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SMALL ENTITY COMPLIANCE GUIDE
Hearing Aid Compatibility for Wireline, Advanced
Communications Services, and Mobile Handsets
FCC 17-135

CG Docket No. 13-46; WT Docket No. 07-250; WT Docket No. 10-254
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This Guide is prepared in accordance with the requirements of Section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996. It is intended to help small entities—small businesses, small organizations (non-profits), and small governmental jurisdictions—comply with the revised rules adopted in the above-referenced Federal Communications Commission (FCC or Commission) rulemaking dockets. This Guide is not intended to replace or supersede these rules, but to facilitate compliance with the rules. Although we have attempted to cover all parts of the rules that might be especially important to small entities, the coverage may not be exhaustive. This Guide cannot anticipate all situations in which the rules apply. Furthermore, the Commission retains the discretion to adopt case-by-case approaches, where appropriate, that may differ from this Guide. Any decision regarding a particular small entity will be based on the statute and any relevant rules.

In any civil or administrative action against a small entity for a violation of rules, the content of the Small Entity Compliance Guide may be considered as evidence of the reasonableness or appropriateness of proposed fines, penalties or damages. Interested parties are free to file comments regarding this Guide and the appropriateness of its application to a particular situation. The FCC will then consider whether the recommendations or interpretations in the Guide are appropriate in that situation. The FCC may decide to revise this Guide without public notice to reflect changes in the FCC's approach to implementing a rule, or it may clarify or update the text of the Guide. Direct your comments and recommendations, or calls for further assistance, to the FCC's Consumer Center:

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I. OBJECTIVES OF THE PROCEEDING

Beginning in the 1980s, the Federal Communications Commission (FCC or Commission) adopted a series of rules requiring telecommunications handsets, such as telephones and cell phones, to be compatible with hearing aids.¹ Without these hearing aid compatibility (HAC) rules, if someone with a hearing aid were to pick up a telephone or cell phone to make a call, they could experience substantial unwanted interference, or they may not receive sufficient volume. When certified under the HAC rules, telephones and cell phones should offer minimal interference and appropriate volume control, and be compatible when interacting with magnetic coils of hearing aids.

In October 2017, the Commission adopted a *Report and Order and Order on Reconsideration* to amend its rules to expand and improve the compatibility of hearing aids with handsets.² The Commission expressed four objectives:

- amend the HAC rules to incorporate a revised industry standard for volume control on wireline handsets, such as wireline telephones;
- apply the Commission’s wireline HAC rules to handsets used with wireline advanced communications services (ACS), such as Voice over Internet Protocol (VoIP) telephones;³
- make technical updates to then-existing rules applicable to wireless handsets, such as cell phones; and
- add a volume control rule for wireless handsets.⁴

The *Report and Order* required manufacturers and service providers to integrate more accessibility features in their wireline and wireless handsets. Thus, customers with hearing loss who use handsets that comply with the new HAC requirements will be able to access the accessibility features in their handsets. These decisions will further the Commission’s goal of improving accessibility to the national telecommunications network.

II. COMPLIANCE REQUIREMENTS

A. Terminology

Acoustic coupling: A connection between a hearing aid and a handset by which “a hearing aid receives sound through a microphone, and then amplifies the sound, which can include a telephone’s audio signal as well as unwanted ambient noise.”⁵

Administrative Council for Terminal Attachments (ACTA): An organization that maintains a database which is free of charge, and contains information about all approved terminal equipment, including information about HAC compliance, and permits the Commission, providers of telecommunications, and consumers to identify equipment that is in compliance with the Commission’s

¹ *Access to Telecommunications Equipment and Services by Persons with Disabilities; Amendment of the Commission’s Rules Governing Hearing Aid-Compatible Mobile Handsets; Comment Sought on 2010 Review of Hearing Aid Compatibility Regulations*, Report and Order and Order on Reconsideration, 32 FCC Rcd 9063, 9064, para. 2 (2017) (*Report and Order*) (FCC 17-135), https://apps.fcc.gov/edocs_public/attachmatch/FCC-17-135A1_Rcd.pdf.

² *Id.* at 9064, para. 1.

³ Rules for hearing aid compatibility of *wireless* handsets used with VoIP were adopted in *Improvements to Benchmarks and Related Requirements Governing Hearing Aid-Compatible Mobile Handsets; Amendment of the Commission’s Rules Governing Hearing Aid-Compatible Mobile Handsets*, Fourth Report and Order and Notice of Proposed Rulemaking, 30 FCC Rcd 13845, 13855-56, paras. 18-21 (2015), https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-155A1_Rcd.pdf.

⁴ *Report and Order*, 32 FCC Rcd at 9064, para. 1.

⁵ *See id.* at 9065 n.7.

HAC rules.⁶

Advanced communications services (ACS): Interconnected VoIP service, non-interconnected VoIP service, electronic messaging service, and interoperable video conferencing service.⁷

ACS telephonic CPE: Customer premises equipment used with ACS that is designed to provide 2-way voice communication via a built-in speaker intended to be held to the ear in a manner functionally equivalent to a telephone. Mobile handsets are excluded from this definition.⁸

Customer premises equipment (CPE): “[E]quipment employed on the premises of a person (other than a [telephone company, for example]) to originate, route, or terminate telecommunications.”⁹

Handset: In general, a device used in delivery of wireless or wireline telecommunications services that “contains a built-in speaker and is typically held to the ear in any of its ordinary uses.”¹⁰

Hearing aid compatibility (HAC): This term refers collectively to “inductive coupling, RF interference reduction, and acoustic coupling (including volume control).”¹¹

Inductive coupling: A connection or pairing between a hearing aid or cochlear implant and a handset whereby an inductive pickup coil (commonly called a “telecoil”) in a hearing aid or cochlear implant “receives directly the audio signal-based magnetic field generated by a handset. The hearing aid then converts this field back to sound that has reduced background noise. A cochlear implant converts it to appropriate electrical signals that are sent to the cochlea, which stimulate the cochlear nerve, causing it to send signals to the brain that are interpreted as sound.”¹²

Interconnected Voice over Internet Protocol (VoIP): A VoIP service that enables people to make and receive calls to and from the public switched telephone network (PSTN).¹³

Non-interconnected VoIP: A VoIP service that enables real-time voice communications that either originate or terminate on the PSTN (but not both), or that neither originate nor terminate on the PSTN.¹⁴

Radiofrequency interference (RF interference): “[E]lectromagnetic radiation which is emitted by electrical circuits carrying rapidly changing signals, as a by-product of their normal operation, and which causes unwanted signals (interference or noise) to be induced in other circuits.”¹⁵

Responsible party: The party or parties responsible for the compliance of (1) terminal equipment or protective circuitry intended for connection directly to the PSTN, or (2) of ACS telephonic CPE, with the applicable rules and regulations in Part 68 of the Commission’s rules and with any applicable technical criteria published by ACTA.¹⁶

Telecommunication Certification Body (TCB): An organization that has been designated, pursuant to Part 68 of the Commission’s rules, to certify that equipment complies with the Commission’s

⁶ *Id.* at 9071 n.60.

⁷ 47 U.S.C. § 153(1).

⁸ 47 CFR § 68.3.

⁹ 47 U.S.C. § 153(16).

¹⁰ 47 CFR § 20.19(a)(3)(i).

¹¹ *Report and Order*, 32 FCC Rcd at 9064 n.1.

¹² 47 CFR § 68.316 (describing a telecoil); *Report and Order*, 32 FCC Rcd at 9064 n.3.

¹³ *Report and Order*, 32 FCC Rcd at 9070 n.50; 47 CFR § 9.3.

¹⁴ *Report and Order*, 32 FCC Rcd at 9070 n.50; 47 CFR § 9.3.

¹⁵ *Report and Order*, 32 FCC Rcd at 9097 n.6.

¹⁶ *Report and Order*, 32 FCC Rcd at 9093, App. B (§ 68.3).

requirements.¹⁷

Voice over Internet Protocol (VoIP): A service that: “(1) [e]nables real-time, two-way voice communications; (2) [r]equires a broadband connection from the user's location; [and] (3) [r]equires Internet protocol-compatible customer premises equipment (CPE).”¹⁸

B. Scope of Rules

The HAC rules apply to two categories of handsets:

- **Wireline handsets, such as wireline telephones.** HAC rules in effect prior to the *Report and Order* apply to telephones connected to the wireline telephone network.¹⁹ Some of the new wireline HAC rules adopted in the *Report and Order* apply to handsets connected to wireline ACS, such as interconnected and non-interconnected VoIP.²⁰ These handsets are called “ACS telephonic CPE.”²¹
- **Wireless handsets, such as cell phones; also called “mobile handsets.”** The HAC rules, in general, apply to wireless handsets used in the delivery of digital mobile service in the United States, including both interconnected and non-interconnected VoIP services, provided over frequencies in the 698 MHz to 6 GHz bands.²²

C. Covered Entities

The HAC rules generally apply to:

- manufacturers of wireless and wireline handsets;
- responsible parties for wireline handsets; and
- service providers, such as cell phone companies.²³

D. Specific Requirements

1. Volume Control on Wireline Telephones (47 CFR §§ 68.1, 68.2(a), 68.3, 68.224(b), 68.317(a)(1)-(2), (h)-(i), 68.320(e))

For decades, the Commission has required wireline handsets connected to the PSTN to provide volume control pursuant to technical standards developed by industry standards-setting organizations. The new rules incorporate a newer technical standard for volume control.²⁴

The new rules have three key features:

- They improve the measurement of volume in two ways. First, instead of requiring equipment testers to measure the volume received by the user with a device that is designed to form a seal

¹⁷ 47 CFR §§ 68.160, 68.501(b) (cross-referencing 47 CFR §§ 68.160-68.162).

¹⁸ *Id.* § 9.3.

¹⁹ *Report and Order*, 32 FCC Rcd at 9064-65, paras. 2-3.

²⁰ 47 U.S.C. § 153(1).

²¹ *See Report and Order*, 32 FCC Rcd at 9070-71, paras. 16-18.

²² More specific information about the application of the rules to services providers and manufacturers, and the specific services they support, is given in section 20.19(a) of the Commission’s rules. 47 CFR § 20.19(a). This rule section was not changed by the *Report and Order* discussed in this Guide.

²³ *See, e.g., id.* §§ 20.19(a), 68.4.

²⁴ TIA, *Receive Volume Control Requirements for Digital and Analog Wireline Handset Terminals, ANSI-TIA-4965-2012* (Oct. 2012) (2012 Wireline Volume Control Standard). This standard is available for purchase via <http://www.tiaonline.org/standards/catalog>, and is available for viewing in the FCC’s Reference Information Center in Washington, DC. 47 CFR § 68.317(i).

with the telephone handset,²⁵ the new standard requires testers to take into account the lack of a seal between a telephone receiver and the ears of users in real-life settings.²⁶ Second, instead of requiring testers to measure loudness in terms that are based on the handset's unamplified (also known as "nominal") sound level,²⁷ the new standard requires loudness to be measured relative to an absolute benchmark. This new approach makes it easier to compare loudness levels between handsets.²⁸

- They provide a "minimum" volume that the handset must meet or exceed.²⁹
- They provide a "maximum" volume that the handset may exceed only if the volume automatically resets to the maximum level or below upon termination of the call.³⁰

2. **Hearing Aid Compatibility for ACS Telephonic CPE (47 CFR §§ 68.1, 68.2(a), 68.3, 68.317(a)(1)-(2), (h)-(i), 68.320(e), 68.501-68.504)**

The new HAC rules for ACS telephonic CPE are based on the HAC rules in effect prior to the *Report and Order* for wireline handsets connected to the PSTN.³¹ For example,

- ACS telephonic CPE must provide inductive coupling in accordance with the rules for wireline handsets in effect prior to the *Report and Order*,³² and provide volume control that conforms to the new standard discussed above.³³
- ACS telephonic CPE must comply with the same testing, attestations of compliance, registration, labeling, and complaint handling rules that otherwise apply to telephones that are directly connected to the PSTN.³⁴ For example:
 - Responsible parties for ACS telephonic CPE must (a) have the equipment tested for HAC compliance, with certification of such compliance made by a TCB³⁵ or, in the alternative, by a Supplier's Declaration of Conformity;³⁶ (b) register such equipment in the terminal equipment database maintained by ACTA;³⁷ and (c) provide appropriate

²⁵ See 47 CFR § 68.317 (referencing, e.g., TIA, *Telephone Instruments with Loop Signaling, ANSI/EIA/TIA-470-A-1987*, at 13 (July 1987)).

²⁶ See *Report and Order*, 32 FCC Rcd at 9067, para. 8.

²⁷ 47 CFR § 68.317.

²⁸ *Report and Order*, 32 FCC Rcd at 9067, para. 9.

²⁹ *Id.* at 9067-68, para. 10; 2012 Wireline Volume Control Standard at 9.

³⁰ 2012 Wireline Volume Control Standard at 9; 47 CFR § 68.317(h); *Report and Order*, 32 FCC Rcd at 9067-68, para. 10, 9094, App. B.

³¹ The Part 68 HAC rules for wireline handsets connected to the PSTN are in various sections of 47 CFR §§ 68.1-68.614.

³² 47 CFR § 68.2(a) (stating that § 68.316 applies to ACS telephonic CPE); *Report and Order*, 32 FCC Rcd at 9093, App. B.

³³ See 47 CFR § 68.2(a) (stating that § 68.317 applies to ACS telephonic CPE); *Report and Order*, 32 FCC Rcd at 9093, App. B.

³⁴ 47 CFR §§ 68.501-68.504 (referencing existing sections of Part 68 which now apply to ACS telephonic CPE).

³⁵ *Id.* § 68.501(b) (cross-referencing 47 CFR §§ 68.160-68.162).

³⁶ The Supplier's Declaration of Conformity is a "procedure where the responsible party . . . makes measurements or takes other necessary steps to ensure that the terminal equipment complies with the appropriate technical standards." 47 CFR §§ 68.320, 68.501(c) (cross-referencing 47 CFR §§ 68.320-68.350).

³⁷ *Id.* § 68.504 (cross-referencing 47 CFR §§ 68.354, 68.610, 68.612).

labels and other information to consumers regarding HAC compliance.³⁸

- Parties with informal complaints alleging violations of the HAC rules can contact state public utility commissions or the Commission.³⁹

3. RF Interference Reduction and Inductive Coupling for Wireless Handsets (47 CFR §§ 20.19(b)(1)-(2), (e)(1)(iii)(B)-(D), (f)(1)(i), (k)(2), (l))

The HAC rules for wireless handsets focus on reducing RF interference and providing inductive coupling. Previous rules allowed wireless handsets to comply with either the 2007 or 2011 version of the wireless HAC standard. The new rules eliminate the 2007 version of the standard and keep the 2011 version, which has been optional since 2012.⁴⁰

The new rules also require wireless handsets to be tested and assigned ratings for RF interference reduction, and for inductive coupling. For RF interference reduction, the handsets must have an M3 or M4 rating, and for inductive coupling, the handsets must have a T3 or T4 rating, as defined in the technical standard.⁴¹

There are two key differences between the 2011 standard and the 2007 standard.

- The 2011 standard applies to a broader range of frequencies than the 2007 version; i.e., the 2011 standard applies to the entire frequency band from 698 MHz to 6 GHz.⁴²
- The 2011 standard provides expanded methods for measuring RF interference, which includes measurements that work with GSM handsets. The 2011 standard thereby eliminates the need for a “power-down” exception that has been used for measuring certain GSM handsets in conjunction with the 2007 standard.⁴³

4. Volume Control for Wireless Handsets (47 CFR §§ 20.19(b)(1), (f)(1)(ii), (k)(2))

In addition to addressing RF interference reduction and inductive coupling for wireless handsets, the new rules require wireless handsets to provide volume control that produces sound levels suitable for persons with hearing loss (with and without hearing aids).⁴⁴ Before now, there was no way that a consumer would know what volume they would hear when they initially turn on a wireless handset (known as the “nominal volume”) or the maximum volume a handset would provide.⁴⁵ The new rules provide general guidelines for the provision of volume control on wireless handsets, and provide discretion to the industry standards-setting organizations in developing the technical details. The Commission noted its anticipation, in the *Report and Order*, that it could expeditiously begin a rulemaking process to evaluate the standard and incorporate it by reference into the wireless HAC rules.

In addition, manufacturers and service providers must ensure that the packaging material of hearing aid compatible handsets clearly display information indicating the handset’s volume capabilities.⁴⁶ If there are numerical metrics or qualitative ratings that describe the volume capabilities,

³⁸ *Id.* § 68.502 (incorporating the applicable requirements of 47 CFR §§ 68.218, 68.224, 68.300).

³⁹ *Id.* § 68.503 (cross-referencing 47 CFR §§ 68.414-68.423).

⁴⁰ *Report and Order*, 32 FCC Rcd at 9083, paras. 42-43.

⁴¹ *Id.* at 9084-85, para. 45 & n.162.

⁴² *Id.* at 9084, para. 44.

⁴³ *Id.* at 9085, paras. 47-48.

⁴⁴ 47 CFR § 20.19(b)(1); *Report and Order*, 32 FCC Rcd at 9091, App. B.

⁴⁵ *See Report and Order*, 32 FCC Rcd at 9081, paras. 35-36.

⁴⁶ 47 CFR § 20.19(f)(1)(ii); *Report and Order*, 32 FCC Rcd at 9092, App. B.

this information must be included on the packaging material, and in the handset’s user manual or as an insert in the packaging material for the handset.⁴⁷

III. RECORDKEEPING AND REPORTING REQUIREMENTS

The *Report and Order* does not contain new FCC-mandated recordkeeping requirements nor any requirements to file reports with the FCC. However, the *Report and Order* does create “information collection” requirements for ACS Telephonic CPE which are described below.

A. Labeling and Instructions

New section 68.502(a) requires that all ACS telephonic CPE manufactured in the United States (other than for export) or imported for use in the United States must have the letters “HAC” affixed thereto.⁴⁸ Section 68.502(a) additionally includes the following information collection requirements.

- Non-hearing aid compatible ACS telephonic CPE offered for sale to the public must contain in a conspicuous location on the surface of its packaging a statement that the ACS telephonic CPE is not hearing aid compatible, or if offered for sale without a surrounding package, the CPE must be affixed with a written statement that the telephone is not hearing aid compatible;⁴⁹ and
- ACS telephonic CPE must also be accompanied by instructions in accordance with section 68.218(b)(2), which requires notice that the FCC prohibits use of the handset in certain locations.⁵⁰

B. Certification Procedures and Supplier’s Declaration of Conformity

For wireline ACS telephonic CPE, a responsible party must obtain certification of its equipment by using a third-party TCB or a Supplier’s Declaration of Conformity.⁵¹

- New section 68.501(b) applies the designation of TCB requirements in section 68.160 and the requirements for TCBs in section 68.162 to ACS telephonic CPE.⁵² Under these provisions, the responsible party must assemble and compile supporting technical documentation concerning the ACS telephonic CPE to give to the TCB.⁵³
- New section 68.501(c) applies, by reference, the Supplier’s Declaration of Conformity requirements of sections 68.320-68.350 (except section 68.324(f)) to ACS telephonic CPE.⁵⁴ As a result, a responsible party using a Supplier’s Declaration of Conformity for ACS telephonic CPE must:
 - Ensure that the Supplier’s Declaration of Conformity contains the wording prescribed in section 68.324;
 - Retain records of the Supplier’s Declaration of Conformity, the testing facility, testing procedure, and test results for, in general, 10 years after the manufacture of

⁴⁷ 47 CFR § 20.19(f)(1)(ii); *Report and Order*, 32 FCC Rcd at 9082-83, 9092, para. 40, App. B.

⁴⁸ 47 CFR § 68.502(a)(1).

⁴⁹ *Id.* § 68.502(a)(2).

⁵⁰ *Id.*

⁵¹ *Id.* § 68.501.

⁵² *Id.* § 68.501(b) (cross-referencing 47 CFR §§ 68.160, 68.162).

⁵³ *Id.* §§ 68.160, 68.162.

⁵⁴ *Id.* § 68.501(c) (cross-referencing 47 CFR §§ 68.320-68.350).

the equipment is permanently discontinued; and

- Compile a description of the measurement facilities used for testing the equipment, and include in that description information required by ACTA.⁵⁵

C. ACTA Database

Information about wireline ACS telephonic CPE must be contained in a database that is administered by ACTA. Section 68.504 applies the ACTA database provisions of sections 68.354, 68.610 and 68.612 to ACS telephonic CPE.⁵⁶ As a result:

- ACS telephonic CPE must be labelled in a manner required by, and with identification information provided by, ACTA;
- ACTA must operate and maintain the database; and
- Responsible parties must submit information about their ACS telephonic CPE to be retained in the ACTA database.⁵⁷

D. Warranty, Instructions, and Revocation for ACS Telephonic CPE

Wireline ACS telephonic CPE must comply with the following requirements, which mirror the requirements of sections 68.218, 68.224 and 68.300:⁵⁸

- A responsible party must warrant that the ACS telephonic CPE complies with applicable rules and regulations and with the applicable technical criteria;
- For ACS telephonic CPE that is represented to be hearing aid compatible, the responsible party must give the user any instructions required by ACTA;
- For ACS telephonic CPE that is not hearing aid compatible, the responsible party must give the user a notice that the ACS telephonic CPE is not hearing aid compatible; and
- When approval of any ACS telephonic CPE is revoked, the responsible party must notify the purchaser and user of the equipment to discontinue its use.⁵⁹

E. Designation of Agents for Service

Complaints about ACS telephonic CPE may be filed at the FCC pursuant to the procedures in sections 68.414-68.423.⁶⁰ Manufacturers of ACS telephonic CPE will need to designate an agent for service of process pursuant to section 68.418.⁶¹

IV. IMPLEMENTATION DATES

A. Effective Dates

The following rules in the *Report and Order* became effective on March 30, 2018: 47 CFR §§ 20.19(b)(1)-(2), (e)(1)(iii)(B)-(D), (f)(1)(i)-(ii), (k)(2), (l), 68.1, 68.2(a), 68.3 (selected definitions),

⁵⁵ *Id.* §§ 68.320-68.350.

⁵⁶ *Id.* § 68.504 (cross-referencing 47 CFR §§ 68.354, 68.610, 68.612).

⁵⁷ *Id.* §§ 68.354, 68.610, 68.612.

⁵⁸ *Id.* § 68.502 (incorporating the applicable requirements of 47 CFR §§ 68.218, 68.224, 68.300).

⁵⁹ *Id.*

⁶⁰ *Id.* § 68.503 (cross-referencing 47 CFR §§ 68.414-68.423).

⁶¹ *Id.* § 68.418.

68.224(b), 68.317(a)(1)-(2), (h)-(i), 68.320(e).⁶² Sections 68.501 to 68.504, which apply to ACS telephonic CPE, became effective on May 21, 2018.⁶³ However, the dates by which manufacturers, service providers, TCBs, and responsible parties must comply with some of these rules vary in accordance with the text of each rule, as discussed below.

B. Compliance Deadlines

1. Volume Control on Wireline Telephones

Telephones manufactured or imported for use in the United States on or after February 28, 2020 must comply with the new volume control rules.⁶⁴ The existing inventory and installed base of wireline handsets that comply with the prior volume standards in the Commission's rules before February 28, 2020 may remain in place until retired.⁶⁵

2. Hearing Aid Compatibility for ACS Telephonic CPE

Manufacturers must ensure that their ACS telephonic CPE manufactured or imported for use in the United States on or after February 28, 2020 complies with the HAC rules.⁶⁶ Responsible parties for ACS telephonic CPE that is manufactured in or imported for use in the United States on or after February 28, 2020 will be required to submit all information required by ACTA for inclusion in the database within 30 days after the date that the equipment is manufactured in or imported into the United States.⁶⁷

3. RF Interference Reduction and Inductive Coupling for Wireless Handsets

A wireless handset submitted for equipment certification or for a permissive change relating to hearing aid compatibility on or after August 28, 2018 must comply with the 2011 standard.⁶⁸ Although the new rules eliminate the 2007 standard and the power-down exception, wireless handsets certified prior to August 28, 2018, under the 2007 standard or any previous RF interference reduction or inductive coupling standard, including GSM handsets that were previously certified under the power-down exception, will be grandfathered and will not be subject to the new rules.⁶⁹

Not all wireless handsets need to comply with the HAC rules. Manufacturers and service providers must ensure that specific percentages of their inventories are hearing aid compatible, depending on the year that the handsets are offered for sale, and in accordance with a schedule adopted in 2016.⁷⁰ The technical rules adopted in the *Report and Order* discussed here do not affect the deployment schedules set out in the 2016 order.

⁶² *Notice of Effective Date of Hearing Aid Compatibility Rules*, Public Notice, 33 FCC Rcd 2145 (CGB 2018).

⁶³ *Notice of Effective Date of Hearing Aid Compatibility Rules*, Public Notice, DA 18-532 (CGB May 21, 2018).

⁶⁴ 47 CFR § 68.317(a); *Report and Order*, 32 FCC Rcd at 9094, App. B.

⁶⁵ *Report and Order*, 32 FCC Rcd at 9068, para. 13.

⁶⁶ 47 CFR §§ 68.2(a) (applying many sections of Part 68 to ACS telephonic CPE), 68.501.

⁶⁷ *Id.* § 68.504.

⁶⁸ *Id.* § 20.19(b)(2); *Report and Order*, 32 FCC Rcd at 9091, App. B. The 2011 standard, ANSI C63.19-2011, is incorporated by reference into the Commission's rules. 47 CFR § 20.19(a). The 2007 standard (ANSI C63.19-2007) and the 2011 standard are available for purchase via <http://standards.ieee.org/>, and are available for viewing at the FCC's Reference Information Center in Washington, DC. 47 CFR § 20.19(l); *Report and Order*, 32 FCC Rcd at 9092, App. B.

⁶⁹ *Report and Order*, 32 FCC Rcd at 9085-86, para. 49.

⁷⁰ *Improvements to Benchmarks and Related Requirements Governing Hearing Aid-Compatible Mobile Handsets*, Report and Order, 31 FCC Rcd 9336, 9336, para. 1 (2016), https://apps.fcc.gov/edocs_public/attachmatch/FCC-16-103A1_Rcd.pdf; 47 CFR § 20.19(c)-(e).

4. Volume Control for Wireless Handsets

The *Report and Order* encourages industry standards-setting organizations to develop a wireless volume control standard that the Commission would then incorporate in its rules. After that, a wireless handset submitted for HAC certification, or for a permissive change relating to HAC, will need to comply with that standard beginning March 1, 2021.⁷¹ Even if no standard is developed by industry, wireless handsets submitted for HAC certification, or for a permissive change relating to HAC, will need to be equipped with volume control that produces sound levels suitable for persons with hearing loss beginning March 1, 2021.⁷²

Not all new handsets need to provide volume control that is compliant with the standard by March 1, 2021. The rules include timelines for how many wireless handsets offered by carriers and manufacturers need to be HAC compliant each year. Only new handset models submitted for HAC certification (or for a permissive change relating to HAC) will need to comply with the volume control requirements beginning March 1, 2021.⁷³ Manufacturers and service providers will not need to retrofit or recertify any HAC-compliant models or drop any such models from their portfolios prematurely to comply with the volume control rules.⁷⁴

V. INTERNET LINKS

HAC Report and Order and Order on Reconsideration (FCC 17-135):

- <https://www.fcc.gov/document/report-order-updating-hearing-aid-compatibility-rules>

Effective Date of HAC Rules Announced:

- <https://www.fcc.gov/document/hearing-aid-compatibility-effective-dates-rule-changes>

HAC Rules for Wireline Handsets:

- Electronic Code of Federal Regulations, <https://www.ecfr.gov> (Search for 47 CFR Part 68)

HAC Rules for Wireless Handsets:

- Electronic Code of Federal Regulations, <https://www.ecfr.gov> (Search for 47 CFR § 20.19)

Additional information about the Commission's HAC requirements:

- <https://www.fcc.gov/general/hearing-aid-compatibility-and-volume-control>

⁷¹ 47 CFR § 20.19(b)(1); *Report and Order*, 32 FCC Rcd at 9091, App. B.

⁷² 47 CFR § 20.19(b)(1); *Report and Order*, 32 FCC Rcd at 9091, App. B.

⁷³ 47 CFR § 20.19(b)(1); *Report and Order*, 32 FCC Rcd at 9079, 9091, para. 31, App. B.

⁷⁴ *Report and Order*, 32 FCC Rcd at 9081, paras. 35-36.