

MAY 11 1982

Honorable Bob Packwood
Chairman, Committee on Commerce,
Science, and Transportation
United States Senate
Washington, D.C. 20510

Re: S. 2355

Dear Mr. Chairman:

We have received your request for Commission comments on the following bill now pending consideration before your Committee: S. 2355, a bill which would provide that persons with impaired hearing are ensured reasonable access to telephone service.

Please be advised that the Commission has been invited to testify on this bill on May 6th before your Subcommittee on Communications, chaired by Senator Goldwater. That testimony will constitute our comments on the bill and we will submit a copy of that testimony to your Committee when available.

Sincerely,



Mark S. Fowler
Chairman

MHayes/ck/4/22/82

shall make a final determination within 1 year of the receipt of the request.

(b) NARS shall review the information using applicable systematic review guidelines and shall make available to the requestor information declassified using those guidelines.

(c) Information which cannot be declassified by NARS using systematic review guidelines shall be forwarded to the agencies with primary subject matter interest and further processed in accordance with § 105-61.104-6 (a) (2) through (5) and (b).

§ 105-61.104-8 Access by historical researchers and former Presidential appointees.

(a) Access to classified information may be granted to U.S. citizens who are engaged in historical research projects or who previously occupied policy-making positions to which they were appointed by the President. Persons desiring permission to examine material under this special historical researcher/Presidential appointees access program should contact NARS at least 4 months before they desire access to the materials to permit time for the responsible agencies to process the requests for access. NARS shall inform requestors of the agencies to which they will have to apply for permission to examine classified information and shall provide requestors with the information and forms to apply for permission from the Archivist of the United States to examine classified information originated by the White House or classified information in the custody of the National Archives which was originated by a defunct agency.

(b) Requestors may examine records under this program only after the originating or responsible agency:

(1) Determines in writing that access is consistent with the interest of national security;

(2) Takes appropriate steps to protect classified information from unauthorized disclosure or compromise, and ensures that the information is safeguarded in a manner consistent with Executive Order 12356; and

(3) Limits the access granted to former presidential appointees to items that the person originated, reviewed, signed, or received while serving as a presidential appointee.

(c) To grant against the possibility of unauthorized access to restricted records, a director may issue instructions supplementing the research room rules provided in § 105-61.102.

§ 105-61.104-9 Fees.

NARS will charge requestors for copies of declassified according to the fees listed in 41 CFR 105-61.5206.

(Sec. 205(c), 63 Stat. 390; 40 U.S.C. 486(c))

Dated: November 10, 1983.

Ray Kline,

Acting Administrator of General Services.

(FR Doc. 84-644 Filed 1-10-84; 8:45 am)

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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 64 and 68

(CC Docket No. 83-427; FCC 83-565)

Access to Telecommunications Equipment by the Hearing Impaired and Other Disabled Persons

AGENCY: Federal Communications Commission.

ACTION: Final rules.

SUMMARY: The Commission is amending its rules to incorporate the requirements of the Telecommunications for the Disabled Act of 1982, which ensure that hearing impaired persons have reasonable access to telephone service and allow telephone carriers to provide equipment needed by persons with hearing, sight, speech or mobility impairments to utilize the telephone network. These actions are necessary to maintain affordability of such equipment and to enable persons with the disabilities listed to function as fully participating members of society. The amendments will facilitate access of disabled persons to necessary equipment and services in both residential and non-residential settings, and through the adoption of technical specifications and labeling requirements, will enable manufacturers, telephone suppliers, and customers to determine whether particular telephones are usable by hearing aid wearers.

EFFECTIVE DATE: February 10, 1984.

FOR FURTHER INFORMATION CONTACT: Carl Gold, 202-632-4890.

List of Subjects

47 CFR Part 64

Communications common carriers, Telephone.

47 CFR Part 68

Administrative practice and procedure, Communications common carriers, Communications equipment, Telephone.

Report and Order

In the Matter of Access to Telecommunications Equipment by the Hearing Impaired and Other Disabled Persons. CC Docket No. 83-427.

Adopted: December 1, 1983.

Released: December 23, 1983.

By the Commission: Chairman Fowler issuing a separate statement.

I. Introduction

1. The Telecommunications for the Disabled Act of 1982, Pub. L. 97-410 (to be codified as 47 U.S.C. 610) (Act) was signed into law on January 3, 1983. It is designed to resolve problems that persons with physical disabilities may have in obtaining access to the telephone network. The Act requires that the Commission, no later than January 3, 1984, (1) establish regulations to ensure reasonable access to telephone service for the hearing impaired; (2) establish regulations requiring that certain categories of telephones designated "essential" be internally compatible with hearing aids specially designed for telephone use; (3) adopt technical standards which will effectuate the above regulations; (4) establish requirements for labeling telephone packaging to inform consumers whether a telephone is compatible with hearing aids; (5) adopt rules to allow carriers to provide "specialized terminal equipment" (i.e., CPE) to persons with hearing, sight, speech and mobility impairments, and permit state commissions to allow carriers to recover in tariffs for communications services "reasonable and prudent costs not charged directly to users of such equipment." In addition, the Act delegates to state commissions the authority to enforce the rules we adopt concerning reasonable access to telephone service and compatibility of "essential" telephones. The Act requires the Commission to consider the costs and benefits to all telephone users of any regulations enacted, and to encourage the use of currently available technology without discouraging or impairing the development of new technology. We are, as explained in this Order, amending our rules to implement the requirements of the Act. Final rules adopted herein are attached as Appendix C.

2. Pending issuance of regulations to implement the Act, we granted a waiver to all carriers to offer new "specialized CPE" (i.e. the "specialized terminal equipment" referred to above) on a tariffed or untariffed basis to persons with impaired hearing, vision, speech or mobility. We also permitted the Bell Operating Companies (BOC's) to offer

such equipment without forming a separate subsidiary as required by *Computer II*. That waiver contained a temporary definition of "specialized CPE" which is subject to revision in this rulemaking. This waiver was granted to avoid disrupting the provision of equipment and services necessary for disabled persons to access the telephone network. *American Telephone and Telegraph Co., Petition for Waiver Allowing BOCs to Provide Under Tariff New CPE for the Disabled*, 92 FCC 2d 38 (1983) (*Waiver Order*).

3. As a first step in implementing the Act, we adopted a Notice of Proposed Rulemaking (Notice) and solicited comments and reply comments on the issues mentioned above. — FCC 2d —, FCC 83-176, released May 4, 1983, 48 FR 20771 (May 9, 1983).¹ Comments were received from telephone carriers, equipment manufacturers, state public utility commissions, organizations representing persons with impaired hearing and other disabilities, a Member of Congress, and other members of the public.²

4. Recently we denied the request of the American Telephone & Telegraph Company (AT&T) that this Commission authorize it to offer "specialized CPE" on a detariffed basis. We based this determination on our finding that it would best effectuate the purposes of the Act to leave the decision whether or not to detariff this CPE to each state. *American Telephone and Telegraph Co., Request to Offer Specialized CPE for the Disabled on a Detariffed Basis*. — FCC 2d —, FCC 83-517, released November 25, 1983. We are herein modifying our *Computer II*³ rules to implement this decision.

¹ At the same time, the Commission terminated an earlier proceeding, *Telecommunications Services for the Deaf and Hearing Impaired*, CC Docket No. 78-50, — FCC 2d —, FCC 83-177, released May 4, 1983, which involved issues similar to those raised by the Act. That Order indicated that certain issues would be addressed in the instant proceeding, including the inability of individuals using telecommunications devices for the deaf (TDDs) in the ASCII format to communicate with persons using TDDs in the Baudot format.

² Summaries of comments and reply comments are attached as Appendices A and B, respectively. In addition, numerous informal comments were received. These comments were considered in rendering this decision but are not summarized in this Order.

³ Amendment of Section 64.702 of the Commission's Rules and Regulations (Second *Computer Inquiry*), 77 FCC 2d 384 (1980) (Final Decision), reconsideration, 84 FCC 2d 512 (1981), *aff'd sub nom. CCIA v. FCC*, 693 F.2d 198 (D.C. Cir. 1982), cert. denied, 103 S. Ct. 2108 (1983).

II. Communications Needs of the Disabled and Current Efforts To Meet Those Needs

A. Congressional Cost-Benefit Analysis

5. Before passing the Act, Congress weighed the likely costs and benefits to all persons of requiring that certain telephones be made compatible with hearing aids and that carriers be able to recover the costs of providing certain "specialized CPE" to disabled consumers in tariffs for regulated services. A summary of significant findings included in the Act and the accompanying House Committee Report⁴ is necessary to understand the actions we are taking.

6. The Act's provisions requiring compatibility between telephone and hearing aids "specially designed for telephone use"⁵ are intended to benefit the more than ten million Americans whose hearing is sufficiently impaired to require the use of a hearing aid. Congress found that the level of production of compatible telephones is sufficient that such telephones are widely available.⁶ Congress found, however, that a "lack of technical standards ensuring compatibility between hearing aids and telephones,"⁷ necessitated that "adoption of technical standards * * * to ensure compatibility * * * thereby accommodating the needs of individuals with hearing impairments."⁸

7. Congress also found that the hearing of 1.2 million Americans is too diminished to use a telephone even with a hearing aid.⁹ These persons require other devices to utilize the telephone network, the most widely used being the "telecommunications device for the deaf" (TDD). The TDD is basically a typewriter with a small display screen, which may be equipped with a printer. The TDD sends and receives messages over the telephone network. Some TDDs are directly hard-wired into the network, while others are connected through acoustic couplers.

⁴ H.R. Rep. No. 888, 97th Cong., 2d Sess. (1982) (House Report).

⁵ Act, section 610(b). The House Report explains that most hearing aids are "specially designed for telephone use," i.e., contain a "telecoil" which is activated by a magnetic field generated by a telephone handset. 80% of telephones currently in use generate a sufficient field to activate the telecoil, which is necessary to permit feedback-free reception loud enough for the user to hear. House Report at 8. Telephones which internally generate the required magnetic field will be referred to throughout this order as "hearing aid-compatible" or "compatible."

⁶ See Act, § 2(2); House Report at 11.

⁷ Act, § 2(3).

⁸ *Id.*, § 2(4).

⁹ See House Report at 4.

8. Other persons are affected by impaired speech, vision or mobility. They can utilize the network only through a variety of devices which modify or are ancillary to a telephone. The House Report cites examples of commercially available products including artificial larynxes and breath-activated telephones, and products which might become available, e.g., a voice-activated telephone.¹⁰

9. Congress found that equipment enabling persons with disabilities to utilize the telephone network has traditionally been provided by telephone companies, often at prices which are subsidized pursuant to state-sanctioned programs. Subsidization has been effectuated by various methods, including tariffs which reflect a decision that part of the cost of such equipment should be built into the prices of other products and services, and surcharges billed directly to general ratepayers.¹¹ Congress was concerned that *Computer II*'s prohibition on tariffing CPE would eliminate such subsidization, making "specialized CPE" unaffordable and depriving many disabled persons of access to telephone service. Congress stated that this might deprive many individuals of the opportunity to have gainful employment, and even require institutionalization of those disabled persons whose health must be frequently monitored. As a result, Congress decided that the costs to society of lost telephone usage including impairment of the quality of life for the disabled, far exceed the costs of subsidizing products and services needed by the disabled to use the telephone network.¹² Accordingly, Congress, sought to provide each state the power to subsidize "specialized CPE," in any manner which it finds most effective.

10. Based upon its cost-benefit analysis, Congress made the following findings which are relevant to our determinations herein. The regulatory costs to implement the Act and monitor its implementation are minor.¹³ It is not costly to maintain production of hearing aid-compatible telephones.¹⁴ In fact, Congress found that the incremental cost of manufacturing a telephone so as to be compatible rather than incompatible is currently insignificant.¹⁵

¹⁰ *Id.* at 3. A more complete list of products which assist the disabled in using the telephone is described in para. 13, *infra*.

¹¹ See H. Rpt. at 3.

¹² H. Rpt. at 3-4.

¹³ H. Rpt. at 7.

¹⁴ *Id.* at 8.

¹⁵ *But see* H. Rpt. at 8, fn. 4, which notes that technological changes may increase the cost differential.

It is more cost-effective for the states than the Commission to enforce requirements that "essential telephones" be hearing aid-compatible.¹⁶ Finally, any costs to ensure the availability and affordability of equipment necessary for disabled persons to use the network are outweighed by the benefits to society that will result when "these individuals can participate as self-sustaining employees and consumers in the national economy and can safely and conveniently travel from state to state with equal access to airports, hotels, restaurants, and other places of public accommodation."¹⁷

B. Current Availability of Telecommunications Equipment and Services Beneficial to Persons With Disabilities

1. Hearing Aid-Compatible Telephones

11. Congress found that an increasing portion of telephones in production are or can be made hearing aid-compatible. AT&T represents that all telephones it provides which are activated by coins or credit cards are already compatible. General Telephone & Electronic Service Corporation (GTE) states that all of its coin-operated telephones are hearing aid-compatible.¹⁸ United Telephone System (UTS) states that all new telephones purchased by UTS companies for coin operation are compatible.¹⁹ AT&T represents that by the end of 1984, almost all telephones produced by Western Electric Company will be compatible.²⁰ GTE and UTS, however, comment that the compatibility of telephones they offer varies. They attribute this variance, at least in part, to the absence of uniform standards defining compatibility, a situation which the Act is designed to correct.²¹

2. Other Devices That Assist the Disabled

12. Telecommunications Devices for the Deaf (TDDs) are the primary means by which deaf and speech-impaired individuals are able to access the telephone network. Some parties argue that if TDDs are not subsidized, if special assistance in accessing the network is not provided, and some improvements in technology are not made, TDDs are deficient as a substitute for telephones. First, they are more costly than most basic telephone

equipment. AT&T has represented that retail price of certain TDDs to be approximately \$600 plus delivery charges.²² Second, many older TDDs were often teletypewriters taken out of service and donated by communications companies. Those TDDs use the Baudot format, with a modem that allows only one person to transmit messages at a time. On the other hand, many currently produced TDDs use the ASCII format with a modem allowing simultaneous transmission. The two formats are incompatible, and it appears that an affordable converter is not yet in production.²³ It may be too costly to convert a TDD from Baudot to ASCII or to retrain Baudot users to use ASCII, which is the format more likely to be used in the future.²⁴ Finally, TDD users require special operator and directory services to access the network.

13. In addition to TDDs, a number of other devices and assemblies of equipment are currently available which enable persons with physical impairments to utilize the network.²⁵ Aids for persons with impaired speech include the amplifying handset and artificial larynx. Aids for persons with impaired hearing include amplifying handsets and headsets, receivers which transmit messages by bone conduction, and devices which use light or vibrations to signal incoming calls. Aids for persons with impaired vision include large-number dials and stickers and a light-sensitive probe that produces an audible response to indicate on which line a call is incoming on a multi-button telephone set. Code-Com sets enable visually or hearing impaired persons to send and receive coded messages through lights or vibrations. Persons with impaired mobility can obtain speakerphones and other devices which allow hands-free calling, and single number dialers which require only that the caller press a button which dials a preprogrammed emergency number.

3. Current Programs Allowing the Disabled To Use the Network

14. Many states now help assure the availability of this equipment to the disabled through a variety of programs. The following is not intended to be an exhaustive list. California requires that every telephone ratepayer pay a small

surcharge (currently 3¢ per month) to a trust fund. The trust fund reimburses exchange carriers who provide TDDs to deaf persons at no charge beyond the monthly rate for local telephone service. California also requires carriers to provide certain types of "specialized" CPE to the disabled, such as touchcalling instruments, amplified handsets, and speakerphones, at one-half the ordinary tariff rate, allowing carriers to recover any unpaid costs in rate proceedings.²⁶ A Michigan statute requires that exchange carriers sell or lease TDDs to the deaf or severely hearing impaired at the carrier's purchase cost, with mandatory application of lease payments to the purchase price.²⁷ The Wisconsin Public Services Commission requires that TDDs (apparently costing up to \$250) be provided as part of the basic local exchange rate. Maintenance is provided as part of the basic local exchange rate.²⁸ The Kentucky Utility Regulatory Commission requires carriers to provide TDDs to deaf persons at the "actual direct cost to the utility."²⁹ The New Hampshire Public Utilities Commission has ordered that various devices other than TDDs be provided at the rate for basic exchange services.³⁰ Minnesota has approved tariffs filed by Northwestern Bell and Continental Telephone which offer for sale specialized terminal equipment under low-interest credit arrangements.

15. In addition to providing equipment beneficial to the disabled, some carriers provide special services necessary for disabled customers to access that network. AT&T-affiliated BOCs have regional offices which provide information concerning products and services designed to aid persons with disabilities, and specialized repair and related services.³¹ GTE states that it offers similar services itself or "participates with the BOCs via" BOC assistance centers "in many parts of the country."³² In addition, AT&T provides

¹⁶ Comments of California Public Utilities Commission at 1-4 (hereinafter California).

¹⁷ Mich. Comp. Laws § 484.103.

¹⁸ Order of Wisconsin Public Service Commission 05-TV-6 (Feb. 20, 1980).

¹⁹ Order of Ky. Util. Reg'y Comm'n, Admin. Case No. 220 (Feb. 19, 1980).

²⁰ N.H. Pub. Util. Comm'n., Order No. 15752, Dkt. DR 62-70.

²¹ AT&T Comments at 3-6. Reply at 7-9. AT&T intends, after the planned divestiture of the BOCs in 1984, to provide product and service information and distribution through one nationwide center which would be accessed by a toll-free number. AT&T Comments at 5.

²² GTE Comments at 3-4.

¹⁶ *Id.* at 14.

¹⁷ H. Rpt. at 4 (Footnote omitted).

¹⁸ AT&T Comments at A2-5; GTE Comments at 8, 14.

¹⁹ UTS Comments at 3.

²⁰ AT&T Comments at A-1, 2.

²¹ UTS Comments at 3; GTE Comments at 8, 9, 14.

²² Supplementary Comments at 6, n. 9. Certain TDDs are currently available at lower retail prices, but all are significantly more costly than basic telephones.

²³ See AT&T Comments at 12.

²⁴ "A Nationwide Communications System for the Hearing Impaired," NTIA Contract No. NT-81-SAC-00070 at 10, 15 (October 1981).

²⁵ See "Telecommunications Services for Special Needs" (Bell System publication).

toll-free operator and directory assistance to disabled customers of any carrier.³³ Some carriers provide discounts on TDD toll rates, recognizing the slow speed of information transmission, and exemptions from directory or operator assistance charges on telephone calls made by persons with diminished vision or mobility.

III. Adoption of Regulations To Implement the Telecommunications for the Disabled Act

A. Introduction

16. In order to ensure that every hearing impaired person has reasonable access to telephone service, and that persons with other disabilities can obtain specialized CPE at affordable rates, we are amending Parts 64 and 68 of our Rules and Regulations³⁴ to achieve the purposes of the Telecommunications for the Disabled Act. The rules we are adopting ensure that every person who requires a hearing aid-compatible telephone can obtain one. Exchange carriers are required to provide such telephones if unavailable from other sources. The Rules also ensure that TDD users will be provided the operator and directory assistance they require to access the telephone network. After January 1, 1985, all telephones which are installed in "essential" locations, as defined in the Rules, must be hearing aid-compatible. All coin-operated and "emergency use" telephones, as defined in the Rules, which were installed prior to January 1, 1985, must be converted to hearing aid-compatibility by that date. We are adopting a uniform technical standard which will allow confirmation of whether telephones are actually hearing aid-compatible. We are also requiring that all telephones offered for sale after June 1, 1984, be accompanied by package labelling or written statements notifying the prospective purchaser whether or not the telephone is hearing aid-compatible, and if not, disclosing that the instrument may not be used as "essential." Finally, we are modifying our Rules to conform to the Act's directive that carriers may offer specialized CPE, either on a tariffed or untariffed basis as each state may direct.

B. Regulations To Ensure Reasonable Access to Telephone Service by the Hearing Impaired

1. Summary of Rules

17. Section 610(a) of the Act states:

³³ AT&T Comments at 3. Reply Comments at 8.
³⁴ 47 CFR Parts 64, 68.

The Commission shall establish such regulations as are necessary to ensure reasonable access to telephone service by persons with impaired hearing.

We are taking several actions to ensure that hearing impaired consumers have reasonable access to telephone service. We are requiring that exchange carriers make available a hearing aid-compatible telephone, on request to each user who cannot otherwise obtain such a telephone. We are requiring any carrier currently providing specialized operator and directory assistance for TDD users notify regulatory authorities six months prior to any intended termination of such service. No other actions are necessary to ensure availability of transmission services needed by the hearing impaired to access the network, because hearing impaired persons who are able to use telephones with or without ancillary devices are afforded the same range of operator and directory assistance as persons without impaired hearing. There currently exist various exemptions and discounts on charges for TDD assistance and discounts on rates for TDD toll calls. We endorse the offering of beneficial rates for such services, which we note are not mandated by the Act. The actions we are taking, together with the actions we are taking to implement subsections (b), (c) and (d) of the Act (see paras. 23-44, *infra*), ensure the accessibility of telephone service to the hearing impaired.

2. Provision of Hearing Aid-Compatible Telephones

18. We are adopting rules to ensure that hearing aid users have access to telephone service by requiring that exchange carriers supply customers who are hearing impaired with compatible telephones, on a detariffed basis, after other efforts to procure such a telephone have failed.³⁵ Tariffing of hearing aid-compatible telephones is unwarranted because, as explained in paragraph 46, *infra*, hearing aid-compatible telephones are not "specialized CPE." Although Congress was confident that manufacturing of hearing aid-compatible telephones is nearing universality, comments of independent carriers in this proceeding indicate that availability may be limited in non-urban areas, and representatives of the hearing impaired have complained that current "on request" programs by which carriers voluntarily provide compatible

³⁵ The requirements of the regulation may be met either by the sale of new compatible telephones or conversion of existing incompatible ones.

telephones are ineffective.³⁶ Recently we adopted a plan which allows states, until June 30, 1985, to require exchange carriers to provide and maintain basic telephones for subscribers in isolated areas who cannot obtain telephones from unregulated entities.³⁷ We conclude herein that hearing impaired consumers must be permanently protected from similar failure of the marketplace to provide hearing aid-compatible telephones. Our new rule should be interpreted consistently with "provider of last resort" provisions until expiration of those provisions. We further find that the regulation will not be unduly burdensome to carriers who will have an ample supply from which to procure hearing aid-compatible telephones if necessary. We also conclude that requiring a carrier to convert a convertible incompatible telephone upon request of a hearing impaired consumer does not constitute retrofitting prohibited by section 610(f) of the Act because the customer, and not the carrier, will bear the cost of conversion.

19. Several parties take the position that subsection (a) requires us to take more expansive actions. Two commenters argue that we should ensure that all telephones are hearing aid-compatible by requiring hearing aid-compatibility as a prerequisite to registration under Part 68.³⁸ The Organization of Use of the Telephone (OUT) and the American Speech-Language-Hearing Association (ASLHA) recommend that registration of all telephones under Part 68 of our Rules be conditioned upon hearing aid compatibility. OUT argues that this would be the most cost-effective and most easily-administered means of ensuring that each hearing aid wearer has access to a compatible telephone. We agree that such a requirement could effectively assure hearing aid users of access to compatible telephones and might be relatively simple to administer. We find, however, that adopting the requirement advocated by OUT and ASLHA would contravene the purposes of the Act, while the requirement we are adopting furthers those purposes. Congress could have required that every

³⁶ Organization for Use of the Telephone (OUT), Reply Comments at 12.

³⁷ National Association of Regulatory Utility Commissioners Petition for Declaratory Ruling that State Commissions Have Authority to Require Exchange Carriers to Provide and Maintain Basic Telephone Instruments and Associated Wiring. — FCC 2d —, FCC 83-222, released May 12, 1983.

³⁸ OUT Comments, at 2-4, 18; American Speech-Language-Hearing Association (ASLHA), Reply Comments at 2.

telephone which is manufactured be hearing aid-compatible, a situation which OUT and ASLHA's proposal would create. It chose, however, only to specify locations where a compatible telephone must be placed. The legislative history expresses the statutory plan:

The legislation focuses on those "essential telephones" to which the hearing impaired must have access if they are to function effectively in modern society. Companies are free to manufacture and to market non-compatible telephones, and businesses and consumers may purchase these instruments for use by persons who do not have hearing impairments.

Under no circumstances may the Commission designate as an essential telephone any residential telephone . . . if all the persons who would normally use it do not have hearing impairments. House Report at 9.

20. The purposes of the Act can be achieved through actions short of requiring universal production of compatible telephones. Our rules ensure that every person who requires a compatible telephone can acquire one. As noted, Congress found that a sufficient supply of compatible telephones exists to ensure this. The rules also preserve consumer and manufacturer choice concerning equipment to be purchased and manufactured.

21. In addition, we note that the approach we are taking will strengthen existing "on request" programs, by requiring carriers, if necessary, to secure hearing aid-compatible telephones, if requested by a subscriber. Merely reporting unavailability of compatible telephones would not meet the carrier's obligation to supply equipment.⁴⁰ Furthermore, uniform technical standards for hearing aid-compatibility will prevent carriers from evading responsibility by disclaiming knowledge of whether particular equipment is functionally compatible. This approach is also more likely than a requirement that telephones be compatible to be registered to achieve the statutory goals as it will not interfere with price competition and innovation in the CPE market.

3. Operator and Directory Assistance Services Necessary for TDD Users to Access the Telephone Network

22. AT&T has indicated that it provides TDD operator and directory assistance to customers of any carrier. (Comments at 3, Reply at 8). GTE states

⁴⁰ States may establish reasonable standards for determining the actual availability of compatible telephones within exchange areas.

that it provides similar services in certain of its territories. (See Comments at 4). To ensure that hearing impaired persons have "reasonable access" to telephone service, we are requiring that carriers providing such services notify this Commission and affected states six months prior to terminating such service. Without these services, provision of TDDs could become a fruitless act. This provision allows this Commission and state regulatory agencies to consider termination proposals and determine whether termination is in the public interest. Furthermore, we are not requiring that carriers make available more sophisticated or costly services suggested by some commenters. These include call waiting, call forwarding, and relay services using intermediaries to allow conversation between persons without hearing impairments who do not have TDDs, and TDD users.⁴⁰ Such services appear to impose costs which we are unwilling to impose in light of section 610(e) of the Act. We are not precluding cooperative efforts by states and carriers, including subsidies if necessary, to provide incidental services to TDD users which go beyond the basic requirements of new section 64.603.⁴¹ Indeed, we note that without requirements by this Commission, AT&T, some BOC's, GTE, and some Independents currently allow discounts or exemptions from charges for directory or operator assistance.

4. Requirements that "Essential Telephones" be Hearing Aid-Compatible

a. Summary.

23. Section 610(b) of the Act provides:

[T]he Commission shall require that essential telephones provide internal means for effective use with hearing aids that are specially designed for telephone use. For purposes of this subsection, the term "essential telephones" means only coin-operated telephones, telephones provided for emergency use, and other telephones frequently needed for use by persons using such hearing aids.

⁴⁰ Comments suggesting that we require some or all of these services include Michigan Department of Labor (Michigan), at 2-3; National Center for Law and the Deaf (National Center), at 2; Institute for Cognitive Science (ICS), at 2-4; California, at 1-2; Greater Los Angeles Council on Deafness (Los Angeles), at 4.

⁴¹ Several commenters (Los Angeles at 4; ASLHA at 2; ICS at 1-2; Bay Area Center for Law and the Deaf (BACLAD) at 2) request that the Commission require discounts on TDD toll calls because TDDs transmit information at a much slower rate than telephones. AT&T correctly responds, however, that our Order terminating Docket No. 78-50 (Telecommunications Services for the Deaf and Hearing Impaired) concluded that further rate determinations of this nature are appropriately left to state regulatory agencies.

The Act also provides:

[E]xcept for coin-operated telephones and telephones provided for emergency use, the Commission may not require the retrofitting of equipment to achieve the purposes of this section. 47 U.S.C. 610(f).

To meet the mandate of subsection (b) and the restrictions of subsection (f), we are requiring that as of January 1, 1985, all newly installed "essential" telephones be hearing aid-compatible, and all incompatible coin-operated and emergency telephones be retrofitted by that date. To codify these requirements, we are adding §§ 68.4 and 68.112 to Part 68 of our Rules. We note that the Act does not require placement of new telephones where none currently exist, only that newly-installed telephones be compatible and that designated existing telephones be retrofitted.

24. Section 68.4 prescribes hearing aid-compatibility of new and existing "essential" telephones by January 1, 1985, including retrofitting of telephones not exempted by subsection (f) of the Act. While United States Independent Telephone Association (USITA) requested more time, it provided no data affirmatively demonstrating a need for a longer retrofitting period. "Hearing aid-compatibility" is defined by reference to § 68.316, which is discussed at paras. 38-41, *infra*. The Electronic Industries Association (EIA) standards adopted in section 68.316 meet the Act's mandate that hearing aid-compatibility be provided by means internal to a telephone.

b. Categories of Essential Telephones.

25. Section 68.112 establishes definitions of the three categories of "essential" telephones, *i.e.* coin-operated, "emergency," and "frequently needed." The subcategories adopted under the headings "emergency" and "frequently needed" telephones include telephones in places where the hearing impaired might be isolated or confined; telephones installed to contact public authority or to obtain medical assistance; credit card telephones; telephones made available to invites; telephones in workplaces; and telephones in hotel or motel rooms. These categories are consistent with the legislative history.

(1) Coin-Operated Telephones

26. Our requirement that coin-operated telephones be hearing aid-compatible applies to any coin-operated telephone regardless of location. This is consistent with Congressional findings that most coin-operated telephones are already hearing aid-compatible and that it is not costly to convert an

incompatible telephone.⁴² Furthermore, a one-year deadline for retrofitting coin-operated telephones is consistent with these Congressional findings, and we encourage carriers to retrofit earlier if this is feasible. The definition of "coin-operated" contained in new § 68.112(a) should be reasonably construed to accommodate technological changes, including availability of telephones which accept and make change for paper currency. See GTE Comments at 11. The definition excludes telephones activated by credit cards only, which we classify as "frequently needed" telephones. See Para. 30, *infra*.⁴³

(2) *Telephone Provided for Emergency Use*

27. We are adding to our rules definitions of three subcategories of "telephones provided for emergency use." These are (1) telephones provided for use in isolated areas, (2) telephones needed to signal life-threatening situations in confined institutional settings, and (3) telephones specifically installed to contact public authorities or providers of medical assistance. We note that Congress intended that non-network telephones be included in this category, e.g., telephones in elevators, police call boxes, telephones in hospital rooms. The definitions of "emergency use" telephones will be contained in new § 68.112(b). Upon an affirmative showing that another location should be included in our Rules, we will consider adding new categories.

28. We are not requiring placement of an "emergency" telephone where none existed; the reference in subsection (b)(3) of the new rule to telephones "needed" to signal life-threatening or emergency situations indicates that institutions may have chosen to provide an alternative means of monitoring emergencies, including an on-duty attendant or a signalling device other than a telephone. In that case, a telephone which is also in the hospital

room is not provided for emergency use and if incompatible would not have to be retrofitted. Finally, in recognition of our responsibility under section 610(e) to consider the costs and benefits of every rule we adopt herein, we find a lack of evidence showing that any "emergency telephone" requirement, including the one-year deadline in retrofitting, will be unduly costly to manufacturers, carriers, or the public.

(3) *Telephones Frequently Needed by the Hearing Impaired*

29. The remaining category of "essential" telephones is "telephones frequently needed for use by the hearing impaired." The definitions of "frequently needed" telephones, contained in § 68.112(c), include five subcategories of telephones: telephones activated by credit card or other pre-arranged credit; workplace telephones; telephones made available at places of business or in public buildings; telephones in hotel and motel rooms; and non-emergency telephones in locations where the hearing impaired may be confined, e.g., hospitals. As with "emergency" telephones, Congress intended to include certain non-network telephones in this category, including internal extensions in places of business and public buildings.⁴⁴ Unlike the other two categories of "essential" telephones, not every newly installed telephone in this category need be compatible. The following sections describe the subcategories of "frequently needed" telephones. Our rules recognize that subsection (f) of the Act prohibits the Commission from requiring the retrofitting of telephones in this category.

(a) *Credit Card Telephones.*

30. The first subcategory is telephones on which calls may be paid for only by credit cards or other pre-arranged credit (or third number or reverse billing). Congress in its Report noted that AT&T and GTE projected that all credit card telephones in their territories would be hearing aid-compatible by the end of 1982.⁴⁵ AT&T represents that it has accomplished this. (Comments at A-2 thru 5). Congress concluded that, because in its view less power is needed to activate these telephones than coin-operated telephones, many credit card telephones would be removed if we required these telephones to conform to the same criterion for magnetic field strength as other "essential" telephones.⁴⁶ The Report therefore

recommends that a newly-installed credit-card telephone be hearing aid-compatible unless no coin-operated telephone is readily accessible which is capable of performing the same functions as the credit card telephone.⁴⁷ We are adopting a rule which is consistent with Congress' concerns but will still ensure that compatible telephones are available in public locations.

(b) *Workplace Telephones.*

31. We are also requiring that when an employer installs a new telephone at the work station of a hearing impaired employee, that telephone must be compatible if that employee will use it in the course of work duties. Section 68.112(c)(2) contains this requirement. This requirement is consistent with the legislative history, which provides that "An employee with impaired hearing should have access to at least one compatible telephone unless his duties would not involve the use of such a telephone if it were available." H. Rpt. at 10. We cannot accept the contention by OUT (Comments at 7) that we should require all new telephones in workplaces to be hearing aid-compatible. OUT's position is inconsistent with the requirement of section 610(b) that non-emergency, non-coin-operated CPE be compatible only if frequently needed by persons with hearing impairments. In addition, we conclude that OUT's suggestion is unnecessary to achieve the purposes of the Act, which seeks to preserve consumer choice in the purchase of CPE.

(c) *Telephones for Use by Invitees.*

32. The next category of "frequently needed" telephones is telephones for use by business invitees. We shall require generally that newly-installed telephones in public buildings and places of business, which are made available to the public, be compatible, no party having demonstrated that a compatibility requirement will impose "extraordinary costs of implementation" in the locations mentioned.⁴⁸ This section does not require that a newly-installed credit card-telephone be compatible if it is in proximity to a hearing aid-compatible coin-operated telephone.

(d) *Hotel and Motel Room Telephones.*

33. The fourth category of "frequently needed" telephones is hotel and motel room telephones, for which new § 68.112(c)(4) sets forth requirements. This subcategory received considerable attention in both the legislative history

⁴² See H. Rpt. at 9.

⁴³ We note that while the legislative history of the Act appears to contemplate that all telephones be registered, with registration indicating whether or not a telephone is hearing aid-compatible. H. Rept. at 12, we do not currently permit registration of coin-operated telephones. As all coin-operated telephones will have to be hearing aid-compatible, their omission from the registration program is of little consequence in terms of the purposes of the Act. An application for registration of a coin-operated telephone is, however, currently under consideration by this Commission. Application of Viking Electronics, Inc., File No. 100-CX-83 (October 26, 1982). If we decide to register coin-operated telephones, applications will be required to show hearing aid-compatibility, and registrants will be subject to the same conditions concerning hearing aid-compatibility as registrants of other "essential" telephones.

⁴⁴ See H. Rpt. at 10.

⁴⁵ *Id.* at 11.

⁴⁶ See *id.* at 6, 9.

⁴⁷ *Id.* at 9, 0.

⁴⁸ See *id.* at 10.

of the Act and in the comments received in this proceeding. OUT (Comments at 7, Reply Comments at 9-11), ASLHA (Comments at 4), and the Communications Workers of America (Reply Comments at 3) demand universal compatibility of hotel and motel room telephones. OUT in particular argues that this would be a less costly and less confusing requirement than alternatives which were proposed by other commenters and considered by Congress. Congress, however, did not believe that universal compatibility in hotel and motels is necessary. The Report states:

As an alternative to providing compatible telephones in every room, a hotel may set aside a reasonable number of rooms (under a formula that the regulations will specify) for the hearing impaired. Alternatively, the hotel owner may maintain a reasonable supply of compatible instruments and install them at the request of a guest who uses a hearing aid. H. Rpt. at 10.

34. The Chairman of the House Committee which had jurisdiction over the Act, Representative Wirth, confirmed in debate that "there is no requirement that every telephone in the lobby or every [hotel or motel] room would have to have telephones that are compatible with hearing aids." He proposed that "1 out of 10 rooms" should have a compatible telephone.⁴⁹ Representative Wirth referred to the above-quoted portion of the House Report as providing "several examples of the maximum extent of regulation" by the Commission," i.e., prohibiting the Commission from requiring that every new hotel or motel telephone be hearing aid-compatible.⁵⁰

35. We conclude as Congress did that we need not require that all telephones in hotel and motel rooms be compatible. Any of several approaches will ensure that hearing aid users are accommodated by hotels and motels. Section 68.112(c)(4) therefore sets forth several alternatives for compliance. Any hotel or motel which has incompatible telephones in its rooms need not install new telephones or retrofit existing telephones. When a hotel or motel does install a new telephone or replaces an existing one, it may comply with the Act either by installing a compatible telephone or taking other actions specified in our Rules. Once a hotel or motel has attained compliance in ten percent of its rooms, it may install any type of equipment it chooses. We reject,

however, comments which suggest that the maintenance of a supply of adapters which couple externally with non-compatible handsets to enable use of those handsets by hearing aid wearers would comply with the Act.⁵¹ The plain language of section 610(b) requires that essential telephones contain internal means for compatibility with hearing aids. Accordingly, compliance with § 68.112(c)(4) can be achieved only by provision of internally compatible telephones as specified therein.

(e) *Non-Emergency Telephones in Locations Where the Hearing Impaired May be Confined.*

36. The final category of "frequently needed" telephones includes telephones in locations where the hearing impaired may be confined but which are not needed to signal the presence of a life-threatening situation. This category includes, but is not limited to, telephones in rooms in hospitals, convalescent homes, residential health care facilities for senior citizens, and prisons. As indicated in para. 28, *supra*, if a hearing impaired person in such a location has access to an alternative means of signalling an emergency, a telephone in such a room is not provided for emergency use. It would, however, be "frequently needed by the hearing impaired." Therefore, existing telephones in such locations need not be retrofitted, but telephones installed after January 1, 1985, must be hearing aid-compatible.

(f) *Public Availability of Telecommunications Devices for the Deaf.*

37. An additional issue which is most logically dealt with here is the suggestion made by several commenters that the Commission require the placement of TDDs, or coin telephone booths which can accommodate them, in public locations.⁵² We will not prescribe such a requirement in this proceeding. Subsection (b) of the Disabled Act is limited by its terms to telephones, not TDDs. No section of the Act affirmatively requires placement of an instrument whether a telephone or TDD, and, in view of the substantial costs that such a requirement might impose on the public and those governmental and private entities which control such locations, we decline to do so here. As we noted in *Telecommunications Services for the Deaf and Hearing*

Impaired,⁵³ however, there is nothing to prevent a state regulatory agency from requiring subsidization of such equipment pursuant to section 610(g) of the Act.⁵⁴ We therefore leave this matter for resolution between states, carriers and suppliers of TDDs.

5. *Adoption of Uniform Technical Standards for Hearing Aid Compatibility*

38. Congress found in section 2 of the Act that technical standards for compatibility between hearing aids and telephones are necessary to assure that the needs of the hearing impaired are met. Section 610(c) of the Act provides that "the Commission shall establish or approve such technical standards as required to enforce this section." The Report indicates that such standards must be nationally uniform, preempting any conflicting state requirements. The Commission may adopt standards produced by industry agreement or adopt other standards if industry fails to agree or the industry standard does not lead to satisfactory results. The legislative history, however, reflects Congress' concern that our technical standards not freeze technology by specifying a permissible design and excluding potentially superior alternatives. In fact Congress made plain that the Commission should expeditiously accept any new design which is compatible with existing technologies and provides results which are equivalent or superior to those achieved by an existing standard.⁵⁵

39. Comments filed in this proceeding by the Electronic Industries Association (EIA), a trade association representing manufacturers of telephone equipment, contain proposed technical standards developed jointly by EIA and the Hearing Industries Association (HIA), entitled "Magnetic Field Intensity Criteria for Telephone Compatibility with Hearing Aids." Commenters agreed that these standards will ensure that complying telephones will be usable with hearing aids equipped with telecoils. Consistent with Congress' suggestion that we adopt industry-developed, effective standards, we are therefore incorporating these standards into Part 68, at § 68.316. The standards enable manufacturers and suppliers to be certain that the telephones they produce and install are functionally

⁴⁹123 Cong. Rec. at H 9485 (Daily ed., Dec. 13, 1962).

⁵⁰123 Cong. Rec. at H 10355 (Daily ed., December 18, 1982). *Accord.* Comments of Representative Thomas Bliley, Jr., filed in this docket (June 15, 1983).

⁵¹See GTE Comments at 8; North American Telephone Association (NATA) Comments at 7; Electronic Industries Association (EIA) Comments at 5.

⁵²E.g., Scott Rafferty (Rafferty) Comments at 6; National Center, Comments at 2; BACLAD, Reply Comments at 2; Michigan, Comments at 3.

⁵³CC Docket No. 78-50. — FCC 2d —, FCC 83-177, released May 4, 1983.

⁵⁴*Id.* at paras. 21-24.

⁵⁵H. Rpt. at 11. The Report specifically indicates that Congress chose not to specify "inductive coupling" as the only acceptable method of hearing aid compatibility. *Id.* at 6.

compatible with hearing aids designed for telephone use. We note that the new rule cross-references requirements we are adopting for labelling of telephone packaging. See paras. 42-44, *infra*. This cross-reference will disclose to potential purchasers the limits the Act places on the use of incompatible telephones in "essential" locations.

40. Accordingly, we are adopting the standard recommended by EIA.⁵⁶ We are not precluding EIA from developing new standards or revising its recommended standards to reflect changes in technology. Henceforth, however, the Commission, not industry, will determine whether to amend the standard adopted in our Rules. Furthermore, we will not freeze technology by specifying a particular design for hearing aid-compatibility; thus we will entertain a petition by any person, supported by technical data, which demonstrates that a particular telephone may be used as "essential" because a technological alternative to inductive coupling makes that telephone hearing aid-compatible by means internal to the telephone.

41. While OUT supports the EIA standards, it also argues that prototype telephones should be subject to laboratory tests by a federal testing bureau, or to field tests by consumers, before the Commission enacts technical standards. (OUT Comments at 10-12). It bases this argument upon a statement in the legislative history that the Commission should reject an industry-developed compatibility standard if consumers establish that the standard fails to provide satisfactory results.⁵⁷ We will not order such tests as a prerequisite to adopting the EIA standard. We would expect, however, that every manufacturer will rigorously test all new equipment and we are requiring that all Part 68 registrations of telephones represented to be compatible be backed by affirmative data to be made available to the Commission on request. We will of course review carefully any complaints that the standard we are adopting is insufficient, and take prompt remedial action, if warranted.⁵⁸

⁵⁶ Because of the broad consensus on the standards proposed by EIA/HIA, we find it unnecessary for the Common Carrier Bureau to convene meetings on this subject as we had suggested in the Notice, para. 25.

⁵⁷ H. Rpt. at 11.

⁵⁸ On November 25, 1983, OUT submitted unauthorized supplementary comments which criticize some aspects of the EIA standards. In view of the imminent deadline for issuing regulations to implement the Act, we will not address further the question of the adequacy of the standards, but will, as noted, take remedial action if warranted based upon consumer complaints.

6. Labelling of Telephone Packaging and Other Notification Concerning Hearing Aid Compatibility

a. Requirements.

42. Section 610(d) of the Act provides that

The Commission shall establish such requirements for the labelling of packaging materials for equipment as are needed to provide adequate information to consumers on the compatibility between telephones and hearing aids.

Requirements for labelling CPE packaging must "explain, in a clear understandable manner, whether and how persons with impaired hearing may use such equipment." H. Rpt. at 12. The Act does not require labelling of equipment itself. However, the Report notes that "it would be desirable for persons using hearing aids to be able to identify noncompatible telephones * * * outside their homes." *Id.*

43. To meet the mandate of subsection (d) of the Act and to ensure that purchasers of new incompatible telephones are aware that such telephones may not be installed in locations causing them to be "essential,"⁵⁹ we are requiring labelling of external packaging as the Act prescribes, and directing manufacturers to include written disclosure statements with new telephones delivered unpackaged, because equipment used in workplaces, hospitals, places of business, etc., is often delivered unpackaged. These requirements are incorporated in new § 68.224 of our Rules, which provides manufacturers six months after the rules are issued to comply. All new telephones which are incompatible with hearing aids must be accompanied by written information concerning limitations on use as "essential" pursuant to section 610(b) of the Act. Although these disclosure statements may not reach the end user, they will ensure that the purchaser is aware of his obligations to end users and can make informed purchasing decisions. These requirements will undoubtedly impose some costs on manufacturers of CPE. But since labelling and instructions are generally used in any event, the costs will largely be those associated with a change in labelling and instructions, and not continuing ones. Congress, as we have noted, has determined that the benefits of enabling hearing impaired persons to function in society, including reduced institutionalization and increased employment, outweigh these costs. See para. 9, *supra*.

⁵⁹ See *id.* at 12.

b. Identification of Compatibility of Non-Residential Telephones.

44. We have considered but rejected proposals by several commenters that we require some form of marking or labelling on the surface of telephones to indicate whether they are hearing aid compatible,⁶⁰ and a proposal that we require signs on or near pay telephones indicating availability of a hearing aid-compatible telephone.⁶¹ We see no reason to require signs on pay telephone booths because all coin-operated telephones will be compatible pursuant to section 610(b) of the Act, and § 68.112 of our Rules. Furthermore, while we agree that some means of identifying compatibility of telephones outside the home would help ensure that hearing aid users will feel free to travel, the record shows that most coin-operated telephones, which are already generally compatible, are already marked with a blue "grommet" (*i.e.* rubber molding on the junction of the cord and receivers),⁶² and most public use telephones will become compatible by operation of amendments to Part 68 of our Rules adopted by this Order.⁶³ We are not, of course, discouraging voluntary marking of telephone equipment or designations of public availability of compatible telephones in any manner which may aid hearing impaired persons.

7. Provision of "Specialized CPE" for Persons With Impaired Hearing, Speech, Vision or Mobility

a. Statutory Provision.

45. Section 610(g) of the Act provides:

Any common carrier or connecting carrier may provide specialized terminal equipment needed by persons whose hearing, speech, vision, or mobility is impaired. The State commission may allow the carrier to recover in its tariffs for regulated service reasonable and prudent costs not charged directly to users of such equipment.

As we have noted (para. 4, *supra*), we concluded in our Order denying AT&T's request to detariff "specialized CPE" that the Act is intended to facilitate the efforts of states and carriers to meet the communications needs of disabled persons. Therefore, we have added rules which modify *Computer II*, to make clear that states may continue

⁶⁰ Rafferty, Comments at 15; Michigan, Comments at 5; OUT, Comments at 14.

⁶¹ Michigan, Comments at 3.

⁶² AT&T Comments at 12; USITA Comments at 7.

⁶³ In addition we note that the requirements of new § 64.603 requiring carriers annually to include billing inserts containing information on the Act's requirements, will ensure that consumers are aware of requirements that "essential" telephones be compatible, and will explain the significance of any non-verbal form of labelling or marking adopted by a carrier including "grommets," symbols, or the like.

subsidized offerings of "specialized CPE" on a tariffed or detariffed basis.⁶⁴ The Commission recently required that any BOC which offers CPE after divestiture must do so through structural separation.⁶⁵ This requirement, however, does not affect carriers' ability to offer specialized CPE on an unseparated basis. The Act does not specifically define specialized CPE (which is referred to in the Act as "specialized terminal equipment"). The Report gives guidance, however, noting that regulated services may subsidize only equipment actually needed by disabled persons to communicate, or by other persons who communicate regularly with disabled persons.⁶⁶ The Report also gives certain examples of specialized terminal equipment including TDDs, artificial larynxes, and hands-free telephones, *id.* at 3.

b. Definition of Specialized CPE.

46. We are modifying our Rules to allow states and carriers to tariff specialized CPE for persons with impaired hearing, speech, sight or mobility. Therefore we are adding Section 64.601(a) to our Rules. That provision recognizes that carriers may provide specialized CPE to disabled persons or to their associates. Specialized CPE encompasses any CPE which a person with a particular disability needs to access the network without assistance, or a non-disabled person needs to communicate with a disabled person, e.g., a TDD. In other words, a particular type of CPE may not be provided under tariff to a person who would be able to utilize the network or contact a disabled person without it. E.g., an amplifying handset may not be provided under tariff to a person whose hearing is unimpaired. The definition excludes basic hearing aid-compatible telephones. The Act does not specifically address the inclusion of hearing aid-compatible telephones as part of specialized terminal equipment. Congress found that the marketplace is producing an ample supply of such telephones at affordable prices.⁶⁷

⁶⁴ Although we have left to the states decisions regarding the appropriate method for subsidizing specialized CPE, and we are required to delegate to the states authority to enforce certain regulations, see para. 51, *infra*, we are hopeful that carriers will continue current programs to aid the disabled. Moreover, we encourage new initiatives by carriers and states to assist disabled ratepayers.

⁶⁵ Policy and Rules Concerning the Furnishing of Customer Premises Equipment, Enhanced Services and Cellular Communications Services, CC Docket No. 83-113, FCC 2d—, FCC 83-552, adopted November 23, 1983.

⁶⁶ H. Rpt. at 13.

⁶⁷ H. Rpt. at 11.

Congress' concern was directed to other more costly equipment which is produced on a relatively small scale, and which might escalate in price in a deregulated environment. In such cases disabled persons would be hampered by unsubsidized prices of equipment. Such concerns do not apply to basic hearing aid-compatible telephones.⁶⁸ Therefore subsidies are unnecessary for such telephones. Moreover, as hearing aid-compatible telephones are expected to be almost universally available, tariffed provision of such telephones would undercut this Commission's *Computer II* policies.

47. The regulation does not preclude carriers from offering, or states from approving, offering of TDDs or other specialized CPE under any subsidy method which will effectuate the goals of the Act, including tariffing. In fact, this Commission encourages the continuation of charitable contributions, by carriers, or equipment such as TDDs and artificial larynxes, a subsidy method which may prove less distortive of telephone rates and less detrimental to ratepayers than increasing toll or exchange rates or imposing surcharges on bills for exchange services. In order to encourage innovation and avoid freezing technology, our new rule includes a list of examples but does not specify every type of "specialized CPE" which may be permissibly offered to disabled persons.⁶⁹ States can allow equipment other than the examples specified to be provided under tariff consistent with the letter and spirit of the Act and our Rules. We trust that such authority will not be abused, and we are prepared to take actions to prevent such abuse. See para. 49, *infra*.

48. Finally, we have considered, and we reject, suggestions by some commenters that the Commission adopt a definition of specialized CPE which would allow subsidized provision of only those products whose sole or main purpose is to benefit the disabled.⁷⁰ Subsection (g) of the Act refers to equipment "needed" by the disabled. Equipment may be needed by the disabled regardless of whether it was designed with them in mind, e.g. speakerphones. We find, moreover, that the problems of attempting to define specialized CPE by the nature of

⁶⁸ *Id.*

⁶⁹ In Addition to requirements for provision of specialized CPE, states may find it appropriate to issue reasonable requirements for carries to notify customers of the availability of such products and incidental services which enable customers to utilize such products.

⁷⁰ See NATA Comments at 11; USITA Comments at 8; Comdial Comments; GTE Comments at 18; Michigan Comments at 5; UTS Comments at 5.

particular equipment, *i.e.*, whether a product is "designed" for disabled persons or only incidentally beneficial to them, are almost insoluble in some cases.

c. Limitations on Provision of Specialized CPE.

49. States and carriers must be cognizant that the Act does not authorize carriers to make a wholesale re-entry into the provisions of regulated CPE. We have considered circumstances in which we would take action against state programs which go further than permitted by the Act. Among the circumstances in which we might act are situations outlined by Representative Wirth. These include: (1) A tariff includes equipment that is not specialized, *i.e.*, will not enable a disabled person to use generally available telecommunications services (or those services that have been specially designed for their use) effectively or without assistance; (2) a tariff makes equipment which might otherwise be designated "specialized" available to persons who do not require it by virtue of a physiological impairment (e.g., a speakerphone provided to a non-disabled person); (3) a tariff for regulated services includes costs of providing equipment that are not "reasonable and prudent."⁷¹ One method of preventing abuse of the subsidy mechanism which is currently employed in several states is certification that a consumer needs a particular device to effectively obtain telephone service, by professionals familiar with particular disabilities, before the customer may obtain one at subsidized rates. In any event, we are confident that the states, which have the incentive to hold down rates for telephone services for all ratepayers, will assure that abuses in the provision of specialized CPE do not occur.

d. Incompatibility of ASCII and Baudot TDDs.

50. As we recognized in the Notice (para. 17), the termination of CC Docket No. 78-50 left unresolved the question of how to rectify the incompatibility between TDDs using the ASCII/103 (ASCII) and Baudot/Weitbrecht (Baudot) standards. The record in this proceeding does not provide a basis for a uniform solution to this problem at this time. AT&T has indicated that development of an affordable modem allowing interface between the two formats is feasible, and that the Electronic Industries Association is

⁷¹ 123 Cong. Rec. at H9484 (Daily ed., Dec. 13, 1982).

exploring a uniform standard for interface between ASCII and Baudot TDDs. (Comments at 12). We encourage voluntary developments in this area and would consider, only as appropriate, formal adoption of a uniform standard agreed to by consensus, as was the case with the hearing aid compatibility standard we are adopting herein. At this time, however, we are limiting regulation of this situation to requirement that carriers which supply TDDs, provide TDD users, on request, with sufficient information to make informed purchasing decisions. See § 64.601(b).

51. The growing availability of moderate-cost home computer equipment meeting the ASCII/103 standard suggests that adopting that standard for telecommunications equipment for the deaf might decrease equipment costs for deaf customers and greatly expand the community of users to which deaf persons have access. While the Commission could conceivably adopt ASCII/103 as a standard with a specified deadline for phasing out dual-format or Baudot-only TDDs, the immediate costs of conversion or replacement of obsolescent existing equipment warrant caution in taking short-term actions unjustified by the record. The states will have power to require provision of TDDs using a particular standard, and can develop, in conjunction with carriers, any needed subsidization plans for conversion of equipment or retraining of Baudot users. We note, for example, that California's TDD subsidy program requires provision of dually compatible TDDs, with customers required to pay only a small surcharge for a dually compatible TDD if such a instrument is not cost-competitive with Baudot-only TDDs.⁷³ This Commission remains receptive to efforts by industry and representatives of the hearing impaired to reach a nationwide solution to the ASCII/Baudot problem.

8. Enforcement of Regulations Issued Under Subsections (a) and (b) of the Act

52. Section 610(h) of the Act provides that

The Commission shall delegate to each state commission the authority to enforce within such State compliance with the specific regulations that the Commission issues under subsections (a) and (b), conditioned upon the adoption and enforcement of such regulations by the State commission.

⁷³ Investigation to Provide a Program for the Furnishing of Telecommunications Devices to the Deaf and Severely Hearing Impaired, Decision No. 92371, at 2-3 (Calif. Publ. Util. Com'n, April 7, 1981).

Congress found that it would be more cost-effective for the states rather than this Commission to handle disputes arising under the Act. Therefore authority to enforce subsections (a) and (b), requiring "reasonable access" and compatibility of "essential" telephones, is delegated to any state commission which adopts the regulations issued in this proceeding. New §§ 68.414 and 64.604, which delegate responsibility for several of the rules we are enacting, prescribe a period for voluntary compliance by individuals or carriers before a state commences a formal enforcement action.⁷⁴ The regulations delegating enforcement responsibilities also underscore that this Commission retains jurisdiction to enforce all sections of the Act if a state declines enforcement responsibilities. Our Rules, however, make clear that a state may properly decide not to act on a complaint which lacks merit as long as the customer is properly notified.⁷⁴

IV. Regulatory Flexibility Act—Final Analysis

A. Need for and Objectives of Rules

53. These rules are being issued as directed by the Telecommunications for the Disabled Act of 1982, Pub. L. 97-410 (to be published at 47 U.S.C. 610). Through these rules, the Commission seeks to comply with the congressional purposes and provisions contained in that legislation. In order to comply with those purposes, this Commission is adopting regulations to ensure reasonable access to telephone service by the hearing impaired, including enacting technical standards for certification that essential telephones are hearing aid-compatible; defining which telephones are "essential"; enacting standards for labelling packaging and otherwise notifying the public of whether telephones are or are not hearing aid-compatible; and requiring telephone carriers to provide hearing impaired persons with hearing aid-compatible telephone if otherwise unavailable. In addition, the rules define circumstances under which specialized equipment needed by the hearing impaired and other disabled persons may be provided pursuant to state

⁷³ See Rpt. at 14.

⁷⁴ We further note a commenter's suggestion that this Commission, in order to facilitate public scrutiny of carrier compliance, act as a repository for carrier tariff filings for "specialized CPE" and accountings for sales of such products. Rufferty, Comments at 25. We believe, however, that the benefits of such requirements would not justify the resulting paperwork burden, both to the carriers and to the Commission. Therefore we are not adopting such a requirement.

public utility regulation, and prescribe that carriers notify regulatory commissions if the carrier plans to discontinue transmission services necessary to enable deaf persons to use the network.

54. The Notice of Proposed Rulemaking in this proceeding (Para. 44) solicited comments on the Initial Regulatory Flexibility Analysis, and specified that such comments be contained under separate headings from comments relating to the general issues. No such comments were received. Nevertheless, in order to discharge our duty under the Regulatory Flexibility Act, we will proceed to discuss the pertinent costs arising from actions we are taking to implement the Telecommunications for the Disabled Act, and alternatives to those actions which we considered and rejected.

B. Analysis of Specific Actions

1. Adoption of Technical Standards for Hearing Aid Compatibility

55. We are requiring that telephones, in order to be designated "hearing aid-compatible" and therefore usable as "essential" telephones, comply with a uniform technical standard incorporated in our Rules. This standard places no burden on any person because it does not of itself require any company to manufacture telephones but merely establishes specifications to be met by a company which chooses to do so. Furthermore, the standard represents a consensus of industry members based upon currently prevalent technology. We were not presented with a viable alternative to the particular standard we are adopting.

2. Requirements That Essential Telephones be Hearing Aid-Compatible

56. We are requiring that after a specified date only hearing aid-compatible telephones be installed for use as "essential" telephones and that existing telephones which are coin-operated or provided for emergency use be retrofitted for compatibility by that date. There is generally no alternative to either requirement, both of which are mandated by the Act. Where the Act permitted an alternative to requiring that every telephone in a particular category of "essential" telephones be hearing aid-compatible, we have adopted such an alternative, *i.e.*, for credit card telephones and telephones in hotel and motel rooms. Certain commenters proposed longer deadlines for the retrofitting of coin-operated and emergency use telephones. We rejected those alternatives because no commenter quantified the expense to

which the shorter deadline we are adopting would subject providers of those telephones.

3. Requirements for Package Labelling and Inserts to Indicate Hearing Aid Compatibility and Provide Other Information

57. These requirements will increase manufacturers' production costs to some extent. However, there is no alternative to requiring package labelling, which is required by the Act, and therefore no alternative to package inserts which replace labels for unpackageable telephones. Package inserts informing a customer that an incompatible telephone may not be used in "essential" circumstances is required to effectuate the Congressional intent that the purchaser be informed of limitations on the use of incompatible telephones. Congress found such an approach to be preferable to requiring that every telephone manufactured be hearing aid-compatible. Package inserts are also less costly than alternatives we considered and rejected, such as marking the surface of an incompatible telephone.

4. Provision of Specialized CPE

58. The provision in our Rules relating to specialized CPE merely recognizes that the Act preserves certain rights which states and carriers already largely possess. It creates no rights or obligations in itself and therefore is not burdensome to any carrier or manufacturer.

5. Provision of Information Concerning Usage of ASCII and Baudot TDDs

59. We are requiring that carriers which provide TDDs are also required to provide, on request, information enabling customers to make informed decisions in purchasing or leasing a TDD. The costs of such a requirement, if any, should be minimal. The Commission considered but rejected more rigorous and expensive alternatives for rectifying problems stemming from incompatibility of TDD formats, including adoption of a standard format which would require costly equipment modification or removal of products from the market.

6. Requirement that Exchange Carriers Provided Hearing Aid-Compatible Telephones if Otherwise Unavailable

60. This provision places some expense on exchange carriers, who may choose to comply through any combination of maintenance of inventory, procurement of instruments as needed, or conversion of existing instruments. Such costs can, however, be recouped through mark-up on the

retail price of telephones and through service charges for installations of telephones. The only viable alternatives for ensuring that every person needing a compatible telephone can acquire one, those of making hearing aid-compatibility a prerequisite to Part 68 registration of telephones, or of designating as "essential" all residential telephones used by hearing impaired individuals, would be more onerous.

7. Notification by Carriers Seeking to Terminate TDD Operator and Directory Assistance

61. This requirement does not impose costs on carriers, who would in most instances have to seek regulatory permission to terminate such services in any event. It does not require the offering of new services, nor mandate continuation of services which may be too costly for a particular carrier to maintain.

C. Flexibility Analysis Conclusion

62. We conclude that the actions we are taking herein comply with the purposes of the Regulatory Flexibility Act. In many instances our regulations do no more than codify requirements expressly imposed by Congress. Where alternative resolutions to particular problems were presented, we have chosen the less costly alternative unless a more costly alternative would clearly be more effective in meeting the needs of disabled customers. Finally, in many instances, both large and small carriers and manufacturers will be able to include the expenses of actions required by our regulations as part of revenue requirements for regulated services or by setting their own price on unregulated products and services.

V. Conclusion

63. Accordingly, it is ordered, pursuant to Sections 4(i), 4(j) of the Communications Act of 1934, as amended (47 U.S.C. 154(i) and 154(j)), and pursuant to the Telecommunications for the Disabled Act of 1982, Pub. L. 97-410 (to be published at 47 U.S.C. 610), that Parts 64 and 68 of the Commission's Rules and Regulations are amended as specified in Appendix C. These amendments become effective 30 days after publication of the report and order in the Federal Register.

64. It is further ordered that the Secretary shall cause this Report and Order and the Final Regulatory Flexibility Analysis contained herein to be published in the Federal Register and

send a copy to the Counsel for Advocacy of the Small Business Administration in accordance with section 603(a) of the Regulatory Flexibility Act (5 U.S.C. 601, *et. seq.* (1980)).

65. It is further ordered that this proceeding is terminated.

Note.—Due to the ongoing effort to minimize publishing costs, Appendices A and B, summaries of comments, will not be printed herein. However, interested parties may review those comments in the FCC Dockets Branch, RM. 239, 1919 M. St., N.W. Washington, D.C. 20554.

Federal Communications Commission.

William J. Tricarico,

Secretary.

Appendix C

PART 68—[AMENDED]

Title 47, Part 68 of the Code of Federal Regulations is amended as follows:

1. By revising § 68.1 to read as follows:

§ 68.1 Purpose.

The purpose of the rules and regulations in this part is to provide for uniform standards for the protection of the telephone network from harms caused by the connection of terminal equipment thereto, and for the compatibility of hearing aids and telephones so as to ensure that persons with hearing aids have reasonable access to the telephone network.

2. By adding the following § 68.4 to Subpart A, to read as follows:

§ 68.4 Hearing aid-compatible telephones.

Except as provided in § 68.112(c) (1) and (4), every telephone installed on or after January 1, 1985 which is subject to § 68.112 must be hearing aid-compatible. Every telephone subject to § 68.112 (a) and (b) installed prior to January 1, 1985 shall be modified or replaced, as necessary, in order to be hearing aid-compatible by January 1, 1985. A telephone is hearing aid-compatible if it meets the criteria set forth in § 68.200(i).

3. By adding the following § 68.112 to Subpart B:

§ 68.112 Hearing aid-compatibility.

(a) *Coin telephones.* All new and existing coin-operated telephones, whether located on public property or in a semi-public location (e.g. drugstore, gas station, private club).

(b) *Emergency use telephones.* Telephones "provided for emergency use" include the following:

(1) Telephones in places where a person with impaired hearing might be

isolated in an emergency, including, but not limited to, elevators, automobile, railroad or subway tunnels, and highways.

(2) Telephones specifically installed to alert emergency authorities, including, but not limited to, police or fire departments or medical assistance personnel.

(3) Telephones needed to signal life-threatening or emergency situations in confined settings, including, but not limited to, rooms in hospitals, residential health care facilities for senior citizens, convalescent homes, and prisons. A telephone is not needed to signal life-threatening or emergency situations if an alternative means of signalling such a situation is available.

(c) *Telephones frequently needed by the hearing impaired.*

(1) Any telephone on which calls may only be paid for by credit card or other pre-arranged credit. Each such telephone must be hearing aid-compatible unless a hearing aid-compatible coin-operated telephone providing similar services is nearby and readily available.

(2) Any telephone made available at the work station of a hearing impaired employee for use by that employee in his or her employment duty. An employee's "work station" is defined as the location within a workplace where that employee is usually found in the course of his or her employment duties.

(3) Any telephone, including internal extensions and telephones restricted to local calling areas, made available for use by the public in places of business or buildings in which visits by the public are reasonably expected. Examples include, but are not limited to, telephones located in lobbies of hotels or apartment buildings; telephones in stores, which are used by patrons to order merchandise; telephones in public transportation terminals which are used to call taxis or to reserve rental automobiles.

(4) Any telephone in a hotel or motel room. *Provided that*, if at least ten percent of the rooms in a hotel or motel are equipped to accommodate a hearing impaired customer, the hotel or motel need not purchase or install a compatible telephone when it replaces a telephone. A room is equipped to accommodate a hearing impaired customer if (i) it contains a permanently installed hearing aid-compatible telephone; or (ii) it contains a telephone which will accept a plug-in hearing aid-compatible handset, which shall be provided to the hearing impaired customer by the hotel or motel; or (iii) the room contains a jack into which a

hearing aid-compatible telephone provided to the customer by the hotel or motel may be plugged (*i.e.*, in addition to a permanently installed telephone which is not hearing aid-compatible). *Provided further that*, if fewer than ten percent of the rooms in a hotel or motel are hearing aid-compatible, when replacing a telephone the hotel or motel must, until the ten percent minimum is reached: (A) replace it with a hearing aid-compatible telephone, or (B) procure and maintain a plug-in hearing aid-compatible telephone handset which it will provide to a hearing impaired customer upon request at check-in.

(5) Any telephone in the locations listed in § 68.112(b)(3) in which an alternative means of signalling a life-threatening or emergency situation is available.

4. Section 68.200 is amended by adding a new paragraph (i), to read as follows:

§ 68.200 Application for equipment registration.

* * * * *

(i) Any application for registration or modification of the registration of a telephone, filed on or after March 1, 1984, shall state whether the handset complies with Section 68.316 of these rules (defining hearing aid compatibility), or state that it does not comply with that section. A telephone handset which complies with Section 68.316 shall be deemed a "hearing aid-compatible telephone" for purposes of Section 68.4.

5. Section 68.218 is amended by adding paragraph (b)(5) and by revising the flush (final sentence) sentence at the end of paragraph (b) to read as follows:

§ 68.218 Responsibility of grantees of equipment registration.

* * * * *

(b) The grantee or its agent shall provide to the user of the registered equipment the following:

* * * * *

(5) For a telephone which is not hearing aid-compatible, as defined in § 68.316 of these Rules:

(i) Notice that FCC rules prohibit the use of that handset in certain locations; and

(ii) A list of such locations (see Section 68.112).

A telephone company which provides and installs the registered equipment need only provide the user with the information required in paragraphs (b)(1), (b)(3) and (b)(5) of this section.

6. By adding to Subpart C the following § 68.224:

§ 68.224 Notice of hearing aid compatibility.

Every telephone offered for sale to the public on or after June 1, 1984, whether previously-registered or newly-registered, shall:

(a) Contain in a conspicuous location on the surface of its packaging a statement as to whether or not the telephone is hearing aid-compatible, as is defined in section 68.316 of these Rules, or if offered for sale without a surrounding package, shall be accompanied by a written statement as to whether or not the telephone is hearing aid-compatible, as is defined in Section 68.316 of these Rules; and

(b) Be accompanied by instructions in accordance with § 68.218(b)(5) of the Rules.

7. By adding to Subpart D the following § 68.316.

§ 68.316 Hearing aid compatibility: technical standards.

A telephone handset is hearing aid-compatible if it complies with the following standard, published by Electronic Industries Association, copyright 1983, and reproduced by permission of Electronic Industries Association:

Electronic Industries Association Recommended Standard RS-504 Magnetic Field Intensity Criteria for Telephone Compatibility With Hearing Aids

[Prepared by EIA Engineering Committee TR-41 and the Hearing Industries Association's Standards and Technical Committee]

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Magnetic Field Intensity Criteria for Telephone Compatibility With Hearing Aids

(From EIA Standards Proposal No. 1652, formulated under the cognizance of EIA TR-41 Committee on Voice Telephone Terminals)

and the Hearing Industries Association's Standards and Technical Committee.)

1 Introduction

Hearing-aid users have used magnetic coupling to enable them to participate in telephone communications since the 1940's. Magnetic pick-ups in hearing-aids have provided for coupling to many, but not all, types of telephone handsets. A major reason for incompatibility has been the lack of handset magnetic field intensity requirements. Typically, whatever field existed had been provided fortuitously rather than by design. More recently, special handset designs, e.g., blue grommet handsets associated with public telephones, have been introduced to provide hearing-aid coupling and trials were conducted to demonstrate the acceptability of such designs. It is anticipated that there will be an increase in the number of new handset designs in the future. A standard definition of the magnetic field intensity emanating from telephone handsets intended to provide hearing-aid coupling is needed so that hearing-aid manufacturers can design their product to use this field, which will be guaranteed in handsets which comply with this standard.

1.1 This standard is one of a series of technical standards on voice telephone terminal equipment prepared by EIA Engineering Committee TR-41. This document, with its companion standards on Private Branch Exchanges (PBX), Key Telephone Systems (KTS), Telephones and Environmental and Safety Considerations (Refs: A1, A2, A3 and A4) fills a recognized need in the telephone industry brought about by the increasing use in the public telephone network of equipment supplied by numerous manufacturers. It will be useful to anyone engaged in the manufacture of telephone terminal equipment and hearing-aids and to those purchasing, operating or using such equipment or devices.

1.2 This standard is intended to be a living document, subject to revision and updating as warranted by advances in network and terminal equipment technology and changes in the FCC Rules and Regulations.

2 Scope

2.1 The purpose of this document is to establish formal criteria defining the magnetic field intensity presented by a telephone to which hearing aids can couple. The requirements are based on present telecommunications plant characteristics at

the telephone interface. The telephone will also be subject to the applicable requirements of EIA RS-470, Telephone Instruments with Loop Signaling for Voiceband Applications (Ref: A3) and the environmental requirements specified in EIA Standards Project PN-1361, Environmental and Safety Considerations for Voice Telephone Terminals, when published (Ref: A4).

Telephones which meet these requirements should ensure satisfactory service to users of magnetically coupled hearing-aids in a high percentage of installations, both initially and over some period of time, as the network grows and changes occur in telephone serving equipment. However, due to the wide range of customer apparatus and loop plant and dependent on the environment in which the telephone and hearing aid are used, conformance with this standard does not guarantee acceptable performance or interface compatibility under all possible operating conditions.

2.2 A telephone complies with this standard if it meets the requirements in this standard when manufactured and can be expected to continue to meet these requirements when properly used and maintained. For satisfactory service a telephone needs to be capable, through the proper selection of equipment options, of satisfying the requirements applicable to its marketing area.

2.3 The standard is intended to be in conformance with Part 68 of the FCC Rules and Regulations, but it is not limited to the scope of those rules (Ref: A5).

2.4 The signal level and method of measurement in this standard have been chosen to ensure reproducible results and permit comparison of evaluations. The measured magnetic field intensity will be approximately 15 dB above the average level encountered in the field and the measured high-end frequency response will be greater than that encountered in the field.

2.5 The basic accuracy and reproducibility of measurements made in accordance with this standard will depend primarily upon the accuracy of the test equipment used, the care with which the measurements are conducted, and the inherent stability of the devices under test.

3 Definitions

This section contains definitions of terms needed for proper understanding and application of this standard which are not

believed to be adequately treated elsewhere. A glossary of telephone terminology, which will be published as a companion volume to the series of technical standards on Telephone Terminals For Voiceband Applications, is recommended as a general reference and for definitions not covered in this section.

3.1 A telephone is a terminal instrument which permits two-way, real-time voice communication with a distant party over a network or customer premises connection. It converts real-time voice and voiceband acoustic signals into electrical signals suitable for transmission over the telephone network and converts received electrical signals into acoustic signals. A telephone which meets the requirements of this standard also generates a magnetic field to which hearing-aids may couple.

3.2 The telephone boundaries are the electrical interface with the network, PBX or KTS and the acoustic, magnetic and mechanical interfaces with the user. The telephone may also have an electrical interface with commercial power.

3.3 A hearing aid is a personal electronic amplifying device, intended to increase the loudness of sound and worn to compensate for impaired hearing. When equipped with an optional inductive pick-up coil (commonly called a telecoil), a hearing aid can be used to amplify magnetic fields such as those from telephone receivers or induction-loop systems.

3.4 The reference plane is the planar area containing points of the receiver-end of the handset which, in normal handset use, rest against the ear (see Fig 1).

3.5 The measurement plane is parallel to, and 10 mm in front of, the reference plane (see Fig 1).

3.6 The reference axis is normal to the reference plane and passes through the center of the receiver cap (or the center of the hole array, for handset types that do not have receiver caps).

3.7 The measurement axis is parallel to the reference axis but may be displaced from that axis, by a maximum of 10 mm (see Fig 1). Within this constraint, the measurement axis may be located where the axial and radial field intensity measurements, are optimum with regard to the requirements. In a handset with a centered receiver and a circularly symmetrical magnetic field, the measurement axis and the reference axis would coincide.

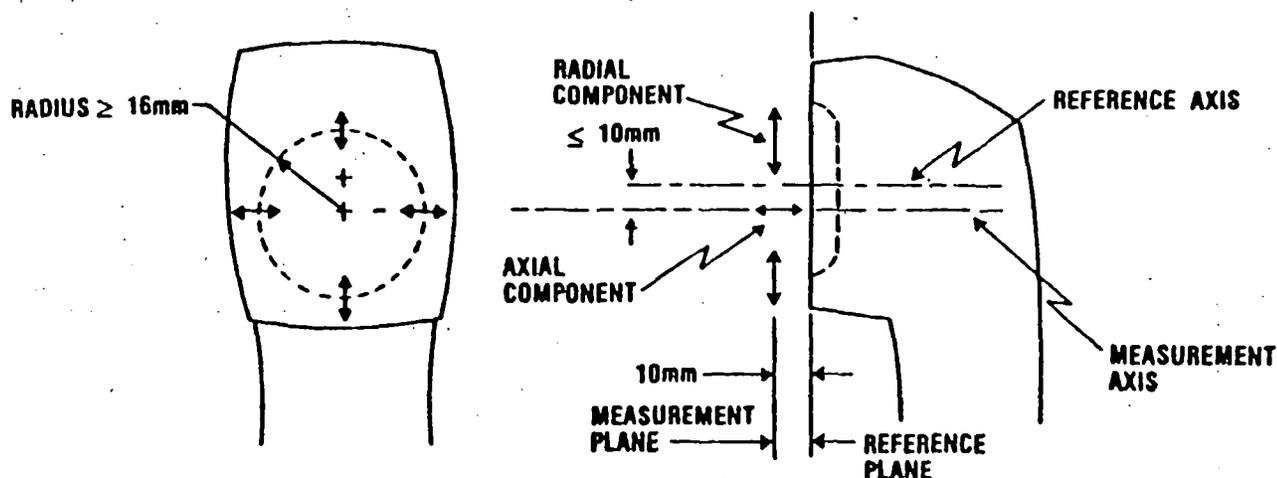


FIG 1 REFERENCE AND MEASUREMENT PLANES AND AXES

4 Technical Requirements

4.1 General.

These criteria apply to handsets when tested as a constituent part of a telephone.

4.1.1 Three parameters descriptive of the magnetic field at points in the measurement plane shall be used to ascertain adequacy for magnetic coupling. These three parameters are intensity, direction and frequency response, associated with the field vector.

4.1.2 The procedures for determining the parameter values are defined in the IEEE Standard Method For Measuring The Magnetic Field Intensity Around A Telephone Receiver (Ref: A8), with the exception that this EIA Recommended Standard does not require that the measurements be made using an equivalent loop of 2.75 km of No. 28 AWG cable, but uses a 1250-ohm resistor in series with the battery feed instead (see Fig 2).

4.1.3 When testing other than general

purpose analog telephones, e.g., proprietary or digital telephones, an appropriate feed circuit and termination shall be used that produces equivalent test conditions.

4.2 Axial Field Intensity.

When measured as specified in 4.1.2, the axial component of the magnetic field directed along the measurement axis and located at the measurement plane, shall be greater than -22 dB relative to 1 A/m, for an input of -10 dBV at 1000 Hz (see Fig 2).

Note.—If the magnitude of the axial component exceeds -19 dB relative to 1 A/m, some relaxation in the frequency response is permitted (See 4.4.1).

4.3 Radial Field Intensity.

When measured as specified in 4.1.2, radial components of the magnetic field as measured at four points 90° apart, and at a distance >16 mm from the measurement axis (as selected in 4.2), shall be greater than -27 dB relative to 1 A/m, for an input of -10 dBV

at 1000 Hz (see Fig 2).

4.4 Induced Voltage Frequency Response.

The frequency response of the voltage induced in the probe coil by the axial component of the magnetic field as measured in 4.2, shall fall within the acceptable region of Fig 4A or Fig 4B (see 4.4.1 and 4.4.2), over the frequency range 300-to-3300 Hz.

4.4.1 For receivers with an axial component which exceeds -19 dB relative to 1 A/m, when measured as specified in 4.1.2, the frequency response shall fall within the acceptable region of Fig 4A.

4.4.2 For receivers with an axial component which is less than -19 dB but greater than -22 dB relative to 1 A/m, when measured as specified in 4.1.2, the frequency response shall fall within the acceptable region of Fig 4B.

BILLING CODE 6712-01-M

**BLOCK DIAGRAM
MAGNETIC FIELD MEASURING APPARATUS**

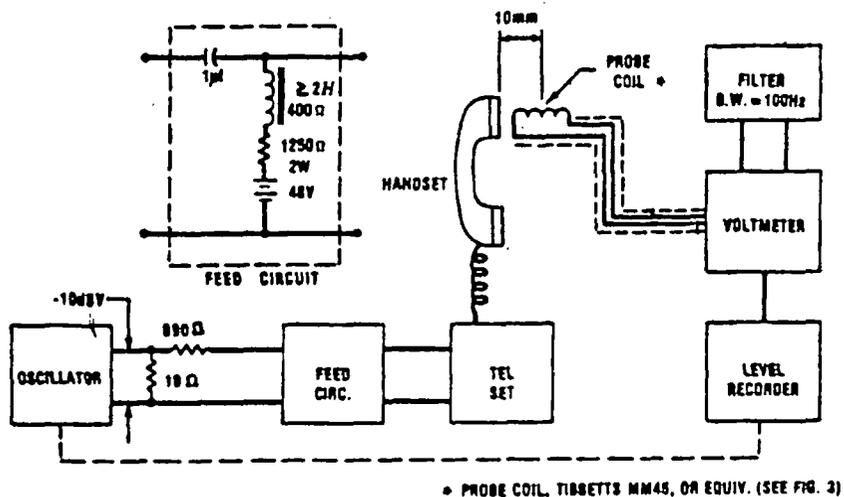
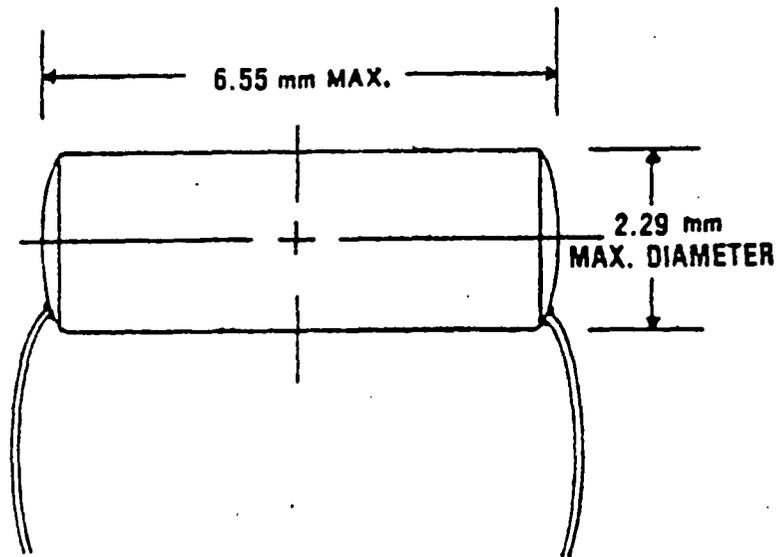


FIG 2 MEASUREMENT BLOCK DIAGRAM



TYPICAL PARAMETERS OF PROBE COIL

DC RESISTANCE: 900 Ω
 INDUCTANCE: 140 mH
 SENSITIVITY: -60.5 dBV/(A/m)

FIG 3 PROBE COIL PARAMETERS

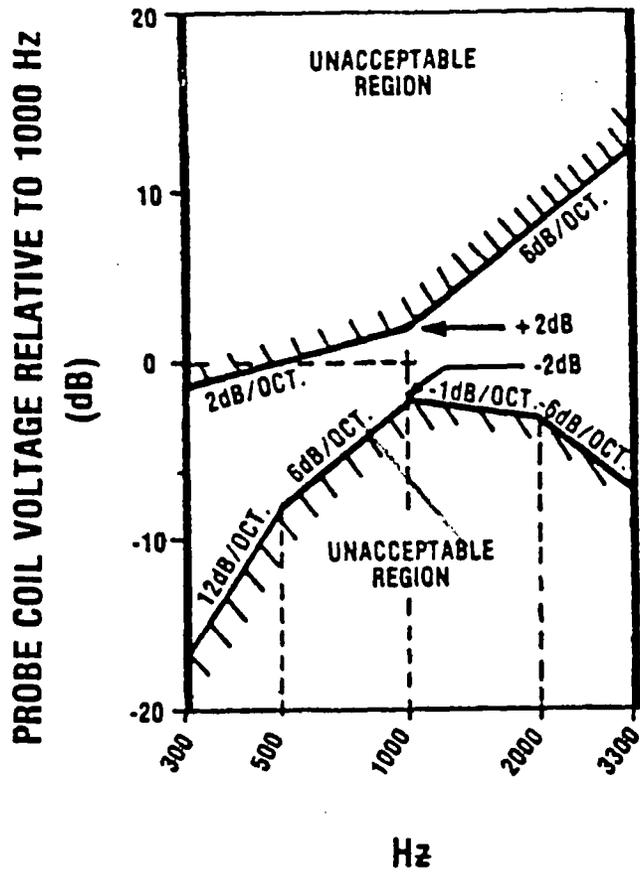


FIG 4A INDUCED VOLTAGE FREQUENCY RESPONSE FOR RECEIVERS WITH AN AXIAL FIELD THAT EXCEEDS -19 dB

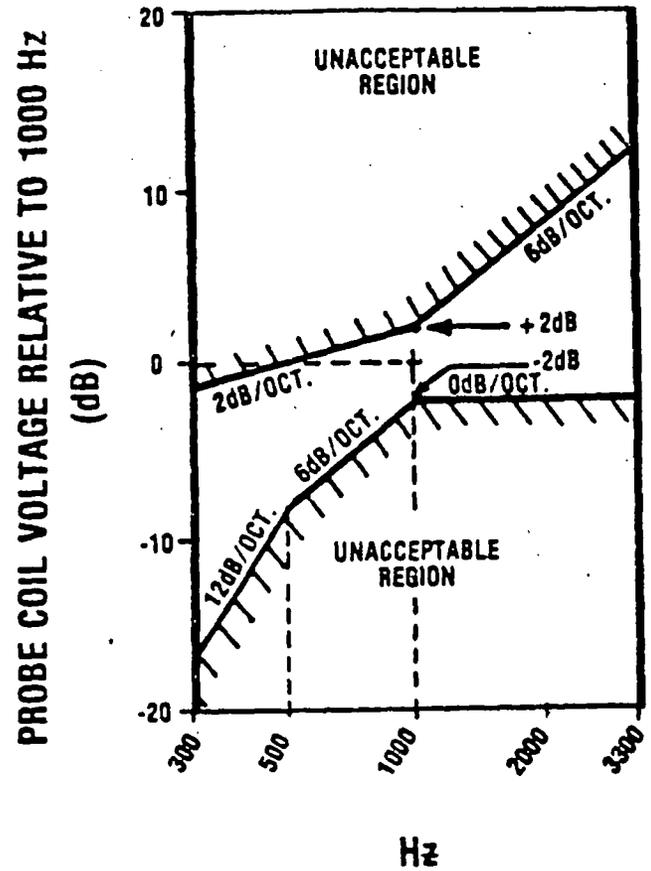


FIG 4B INDUCED VOLTAGE FREQUENCY RESPONSE FOR RECEIVERS WITH AN AXIAL FIELD THAT EXCEEDS -22 dB

Appendix A Bibliography

(A1) EIA Standard RS-464, Private Branch Exchange (PBX) Switching Equipment for Voiceband Applications.

(A2) EIA Standard RS-478, Multi-Line Key Telephone Systems (KTS) for Voiceband Applications.

(A3) EIA Standard RS-470, Telephone Instruments with Loop Signaling for Voiceband Applications.

(A4) EIA Project Number PN-1361.

Environmental and Safety Considerations for Voice Telephone Terminals.

(A5) Federal Communications Commission Rules and Regulations, Part 68, Connection of Terminal Equipment to the Telephone Network.

(A6) IEEE Standard, Method for Measuring the Magnetic Field around a Telephone Receiver. (to be published)

8. By adding to Subpart E the following § 68.414:

§ 68.414 Hearing aid-compatibility: enforcement.

Enforcement of §§ 68.4 and 68.112 is hereby delegated to those states which adopt those Sections and provide for their enforcement. The procedures followed by a state to enforce those sections shall provide a 30-day period after a complaint is filed, during which time state personnel shall attempt to resolve a dispute on an informal basis. If a state has not adopted or incorporated §§ 68.4 and 68.112, or failed to act within 6 months from the filing of a complaint with the state public utility commission, the Commission will accept such complaints. A written notification to the complainant that the state believes action is unwarranted is not a failure to act.

PART 64—[AMENDED]

Title 47, Part 64 of the Code of Federal Regulations is amended as follows:

1. By adding a new Subpart F to read as follows:

Subpart F—Furnishing of Customer-Premises Equipment and Related Services Needed by Persons With Impaired Hearing, Speech, Vision or Mobility

Sec.

68.601 Specialized customer-premises equipment.

68.602 Provision of hearing aid-compatible telephones by exchange carriers.

68.603 Notification that carrier seeks to terminate operator or directory assistance for TDD users.

68.604 Enforcement.

Subpart F—Furnishing of Customer-Premises Equipment and Related Services Needed by Persons With Impaired Hearing, Speech, Vision or Mobility

§ 64.601 Specialized customer-premises equipment.

(a) Any communications common carrier may provide, under tariff, customer-premises equipment other than a hearing aid-compatible telephone (as defined in § 68.316) which is actually needed by persons whose hearing, speech, vision or mobility is impaired. Such equipment may be provided to persons with those disabilities or to associates or institutions who require such equipment regularly to communicate with them. Examples of such equipment include, but are not limited to, artificial larynxes, bone conductor receivers, and telecommunications devices for the deaf (TDDs).

(b) Any carrier who provides telecommunications devices for the deaf, whether or not pursuant to tariff, shall respond to any inquiry concerning (1) the availability (including general price levels) of TDDs using ASCII, Baudot, or both formats; (2) the compatibility of any TDD with other TDDs and computers.

§ 64.602 Provision of hearing aid-compatible telephones by exchange carriers.

In the absence of alternative suppliers in an exchange area, an exchange carrier must provide a hearing aid-compatible telephone, as defined in § 68.200(j), and provide related installation and maintenance services, in connection with such telephones, on a detariffed basis, to any hearing impaired customer who requests such equipment or services.

§ 64.603 Notification that carrier seeks to terminate operator or directory assistance for TDD users.

Any telephone exchange carrier providing operator and directory assistance services to users of telecommunications devices for the deaf, which seeks to terminate existing services, shall no less than six months prior to a proposed termination date notify the Commission and state public utility commission of its intent to terminate.

§ 64.604 Enforcement.

Enforcement of §§ 64.602 and 64.603 is hereby delegated to those state public utility commissions which adopt those sections and provide for their enforcement. The procedures followed by a state to enforce those sections shall

provide a 30-day period after a complaint is filed, during which time state personnel shall attempt to resolve a dispute on an informal basis. If a state has not adopted §§ 64.602 and 64.603, or has failed to act within six months from the filing of a complaint with the state public utility commission, the Commission will accept such complaints. A written notification to the complainant that the state believes action is unwarranted is not a failure to act.

Separate Statement of Mark S. Fowler, Chairman

RE: Access to Telecommunications Equipment by the Hearing Impaired and Other Disabled Persons

This decision completes an important link of our implementation of *Computer II*. Congress recognized in passing the 1982 Telecommunications for the Disabled Act that the new competitive communications environment must ensure continued service for those with hearing, sight, speech and mobility impairments. Today's decision takes account of these needs, balancing them against the dictates of a robust telecommunications marketplace.

I want to complement the staff in drawing up procedures and regulations that strike that balance extremely well. And I hope that state regulators will use today's decision as their guide in formulating policies and reviewing tariffs that affect the rights of consumers that need special services. Under this decision, the hearing impaired and others will find that they are merely different, not disabled, consumers when it comes to using their telephones.

[FR Doc. 84-309 Filed 1-10-84; 8:45 am]

BILLING CODE 6712-01-M

47 CFR Part 73

[BC Docket No. 78-28; MM Docket No. 83-16; RM-3103; RM-3740; FCC 83-572]

Relative Phase Tolerances for Directional AM Stations; and, Amendment of the Commission's Rules To Expand the Use of Toroidal Transformers; and, To Provide for the Use of Radio Frequency Relays in Sampling Element Transmission Lines

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: The Commission adopts new rules that require AM broadcasters using directional antenna systems to keep the relative antenna phases to within $\pm 3^\circ$ of the values specified on the station license. Additionally, the rules provide for expanded use of toroidal current transformers as a means of deriving current samples in direction AM station antenna systems and