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March 11, 1991

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**MAR 11 1991**

Federal Communications Commission  
Office of the Secretary

Ms. Donna R. Searcy  
Secretary  
Federal Communications Commission  
Room 222  
1919 M Street, N.W.  
Washington, D.C. 20554

93-199

Re: Rule Making No. 7610 ✓

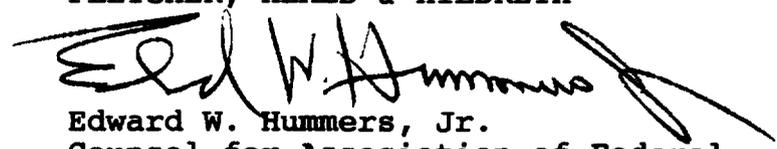
Dear Ms. Searcy:

Transmitted herewith on behalf of the Association of Federal Communications Consulting Engineers are an original and four copies of that association's comments in Rule Making No. 7610.

Should any questions arise concerning this matter, please communicate with the undersigned.

Very truly yours,

FLETCHER, HEALD & HILDRETH



Edward W. Hummers, Jr.  
Counsel for Association of Federal Communications Consulting Engineers

EWH/sj

Enclosure

cc: Russell C. Harbaugh, Jr., P.E. (w/enc.)  
Mr. John R. Furr (w/enc.)

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MAR 1 1 1991

Federal Communications Commission  
Office of the Secretary

Before the  
Federal Communications Commission  
Washington, DC

In the matter of )  
 )  
Petition for Rulemaking )  
Seeking Amendment )  
of 47CFR Part 87 )  
regarding the )  
performance of receivers )  
used in the aeronautical )  
services )

RM 7610 ✓

Comments of the Association of  
Federal Communications Consulting Engineers  
and  
Request for Issuance of Notice of Inquiry

The Association of Federal Communications Consulting Engineers (AFCCE) is an organization that includes approximately 100 members who are professional engineers engaged in the practice of consulting telecommunications engineering or who are engineering executives in companies which own multiple broadcast stations, together with approximately 75 associate members who are affiliated with the manufacturers of broadcasting equipment. AFCCE files these comments in general support of the above captioned proceeding initiated by John Furr & Associates.

AFCCE, through its Aeronautical Committee, hereby supports the petitioner's basic premise, i.e., that the Commission should institute minimum performance standards for airborne navigation and communications receivers operating in the bands 108.0 MHz to 117.99 MHz and 118.0 MHz to 136.99 MHz, respectively. However, standards may also need to be established for any other receivers which may be susceptible to performance degradation due to

out-of-band signals (e.g., glide slope, marker beacon, DME, LF/MF NDB, etc.). Furthermore, the Commission should establish minimum performance criteria for all ground-based receiver equipment used in support of air traffic control, navigation and communications services in both VHF and UHF bands. These performance criteria should be directed to the characteristics of these receivers relative to desensitization and receiver generated intermodulation due to out-of-band signals. Presently, the receivers used in general aviation aircraft are not governed by any standards or requirements relative to these parameters; some of this equipment is unable to sufficiently suppress (attenuate) out-of-band signals from other authorized services.

The avionics industry could have taken a lesson from the land mobile industry which for decades has designed its equipment with effective front-end filtering and with signal dynamic range characteristics to operate in the harsh environment of the crowded land mobile bands.

AFCCE suggests that the Commission issue a Notice of Inquiry and Rulemaking which would permit ample time for all interested parties to provide technical data on which the Commission could base its subsequently developed proposed rules. The topics on which the NOI should seek industry input should include:

- Documentation of actual interference problems caused by FM and TV broadcast services and other services to aeronautical facilities.
- Evaluation of receiver performance relative to normal or typical input signal levels, e.g., VOR-ILS localizer signal strength.
- Determining the practicality of retrofitting simple external in-line filtering devices to improve the performance of older or poorer equipment.
- Surveying the actual performance of currently installed navigation equipment used under Instrument Flight Rules (IFR) and requirements for equipment used under Visual Flight Rules (VFR).

- Documenting the performance of receivers in current production.
- Evaluation of the future immunity characteristics proposed by the CCIR-JIWP.
- Assessing the state-of-the-art in receiver design, perhaps using the land mobile model.

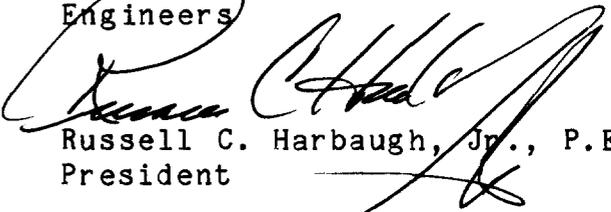
The Commission should invite and encourage the participation of the Radio Technical Commission for Aeronautics (RTCA) in this proceeding. The Commission should also consider the relationship of the ongoing work of CCIR Study Group 12 (Task Groups 12/1 & 12/2) to which, of course, the USA is a party.

Since it is possible that an outcome of this inquiry may be that many existing receivers will not meet any proposed standards -- which may be applied only to newly manufactured equipment -- short-term compliance may be major problem. The Commission should, therefore, fully address compliance through the addition of external filtering; such filtering is known to be available and the technologies are well developed. However, interagency coordination with the FAA may be required because of certification issues that will arise relative to equipment required to be manufactured under FAA Technical Service Orders (TSO) or equipment used by certain operators (e.g., air carriers) or equipment used for primary navigation under IFR.

The broadcast industry needs a solution to the growing regulatory morass arising out of perceived interference problems and the Commission is urged to move swiftly and authoritatively to resolve the issue through the institution of receiver performance criteria developed after a NOI/Rule Making process.

Respectfully submitted,

Association of Federal  
Communications Consulting  
Engineers



Russell C. Harbaugh, Jr., P.E.  
President

CERTIFICATE OF SERVICE

I, Sandra Johnson, a secretary at the law firm of Fletcher, Heald & Hildreth, do hereby certify that a true copy of the foregoing comments in "Rule Making No. 7610" was sent this eleventh day of March, 1991, by U.S. postage paid mail to the following:

John R. Furr, President  
John Furr & Associates, Inc.  
2700 N. E. Loop 410  
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San Antonio, Texas 78217

  
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Sandra K. Johnson