**Before the**

Federal Communications Commission

Washington, D.C. 20554

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| In the Matter of  Amendment of the Commission’s Rules Governing  Standards for Hearing Aid-Compatible Handsets | **)**  **)**  **)**  **)** | WT Docket No. 20-3 |

order

**Adopted: April 14, 2023 Released: April 14, 2023**

By the Chief, Wireless Telecommunications Bureau:

# Introduction

1. Today, we take action[[1]](#footnote-3) to ensure that handset manufacturers can continue to release the newest handset models capable of achieving hearing aid compatibility by extending the technical standard transition period referenced in section 20.19(b) of our hearing aid compatibility rules by six months.[[2]](#footnote-4) This provision requires that starting June 5, 2023, handset manufacturers must exclusively use the 2019 ANSI Standard for certifying new handset models as hearing aid-compatible and may no longer use the 2011 ANSI Standard for certification purposes.[[3]](#footnote-5) We take this step to ensure that handset manufacturers can continue to certify new handset models with improved hearing aid compatibility features under the 2011 ANSI Standard while we consider a petition for waiver filed by ATIS to modify the 2019 ANSI Standard to allow handset models satisfying a reduced volume control testing methodology to be certified as hearing aid-compatible.[[4]](#footnote-6) With this brief extension of time, we allow handset manufacturers to continue to use either the 2011 or the 2019 ANSI Standard to certify new handset models as hearing aid-compatible until December 5, 2023.[[5]](#footnote-7) We expect that during this six month period handset manufacturers will abide by their commitment to include innovative new technologies in the handset models that they release which will benefit consumers, especially those with hearing loss. Continuing to allow new handset models to be certified as hearing aid-compatible is essential to moving towards the Commission’s commitment to attaining 100% hearing aid-compatibility of covered wireless handsets, as soon as achievable.

# BACKGROUND

1. The Commission’s rules require handset manufacturers to ensure that at least 85% of the total number of handset models that they offer to consumers are hearing aid-compatible.[[6]](#footnote-8) Handset models are considered hearing aid-compatible if they meet ANSI technical standards that the Commission has incorporated by reference into the hearing aid compatibility rules. In September 2019, the ANSI Committee[[7]](#footnote-9) petitioned the Commission to replace the existing 2011 ANSI Standard that had been incorporated by reference into the Commission’s rules with the 2019 ANSI Standard.[[8]](#footnote-10) Both standards address acoustic and inductive coupling between wireless handsets and hearing aids,[[9]](#footnote-11) but the 2019 ANSI Standard for the first time includes a volume control requirement.[[10]](#footnote-12) This new standard specifically incorporates by reference the ANSI/TIA-5050:2018 volume control standard and requires handset models to meet this standard in order to be certified as hearing aid-compatible.[[11]](#footnote-13)
2. On February 22, 2021, the Commission adopted the 2019 ANSI Standard and the related ANSI/TIA volume control standard.[[12]](#footnote-14) The Commission noted that “[t]he 2019 ANSI Standard is broadly supported by both industry and consumer groups.”[[13]](#footnote-15) The Commission determined to make the 2019 ANSI Standard and the associated volume control requirement the exclusive testing standard for determining hearing aid compatibility after a two year transition period.[[14]](#footnote-16) During the transition period, handset manufacturers may use either the 2011 or the 2019 ANSI Standard when certifying new handset models.[[15]](#footnote-17) The Commission found that a two-year transition period was an appropriate length of time because it was consistent with past practice and took into consideration the typical handset industry product development cycle. The Commission noted that CTIA and Samsung, among others, supported a two-year transition period before requiring the exclusive use of the new testing standard.[[16]](#footnote-18) The two-year transition period that the Commission adopted ends on June 5, 2023.[[17]](#footnote-19) Without today’s action, beginning on this date, handset models would only be certified as hearing aid-compatible using the new standard and the related volume control standard.
3. On December 16, 2022, ATIS filed a petition for waiver asking the Commission to allow wireless handsets to satisfy a reduced volume control testing methodology—instead of the full ANSI/TIA Volume Control Standard incorporated into the 2019 ANSI Standard—in order to be certified as hearing aid-compatible.[[18]](#footnote-20) According to ATIS, handset manufacturers have discovered “significant and material problems with the methodology used for testing volume control”[[19]](#footnote-21) that renders compliance with the 2019 ANSI Standard functionally impossible for handsets.[[20]](#footnote-22) On March 23, 2023, the Wireless Telecommunications Bureau (Bureau) released a Public Notice seeking comment on ATIS’s petition that establishes a 45-day comment period that closes on May 18, 2023.[[21]](#footnote-23) The Public Notice seeks comment on the petition within the context of the Commission’s commitment to attaining 100% hearing aid compatibility for all covered wireless handsets, as soon as achievable,[[22]](#footnote-24) as well as the Commission’s previous finding that a volume control requirement is necessary “to ensure the provision of effective telecommunications for people with hearing loss.”[[23]](#footnote-25)
4. Subsequently, on March 29, 2023, CTIA filed a letter with the Commission urging “the Commission to provide near-term relief in light of the flawed volume control testing methodology and upcoming exclusive use compliance date of June 5, 2023.”[[24]](#footnote-26) CTIA states that without action, the timing of the current comment cycle will likely alter the HAC-rated phone market.[[25]](#footnote-27) Likewise, on April 5, 2023, the ATIS Hearing Aid Compatibility Task Force (Task Force) filed a letter urging “the Commission to act to grant interim, near-term relief that enables new wireless handsets with improved or novel features for people with hearing loss to receive HAC ratings while the Commission considers the [ATIS] waiver request.”[[26]](#footnote-28) In its letter, the Task Force explains that “[h]andset testing takes several weeks, and therefore the FCC will not be able to resolve the Petition before covered entities must test phones in advance of the June 5, 2023 compliance date given the current comment cycle.”[[27]](#footnote-29)

# discussion

1. Section 1.3 of the Commission’s rules provides that the Commission may “on its own motion or on petition” suspend a rule “for good cause shown, in whole or in part, at any time.”[[28]](#footnote-30) The Commission may find that the “good cause shown” standard is met when: (1) “special circumstances warrant a deviation from the general rule” and (2) “such deviation will serve the public interest.”[[29]](#footnote-31) In this case, we find good cause to suspend the June 5, 2023 exclusive use transition date contained in section 20.19(b) of our rules for six months.
2. ATIS’s petition and the subsequent letters filed by CTIA and the Task Force express significant concerns about the pending June 5 exclusive use date for the 2019 ANSI Standard. These filings demonstrate both that special circumstances warrant an extension of the transition period and that an extension of the exclusive use date will serve the public interest. First, ATIS’s petition states that handset manufacturers have discovered “significant and material problems with the methodology used for testing volume control.”[[30]](#footnote-32) ATIS’s petition states that there is a flaw in the existing volume control testing methodology that renders compliance with the standard functionally impossible and, as a result, compliance with the requirements of the 2019 ANSI Standard impossible.[[31]](#footnote-33) ATIS asserts that we must act in order to ensure that new handset models can be certified as hearing aid-compatible after the exclusive use transition date passes. Without Commission action, ATIS states that handset manufacturers will only be able to release a limited number of new handset models, if any at all.[[32]](#footnote-34) ATIS recognizes that the Commission’s rules require handset manufacturers to ensure that 85% of the total number of handset models that they offer to the public are hearing aid-compatible. ATIS argues that the 85% deployment benchmark will limit the ability of handset manufacturers to release new handset models if they cannot certify new handset models as hearing aid-compatible. As such, the Bureau placed the petition on public notice to develop a record in order to fully consider the technical aspects and functional implications of ATIS’s petition.
3. Further, CTIA and the Task Force urge the Commission to take immediate action and grant near-term relief while the record develops for ATIS’s petition. CTIA asserts that the 2019 ANSI Standard’s volume control testing methodology contains “insurmountable flaws” and without immediate Commission action the handset marketplace will be altered. [[33]](#footnote-35) The Task Force states that “the volume control testing measures in the 2019 ANSI standard are unworkable.”[[34]](#footnote-36) According to these parties, after the exclusive use transition date passes, handset manufacturers will not be able to certify new handset models as hearing aid-compatible and this will harm consumers with hearing loss because they may not consider purchasing new handset models that lack hearing aid compatibility certification—even though these new models might offer improved hearing aid compatibility features that better meet their needs.[[35]](#footnote-37) This lack of certification, CTIA and the Task Force argue, will deprive consumers with hearing loss of the information that they need to make informed purchasing decisions.[[36]](#footnote-38) Additionally, as explained in the Task Force’s letter, handset testing takes several weeks, which would require the covered entities to begin testing new phones before the conclusion of the comment cycle for ATIS’s Petition.[[37]](#footnote-39)
4. Moreover, the Task Force, CTIA, and ATIS indicate that during the extended transition period, consumers with hearing loss will receive additional benefits in terms of advancements in hearing aid-compatible handsets. The Task Force states that “industry stakeholders will continue to roll out new, advanced wireless phones that have the latest features, including volume control while the Commission provides interim relief.”[[38]](#footnote-40) In addition, the Task Force states that during the period of interim relief, handset manufacturers “will continue to offer innovative coupling and volume control capabilities,”[[39]](#footnote-41) and that handset manufacturers are committed to “continue to explore advanced solutions and offer innovative coupling and volume control capabilities, and improved audio quality while interim relief is in effect.”[[40]](#footnote-42) CTIA asserts that handset manufacturers already may be in the process of designing new handset models to meet certain aspects of the 2019 ANSI Standard.[[41]](#footnote-43) CTIA indicates that these new handset models may provide for improved acoustic and T-Coil coupling between handsets and hearing aids, operate over a wider range of frequencies, and have volume control capabilities.[[42]](#footnote-44) In its petition, ATIS stresses that new handset models are being designed to produce increased amplification, consistent with the Commission’s goal for adopting volume control requirements.[[43]](#footnote-45)
5. Based on the special circumstances outlined above, as well as the commitments made by the Task Force, CTIA, and ATIS that handset manufacturers will continue to improve coupling and volume control capabilities of new handset models during any interim relief, we find that granting this extension of six months to December 5, 2023 is in the public interest. During this six-month extension, handset manufacturers may continue to use either the 2011 or the 2019 ANSI Standards for certification. If a manufacturer chooses to use the 2019 ANSI Standard for certification, the submitted handset model must meet all aspects of the standard, including the volume control requirements, in order for the handset to be certified as hearing aid-compatible. Otherwise, new handset models must meet all aspects of the 2011 ANSI Standard in order to be certified as hearing aid-compatible. The 2011 ANSI Standard is a well-established and utilized standard for determining hearing aid compatibility and granting this extension permitting use of the standard for six months will ensure that new handset models will continue to be released to the public.[[44]](#footnote-46)
6. Our extension is consistent with the policy objective underlying our hearing aid compatibility rules. These rules are based on the principle that consumers with hearing loss should have the same access to the newest and most advanced handset models as consumers without hearing loss.[[45]](#footnote-47) By extending the transition period, we ensure that in the coming months handset manufacturers will be able to release new handset models when they otherwise might not be able to because of the 85% hearing aid-compatible handset deployment benchmark. The extended transition period permits new handset models to be certified as hearing aid-compatible, which in turn ensures that consumers with hearing loss will have the opportunity to consider these handsets for their needs just like consumers without hearing loss. By granting this extension, we act to ensure that the handset marketplace will not be disrupted by certification issues and will continue to operate as it has during the existing two-year transition period.
7. Additionally, a six-month extension is the appropriate length of time to preserve the status quo pending resolution of the testing problems identified by ATIS. This extension gives the public time to fully review and comment on ATIS’s petition, which will ensure that we have a complete record on which to assess the request. Further, given the complexity of the technical issues involved with ATIS’s petition, we wish to ensure that members of the public have time to meet with us if they wish to express their views in *ex parte* presentations.[[46]](#footnote-48) Thus, we agree with CTIA and the Task Force that granting interim relief serves the public interest because it will allow the record to develop in response to ATIS’s petition.[[47]](#footnote-49)
8. We are encouraged by the technological advancements that the Task Force, CTIA, and ATIS refer to in their filings and the commitment by handset manufacturers to continue to innovate and to include these innovations in new handset models released during the extended transition period. Consumers with hearing loss will benefit from these improvements, and we expect that handset manufacturers will incorporate these changes into new handset models released in the coming months. In addition, these commitments will bring us closer to the time when all handset models will be certified as hearing aid-compatible and consumers with hearing loss will be able to consider all handset models for their needs, including the newest and most technologically advanced models. We continue to strive toward our goal of 100% hearing aid compatibility in the near future and our decision to adopt a six month extension does not require us to adjust our time frame for making this decision. Our extension permits handset manufacturers to continue the process of certifying all of their handset models as hearing aid-compatible, as many of them do now.[[48]](#footnote-50) These advancements support our decision to grant this brief extension and ensure that our action today is in the public interest.
9. For all of the above reasons, we find good cause to extend by six months the June 5, 2023 exclusive use transition date contained in section 20.19(b) of our hearing aid compatibility rules to December 5, 2023.
10. *Paperwork Reduction Act.* This document does not contain new or substantively modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. In addition, therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. § 3506(c)(4).
11. *Congressional Review Act.* The Commission has determined, and the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, concurs, that this rule is “non-major” under the Congressional Review Act, 5 U.S.C. § 804(2). The Commission will send a copy of this Order to Congress and the Government Accountability Office pursuant to 5 U.S.C. § 801(a)(1)(A).

# ordering clause

1. Accordingly, IT IS ORDERED, pursuant to section 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), and sections 0.331 and 1.3 of the Commission’s rules, 47 CFR §§ 0.331 and 1.3, that the June 5, 2023 date included within section 20.19(b) is extended to December 5, 2023.
2. IT IS FURTHER ORDERED that the Office of the Managing Director, Performance Evaluation and Records Management, SHALL SEND a copy of this Order in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, 5 U.S.C. § 801(a)(1)(A).

FEDERAL COMMUNICATIONS COMMISSION

Joel Taubenblatt

Chief, Wireless Telecommunications Bureau

1. 47 CFR § 1.3. [↑](#footnote-ref-3)
2. 47 CFR § 20.19(b). [↑](#footnote-ref-4)
3. 47 CFR § 20.19(b). The 2019 ANSI Standard refers to the technical document entitled Accredited Standards Committee C63® - Electromagnetic Compatibility, *American National Standard Methods of Measurement of Compatibility Between Wireless Communications Devices and Hearing Aids*, ANSI C63.19-2019 (2019 ANSI Standard). The 2011 ANSI Standard refers to the technical document entitled Accredited Standards Committee C63® - Electromagnetic Compatibility, *American National Standard Methods of Measurement of Compatibility Between Wireless Communications Devices and Hearing Aids*, ANSI C63.19-2011 (2011 ANSI Standard). *See also* 47 CFR § 20.19(a), (l). [↑](#footnote-ref-5)
4. Petition of ATIS on Behalf of the Covered Entities of the Hearing Aid Compatibility Task Force for Limited, Interim Waiver, WT Docket Nos. 15-285 and 20-3 (filed Dec. 16, 2022) (*ATIS Petition*). The covered entities of the Hearing Aid Compatibility Task Force include Apple, Inc.; AT&T; Competitive Carriers Association; Consumer Technology Association; CTIA; Google; Mobile & Wireless Forum; Samsung Research America; T-Mobile USA; Telecommunications Industry Association (“TIA”); Union Telephone Company; USCellular; and Verizon. *Id.* at 1 & n.1. [↑](#footnote-ref-6)
5. Given that the testing and certification process can take over a month to complete, any handset models to be certified under the 2011 ANSI Standard will have to start and *complete* the entire certification process prior to December 5, 2023. *See* Federal Communications Commission, Office of Engineering and Technology Laboratory Division*, Equipment Authorization Guidance For Hearing Aid Compatibility* (Sept. 19, 2022) (“All Hearing Aid Compatibility (HAC) applicable grants of certification, including permissive changes, issued on or after June 5, 2023 must be compliant with ANSI C63.19-2019 and their supporting HAC test report(s) shall demonstrate compliance with ANSI C63.19-2019.”). [↑](#footnote-ref-7)
6. 47 CFR § 20.19(c)(1)(ii). [↑](#footnote-ref-8)
7. The ANSI Committee refers to the Accredited Standards Committee C63®–Electromagnetic Compatibility, which is the accredited standards development organization whose working group, C63.19, is responsible for developing and maintaining ANSI C63.19-the wireless hearing aid compatibility standard. ANSI, Introduction to ANSI, <https://www.ansi.org/about_ansi/introduction/introduction.aspx?menuid=1> (last visited Mar. 20, 2023). [↑](#footnote-ref-9)
8. *See* Report and Petition of American National Standards Institute Accredited Standards Committee C63®, CG Docket No. 13-46, WT Docket Nos. 07-250 and 10-254, at 1 (filed Sept. 23, 2019). [↑](#footnote-ref-10)
9. Hearing aids operating in acoustic coupling mode receive sounds through a microphone and then amplify all sounds surrounding the user, including both desired sounds, such as a telephone’s audio signal, and unwanted ambient noise. To use a wireless handset with a hearing aid or cochlear implant in acoustic coupling mode, radiofrequency interference and other electromagnetic interference from the handset must be controlled. Hearing aids operating in inductive coupling mode turn off their microphone to avoid amplifying unwanted ambient noise, instead using a telecoil (T-Coil) to receive only audio signal-based magnetic fields generated by inductive coupling-capable telephones. The hearing aid converts these fields back to sound or to a signal appropriate for cochlear implant users. [↑](#footnote-ref-11)
10. *Amendment of the Commission’s Rules Governing Standards for Hearing Aid-Compatible Handsets*, WT Docket No. 20-3, Report and Order, 36 FCC Rcd 4566, 4568-569, para. 6 (2021) (*2021 HAC Order*). [↑](#footnote-ref-12)
11. ANSI/TIA-5050:2018, *Telecommunications – Communications Products – Receive Volume Control Requirements for Wireless (Mobile) Devices* (approved Jan. 17, 2018) (*ANSI/TIA Volume Control Standard*); 47 CFR § 20.19(a), (l). The volume control requirement establishes a standard and testing methodology that uses conversation gain to measure the acoustic output level of speech from a handset relative to the acoustic level that would be present in a fact-to-face conversation with two people one meter apart. ANSI/TIA Volume Control Standard at 1. [↑](#footnote-ref-13)
12. *2021 HAC Order*, 36 FCC Rcd 4566. [↑](#footnote-ref-14)
13. *2021 HAC Order*, 36 FCC Rcd at 4567, para. 2. [↑](#footnote-ref-15)
14. *2021 HAC Order*, 36 FCC Rcdat 4576, para. 22. [↑](#footnote-ref-16)
15. *2021 HAC Order*, 36 FCC Rcdat 4576, para. 22; 47 CFR § 20.19(b)(2). [↑](#footnote-ref-17)
16. *2021 HAC Order*, 36 FCC Rcdat 4576, para. 22. [↑](#footnote-ref-18)
17. 47 CFR § 20.19(b). [↑](#footnote-ref-19)
18. *ATIS Petition* at 1-2. [↑](#footnote-ref-20)
19. *ATIS Petition* at 3. [↑](#footnote-ref-21)
20. *ATIS Petition* at 3-4. [↑](#footnote-ref-22)
21. *Wireless Telecommunications Bureau Seeks Comment on ATIS Waiver Request on Behalf of the Covered Entities of the Hearing Aid Compatibility Task Force*, WT Docket No. 20-3, Public Notice, (rel. Mar. 23, 2023) (*ATIS Petition PN*); FCC, Notice; request for comments, 88 Fed. Reg. 19639 (Apr. 3, 2023) (establishing that comments are due on or before May 3, 2023 and reply comments are due on or before May 18, 2023). [↑](#footnote-ref-23)
22. *See, e.g.*, *Improvements to Benchmarks and Related Requirements Governing Hearing Aid-Compatible Mobile Handsets*, WT Docket No. 15-285, Report and Order, 31 FCC Rcd 9336, 9337, 9345, paras. 4, 22 (2016); *2021 HAC Order*, 36 FCC Rcd at 4566, para. 1. Simultaneously with the release of the Public Notice seeking comment on ATIS’s petition, the Bureau also released a Public Notice seeking comment on a report recently filed by the Hearing Aid Compatibility Task Force regarding its recommendations for achieving 100% hearing aid compatibility for wireless handsets. *Wireless Telecommunications Bureau Requests Comment on the Hearing Aid Compatibility Task Forces’ Final Report and Recommendation*, WT Docket No. 15-285, Public Notice (rel. Mar. 23, 2023). [↑](#footnote-ref-24)
23. *See Amendment of the Commission’s Rules Governing Hearing Aid-Compatible Mobile Handsets*, WT Docket No. 07-250, Report and Order and Order on Reconsideration, 32 FCC Rcd 9063, 9073-074, para. 23 (2017) (*2017 HAC Report and Order*). [↑](#footnote-ref-25)
24. Letter from Scott Bergmann, Senior Vice President, Regulatory Affairs, CTIA, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-3, at 1 (filed Mar. 29, 2023) (*CTIA Letter*). [↑](#footnote-ref-26)
25. CTIA Letter at 2. [↑](#footnote-ref-27)
26. Letter from Thomas Goode, General Counsel, ATIS, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-3, at 3 (filed Apr. 5, 2023) (*Task Force Letter*). [↑](#footnote-ref-28)
27. Task Force Letter at 1 & n.1. [↑](#footnote-ref-29)
28. 47 CFR § 1.3. [↑](#footnote-ref-30)
29. *See, e.g*., *Ne. Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990); *see WAIT Radio v. FCC*, 418 F.2d

    1153, 1157-59 (D.C. Cir. 1969) (*WAIT Radio*). [↑](#footnote-ref-31)
30. *ATIS Petition* at 3. [↑](#footnote-ref-32)
31. *ATIS Petition* at 3-4. [↑](#footnote-ref-33)
32. *ATIS Petition* at 16. [↑](#footnote-ref-34)
33. *CTIA Letter* at 1-2. [↑](#footnote-ref-35)
34. *Task Force Letter* at 2. [↑](#footnote-ref-36)
35. *CTIA Letter* at 2; *Task Force Letter* at 2; *see also* *ATIS Petition* at 16. [↑](#footnote-ref-37)
36. *CTIA Letter* at 2; *Task Force Letter* at 2. [↑](#footnote-ref-38)
37. *Task Force Letter* at 1 n.1. [↑](#footnote-ref-39)
38. *Task Force Letter* at 3. [↑](#footnote-ref-40)
39. *Task Force Letter* at 1. [↑](#footnote-ref-41)
40. *Task Force Letter* at 3. [↑](#footnote-ref-42)
41. *CTIA Letter* at 2. [↑](#footnote-ref-43)
42. *CTIA Letter* at 2. [↑](#footnote-ref-44)
43. *ATIS Petition* at 4. [↑](#footnote-ref-45)
44. In April of 2012, the Bureau and OET adopted the 2011 ANSI Standard as an alternative standard to use to certify new handset models as hearing aid-compatible. *Amendment of the Commission’s Rules Governing Hearing Aid-Compatible Mobile Handsets*, WT Docket No. 07-250, Third Report and Order, 27 FCC Rcd 3732, 3735, para. 9 (WTB/OET 2012). In October 2017, the Commission made the 2011 ANSI Standard the exclusive testing standard for determining hearing aid compatibility. *2017 HAC Report and Order*, 32 FCC Rcd at 9085, para. 46 (2017). [↑](#footnote-ref-46)
45. *Amendment of the Commission’s Rules Governing Hearing Aid-Compatible Mobile Handsets*, WT Docket No. 07-250, Policy Statement and Second Report and Order and Further Notice of Proposed Rulemaking, 25 FCC Rcd 11167, 11174, para. 18 (2010). [↑](#footnote-ref-47)
46. *See* *ATIS Petition PN* at para. 20. [↑](#footnote-ref-48)
47. *Task Force Letter* at 1, 2; *CTIA Letter* at 2 (stating that interim relief will “allow the record in response to the waiver public notice to develop in an orderly fashion”). [↑](#footnote-ref-49)
48. *See* FCC, Hearing Aid Compatibility Reports: Device Manufacturers Summary, Hearing Aid Compatibility Status Reporting, <https://www.fcc.gov/wireless/systems-utilities/universal-licensing-system/hearing-aid-compatibility-status-reporting-1> (many handset manufacturers report 100% compliance). [↑](#footnote-ref-50)