications equipment should consider the economic advantages of incorporating a visual

monitoring system of transmitter radiation as an additional feature to this new equipment.

c. Operators of aircraft and airport mobile and ground based transmitters should provide a means for the proper storage of microphone when the microphone is not in use.

d. Pilots and operators of airport mobile vehicles who suspect difficulties with their microphones should unplug them immediately rather than leave them connected until a serviceable replacement can be installed.

e. Operators who might have other ideas as to how best to insure against frequency blockages caused by "stuck mikes" should convey their views to the local FAA facility for dissemination to other interested persons.



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