



Federal Communications Commission
Washington, D.C. 20554

April 22, 2015

DA 15-487

Small Entity Compliance Guide

Order on Reconsideration and Further Notice of Proposed Rulemaking

Amendment of Parts 1, 2, 22, 24, 27, 90 and 95 of the Commission's Rules to Improve Wireless Coverage Through the Use of Signal Boosters

FCC 14-138
WT Docket No. 10-4
Released: September 23, 2014

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 new rules adopted in the above-referenced FCC rulemaking docket(s). This Guide is not intended to replace the rules and, therefore, final authority rests solely 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 may, perhaps, not apply in a particular situation based upon the circumstances, and the FCC retains the discretion to adopt approaches on a case-by-case basis that may differ from this Guide, where appropriate. Any decisions regarding a particular small entity will be based on the statute and regulations.

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 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 to clarify or update the text of the Guide. Direct your comments and recommendations, or calls for further assistance, to the FCC's Consumer Center:

1-888-CALL-FCC (1-888-225-5322)
TTY: 1-888-TELL-FCC (1-888-835-5322)
Fax: 202-418-0232

TABLE OF CONTENTS

I. SUMMARY OF ACTION TAKEN AND OBJECTIVES OF THE PROCEEDING 3
**II. REGULATIONS AND POLICIES THAT THE COMMISSION ADOPTED OR
MODIFIED, INCLUDING COMPLIANCE REQUIREMENTS 3**
III. RECORDKEEPING REQUIREMENTS 5
IV. WEBLINK 5

I. SUMMARY OF ACTION TAKEN AND OBJECTIVES OF THE PROCEEDING

In this *Order on Reconsideration* in WT Docket No. 10-4, the Commission took the following actions: 1) streamlined the equipment certification process by amending certain technical requirements for Wideband Consumer Signal Boosters; 2) strengthened the gain and power limits for Provider-Specific Consumer Signal Boosters; 3) amended the booster antenna kitting rules for Provider-Specific Consumer Signal Boosters; 4) and required that Consumer Signal Boosters certified only for fixed operation be labeled to notify consumers that such devices may only be used in fixed, in-building locations.

These amendments to the rules will facilitate the test procedures and equipment certification process for Wideband Consumer Signal Boosters without diminishing the safeguards in the Commission's rules designed to protect wireless networks. The rule changes will benefit consumers by decreasing the costs and complexities associated with the manufacture and certification of Wideband Boosters, which in turn may reduce the cost of these devices to consumers, while continuing to achieve the objectives of the Network Protection Standard (NPS).¹

These changes also will ensure consumer access to a wide variety of cost-efficient Consumer Signal Boosters while strengthening the technical protections for the wireless networks.

II. REGULATIONS AND POLICIES THAT THE COMMISSION ADOPTED OR MODIFIED, INCLUDING COMPLIANCE REQUIREMENTS

In the *Order on Reconsideration*, the Commission modified and adopted rules governing Provider-Specific Consumer Signal Boosters. The revised and new rules:

- Require that mobile Provider-Specific Consumer Signal Boosters meet the same noise limits as mobile Wideband Consumer Signal Boosters;
- Require that mobile Provider-Specific Consumer Signal Boosters that are directly connected to the device or that use direct contact coupling (*e.g.*, cradle-type boosters) meet the same gain limits that apply to similarly connected Wideband Consumer Signal Boosters; and
- Require that the maximum booster gain for mobile Provider-Specific Consumer Signal Boosters that use an inside antenna and that have both automatic gain adjustment based on isolation measurements between booster donor and server antenna and automatic feedback cancellation not exceed 58 dB and 65 dB for frequencies below and above 1 GHz, respectively.

In the *Order on Reconsideration*, the Commission also took the following actions:

- Amended the antenna kitting rule for all Provider-Specific Consumer Signal Boosters to be the same as the current antenna kitting rule applicable to Wideband Consumer Signal Boosters.

¹ The NPS is a flexible set of requirements adopted by the Commission for the design and manufacture of Consumer Signal Boosters, which is intended to couple signal booster innovation with sufficient safeguards to protect wireless networks from harmful interference.

- Amended the booster labeling requirements to require that all consumer boosters, both Provider-Specific and Wideband, certified for fixed, in-building use include language stating: “This device may ONLY be operated in a fixed location for in-building use.”
- Removed the reference to downlink noise from section 20.21(e)(8)(i)(A)(I) of Noise Limits technical requirement for Wideband Consumer Signal Boosters.
- Added a reference to downlink noise in section 20.21(e)(8)(i)(H) of the Transmit Power Off Mode requirement for Wideband Consumer Signal Boosters.

We discuss these rule changes and compliance requirements in more detail below:

Noise Limits for Provider-Specific Consumer Signal Boosters. The Commission adopted modified, strengthened noise and gain limits for mobile Provider-Specific Consumer Signal Boosters. The rules now require that all mobile Provider-Specific Consumer Signal Boosters meet the same noise limits as mobile Wideband Consumer Signal Boosters and that mobile Provider-Specific Consumer Signal Boosters that are directly connected to the device or that use direct contact coupling (e.g., cradle-type boosters) meet the same gain limits that apply to similarly connected Wideband Consumer Signal Boosters. For mobile Provider-Specific Consumer Signal Boosters that use an inside antenna and that have both automatic gain adjustment based on isolation measurements between booster donor and server antenna and automatic feedback cancellation, the Commission will require that the maximum booster gain not exceed 58 dB and 65 dB for frequencies below and above 1 GHz, respectively. The noise and gain limits are reasonable for signal booster manufacturers to implement, while also adequately protecting against interference to wireless networks.

Antenna Kitting Requirements. The Commission amended the rule for mobile Provider-Specific Consumer Signal Boosters to mirror the current antenna kitting rule for Wideband Consumer Signal Boosters by replacing the word “mobile” in section 20.21(e)(9)(i)(H) with the word “all.”

Labeling Requirements. The Commission implemented labeling requirement for all fixed Consumer Signal Boosters, both Provider-Specific and Wideband, manufactured or imported on or after one year from the effective date of the rule change that must include the following advisory (1) in on-line point-of-sale marketing materials, (2) in any print or on-line owner’s manual and installation instructions, (3) on the outside packaging of the device, and (4) on a label affixed to the device: “This device may be operated only in a fixed location for in-building use.” The Commission recognized that the labeling requirement imposes additional costs on entities that manufacture Consumer Signal Boosters; consistent with the previous decision in the *Report and Order* to implement labeling requirements, however, the Commission concluded that such costs are outweighed by the benefits of ensuring that consumers purchase appropriate devices.

In addition, a typographical error was corrected in 47 C.F.R. § 1.1307(b)(1) regarding radio frequency exposure labeling requirements for Consumer Signal Boosters.

Noise Limit for Wideband Consumer Signal Boosters. As we mentioned above, the Commission revised a rule to eliminate a noise limit that previously applied to Wideband Consumer Signal Boosters. In pertinent part, as revised, this rule reads as follows: “The transmitted noise power in dBm/MHz of consumer boosters at their uplink port shall not exceed -103 dBm/MHz – RSSI. RSSI (received signal strength indication expressed in negative dB units relative to 1 mW) is the downlink composite received signal power in dBm at the booster donor port for all base stations in the band of operation.”

Downlink Gain Requirement. The Commission added a downlink gain requirement to the Transmit Power Off Mode rule. This will ensure gain equivalency as required by the Bidirectional

Capability rule without creating complications for the test procedures. In addition, it will benefit signal booster manufacturers by setting a floor on the permissible downlink gain when in proximity to one or more base station transmitters (*i.e.*, high RSSI levels).

III. RECORDKEEPING REQUIREMENTS

The rule changes adopted in this proceeding will not alter any of the current reporting or recordkeeping requirements but should provide small entities with access to the coverage enhancing benefits of signal boosters that do not harm wireless networks.

IV. WEBLINK

The *Order on Reconsideration and Further Notice of Proposed Rulemaking*, FCC 14-138, was adopted September 19, 2014 and released September 23, 2014. Final rules adopted in the *Order on Reconsideration* are effective on December 29, 2014, except for 47 C.F.R. § 20.21(f)(1)(iv)(A)(2), which contain information collection requirements subject to the Paperwork Reduction Act of 1995, Public Law 104-13, that are not effective until after approval by the Office of Management and Budget. The Federal Communications Commission will publish a document in the Federal Register announcing OMB approval and the effective date of these rule revisions.

http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-14-138A1.docx

http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-14-138A1.pdf

http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-14-138A1.txt