

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
4RF LIMITED) WT Docket No. 13-188
)
Request for Waiver of Part 90 Rules to Permit Use)
of Certain Emission Designators for Telemetry)
Radios)

ORDER

Adopted: **March 19, 2014**

Released: **March 19, 2014**

By the Deputy Chief, Mobility Division, Wireless Telecommunications Bureau:

1. *Introduction.* We have before us a request for a blanket waiver or, in the alternative, clarification of Section 90.207(i) of the Commission’s Rules¹ filed by 4RF Limited (“4RF”) to allow use of G1D and D1D emission designators² for telemetry operations.³ For the reasons discussed herein, we grant 4RF’s request in part. Specifically, we clarify that G1D emissions are permitted for Part 90 telemetry, but we grant the request for a waiver to permit D1D emissions only with respect to 4RF’s Aprisa SR+ equipment rather than for all telemetry equipment.

2. *Background.* Section 90.207 sets forth the emissions that may be authorized under Part 90 of the Commission’s Rules and references the types of operations in which they may be utilized.⁴ Section 90.207(i) provides, “For telemetry operations, when specifically authorized under this part, only A1D, A2D, F1D, or F2D will be authorized.”⁵

3. 4RF, a radio equipment designer/manufacturer, has developed a narrowband high-efficiency point-to-multipoint telemetry radio system, the Aprisa SR+, that provides a capacity of up to 60 kbps in 12.5 kilohertz channels and 120 kbps in 25 kilohertz channels. 4RF states that Aprisa SR+ equipment complies with the Part 90 emission mask but, because it utilizes linear modulation methods to address spectrum efficiency, uses D1D and G1D emissions. 4RF states that permitting Aprisa SR+ use in the

¹ 47 C.F.R. § 90.207(i).

² The emission designator is a series of alphanumeric characters that denotes the necessary bandwidth, type of modulation, nature of the signal modulating the main carrier, and type of information to be transmitted. *See* 47 C.F.R. §§ 2.201(b), 2.202(b). G1D is a type of phase-modulated digital emission, and D1D is a digital emission that is amplitude- and angle-modulated.

³ *See* Request for Waiver of Section 90.207(i) of the Commission’s Rules filed by 4RF Limited on July 18, 2013 (Request). The Wireless Telecommunications Bureau’s Mobility Division sought comment on the Request. *See* Wireless Telecommunications Bureau Seeks Comment on Request by 4RF Limited for Waiver of Certain Part 90 Rules to Permit Use of Certain Emission Designators for Telemetry Radios, *Public Notice*, WT Docket 13-188, 28 FCC Rcd 11022 (WTB MD 2013). One comment and one reply comment, both supporting the Request, were filed.

⁴ Amendment of the Commission’s Rules governing the Private Land Mobile Radio Service to provide a new Part 90 that reregulates and consolidates Parts 89, 91, and 93, *Report and Order*, Docket No. 21348, 29 F.C.C. 2d 1612, 1616 ¶ 11 (1978).

⁵ *See* 47 C.F.R. § 90.207(i).

United States would facilitate critical infrastructure companies' migration to IP-enabled technologies for remote monitoring and control applications, and high-speed telemetry applications for which the equipment is available to users in other countries.⁶ 4RF requests a blanket waiver of Section 90.207(i) to allow certification, licensing, and use of telemetry radios with G1D and D1D emissions or, in the alternative, a clarification that the rule permits such emissions.

4. *Discussion. G1D.* As noted by 4RF,⁷ Section 2.201(c)(3) of the Commission's Rules was amended subsequently to the enactment of Section 90.207(i) to state that whenever frequency modulation "F" is indicated, phase modulation "G" is also acceptable.⁸ Consequently, we hereby clarify that Section 90.207(i) should be read to permit G1D (and G2D) emissions for Part 90 telemetry operations.

5. *D1D.* To obtain a waiver of the Commission's Rules, a petitioner must demonstrate either that the underlying purpose of the rule(s) would not be served or would be frustrated by application to the present case and that grant of the waiver would be in the public interest; or that, in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.⁹ We conclude that grant of a waiver to permit certification, licensing, and use of 4RF's Aprisa SR+ equipment is warranted. Allowing licensees to utilize the D1D emissions will promote the efficient use of limited spectrum resources, and can improve the effectiveness of critical infrastructure operations that protect life, property, and the environment.¹⁰ Based on the record before us, we conclude that grant of 4RF's request would not frustrate the underlying purposes of the emission designator rules and would serve the public interest.¹¹

6. We grant the waiver only with respect to 4RF's Aprisa SR+ equipment. 4RF has not made a showing that warrants grant of a blanket waiver of Section 90.207(i) for any telemetry equipment from any manufacturer used for any purpose. If 4RF believes that a wholesale modification of Section 90.207(i) is in order, it should file an appropriate petition for rulemaking.¹²

7. *Conclusion.* We grant 4RF's request as set forth above. We agree with 4RF that Section 90.207(i) already permits G1D emissions for telemetry operations. With respect to D1D emissions, we grant a waiver of the rule to permit certification, licensing, and use of 4RF's Aprisa SR+ equipment. A copy of this *Order* shall be submitted with the equipment authorization application. License applications

⁶ See Request at 1-2.

⁷ See *id.* at 5-6.

⁸ See 47 C.F.R. § 2.201(c)(3) note 2; see also Provision for New System of Emission Designators Described in Article 4 of the International Telecommunication Union Radio Regulations, Gen. Docket No. 80-739, 49 Fed. Reg. 48694 (1984). As one commenter explains, "Whenever the frequency of RF waves change, so does the phase and vice versa, so while there are some minor academic differences in the [F1D and G1D] emissions, they are for all intents and purposes one and the same." Comments of James E. Whedbee at 1.

⁹ See 47 C.F.R. § 1.925(b)(3).

¹⁰ See Request at 7.

¹¹ See Lojack Corporation, *Order*, 20 FCC Rcd 20497, 20499 ¶ 7 (WTB PSCID 2005) (granting waiver to permit D1D emission on frequency on which 47 C.F.R. § 90.20(e)(6) permitted only F1D and F2D, on the grounds that allowing greater efficiency was in the public interest and would not frustrate the rule's underlying purpose).

¹² See, e.g., Rangemaster Golf Enterprises dba ProShot Golf, *Order*, 10 FCC Rcd 5043, 5044 ¶ 7 (WTB 1995) (denying a request for blanket waiver of Section 90.207 to permit a non-standard emission in any location, rather than proceeding by rulemaking), *on reconsideration*, *Memorandum Opinion and Order*, DA 95-1259 (WTB rel. June 8, 1995) (granting a more limited waiver request).

must reference this *Order* by the DA number set forth above. No license applications will be granted until 4RF obtains equipment authorization.

8. Accordingly, IT IS ORDERED, pursuant to Section 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), and Section 1.925 of the Commission's Rules, 47 C.F.R. § 1.925, that the waiver request filed by 4RF Limited, on March 14, 2011 IS GRANTED IN PART as set forth herein.

9. This action is taken under delegated authority pursuant to Sections 0.131 and 0.331 of the Commission's Rules, 47 C.F.R. §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Scot Stone
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