

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

In the Matter of
Review of Part 87 of the Commission's Rules
Concerning the Aviation Radio Service
WT Docket No. 01-289

NOTICE OF PROPOSED RULE MAKING

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I. INTRODUCTION AND EXECUTIVE SUMMARY

1. In this *Notice of Proposed Rulemaking (Notice or NPRM)*, we propose to consolidate, revise, and streamline our Part 87 rules governing the Aviation Radio Service. The Aviation Radio Service is an internationally-allocated family of radio services designed to enhance and protect the safety of life and property in air navigation. These proposed rule changes are designed to ensure that these rules reflect recent technological advances, as well as ensuring that these rules are consistent with other Commission rules. We are also initiating this proceeding to eliminate regulations that are duplicative, outmoded, or otherwise unnecessary in the Aviation Radio Service.

2. As discussed in further detail below and set forth in the Appendix of this *NPRM*, we propose to:

- Update the technical specifications for Aeronautical Mobile Satellite (Route) Service (AMS(R)S) equipment.
- Amend our equipment certification procedures to:
 - ♦ permit the certification of dual spacing transceivers for aircraft also operating in countries which employ 8.33 kHz channel spacing;
 - ♦ allow the certification of radios that operate outside the civil aviation band for aircraft in the Civil Reserve Airfleet; and
 - ♦ streamline the certification process for equipment needing a Federal Aviation Administration (FAA) showing of compatibility with the National Airspace System.
- Authorize the use of the Differential Global Positioning System (DGPS) in the 108-118 and 1559-1610 MHz bands and license DGPS licensees on a non-developmental basis.
- Allow the use of temporary call signs for aircraft operation under the provisions of wet lease agreements.¹

3. In addition, we seek comment on the following major issues:

- Whether to authorize AMS(R)S under the Part 87 rules in the 1610-1626.5 and 5000-

¹ A wet lease is a leasing arrangement whereby a person agrees to provide an entire aircraft and at least one crewmember.

5150 MHz bands.

- Whether to amend Section 87.261(c) of our rules to allow more than one Aeronautical Enroute Station to be authorized at any one location.
- Whether to amend our Part 87 rules to accommodate Time Division Multiple Access emissions in the very high frequency Aeronautical Mobile (Route) Service (AM(R)S) band, as an alternative to 8.33 kHz channel spacing to allow greater use of spectrum for domestic air travel.
- Whether to eliminate all specific references to the Civil Air Patrol in Part 87.²
- Whether to revise our licensing rules and procedures for unicom stations.³

II. DISCUSSION

4. The Aviation Radio Service is an internationally-allocated family of radio services designed to enhance and protect the safety of life and property in air navigation. The Commission regulates the Aviation Radio Service in cooperation with the FAA. By way of background, federal regulation of the Aviation Radio Service predates the Commission. In 1929, the Commission's predecessor, the Federal Radio Commission, adopted the Aviation Operating Plan.⁴ Later, the Commission assigned the administration and licensing of the Aviation Radio Service to its Telegraph Division.⁵ The Commission originally codified the rules governing the Aviation Radio Service at Part 9 of its Rules; but in 1963, the Commission moved them to Part 87, where they reside today.⁶ While there have been several additions and amendments to the Aviation Radio Service rules, the Commission has not undertaken an extensive review of these rules since 1988.⁷ The underlying purpose of this *Notice* is to initiate and conduct such a review. The Aviation Radio Service consists of three services: (1) the Aeronautical Mobile Service, which includes aeronautical advisory stations, aeronautical enroute stations, airport control stations, and automatic weather observation stations; (2) the Aeronautical Radionavigation Service, which includes stations used for navigation, obstruction warning, instrument landing, and measurement of altitude and range; and (3) the

² The Civil Air Patrol is an independent, non-governmental entity, created by the act of July 1, 1946. *See* 60 Stat. 346, c. 527, 36 U.S.C. §§ 201-208. The purpose of the organization is to encourage and aid citizens of the United States in contributing their efforts, services, and resources in developing aviation and in maintaining air supremacy; and encourage and develop by example the voluntary contribution of private citizens to the public welfare; provide aviation education and training especially to its senior and cadet members; encourage and foster civil aviation in local communities; provide an organization of private citizens with adequate facilities to assist in meeting local and national emergencies; and to assist the Department of the Air Force in fulfilling its noncombat programs and missions. *See* 36 U.S.C. § 40302.

³ Unicom stations are also referred to as aeronautical advisory stations, and are fixed stations used for advisory and civil defense communications primarily with private aircraft stations. *See* 47 C.F.R. § 87.5.

⁴ *See* Federal Radio Commission, 3rd Annual Report, at 25 (1929).

⁵ First Order of the Federal Communications Commission, *Order*, 1 FCC 3, 4 (1935).

⁶ Reorganization and Revision of Chapter, *Order*, 28 Fed. Reg. 12386, 12388 (1963).

⁷ *See* Reorganization and Revision of Part 87 Governing the Aviation Services, *Memorandum Opinion and Order*, PR Docket No. 87-214, 3 FCC Rcd 4171 (1988).

Aeronautical Fixed Service, which is a system of fixed stations utilizing point-to-point radio communications for aviation safety, navigation, or preparation for flight.

A. Aeronautical Mobile Satellite (Route) Service (AMS(R)S) Issues

5. The Aeronautical Mobile Satellite (Route) Service (AMS(R)S) is a mobile satellite service in which mobile earth stations are located on board aircraft.⁸ This service is used for operational control communications for aircraft along national and international civil air routes. Operational control communications relate to the safe, efficient and economical operation of aircraft, such as fuel, weather, position reports, aircraft performance, essential services and supplies. Public correspondence is not permitted. The ability of, *inter alia*, survival craft and emergency position-indicating radiobeacon stations to participate in this service enhances the service's ability to protect life and property.

6. In 1986, the Commission allocated twenty-seven megahertz of spectrum for a Mobile Satellite Service (MSS)⁹ to be shared with AMS(R)S.¹⁰ The Commission allocated the 1549.5-1558.5 MHz and 1651-1660 MHz bands on a co-primary basis to MSS and AMS(R)S, but granted AMS(R)S priority and real-time preemptive access.¹¹ The Commission allocated the 1545-1549.5 MHz and 1646.5-1651 MHz bands to AMS(R)S on a primary basis with MSS secondary in these bands.¹² In 1987, the Commission affirmed this allocation with a minor modification to clarify footnote US308,¹³ and in 1989, authorized the first AMS(R)S licensee at the slightly increased service bands of 1545-1559 MHz and 1646.5-1660.5 MHz.¹⁴

1. Updating of Technical Standards for AMS(R)S Equipment

7. In 1992, the Commission established technical standards and licensing procedures for the

⁸ The Commission formerly also used the acronym AMSS(R) to refer to this service.

⁹ A mobile satellite service is a radio communication service between mobile earth stations and one or more space stations. *See* 47 C.F.R. § 2.1. A mobile earth station is an earth station intended for use while in motion or during halts at unspecified points. *See* 47 C.F.R. § 25.201.

¹⁰ *See* Amendment of Parts 2 and 22 of the Commission's Rules Relative to Cellular Communications Systems, *Report and Order*, Gen. Docket Nos. 84-1231, 84-1233, 84-1234, 2 FCC Rcd 1825 (1986).

¹¹ *See* 47 C.F.R. § 2.106 n.US308.

¹² *See* Amendment of Parts 2 and 22 of the Commission's Rules Relative to Cellular Communications Systems, *Report and Order*, Gen. Docket Nos. 84-1231, 84-1233, 84-1234, 2 FCC Rcd 1825 (1986).

¹³ Footnote US308 was modified to provide AMS(R)S with priority access as well as real-time preemptive capability in the MSS and also to require that systems not interoperable with the AMS(R)S operate on a secondary basis. *See* Amendment of Parts 2 and 22 of the Commission's Rules Relative to Cellular Communications Systems, *Memorandum Opinion and Order*, Gen. Docket Nos. 84-1231, 84-1233, 84-1234, 2 FCC Rcd 6830 (1987).

¹⁴ *See* Amendment of Parts 2, 22 and 25 of the Commission's Rules to Allocate Spectrum for and to Establish Other Rules and Policies Pertaining to the Use of Radio Frequencies in a Land Mobile Satellite Service for the Provision of Various Common Carrier Services, *Memorandum Opinion, Order and Authorization*, Gen. Docket No. 84-1234, 4 FCC Rcd 6041 (1989).

AMS(R)S.¹⁵ In developing these standards, the Commission relied upon documents produced by industry standard-setting organizations, such as Minimum Operational Performance Standards (MOPSs) developed by RTCA, Inc. (RTCA)¹⁶ and Standards and Recommended Practices (SARPs) developed by the International Civil Aviation Organization's (ICAO)¹⁷ Aeronautical Mobile Communications Panel (AMCP).¹⁸ RTCA and ICAO have amended the relevant MOPSs and SARPs since the promulgation of the technical standards contained in our Part 87 rules. Therefore, we propose the following changes to our rules to ensure that our rules reflect the latest industry standards as reflected by these documents.

8. *Power and Emissions.* We propose amending 47 C.F.R. § 87.131 to correct the table to raise permitted maximum output power of Aircraft Earth Stations from 60 watts to 80 watts. The value of output power is measured at the output of the high power amplifier and does not account for RF cable and diplexer losses. The assumed value of such losses is 1.25 dB, which would result in an output of 60 watts. As a result, we believe that the value currently specified in our rules is erroneous and we propose to correct that here.¹⁹ We seek comment on our proposal.

9. *Emission Limitations.* We propose to amend 47 C.F.R. § 87.139(i) to ensure that our rules reflect the latest technical standards without retaining regulations in the Commission's rules that duplicate standards established by the FAA in its Technical Standards Order governing AMS(R)S. The proposed edits are contained in a table set forth as a proposed amendment to Section 87.139 of the Commission's rules in Appendix A. We seek comment on our proposal.

2. Expanding the Authorization of AMS(R)S

10. Our rules currently authorize the use of the AMS(R)S in the 1545-1559 MHz and 1646.5-1660.5 MHz bands.²⁰ The International Telecommunications Union (ITU) and the Commission's Table of

¹⁵ See Amendment of Part 87 of the Commission's Rules to Establish Technical Standards and Licensing Procedures for Aircraft Earth Stations, *Report and Order*, PR Docket No. 90-315, 7 FCC Rcd 5895 (1992).

¹⁶ RTCA Inc. is an FAA-sponsored association of aeronautical organizations of the United States from both government and industry. Organized in 1935 as the Radio Technical Commission for Aeronautics, RTCA today includes over 200 government, industry, and academic organizations from the United States as well as other nations seeking technical solutions to problems involving the application of electronics and telecommunications to aeronautical operations. The findings of RTCA are in the nature of recommendations to all organizations concerned. While RTCA is not a government agency, its Special Committees act under the Federal Advisory Committee Act and its findings and recommendations are often adopted by government agencies in forming aviation policy. See, e.g., RTCA, RTCA/DO-195 i (1986).

¹⁷ ICAO is an international body operating under the auspices of the United Nations. Its recommendations, in part, serve as the basis for the Aviation Radio Service rules. See 47 C.F.R. § 87.1(a)(3).

¹⁸ Amendment of Part 87 of the Commission's Rules to Establish Technical Standards and Licensing Procedures for Aircraft Earth Stations, *Report and Order*, PR Docket No. 90-315, 7 FCC Rcd 5895, 5895-96 ¶ 4 (1992).

¹⁹ See RTCA, RTCA/DO-210D § 2.2.4.2.2 n.3.

²⁰ See 47 C.F.R. § 87.187(q). The 1545-1559 MHz band is allocated for space-to-Earth transmission while the 1646.5-1660.5 MHz band is allocated for Earth-to-space transmission.

Allocations allocate additional spectrum in the 1610-1626.5 MHz band and the 5000-5150 MHz band to AMS(R)S on a primary basis.²¹

11. At this time, our AMS(R)S licensing rules distinguish between the 1610-1626.5 MHz and 5000-5150 MHz bands and the 1646.5-1660.5 MHz band. Specifically, the first two bands are regulated under Part 25 of our rules and the third band is regulated under Part 87. Further, Part 87 affords the AMS(R)S priority over other MSS use in the 1646.5-1660.5 MHz band,²² and Part 87 and Footnote US308 provide for priority and real-time preemptive access for AMS(R)S in the 1651-1660 MHz portion of the band,²³ but Part 25 does not specifically provide the protections of priority and real-time preemptive access for AMS(R)S in the 1610-1626.5 MHz and 5000-5150 MHz bands. In light of the fact that both the ITU and the Commission have allocations for the 1610-1626.5 MHz and 5000-5150 MHz bands for the AMS(R)S, we seek comment on whether we should authorize the use of AMS(R)S under Part 87 for aircraft stations in these bands, without the protections of priority and real time preemptive access, in order to ensure consistency of the regulatory and licensing processes for these three bands.²⁴

B. Aeronautical Enroute Station Issues

12. The aeronautical enroute service provides air-ground communications for the operational control (flight management) of aircraft by the operating companies.²⁵ Communications relate to safe and efficient aircraft operation, such as aircraft performance, fuel, weather, position reports, essential services and supplies.²⁶ Public correspondence (*i.e.*, private or personal messages of passengers or crew) is not

²¹ See International Telecommunication Union's *Radio Regulations*, Volume 4, Geneva, 1998, ISBN 92-61-05171-5 (ITU Radio Regulations) n.S5.367; 47 C.F.R. § 2.106 n.733. While the Commission currently allocates the 5150-5250 MHz band as well as the 15.4-15.7 GHz band to AMS(R)S on a primary basis, the Commission has proposed to follow the recommendation of the 1995 World Administrative Radio Conference (WARC-95), codified at footnote S5.367 of the ITU Radio Regulations, and eliminate the AMS(R)S allocation for the 15.4-15.7 GHz band and reduce the allocation for AMS(R)S in the 5000-5250 MHz band to the 5000-5150 MHz band. See Amendment of Parts 2, 25 and 97 of the Commission's Rules with Regard to the Mobile-Satellite Service Above 1 GHz, *Notice of Proposed Rulemaking*, ET Docket 98-142, 13 FCC Rcd 17107, 17115 ¶ 16, 17126 ¶ 32 (1998).

²² See 47 C.F.R. § 87.189(d).

²³ See 47 C.F.R. §§ 2.106 n.US308, 87.187(q).

²⁴ We note, however, that similar to ITU, we are not, at this time, considering expanding the full range of protections of specific priority and real-time preemptive access protections afforded the use of AMS(R)S for the entire 1545-1559 MHz and 1646.5-1660.5 MHz bands.

²⁵ Operational control communications are defined in Volume II of Annex 10 to the Convention on International Civil Aviation as communications required for exercising authority over initiation, continuation, diversion or termination of a flight. In other words, such communications are used by an organization to directly control its aircraft operations.

Air traffic control communications, on the other hand, relate to the safe, and orderly flow of air traffic, *i.e.*, provide safe separation of aircraft. In the United States air traffic control services are provided by the Federal Aviation Administration (FAA).

²⁶ 47 C.F.R. § 87.261(a).

permitted on enroute frequencies.²⁷ Enroute stations are the means by which companies satisfy FAA requirements to maintain reliable communications between each aircraft and the appropriate dispatch office in the case of large trunk air carriers, or maintain flight following systems in the case of small airlines and large commercial aircraft operations.²⁸

13. Except in Alaska, only one aeronautical enroute licensee may be authorized at any one location.²⁹ This limitation stems from the early days of the aviation transport industry when it was recognized that the limited number of suitable frequencies available was not sufficient to allow each aviation organization to have its own 'chain' of radio stations along its various air routes.³⁰ With encouragement from the then Federal Radio Commission, the early air transport companies adopted a plan calling for coordination and cooperation in the use of available frequencies along the airways.³¹ As a result, Aeronautical Radio, Inc. (ARINC) was incorporated in 1929 as a private communications company dedicated to serving the air transport industry on a non-profit, cost-sharing basis.³² ARINC's principal stockholders as well as principal customers are the U.S. scheduled airlines, but it provides its services to all aircraft operators, including foreign airlines, business entities and private individuals. ARINC owns and operates most aeronautical enroute service stations, and is the licensee of all the domestic network³³ aeronautical enroute stations in the continental U.S.³⁴

14. In 1987, the Commission concluded that the basic rationale underlying the use of an industry intermediary to manage the enroute communications system, *i.e.*, a scarcity of available spectrum and a need for coordination among users to assure adequate enroute communications at reasonable costs, remained valid.³⁵ In support of its position, the Commission noted that it had previously held that the public benefits derived from communications sharing arrangements may include (1) services at rates closer to costs, (2) better management of communications networks, (3) efficient use of available spectrum, and

²⁷ *Id.*

²⁸ *See* 14 C.F.R. §§ 121.99, 121.125.

²⁹ 47 C.F.R. § 87.261(c). Location for the purposes of this rule is defined as an area that can be adequately served by the particular station. *Id.*

³⁰ *See* Amendment of Part 87 to Clarify the Aeronautical Enroute Station Rules and Provide Two Additional Frequencies for Use by Small Aircraft Operating Agencies, *Report and Order*, PR Docket 80-243, 87 FCC 2d 382, 384 ¶ 9 (1981) (*Aeronautical Enroute Order*).

³¹ *Id.*

³² *Id.*

³³ Functionally, U.S. aeronautical enroute stations (ground stations) can be classified in two basic categories, network stations and local area stations. A network consists of a group of interconnected (via private lines and/or microwave circuits) enroute stations operating on the same frequency and serving a given flight route. Alternatively, numerous other licensed enroute stations sharing the same frequency band are not part of an enroute network; these off-net VHF stations provide local area service and are usually located at an airport.

³⁴ *Id.* at 385 ¶ 11.

³⁵ *Id.* at 386 ¶ 15.

(4) additional incentive for research and development.³⁶ The Commission went on to state that the elimination of the one station per location rule in the enroute service would produce a number of negative effects:

- The requirement that service be provided to all qualified aircraft operators on the available enroute spectrum, would adversely affect efficiency;³⁷
- Unfettered expansion of the number of licensees would reduce the usefulness of the industry database, limit ARINC's ability to coordinate frequency assignments, and increase congestion and interference; and
- Flexibility in the planning and implementation of new techniques and configurations would be more difficult due to greater diversification of control.³⁸

The Commission concluded that eliminating this limitation would result in a less effective service.³⁹

15. More recently, in the World Trade Organization (WTO) proceeding, Société Internationale de Télécommunications Aéronautiques (SITA) asked the Commission to examine whether the rule permitting only one aeronautical enroute station per location is inconsistent with U.S. WTO policy.⁴⁰ SITA noted that most countries have no limitation on the number of aeronautical enroute licenses authorized per location,⁴¹ and argued that the current spectrum allocation for aeronautical enroute services can accommodate more than one service provider.⁴² It also contended that allowing more than one aeronautical enroute station per location would introduce competition into the aeronautical enroute market, which would produce lower rates for aeronautical enroute service, increase efficiency, and lead to new innovations.⁴³ In addition, SITA argued that removal of this rule would increase public safety by increasing the aeronautical enroute service infrastructure and through the creation of redundant networks.⁴⁴

16. The Commission declined to address SITA's request on the grounds that addressing a service-

³⁶ *Id.* at 386 ¶ 16 (citing Regulatory Policies Concerning Resale and Shared Use of Common Carrier Services and Facilities, *Report and Order*, Docket 20097, 60 FCC 2d 261, 298-300 ¶¶ 75-80 (1976)).

³⁷ *See* 47 C.F.R. § 87.261(b).

³⁸ *Aeronautical Enroute Order*, 87 FCC 2d at 386-87 ¶ 17.

³⁹ *Id.*

⁴⁰ *See* Rules and Policies on Foreign Participation in the U.S. Telecommunications Market, *Report and Order and Order on Reconsideration*, IB Docket 97-142, 12 FCC Rcd 23891, 23939 ¶ 110 (1997) (*WTO Proceeding*).

⁴¹ *See* Comments of SITA in IB Docket 94-142, filed July 9, 1997 at n.16.

⁴² *See Ex Parte* Presentation of SITA in IB Docket 94-142, filed Nov. 13, 1997.

⁴³ *See* Opposition to Petition for Partial Reconsideration in IB Docket 94-142, filed Feb. 10, 1998, by SITA at 2.

⁴⁴ *See Ex Parte* Presentation of SITA in IB Docket 94-142, filed Oct. 15, 1997.

specific rule was beyond the scope of that proceeding.⁴⁵ The Commission also noted that the record on this issue consisted solely of the submissions of SITA and ARINC, and “critical parties ... have not had sufficient opportunity to provide the input that we would need before we were to reconsider our licensing rules.”⁴⁶ The Commission stated that it would seek comment on this issue in a separate proceeding.⁴⁷ We believe that the present proceeding presents an appropriate occasion to examine this issue. In order to refresh the record (which is more than three years old) and broaden the scope of commenters, we now seek comment on whether we should amend Section 87.261(c) of the Commission’s Rules to allow more than one aeronautical enroute licensee at a given location. In particular, commenters should address whether the introduction of competition into this service would create the benefits cited by SITA, or whether allowing more than one licensee in the same location would produce the effects previously considered by the Commission in the *Aeronautical Enroute Order* noted above.

C. Standards for Automatic Station Logs

17. Currently stations at fixed locations in the international aeronautical mobile service must maintain a written or automatic station log that conforms to the standards set forth in accordance with Paragraph 3.5, Volume II, Annex 10 of the ICAO Convention.⁴⁸ The relevant ICAO provisions, however, establish specific guidelines only for written station logs. ARINC has inquired whether stations must maintain a separate Sign In and Out log (which the ICAO provisions appear to require) when utilizing automatic logs.⁴⁹ ARINC contends that, because automated station logs electronically indicate radio operators as on and off at the position they work during a shift, maintaining a separate written Sign In and Out log is redundant.⁵⁰

18. As a preliminary matter, we propose eliminating the specific reference to Paragraph 3.5, Volume II, Annex 10 of the ICAO Convention, and instead propose mandating that stations at a fixed location in the international aeronautical mobile service maintain a log in accordance with the provisions of Annex 10 of the ICAO Convention.⁵¹ We believe that eliminating the reference to a specific paragraph of

⁴⁵ *WTO Proceeding*, 12 FCC Rcd at 23942 ¶ 118.

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ See 47 C.F.R. § 87.109. In 1982, the Commission eliminated the requirement for all fixed stations in the Aviation Services to maintain station logs, with the exception of those stations providing international service in accordance with the provisions of Annex 10 to the ICAO Convention. See Amendment to Remove Station Log Requirements and To Provide for Additional Utilization of Specific MHz Frequencies in the Aviation Services, Gen. Docket 82-182, 47 Fed. Reg. 5682 (FCC 1982).

⁴⁹ Letter, dated August 17, 2000, from Jerry Wiles, Center Operation Manager, San Francisco ARINC, to FCC.

⁵⁰ *Id.*

⁵¹ Paragraph 3.5, Volume II, Annex 10 of the ICAO Convention mandates that the following information shall be entered into written station logs: a) the name of the agency operating the station; b) the identification of the station; the date; the time of opening and closing the station; the signature of each operator, with the time the operator assumes and relinquishes a watch; f) the frequencies being guarded and type of watch (continuous or scheduled) being maintained on each frequency; g) except at intermediate mechanical relay stations, record of each communication, test transmission, or attempted communication showing text of (continued....)

the ICAO Convention will minimize the effect of changes to that specific paragraph on our rules.

19. We further propose clarifying our rules governing station logs by specifically stating that automatic logs must contain the same information required for written logs by Annex 10 of the ICAO Convention, with the exception of the Sign In and Sign Out portion of the log. Specifically, we propose to require that automatic station logs contain the following information:

- the name of the agency operating the station;
- the identification of the station;
- the date;
- the time of opening and closing the station;
- the frequencies being guarded and the type of watch (*i.e.*, continuous or scheduled) being maintained on each frequency;
- except at intermediate mechanical relay stations, a record of each communication showing text of communication, time communication completed, station(s) communicated with, and frequency used;
- all distress communications and action thereon;
- a brief description of communication conditions and difficulties, including harmful interference. Such entries should include, whenever practicable, the time at which interference was experienced, and the character, radio frequency and identification of the interfering signal;
- a brief description of interruption to communications due to equipment failure or other difficulties, giving the duration of the interruption and action taken; and
- such additional information as may be considered by the operator to be of value as part of the record of the station's operations.

We also propose requiring stations maintaining written station logs to also enter the signature of each operator, as well as the time the operator assumes and relinquishes a watch.

20. We believe that by establishing specific informational standards for written and automatic station logs, we will decrease confusion over what information is necessary for each type of log. We also believe that our proposed approach would promote increased use of automatic station logs, a step that should reduce the administrative burden on the industry without deleteriously impacting our regulatory interests. We seek comment on our proposals.

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communication, time communication completed, station(s) communicated with, and frequency used; h) all distress communications and action thereon; i) a brief description of communications and difficulties; j) a brief description of interruption to communications due to equipment failure or other troubles, giving the duration of the interruption and the action taken; and k) such additional information as may be considered by the operator to be of value as part of the record of the station's operations. *International Standards and Recommended Practices, Aeronautical Telecommunications, Annex 10 to the Convention on Civil Aviation, Vol. II, Aeronautical Radio Frequency Spectrum Utilization, Amendment No. 72, International Civil Aviation Organization, Montreal, 1997 (ISRP).*

D. Equipment Certification Issues

21. The Commission has established specific procedures that equipment manufacturers must follow to obtain certification of equipment operating in the Aviation Radio Service frequencies.⁵² It is our understanding that occasionally strict compliance with these procedures impedes equipment manufacturers seeking to develop and market certain products. In order to escape these impediments, equipment manufacturers have increasingly turned to petitioning the Commission for waivers of specific rules in order to allow them to market and develop their products. This practice is highly inefficient and places a large administrative burden on both equipment manufacturers and the Commission. In order to address these problems, we propose several rule changes regarding equipment certification. We believe these proposed changes would allow more rapid deployment of new equipment intended to enhance the safety of life and property in the aviation context. We solicit comment on our proposals.

1. Accommodation of 8.33 kHz Channel Spacing Transmitters

22. In March of 1997, ICAO amended its International Standards and Recommended Practices to incorporate a channel plan specifying 8.33 kHz channel spacings in the Aeronautical Mobile (Route) Service (AM(R)S) in the 118-137 MHz band.⁵³ The 8.33 kHz channel plan was adopted to alleviate the shortage of very high frequency (VHF) air traffic control (ATC) channels experienced in Western Europe and the United Kingdom.⁵⁴ Eight western European countries implemented the 8.33 kHz channel plan in 1999.⁵⁵ Accordingly, aircraft operating in the airspace of these countries must be able to transmit and receive on the 8.33 kHz spaced channels.

23. Our rules currently require that U.S. registered aircraft employ certified radios and that aircraft radios must meet the technical requirements set forth in Subpart D of Part 87 of the Commission's Rules in order to be certified under the Commission's Rules.⁵⁶ Subpart E of Part 87 contains a list of "assignable carrier frequencies or frequency bands" and includes carrier frequencies in the VHF aircraft

⁵² See 47 C.F.R. § 87.147.

⁵³ See *International Standards and Recommended Practices, Aeronautical Telecommunications*, Annex 10 to the Convention on Civil Aviation, Vol. V, Aeronautical Radio Frequency Spectrum Utilization, Amendment No. 72, International Civil Aviation Organization, Montreal, 1997 (ISRP). Ordinarily, when the ICAO adopts an International Standards and Recommended Practices, it is binding on the contracting countries. See Amendment of Part 87 of the Commission's Rules to Establish Technical Standards and Licensing Procedures for Aircraft Earth Stations, *Report and Order*, PR Docket No. 90-315, 7 FCC Rcd 5895, 5896 n.12 (1992). However, contracting countries were not required to implement 8.33 kHz spacing if their current channel spacing standards provide an adequate number of frequencies. ISRP at 6, para. 4.1.2.1. The United States has not adopted 8.33 kHz spacing.

⁵⁴ See *Plan for the 8.33 kHz Channel Spacing Implementation in Europe (8.33 kHz Spacing Plan)*, Edition 2.0, European Civil Aviation Conference, Dec. 2, 1996 at 2.

⁵⁵ The implementing countries are Austria, Belgium, France, Germany, Luxembourg, Netherlands, Switzerland and the United Kingdom. *Id.*

⁵⁶ 47 C.F.R. § 87.39; see also 47 C.F.R. § 87.145 (requiring, with exceptions not relevant here, that radio equipment installed on air carrier aircraft must be type certified and must meet FCC and FAA requirements).

band used for AM(R)S communications (namely—117.975-136.975 MHz).⁵⁷ We note, however, that the listed frequencies are based on 25 kHz channel spacing with no provision for operating on 8.33 kHz-spaced channels as envisioned by the ICAO channel plan.⁵⁸ Consequently, certification of dual channel spacing transceivers (*i.e.*, radios that can operate using 8.33 kHz-spaced channels as well as 25 kHz-spaced channels) currently may not be obtained absent grant of a waiver of Section 87.173(b) of the Commission's Rules.⁵⁹

24. We recognize that U.S. air carriers operate internationally and their aircraft operate in countries that employ 8.33 kHz spacing. We also recognize that aircraft must have the capability of communicating reliably with ground stations as directed, and on the frequencies specified, by air traffic controllers. It is clear that this capability could be impaired if U.S.-registered aircraft were unable to communicate effectively with ATC facilities in certain European countries employing 8.33-kHz spaced channels.⁶⁰ Furthermore, we note that the current system of granting certification of dual spacing transceivers on an individual, case-by-case basis creates an administrative workload for both the regulated community and our own staff. Accordingly, in the interest of air safety and operational efficiency, we now propose to amend Section 87.137 of our Rules to permit certification of dual channel spacing transceivers to accommodate aircraft which operate in countries that employ 8.33 kHz spacing.

25. We note that this proposal addresses equipment certification only. Since, at this time, the FAA has not adopted 8.33 kHz channel spacing within the United States, we do not propose to permit the use of 8.33 kHz channel spacing in the United States, with the following exceptions. In order to reflect the International Standards and Recommended Practices, we propose to amend 47 C.F.R. § 87.137 to authorize 8.33 kHz bandwidth for aircraft in international flight. We also propose to authorize the use of 8.33 kHz bandwidth for the purpose of certifying dual channel spacing transceivers by a) adding the emission designators 8K33A3E to the A3E emission class, b) listing 8.33 kHz as the authorized bandwidth for the new emission designator, and c) creating a new footnote to the table denoting that the use of 8.33 kHz bandwidth is only for aircraft in international flight.

26. We note reports that there is a growing shortage of VHF ATC channels and that this shortage will continue until the FAA implements a new modernized ATC communications system, which is expected to occur around 2009.⁶¹ We note that as part of this modernization effort, the FAA is evaluating the use of VHF Data Link, Mode 3 (VDL-3), a plan that utilizes Time Division Multiple Access (TDMA) as an alternative to 8.33 kHz channel spacing to allow greater efficiency of spectrum use for domestic air travel.⁶² In light of these plans, we seek comment on whether we should amend our rules to accommodate TDMA emissions in the VHF AM(R)S band.

⁵⁷ See 47 C.F.R. § 87.173(b). We note that while the band 117.976-137 MHz is allocated to AM(R)S internationally, in the U.S., only the bands 117.975-121.9375 MHz and 123.5875-137 MHz are limited to AM(R)S; the band 121.9375-123.5875 MHz is allocated to the aeronautical mobile service.

⁵⁸ Additionally, we note that the emission designators set forth in 47 C.F.R. § 87.137 do not contemplate 8.33 kHz channel spacing.

⁵⁹ See, *e.g.*, Wulfsberg Electronic Division, *Order*, 15 FCC Rcd 10992 (WTB PSWPD 2000).

⁶⁰ Rockwell Collins, Inc., *Order*, 13 FCC Rcd 2954 (WTB PSPWD 1998).

⁶¹ See *Radio Crunch Threatens Air Travel*, Washington Post, November 13, 2000, at A1.

⁶² *Id.*

27. In an effort to address this shortage of VHF ATC channels, which directly impacts the safety of life and property in air navigation, in a more timely fashion, we seek comment on whether we should allow the use of the frequencies 121.975 MHz – 122.675 MHz for ATC on a secondary basis. These frequencies are currently allocated to FAA flight service stations (FSSs). We do not anticipate major coordination problems with this proposal since any necessary coordination between primary and secondary services would be administered by the FAA, which currently operates nearly all FSSs, and engineers and manages this band segment on behalf of the Commission. For similar reasons, we also seek comment on whether to remove the restriction limiting the use of the sub-band 121.6 MHz-121.95 MHz to ground control, and allow these frequencies to be used for general ATC communications.

2. Certification of Equipment for the Civil Reserve Airfleet

28. Another current requirement for certification of VHF aviation transmitters is that the equipment operate only on frequencies in the civil aviation band.⁶³ In some situations, however, civil aircraft must communicate with military facilities, which use frequencies outside of the civil aviation band, specifically in the 138-144 MHz and 150.05-150.8 MHz Government bands and in the 148-149.9 MHz band which is shared by Government and non-Government users. For example, aircraft of the Civil Reserve Air Fleet serve a military transport role in emergency conditions. Additionally, civil aircraft that have the occasion to use military airfields, *e.g.*, in connection with the transport of "VIP" passengers such as heads of state, also engage in aeronautical communications in the subject frequency bands.

29. We currently certify radios that operate in both the civil aviation band and the military radio bands through the use of waivers.⁶⁴ Because, as we state above, the use of waivers to obtain equipment certification is inefficient and resource-intensive, we propose amending our rules to allow the certification of radios that operate both inside and outside the civil aviation bands, with the caveat that the FCC certification will only apply to use inside the civil aviation band. We emphasize that this proposal addresses equipment certification only. Other agencies are responsible for granting authorization to operate outside of the civil aviation band, and we are not proposing to permit operations outside of the civil aviation band in the United States under our Rules.

3. Certification of Equipment Requiring an FAA Showing of Compatibility with the National Airspace System

30. Before the Commission certifies equipment that operates in certain frequencies, it consults with the FAA to ensure that the equipment is compatible with the National Airspace System.⁶⁵ Currently, an applicant for certification of this type of equipment must notify the FAA of the filing of the certification application and provide the FAA with certain technical specifications relating to the equipment.⁶⁶ The Commission allows the FAA twenty-one calendar days to file any objection to the application along with a

⁶³ See 47 C.F.R. §§ 87.173(b), 87.475(b)(4), (5).

⁶⁴ See, *e.g.*, Rockwell Collins, Inc., *Order*, 14 FCC Rcd 3340 (WTB PSPWD 1999).

⁶⁵ The National Airspace System is the common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures; technical information; and manpower and material. This system includes system components shared jointly with the military. *Aeronautical Spectrum Planning for 1997-2010*, Doc. No. RTCA/DO-237 (1997). The system operates on frequencies set forth at 47 C.F.R. § 87.147(d)(3).

⁶⁶ See 47 C.F.R. § 87.147(d), (d)(1).

showing that the equipment in question is incompatible with the National Airspace System.⁶⁷ If such an objection is filed, then the Commission considers the showing before taking final action on the application.⁶⁸

31. Based on our experience with this process, we believe it is cumbersome, and propose to streamline it by requiring applicants to submit, as part of the application for certification, an FAA determination of the equipment's compatibility with the National Airspace System, rather than having applications remain in pending status for a specified period of time to allow the FAA to file an objection. We believe this proposed process will provide applicants with increased participation in the certification process, streamline the certification process, reduce the FAA's and the Commission's administrative workload, and reduce the time necessary to obtain certification. We seek comment on this proposal.

E. Amending License Terms of Non-Aircraft Stations

32. In our ongoing effort to establish uniformity among regulated wireless services, we propose to extend the license terms of licenses in the Aviation Radio Service, other than aircraft stations, from five years to ten years. This will place non-aircraft stations on a similar licensing period as aircraft licenses.⁶⁹ We believe that changing the licensing period from a five- to a ten-year period for non-aircraft licenses would provide economic benefits for licensees by effectively halving licensee's application fees and costs of processing the renewals.⁷⁰ We also believe that this change in licensing period would reduce the Commission's annual costs for processing renewal applications.⁷¹ We seek comment on this proposal.

F. Amending Construction Requirements of Non-Aircraft Stations

33. Similarly, we propose to extend the period in which unicom stations and radionavigation land stations must be placed in operation from eight months to one year.⁷² We believe that a longer implementation period would simplify the regulatory requirements for aviation stations by reducing the number of requests for extensions of time to construct a station, simplify the regulatory requirements

⁶⁷ See 47 C.F.R. § 87.147(d)(2).

⁶⁸ *Id.*

⁶⁹ See 47 C.F.R. § 87.27(a). This proposed amendment also would license non-aircraft stations for the same length of time as coast stations in the Maritime Radio Services, which perform similar functions. See 47 C.F.R. § 80.25(b) (as amended by Amendment of the Commission's Rules Concerning Maritime Communications, *Fourth Report and Order and Third Further Notice of Proposed Rule Making*, PR Docket No. 92-257, 15 FCC Rcd 22585 (2000) (*Maritime Fourth Report and Order*)).

⁷⁰ Under the Commission's current fee schedule, the application fee for a ten-year license is same as that for a five-year license. See 1998 Biennial Regulatory Review -- 47 C.F.R. Part 90 - Private Land Mobile Radio Services, *Report and Order and Further Notice of Proposed Rule Making*, WT Docket No. 98-182, 15 FCC Rcd 16673, 16677-78 ¶ 9 (2000) (*Part 90 Biennial Review*).

⁷¹ See *id.*

⁷² See 47 C.F.R. § 87.45. Unicom stations are also referred to as aeronautical advisory stations and are fixed stations used for advisory and civil defense communications primarily with private aircraft stations. See 47 C.F.R. § 87.5. Radionavigation land stations are land stations that assist with navigation using radiodetermination.

applicable to aviation licensees, and decrease administrative burdens placed on licensees and the Commission. This approach also would be consistent with the Commission's recent actions regarding construction requirements in other services.⁷³ We seek comment on this proposal.

G. Adding Additional Emission Types⁷⁴

34. Since 1996, ARINC has been using emission type J2D for enroute high frequency (HF) communications, through a series of waivers to allow it to assist in the development of a worldwide HF datalink system. We are aware of no complaints or other problems arising from these operations. In order to reduce our administrative burden and to anticipate implementation of the worldwide HF datalink system, we propose amending our rules to add J2D as an acceptable data emission type for enroute HF communications. We seek comment on this proposal. We also seek comment on the more general question of whether we should continue to designate specific emission types on aviation frequencies that are not shared with other services, or allow licensees to utilize any emission type in these frequencies if the transmitters meet the other applicable technical specifications.⁷⁵

H. Removal of References to Civil Air Patrol (CAP)

35. Part 87 contains several references to the Civil Air Patrol (CAP). While we have licensed CAP stations in the past, these licenses have expired. At this time, we have no formal relationship with the CAP, which is currently authorized by the Air Force and the National Telecommunications and Information Administration (NTIA). Moreover, the CAP, similar to other aviation licensees, can obtain any necessary Part 87 licenses under our general licensing procedures. We seek comment on whether we should eliminate the specific references to the CAP that appear in Part 87.

I. Addition of Station Class Codes

36. Part 87 currently classifies the different types of stations in the Aviation Radio Service by a two- or three-character code.⁷⁶ We believe that advances in ground control technology and changes in airport procedures have rendered our current set of station classes inadequate. We propose to bring our rules up-to-date by adding five additional station class codes. We propose adding three station classes to reflect changes in ground control technology and procedures: (a) Remote Communications Outlet (RCO),⁷⁷ (b) Ground Communication Outlet (GCO),⁷⁸ and (c) Ramp Control (RPC).⁷⁹ We currently license

⁷³ See *Part 90 Biennial Review*, 15 FCC Rcd at 16679 ¶12; *Maritime Fourth Report and Order*, 15 FCC Rcd at 22600 ¶ 27.

⁷⁴ Acceptable emission types are set forth at 47 C.F.R. § 87.131 using codes defined at 47 C.F.R. § 2.201.

⁷⁵ 47 C.F.R. § 87.131 *et. seq.*

⁷⁶ The station class codes are listed at 47 C.F.R. § 87.171.

⁷⁷ An RCO is an unmanned communication facility remotely controlled by air traffic personnel.

⁷⁸ A GCO is an unstaffed, remotely controlled, ground-to-ground communications facility.

⁷⁹ An RPC is a facility specifically authorized to control the movement of aircraft in the defined ramp or apron area of an airport.

operations that would fall under these new classes as airport control towers (FAC), even though these stations perform different functions. Since these proposed station classes are terms of art within the aviation community, we believe that establishing station codes for these distinct types of operations will enable us to better coordinate our licensing activities with the NTIA's Interdepartment Radio Advisory Committee (IRAC)⁸⁰ and the FAA by adding greater specificity to the coordination process. Similarly, we further propose to increase the accuracy of our licensing database by adding two other station classes: (a) RADAR/TEST (RLD)⁸¹ and (b) Radio Navigation Land/DME (RNV).⁸² We propose to begin licensing new stations using these new codes upon the date the rule changes become effective, and to bring existing stations into conformance with these new station codes as we receive renewal or modification applications.

37. In addition to the rule changes proposed above, we seek comment on the broader issue of whether we should eliminate station class codes from Part 87 and utilize them solely within the application process. Under this approach, we would adopt a licensing approach for the Aviation Radio Service analogous to that used in the Private Land Mobile Radio Services, which does not have station class codes codified in the Commission's rules.⁸³ We believe that such an action would not only streamline our rules, but would also simplify the task of maintaining a technologically current list of station codes by allowing us to update or otherwise modify the station class code list as necessary without having to go through a formal rule making process each time.

J. Differential Global Positioning System (DGPS)

38. DGPS is an augmentation of the Global Positioning System (GPS), a constellation of twenty-four satellites orbiting the earth at an altitude of 10,900 miles. GPS was developed by the U.S. military to provide tactical location, but has become a major civilian "utility," providing enhancements to numerous applications, including navigation and survey support, through precise location information. However, due to certain technical properties of the system, GPS contains some inherent inaccuracy. DGPS corrects this problem by using fixed transmitting stations which transmit differences in known locations with the position the GPS satellite system is indicating, and send this "differential" information via radio link to mobile units within range of their signals, thus allowing a significant increase in the accuracy of the mobile unit's coordinates.⁸⁴ DGPS is done in two ways: from stations on the ground, *e.g.*, Ground Based

⁸⁰ The IRAC is composed of representatives appointed by twenty-three member federal departments and agencies. A representative appointed by the Commission to serve in that capacity effects liaison between the IRAC and the FCC. The IRAC serves in an advisory capacity pertaining to the allocation, management, and use of the radio spectrum. The IRAC advises the Assistant Secretary for Communications and Information, U.S. Department of Commerce, and reports to the Deputy Associate Administrator, Office of Spectrum Management.

⁸¹ An RLD is a land station operating radar or testing the operations of radar.

⁸² An RNV is equipment (airborne and ground) used to measure the slant range distance from the Distance Measuring Equipment (DME) navigational aid.

⁸³ The Private Land Mobile Radio Service Rules are codified at Part 90 of the Commission's Rules. *See* 47 C.F.R. 90 *et. seq.*

⁸⁴ Amendment of Part 2 of the Commission's Rules To Make Non-substantive Revisions to the Table of Frequency Allocations, *Memorandum Opinion and Order*, 15 FCC Rcd 3459, 3467-68 n.40 (OET 1999). DGPS still provides greater accuracy than GPS, even though the United States has increased the accuracy of GPS information accessible to civilians by ending its practice of intentionally degrading GPS signals for national security reasons. *See* Statement on the Decision to Stop Degrading Global Positioning System Signals, 36 Weekly Comp. Pres. Doc. 959960 (May 8, 2000).

Augmentation Systems (GBAS)⁸⁵ and via satellite, *e.g.*, Space Based Augmentation Systems (SBAS).⁸⁶ The Commission, at the request of the FAA, authorized the use of DGPS in the 112-118 MHz band in 1999.⁸⁷

39. Subsequently, the NTIA amended its *Manual* to permit DGPS “on a primary basis in the bands 108-117.975 MHz, 1559-1610 MHz, and 5000-5150 MHz for the specific purpose of transmitting DGPS information intended for aircraft navigation.”⁸⁸ In addition, the FAA recently petitioned the Commission to allow the use of DGPS in the 108-117.975 MHz band.⁸⁹ Given that the three bands listed are Federal/non-Federal Government shared spectrum, incorporation of this provision will affect non-Federal Government services. In order to minimize this impact, we propose reclassifying the NTIA’s proposed footnote G126 as footnote US343⁹⁰ of the FCC’s frequency allocation table⁹¹ to read as follows:

US343 Differential-Global-Positioning-System (DGPS) Stations may be authorized on a primary basis in the bands 108-117.975 MHz and 1559-1610 MHz for the specific purpose of transmitting DGPS information intended for aircraft navigation.

40. In addition, we propose granting the FAA’s request and expanding the authorization for DGPS from the 112-118 MHz band to the 108-117.975 MHz on a primary basis.⁹² We further propose to change the designation of DGPS from developmental technology and begin to license DGPS systems, such as GBAS, on a routine non-developmental basis. We believe that the wide adoption of this technology by the

⁸⁵ The FAA operates a GBAS, which it calls a Local Area Augmentation System (LAAS), in order to provide aircraft with increased location accuracy (to within 10 meters). LAAS transmitters are placed within airports to provide specific GPS correction information for the landing area.

⁸⁶ The FAA also operates an SBAS, which it calls a Wide Area Augmentation System (WAAS). WAAS is composed of 24 ground reference stations in the United States. The SBAS stations compute their GPS-derived locations and compare them with their surveyed locations. A master station receives the data and sends corrections to aircraft via INMARSAT satellites, over the L1 frequency used by GPS (1575.42 MHz).

⁸⁷ See Amendment of Part 87 of the Commission’s Rules to Permit Automatic Operation of Aeronautical Advisory Stations (Unicom), *Report and Order*, WT Docket 96-1, 14 FCC Rcd 3722 (1999); 47 C.F.R. § 87.475(e). Licensees are also providing DGPS in this band pursuant to developmental authority. See 47 C.F.R. § 87.37.

⁸⁸ See NTIA’s *Manual of Regulations and Procedures for Federal Radio Frequency Management*, January 2000 Edition, at 4-59, 4-94 (NTIA Manual).

⁸⁹ See Letter, dated September 19, 2000 from George K. Sakai, Program Director for Spectrum Policy and Management, FAA to Magalie Roman Salas, Secretary, FCC.

⁹⁰ A footnote of this kind is necessary. DGPS signals are data streams transmitted from either a fixed terrestrial location or from a satellite. The 108-117.975 MHz band is allocated only to the Aeronautical Radionavigation Service. By definition, a data transmission is not considered a radionavigation application. Radionavigation must be accomplished by obtaining information by means of the propagation properties of radiowaves. See 47 C.F.R. § 87.5.

⁹¹ 47 C.F.R. § 2.106.

⁹² The previous allocation of 118 MHz represented a rounding error in our table, which we propose to correct here.

aviation community demonstrates that it should no longer be classified as a developmental technology.

41. We tentatively conclude, however, that we should not authorize the use of DGPS in the 5000-5150 MHz band because the NTIA recently informed us that the FAA has determined that DGPS use of the 5000-5150 MHz band is not technically feasible.⁹³ In summary, we propose to authorize the use of DGPS in the 108-117.975 MHz and 1559-1610 MHz bands, add a clarifying footnote to the Commission's frequency allocation table, and begin to license DGPS on a non-developmental basis. We seek comment on these proposals.

K. Aeronautical Advisory Stations (Unicom) Issues

42. The Commission established the unicom service in 1950 to provide for air-to-ground communications primarily between general aviation aircraft and airport facilities.⁹⁴ Unicom transmissions are limited to the necessities of safe and expeditious operation of aircraft, including runway conditions, types of fuel available, wind conditions, weather information, dispatching, and other necessary safety information.⁹⁵ Unicom transmissions may include, on a secondary basis, communications pertaining to the efficient portal-to-portal transit of an aircraft, such as available ground transportation, food, and lodging.⁹⁶ Unicom transmissions must provide impartial information concerning available ground services, and must provide service to any aircraft station upon request and without discrimination.⁹⁷

43. Unicom stations may operate at both controlled and uncontrolled airports.⁹⁸ Controlled airports are those that are equipped with either a control tower, a control tower remote communications outlet (RCO), or an FAA flight service station (FSS).⁹⁹ Unicom stations at controlled airports may not transmit information

⁹³ See Letter to Chief, Office of Engineering and Technology, FCC, from the Associate Administrator, Office of Spectrum Management, NTIA, dated May 7, 2001.

⁹⁴ Amendment of Part 87 of the Commission's Rules to Permit Automatic Operation of Aeronautical Advisory Stations (Unicom), *Notice of Proposed Rule Making*, WT Docket No. 96-1, 11 FCC Rcd 1084, 1084 ¶ 2 (1996).

⁹⁵ 47 C.F.R. § 87.213(b)(1).

⁹⁶ 47 C.F.R. § 87.213(b)(2).

⁹⁷ 47 C.F.R. § 87.213(a).

⁹⁸ At controlled airports, more than one unicom may operate but all unicom stations share a single frequency, 122.950 MHz. See 47 C.F.R. § 87.217(b). At an uncontrolled airport, only one unicom station may be authorized. See *id.*

⁹⁹ Control towers provide ATC services to aircraft landing on, taking off from, and taxiing at an airport as well as aircraft transiting an airport's traffic area. 47 C.F.R. § 87.417(a). An RCO is an aeronautical radio station at a small uncontrolled airport located near a large airport with a control tower (a controlled airport). The RCO is connected via landlines to the control tower (or other FAA control facility), and enables the FAA to provide air traffic services to more airports and aircraft than would normally be served by the control facility alone. See Amendment of the Aviation Services Rules (Part 87) to Provide for the Licensing of Control Tower Remote Communications Outlet Stations at Airports Without Control Towers, *Order*, RM-6791, 5 FCC Rcd 4550 (1990). A FAA FSS is part of a network of stations that covers all 50 states. FSSs provide weather briefings and information on flight facilities, and monitor the navigational radio net. John F. Welch, ed., Van Sickle's Modern Airmanship 737 (1981).

regarding runway conditions, wind, or weather during the hours of operation of the controlling facility.¹⁰⁰ The vast majority of airports in the United States are uncontrolled airports.¹⁰¹ At uncontrolled airports, unicoms are often the only available source of this critical safety-related information.

44. Currently we authorize unicom frequencies as either MA (all aircraft) or MA2 (private aircraft only). Of the eight frequencies designated for unicom use, five are currently designated as MA2.¹⁰² Airports are apparently reluctant to request authorization for MA2 frequencies because this would preclude the use of the airports by commercial air operations. This business decision has reportedly caused congestion in the MA frequencies. In order to address this concern, we seek comment as to whether we should eliminate the distinction between MA and MA2 and designate all unicom frequencies as MA.

45. Our rules currently state that we will assign unicom frequencies based upon maximum geographic co-channel separation.¹⁰³ This method, however, has led to situations where the channel that produces maximum geographic co-channel separation may not be the most appropriate channel for a particular airport. In these cases, airport managers petition the Commission for another frequency, a step that consumes both the airport and the Commission's time and resources. In order to reduce these administrative burdens, we propose amending 47 C.F.R. § 87.217(a) to require applicants for a unicom license to request a specific frequency.

46. Only one unicom station may be authorized at an uncontrolled airport.¹⁰⁴ Consequently, we sometimes receive mutually exclusive applications. Our past practice has been to designate competing unicom license applications for hearing. We have found this process to be lengthy, expensive and inefficient. In addition, we note that the Balanced Budget Act of 1997 amended the Communications Act (the Act) to require the Commission to use competitive bidding to resolve mutually exclusive applications for initial licenses, subject to certain exemptions set forth in the statute.¹⁰⁵ The Act also provides that the Commission has an obligation to avoid mutual exclusivity in application and licensing proceedings, if it is in the public interest to do so, through the use of engineering solutions, negotiation, threshold qualifications, service regulations, and other means.¹⁰⁶

¹⁰⁰ 47 C.F.R. § 87.213(b)(1).

¹⁰¹ As of December 31, 2000, there were 19,281 airports in the United States. Control towers operated at 496 of these. There were 75 FAA FSSs and 61 automated flight service stations (AFSSs). FAA Administrator's Fact Book (Jan. 2001). While the establishment of the level of ATC services and navigational facilities at a particular airport is left to the discretion of the airport manager, the FAA has certain regulatory criteria to which these services and facilities must adhere. *See* 14 C.F.R. § 170.

¹⁰² *See* 47 C.F.R. §§ 87.173, 87.217.

¹⁰³ *See* 47 C.F.R. § 87.217(a)(2).

¹⁰⁴ 47 C.F.R. § 87.217(b).

¹⁰⁵ *See* 47 U.S.C. § 309(j)(2). *See generally* Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, *Report and Order and Further Notice of Proposed Rule Making*, WT Docket No. 99-87, 15 FCC Rcd 22709, 22715-17 ¶¶ 13-17 (2000), *petitions for reconsideration pending (BBA Report and Order)*. Formerly, only subscriber-based services were auctionable. *See* 47 U.S.C. § 309(j)(2) (1996).

¹⁰⁶ 47 U.S.C. § 309(j)(6)(E).

47. As a preliminary matter, we note that none of the statutory exemptions from our competitive bidding authority apply to unicom. Specifically, the exemption for public safety radio services is not applicable because it applies only to “private internal radio services.”¹⁰⁷ A private internal service is one for which the licensee does not receive compensation, and all messages are transmitted between fixed or mobile stations of the licensee.¹⁰⁸ Unicom communicate with stations other than those of the licensee. Therefore, we tentatively conclude that unicom are not exempt from competitive bidding.¹⁰⁹ We seek comment on this tentative conclusion.

48. Even though they do not come within the exemption for public safety radio services, we believe that unicom at uncontrolled airports, by transmitting information regarding runway conditions, wind, and weather, provide services that contribute to the safety of life, health, and property. Moreover, unicom frequencies are the only spectrum on which these services can be provided, so entities seeking to perform this function have no other source of spectrum.¹¹⁰ In most instances in which mutually exclusive applications have been filed, one of the applicants is a governmental entity. We do not believe that it is appropriate to compel governmental entities seeking to operate unicom stations to bid against private entities¹¹¹ if there are feasible means of avoiding mutual exclusivity.¹¹² Consequently, we tentatively conclude that it would serve the public interest to adopt a licensing scheme that avoids mutually exclusive unicom applications, at least where government entities are involved.

49. We seek comment, especially from small entities, on what measures we should adopt to avoid mutual exclusivity between unicom applications. One alternative is to assign unicom licenses on a first-come, first-served basis. Another alternative is to provide the airport owner (whether or not a government entity) a priority for the license. In addition, we believe that many instances of competing applications also could be avoided by providing incumbent unicom licensees with a renewal expectancy.¹¹³ Commenters should address these options, which are not mutually exclusive, and may also suggest other means. We also seek comment on whether such means should be used to avoid mutual exclusivity among non-governmental entities, or whether the licensing scheme should permit the filing of competing applications by private entities, which would be resolved by competitive bidding.

¹⁰⁷ 47 U.S.C. § 309(j)(2)(A).

¹⁰⁸ *BBA Report and Order*, 15 FCC Rcd at 22742 ¶ 67.

¹⁰⁹ The other exemptions, for digital television license and educational broadcast stations, *see* 47 U.S.C. § 309(j)(2)(B), (C), clearly do not apply to unicom.

¹¹⁰ This is so because unicom transmissions must be compatible with aircraft radios.

¹¹¹ *Cf. BBA Report and Order*, 15 FCC Rcd at 22750 ¶ 83. *But see id.* at 22751-52 ¶ 87 (public safety entities may, if they so choose, participate in spectrum auctions).

¹¹² Government entities are exempt from the Commission’s fee for participating in a hearing, *see* 47 C.F.R. § 1.1114(f), so the current method of resolving mutually exclusive unicom applications does not impact them financially.

¹¹³ We note that our auction authority extends only to initial licenses, and not to renewals. *See* 47 U.S.C. § 309(j)(1).

L. South San Diego Uncontrolled Airspace Corridor Group

50. The South San Diego Uncontrolled Airspace Corridor Group¹¹⁴ is currently operating under a general aviation special temporary authority (STA) authorizing the use of the frequency 121.95 MHz for air-to-ground and air-to-air communications for aircraft up to 13,000 feet above mean sea level (AMSL) between Imperial Beach, California and Tecate, Mexico.¹¹⁵ This STA authorizes aircraft located in the defined area and involved in parachute jump activities to use the frequency to communicate position reports and safety information. We granted this STA because of the large amount of air traffic in this geographic area (consisting, in large part, of air traffic generated by the activities of military, Federal Government, and local government entities), coupled with the resultant congestion in the aviation frequencies. We note that the FAA supports this STA. Since the STA is, by definition, temporary in nature, while the conditions that created the need for the STA are not temporary in nature, the South San Diego Uncontrolled Airspace Corridor Group must reapply for an extension of this STA within six months and possibly apply for a new STA after the extension expires. We propose to reduce this organization's administrative burden and reduce the Commission's workload by codifying use of 121.95 MHz for air-to-ground and air-to-air communications for aircraft up to 13,000 feet above mean sea level between Imperial Beach, California and Tecate, Mexico in 47 C.F.R. § 87.187. Such a codification would be similar to other portions of our rules applicable to other geographic areas.¹¹⁶ We seek comment on this proposal.

M. Charter Aircraft Call Signs

51. Some U.S. air carriers lease their aircraft to other carriers, both domestic and foreign, under the provisions of "wet lease agreements" governed by the FAA.¹¹⁷ A wet lease is a leasing arrangement whereby a person agrees to provide an entire aircraft and at least one crewmember. The aircraft in question are U.S.-registered and the radio station license of these aircraft is in the name of the aircraft owner. Some of the wet lease agreements specify that the owner/licensee will not use its name or call sign in communications transmissions, but rather the name and call sign of the lessee. Apparently this practice is necessitated when the owner/licensee does not have operating authority in the foreign country under its

¹¹⁴ The South San Diego Uncontrolled Airspace Corridor Group consists of Government (*e.g.*, U.S. Customs, USMC Air Traffic Procedures at Miramar NAS) and non-Government (*e.g.*, City of San Diego-Brown Field Airfield Operations) entities who share a common concern regarding air safety in this area.

¹¹⁵ *See* Letter, dated January 25, 2000 from FCC to Jeff Stone, Aviation Safety Manager, Air Operations Branch, U.S. Customs Service, San Diego, California. The geographical area is defined as: "Airspace located south of the San Diego Class B between Imperial Beach and Tecate:

32-35-00 N. 117-12-00 W. to

32-42-00 N. 116-56-00 W. to

32-41-00 N. 116-41-00 W. to

32-35-00 N. 116-38-00 W. to

32-31-00 N. 117-11-00 W. and return."

¹¹⁶ *See, e.g.*, 47 C.F.R. § 87.187(bb), (cc).

¹¹⁷ *See* 14 C.F.R. Part 119.

own name, but is able to operate using the call sign of the lessee.¹¹⁸

52. Section 87.107 of the Commission's Rules requires all aircraft stations to identify their transmissions by one of several means including (1) the aircraft radio station call sign or (2) the type of aircraft followed by the characters of the registration marking ("N" number) of the aircraft, omitting the prefix letter "N." With respect to the aircraft and the aircraft radio station license that are the subjects of these wet lease agreements and owned and licensed by the U.S. carrier, Section 87.107 requires that the station identification used in transmissions be either the call sign assigned by the FCC to the carrier or the registered number of the aircraft. Thus, any agreement to do otherwise could be deemed contrary to our Rules.

53. We recognize that these wet lease agreements represent a prevalent industry practice. As part of our ongoing effort to develop regulatory schemes that accommodate industry practices that do not compromise the underlying purposes of our Rules, we propose to amend Section 87.107 to allow a lessee to create a temporary call sign using the lessee's carrier call sign followed by the suffix "WLA" denoting that this aircraft is owned by another carrier.¹¹⁹ We seek comment on this proposal.

N. Additional Issues

54. We have observed confusion within segments of the aviation community regarding the legal limits of an aircraft license. We seek comment, especially from small entities, on how we can better inform all segments of the aviation community that an aircraft operating under the authority of a station license or licensed by rule may only transmit on the frequencies for which the aircraft is eligible.

55. Our rules currently require aircraft stations operating on ultralight aircraft to identify themselves by an FCC-assigned control number.¹²⁰ Licensing these stations in this manner has not only become administratively burdensome, but has essentially made the Commission the registrar of ultralight aircraft since the FAA does not license ultralight aircraft. We seek comment on how to develop a licensing scheme that would no longer require the individual licensing of aircraft stations operating from ultralight aircraft without compromising the safety of life and property.

56. As part of our ongoing effort to maintain conformity and accuracy in our rules, we propose to amend 47 C.F.R. § 87.173 by adding an allocation for radiobeacons in the 525-535 kHz band. This allocation exists in the Commission's master frequency table at 47 C.F.R. § 2.106 but is not reflected in the Aviation Radio Service frequency table and applicable rules. As a ministerial matter, we propose the following amendments to 47 C.F.R. § 87.173 to correct typographical errors: changing the reference to "406.25 MHz" to "406.025 MHz" and changing the reference to "510.525 kHz" to "510-525 kHz."

57. We currently allow ground testing of Traffic Alert and Collision Avoidance Systems (TCAS) on 1090 MHz through the use of waivers.¹²¹ Because, as we have stated previously, the use of waivers is

¹¹⁸ See Letter, dated April 5, 2000, from Russ Hammer, Principal Operations Inspector, FAA to FCC.

¹¹⁹ See 47 C.F.R. § 80.123(c), which allows associated land stations of public coast station licensees to identify themselves by the licensee's call sign followed by a unique alphanumeric unit identifier.

¹²⁰ See 47 C.F.R. § 87.107(a)(2).

¹²¹ TCAS is an airborne warning system designed to avert mid-air collisions. See, e.g., Rockwell Collins, Inc., *Order*, 14 FCC Rcd 3340 (WTB PSPWD 1999).

inefficient and resource-intensive, we propose amending our rules to codify this use.

58. As part of our ongoing effort to ensure that our rules stay abreast of technological advances, conform to the rules governing other radio services,¹²² and are responsive to industry needs, we seek comment on whether there are other sections of this part that need to be revised. Additionally, as part of our ongoing effort to streamline our rules, we seek comment as to whether there are portions of the Aviation Radio Service rules that should be eliminated because they are duplicative, outmoded, or otherwise unnecessary.

III. CONCLUSION

59. In view of the foregoing, we propose to amend our Part 87 rules to (1) reflect recent technological advances affecting the aviation radio service; (2) create greater conformity between these rules and other Commission rules; and (3) eliminate regulations that are duplicative, outmoded, or otherwise unnecessary. We invite comment on these matters and our proposed rules that are appended hereto. We also seek comment on any other related modifications to Part 87 that would be in the public interest. Finally, we seek comment regarding the effect of any proposed aviation rule changes on public safety and homeland defense.

IV. PROCEDURAL MATTERS

A. Ex Parte Rules—Permit-But-Disclose Proceeding

60. This is a permit-but-disclose notice and comment rule making proceeding. *Ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided in our Rules.¹²³

B. Regulatory Flexibility Act

61. *Initial Regulatory Flexibility Certification.* We have prepared an Initial Regulatory Flexibility Certification concerning the impact on small entities of the policies and rules proposed by this *Notice*. The Initial Regulatory Flexibility Certification is set forth in Appendix B.

C. Paperwork Reduction Act of 1995 Analysis

62. This *NPRM* contains either a proposed or modified information collection. As part of its continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this *NPRM*, as required by the Paperwork Reduction Act of 1995, Pub. L. No. 104-13. Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the

¹²² See *e.g.*, Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band, *Report and Order*, IB Docket 99-81, 15 FCC Rcd 16127, 16155 ¶ 65 (2000), noting that the Aviation Radio Service rules “must be amended or waived” to permit operation of AMS(R)S aircraft earth stations in the United States in the 2 GHz Mobile Satellite Service frequency bands.

¹²³ See generally 47 C.F.R. §§ 1.1202, 1.1203, 1.1206(a).

respondents, including the use of automated collection techniques or other forms of information technology. Written comments by the public on the proposed and/or modified information collections are due at the same time as other comments to this *NPRM*. Written comments must be submitted by the Office of Management and Budget (OMB) on the proposed and/or modified information collections 60 days from the date of publication of this *NPRM* in the Federal Register. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Judy Boley, Federal Communications Commission, Room 1-C804, 445 Twelfth Street, S.W., Washington, D.C. 20554, or via the Internet to jboley@fcc.gov and to Edward Springer, OMB Desk Officer, 10236 NEOB, 725 17th Street, N.W., Washington, D.C. 20503 or via the Internet to Edward.Springer@omb.eop.gov.

D. Comment Dates

63. Pursuant to Sections 1.415 and 1.419 of our Rules, interested parties may file comments on or before [90 days after Federal Register publication] and reply comments on or before [120 days after Federal Register publication].¹²⁴ Comments may be filed using the Commission's Electronic Filing System (ECFS) or by filing paper copies.¹²⁵

64. Comments filed through the ECFS can be sent as an electronic file via the Internet to <http://www.fcc.gov/e-file/ecfs.html>. Generally, only one copy of an electronic submission must be filed. If multiple docket or rulemaking numbers appear in the caption of this proceeding, however, then commenters must transmit one electronic copy of the comments to each docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To obtain filing instructions for e-mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message, "get form <your e-mail address>." A sample form and directions will be sent in reply.

65. Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, commenters must submit two additional copies for each additional docket or rulemaking number. All filings must be sent to the Commission's Secretary, Magalie Roman Salas, Office of the Secretary, Federal Communications Commission, 445 12th St., S.W., Room TW-A325, Washington, D.C. 20554.

66. Parties who choose to file by paper should also submit their comments on diskette. These diskettes should be submitted to Roberto Mussenden, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau, 445 12th St., S.W., Washington, D.C. 20554. Such a submission should be on a 3.5-inch diskette formatted in an IBM compatible format using Microsoft Word 97 or compatible software. The diskette should be accompanied by a cover letter and should be submitted in "read only" mode. The diskette should be clearly labeled with the commenter's name, proceeding (including the docket number in this case, WT Docket No. 01-289), type of pleading (comment or reply comment), date of submission, and the name of the electronic file on the diskette. The label should also include the following phrase "Disk Copy - Not an Original." Each diskette should contain only one party's pleadings, preferably in a single electronic file. In addition, commenters should send diskette copies to the

¹²⁴ 47 C.F.R. §§ 1.415, 1.419.

¹²⁵ See Electronic Filing of Documents in Rulemaking Proceedings, *Report and Order*, GC Docket No. 97-113, 13 FCC Rcd 11322 (1998).

Commission's copy contractor, Qualex International, Portals II, 445 Twelfth St., S.W., Room CY-B402, Washington, D.C. 20554.

E. Ordering Clauses

67. Accordingly, IT IS ORDERED that, pursuant to Sections 4(i), 303(r), and 403 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(r), 403, this *Notice of Proposed Rule Making* IS HEREBY ADOPTED.

68. IT IS FURTHER ORDERED that the Commission's Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this *Notice of Proposed Rule Making*, including the Initial Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

F. Further Information

69. For further information, contact Jeffrey Tobias, jtobias@fcc.gov, or Ghassan Khalek, gkhalek@fcc.gov, Policy and Rules Branch, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau, (202) 418-0680, or TTY (202) 418-7233.

70. Alternative formats (computer diskette, large print, audiocassette and Braille) are available to persons with disabilities by contacting Brian Millin at (202) 418-7426, TTY 418-7365, or at bmillin@fcc.gov. This *Notice* can also be downloaded at: <http://www.fcc.gov/df/>

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas
Secretary

APPENDIX A: PROPOSED RULES

Parts 2 and 87 of title 47 of the Code of Federal Regulations are proposed to be amended as follows:

**PART 2 -- FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL
RULES AND REGULATIONS**

1. The authority citation for Part 2 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

2. Section 2.106, the Table of Frequency Allocations, is amended as follows:

a. Revise pages 26 and 44.

b. In the list of United States (US) Footnotes, add footnote US343.

§ 2.106 Table of Frequency Allocations.

The revisions and additions read as follows:

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*

	75.4-76 FIXED MOBILE	75.4-87 FIXED MOBILE	75.4-88	75.4-76 FIXED MOBILE NG3 NG49 NG56	Public Mobile (22) Private Land Mobile (90) Personal Radio (95)
S5.175 S5.179 S5.184 S5.187	76-88 BROADCASTING Fixed Mobile	S5.182 S5.183 S5.188		76-88 BROADCASTING	Broadcast Radio (TV) (73) Auxiliary Broadcasting (74)
87.5-100 BROADCASTING	S5.185	87-100 FIXED MOBILE BROADCASTING		NG128 NG129 NG149	
S5.190	88-100 BROADCASTING		88-108	88-108 BROADCASTING	Broadcast Radio (FM) (73) Auxiliary Broadcasting (74)
100-108 BROADCASTING			US93	US93 NG2 NG128 NG129	
S5.192 S5.194					
108-117.975 AERONAUTICAL RADIONAVIGATION			108-117.975 AERONAUTICAL RADIONAVIGATION		Aviation (87)
S5.197			US93 US343		
117.975-137 AERONAUTICAL MOBILE (R)			117.975-121.9375 AERONAUTICAL MOBILE (R)		
			S5.111 S5.199 S5.200 591 US26 US28		
			121.9375-123.0875	121.9375-123.0875 AERONAUTICAL MOBILE	
			591 US30 US31 US33 US80 US102 US213	591 US30 US31 US33 US80 US102 US213	
			123.0875-123.5875 AERONAUTICAL MOBILE		
			S5.200 591 US32 US33 US112		
S5.111 S5.198 S5.199 S5.200 S5.201 S5.202 S5.203 S5.203A S5.203B			See next page for 123.5875-137 MHz		See next page for 123.5875-137 MHz

<p>1530-1535 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) S5.353A Earth exploration-satellite Fixed Mobile except aeronautical mobile S5.341 S5.342 S5.351 S5.354</p>	<p>1530-1535 SPACE OPERATION (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) S5.353A Earth exploration-satellite Fixed Mobile S5.343 S5.341 S5.351 S5.354</p>	<p>1530-1535 MOBILE-SATELLITE (space-to-Earth) MARITIME MOBILE-SATELLITE (space-to-Earth) Mobile (aeronautical telemetry) S5.341 S5.351 US78 US315</p>	<p>Aviation (87)</p>
<p>1535-1559 MOBILE-SATELLITE (space-to-Earth) S5.341 S5.353A S5.354 S5.355 S5.356 S5.357 S5.357A S5.359 S5.362A</p>	<p>1535-1544 MOBILE-SATELLITE (space-to-Earth) MARITIME MOBILE-SATELLITE (space-to-Earth) S5.341 S5.351 US315 1544-1545 MOBILE-SATELLITE (space-to-Earth) S5.341 S5.356 1545-1549.5 AERONAUTICAL MOBILE-SATELLITE (R) (space-to-Earth) Mobile-satellite (space-to-Earth) S5.341 S5.351 US308 US309 1549.5-1558.5 AERONAUTICAL MOBILE-SATELLITE (R) (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) S5.341 S5.351 US308 US309 1558.5-1559 AERONAUTICAL MOBILE-SATELLITE (R) (space-to-Earth) S5.341 S5.351 US308 US309</p>	<p>Satellite Communications (25) Maritime (80) Aviation (87)</p>	
<p>1559-1610 AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) S5.341 S5.355 S5.359 S5.363</p>	<p>1559-1610 AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) S5.341 US208 US260 US343</p>		

UNITED STATES (US) FOOTNOTES

US343 Differential-Global-Positioning-System (DGPS) Stations may be authorized on a primary basis in the bands 108-117.975 MHz and 1559-1610 MHz for the specific purpose of transmitting DGPS information intended for aircraft navigation.

PART 87—AVIATION SERVICES

1. The authority citation for Part 87 continues to read as follows:

AUTHORITY: 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303, 307(e) unless otherwise noted. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-156, 301-609.

2. Section 87.27 is amended to read as follows:

§ 87.27 License term.

(a) Licenses for stations in the aviation services will normally be issued for a term of ten years from the date of original issuance, or renewal.

(b) Licenses for developmental stations will be issued for a period not to exceed one year and are subject to change or to cancellation by the Commission at any time, upon reasonable notice, but without a hearing.

3. Section 87.45 is amended to read as follows:

§ 87.45 Time in which station is placed in operation.

This section applies only to unicom stations and radionavigation land stations, excluding radionavigation land test stations. When a new license has been issued or additional operating frequencies have been authorized, the station or frequencies must be placed in operation no later than one year from the date of the grant. The licensee must notify the Commission in accordance with § 1.946 of this chapter that the station or frequencies have been placed in operation.

4. Section 87.107 is amended by adding paragraph (a)(6) to read as follows:

§ 87.107 Station Identification.

(a) *****

(6) Aircraft operating under Wet Lease Agreements as provided in 14 C.F.R. Part 119 may identify themselves by lessee carrier's call sign, followed by the suffix "WLA."

5. Section 87.109 is amended to read as follows:

§ 87.109 Station Logs.

(a) A station at a fixed location in the international aeronautical mobile service must maintain a log in accordance with Annex 10 of the ICAO Convention.

(b) A station log must contain the following information.

- (1) The name of the agency operating the station.
- (2) The identification of the station.
- (3) The date.
- (4) The time of opening and closing the station.
- (5) The frequencies being guarded and the type of watch (continuous or scheduled) being maintained on each frequency.
- (6) Except at intermediate mechanical relay stations where the provisions of this paragraph need not be complied with, a record of each communication showing text of communication, time communications completed, station(s) communicated with, and frequency used.
- (7) All distress communications and action thereon.
- (8) A brief description of communications conditions and difficulties, including harmful interference. Such entries should include, whenever practicable, the time at which interference was experienced, the character, radio frequency and identification of the interfering signal.
- (9) A brief description of interruption to communications due to equipment failure or other troubles, giving the duration of the interruption and action taken.
- (10) Such additional information as may be considered by the operator to be of value as part of the record of the stations operations.

(c) Stations maintaining written logs must also enter the signature of each operator, with the time the operator assumes and relinquishes a watch.

6. Section 87.131 is amended by revising the table to read as follows:

§ 87.131 Power and emissions.

* * *

Class of station	Frequency band/frequency	Authorized emission(s) ⁹	Maximum power ¹
* * *	* * *	* * *	* * *
Aeronautical enroute and aeronautical fixed.	HF.....	R3E, H3E, J3E, J7B, H2B, J2D	6 kW.
* * *	* * *	* * *	* * *
Aircraft Earth.	UHF.....	G1D, G1E, G1W	80 W. ⁸
* * * * *	* * * * *	* * * * *	* * *

⁸Power may not exceed 80 watts per carrier as measured at the output of the high power amplifier. The maximum EIRP may not exceed 2000 watts per carrier.

7. Section 87.137 is revised by amending the table in paragraph (a) to read as follows:

§ 87.137 Types of Emission.

(a)*****

Class of emission	Emission designator	Authorized bandwidth (kilohertz)		
		Below 50 MHz	Above 50 MHz	Frequency deviation
***	***	***	***	
A3E	8K33A3E		(17)	
***	***	***	***	
F9D	5M0F9D		(9)	
G1D	16K0G1D		20kHz	
***	***	***	***	
G1E ¹⁶	21K0G1E		25	
G1W ¹⁶	21K0G1W		25	
*****	*****	*****	*****	

⁹To be specified on license.

¹⁶Authorized for use by aircraft earth stations. Lower values of necessary and authorized bandwidth are permitted.

¹⁷Only authorized for use by aircraft in international flight or for equipment certification purposes.

8. Section 87.139 is revised by removing paragraph 87.139(i)(2), redesignating paragraphs 87.139(i)(3) and paragraph 87.139(i)(4) as paragraphs 87.139(i)(2) and paragraph 87.139(i)(3) respectively and amending paragraphs 87.139(i)(1) and paragraph 87.139(i)(3) to read as follows:

§ 87.139 Emission limitations.

(i)*****

(1)***

Frequency (MHz)	Attenuation (dB) ¹
0.01 to 1525	135 dB/4 kHz
1525 to 1559	203 dB/4 kHz
1559 to 1585	155 dB/1 MHz
1585 to 1605	143 dB/1 MHz
1605 to 1610	117 dB/1 MHz
1610 to 1610.6	95 dB/MHz
1610.6 to 1613.8	80 dBW/MHz
1613.8 to 1614	95 dB/MHz
1614 to 1626.5	70 dB/4 kHz
1626.5 to 1660	70 dB/4 kHz ²
1660 to 1670	49.5 dB/20 kHz ²
1670 to 1735	60 dB/4 kHz
1735 to 12000	105 dB/4 kHz
12000 to 18000	70 dB/4 kHz

¹These values are expressed in dB below the carrier referenced to the bandwidth indicated, and relative to the maximum emission envelope level, or where the attenuation is shown in dBW, the attenuation is expressed in terms of absolute power referenced to the bandwidth indicated.

²Attenuation measured within the transmit band excludes the band ± 35 kHz of the carrier frequency.

* * * * *

(3) * * *

Frequency Offset (normalized to SR)	Attenuation (dB)
+/-0.75 x SR	0
+/-1.40 x SR	20
+/-2.95 x SR	40

Where: SR = Symbol Rate
 SR = 1 x channel rate for BPSK
 SR = 0.5 x channel rate for QPSK

* * * * *

9. Section 87.147 is amended by adding paragraph (f) and revising paragraph (d) to read as follows:

§ 87.147 Authorization of equipment.

* * * * *

(d) An applicant for certification of equipment intended for transmission in any of the frequency bands listed in paragraph (d)(3) of this section must notify the FAA of the filing of a certification application. The letter of notification must be mailed to: FAA, Office of Spectrum Policy and Management, 800 Independence Ave., S.W., Washington, D.C. 20591 prior to the filing of the application with the Commission.

(2) The certification application must include a copy of the notification letter to the FAA as well as a copy of the FAA's subsequent determination of the equipment's compatibility with the National Airspace System.

(f) Certification may be requested for equipment that has the capability to transmit in the 138-144 MHz, 148-149.9 MHz, or 150.5-150.8 MHz bands as well as frequency bands set forth in Section 87.173 of this part. The Commission will only certify this equipment for use in the bands regulated by this part.

10. Section 87.171 is amended by adding, in alphabetical order, the symbols and class of station for RLP to read as follows:

§ 87.171 Class of station symbols.

GCO – Ground Communication Outlet

RCO – Remote Communications Outlet

RLD – RADAR/TEST

RNV – Radio Navigation Land/DME

RPC – Ramp Control

11. Section 87.173 is amended by revising the table paragraph (b) to read as follows:

§ 87.173 Frequencies.

(b) Frequency table:

Frequency or frequency band	Subpart	Class of station	Remarks
***	***	***	***
510-535 kHz	Q	RLB	Radiobeacons.
***	***	***	***
108.000-117.950 MHz.....	Q	RLO	VHF omni-range
108.000-117.975 MHz.....	Q	DGP	Differential GPS
108.050 MHz.....	Q	RLT	
***	***	***	*****
1435-1535 MHz.....	F, J	MA, FAT	Aeronautical telemetry and telecommand operations.

1559-1610 MHz.....	Q	DGP	Differential GPS
1559-1626.5 MHz.....	F,Q	MA, RL	Aeronautical radionavigation
*****	*****	*****	*****

12. Section 87.187 is amended by adding a new paragraph (dd) to read as follows:

§ 87.187 Frequencies.

(dd) The frequency 121.95 is authorized for air-to-ground and air-to-air communications for aircraft up to 13000 feet above mean sea level (AMSL) within the area bounded by the following coordinates (all coordinates are referenced to North American Datum 1983 (NAD83)):

- 32-35-00 N. Lat.; 117-12-00 W. Long.
- 32-42-00 N. Lat.; 116-56-00 W. Long.
- 32-41-00 N. Lat.; 116-41-00 W. Long.
- 32-35-00 N. Lat.; 116-38-00 W. Long.
- 32-31-00 N. Lat.; 117-11-00 W. Long.

13. Section 87.189 is amended by revising paragraphs (c) to read as follows:

§ 87.189 Requirements for public correspondence equipment and operations.

(c) A continuous watch must be maintained on the frequencies used for safety and regularity of flight while public correspondence communications are being handled. For aircraft earth stations, this requirement is satisfied by compliance with the priority and preemptive access requirements of § 87.187(q).

14. Section 87.217 is amended by revising paragraph (a) to read as follows:

§ 87.217 Frequencies.

(a) Only one unicom frequency will be assigned at any one airport. Applicants must request a particular frequency, which will be taken into consideration when the assignment is made. The frequencies assignable to unicom are:

15. Section 87.475 is amended by revising paragraphs (b)(2) and (c)(2) to read as follows:

§ 87.475 Frequencies.

* * * * *

(b) * * * * *

- (2) Radiobeacon stations enable an aircraft station to determine bearing or direction in relation to the radiobeacon station. Radiobeacons operate in the bands 190-285 kHz; 325-435 kHz; 510-525 kHz; and 525-535 kHz. Radiobeacons may be authorized, primarily for off-shore use, in the band 525-535 kHz on a non-interference basis to travelers information stations.

* * * * *

(c) * * * * *

- (2) The frequencies available for assignment to radionavigation land test stations for the testing of airborne receiving equipment are 108.000 and 108.050 MHz for VHF omni-range; 108.100 and 108.150 MHz for localizer; 334.550 and 334.700 MHz for glide slope; 978 and 979 MHz (X channel)/1104 MHz (Y channel) for DME; 1030 MHz for ATC radar beacon transponders; 1090 MHz for Traffic Alert and Collision Avoidance Systems (TCAS); and 5031.0 MHz for microwave landing systems. Additionally, the frequencies in paragraph (b) of this section may be assigned to radionavigation land test stations after coordination with the FAA. The following conditions apply:

* * * * *

APPENDIX B

INITIAL REGULATORY FLEXIBILITY CERTIFICATION

The Regulatory Flexibility Act (RFA)¹²⁶ requires that an agency prepare a regulatory flexibility analysis for notice-and-comment rulemaking proceedings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities."¹²⁷ The RFA generally defines "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."¹²⁸ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.¹²⁹ A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).¹³⁰

The Commission originally codified the rules governing the Aviation Radio Service at Part 9 of its Rules; but in 1963, the Commission moved them to Part 87, where they reside today.¹³¹ While there have been several additions and amendments to the Aviation Radio Service rules, the Commission has not undertaken an extensive review of these rules since 1988.¹³² The underlying purpose of this *Notice* is to initiate and conduct such a review. The Aviation Radio Service consists of three services: (1) the Aeronautical Mobile Service, which includes aeronautical advisory stations, aeronautical enroute stations, airport control stations, and automatic weather observation stations; (2) the Aeronautical Radionavigation Service, which includes stations used for navigation, obstruction warning, instrument landing, and measurement of altitude and range; and (3) the Aeronautical Fixed Service, which is a system of fixed stations utilizing point-to-point radio communications for aviation safety, navigation, or preparation for flight.

The Aviation Radio Service is an internationally-allocated family of radio services designed to enhance and protect the safety of life and property in air navigation. In this *Notice* we propose to consolidate, revise, and streamline our Part 87 rules governing the Aviation Radio Service. These proposed rule changes are designed to ensure that these rules reflect recent technological advances, as well as ensuring that these rules are consistent with other Commission rules. We are also initiating this proceeding to eliminate regulations that are duplicative, outmoded, or otherwise unnecessary in the Aviation Radio

¹²⁶ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

¹²⁷ See 5 U.S.C. § 605(b).

¹²⁸ 5 U.S.C. § 601(6).

¹²⁹ 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

¹³⁰ 15 U.S.C. § 632.

¹³¹ Reorganization and Revision of Chapter, *Order*, 28 Fed. Reg. 12386, 12388 (1963).

¹³² See Reorganization and Revision of Part 87 Governing the Aviation Services, *Memorandum Opinion and Order*, PR Docket No. 87-214, 3 FCC Rcd 4171 (1988).

Service.

The proposals in the *Notice* are intended to reduce the administrative burden on applicants and entities seeking certification of equipment, ensure that the Commission's rules reflect the latest technical and industry standards, and correct typographical or ministerial errors in the Commission's Rules.¹³³ The changes we propose are of an administrative nature, and will not have a substantial economic impact on small entities. If there is an economic impact on small entities as a result of these proposals, however, we expect the impact to be a positive one.

The Commission therefore certifies, pursuant to the RFA, that the proposals in this *Notice*, if adopted, will not have a significant economic impact on a substantial number of small entities. If commenters believe that the proposals discussed in the *Notice* require additional RFA analysis, they should include a discussion of these issues in their comments and additionally label them as RFA comments. The Commission will send a copy of the *Notice*, including a copy of this initial certification, to the Chief Counsel for Advocacy of the SBA. In addition, a copy of the *Notice* and this initial certification will be published in the Federal Register.¹³⁴

¹³³ For example, we propose to reduce the need for waivers by allowing the certification of certain types of transmitters without the use of waivers. See ¶¶ 22, 28, *supra*. We also seek to ensure that the Commission's Rules concerning the technical standards of AMS(R)S equipment reflects the latest technical standards. See ¶ 7, *supra*. We also propose to correct the Commission's Rules by adding an allocation for radiobeacons in the 525-535 kHz band to ensure that the Part 87 rules conform to the Part 2 rules.

¹³⁴ See 5 U.S.C. § 605(b).