

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of)	
)	
Amendments of Parts 1, 2, 15, 90, and 95 of the Commission’s Rules to Permit Radar Services in the 76-81 GHz Band)	ET Docket No. 15-26
)	
Amendment of Part 15 of the Commission’s Rules to Permit the Operation of Vehicular Radar Services in the 77-78 GHz Band)	RM-11666
)	
Amendment of Sections 15.35 and 15.253 of the Commission’s Rules Regarding Operation of Radar Systems in the 76-77 GHz Band)	ET Docket No. 11-90 RM-11555
)	
Amendment of Section 15.253 of the Commission’s Rules to Permit Fixed Use of Radar in the 76-77 GHz Band)	ET Docket No. 10-28
)	
Amendment of the Commission’s Rules to Permit Radiolocation Operations in the 78-81 GHz Band)	WT Docket No. 11-202
)	

**COMMENTS OF
THE ALLIANCE OF AUTOMOBILE MANUFACTURERS, INC.**

The Alliance of Automobile Manufacturers, Inc. (the “Alliance”)¹ submits these comments in response to the Notice of Proposed Rulemaking (“NPRM”) in the above-captioned dockets.² In that NPRM, the Federal Communications Commission (“FCC” or “Commission”)

¹ The Alliance is an association of twelve of the world’s leading car and light truck manufacturers, including BMW Group, FCA US, Ford Motor Company, General Motors Company, Jaguar, Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of America, and Volvo Cars. *See* Alliance of Automobile Manufacturers, Members, <http://www.autoalliance.org/about-the-alliance/overview>.

² *Amendment of Parts 1, 2, 15, 90 and 95 of the Commission’s Rules to Permit Radar Service in the 76-81 GHz Band et al.*, Notice of Proposed Rulemaking and Reconsideration Order, FCC 15-16 (rel. Feb. 5, 2015) (“NPRM”).

seeks comment on proposed rules that would allow for the deployment of various radar applications in the 76-81 GHz band.³

If adopted, the Commission's proposal to allow vehicular radar operations throughout the 76-81 GHz band will promote the growth and evolution of important vehicle safety technologies that directly benefit the public. Furthermore, it is entirely appropriate to authorize vehicular radar services under Part 95 of the Commission's rules. The Part 95 license-by-rule regime will provide a level of interference protection to these innovative safety technologies while avoiding overly burdensome individual licensing requirements.

However, the Commission should be careful not to allow services in the 76-81 GHz band that could cause harmful interference to vehicular radar services. For example, fixed infrastructure radar poses a significant threat to vehicular radar and should not be allowed to operate in the 76-81 GHz band, even at bandwidths of only one gigahertz.

Additionally, the Commission should continue to certify vehicular radar equipment to operate in the 24 GHz band and not impose a sunset date applicable to such equipment certifications.

I. The Alliance Supports the FCC's Proposals to Allow Vehicular Radars in the 76-81 GHz Band and to License Them By Rule Under Part 95.

Allowing vehicular radar throughout the 76-81 GHz band will benefit the public by promoting the development and deployment of innovative safety applications using short-range radar ("SRR"), such as autonomous braking, pedestrian protection, collision warning, lane departure warnings, and blind spot detection. As the Commission correctly noted in the NPRM,

³ See, e.g., *id.* at 1.

these technologies “offer new and tangible ways to enhance the safety of the Nation’s drivers, and to meet important automotive safety objectives.”⁴

Spectrum in the 76-81 GHz band is well suited for vehicular radar, given the very short range of SRR signals. The limited range of such signals enables a higher concentration of transmitters than is possible at lower frequencies and generally mitigates the risk of harmful interference.⁵ Furthermore, the Commission has noted that other services currently operating in the 76-81 GHz band will be generally compatible with vehicular radar technologies.⁶

If adopted, the Commission’s proposal to authorize vehicular radar under its Part 95 license-by-rule regime will promote the deployment and reliable operation of these life-saving technologies by providing interference protection without the burdens of individual licensing.⁷ Under the Commission’s Part 95 rules, primary users are protected from interference from, and are permitted to cause interference to, secondary users. Such a framework is appropriate here, where the technologies involved have the potential to, and in fact do, prevent injuries and save lives.

II. The FCC Should Not Allow Fixed Infrastructure Radar in the 76-81 GHz Band at This Time.

Fixed infrastructure radar may cause harmful interference to vehicular radar and should not be allowed to operate in the 76-81 GHz band at this time. The Commission’s proposal to allow fixed infrastructure radar to operate in a one gigahertz band in the 76-81 GHz band at 76-

⁴ *Id.* at ¶ 26.

⁵ *Id.* at ¶ 31.

⁶ *Id.* at ¶¶ 33-34.

⁷ *Id.* at ¶¶ 67-70.

77 GHz⁸ would increase the risk of interference to vehicular radar and potentially threaten the safety of those who rely on vehicular radar in the same band.

The risk of interference between these two technologies is not new, and the Alliance has voiced concerns to the Commission about it before.⁹ The record is replete with submissions documenting the fact that fixed infrastructure radar can interfere with vehicular radar in a way that would create serious safety concerns for motorists.¹⁰ Furthermore, the More Safety for All by Radar Interference Mitigation (“MOSARIM”) study suggests that vehicular radars and fixed infrastructure radars are, in fact, not compatible.¹¹

At the very least, the Commission should postpone allowing fixed infrastructure radar systems to operate in the 76-81 GHz band until further testing is complete. Because the MOSARIM study focused primarily on other types of interference, the European Conference of Postal and Telecommunications Administrations (“CEPT”) is engaging in additional testing designed to squarely examine fixed infrastructure radar to vehicular radar interference.¹² That testing should already be underway, and its results are expected later this year.¹³ It would be premature to allow fixed infrastructure radars to operate within the 76-81 GHz band before the

⁸ *Id.* at ¶ 55.

⁹ *See, e.g.*, Alliance of Automobile Manufacturers, Inc., Opposition, ET Docket Nos. 11-90 and 10-28, RM-11555 (filed Dec. 3, 2012) (“Alliance Opposition”); *Amendment of Sections 15.35 and 15.253 of the Commission’s Rules Regarding Operation of Radar Systems in the 76-77 GHz Band, et al.*, Report & Order, 27 FCC Rcd 7880, ¶ 21-22 (2012).

¹⁰ *See, e.g.*, Alliance Opposition; Comments of Toyota, ET Docket Nos. 11-90 and 10-68, RM-11555, at 6-9 (filed July 18, 2011).

¹¹ *See* The MOSARIM Consortium, *Results of Interference Tests Between Automotive Radar Systems and Navtech Traffic Monitoring System*, at 11 (Nov. 30, 2012), available at <https://assrv1.hawaw.de/index.php/dataexchange/func-startdown/1319>.

¹² *See* CEPT Electronic Communications Committee, SRDMG#61 Results (Apr. 7, 2014, 4:24 p.m.), <http://www.cept.org/ecc/groups/ecc/wg-fm/srdmg/page/srdmg61-results-2-4-april-2014> (confirming that the studies under SE24 W151 will “only be performed on fixed transport infrastructure radars operating in 76-77 GHz with regard to the co-existence with vehicular radars”).

¹³ *See, e.g.*, SE24, Outcome of the 80th Meeting of SE24 (Dec. 10, 2014, 5:00 p.m.), <http://www.cept.org/ecc/groups/ecc/wg-se/se-24/page/outcome-of-the-80th-meeting-of-se24>.

results of this further testing are made available and reviewed, especially considering the safety risks posed to motorists in the event there is harmful interference.

III. The FCC Should Clarify That Its Equipment Certification Sunset Proposals Do Not Apply to Vehicular Radar Equipment Certified Under Sections 15.245 and 15.249 of its Rules.

The Commission proposes to phase out new vehicular equipment certifications outside the 76-81 GHz band by modifying sections 15.37, 15.252, 15.253, and 15.515 of its rules.¹⁴

However, these are only some of the Commission's rules that govern vehicular radar equipment certifications. New narrowband vehicular radar equipment that operates outside the 76-81 GHz band is also routinely certified under Sections 15.245 and 15.249. Presumably, the Commission's proposal will not affect narrowband vehicular radar equipment certifications under Sections 15.245 and 15.249. However, we request that the Commission provide clarification on this point.

IV. The FCC Should Not Adopt a Sunset Date for New 24 GHz Vehicular Radar Equipment Certifications.

The Commission's proposal to prohibit certification of new vehicular radar systems that do not operate in the 76-81 GHz band, whatever its scope, would deprive automobile manufacturers of much-needed flexibility going forward while serving no recognizable purpose.¹⁵ Wideband and ultra-wideband vehicular radar systems use the 22-29 GHz band (or "24 GHz Band"), and it is unclear why the Commission desires to clear that spectrum of that unlicensed, low-powered vehicular radar, or what services the Commission believes are currently being prohibited due to the existing vehicular radar operations. Further, the Commission's proposal to prohibit future vehicular radar equipment certifications in the 24 GHz Band would

¹⁴ See NPRM at Appendix B.

¹⁵ See NPRM at ¶¶ 43-44.

unnecessarily harm those stakeholders that have already invested time and capital into developing and deploying wideband and ultra-wideband 24 GHz vehicular radar systems.

The Commission should, therefore, allow stakeholders to certify vehicular radar equipment in the soon-to-be authorized 76-81 GHz Band and the currently available 24 GHz Band. This type of flexibility would facilitate the development and deployment of new vehicular radar technologies by promoting competition among suppliers and providing the option of multiple spectrum bands and technical rules. Conversely, the Commission's proposal could potentially stifle innovation while allowing a good portion of the 24 GHz band to lay fallow.

V. Conclusion

The Alliance urges the Commission to adopt rules in the above-referenced proceedings consistent with its comments set forth above.

Respectfully submitted,

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