

**Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
American Drone Dominance	)	GN Docket No. 26-74
	)	WT Docket No. 22-323
	)	WT Docket No. 24-629
	)	
Amendment of Parts 2, 15, 80, 90, 87, and 101	)	ET Docket No. 15-99
of the Commission's Rules Regarding	)	
Implementation of the Final Acts of the World	)	
Radiocommunication Conference (Geneva,	)	
2012) (WRC-12)	)	

**COMMENTS OF THE AEROSPACE AND FLIGHT TEST  
RADIO COORDINATING COUNCIL, INC.**

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## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION AND SUMMARY .....	1
BACKGROUND .....	2
DISCUSSION .....	5
1. Ways to Improve the Coordination Process for UAS Experimental Licenses .....	5
2. Spectrum Needs of UAS .....	7
CONCLUSION .....	12

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**COMMENTS OF THE AEROSPACE AND FLIGHT TEST  
RADIO COORDINATING COUNCIL, INC.**

Aerospace and Flight Test Radio Coordinating Council, Inc. (“AFTRCC”) hereby submits its comments on the Commission’s Public Notice<sup>1</sup> seeking comment on a broad range of matters regarding how the United States might bolster its supremacy in the technology, manufacturing, and operations of uncrewed aircraft systems (“UAS”).

**INTRODUCTION AND SUMMARY**

AFTRCC, an organization whose members are leading American aerospace manufacturers and many who are the forefront of cutting-edge UAS, applauds the Commission’s recognition that “[t]he production, deployment, and export of *American* unmanned aircraft systems (UAS or drones) and anti-drone defense systems (Counter-UAS) have become core elements of our economic and military superiority.” (Public Notice at 1.)

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<sup>1</sup> Public Notice, *FCC Seeks Comment on Unleashing American Drone Dominance*, DA 26-314, GN Docket No. 26-74, WT Docket No. 22-323, WT Docket No. 24-629 (rel. Apr. 1, 2026) (“Public Notice”).

AFTRCC focuses its comments on the matter of spectrum use to support American leadership in the emerging world of UAS, mindful both of the growing demand for spectrum access to meet a variety of UAS radiocommunications needs and the important incumbent uses of spectrum for other aviation and aerospace needs, including aeronautical mobile telemetry (“AMT”) in support of flight testing, including for UAS. Consequently, any rules adopted to facilitate UAS spectrum access should account for and continue to protect non-Federal flight test operations occurring in existing allocations (which are shared co-equally with Federal flight test operations) used for AMT, as well as a small range of VHF utilized for air-ground communications during test flights, to advance both commercial and military applications.

## **BACKGROUND**

AFTRCC is an association of the nation’s principal aerospace manufacturers. *See* Attachment for current members. AFTRCC was founded in 1954 to serve as an advocate for the aerospace industry on matters affecting spectrum policy.

AFTRCC also is a coordinator for non-Federal AMT flight test operators in several bands, and its coordination framework has supported flight testing by a number of leading American developers and manufacturers of military and commercial UAS systems. AFTRCC serves as the recognized non-Federal Government coordinator for shared Government/Non-Government spectrum allocated to the aeronautical mobile (route) service (“AM(R)S”) to support flight testing throughout 1435-1525 MHz and 2360-2395 MHz, long the two workhorse bands for AMT operations.<sup>2</sup> AFTRCC works closely with Government Area Frequency Coordinators (“AFCs”), who are responsible for Department of War (“DoW”) use of Federal

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<sup>2</sup> 47 C.F.R. §§ 27.73(a) and 74.803(d).

AMT spectrum, a collaboration which helps ensure that interference-free Federal and non-Federal flight test operations are protected and flight safety is maximized.<sup>3</sup>

AFTRCC also coordinates AMT use in the 5091-5150 MHz band, which is allocated to AM(R)S for support of AMT, in collaboration with the Federal Aviation Administration (“FAA”) and Federal government flight test operators and AFCs. Further, AFTRCC member companies conduct flight test operations, including for several significant UAS programs (e.g., UAS high altitude platforms and passenger aircraft) on a Part 5 experimental basis in the 4400-4940 MHz band to meet government contract requirements and also to advance their own, separate commercial aircraft programs. The Federal 4400-4940 MHz band is used significantly for AMT to support flight testing by DoW and other Federal test ranges, among a variety of other Federal uses. The Commission has a pending rulemaking in ET Docket No. 15-99 considering making a co-primary allocation to this band for non-Federal AMT operations.<sup>4</sup> AFTRCC urges the Commission to complete this rulemaking proceeding to effectuate the proposed allocation which will further advance the United States’ path to “drone dominance.”

Finally, AFTRCC coordinates frequencies in the VHF Band (123.1125-123.5875 MHz). These VHF channels are specifically used by non-Federal flight test operators and several Federal users for critical communications with pilots and other personnel in connection with flight testing.<sup>5</sup>

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<sup>3</sup> More information regarding AFTRCC may be found at <https://afrcc.org>.

<sup>4</sup> *See Amendment of Parts 2, 15, 80, 90, 87, and 101 of the Commission’s Rules Regarding Implementation of the Final Acts of the World Radiocommunication Conference (Geneva, 2012) (WRC-12), Other Allocation Issues, and Related Rule Updates*, Report and Order, 32 FCC Rcd 2703 (2017) (explaining the Commission’s intent to address the 4400 MHz band proposal for an AMT allocation in a subsequent order in the proceeding).

<sup>5</sup> AFTRCC also coordinates flight test radio communications in the HF Band (2851.0-21931.0 kHz).

AFTRCC is also the Commission-designated coordinator for secondary medical body area network use of the AMT spectrum at 2360-2390 MHz (in conjunction with the Enterprise Wireless Alliance),<sup>6</sup> and is responsible for coordination with the Wireless Communications Services (“WCS”) licensee – AT&T – in the subjacent, 2345-2360 MHz band.<sup>7</sup> AFTRCC has also been designated by the Commission to coordinate secondary wireless microphone use of the 1435-1525 MHz AMT band<sup>8</sup> and, for many years, has coordinated requests by broadcasters and broadcast engineering companies for site-specific Part 5 experimental special temporary authorizations, in addition to other Part 5 experimental license applications in the 1435-1525 MHz and 2360-2395 MHz bands, such as for increasing commercial space launch operations.

Test flight operations supported by AMT are in the critical path for the continuing success of the United States military defense and the civil aviation industry, including for new generations of UAS that this Administration wishes to advance and which are the focus of the Public Notice. Flight tests push aeronautical vehicles to their design limits, thus making safety of flight during both flight tests and regular operations dependent on the reliability of information received on a real-time basis without harmful interference. Modern aircraft and

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<sup>6</sup> *In the Matter of Amendment of the Commission's Rules to Provide Spectrum for the Operation of Medical Body Area Networks*, First Report and Order, 27 FCC Rcd 6422 at para. 74 (2012). AFTRCC also currently coordinates space launch operations with AMT operations for the frequencies 2364.5 MHz, 2370.5 MHz, and 2382.5 MHz when any of these three frequencies are used for commercial space launches.

<sup>7</sup> 47 C.F.R. § 27.73(a) (“The coordinator for the assignment of flight test frequencies in the 2360-2390 MHz band, Aerospace and Flight Test Radio Coordination [sic] Council (AFTRCC), will facilitate a mutually satisfactory coordination agreement between the WCS licensee(s) and AMT entity(ies) for existing AMT receiver sites.”). *See also Amendment of Part 27 of the Commission's Rules to Govern the Operation of Wireless Communications Services in the 2.3 GHz Band, Establishment of Rules and Policies for the Digital Audio Satellite Service in the 2310-2360 MHz Frequency Band*, Report and Order and Second Report and Order, 25 FCC Rcd 11710, 11785 (2010).

<sup>8</sup> 47 C.F.R. § 74.803(d)(2).

missiles are designed to operate closer to the point of maximum efficiency, and testing requires that more information be collected at higher data speeds and more extensive testing.

Certification of next generation commercial aircraft requires data rates up to the 100 to 200 Mbps range. Successful real-time receipt and near instantaneous analysis of key telemetry data is essential, especially in cases where an ongoing test needs to be aborted promptly for safety or operational reasons or modified to include additional maneuvers.

AMT systems can be highly susceptible to interference without adequate mitigation measures in place. During flight tests, telemetry often originates from distant aircraft as much as 200 miles away from the flight test center's AMT receive facilities, resulting in weak signals subject to severe fluctuations during maneuvers requiring very high-gain directional antennas, which also renders them vulnerable to interference. The safety-of-life implications of the uninterrupted availability of real-time flight test telemetry data cannot be overstated.

## **DISCUSSION**

### **1. Ways to Improve the Coordination Process for UAS Experimental Licenses**

The Public Notice states that the Commission's experimental licensing framework "was not designed with the scale, pace, and complexity of modern UAS in mind." (Public Notice at 5.) While that may be true as a technical matter, AFTRCC has been adapting its coordination practices and procedures to process the increasing number of Part 5 coordination requests in the bands for which it is responsible, including numerous requests for UAS testing and development. In the bands used for AMT in support of flight testing, coordination of a variety of secondary uses and of adjacent band licensees is important to ensure that Part 87 licensed flight test operations remain protected as the primary users of the AMT bands. Cognizant that aerospace developers and manufacturers utilize Part 5 licenses to test their systems (including for other purposes), AFTRCC has been supportive of ways to modernize and streamline the experimental

licensing process. For example, in 2023, AFTRCC launched an electronic portal to receive experimental license coordination requests (among other types of coordination requests), and it is actively exploring with the Federal AFCs ways to make collaboration with them more efficient to streamline and otherwise improve the coordination request review and decision process.

The Public Notice asks whether the Commission should “consider establishing a dedicated UAS experimental license category with flexible terms tailored to drone developers, including longer durations, broader geographic coverage, or expedited renewals?” (Public Notice at 5.) AFTRCC will be tracking the comments in response to this part of the Public Notice and offer responsive comments should any aspects of the proposals raise issues pertaining to protecting AMT. With regard to experimental license coordination within the AMT bands, in many cases AFTRCC limits the period of time for which Part 5 uses are coordinated because of the dynamically changing needs of flight test operators at their respective AMT facilities, geography of the proposed experimental operations, and other factors. Hence, with regard to spectrum in or adjacent to the AMT bands, AFTRCC may have concerns about any blanket approach which would allow drone manufacturers longer-period experimental licenses for aeronautical, outdoor operation, rather than case-by-case consideration.

By the same token, AFTRCC would be open to working with the Commission, FAA, NTIA, and the AFCs to explore the potential for “pre-cleared test ranges or corridors . . . where licensees [might be able to] conduct UAS experiments with reduced paperwork and faster approvals” (Public Notice at 5) or “a blanket experimental authorization for qualified drone developers operating within specified frequency bands and safety parameters.” (Public Notice at 6.) AFTRCC is provisionally skeptical regarding the extent to which plug and play options mentioned in the Public Notice could be developed *in AMT bands* given the variable needs of

flight test operators in those frequencies, especially in geographic areas where flight test operations are conducted with greater intensity. (*See* Public Notice at 5.)

## **2. Spectrum Needs of UAS**

AFTRCC looks forward to reviewing the comments received on spectrum resources UAS proponents believe are necessary to advance American global leadership. As already noted, AMT spectrum resources today are used increasingly to support flight testing of UAS. AFTRCC reiterates its comment above that it would welcome efforts by the Commission to strengthen the access of American aerospace manufacturers to the Federal 4.4 GHz band by completing the pending rulemaking in Docket No. 15-99 and adopting the proposal to allocate 4400-4940 MHz for non-Federal flight testing which will advance, in addition to important crewed conventional aircraft programs, American UAS dominance. Making that allocation would also increase the intensity of use of that band, which is already utilized for Federal flight testing, among other Federal operations.<sup>9</sup>

Separately and as a general matter, AFTRCC submits that the Commission should not take actions to support UAS general communications spectrum needs that reduce, or place constraints on, any existing AMT allocations identified in the Background section above. As an initial matter, this would be counterproductive given that UAS manufacturers and developers already rely on access to that spectrum for flight testing of UAS. Thus, for example, the Commission should not establish any frameworks that create some type of permanent or increased access for Part 5 operations by drone manufacturers as this would negatively impact existing spectrum access for flight testing in already increasingly congested AMT bands.

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<sup>9</sup> *See* discussion on page 3, *supra*.

In addition, AFTRCC underscores that flight test operators have access to limited amounts of spectrum in order to carry out their critical operations at the same time that their own demand for spectrum is increasing. Flight test operators have had to make do with less spectrum, for example, in the 2300-2400 MHz range as the Commission has migrated scores of megahertz away from flight testing over the past three decades for other services, such as digital radio and Wireless Communications Services. Accordingly, it would be inappropriate and contrary to the public interest to implement any permanent constraints on the existing access that AFTRCC Members and other flight test operators have to spectrum to satisfy their AMT requirements. That said, AFTRCC recognizes that requests for coordination for Part 5 operations in the AMT bands certainly will continue to be made in support of experimental applications, and AFTRCC will continue its important role of processing those requests under its existing framework including requests by UAS operators while protecting primary AMT operations.

The Public Notice seeks comment about the potential for allowing UAS access to existing mobile service bands to support meeting the growing needs of UAS. (Public Notice at 6.) The Commission explains some of these bands prohibit airborne use (in the Table of Frequency Allocations or by rule) while others are silent on airborne operation.<sup>10</sup> Two flexible use bands that currently prohibit airborne operations are the 1432-1435 MHz band and the 2345-2360 MHz band, both available for Part 27 licensees. These bands, respectively, are next to the two safety-of-flight Federal/non-Federal AMT bands: 1435-1525 and 2360-2395 MHz. As AFTRCC explained previously in its comments regarding making the 5030-5091 MHz band available for UAS command and control communications, making either of these Part 27 bands

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<sup>10</sup> See Public Notice at 6 (“the Table of Frequency Allocations prohibits aeronautical mobile use for several other spectrum bands, including all or portions of the 1670-1675 MHz, 1.4 GHz, 2.3 GHz, and 3.7 GHz bands”).

available for UAS radiocommunications would create additional potential threats to AMT operations in the adjacent bands.<sup>11</sup>

AFTRCC submits that the Commission should not consider exacerbating the interference environment for flight test operators by allowing airborne communications in these adjacent bands without careful technical analysis and justification that compatibility with flight testing can be achieved. Even if found feasible, such operations should only be permitted if first coordinated with AFTRCC. While in some cases there are existing coordination agreements with adjacent-band licensees operating base station networks, those agreements did not contemplate dynamic UAS operations in the adjacent band.<sup>12</sup>

In addition, the Public Notice raises the issue of expanded access for UAS to 5030-5091 MHz which is adjacent to 5091-5150 MHz band used for AMT in support of flight testing. (Public Notice at 7.) Consistent with AFTRCC's comments in Docket 23-323, where the Commission has already made some of the central part of this band available for certain UAS operations, any rules governing increased access to the band, particularly uses near the band edge

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<sup>11</sup> See Comments of AFTRCC, WT Docket No. 22-323, at 14 (March 9, 2023) (“AFTRCC 2023 Comments”).

<sup>12</sup> For example, the AFTRCC coordination agreement with AT&T, the WCS licensee in 2345-2360 MHz, is predicated on site-based coordination of fixed WCS stations, taking into a variety of factors that remain static once a site is coordinated (including additional filters, power settings, antenna patterns and gain, azimuthal orientation, electrical and mechanical down tilt, and separation). Thus, the existing coordination framework with would not be suitable to coordinate dynamic UAS operations in which, by definition, these factors are subject to opportunistic change. Accordingly, the Commission should, if it otherwise finds it in the public interest to allow aeronautical operations in these two adjacent WCS bands, impose power and out-of-band emission limits consistent with Rec. ITU-R M.1459 to protect the safety-of-life AMT operations in the 1435-1525 and 2360-2395 MHz bands. Recommendation ITU-R M.1459, *Protection Criteria for Telemetry Systems in the Aeronautical Mobile Service and Mitigation Techniques to Facilitate Sharing with Geostationary Broadcasting-Satellite and Mobile-Satellite Services in the Frequency Bands 1452-1525 MHz and 2310-2360 MHz* (2000) (“ITU-R M.1459”).

of 5091 MHz must ensure compatibility with AMT operations occurring above that band edge, for example, through technical limits and/or a coordination requirement or ITU R M.1459 protection.<sup>13</sup> AFTRCC would be in favor of participating in a multi-stakeholder group collaborating in an attempt to develop such requirements by the interested parties.

Finally, the Public Notice asks whether the Commission should consider issuing licenses in the aeronautical VHF band (117.975-137 MHz) for communications by UAS pilots on the ground with Air Traffic Control. (Public Notice at 6.) AFTRCC continues to oppose this possibility for the limited range of VHF frequencies it coordinates, 123.1125-123.5875 MHz.<sup>14</sup> As AFTRCC noted in its Comments in Docket No. 23-323, only a limited number of VHF channels are available for use in connection with flight testing operations, namely 8.33 kHz channels in that frequency range.<sup>15</sup> AFTRCC coordinates these channels for the purpose of supporting non-Federal flight test operations under FCC Part 87 and certain other specialized aviation uses by Federal operators and space launch-related operations.<sup>16</sup> These VHF

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<sup>13</sup> AFTRCC 2023 Comments at 9-13. The Commission declined to adopt a coordination requirement in its Order adopting a limited opening of the 5030-5091 MHz band on the basis of the distance of the channels being made available from the band edge and deferred issues of protecting AMT should UAS use be permitted in the future near and up to the band edge. *See In the Matter of Spectrum Rules and Policies for the Operation of Unmanned Aircraft Systems*, Report and Order, 39 FCC Rcd 10005, 10071, n. 454 (2024).

<sup>14</sup> AFTRCC takes no position on the prospect of making any other VHF channels available for individual site-based licensing for UAS operator ground stations to air traffic control.

<sup>15</sup> *See* AFTRCC 2023 Comments at 16. *See also* 47 C.F.R. §§ 87.173(b), 87.303(a) & (b).

<sup>16</sup> AFTRCC also coordinates aeronautical VHF frequencies within the range above used by DoD for flight testing on DoD test ranges and by the National Interagency Fire Center (“NIFC”) to support aerial firefighting operations. AFTRCC, in discussions with NTIA, has identified two of the flight test VHF frequencies (123.1167 MHz and 123.5833 MHz) to support suborbital space launch/reentry, with of the goal of keeping the remaining VHF frequencies that AFTRCC coordinates earmarked for flight testing purposes as the 123.1125-123.5875 MHz range becomes increasingly congested. Due to the extensive area on the ground within line of sight of a space launch vehicle operating at altitudes exceeding 300,000 feet above mean sea level, space launch

frequencies are used extensively to support live continuous voice connections with flight test aircraft pilots and the ground support teams. For many flight test ranges, uses of this limited number of channels to support flight test operations can become congested. While the use of these channels without interference is important at all stages of flight tests, many of “high risk” AMT tests incorporate a “button” on the microphone of a VHF radio in the ground station to abort a maneuver in real time based on the AMT data being received. It is critical that these types of communications be received clearly the first time, so that pilots can respond immediately to ensure a safe termination of the maneuver, or the test as a whole, protecting both lives and property. Consequently, making the 123.1125-123.5875 MHz channels, or even a subset of them, available for permanent UAS ground-station communications licenses would put a strain on these important flight test needs.

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communications are received over a geographic area far exceeding the footprint of a traditional aircraft involved in a flight test, limiting reuse.

## CONCLUSION

AFTRCC appreciates this opportunity to provide initial comments on the Public Notice. Many AFTRCC members and other flight test operators have a vested interest in the expansion of the UAS sector, and AFTRCC looks forward to playing its part in ensuring spectrum needs are met for this sector as well as the intense more general needs for flight testing by the aviation and aerospace industries.

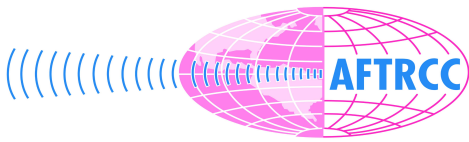
Respectfully submitted,

AEROSPACE AND FLIGHT TEST RADIO  
COORDINATING COUNCIL, INC.

A handwritten signature in black ink, appearing to read 'Jonathan Westerling', with a stylized flourish at the end.

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May 1, 2026



AEROSPACE & FLIGHT TEST RADIO COORDINATING COUNCIL, INC.®

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