

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

In the Matter of)
)
Midland Radio Corporation Petition for Waiver of) WT Docket No. 21-388
Certain FCC's Rules to Authorize a Radio System)
to Improve Safety for Off-Road GMRS Users)
)

ORDER

Adopted: July 24, 2023

Released: July 24, 2023

By the Chief, Mobility Division, Wireless Telecommunications Bureau:

I. INTRODUCTION

1. Midland Radio Corporation (Midland) has requested a waiver of four subsections of the Commission's Part 95 rules governing General Mobile Radio Service (GMRS) in the 462 MHz band, in order to permit non-handheld radios that utilize a non-integrated antenna to automatically transmit digital data more than once within a 30-second period, and to operate at 50 watts. For the reasons articulated below we grant Midland's Waiver Request, subject to the conditions described herein.

II. BACKGROUND

2. The Personal Radio Services governed by Part 95 include various short-range low-power services, generally for public use over shared spectrum with operation authorized by rule rather than by individual licenses. GMRS is a mobile two-way voice communication service with limited data applications that facilitates activities of individual licensees and their family members, including but not limited to, voluntary provision of assistance to the public during emergencies and national disasters.

3. Midland's Waiver Request. Midland manufactures and sells personal communications devices, including GMRS radios, Citizens Band (CB) radios, and other two-way radios for use in areas where there is little to no cellular coverage. On July 16, 2021, Midland requested that the Commission waive certain sections of its Part 95 rules to extend data privileges currently limited to handheld GMRS

1 47 CFR Part 95, subpart E.

2 Midland Radio Corporation Petition for Waiver, WT Docket No. 21-388 (filed July 16, 2021), https://www.fcc.gov/ecfs/file/download/Midland%20-%20Petition%20for%20Waiver%20of%20Integrated%20Antenna%20Rule.pdf?folder=1071680655068 (Waiver Request); id. at 4-6.

3 47 CFR Part 95; Review of the Commission's Part 95 Radio Services Rules, Report and Order, 32 FCC Rcd 4292, 4294-95, paras. 4-5 (2017) (2017 Report and Order). The Personal Radio Services consist of eleven different services. Id. at 4294, para. 4. While Part 95 originally applied mainly to mobile voice communication for individuals and radio control devices used by hobbyists for control of model devices, the scope has expanded over time to include, for example, devices used to locate lost persons, retrieve data from implanted medical devices, and increase highway safety. Id. at 4293, para. 3.

4 2017 Report and Order, 32 FCC Rcd at 4294-95, paras. 4-5.

devices to non-handheld mobile units.⁵ On November 12, 2021, Midland submitted an Amendment to its Waiver Request.⁶

4. Specifically, Midland requests waivers of:
- Section 95.1731(d), to allow digital transmission from *non-handheld* radios.⁷ Midland asserts that this is necessary because the off-road radios would be vehicle-mounted units, which would increase the power for such data uses from 5 watts to 50 watts.⁸
 - Section 95.1787(a)(3), to allow the automatic transmission of digital data *more than once* within a thirty-second period.⁹ Midland argues that allowing the more frequent transmission of GPS data will ensure users' safety because the users will be continuously monitored by other users.¹⁰
 - Section 95.1787(a)(4),¹¹ to allow the antennas to be a *non-integrated* part of the GMRS unit. Midland plans to provide greater range through the use of a separate antenna that utilizes higher gains and ensures a constant source of power since it is drawing from the vehicle's power supply.¹²
 - Section 95.1767(a), to allow the devices sending digital data to operate at 50 watts instead of the current 5 watt limit.¹³ In its Waiver Amendment, Midland argues that operating at higher powers will better serve the safety needs of and real-life use by off-road users.¹⁴ Midland also states that GMRS device users will be better served by data transmissions, as opposed to voice messages, because data transmission are more reliable and more accurate.¹⁵ Further, it claims that allowing

⁵ Midland states that it intends to transmit digital data only on the 462 MHz main and interstitial frequencies, and will not transmit on the 467 MHz frequencies. Waiver Request at 3-4; Amendment to Petition for Waiver and Comments of Midland Radio Corporation, WT Docket No. 21-388, at 7 (filed Nov. 12, 2021), <https://www.fcc.gov/ecfs/document/1112223494752/1> (Waiver Amendment).

⁶ Waiver Amendment.

⁷ 47 CFR § 95.1731(d) (“GMRS hand-held portable units may transmit digital data containing location information, or requesting location information from one or more other GMRS or FRS units, or containing a brief text message to another specific GMRS or FRS unit”); Waiver Request at 4.

⁸ Waiver Request at 4.

⁹ 47 CFR § 95.1787(a)(3) (“Digital data transmissions must not be sent more frequently than one digital data transmission within a thirty-second period, except that a GMRS unit may automatically respond to more than one interrogation request received within a thirty-second period”); Waiver Request at 5.

¹⁰ Waiver Request at 5; Waiver Amendment at 3-4.

¹¹ 47 CFR § 95.1787(a)(4) (“The antenna must be a non-removable integral part of the GMRS unit”); Waiver Request at 5.

¹² Waiver Request at 2.

¹³ 47 CFR § 95.1767(a) (“The limits in this paragraph apply to stations transmitting on any of the 462 MHz main channels or any of the 467 MHz main channels. Each GMRS transmitter type must be capable of operating within the allowable power range. GMRS licensees are responsible for ensuring that their GMRS stations operate in compliance with these limits.”); *id.* § 95.1767(a)(1) (“The transmitter output power of mobile, repeater and base stations must not exceed 50 Watts.”).

¹⁴ Waiver Amendment at 4-5.

¹⁵ Waiver Request at 2.

a 50 watt power limit would enable a data transmission range of roughly 5-6 miles, as opposed to .5-1 miles for 5 watts, which would better serve the needs of users.¹⁶

5. Midland contends that waiver of these rules would enable off-road/off-grid enthusiasts to communicate by voice and to transmit text messages and GPS location information through digital transmissions on GMRS frequencies. Midland has stated that it intends to develop a smart device application for off-road enthusiasts that connects via Bluetooth to a GMRS mobile radio to allow voice/text communications and the transmission of GPS data, enabling groups to track the location of individual members during offroad travels.¹⁷ Midland states that GPS transmissions will only be transmitted once a “Group” of two or more persons is created, riders are linked, and a “Trip” has been initiated in the application.¹⁸ Once the Trip has begun, riders will have a visual display that monitors the exact GPS location of all group members.¹⁹ The Trip will automatically cease after: (1) a Trip is completed; (2) the riders are unlinked; (3) a Group is disbanded; or (4) twelve hours—whichever comes first.²⁰

6. Midland argues that a waiver is necessary to protect and ensure safety of life of those who travel in remote off-road areas, or who travel in areas that have poor cellular coverage, by enabling continuous communication.²¹ Midland further explains that it intends to implement certain protective features to minimize interference with other GMRS users if its limited Waiver Request is granted, including (1) programming the radios with a “busy channel lockout” that will disallow GPS data from transmitting while the channel is being used, and (2) only allowing the transmission of data when two or more users are actively grouped together in the application.²²

7. On October 12, 2021, the Bureau sought comment on Midland’s Waiver Request.²³ Eleven parties—a mix of off-road enthusiasts and GMRS licensees—submitted comments in support of Midland’s Waiver Request; no party opposed the Waiver Request or raised concerns.²⁴ As noted above, on November 12, 2021, Midland submitted an Amendment to its Waiver Request and also responded to the questions posed by the Commission in the Public Notice.²⁵

¹⁶ Waiver Amendment at 6.

¹⁷ Waiver Request at 3-4, 8.

¹⁸ Waiver Request at 3-4, 8.

¹⁹ Waiver Request at 3-4, 8; Letter from Tony S. Lee, Counsel for Midland Radio Corporation, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 21-388, at 4, 8 (filed Mar. 25, 2022) (Midland March 25th *Ex Parte*).

²⁰ Waiver Request at 3-4, 8.

²¹ Waiver Request at 5.

²² Waiver Request at 7-9.

²³ See *Wireless Telecommunications Bureau Seeks Comment on Request by Midland Radio Corporation for Waiver of Certain General Mobile Radio Service Rules*, WT Docket No. 21-388, Public Notice, DA 21-1269 (Oct. 12, 2021) (Public Notice).

²⁴ Comments of James Edwin Whedbee (filed Oct. 18, 2021); Comments of Larry Jones (filed Oct. 21, 2021); Comments of William Deans Shirley (filed Oct. 26, 2021); Comments of Steve Hayes (filed Oct. 26, 2021); Comments of Matt Oesterlei (filed Oct. 26, 2021); Comments of Chris Holloway (filed Oct. 26, 2021); Comments of Josh Carter (filed Oct. 29, 2021); Comments of Jason Specht (filed Nov. 1, 2021); Comments of Cullen Powers (filed Nov. 1, 2021); Comments of Josh Roelle (filed Nov. 3, 2021); Comments of Sean P. Holman (filed Nov. 11, 2021). On March 28, 2023, Garmin International, Inc. (Garmin), expressed support for Midland’s Waiver Request. See Letter from M. Anne Swanson, Counsel for Garmin International, Inc., Marlene H. Dortch, Secretary, FCC, WT Docket No. 21-388 (filed Mar. 28, 2023) (Garmin *Ex Parte*).

²⁵ Waiver Amendment; Midland March 25th *Ex Parte*; see also Public Notice at 2. In its Amendment, Midland removed its waiver request of section 95.1787(a)(1) to allow the automatic transmission of digital data because of

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III. DISCUSSION

8. *Waiver Standard.* Waiver of a rule is appropriate where either (1) the “[t]he underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest,” or (2) “[i]n 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.”²⁶ An applicant seeking a waiver faces a high hurdle, and must plead with particularity the facts and circumstances that warrant a waiver.²⁷

9. The Division grants Midland’s Waiver Request subject to the conditions described below. We find that Midland has shown that a waiver is warranted because, based on the unique circumstances, application of several GMRS provisions to this particular software application would not serve the public interest. By granting a waiver, we allow increased functionality and safety for the off-road community, in support of the public interest. We agree with Midland that grant of its waiver request would serve the public interest by ensuring that critical communications and location information are available in dangerous remote locations where traditional communications infrastructure is lacking. We also find that, due to the conditions we adopt below, the underlying purpose of the rules will not be frustrated by grant of Midland’s Waiver Request. Rather, to mitigate the possibility that Midland’s application may cause congestion in the band or unnecessary audio interference to other GMRS users, we adopt several conditions, based in part on Midland’s proposed protective features.²⁸

10. *Waiver of Handheld Radios and Integrated Antennas.* Midland seeks waiver of section 95.1731(d) to allow digital transmissions from non-handheld radios, and section 95.1787(a)(4) to allow the antennas to be a non-integrated part of the GMRS unit.²⁹ Midland states that off-road GMRS users typically use CB-style vehicle mounted GMRS radios, rather than hand-held units, because the vehicle mounted radios are more reliable, provide greater range, and have a constant source of power since the radios draw on a vehicle’s power supply.³⁰ We agree with Midland that off-road GMRS users need to be able to reliably transmit data between mobile radios to keep track of individuals in their group, and we waive sections 95.1731(d) and 95.1787(a)(4), subject to the conditions below. We find that allowing the transmission of digital data from non-handheld and non-integrated antennas will help users communicate and locate one another regardless of their off-road location, which furthers the public interest given the inherent dangers associated with off-road activities.³¹ Waiver of these sections is conditioned upon

the Commission’s recently released *GMRS Order*, which adopted rules to allow for automatic data transmissions in the GMRS service. See *Review of the Commission’s Part 95 Personal Radio Services Rules, Petition for Rulemaking of Garmin International, Inc., Petition for Rulemaking of Omnitronics, L.L.C.*, WT Docket No. 10-119, Memorandum Opinion and Order on Reconsideration, 36 FCC Rcd 12824, 12829, paras. 11-12 (2021) (*GMRS Order*). The rules adopted in the *GMRS Order* became effective on October 28, 2021. See *Review of the Commission’s Personal Radio Services Rules*, 86 Fed. Reg. 53563-01 (Sept. 21, 2021).

²⁶ 47 CFR § 1.925(b)(3).

²⁷ *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969) (citing *Rio Grande Family Radio Fellowship, Inc. v. FCC*, 406 F.2d 664 (D.C. Cir. 1968)); *Birach Broadcasting Corp.*, Memorandum Opinion and Order, 18 FCC Rcd 1414, 1415, para. 6 (2003).

²⁸ Waiver Request at 7-10; Waiver Amendment at 7-8.

²⁹ Waiver Request at 4, 6.

³⁰ Waiver Request at 2 (stating that the hand-held units use small portable batteries that degrade over time and adversely affect signal strength).

³¹ Waiver Request at 2. While we declined, in the *2017 Report and Order*, to allow detachable antennas for GMRS devices based on a concern that it could cause harmful interference on the 467 MHz interstitial frequencies, we find that this concern does not apply here because Midland will only be transmitting on the 462 MHz main and

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Midland meeting various requirements discussed below, which will aid in avoiding band congestion and mitigate possible audio interference to adjacent users.³²

11. *Waiver of Duty Cycle.* Midland also requests a waiver of section 95.1787(a)(3) to allow the automatic transmission of digital data more than once within a 30-second period, arguing that allowing transmissions every 5 to 10 seconds will ensure that GMRS users have the ability to better guard against serious or catastrophic accidents in remote areas.³³ Midland states that the more frequent data transmission would provide a vital lifeline enabling a more rapid coordination and provision of aid in certain situations, such as in areas with little-to-no cellular signal coverage where it could be difficult for emergency personnel to quickly be contacted and dispatched to the emergency location.³⁴ We find a waiver of section 95.1787(a)(3) is warranted in the instant case, because it is in the public interest to allow close to real time tracking in the unique circumstances surrounding the use of off-road GMRS units and the additional public safety features afforded by more frequent data transmissions.³⁵ We agree with Midland that the safety of radio users in remote, outdoor locations will be increased by having more frequent location information available, especially in an emergency situation where time is of the essence.³⁶ We believe that the conditions described below will aid in ensuring that the digital data transmissions do not unduly congest the band or cause audio interference to the detriment of other GMRS users, and we thus grant Midland's request for waiver of section 95.1787(a)(3), so long as Midland complies with these conditions.

12. *Waiver of Power Limit.* Midland further asserts that waiver of section 95.1767(a) to allow devices sending digital data to operate at 50 watts instead of the 5 watt limit will better serve the safety needs and real-life uses of off-road users.³⁷ We agree with Midland that increasing the power limit will better serve the public interest, especially in emergency situations, because doing so will increase the range of the devices from about 0.5-1 miles to 5-6 miles, improving the area in which users can find others in the group in a potential life threatening situation.³⁸ The conditions we adopt below aid in minimizing potential undue congestion or audio interference to other GMRS users that could be caused by these higher powered, more frequent data transmissions. Because waiver of section 95.1767(a) for the 462 MHz main channels in this instance will further the public interest by allowing more reliable and accurate communication amongst off-road users and with emergency first-responders, and the conditions below will protect other GMRS users from band congestion and audio interference, we grant waiver of this rule.

interstitial frequencies. *2017 Report and Order*, 32 FCC Rcd at 4307, para. 38; *see also* Waiver Request at 7; Waiver Amendment at 2.

³² Waiver Request at 7-10; Waiver Amendment at 7-8.

³³ Waiver Request at 5, n.8. Midland states that it will transmit 50 ms of data approximately once every 5-10 seconds, which equates to a maximum duty cycle of 300-600 ms per minute. *See id.* at 5; Waiver Amendment at 4. In its *ex parte*, Garmin expressed support for Midland's request for waiver of section 95.1787(a)(3) noting that "[s]uch short digital transmissions will not create excessive congestion or cause harmful interference to other GMRS or FRS operations." Garmin *Ex Parte* at 1-2.

³⁴ Waiver Request at 6-7.

³⁵ *Id.*

³⁶ *See GMRS Order*, 36 FCC Rcd at 12828, paras. 10-11 (stating that allowing more frequent data transmissions could enhance search and rescue operations). We note that while we previously declined to depart from the duty cycle limitations when we issued the *GMRS Order*, we find that, based on the unique circumstances here, the public interest is better served by the more frequent data transmissions. *Id.* at 12828-29, para. 12.

³⁷ Waiver Amendment at 4-7.

³⁸ *Id.* at 6 (stating "range estimates are based on worst-case scenarios involving high foliage, rough terrain areas where tree coverage and landscape morphology would more adversely affect signal propagation").

IV. CONCLUSION

13. Taking into account the unique circumstances surrounding radio use by off-road GMRS users, discussed in detail above, we find that the grant of Midland's Waiver Request, subject to the conditions below, is in the public interest. Waiver will enable Midland to manufacture and market a beneficial GMRS device that will enhance the public safety of off-road GMRS users, particularly in remote and hard-to-reach areas.

14. *Conditions.* This waiver grant is conditioned on the following, which largely reflect elements that Midland agreed to in the record:³⁹

- 1) Transmitters operating under this waiver must not be capable of modification by end users to adjust the frequencies of operation.
- 2) Operation under this waiver is restricted to the 462 MHz main and interstitial channels.
- 3) Operation at up to 50 watts is restricted to the 462 MHz main channels (not including the interstitial channels).
- 4) Digital data transmissions may not be sent more than once every 10 seconds, and each transmission must be no more than 50 ms in duration.
- 5) Digital data transmissions may only be made when two or more users are actively linked together through a smartphone application.
- 6) Digital data transmission may only occur when the channel is clear. Midland must:
 - A. Ensure that its radios are able to detect when a channel is being used, and must not transmit data while the channel is being used; and
 - B. Provide the Bureau, in advance of equipment authorization, with a description of how Midland will ensure that it only transmits data when the channel is not being used.
- 7) While Midland must comply with the duty cycle as required by section 95.1787(a)(3) of the Commission's rules, it may transmit up to 50 ms of data every 10 seconds where it can confirm at the beginning of each session of use that the transmitter is in a rural area as evidenced by the following method, or via an alternate method deemed equivalent by the Bureau:
 - A. The transmitting unit must use real time GPS data to confirm that the device is in a rural county or census tract i.e., with a population density of 100 or fewer persons per square mile.
- 8) Midland must file a Petition for Rulemaking within 60 days from release of this Order seeking rule changes that would permit more flexible use of the band. The rulemaking petition should, at a minimum, request any and all rule changes that may be necessary for Midland's services to be provided over this spectrum.

V. ORDERING CLAUSES

15. Accordingly, IT IS ORDERED that pursuant to section 4(i) of the Communications Act, as amended, 47 U.S.C. § 154(i), and section 1.925 of the Commission's Rules, 47 CFR § 1.925, the

³⁹ Waiver Request at 9-10; Waiver Amendment at 7-8.; *see also* Garmin *Ex Parte* at 2 (supporting Midland's proposed conditions); Letter from Tony S. Lee, Counsel for Midland Radio Corporation, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 21-388 (filed July 18, 2023) (Midland July 18th *Ex Parte*).

Midland Radio Corporation Request for Waiver of sections 95.1731(d), 95.1787(a)(3)-(4), and 95.1767(a), is GRANTED, subject to the conditions described herein.

16. These actions are taken under delegated authority pursuant to sections 0.131 and 0.331 of the Commission's Rules, 47 CFR §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

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