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SMALL ENTITY COMPLIANCE GUIDE

Unlicensed White Space Device Operations in the Television Bands; Amendment of Part 15 of the Commission's Rules for Unlicensed Operations in the Television Bands, Repurposed 600 MHz Band, 600 MHz Guard Bands and Duplex Gap, and Channel 37

FCC 23-24
ET Docket Nos. 14-165 and 20-36
Adopted April 11, 2023

In accordance with Section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996, this Guide is intended to help small entities—small businesses, small organizations (non-profits), and small governmental jurisdictions—comply with the 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 in the above-referenced proceeding and the appropriateness of its application to a particular situation. The Commission will then consider whether the recommendations or interpretations in the Guide are appropriate in that situation. The Commission may decide to revise this Guide without public notice to reflect changes in its approach to implementing a rule or it may clarify or update the text of the Guide. Direct your comments, recommendations, or request for further assistance to the FCC's Consumer Center:

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I. OBJECTIVES OF THE PROCEEDING

In the *Order on Reconsideration, Report and Order, and Memorandum Opinion and Order* in ET Docket Nos. 14-165 and 20-36, the Federal Communications Commission (Commission) adopted three orders regarding the effective and efficient management of white space devices operating in the broadcast television (TV) bands and portions of the 600 MHz band.¹

The Commission's actions in the *Order on Reconsideration* rejected a petition for reconsideration of two rules changes and upheld prior Commission decisions concerning the operation of mobile white space devices and narrowband white space devices utilizing broadcast TV bands.

Relatedly, the *Report and Order* adopted rules specifying how often mobile and narrowband white space devices must contact a white space database to determine the operating channels and associated maximum permissible power levels that are available at a device's location. The amended rules: (1) require a mobile white space device to contact a white space database at least once per hour to determine whether its operating channel continues to be available, and (2) require a narrowband white space device to contact a white space database at least once per day to determine whether its operating channel continues to be available.

Lastly, in the *Memorandum Opinion and Order*, the Commission declined to modify existing rules to permit white space databases to use more complex terrain-based models to determine which TV channels are available for white space operation at a particular location, opting to retain the current model for determining TV channel availability.² Additionally, the *Memorandum Opinion and Order* corrects section 15.713(e)(6) of the rules, which pertains to the maximum permissible antenna height above ground for fixed white space devices.³

The steps taken by the Commission in the *Order on Reconsideration, Report and Order, and Memorandum Opinion and Order* further its goals of providing clarity to white space device users and manufacturers, while also optimizing the use of white space devices. Moreover, these actions facilitate improved broadband services to all Americans, particularly those in rural, Tribal and other underserved areas, while also protecting other operations in the TV bands from harmful interference.

II. COMPLIANCE REQUIREMENTS

The compliance requirements resulting from the Commission's actions in the *Order on Reconsideration, Report and Order, and Memorandum Opinion and Order*, which revises the database re-check requirements in section 15.711(h) for various categories of white space devices, are set forth in the *Report and Order*. Due to the technical similarities between mobile and fixed devices, the Commission opted to require mobile devices to re-check the white space databases at least once per hour, which is the same re-check interval required for fixed devices (excluding narrowband). For narrowband devices, the Commission required maintaining the current once daily re-check, as it concluded narrowband devices had a very low likelihood of causing harmful interference to licensed wireless microphones and therefore did not necessitate an hourly database re-check.

The revised section contains three paragraphs which specify the re-check requirements that apply to:

¹ *Unlicensed White Space Device Operations in the Television Bands; Amendment of Part 15 of the Commission's Rules for Unlicensed Operations in the Television Bands, Repurposed 600 MHz Band, 600 MHz Guard Bands and Duplex Gap, and Channel 37*, ET Docket Nos. 14-165 and 20-36, Order on Reconsideration, Report and Order, and Memorandum Opinion and Order, FCC 23-24 (Apr. 12, 2023) (*Order on Reconsideration, Report and Order, and Memorandum Opinion and Order*).

² 47 CFR § 15.712. This section requires white space devices to meet minimum separation distances from the protected contours of co-channel and adjacent channel TV stations, as well as from other protected services including licensed wireless microphones, land mobile stations, and certain receive sites.

³ Id. § 15.713(e)(6).

(1) mobile, fixed and Mode II personal/portable devices (excluding narrowband devices) operating in the TV bands; (2) fixed and Mode II personal/portable devices operating outside of the TV bands; and (3) narrowband devices (which operate only in the TV bands).

A. Mobile Device Database Re-check Requirements (47 CFR §§ 15.711(h)(1) & (k)(9))

- Mobile white space devices are now subject to the same database re-check requirements as fixed and Mode II personal/portable devices (excluding narrowband devices) that operate in the TV bands. Specifically, section 15.711(h)(1) was modified to make mobile white space devices subject to the same database re-check requirements as these other categories of devices. In addition, section 15.711(k)(9) was modified to replace the former database re-check requirements for mobile devices with a cross-reference to section 15.711(h)(1) that will specify the applicable database re-check requirements.
- Under section 15.711(h)(1), mobile devices must access the white space database at least once every 60 minutes to verify that the operating channel(s) and associated maximum permissible power levels continue to be available at their location. Devices must adjust their channel usage in accordance with the most recent channel availability schedule information provided by the white space database for the two-hour period beginning at the time the device last accessed the database. Scheduling information is provided by the database when necessary to protect registered licensed wireless microphones near a white space device's location.
- If a device fails to successfully contact the white space database, it may continue to operate until no longer than 120 minutes after the last successful contact, at which time it must cease operations until it reestablishes contact with the white space database and re-verifies its list of available channels and associated maximum power levels.

B. Narrowband Device Database Re-check Requirements (47 CFR §§ 15.711(h)(2) & (3))

- Narrowband white space devices are no longer subject to the same database re-check requirements as fixed and Mode II personal/portable devices operating outside of the TV bands specified in section 15.711 (h)(2). Instead, they are required to comply with the database re-check requirements in a new subsection 15.711(h)(3).
- A narrowband device that has been in a powered-on state shall access the database at least once each 24-hour period to verify that the operating channel(s) and associated maximum power levels continue to be available at its location.
- A device must cease operating if it fails to successfully access the database within 24 hours from its last successful contact. It may not resume operation until it re-establishes contact with the white space database and re-verifies its list of available channels and corresponding power levels.

In the *Memorandum Opinion and Order*, the Commission declined to modify existing rules to permit white space databases to use more complex terrain-based models (such as the Longley-Rice Irregular Terrain Model) to determine which TV channels are available for white space operation at a particular location; therefore no compliance requirements are changed. The Commission, however, modified section 15.713(e)(6) by removing an incorrect reference to a 30 meter antenna height above ground limit for fixed white space devices.⁴ This is a ministerial revision that conforms the text of the rule to the Commission's decision in the *2020 White Spaces Order and FNPRM* and therefore does not change any

⁴ 47 CFR § 15.713(e)(6).

compliance requirements.⁵

Lastly, in the *Order on Reconsideration*, the Commission continued to allow mobile devices to operate at 16 watts Effective Isotropic Radiated Power (EIRP) and permit narrowband white space devices to operate in all areas rather than limiting them to “less congested” areas. The *Order on Reconsideration* does not change existing rules concerning these areas, nor does it change any related compliance requirements.

III. RECORDKEEPING AND REPORTING REQUIREMENTS

The Commission’s actions in the *Order on Reconsideration, Report and Order, and Memorandum Opinion and Order* did not create any new recordkeeping or reporting requirements.

IV. IMPLEMENTATION DATE

The rules in the *Order on Reconsideration, Report and Order, and Memorandum Opinion and Order* became effective on June 21, 2023.

V. INTERNET LINKS

A copy of the *Order on Reconsideration, Report and Order, and Memorandum Opinion and Order* is available at:

<https://docs.fcc.gov/public/attachments/FCC-23-24A1.pdf>.

A copy of the Federal Register Summary of the *Order on Reconsideration, Report and Order, and Memorandum Opinion and Order* is available at:

<https://www.govinfo.gov/content/pkg/FR-2023-05-22/pdf/2023-10166.pdf>.

⁵ *Unlicensed White Space Device Operations in the Television Bands*, Report and Order and Further Notice of Proposed Rulemaking, 35 FCC Rcd 12603 (2020) (*2020 White Spaces Order and FNPRM*). The Commission removed the antenna height above ground limit for most fixed white space devices. See *2020 White Spaces Order and FNPRM*, 35 FCC Rcd at 12613-15, paras. 31-33.