

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

In the Matter of	)	
	)	
Amendment of Parts 2 and 87 of the Commission's	)	
Rules to Accommodate Advanced Digital	)	WT Docket No. 00-77
Communications in the 117.975-137 MHz Band	)	
and to Implement Flight Information Services in	)	RM Nos. 9376, 9462
the 136-137 MHz Band	)	
	)	

**REPORT AND ORDER  
(Proceeding Terminated)**

**Adopted:** April 5, 2001

**Released:** April 13, 2001

By the Commission:

**I. INTRODUCTION AND EXECUTIVE SUMMARY**

1. In this *Report and Order* we adopt, substantially without change, the proposals set forth in the Commission's *Notice of Proposed Rulemaking (NPRM)* in WT Docket No. 00-77.<sup>1</sup> We amend Parts 2 and 87 of the Commission's Rules to (1) permit the Federal Aviation Administration (FAA) to use five additional channels in the 136-136.475 MHz frequency band; (2) authorize the implementation of Flight Information Services (FIS) in the 136-137 MHz band; (3) accommodate digital communications systems throughout the 117.975-137 MHz aeronautical radio spectrum; and (4) clarify that five channels previously reserved for special purpose aeronautical enroute operations in the Gulf of Mexico Region – 136.775 MHz, 136.800 MHz, 136.825 MHz, 136.850 MHz and 136.875 MHz – are no longer so reserved, and thus may be licensed for general purpose aeronautical enroute operations without geographical limitation. The rules we adopt herein depart from the *NPRM* proposals by retaining the frequency 136.500 MHz as part of the aeronautical enroute service and by adding the frequency 136.825 MHz to the four frequencies the Commission proposed to make available for general purpose aeronautical enroute services both within and outside the Gulf of Mexico Region. These rule amendments will enhance the safety of aviation by alleviating spectrum congestion in the aeronautical radio frequency bands and by paving the way for the introduction of FIS and other new digital communications services.

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<sup>1</sup> Amendment of Parts 2 and 87 of the Commission's Rules to Accommodate Advanced Digital Communications in the 117.975-137 MHz Band and to Implement Flight Information Services in the 136-137 MHz Band, *Notice of Proposed Rule Making*, WT Docket No. 00-77, FCC 00-160 (rel. May 15, 2000) (*NPRM*), amended by *Errata* (rel. June 5, 2000). The *NPRM* was published in the Federal Register on July 3, 2000. See 65 Fed. Reg. 41032-41034 (2000). Initially, the deadlines for filing comments and reply comments were July 14, 2000 and August 14, 2000, respectively. On July 3, 2000, the period of time for the filing of comments was extended to August 2, 2000, and the period of time for the filing of reply comments was extended to September 1, 2000. Amendment of Parts 2 and 87 of the Commission's Rules to Accommodate Advanced Digital Communications in the 117.975-137 MHz Band and to Implement Flight Information Services in the 136-137 MHz Band, *Order*, WT Docket No. 00-77, 15 FCC Rcd 11702 (WTB PSPWD 2000).

## II. BACKGROUND

2. On July 5, 1990, the Commission amended Parts 2 and 87 of the rules to permit the operation of aviation stations in the 136-137 MHz band.<sup>2</sup> Forty channels with 25 kHz spacing were made available for assignment.

3. The upper twenty of the forty channels were allotted for aeronautical enroute services.<sup>3</sup> Six of those twenty channels were designated for special purpose enroute services in the Gulf of Mexico Region, an area stretching 180 miles inland from the Gulf shoreline, to be used for helicopter flight following systems.<sup>4</sup> The Commission specified, however, that the reservation of the six channels for helicopter flight following systems in the Gulf of Mexico Region would expire on January 1, 1994.<sup>5</sup> The twenty channels in the 136.5-137 MHz portion of the 136-137 MHz band generally are coordinated by Aeronautical Radio, Inc. (ARINC)<sup>6</sup> for Aircraft Operational Control (AOC) communications, and this portion of the band is commonly referred to as the AOC band.

4. Of the twenty lower channels, fifteen channels were allotted for air traffic control (ATC) of general aviation, including automatic weather observation services (AWOS),<sup>7</sup> automatic terminal

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<sup>2</sup> Amendment of Parts 2 and 87 of Commission's Rules to Permit the Aviation Services to Use Frequencies in the 136-137 MHz Band, *Report and Order*, GEN. Docket No. 89-295, 5 FCC Rcd 3954 (1990) (*Report and Order*), *reconsideration granted in part, Memorandum Opinion & Order*, 6 FCC Rcd 2291 (1991) (*Reconsideration Order*). This action was taken to conform the rules with the Final Acts of the 1979 World Administrative Radio Conference and the Final Acts of the 1987 World Administrative Radio Conference for the Mobile Services, and to address two petitions for rulemaking filed by Aeronautical Radio, Inc. (ARINC) and the American Petroleum Institute (API), respectively.

<sup>3</sup> Aeronautical enroute services provide operational control communications to aircraft along domestic or international air routes. Operational control communications pertain to the safe, efficient and economical operation of aircraft, offering information on matters such as fuel, weather position reports, aircraft performance, and essential services and supplies. 47 C.F.R. § 87.261(a).

<sup>4</sup> In the *Report and Order*, the Commission initially reserved a complement of eight channels for special purpose enroute services in the Gulf of Mexico Region. *Report and Order*, 5 FCC Rcd at 3957 ¶ 27. On reconsideration, however, the Commission reduced the number of reserved channels to six. *Reconsideration Order*, 6 FCC Rcd at 2292 ¶ 13; *see also* 47 C.F.R. § 87.263(a)(5).

<sup>5</sup> *Report and Order*, 5 FCC Rcd at 3957 ¶ 27; *see also* 47 C.F.R. § 87.263(a)(5).

<sup>6</sup> ARINC is a communications company established to coordinate and provide aeronautical enroute telecommunication services and facilities to the aviation industry. ARINC provides air-to-ground and ground-to-air communications for the regularity and efficiency of flight and the safety of aircraft, *i.e.*, communications regarding fuel, weather, aircraft performance, position reports and other essential services. ARINC's principal stockholders and principal customers are the United States scheduled airlines. A number of corporate and general aviation operators also own shares in ARINC. ARINC provides its services to all aircraft operators, including foreign airlines and business and private aircraft, on a not-for-profit, cost sharing, basis. ARINC currently holds over 6,000 licenses, including over 200 assignments in the 136.500-136.975 MHz band. *See Report and Order*, 5 FCC Rcd at 3961 n.1; ARINC Comments on FAA Petition for Rulemaking, RM-9462 (filed April 19, 1999) at 1.

<sup>7</sup> Automatic weather observation services provide pilots with up-to-date weather information including the time of the latest weather sequence, altimeter setting, wind speed and direction, dew point, temperature, visibility and other pertinent data needed at airports that have neither a full-time control tower nor a full-time FAA Flight Service Station. 47 C.F.R. § 87.525.

information services (ATIS),<sup>8</sup> and airport control tower communications (ACTC).<sup>9</sup> These fifteen channels were made available on a shared basis to the FAA.<sup>10</sup> The 136-136.475 MHz portion of the 136-137 MHz band, which is immediately adjacent to the VHF aeronautical mobile (R) radio band at 117.975-136 MHz, is commonly referred to as the ATC band. The remaining five channels in the 136-137 MHz band were held in reserve for future general aviation services.<sup>11</sup>

5. The instant proceeding has its genesis in two petitions for rulemaking. On September 14, 1998, the Small Aircraft Manufacturers Association (SAMA) filed a petition for rulemaking proposing a revision of the aviation rules to permit the use of digital data transmissions generally, and also to designate four channels, to be identified by the FAA, for the implementation of new Flight Information Services<sup>12</sup> in the 136-137 MHz band.<sup>13</sup> On November 19, 1998, the FAA filed a petition for rulemaking addressing use of the 136-137 MHz frequency band.<sup>14</sup> The FAA expressed its support for the SAMA Petition, and also requested reallocation of the 136-137 MHz band from a non-Government allocation to a shared Government/non-Government allocation. On August 3, 1999, the FAA filed comments revising its Petition for Rulemaking to reflect agreements reached between the FAA and the air transport industry, which had opposed the original FAA Petition, regarding implementation of FIS.<sup>15</sup> In the Revised Petition, the FAA

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<sup>8</sup> Automatic terminal information services provide pilots with information regarding aircraft movement within an airport. 47 C.F.R. § 87.525.

<sup>9</sup> Airport control tower communications are operational control communications between pilots and airport control towers regarding aircraft landings and take-offs, and regarding aircraft transiting the airport traffic area on approach and departure. 47 C.F.R. § 87.417

<sup>10</sup> 47 C.F.R. § 2.106 n.US244.

<sup>11</sup> *Report and Order*, 5 FCC Rcd at 3958 ¶ 32.

<sup>12</sup> In an Airborne Flight Information Services Policy Statement issued by the Administrator of the FAA on May 1, 1998, and appended to the SAMA Petition, FIS is described as a service delivered to the cockpit via digital data link that provides information necessary for continued safe flight and for both in-air and on-ground flight planning. FIS includes broadcasts of weather and other advisory information that serve the same purpose as AWOS and ATIS weather reports, but through data rather than voice transmission. The data are provided to the flight crew on a display, either textually or graphically. Examples of FIS products for delivery to the cockpit include the text of weather observations; graphical representations of weather hazard areas, such as thunderstorms; Notices to Airmen; and status of special use airspace. FIS is intended to complement, not replace, the existing voice communications services. Federal Aviation Administration, *Airborne Flight Information Services Policy Statement* (1998) at 1.

<sup>13</sup> SAMA Petition for Rulemaking, RM-9376 (filed September 14, 1998) (SAMA Petition). SAMA is a trade association that is one of the members of the General Aviation Action Plan Coalition, a group that formally requested the FAA to adopt its FIS policy. *Id.* at 2. Comments in response to the SAMA petition were filed by the National Air Transport Association (NATA), the National Business Aviation Association (NBAA), and ARINC. *See NPRM* at ¶ 4 nn.24-26.

<sup>14</sup> FAA Petition for Rulemaking, RM-9462 (filed November 19, 1998) (FAA Petition).

<sup>15</sup> These comments will be referred to as the FAA Revised Petition. The FAA indicated that its original Petition for Rulemaking remains valid except as amended in the FAA Revised Petition. FAA Revised Petition at 1. On November 15, 1999, ARINC filed further comments to clarify its views on the suggested rule changes. *See Letter from John Bartlett, Esq., Wiley, Rein & Fielding, to D'wana Terry, Chief, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau* (dated November 15, 1999) (ARINC Clarification).

proposed four frequencies for FIS.<sup>16</sup> The FAA also proposed associated changes to technical rules regarding, for example, emissions and frequency stability.<sup>17</sup> In addition, however, the FAA continued to press for a shared allocation, but now it sought a reallocation only of the 136-136.475 MHz portion of the 136-137 MHz band.<sup>18</sup>

6. In response to the SAMA and FAA Petitions, and the comments thereon, the Commission issued the *NPRM* on May 15, 2000. The *NPRM* proposed to: (1) reject the FAA's request for a shared allocation of the 136-136.475 MHz band, but to modify footnote US244 in the Table of Frequency Allocations, 47 C.F.R. § 2.106, to permit the FAA to use five additional channels in the 136-136.475 MHz band – specifically, the five reserved channels – on a shared basis for ATC purposes, including FIS; (2) revise specified technical rules (47 C.F.R. §§ 87.131 (power and emissions), 87.133 (frequency stability), 87.137 (types of emission), and 87.139 (emission limitations)) to accommodate advanced digital communications systems throughout the 117.975-137 MHz band; and (3) modify the rules pertaining to special purpose enroute services in the Gulf of Mexico Region to clarify that four of the six channels that had been designated for that purpose, all four of which remain unlicensed, are now available for general purpose aeronautical enroute services.<sup>19</sup> The only comments filed in response to the *NPRM* were filed jointly by ARINC and the Air Transport Association of America, Inc. (ATA).<sup>20</sup> In the only other filing responsive to the *NPRM*, the FAA submitted a letter informing the Commission that it “has no objections to the referenced rulemaking.”<sup>21</sup>

### III. DISCUSSION

#### A. Allocation and Assignment of the Frequencies in the 136-137 MHz Band

7. *Background.* With respect to the FAA's reallocation proposal, the Commission tentatively concluded that “a Federal Government allocation within the 136-137 MHz band is unnecessary to achieve the goals of both the FAA and industry.”<sup>22</sup> Instead, the Commission proposed to amend footnote US244 of 47 C.F.R. § 2.106 to extend the FAA's shared access from fifteen channels to twenty channels in the band. The channels proposed to be added are those that have been held in reserve to date, namely, 136.100 MHz,

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<sup>16</sup> FAA Revised Petition at 1-3. The four frequencies proposed for FIS in the FAA Revised Petition are 136.425 MHz, 136.450 MHz, 136.475 MHz, and 136.500 MHz. The FAA proposed four other channels in its original Petition.

<sup>17</sup> *Id.* at 4.

<sup>18</sup> *Id.* at 2 (proposed amendment of 47 C.F.R. § 2.106).

<sup>19</sup> *NPRM* at ¶ 1.

<sup>20</sup> The ATA is the national trade and service association of the United States airline industry. See ARINC/ATA Comments on FAA Petition for Rulemaking, RM 9462 (filed April 19, 1999) (ARINC/ATA Joint Comments), at 2.

<sup>21</sup> Letter from Mr. George K. Sakai, Program Director for Spectrum Policy and Management, FAA, to Ms. Magalie Roman Salas, Secretary, FCC, dated July 12, 2000. In this letter, the FAA states that it “do[es] not fully agree with the approach that the FCC has taken to deal with the issues concerning the 136-137 MHz band.” It adds, however, that it has no objection to the *NPRM* proposals because “Flight Information Services and other air/ground communications services can be implemented as stated in the ... *NPRM*, in order to provide new aeronautical safety benefits.”

<sup>22</sup> *NPRM* at ¶ 10

136.200 MHz, 136.275 MHz, 136.375 MHz, and 136.475 MHz.<sup>23</sup>

8. *Discussion.* In their comments, ARINC/ATA reiterate support for the approach proposed in the *NPRM* for the allocation and assignment of frequencies in the 136-137 MHz band. While agreeing that the FAA should be given access to the five additional frequencies in conjunction with the authorization of FIS in the 136-137 MHz band, ARINC/ATA contend that “[n]othing has happened [since the band was designated non-Government after the 1979 World Administrative Radio Conference] that would justify changing” the existing, exclusive allocation of the band for non-Government use.<sup>24</sup>

9. We adopt the proposal to maintain the existing allocation of the 136-137 MHz band and to give the FAA access to the five channels that have been held in reserve. We believe that it is unnecessary to reallocate the band for shared use by the Federal Government, especially since the FAA will have access to five additional frequencies in the ATC band. Maintaining the existing allocation will protect ARINC’s current use of the 136-137 MHz frequencies for aircraft operational control communications without having a negative impact on the FAA’s existing rights to use the lower channels on a shared basis for air traffic control purposes. In addition, the existing allocation of the band remains consistent with the Final Acts of the 1979 and 1987 WARC’s. We note that the FAA, in indicating that has no objections to the *NPRM* proposals, has effectively abandoned its earlier requests for a reallocation of the band in this proceeding.

10. We also believe that the public interest will be served by extending the FAA’s existing shared access to 136-137 MHz spectrum to include the specified additional five frequencies in the ATC band. Providing the FAA with access to these five frequencies, as proposed in the *NPRM*, is supported by ARINC/ATA and other aviation industry organizations.<sup>25</sup> This action will permit the deployment of FIS to go forward as contemplated by the FAA and the civil aviation industry, without impairing existing analog aviation communications. We amend footnote US244 to the Section 2.106 Table of Frequency Allocations accordingly.<sup>26</sup>

11. One additional matter regarding the assignment and use of the 136-137 MHz band channels needs to be addressed. ARINC/ATA note that the proposed amendment to the Section 87.173(b) frequency table, as reflected in Appendix B to the *NPRM*, reclassifies the frequency 136.500 MHz, one of the four frequencies proposed to be used for FIS. Currently, the Section 87.173(b) frequency table indicates that the frequency 136.500 MHz is governed by Subpart I of the Part 87 Rules, Aeronautical Enroute and Aeronautical Fixed Stations, and is available for Aircraft (Air Carrier and Private) and Aeronautical Enroute stations.<sup>27</sup> In the proposed amendment, the frequency 136.500 MHz is listed as governed by Subparts O and S of Part 87, governing Airport Control Tower Stations and Automatic Weather Observation Stations, respectively.<sup>28</sup> Thus, this proposed change in the Section 87.173(b)

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<sup>23</sup> *Id.*

<sup>24</sup> ARINC/ATA *NPRM* Comments at 6. (The comments filed jointly by ARINC and ATA in response to the *NPRM* will be referred to herein as ARINC/ATA *NPRM* Comments to distinguish them from the comments filed jointly by ARINC and ATA in response to the FAA Petition for Rulemaking.)

<sup>25</sup> See ARINC/ATA *NPRM* Comments at 6; *NPRM* at ¶ 10 and n55.

<sup>26</sup> See Appendix B, 47 C.F.R. § 2.106, n.US244.

<sup>27</sup> 47 C.F.R. § 87.173(b).

<sup>28</sup> 47 C.F.R. § 87.173(b), as proposed in Appendix B of the *NPRM*.

frequency table would shift the frequency 136.500 MHz from the AOC band to the ATC band. ARINC/ATA oppose this change, stating that it is important that the frequency 136.500 MHz remain in the aeronautical enroute service.<sup>29</sup> We do not believe that it was the Commission's intention to reclassify the frequency 136.500 MHz in this proceeding, but only to authorize its use for FIS. Accordingly, we will retain the existing classification of the frequency in the Section 87.173(b) frequency table.

## B. Digital Communications in the 117.975-137 MHz Band

12. *Background.* The Commission also proposed to make the requisite changes to the technical rules to facilitate the transition from analog to digital aviation communications systems. It specifically proposed to amend Sections 87.131<sup>30</sup> (power and emissions), 87.133<sup>31</sup> (frequency stability), 87.137<sup>32</sup> (types of emission), and 87.139<sup>33</sup> (emission limitations) to add the emissions classes for phase modulation digital data transmission (G1D and G7D) as permissible throughout the entire 117.975-137 MHz band.<sup>34</sup> The FAA appeared to propose that the Commission limit communications within the 136-136.475 MHz band to VHF digital link (VDL) Mode 3 data transmissions, and also sought to limit use of the 136-137 MHz band in its entirety to digital-only systems using International Civil Aviation Organization (ICAO) standards (or systems compatible with those standards).<sup>35</sup> On the other hand, ARINC and the ATA asserted that VDL Mode 2 data transmissions, as well as VDL Mode 3 data transmissions, should be permitted in the 136-136.475 MHz band, and that no digital-only restriction should be placed on the AOC channels from 136.5-137 MHz.<sup>36</sup> The *NPRM* proposed to allow the use of both VDL Mode 2 and VDL Mode 3 in the 117.975-137 MHz band without limitation.<sup>37</sup> This approach, the Commission tentatively concluded, "would permit compatibility, flexibility, and efficiency while the aviation community transitions to the future digital air/ground communications system."<sup>38</sup>

13. *Discussion.* ARINC/ATA, in their comments to the *NPRM*, express their continued support for this approach. They note that ARINC and the air transport industry have already invested tens of millions of dollars in the development of a new higher capacity VDL Mode 2 infrastructure which ARINC hopes to begin deploying in 2001. They further note that both VDL Mode 2 and VDL Mode 3

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<sup>29</sup> ARINC/ATA *NPRM* Comments at 6.

<sup>30</sup> 47 C.F.R. § 87.131.

<sup>31</sup> 47 C.F.R. § 87.133.

<sup>32</sup> 47 C.F.R. § 87.137.

<sup>33</sup> 47 C.F.R. § 87.139.

<sup>34</sup> *NPRM* at ¶ 13.

<sup>35</sup> FAA Petition at 2, 4-5; FAA Revised Petition at 2-3.

<sup>36</sup> ARINC/ATA Joint Comments at 6. The G1D emission (emission designator 14K0G1D) is necessary for VDL Mode 2 transmission. The G7D emission (emission designator 14K0G7D) is necessary for VDL Mode 3 transmission.

<sup>37</sup> *NPRM* at ¶ 17.

<sup>38</sup> *Id.*

have received international approval in the Standards and Recommended Practices (SARPs) of the ICAO.<sup>39</sup>

14. We agree that we should accommodate digital communications in the 117.975-137 MHz band and allow the use of both VDL Mode 2 and VDL Mode 3 throughout the band without limitation. Authorizing G1D and G7D emissions, in conjunction with the other rule changes adopted herein, will help to alleviate congestion in the VHF aeronautical spectrum and will permit the introduction of FIS and other advanced services that will enhance the safety of flight.<sup>40</sup> We also believe that placing no restrictions on the types of digital technologies that may operate in the 136-137 MHz band or, for that matter, the entire 117.975-137 MHz band will promote flexibility and efficiency during the transition to digital aviation communications systems. It will allow the FAA to move ahead with its plans to deploy a VDL Mode 3 system in the near future, while at the same time addressing aviation industry concerns that the significant investment in VDL Mode 2 technology not be stranded.

### C. Flight Information Services

15. *Background.* In the *NPRM*, the Commission proposed to authorize FIS in the 136-137 MHz band, as urged by SAMA and the FAA in their Petitions for Rulemaking, and supported generally by the industry.<sup>41</sup> It noted SAMA's contention that the 136-137 MHz band is singularly suitable for FIS because the band currently is not used extensively due to the fact that very few general aviation aircraft have voice radios that can tune to this band.<sup>42</sup> SAMA further explained that aircraft wishing to receive FIS broadcasts could purchase an FIS receiver that tunes to those frequencies only, and that avionics manufacturers have already introduced low-cost radio receivers suitable for FIS broadcasts in the 136-137 MHz band.<sup>43</sup>

16. However, the Commission also tentatively concluded that, contrary to SAMA's suggestion, designating four specific channels for FIS in footnote US244 was not necessary and might curtail flexibility. Nonetheless, the four channels favored by the FAA for FIS – 136.425 MHz, 136.450 MHz, 136.475 MHz, and 136.500 MHz – were designated as such in proposed new Section 87.187(dd),<sup>44</sup> along with a prohibition on their use for transmissions *from* aircraft.<sup>45</sup> The Commission also requested

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<sup>39</sup> ARINC/ATA Comments at 7. ARINC/ATA explain that VDL Mode 3 is similar to VDL Mode 2 except that it is designed to use TDMA technology to create four data streams from the 31.5 kb/s data capacity of VDL Mode 2 transmission. *See also* FAA Petition at 2.

<sup>40</sup> We note that the emission designator 14K0G7D was added to Section 87.137(a) in an earlier Report and Order. *See* Amendment of Part 87 of the Commission's Rules to Permit Automatic Operation of Aeronautical Advisory Stations (Unicom) and Amendment of Part 87 to Permit the Use of 112-118 MHz for Differential Global Positioning System (GPS) Correction Data and the Use of Hand-Held Transmitters on Frequencies in the Aeronautical Enroute Service, *Report and Order*, WT Docket Nos. 96-1, 96-211, 14 FCC Rcd 3722, 3743 (1999).

<sup>41</sup> *NPRM* at ¶ 11.

<sup>42</sup> *Id.* According to SAMA, most general aviation aircraft have 720-channel transceivers that tune up to 136 MHz, and only the newest transceivers have a 760-channel capability that can tune as well to the forty channels in the 136-137 MHz band.

<sup>43</sup> *Id.*

<sup>44</sup> 47 C.F.R. § 87.187(dd), as proposed in Appendix B of the *NPRM*.

<sup>45</sup> *NPRM* at ¶ 12 and Appendix B.

comment on whether the new service should be termed “Flight Information Service (FIS),” as used in both the FAA and SAMA Petitions, or “Flight Information Service-Broadcast (FIS-B),” as used by ARINC in its comments. The Commission questioned whether FIS-B and FIS are synonymous or whether the different terms reflect actual differences in the nature of the service; the *NPRM* noted, in this regard, that FIS-B appears to permit users to customize their data displays whereas FIS contemplates a uniform display.<sup>46</sup>

17. *Discussion.* ARINC/ATA support the proposals for authorizing FIS in the 136-137 MHz band. They also agree specifically with the proposal to limit the FIS frequencies to ground-to-air use only, stating that this limitation “is important from a spectrum management standpoint.”<sup>47</sup> On the question of terminology, ARINC/ATA explain that they prefer FIS-B over FIS because the former better conveys the one-way, broadcast nature of the service and that it is not limited to the specific weather advisory described in the *NPRM*.<sup>48</sup>

18. We conclude that FIS should be authorized in the 136-137 MHz band as proposed. The desire to accommodate FIS in the 136-137 MHz band was a primary impetus for this rulemaking proceeding, and all parties agree that deployment of FIS will serve the public interest. This action paves the way for the implementation of a new digital data service that will enhance flight safety in the frequency band identified by both the FAA and the industry as most suitable for that service. We designate as FIS frequencies the four frequencies identified by the FAA and ARINC/ATA in their pleadings, and we will list them as such in Section 87.187(dd) of the Rules,<sup>49</sup> along with a prohibition on their use for transmissions from aircraft. Prohibiting aircraft transmission will ensure that FIS is used for its intended purpose, will promote spectrum efficiency, and will minimize the time for needed for aircraft reception of an entire FIS data transmission. These actions, moreover, reflect an FAA/industry consensus on how best to implement FIS. We will refer to the new service in our Rules as “Flight Information Service-Broadcast (FIS-B)” because this terminology better connotes the one-way, broadcast nature of the service.

#### **D. Aeronautical Enroute Frequencies in the Gulf of Mexico Region**

19. *Background.* The Commission proposed in the *NPRM* to modify Section 87.263(a) of the Rules<sup>50</sup> to clarify that four channels, 136.775 MHz, 136.800 MHz, 136.850 MHz, and 136.875 MHz, that had been reserved “until January 1, 1994”<sup>51</sup> for special purpose aeronautical enroute services in the Gulf of Mexico Region to accommodate helicopter flight following systems, but were never licensed pursuant to that provision, are now available for general purpose aeronautical enroute services domestically without

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<sup>46</sup> *Id.* at ¶ 12.

<sup>47</sup> ARINC/ATA *NPRM* Comments at 4. Elaborating on this point, ARINC/ATA explain that FIS is intended to provide a continuous broadcast of data by the ground station so that the time required for the aircraft to receive the entire broadcast is minimized. Were aircraft transmissions permitted, interference concerns would require a significant increase in ground station separations, making frequency reuse difficult. *Id.* at 4-5. *See also* ARINC Clarification at 3 (“If aircraft transmissions are permitted, the separation required between co-channel frequency assignments would essentially be doubled, which would result in less efficient spectrum utilization.”).

<sup>48</sup> ARINC/ATA *NPRM* Comments at n10.

<sup>49</sup> 47 C.F.R. § 87.187(dd).

<sup>50</sup> 47 C.F.R. § 87.263(a).

<sup>51</sup> 47 C.F.R. § 87.263(a)(5).

geographic limitation.<sup>52</sup> It proposed to retain the special purpose classification of the remaining two channels that had been reserved for helicopter flight following operations in the Gulf of Mexico Region, 136.750 MHz and 136.825 MHz, because those two channels have been licensed to Chevron USA, Inc. and Offshore Logistics, Inc., respectively.<sup>53</sup>

20. *Discussion.* ARINC/ATA generally applaud the tentative decision to clarify the status of the aeronautical enroute channels that had been reserved for helicopter flight following systems in the Gulf of Mexico Region, but they argue that only one channel, not the two channels specified in the *NPRM*, should continue to be designated for helicopter flight following service in the Gulf of Mexico Region.<sup>54</sup> ARINC/ATA agree that the special purpose status of frequency 136.750 MHz, which was licensed to Chevron Industries, Inc. at a number of sites in the Gulf of Mexico Region prior to 1994, should be retained. ARINC/ATA fault our proposal to similarly protect the frequency 136.825 MHz, which is licensed to Offshore Logistics, Inc. at Houma, Louisiana, however, because it was first licensed on June 12, 1997, well after the January 1, 1994 date established by the Commission for terminating the special purpose allotment of the channels. While ARINC/ATA concede that the Offshore Logistics operation should not be subject to interference by subsequent assignments on the channel, they believe that “the range of protection that would be afforded by the Commission’s proposal is much greater than is required to protect helicopter operations out of Houma.”<sup>55</sup> ARINC pledges to protect Offshore Logistics’s Houma operations through the exercise of sound frequency management, but ARINC/ATA maintain that the additional protection to be accorded to these operations under the proposal in the *NPRM* is both unnecessary and contrary to the Commission’s position when it reserved the channels.<sup>56</sup>

21. We agree with ARINC/ATA that the public interest will be served by clarifying that the reservation of these six channels for special purpose aeronautical enroute services in the Gulf of Mexico Region has expired, and by making five of the channels, all but 136.750 MHz, available for general purpose aeronautical enroute service both inside and outside the Gulf of Mexico Region. Existing Section 87.263(a)(5) and both the 1990 *Report and Order* and the 1991 *Reconsideration Order* in Gen. Docket No. 89-295 state unequivocally that the reservation of these channels for helicopter flight following systems in the Gulf of Mexico Region is to expire on January 1, 1994.<sup>57</sup> Since Offshore Logistics acquired its license for 136.825 MHz at Houma in 1997, it cannot claim any reasonable reliance interest in the continuation of the channel’s special status; in fact, the frequency had lost that status even prior to the licensing of Offshore Logistics. We note that Offshore Logistics’ existing Houma helicopter flight

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<sup>52</sup> *NPRM* at ¶ 19.

<sup>53</sup> *Id.* at ¶ 19 and n97.

<sup>54</sup> ARINC/ATA *NPRM* Comments at 3.

<sup>55</sup> *Id.* at 8.

<sup>56</sup> *Id.* at 9. Although ARINC/ATA cite only to proposed rule Section 87.263(a)(5), the same considerations that would warrant deletion of the reference to 136.825 MHz in Section 87.263(a)(5) would warrant deletion of the reference to 136.825 MHz in Section 87.263(a)(1).

<sup>57</sup> See 47 C.F.R. § 87.263(a)(5); *Report and Order*, 5 FCC Rcd at 3957 ¶ 27; *Reconsideration Order*, 6 FCC Rcd at 2292 ¶ 12.

following operations will be protected from interference from subsequent assignments on the channel.<sup>58</sup> We note as well that ARINC/ATA concede that the frequency 136.750 MHz should remain designated for special purpose enroute services in the Gulf because it was licensed to Chevron Industries at various locations prior to 1994.

#### E. Other Matters

22. In addition, we note that the proposed amendment of Section 87.263(a) set forth in Appendix B of the *NPRM*<sup>59</sup> omitted the current second sentence. No party has suggested removing this sentence, and we believe this omission to have been unintentional. Accordingly, the rule, as amended herein, will retain this sentence.

23. Finally, we will modify slightly the language of the proposed amendment of Section 87.263(a)(1) in the interest of clarity. After incorporating in the language of the proposed rule the decision to remove the frequency 136.825 MHz from the reservation of frequencies for special purpose enroute service in the Gulf of Mexico Region,<sup>60</sup> the first sentence of the proposed rule would read: “Frequencies in the 128.8125-132.125 MHz and 136.4875-137.00 MHz bands are available to serve domestic routes, except that the frequency 136.750 MHz is also available to aeronautical enroute stations located at least 288 kilometers (180 miles) from the Gulf of Mexico shoreline (outside the Gulf of Mexico region).” The use of the word *also* makes sense in the existing version of the rule because the frequencies in the upper half of the 136-137 MHz band that are available for general purpose aeronautical enroute services are listed individually. That is, the frequencies available without limitation are listed one by one, and the rule then states that the six reserved frequencies, not previously mentioned, are *also* available, albeit only outside the Gulf of Mexico Region. In the proposed amendment of Section 87.263(a), however, the generally available frequencies are not listed individually, but in two ranges. It is therefore more appropriate to phrase the first sentence of Section 87.263(a)(1), as amended herein, to read: “Frequencies in the 128.8125-132.125 MHz and 136.4875-137.00 MHz bands are available to serve domestic routes, except that the frequency 136.750 MHz is available *only* to aeronautical enroute stations located at least 288 kilometers (180 miles) from the Gulf of Mexico shoreline (outside the Gulf of Mexico Region).” (Emphasis added.) As before, the use of the frequency 136.750 MHz within the Gulf of Mexico Region is governed by Section 87.263(a)(5) of the Rules.

#### IV. CONCLUSION

24. In this *Report and Order*, we amend Parts 2 and 87 of our Rules to provide additional spectrum resources for the FAA and the aviation industry, to permit the introduction of advanced digital communications systems in the 117.975-137 MHz aeronautical radio spectrum generally, and to permit, in particular, the introduction of new Flight Information Services-Broadcast in the 136-137 MHz frequency band. The FAA has been given access to five additional frequencies in the 136-137 MHz band, and additional spectrum has also been made available for general purpose aeronautical enroute service through the clarification of the status of the channels formerly reserved for helicopter flight following systems in the Gulf of Mexico Region. Further, by accommodating the deployment of FIS-B and other advanced aviation

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<sup>58</sup> In addition, Offshore Logistics is not foreclosed by this action from applying to add stations or otherwise modify its facilities in the Gulf Of Mexico Region. Any such modification, however, would need to be coordinated to avoid interference to general purpose aeronautical enroute operations.

<sup>59</sup> *NPRM* at Appendix B, proposed Section 87.263(a).

<sup>60</sup> *See supra*, ¶ 21.

communications systems, this action will bring benefits of efficiency and, more importantly, safety to carriers and passengers traveling in United States airspace.

## V. ADMINISTRATIVE MATTERS

### A. Final Regulatory Flexibility Analysis

25. As required by the Regulatory Flexibility Act, see 5 U.S.C. § 604, the Commission has prepared a Final Regulatory Flexibility Analysis of the possible impact of the rule changes contained in this *Report and Order* on small entities. The Final Regulatory Flexibility Act analysis is set forth in Appendix A. The Commission's Consumer Information Bureau, Reference Information Center, will send a copy of this *Report and Order*, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

### B. Paperwork Reduction Act

26. This *Report and Order* does not contain any new or modified information collection. Therefore, it is not subject to the requirements for a paperwork reduction analysis, and the Commission has not performed one.

### C. Ordering Clauses

27. Authority for issuance of this *Report and Order* is contained in Sections 1, 4(i), 302, 303(f) and (r), 332, and 337 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 302, 303(f) and (r), 337.

28. Accordingly, IT IS ORDERED pursuant to Sections 1, 4(i), 302, 303(f) and (r), 332, and 337 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 302, 303(f) and (r), 337, that Parts 2 and 87 of the Commission's Rules, 47 C.F.R. Parts 2 and 87, ARE AMENDED as set forth in Appendix B, effective thirty days after publication of this *Report and Order* in the Federal Register.

29. IT IS FURTHER ORDERED that the Commission's Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this *Report and Order*, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

30. IT IS FURTHER ORDERED that this proceeding is TERMINATED.

### D. Contacts for Information

31. For further information, contact Jeffrey Tobias, Wireless Telecommunications Bureau, Public Safety and Private Wireless Division, at (202) 418-1617, TTY (202) 418-7233.

32. Alternative formats (computer diskette, large print, audio cassette, and Braille) are available to persons with disabilities by contacting Martha Contee at (202) 418-0260, TTY (202) 418-2555, or via e-mail to [mcontee@fcc.gov](mailto:mcontee@fcc.gov). This *Report and Order* can be downloaded at <http://www.fcc.gov/Wireless/Orders/2001/fcc01122.txt>.

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas  
Secretary

**APPENDIX A****FINAL REGULATORY FLEXIBILITY ANALYSIS**

As required by the Regulatory Flexibility Act (RFA),<sup>1</sup> an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rulemaking* in WT Docket No. 00-77 (*NPRM*).<sup>2</sup> The Commission sought written public comments on the proposals in the *NPRM*, including on the IRFA. The Commission's Final Regulatory Flexibility Analysis (FRFA) in this *Report and Order* in WT Docket 00-77 (*Report and Order*) conforms to the RFA.<sup>3</sup>

**I. Need for, and Objectives of, the *Report and Order***

1. Our objective in this proceeding is to address increasing spectrum congestion within the 117.975-136 MHz band stemming from increasing air traffic control communications requirements that cause frequency assignments in this band to grow about four percent annually. To alleviate this congestion in spectrum used for aviation communications vital to the safety of flight, while providing the Federal Aviation Administration (FAA) with the latitude it needs to meet its statutory role in administering the civil aviation communications spectrum, there needs to be a transition to new digital communications technology. The *Report and Order*, and the rules adopted therein, accommodate this need by revising technical requirements so as to permit the introduction of new digital aviation communication systems in the 117.975-136 MHz band generally, and the introduction specifically of a new digital data service known as Flight Information Service-Broadcast (FIS-B) on four channels in the 136-137 MHz portion of the band. The adopted rules further alleviate problems of spectrum scarcity in the 136-137 MHz band by giving the FAA shared access to five additional frequencies between 136.000 MHz and 136.475 MHz and by clarifying the availability for general purpose aeronautical enroute service communications of five frequencies between 136.750 MHz and 136.875 MHz, inclusive.

**II. Summary of Significant Issues Raised by Public Comments in Response to the IRFA**

2. No comments were filed in direct response to the IRFA.

**III. Description and Estimate of the Number of Small Entities to Which the Rules Will Apply**

3. Under the RFA, small entities may include small organizations, small businesses, and small governmental jurisdictions, or entities. 5 U.S.C. § 601(6). The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term "small entity" as having the same meaning

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<sup>1</sup> See 5 U.S.C. § 603. The RFA, 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).

<sup>2</sup> Amendment of Parts 2 and 87 of the Commission's Rules to Accommodate Advanced Digital Communications in the 117.975-137 MHz Band and to Implement Flight Information Services in the 136-137 MHz Band, WT Docket No. 00-77, *Notice of Proposed Rule Making*, FCC 00-160 (2000) (*NPRM*), amended by *Errata* (rel. June 5, 2000).

<sup>3</sup> See 5 U.S.C. § 604.

as the terms “small business,” “small organization,” and “small governmental jurisdiction.” 5 U.S.C. § 601(3). In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act. A small business concern is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.<sup>4</sup> 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 SBA, 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.”

4. A small organization is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”<sup>5</sup> Nationwide, as of 1992, there were approximately 275,801 small organizations.<sup>6</sup> The definition of “small governmental jurisdiction” is one with populations of fewer than 50,000.<sup>7</sup> There are 85,006 governmental jurisdictions in the nation.<sup>8</sup> This number includes such entities as states, counties, cities, utility districts and school districts. There are no figures available on what portion of this number has populations of fewer than 50,000. However, this number includes 38,978 counties, cities and towns, and of those, 37,556, or 96 percent, have populations of fewer than 50,000.<sup>9</sup> The Census Bureau estimates that this ratio is approximately accurate for all government entities. Thus, of the 85,006 governmental entities, we estimate that 96 percent, or about 81,600, are small entities that may be affected by our rules. Nationwide, there are 4.44 million small business firms, according to SBA reporting data.<sup>10</sup>

5. The rules adopted in this *Report and Order* will affect small businesses that use, manufacture, design, import, or sell transceivers or other radio equipment intended to operate in the frequency band 117.975-137 MHz for the provision of aviation communications. There are no Commission-imposed requirements, however, for any entity to use these products. The adopted rules will benefit small entities that use such equipment, moreover, because they will enhance the safety and efficiency of aircraft navigation. At this time, the Commission does not have access to data that would permit a meaningful estimate of the number of small entities potentially affected by the adopted rules. Therefore, we will use the SBA definition of manufacturers of Radio and Television Broadcasting and Communications Equipment. According to the SBA's regulations, manufacturers of transceivers and radio equipment must have 750 or fewer employees in order to qualify as a small business concern.<sup>11</sup> Census Bureau data indicates that there are 858 U.S. firms that manufacture radio and television broadcasting and

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<sup>4</sup> 5 U.S.C. § 632.

<sup>5</sup> *Id.* § 601(4).

<sup>6</sup> Department of Commerce, U.S. Bureau of the Census, 1992 Economic Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the U.S. Small Business Administration).

<sup>7</sup> 5 U.S.C. § 601(5).

<sup>8</sup> 1992 Census of Governments, U.S. Bureau of the Census, U.S. Department of Commerce.

<sup>9</sup> *Id.*

<sup>10</sup> *See* 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the U.S. Small Business Administration).

<sup>11</sup> 13 C.F.R. §121.201, SIC Code 3663.

communications equipment, and that 778 of these firms have fewer than 750 employees and would be classified as small entities.<sup>12</sup> The Census Bureau category is very broad, and specific figures are not available as to how many of these firms are exclusive manufacturers of transceivers and radio equipment or how many are independently owned and operated.

#### **IV. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements**

6. No new reporting, recordkeeping, or other compliance requirements would be imposed on applicants or licensees as a result of the actions taken in this rulemaking proceeding.

#### **V. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

7. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.<sup>13</sup> The rules adopted in the *Report and Order* do not impose any new reporting or compliance requirements, but only permit additional uses of existing Aviation Radio Service frequencies and the establishment of a new service. The rules adopted will accommodate the deployment of new digital transceivers designed to operate in the VHF aeronautical frequency bands, but the Commission has not specified design standards for such equipment; the *Report and Order* affects only the technical, performance standards for the use of the frequencies at issue. These rules reflect, moreover, a consensus among the FAA and the civil aviation industry regarding the best means of implementing FIS-B and other advanced digital aviation communications services. No parties commenting on the *NPRM* recommended any significant alternatives to the rules adopted.

#### **VI. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules**

8. None.

**Report to Congress:** The Commission will send a copy of this Report and Order, including this FRFA, in a report to be sent to Congress pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996, *see* 5 U.S.C. § 801(a)(1)(A). In addition, the Commission will send a copy of this *Report and Order*, including FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A copy of the *Report and Order* and FRFA (or summaries thereof) will also be published in the Federal Register. *See* 5 U.S.C. § 604(b).

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<sup>12</sup> U.S. Dept. of Commerce, 1992 Census of Transportation, Communications and Utilities, Table ID, (issued May 1995), SIC category 3663.

<sup>13</sup> 5 U.S.C. § 603.

**APPENDIX B**

**FINAL RULES**

Parts 2 and 87 of Title 47 of the Code of Federal Regulations are amended as follows:

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 is amended by revising footnote US244 to read as follows:

**§ 2.106 Table of Frequency Allocations.**

\* \* \* \* \*

US244 The band 136.000-137.000 MHz is allocated to the non-Federal Government aeronautical mobile (R) service on a primary basis, and is subject to pertinent international treaties and agreements. The frequencies 136.000, 136.025, 136.050, 136.075, 136.100, 136.125, 136.150, 136.175, 136.200, 136.225, 136.250, 136.275, 136.300, 136.325, 136.350, 136.375, 136.400, 136.425, 136.450, and 136.475 MHz are available on a shared basis to the Federal Aviation Administration for air traffic control purposes, such as automatic weather observation stations (AWOS), automatic terminal information services (ATIS), flight information services-broadcast (FIS-B), and airport control tower communications. Existing operational meteorological satellites in the band 136-137 MHz may continue to operate on a not-to-interfere basis to aeronautical mobile (R) stations, until January 1, 2002. No new assignments will be made to stations in the meteorological-satellite service.

\* \* \* \* \*

**Part 87 - AVIATION SERVICES**

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

AUTHORITY: 47 U.S.C. §§ 154, 303, and 307(e), unless otherwise noted.

4. Section 87.131 is revised to read as follows:

**§ 87.131 Power and emissions.**

\* \* \*

Class of station	Frequency band/ frequency	Authorized emission(s)	Maximum power <sup>1</sup>
*** Aeronautical multicom	*** VHF	*** A3E	*** 10 watts
Aeronautical enroute and aeronautical fixed.	*** VHF..... ....	*** A3E, G1D.....	*** A9W, 200 watts. <sup>2</sup>
Aeronautical search and rescue	VHF ***	A3E ***	10 watts ***
***	***	***	***

Aviation support	VHF	A3E		50 watts
Airport control tower.....	VHF.....	A3E, G7D.....	G1D,	50 watts.
Aeronautical utility mobile	VHF	A3E		10 watts
***	***	***		***
Aeronautical Frequencies				
Aircraft (Communication).....	***	***		***
***	VHF.....	A3E, A9W, G7D.....	G1D,	55 watts.
***	***	***		***
***				

5. Section 87.133 is amended by revising the table in paragraph (a) to read as follows:

**§ 87.133 Frequency stability.**

(a) \*\*\*

Frequency band (lower limit exclusive, upper limit inclusive), and categories of stations	Tolerance <sup>1</sup>	Tolerance <sup>2</sup>
(4) Band—29.7 to 100 MHz ***	***	***
(5) Band—108 to 137 MHz: Aeronautical stations..... *** Aircraft and other mobile stations in the Aviation Services. ***	*** *** 450 50 <sup>5</sup> ***	*** *** 20 <sup>12</sup> 30 <sup>13</sup> ***
(6) Band—137 to 470 MHz ***	***	***

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<sup>12</sup>For emissions G1D and G7D, the tolerance is 2 parts per 10<sup>6</sup>.

<sup>13</sup>For emissions G1D and G7D, the tolerance is 5 parts per 10<sup>6</sup>.

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6. Section 87.137 is amended, by revising 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
***				
G1D	16K0G1D		20kHz	
G1D	14K0G1D		25	

G1E <sup>16(17)</sup>	21K0G1E		25	
***	***			

7. Section 87.139 is amended, by adding new paragraphs (k), (1), (2), and (3) to read as follows:

**§ 87.139 Emission limitations.**

\*\*\*\*\*

(k) For VHF aeronautical stations and aircraft stations operating with G1D or G7D emissions:

(1) The amount of power measured across either first adjacent 25 kHz channel shall not exceed 0 dBm.

(2) The amount of power measured across either second adjacent channel shall be less than -25 dBm and the power measured in any other adjacent 25 kHz channels shall monotonically decrease at a rate of at least 5 dB per octave to a maximum value of -52 dBm.

(3) The amount of power measured over a 16 kHz channel bandwidth centered on the first adjacent 25 kHz channel shall not exceed -20 dBm.

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

**§ 87.173 Frequencies.**

\*\*\*\*\*

(b) Frequency table:

Frequency or frequency band	Subpart	Class of station	Remarks
***	***	***	***
132.025-135.975 MHz	O	MA, FAC, FAW	25 kHz channel spacing
136.000-136.400 MHz.....	O, S	MA, FAC, FAW	Air traffic control operations; 25 kHz channel spacing.
136.425 MHz.....	O, S	MA, FAC, FAW	Air traffic control operations.
136.450 MHz.....	O, S	MA, FAC, FAW	Air traffic control operations.
136.475 MHz.....	O, S	MA, FAC, FAW	Air traffic control operations.
136.500-136.875 MHz.....	I	MA, FAE	Domestic VHF; 25 kHz channel spacing.
136.900 MHz.....	I	MA, FAE	International and domestic VHF.
136.925 MHz.....	I	MA, FAE	International and domestic VHF.
136.950 MHz.....	I	MA, FAE	International and domestic VHF.
136.975 MHz.....	I ***	MA, FAE ***	International and domestic VHF. ***
143.750 MHz	R	MA, FAP	Civil Air Patrol
***			

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

**§ 87.187 Frequencies.**

\* \* \* \* \*

(dd) The frequencies 136.425, 136.450, 136.475, and 136.500 MHz are designated for flight information services-broadcast (FIS-B) and may not be used by aircraft for transmission.

10. Section 87.263 is amended by revising paragraphs (a)(1) and (a)(5) to read as follows:

**§ 87.263 Frequencies.**

(a) *Domestic VHF service.* (1) Frequencies in the 128.8125-132.125 MHz and 136.4875-137.00 MHz bands are available to serve domestic routes, except that the frequency 136.750 MHz is available only to aeronautical enroute stations located at least 288 kilometers (180 miles) from the Gulf of Mexico shoreline (outside the Gulf of Mexico region). The frequencies 136.900 MHz, 136.925 MHz, 136.950 MHz and 136.975 MHz are available to serve domestic and international routes. Frequency assignments are based on 25 kHz spacing. Use of these frequencies must be compatible with existing operations and must be in accordance with pertinent international treaties and agreements.

\* \* \* \* \*

(5) The frequency 136.750 MHz is available in the Gulf of Mexico Region to serve domestic routes over the Gulf of Mexico and adjacent coastal areas. Assignment of this frequency in the Gulf of Mexico Region shall be to licensees first licensed on this frequency in the Gulf of Mexico Region prior to January 1, 1994, their successors and assigns, and is not subject to the conditions in § 87.261(c) and paragraph (a)(2) of this section. For the purpose of this paragraph, the Gulf of Mexico Region is defined as an area bounded on the east, north, and west by a line 288 km (180 miles) from the Gulf of Mexico shore line. Inland stations must be located within forty-eight kilometers (30 miles) of the Gulf of Mexico shore line.

\* \* \* \* \*