

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D. C. 20554

APR 27 1982

OFFICE OF
THE CHAIRMAN

The Honorable Howard W. Cannon
United States Senate
Committee on Commerce, Science
and Transportation
Washington, D.C. 20510

Dear Senator Cannon:

On May 6, 1982 the Senate Committee on Commerce, Science and Transportation has scheduled hearings on the issue of telephone compatibility for the hearing impaired. In preparation for these hearings you have requested that the Commission review submissions in our general inquiry into the matter of telecommunications services for the deaf and hearing impaired, Docket No. CC 78-50. Specifically, you are seeking information received in response to one question posed in the context of that inquiry: "Whether it is necessary for the benefit of hearing aid users for the Commission to establish standards, such as electromagnetic leakage, etc. in the manufacturing of telephone handsets?"

At your request, the staff of the Common Carrier Bureau summarized comments on this question. This summary is attached. Unfortunately, I am unable to inform you of the Commission's tentative conclusions on this issue because this matter has not yet come before the Commission for resolution.

If the Commission staff or I can be of further assistance, please do not hesitate to contact me.

Sincerely,



Mark S. Fowler
Chairman

Attachment

Summary of Comments on Establishment of Electromagnetic Leakage Standards for Telephone Handsets to Benefit Hearing Aid Users.

Hearing impaired persons utilize a variety of devices to assist them in using the telephone. About half of the hearing aids in use in the United States have a telephone setting which uses inductive coupling to improve reception from a telephone. 1/ Telephone companies and other suppliers of terminal equipment also offer a variety of other devices for sale or lease which are designed to enable hearing impaired persons to use a telephone more effectively. These include telephone handsets with adjustable amplifiers, a variety of bell ringers with different tones and loudness, special speaker telephones and special headsets. Some deaf persons and others have severe hearing impairments also use visual signal devices in lieu of or in addition to the conventional bell ringer.

Hearing aids with a telephone setting use electromagnetic leakage from a telephone receiver in order to achieve the desired effect. Most Western Electric telephones which are currently in use contain the U-type receiver which provides sufficient electromagnetic leakage to permit such hearing aids to operate. ITT and Stromberg-Carlson have manufactured some telephones with a similar design in the past. 2/ However, most telephone receivers which are currently being manufactured, including Western Electric's L-type receiver, do not provide sufficient magnetic leakage to enable a hearing aid user to use the telephone setting.

To our knowledge, the hearing aid industry has not developed an alternative coupling method which would be compatible with the telephone receivers that are currently being manufactured. Western Electric has developed an adapter which can be attached to a telephone handset to convert the signal to magnetic field and also has made the adapter available to non-Bell carriers. The AT&T comments state that both Bell and non-Bell telephone companies sell the adapter on a nonprofit basis. Some comments from hearing aid users and hearing aid user organizations say that the adapter does not provide satisfactory reception. AT&T filed supplemental comments on May 5, 1980. Those comments state that Bell Laboratories is redesigning the external adapter to make it smaller and more effective.

The telephone manufacturers have also developed a magnetic coil which can be built into a telephone handset which does not have a U-type receiver. This coil serves the same function as the external adapter. The reply comments of the Organization for the Use of the Telephone, Inc. ("OUT") indicate that hearing aid users who are not satisfied with the performance of the external adapter have found handsets with the built-in coil to be satisfactory. AT&T, GTE and Continental have installed receivers with such magnetic coils in their pay telephones as the pay telephones are replaced or reconditioned. These telephones are identified with a blue grommet at the entry of the cord into the handset. Representations in the AT&T and GTE comments indicate that virtually all of their coin telephones should have blue grommet handsets at this time.

1/ Some comments estimate that one to two million persons in the United States have hearing aids with a telephone setting.

2/ The Electronic Industries Association comments estimated that 75% of the telephones supplied by a telephone company that is not affiliated with AT&T or GTE are compatible with hearing aids.

The AT&T and GTE comments indicate that neither company has any plans to equip all newly manufactured telephones with the built in coils which are being installed into "blue grommet" pay telephones. GTE says that its telephone company subsidiaries do supply such telephones to subscribers "on request" and do not impose an extra charge for such telephones unless a premises visit is required to replace an existing telephone with a requested telephone. AT&T says that it plans "to provide all new telephones presently offered to its subscribers that do not have a U-type receiver, with the capability of being modified, at customer request, so as to be compatible with inductively coupled hearing aids."

The comments indicate that hearing impaired users of optional equipment provided by telephone companies are generally satisfied with currently available devices, with the exception of the Western Electric adapter. The National Technical Institute for the Deaf does say, however, that amplified handsets do not always provide as much amplification as such handsets were designed to provide and that users frequently do not realize that their telephones are not functioning properly. The Institute says that a visual device could and should be developed to enable the user to verify that the device is working properly.

Several comments indicate that telephone company offerings of optional equipment for hearing impaired users vary from company to company and area to area.

Comments filed by a number of organizations and individuals contend that the incompatibility problem can and should be solved by prohibiting the manufacture or importation of telephones which are not compatible with existing hearing aids. OUT, the National Center for Law and the Deaf, the National Technical Institute for the Deaf, the Alexander Graham Bell Association for the Deaf, Inc., the American Speech and Hearing Association and two agencies within the then Department of Health, Education and Welfare, the Office of Consumer Affairs and the Rehabilitation Services Administration, have endorsed the adoption of a magnetic leakage standard for all telephones. OUT suggests that the blue grommet telephone be adopted as the standard. It says the addition of a simple, inexpensive coil to the newest receiver will solve the compatibility problem. OUT also observes that a standard which is limited to telephones that are manufactured or imported in the future will not impose any retro-fitting costs on the telephone companies.

OUT does not present any cost data to support its assertion that the added coil in a blue grommet telephone is inexpensive. The OUT reply comments say that this Commission should infer that the cost of the coil is minimal because the comments of telephone companies and telephone equipment manufacturers do not provide any information with respect to the cost of the coil. OUT observed that the problem will not be solved if telephone companies furnish compatible telephones to subscribers "on request" because a hearing aid user will not be able to function unless a "requested" telephone is near. OUT also alleges that many hearing aid users have not in fact been able to obtain compatible telephones from telephone companies "on request."

AT&T, GTE, USITA, the Electronic Industries Association and Stromberg-Carlson oppose the adoption of any standards for telephone instruments. Their comments observe that the adoption of any magnetic leakage standard would impose additional costs upon all telephone subscribers and could foreclose future developments in telephone technology which may lead to better telephones. Several comments note that future telephones may be incapable of providing any magnetic coupling.

OUT responded that any inhibition on the development of new types of telephones should not deter the adoption of a magnetic leakage standard for telephones because any future technological development that deprives customers of service cannot be progress. HEW-OCA expressed essentially the same view. It noted newspaper reports that electronic telephones which are not compatible with any hearing aid may soon be available at retail and declared "it would be unconscionable to allow the adoption of technology which would preclude use of the telecommunications system by hearing aid wearers".

AT&T and GTE say that efforts should be directed at producing hearing aids which are compatible with modern telephones instead of making the telephones compatible with inductive coil hearing aids. Their comments imply that hearing aid manufacturers could develop an alternative means of coupling if they devoted sufficient effort to the problem. Other comments claim that the hearing aid industry has made a "sincere" effort to develop alternative devices and imply that it is unrealistic to expect a breakthrough in hearing aid technology which will solve the compatibility problem. The Hearing Industries Association notes that the hearing aid manufacturers are part of a small industry and states that the manufacturers cannot undertake costly research to develop an alternative coupling method without governmental assistance.

Most opponents of magnetic leakage standards for telephones do not express any opinion with respect to this Commission's authority to adopt such standards. The USITA comments do say that such an action may exceed this Commission's authority. USITA asserts that no past action of this Commission "purports to assert Federal jurisdiction to require the furnishing of particular types of terminal equipment" and that any action with respect to equipment standards would "raise quite serious and yet unresolved questions of Federal jurisdiction, Federal expertise and Federal necessity."

The comments that have been filed in this proceeding do not describe the steps, if any, which AT&T and GTE carrier subsidiaries take to advise their subscribers that hearing aid compatible telephones are available "on request." The comments provide virtually no information with respect to the equipment offered by other companies or the practices such companies follow in describing their equipment offerings to their subscribers. The comments do not indicate that any company has taken steps to label private telephones in any manner which would enable a hearing aid user to know whether a particular telephone instrument is compatible with hearing aids.