

APPENDIX A - LIST OF COMMENTERS

Comments

American Commercial Barge Line Company and Waterway Communications Systems, Inc.
(ACBL/WATERCOM)
American Trucking Association (ATA)
American Waterways Operators (AWO)
Association of American Railroads (AAR)
BR Communications (BR)
Globe Wireless
GulfCoast Transit
Malloy Communications (Malloy)
WJG MariTEL Corporation (MariTEL)
Maritime Navigation Safety Association (MNSA)
Mobile Marine Radio, Inc. (MMR)
National Ocean Industries Association (NOIA)
Necode Electronics (Necode)
Fred Daniel d/b/a Orion Telecom (Orion)
OWA, Inc.
Paging Systems, Inc. (PSI)
PinOak Digital Corporation (PinOak)
Ross Engineering (Ross)
Radio Technical Commission for Maritime Services (RTCM)
SEA, Inc. (SEA)
Teamsters Local No. 9
United States Coast Guard (USCG)

Reply Comments

ACBL/WATERCOM
ARA
BR
Globe Wireless
MariTEL
MMR
Ross

APPENDIX B - REGULATORY FLEXIBILITY ANALYSIS

I. Final Regulatory Flexibility Analysis (for *Second Report and Order*)

As required by Section 603 of the Regulatory Flexibility Act, 5 U.S.C. § 603 (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rule Making* in this proceeding (*Notice*). The Commission sought written public comments on the proposals in the *Notice*, including on the IRFA. The Commission's Final Regulatory Flexibility Analysis (FRFA) for the *Second Report and Order* conforms to the RFA, as amended by the Contract With America Advancement Act of 1996 (CWAAA), Pub. L. No. 104-121, 110 Stat. 847 (1996).¹

A. **Need for and purpose of the action**

Our objective is to promote innovative telecommunications services, improve communications capabilities, and reduce regulatory burdens for licensees in the Maritime Service. Specifically, this action will: (1) permit public coast stations to provide automated services, immediately obtain new channels, and serve units on land (VHF stations only); (2) ensure that affordable digital selective calling (DSC) radio equipment is available for recreational vessels; (3) improve high seas communications by permitting automatic link establishment (ALE) transmissions in the 2-30 MHz band; (4) allow stations using narrow-band direct-printing equipment to employ alternative data communications protocols; (5) reduce regulatory burdens for coast station licensees by eliminating the radiotelephone operator requirement, permitting hand-helds to be used under private coast authorizations, unifying the frequency tolerance requirement for 25 watt coast transmitters, and permitting facsimile on marine VHF channel 68 in Alaska; and (6) reduce regulatory burdens for ship station licensees by providing a "blanket" authorization for all radio equipment on board a vessel and permitting vessel owners to store their station licenses away from the harsh marine environment.

In making these broad changes to the Maritime Service rules, we find that the potential benefits to the maritime community exceed any negative effects that may result from the promulgation of rules for this purpose. Thus, we conclude that the public interest is served by amending our rules as described above.

B. **Issues Raised in response to the IRFA**

No comments were submitted in response to the IRFA. In general comments on the *Further Notice*, however, some small business commenters raised issues that might affect small business entities. In particular, some small business commenters argued that requiring public coast stations to use a standard signalling protocol (*e.g.*, DSC) is unnecessary, would be overly burdensome to licensees that have already started developing alternative protocols, and would inhibit the

¹ Subtitle II of the CWAAA is "The Small Business Regulatory Enforcement Fairness Act of 1996" (SBREFA), codified at 5 U.S.C. § 601 *et seq.*

development of innovative protocols to better respond to regional market demands. Small business commenters also pointed out that restricting the types or number of land units to be served by VHF public coast stations would inhibit a station's ability to provide needed services (*e.g.*, customers using hand-held radios or dock-side dispatch stations) and prevent a station from maximizing maritime spectrum efficiency. Further, small business commenters asked that the Commission require marine radios to have a minimum DSC capability which is less extensive and cheaper to implement than the internationally mandated DSC standard for large cargo vessels and passenger vessels. Small business commenters also urged the Commission not to allow recreational vessels to communicate on marine VHF band commercial frequencies on a nation wide basis. These commenters noted that such action would increase congestion on safety channels and inhibit tugs and towing vessels from doing business via marine radio near major ports and waterways. The Commission carefully considered each of these comments in reaching the decision set forth in herein.

C. Description, and Number of Small Entities Involved

The rules adopted herein will apply to small businesses that choose to use, manufacture, design, import, or sell MF, HF, or VHF marine radios. Since this rule making proceeding applies to three groups of small entities, we will analyze the effects of these rules on each of these groups.

Estimates for Marine Radio Manufacturers/Importers

The Commission has not developed a definition of the term "small entity" specifically applicable to marine radio manufacturers and importers. Therefore, the applicable definition of small entity is the definition under the Small Business Administration rules applicable to radio and television broadcasting and communications equipment manufacturers. This definition provides that a small entity is any entity employing less than 750 persons. See 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 3663. Since the Regulatory Flexibility Act amendments were not in effect until the record in this proceeding was closed, the Commission was unable to request information regarding the number of small entities that may choose to manufacture or import marine radio equipment and is unable at this time to make a meaningful estimate of the number of potential manufacturers or importers which are small businesses.

The 1992 Census of Manufacturers, conducted by the Bureau of Census, which is the most comprehensive and recent information available, shows that approximately 925 out of the 948 entities manufacturing radio and television transmitting equipment in 1992 employed less than 750 persons. We are unable to discern from the Census data precisely how many of these manufacturers produce marine radios. Further, any entity may choose to manufacture or produce marine radio equipment. Therefore, for the purposes of our evaluations and conclusions in this Final Regulatory Flexibility Analysis, we estimate that there are at least 925 potential manufacturers and importers of marine radio equipment which are small businesses, as that term is defined by the Small Business Administration.

Estimates for Public Coast Station Licensees

The Commission has not developed a definition of the term "small entity" specifically applicable to public coast station licensees. Therefore, the applicable definition of small entity is the definition under the Small Business Administration rules applicable to radiotelephone service providers. This definition provides that a small entity is any entity employing less than 1,500 persons. See 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812. Since the Regulatory Flexibility Act amendments were not in effect until the record in this proceeding was closed, the Commission was unable to request information regarding the number of small entities that may choose to provide public coast services and is unable at this time to make a meaningful estimate of the number of potential public coast service providers which are small businesses.

The size data provided by the Small Business Administration does not enable us to make a meaningful estimate of the number of public coast station licensees which are small businesses. Therefore, we used the 1992 Census of Transportation, Communications, and Utilities, conducted by the Bureau of Census, which is the most recent information available. This document shows that only 12 radiotelephone firms out of a total of 1,178 such firms which operated during 1992 had 1,000 or more employees. There are over 50 public coast station licensees. Based on the proposals contained herein, it is unlikely that more than 9 licensees will be authorized in the future. Therefore, for purposes of our evaluations and conclusions in this Final Regulatory Flexibility Analysis, we estimate that there are approximately 50 public coast station licensees which are small businesses, as that term is defined by the Small Business Administration.

Estimates for Private Coast Station Licensees

The Commission has not developed a definition of the term "small entity" specifically applicable to private coast station licensees. Therefore, the applicable definition of small entity is the definition under the Small Business Administration rules applicable to radiotelephone service providers. This definition provides that a small entity is any entity employing less than 1,500 persons. See 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812. Since the Regulatory Flexibility Act amendments were not in effect until the record in this proceeding was closed, the Commission was unable to request information regarding the number of small entities that may choose to provide private coast services and is unable at this time to make a meaningful estimate of the number of potential private coast service providers which are small businesses.

The size data provided by the Small Business Administration does not enable us to make a meaningful estimate of the number of private coast station licensees which are small businesses. Therefore, we used the 1992 Census of Transportation, Communications, and Utilities, conducted by the Bureau of Census, which is the most recent information available. This document shows that only 12 radiotelephone firms out of a total of 1,178 such firms which operated during 1992 had 1,000 or more employees. There are presently over 100 private coast station licensees. There is no limitation, however, as to the number of private coast station licensees that may be authorized. Therefore, for purposes of our evaluations and conclusions in this Final Regulatory Flexibility Analysis, we estimate that there are over 100 private coast station licensees which are small businesses, as that term is defined by the Small Business Administration.

D. Summary of Projected Reporting, Recordkeeping, and Other Compliance Requirements

In order to provide for distress signalling capabilities for recreational vessels we are imposing a single regulatory burden that may affect small businesses.

- (1) Each MF, HF, and VHF marine radio for which an application for type acceptance is received on or after June 17, 1999, must comply with either the international requirements set forth in ITU-R Recommendation 493 (including only equipment classes A, B, D, and E) or the minimum requirements set forth in RTCM Paper 56-95/SC101-STD. This requirement, however, will not apply to battery operated, portable hand-held radio equipment or to Automated Maritime Telecommunications System (AMTS) equipment operating in the 216-220 MHz band. All classes of small businesses could potentially be affected by this requirement. In order to have a unit type accepted, a small entity would have to test the radio equipment and provide clerical support to file the requisite FCC application forms. Both of these functions could be handled by a third party.

E. Steps taken to minimize burdens of Small Entities

The Commission in this proceeding has considered comments on ways to implement broad changes to the maritime service rules. In doing so, the Commission has adopted alternatives which minimize burdens placed on small entities. First, it has decided to permit land units to operate under the authority of an associated public coast station's license without having to be individually licensed by the Commission. This approach eliminates the need for fixed and mobile units on land to file forms and submit fees to the Commission. *See* paragraph 17 *supra*. Second, it has decided to permit marine radio manufacturers to continue producing and selling conventional marine radios indefinitely, even though it has set a deadline for the type acceptance for such equipment. This approach manufacturers to sell existing stock and continue to sell units to vessel operators in areas of the country where DSC capability is not needed or desired. *See* paragraph 27 *supra*. Third, it has decided not to license each ALE transmitter individually. This approach provides for system licensing of ALE transmitters nationwide and greatly reduces filing burdens for licensees providing ALE service. *See* paragraph 37 *supra*. Fourth, it has decided not to mandate DSC as the single protocol to be used by public coast stations for interconnection with the PSN. This approach permits coast station licensees to choose an interconnection protocol that meets market demands, rather than presupposing a protocol that may be too expensive or undesirable to implement in certain areas of the country. *See* paragraph 15 *supra*. Fifth, it has decided to simplify ship and aircraft radio licensing and provide a 90-day grace period for renewing ship and aircraft station licenses. This approach eliminates the need for licensees to re-notify the Commission and pay a modification fee each time a new type of radio equipment is added to the station. Further, this approach eliminates the need for licensees to apply for a new station license, and be assigned a new call sign in cases where they forget to renew their license before it expires. Changing a stations call sign would have hidden costs for small businesses that may have literature or training information referencing the present call sign. *See*

paragraph 55 *supra*. Sixth, it has decided not to continue requiring private coast station licensees to get a separate marine utility station license to use hand-held radios. This approach eliminates the need for private coast station licensees to apply for this additional license and pay a fee. *See* paragraph 58 *supra*. Seventh, it has decided to eliminate the frequency tolerance requirement for low powered private coast stations. This approach will allow private coast stations to use economical ship radios for short range communications from land. Eighth, it has decided to authorize, by rule, private coast stations and vessels communicating in Alaskan waters to use of marine VHF channel 68. This approach eliminates the need for private coast station licensees to modify their licenses, and pay a fee, to request the new authority.

F. Significant alternatives considered and rejected

The Commission considered and rejected several significant alternatives. The Commission rejected the alternative of requiring public coast stations to implement DSC as the single protocol for automatic interconnection because it determined that licensees should be given the flexibility to respond to market demands using the most efficient and cost effective protocols available for their particular area of the country. The Commission also rejected the alternative of limiting public coast station serve to units on land to a certain number of vehicles. Instead, it determined that licensees should be given the flexibility to serve any number of fixed or mobile units so long as they provide priority to marine-originating communications. The Commission rejected the alternative of prohibiting the sale, after a certain date, conventional marine radios without a DSC capability. Instead, it determined that small businesses and vessel operators may have a future need for non-DSC radios in areas of the country where DSC is not needed or desirable. The Commission rejected the alternative of requiring all DSC marine radios to meet an international standard. Instead, it determined that the SC101 minimum DSC capability, as endorsed by the Coast Guard, will provide manufacturers with the technical flexibility to respond to the communications needs of all types of vessels, *e.g.*, commercial vessels sailing internationally, recreational vessels on inland waterways. The Commission rejected the alternative of including telegraph and NB-DP authority in the "blanket license" for vessel stations because it determined that stations using telegraphy or NB-DP must ask for a Morse working series or SELCAL number. Because these are allocated internationally and are used by only a small percentage of U.S. vessels, it would be unreasonable to hand out Morse working series and SELCAL numbers to each vessel requesting a license. The Commission rejected the alternative of permitting facsimile transmissions on marine VHF frequencies nationwide because it determined, as the Coast Guard states, that there is too much congestion on marine VHF channels at this point to introduce data communications. Instead, this issue is best addressed at the same time the Commission considers narrowband operations. The Commission rejected the alternative of combining the "commercial" and "non-commercial" classifications of private marine VHF channels because it determined, and the Coast Guard agreed, that such sharing would be limited to niche markets and specific regions of the country. Instead, the Commission will consider specific requests by the Coast Guard to implement sharing on a regional basis. Finally, the Commission rejected the alternative of permitting public coast stations to share PLMR frequencies because it determined that such sharing should be considered only after the resolution of PLMR service consolidation issues.

G. Report to Congress

The Commission shall send a copy of this Final Regulatory Flexibility Analysis with this *Second Report and Order* in a report to Congress pursuant to Section 251 of the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. § 801(a)(1)(A). A copy of this Regulatory Flexibility Analysis will also be published in the Federal Register.

II. Initial Regulatory Flexibility Analysis (for *Second Further Notice*)

As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the expected impact on small entities of the policies and rules proposed in this *Second Further Notice of Proposed Rule Making*. Written public comments are requested on the IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on this *Second Further Notice of Proposed Rule Making* provided in the item.

A. Need for and Objectives of the Proposed Rule: The purpose of this item is to determine whether it is in the public interest, convenience, and necessity to amend our rules to simplify our licensing process for VHF public coast stations, to reconsider our treatment of high seas public coast stations, and to introduce additional flexibility for AMTS public coast stations. These proposals include: (1) converting licensing of VHF public coast station spectrum for which the principal use will involve, or is reasonably likely to involve, "subscriber-based" services, from site-by-site licensing to geographic area licensing, (2) simplifying and streamlining the VHF public coast spectrum licensing procedures and rules, (3) increasing licensee flexibility to provide communication services that are responsive to dynamic market demands, and (4) employing competitive bidding procedures (auctions) to resolve mutually exclusive applications for public coast spectrum for which the principal use will involve, or is reasonably likely to involve, "subscriber-based" services. In addition, we temporarily suspend the acceptance and processing of certain public coast spectrum applications, with the exception of applications in a few noted categories. These proposed rules and actions should increase the number and types of communications services available to the maritime community. Additionally, these proposals should improve safety of life and property at sea.

B. Legal Basis: Authority for issuance of this item is contained in Sections 4(i), 4(j), 7(a), 302, 303(b), 303(f), 303(g), 303(r), 307(e), 332(a), and 332(c) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 154(j), 157(a), 303(b), 303(f), 303(g), 303(r), 307(e), 332(a), and 332(c).

C. Description and Estimate of the Number of Small Entities to Which Rule Will Apply: The proposed rules would affect licensees using public coast spectrum. The Commission has not developed a definition of the term "small entity" specifically applicable to public coast station licensees. Therefore, the applicable definition of small entity is the definition under the Small Business Administration rules applicable to radiotelephone service providers. This

definition provides that a small entity is any entity employing less than 1,500 persons. *See* 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812. Since the Regulatory Flexibility Act amendments were not in effect until the record in this proceeding was closed, the Commission was unable to request information regarding the number of small entities that may choose to provide public coast services and is unable at this time to make a meaningful estimate of the number of potential public coast service providers which are small businesses.

The size data provided by the Small Business Administration does not enable us to make a meaningful estimate of the number of public coast station licensees which are small businesses. Therefore, we used the 1992 Census of Transportation, Communications, and Utilities, conducted by the Bureau of Census, which is the most recent information available. This document shows that only 12 radiotelephone firms out of a total of 1,178 such firms which operated during 1992 had 1,000 or more employees.

We seek comment on the number of small entities that use public coast station spectrum. Further, we seek comment on the number of small entities that are likely to apply for licenses under the various proposals described herein. Because any entity that is capable of providing radiotelephone service is eligible to hold a public coast license, the proposals herein could prospectively affect any small business in the United States. In other words, the universe of prospective or possible public coast spectrum users is all small businesses.

D. Reporting, Recordkeeping, and Other Compliance Requirements:

Again, we note that we have requested comment, *supra*, regarding the establishment of a small business definition for public coast spectrum. If we use competitive bidding to award licenses, as proposed, and also establish a small business definition for the purpose of competitive bidding, then all small businesses that choose to participate in these services will be required to demonstrate that they meet the criteria set forth to qualify as small businesses, as was required under part 1, subpart Q of the FCC's Rules, 47 C.F.R. part 1, subpart Q. Any small business applicant wishing to avail itself of small business provisions will need to make the general financial disclosures necessary to establish that the small business is in fact small.

If this occurs, prior to auction each small business applicant will be required to submit an FCC Form 175, OMB Clearance Number 3060-0600. The estimated time for filling out an FCC Form 175 is 45 minutes. In addition to filing an FCC Form 175, each applicant must submit information regarding the ownership of the applicant, any joint venture arrangements or bidding consortia that the applicant has entered into, and financial information which demonstrates that a small business wishing to qualify for installment payments and bidding credits is a small business. Applicants that do not have audited financial statements available will be permitted to certify to the validity of their financial showings. While many small businesses have chosen to employ attorneys prior to filing an application to participate in an auction, the rules are proposed so that a small business working with the information in a bidder information package can file an application on its own. When an applicant wins a license, it will be required to submit an FCC Form 494 (common carrier) which will require technical information regarding the applicant's proposals for providing service. This application will require information provided by an engineer who will have knowledge of the system's design.

E. Federal Rules That May Duplicate, Overlap, or Conflict with the Proposals:

None.

F. Significant Alternatives Minimizing the Impact on Small Entities Consistent with the Stated Objectives:

The *Notice* solicits comment on a variety of alternatives set forth herein. Any significant alternatives presented in the comments will be considered. As noted, we have requested comment, *supra*, regarding the establishment of a small business definition for the public coast service. We also seek comment generally on the existence of small entities in the public coast service and how many total entities, existing and potential, would be affected by the proposed rules in the *Notice*. Finally, we request that each commenter identify whether it is a "small business" under the SBA definition, *supra*, of employing fewer than 1,500 employees.

G. IRFA Comments

We request written public comment on the foregoing IRFA. Comments must have a separate and distinct heading designating them as responses to the IRFA and must be filed by the deadlines provided in the item.

APPENDIX C - VHF COAST STATION INFORMATION

I. VHF Public Correspondence Frequencies

The table below lists the public correspondence frequency pairs as set forth in 47 C.F.R. § 80.371(c).

Channel number	Carrier frequency (MHz)	
	Ship transmit	Coast transmit
24	157.200	161.800
25	157.250	161.850
26	157.300	161.900
27	157.350	161.950
28	157.400	162.000
84	157.225	161.825
85	157.275	161.875
86	157.325	161.925
87	157.375	161.975
88 (Puget Sound only)	157.425	162.025

II. Coast Guard Districts

§ 3.05-1 First district.

(a) The District Office is in Boston, Massachusetts.

(b) The First Coast Guard District is comprised of: Maine; New Hampshire; Vermont; Massachusetts; Rhode Island; Connecticut; New York except that part north of latitude 42° N. and west of longitude 74°39' W; that part of New Jersey north of 40°18' N. latitude, east of 74°30.5' W. longitude, and northeast of a line from 40°18' N. 74°30.5' W. north-northwesterly to the New York, New Jersey & Pennsylvania boundaries at Tristate; all U.S. Naval reservations on shore at Newfoundland; the ocean area encompassed by the Search and Rescue boundary between Canada and the United States easterly to longitude 63° W.; thence due south to latitude 41° N.; thence southwesterly along a line bearing 219°T to the point of intersection at 37° N. latitude, 67° 13' W. longitude with a line bearing 122°T from the New Jersey shoreline at 40°18' N. latitude (just south of the Shrewsbury River); thence northwesterly along this line to the coast.

§ 3.25-1 Fifth district.

(a) The District Office is in Portsmouth, Va.

(b) The Fifth Coast Guard District is comprised of: North Carolina; Virginia, District of Columbia; Maryland; Delaware; that part of Pennsylvania east of a line drawn along 78°55' W. longitude south to 41°00' N. latitude, thence west to 79°00' W. longitude, and thence south to the Pennsylvania-Maryland boundary; that portion of New Jersey that lies south and west of a line drawn from the New Jersey shoreline at 40°18' N. latitude (just south of the Shrewsbury River), thence westward to 40°18' N. latitude, 74°30.5' W. longitude, thence north-northwesterly to the junction of the New York, New Jersey, and Pennsylvania boundaries at Tristate; and the ocean area encompassed by a line bearing 122°T from the coastal end of the First and Fifth Districts' land boundary at the intersection of the New Jersey shoreline and 40°18' N. latitude (just south of the Shrewsbury River) to the southernmost point in the First Coast Guard District (a point located at approximately 37° N. latitude, 67°13' W. longitude); thence along a line bearing 219°T to the point of intersection with the ocean boundary between the Fifth and Seventh Coast Guard Districts, which is defined as a line bearing 122°T from the coastal end of the Fifth and Seventh Districts' land boundary at the shoreline at the North Carolina-South Carolina border, a point located at approximately 30°55' N. 73° W.; thence northwesterly along this line to the coast.

§ 3.35-1 Seventh district.

(a) The District Office is in Miami, Fla.

(b) The Seventh Coast Guard District shall comprise South Carolina, Florida, and Georgia, except that part of Florida and Georgia west of a line from the intersection of the Florida coast with longitude 83°50' W. due north to a position 30°15' N., 83°50' W., thence due west to a position 30°15' N., 84°45' W., thence due north to the intersection with the south shore of Jim Woodruff Reservoir, thence along the east bank of the Jim Woodruff Reservoir and the east bank of the Flint River up stream to Montezuma, Ga., thence to West Point, Ga.; the Panama Canal Zone; all of the island possessions of the United States pertaining to Puerto Rico and the Virgin Islands; all of the U.S. naval reservations in the islands of the West Indies and on the north coast of South America; and the ocean areas encompassed by a line bearing 122° T. from the coastal end of the Fifth and Seventh Coast Guard District land boundary to the intersection with the eastern boundary of the National Maritime Search and Rescue Region; thence along the eastern and southern boundary of the National Maritime Search and Rescue Region to the intersection with the off-shore boundary between the Seventh and Eighth Coast Guard Districts which is defined as a line extending 199° T. from the coastal end of the Seventh and Eighth Coast Guard District land boundary; thence along this line to the coast.

§ 3.40-1 Eighth district.

(a) The District Office is in New Orleans, La.

(b) The Eighth Coast Guard District is comprised of: North Dakota, South Dakota, Wyoming, Nebraska, Iowa, Colorado, Kansas, Missouri, Kentucky, West Virginia, Tennessee, Arkansas, Oklahoma, New Mexico, Texas, Louisiana, Mississippi, and Alabama; that part of Pennsylvania south of 41° N. latitude and west of 79° W. longitude; those parts of Ohio and Indiana south of 41° N. latitude; Illinois, except that part north of 41° N. latitude and east of 90° W. longitude; that part of Wisconsin south of 46°20' N. latitude and west of 90° W. longitude; that part of Minnesota south of 46°20' N. latitude; those parts of Florida and Georgia west of a line starting at the Florida coast at 83°50' W. longitude; thence northerly to 30° 15' N. latitude, 83° 50' W. longitude; thence due west to 30° 15' N. latitude, 84° 45' W. longitude; thence due north to the southern bank of the Jim Woodruff Reservoir at 84°45' W. longitude; thence northeasterly along the eastern bank of the Jim Woodruff Reservoir and northerly along the eastern bank of the Flint River to Montezuma, GA.; thence northwesterly to West Point, GA.; and the Gulf of Mexico area west of a line bearing 199° T. from the intersection of the Florida coast at 83°50' W. longitude (the coastal end of the Seventh and Eighth Coast Guard District land boundary.)

§ 3.45-1 Ninth district.

(a) The District Office is in Cleveland Ohio.

(b) The Ninth Coast Guard District comprise Michigan, New York north of latitude 42° N. and west of longitude 74°39' W.; Pennsylvania north of latitude 41° and west of longitude 78°55' W.; that part of Ohio and Indiana north of latitude 41° N.; that part of Illinois north of latitude 41° N. and east of longitude 90° W.; Wisconsin, except that part south of latitude 46°20' N. and west of longitude 90° W.; and that part of Minnesota north of latitude 46°20' N.

§ 3.55-1 Eleventh district.

(a) The District Office is in Alameda, California.

(b) The Eleventh Coast Guard District is comprised of: Arizona; Utah; Nevada; California; and the ocean area bounded by a line from the California-Oregon state line westerly to 40° N. latitude, 150° W. longitude; thence southeasterly to 5° S. latitude, 110° W. longitude; thence northeasterly to the border between Guatemala and Mexico on the Pacific Coast (14°38' N. latitude, 92° 19' W. longitude).

§ 3.65-1 Thirteenth district.

(a) The District Office is in Seattle, Wash.

(b) The Thirteenth Coast Guard District shall comprise Washington, Oregon, Idaho, and Montana; and the ocean area bounded by a line from California-Oregon state line westerly to latitude 40° N. longitude, 150° W., thence northeasterly to latitude 54°40' N., longitude 140° W., thence due east to the Canadian coast.

§ 3.70-1 Fourteenth district.

(a) The District Office is in Honolulu, Hawaii.

(b) The Fourteenth Coast Guard District shall comprise the State of Hawaii; and the Pacific Islands belonging to the United States south of latitude 40° N., and west of a line running from 40° N., 150° W. through latitude 5° S., 110° W.; the ocean area west and south of a line running from position 51° N., 158° E. to position 43° N., 165° E.; thence due south to latitude 40° N.; thence due east to longitude 150° W.; thence southeasterly through latitude 5° S., longitude 110° W.

§ 3.85-1 Seventeenth district.

(a) The District Office is in Juneau, Alaska.

(b) The Seventeenth Coast Guard District shall comprise the State of Alaska; the ocean area bounded by a line from the Canadian Coast at latitude 54°40' N. due west to longitude 140° W.; thence southwesterly to position 40° N., 150° W.; thence due west to position 40° N., 165° E.; thence due north to latitude 43° N.; thence northwesterly to 51° N., 158° E.; thence north and east along the coastline of the continent of Asia to East Cape; thence north to the Arctic Ocean.

APPENDIX D - HIGH SEAS COAST STATION INFORMATION

I. Regions for HF Radiotelephone Assignments - Standard Defined Areas

These allotment areas appear in the Preface to the International Frequency List (IFL). *See* IFRB Circular-letter No. 843, dated October 31, 1990.

USA CL: includes that part of the territory of USA limited on the west by a line that extends from the northern border along meridian 110 West of Greenwich to the parallel 35 North, thence along parallel 35 North to its intersection with meridian 85 West, thence along the line joining the points 85 West / 35 North and 75 West / 42 North, thence along meridian 75 West to the northern border including all coast stations of USA lying to the north of these lines.

USA E: includes that part of the territory of USA limited on the west by a line that extends from the eastern coastline along parallel 31 North to its intersection with meridian 85 West of Greenwich, thence along meridian 85 West to the parallel 35 North, thence along the line joining the points 85 West / 35 North and 75 West / 42 North, thence along meridian 75 West to the northern border including all coast stations of USA lying to the east of these lines.

USA W: includes that part of the territory of USA limited on the east by a line that extends from the northern border along meridian 110 West of Greenwich to the southern border including all coast stations of USA lying to the west of this meridian.

USA SO: includes that part of the territory of USA limited on the west by a line that extends from the southern border along meridian 110 West of Greenwich to the parallel 35 North, thence along parallel 35 North to its intersection with meridian 85 West, thence along meridian 85 West to its intersection with parallel 31 North, thence along parallel 31 North to the eastern coastline including all coast stations of USA lying to the south of these lines.

Note: In order to ensure far-reaching conformity with the existing Appendix 25 Allotment Plan and with the examination applied within the present Article 16 procedure, all lines subdividing countries into allotment areas may have a tolerance of +/-1 degree.

APPENDIX E - FINAL RULES

Chapter I of Title 47 of the Code of Federal Regulations, Parts 0, 2, 80, and 87 are amended as follows:

I. Part 0 - Commission Organization

1. The Authority citation for Part 0 continues to read as follows:

AUTHORITY: Sec 5, 48 Stat. 1068, as amended; 47 U.S.C. 155, 255, unless otherwise noted.

2. Section 0.331 is amended by revising paragraph (d) to read as follows:

* * * * *

(d) Authority concerning rulemaking proceedings. The Chief, Wireless Telecommunications Bureau shall not have the authority to act upon notices of proposed rulemaking and inquiry, final orders in rule making proceedings and inquiry proceedings, and reports arising from any of the forgoing except such orders involving ministerial conforming amendments to rule parts, or orders conforming any of the applicable rules to formally adopted international conventions or agreements where novel questions of fact, law, or policy are not involved. Also, the addition of new Marine VHF frequency coordination committee(s) to § 80.514 of this chapter need not be referred to the Commission if they do not involve novel questions of fact, policy or law, as well as requests by the United States Coast Guard to: (1) designate radio protection areas for mandatory Vessel Traffic Services (VTS) and establish marine channels as VTS frequencies for these areas; or (2) designate regions for shared commercial and non-commercial vessel use of VHF marine frequencies.

II. Part 2 - Frequency Allocations and Radio Treaty Matters; General Rules and Regulations

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

AUTHORITY: Secs. 4, 302, 303, and 307 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154, 154(i), 302, 303, 303(r), and 307, unless otherwise noted.

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

- a. Remove the existing entries for 2000-28000 kHz, 28-30 MHz, and 158.115-161.575 MHz.
- b. Add entries in numerical order for 2000-27500 kHz, 27.5-30 MHz, and 158.115-161.575 MHz.
- c. In the International Footnotes under heading I., add footnotes S5.92, S5.93, S5.103, S5.104, S5.105, S5.106, S5.107, S5.108, S5.109, S5.110, S5.111, S5.112, S5.113, S5.114, S5.115, S5.116, S5.117, S5.118, S5.119, S5.120, S5.122, S5.123, S5.124, S5.125, S5.126, S5.127, S5.128, S5.129, S5.130, S5.131, S5.132, S5.133, S5.134, S5.135, S5.136, S5.137, S5.138, S5.139, S5.140, S5.141, S5.142, S5.143, S5.144, S5.145, S5.146, S5.147, S5.148, S5.150, S5.151, S5.152, S5.153, S5.154, S5.155, S5.155A, S5.155B, S5.156, S5.156A, S5.157, S5.226, and S5.229 in numerical order.
- d. In the International Footnotes under heading II., remove footnotes 496, 497, 498, 500, 500A, 500B, 502, 503, 504, 505, 506, 507, 508, 509, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 520A, 520B, 521, 522, 523, 524, 525, 526, 527, 528, 529, 529A, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, and 546.

e. Add footnote US340 in numerical order.

f. Add footnote NG155 in numerical order.

The revisions and additions read as follows:

§ 2.106 Table of Frequency Allocations.

* * * * *

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
*	*	*	*	*	*	*
2000 – 2025 FIXED MOBILE except aero- nautical mobile (R) S5.92 S5.103	2000 – 2025 FIXED MOBILE	2000 – 2025 FIXED MOBILE	2000 – 2025 FIXED MOBILE US340	2000 – 2025 MARITIME MOBILE US340 NG19	MARITIME (80)	
2025 – 2045 FIXED MOBILE except aero- nautical mobile (R) Meteorological Aids S5.104 S5.92 S5.103	2025 – 2045 FIXED MOBILE	2025 – 2045 FIXED MOBILE	2025 – 2045 FIXED MOBILE US340	2025 – 2045 MARITIME MOBILE US340 NG19	MARITIME (80)	
2045 – 2065 FIXED MARITIME MOBILE LAND MOBILE S5.92	2045 – 2065 FIXED MOBILE	2045 – 2065 FIXED MOBILE	2045 – 2065 FIXED MOBILE US340	2045 – 2065 MARITIME MOBILE US340 NG19	MARITIME (80)	
2065 – 2107 FIXED MARITIME MOBILE LAND MOBILE S5.92	2065 – 2107 MARITIME MOBILE S5.105 S5.106	2065 – 2107 MARITIME MOBILE S5.105 S5.106	2065 – 2107 MARITIME MOBILE S5.105 US296 US340	2065 – 2107 MARITIME MOBILE S5.105 US296 US340	MARITIME (80)	

2107 – 2160 FIXED MARITIME MOBILE LAND MOBILE S5.92	2107 – 2160 FIXED MOBILE	2107 – 2160 FIXED MOBILE	2107 – 2160 FIXED MOBILE US340	2107 – 2160 FIXED MARITIME MOBILE LAND MOBILE US340 NG19	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
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International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
2160 – 2170 RADIOLOCATION S5.93 S5.107	2160 – 2170 FIXED MOBILE	2160 – 2170 FIXED MOBILE	2160 – 2170 FIXED MOBILE US340	2160 – 2170 FIXED MARITIME MOBILE LAND MOBILE US340 NG19	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
2170 – 2173.5 MARITIME MOBILE	2170 – 2173.5 MARITIME MOBILE	2170 – 2173.5 MARITIME MOBILE	2170 – 2173.5 MARITIME MOBILE (telephony) US340	2170 – 2173.5 MARITIME MOBILE US340	MARITIME (80)	
2173.5 – 2190.5 MOBILE (distress and calling) S5.108 S5.109 S5.110 S5.111	2173.5 – 2190.5 MOBILE (distress and calling) S5.108 S5.109 S5.110 S5.111	2173.5 – 2190.5 MOBILE (distress and calling) S5.108 S5.109 S5.110 S5.111	2173.5 – 2190.5 MOBILE (distress and calling) S5.108 S5.109 S5.110 S5.111 US279 US340	2173.5 – 2190.5 MOBILE (distress and calling) S5.108 S5.109 S5.110 S5.111 US279 US340	AVIATION (87) MARITIME (80)	2182 kHz: distress and calling
2190.5 – 2194 MARITIME MOBILE	2190.5 – 2194 MARITIME MOBILE	2190.5 – 2194 MARITIME MOBILE	2190.5 – 2194 MARITIME MOBILE (telephony) US340	2190.5 – 2194 MARITIME MOBILE US340	MARITIME (80)	
2194 – 2300 FIXED MOBILE except aero- nautical mobile (R) S5.92 S5.103 S5.112	2194 – 2300 FIXED MOBILE	2194 – 2300 FIXED MOBILE S5.112	2194 – 2300 FIXED MOBILE US340	2194 – 2300 FIXED LAND MOBILE MARITIME MOBILE US340 NG19	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
2300 – 2495 FIXED MOBILE except aeronautical mobile (R) BROADCASTING S5.113 S5.103	2300 – 2495 FIXED MOBILE BROADCASTING S5.113	2300 – 2495 FIXED MOBILE BROADCASTING S5.113	2300 – 2495 FIXED MOBILE US340	2300 – 2495 FIXED LAND MOBILE MARITIME MOBILE US340 NG19	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
2495 – 2498 FIXED MOBILE except aeronautical mobile (R) BROADCASTING S5.113 S5.103	2495 – 2498 STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	2495 – 2498 STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	2495 – 2498 STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz) US340	2495 – 2498 STANDARD FREQUENCY AND TIME SIGNAL US340		
2498 – 2501 STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	2498 – 2501 STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	2498 – 2501 STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	2498 – 2501 STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz) US340	2498 – 2501 STANDARD FREQUENCY AND TIME SIGNAL US340		2500 kHz: standard frequency
2501 – 2502 STANDARD FREQUENCY AND TIME SIGNAL Space Research	2501 – 2502 STANDARD FREQUENCY AND TIME SIGNAL Space Research	2501 – 2502 STANDARD FREQUENCY AND TIME SIGNAL Space Research	2501 – 2502 STANDARD FREQUENCY AND TIME SIGNAL US340 G106	2501 – 2502 STANDARD FREQUENCY AND TIME SIGNAL US340		
2502 – 2505 FIXED MOBILE except aeronautical mobile (R) S5.92 S5.103 S5.114	2502 – 2505 STANDARD FREQUENCY AND TIME SIGNAL	2502 – 2505 STANDARD FREQUENCY AND TIME SIGNAL	2502 – 2505 STANDARD FREQUENCY AND TIME SIGNAL US340	2502 – 2505 STANDARD FREQUENCY AND TIME SIGNAL US340		

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
2505 – 2605 FIXED MOBILE except aero- nautical mobile (R)	2505 – 2605 FIXED MOBILE	2505 – 2605 FIXED MOBILE	2505 – 2605 FIXED MOBILE	2505 – 2605 FIXED LAND MOBILE MARITIME MOBILE	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
S5.92 S5.103 S5.114			US285 US340	US285 US340		
2605 – 2625 FIXED MOBILE except aero- nautical mobile (R)	2605 – 2625 FIXED MOBILE	2605 – 2625 FIXED MOBILE	2605 – 2625 FIXED MOBILE	2605 – 2625 FIXED LAND MOBILE MARITIME MOBILE	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
S5.92 S5.103 S5.114			US285 US340	US285 US340		
2625 – 2650 MARITIME MOBILE MARITIME RADIONAVIGATION	2625 – 2650 FIXED MOBILE	2625 – 2650 FIXED MOBILE	2625 – 2650 FIXED MOBILE	2625 – 2650 FIXED LAND MOBILE MARITIME MOBILE	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
S5.92			US285 US340	US285 US340		
2650 – 2850 FIXED MOBILE except aero- nautical mobile (R)	2650 – 2850 FIXED MOBILE	2650 – 2850 FIXED MOBILE	2650 – 2850 FIXED MOBILE	2650 – 2850 FIXED LAND MOBILE MARITIME MOBILE	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
S5.92 S5.103			US285 US340	US285 US340		
2850 – 3025 AERONAUTICAL MOBILE (R)	2850 – 3025 AERONAUTICAL MOBILE (R)	2850 – 3025 AERONAUTICAL MOBILE (R)	2850 – 3025 AERONAUTICAL MOBILE (R)	2850 – 3025 AERONAUTICAL MOBILE (R)	AVIATION (87)	
S5.111 S5.115	S5.111 S5.115	S5.111 S5.115	S5.111 S5.115 US283 US340	S5.111 S5.115 US283 US340		

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
3025 – 3155 AERONAUTICAL MOBILE (OR)	3025 – 3155 AERONAUTICAL MOBILE (OR)	3025 – 3155 AERONAUTICAL MOBILE (OR)	3025 – 3155 AERONAUTICAL MOBILE (OR) US340	3025 – 3155 AERONAUTICAL MOBILE (OR) US340		
3155 – 3200 FIXED MOBILE except aeronautical mobile (R) S5.116 S5.117	3155 – 3200 FIXED MOBILE except aeronautical mobile (R) S5.116	3155 – 3200 FIXED MOBILE except aeronautical mobile (R) S5.116 S5.117	3155 – 3200 FIXED MOBILE except aeronautical mobile (R) US340	3155 – 3200 FIXED MOBILE except aeronautical mobile (R) US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
3200 – 3230 FIXED MOBILE except aeronautical mobile (R) BROADCASTING S5.113 S5.116	3200 – 3230 FIXED MOBILE except aeronautical mobile (R) BROADCASTING S5.113 S5.116	3200 – 3230 FIXED MOBILE except aeronautical mobile (R) BROADCASTING S5.113 S5.116	3200 – 3230 FIXED MOBILE except aeronautical mobile (R) US340	3200 – 3230 FIXED MOBILE except aeronautical mobile (R) US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
3230 – 3400 FIXED MOBILE except aeronautical mobile BROADCASTING S5.113 S5.116	3230 – 3400 FIXED MOBILE except aeronautical mobile BROADCASTING S5.113 S5.116 S5.118	3230 – 3400 FIXED MOBILE except aeronautical mobile BROADCASTING S5.113 S5.116 S5.118	3230 – 3400 FIXED MOBILE except aeronautical mobile Radiolocation US340	3230 – 3400 FIXED MOBILE except aeronautical mobile Radiolocation US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
3400 – 3500 AERONAUTICAL MOBILE (R)	3400 – 3500 AERONAUTICAL MOBILE (R)	3400 – 3500 AERONAUTICAL MOBILE (R)	3400 – 3500 AERONAUTICAL MOBILE (R) US283 US340	3400 – 3500 AERONAUTICAL MOBILE (R) US283 US340	AVIATION (87)	

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
3500 – 3750 AMATEUR S5.120 FIXED MOBILE except aeronautical mobile S5.92	3500 – 3750 AMATEUR S5.120 S5.119	3500 – 3750 AMATEUR S5.120 FIXED MOBILE	3500 – 3750 US340	3500 – 3750 AMATEUR S5.120 US340	AMATEUR (97)	
3750 – 3800 AMATEUR S5.120 FIXED MOBILE except aeronautical mobile S5.92	3750 – 3800 AMATEUR S5.120 FIXED MOBILE except aero- nautical mobile (R) S5.122	3750 – 3800 AMATEUR S5.120 FIXED MOBILE	3750 – 3800 US340	3750 – 3800 AMATEUR S5.120 US340	AMATEUR (97)	
3800 – 3900 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	3800 – 3900 AMATEUR S5.120 FIXED MOBILE except aero- nautical mobile (R) S5.122	3800 – 3900 AMATEUR S5.120 FIXED MOBILE	3800 – 3900 US340	3800 – 3900 AMATEUR S5.120 US340	AMATEUR (97)	
3900 – 3950 AERONAUTICAL MOBILE (OR) S5.123	3900 – 3950 AMATEUR S5.120 FIXED MOBILE except aero- nautical mobile (R) S5.122	3900 – 3950 AERONAUTICAL MOBILE BROADCASTING	3900 – 3950 US340	3900 – 3950 AMATEUR S5.120 US340	AMATEUR (97)	
3950 – 4000 FIXED BROADCASTING	3950 – 4000 AMATEUR S5.120 FIXED MOBILE except aero- nautical mobile (R) S5.122 S5.124 S5.125	3950 – 4000 FIXED BROADCASTING S5.126	3950 – 4000 US340	3950 – 4000 AMATEUR S5.120 US340	AMATEUR (97)	

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
4000 – 4063 FIXED MARITIME MOBILE S5.127	4000 – 4063 FIXED MARITIME MOBILE S5.127	4000 – 4063 FIXED MARITIME MOBILE S5.127	4000 – 4063 MARITIME MOBILE	4000 – 4063 MARITIME MOBILE	INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)	
		S5.126	US236 US340	US236 US340		
4063 – 4438 MARITIME MOBILE S5.109 S5.110 S5.130 S5.131 S5.132	4063 – 4438 MARITIME MOBILE S5.109 S5.110 S5.130 S5.131 S5.132	4063 – 4438 MARITIME MOBILE S5.109 S5.110 S5.130 S5.131 S5.132	4063 – 4438 MARITIME MOBILE S5.109 S5.110 S5.130 S5.132	4063 – 4438 MARITIME MOBILE S5.109 S5.110 S5.130 S5.132	INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)	
S5.128 S5.129	S5.129	S5.128 S5.129	US82 US296 US340	US82 US296 US340		
4438 – 4650 FIXED MOBILE except aero- nautical mobile (R)	4438 – 4650 FIXED MOBILE except aero- nautical mobile (R)	4438 – 4650 FIXED MOBILE except aero- nautical mobile	4438 – 4650 FIXED MOBILE except aero- nautical mobile (R)	4438 – 4650 FIXED MOBILE except aero- nautical mobile (R)	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
			US340	US340		
4650 – 4700 AERONAUTICAL MOBILE (R)	4650 – 4700 AERONAUTICAL MOBILE (R)	4650 – 4700 AERONAUTICAL MOBILE (R)	4650 – 4700 AERONAUTICAL MOBILE (R)	4650 – 4700 AERONAUTICAL MOBILE (R)	AVIATION (87)	
			US282 US283 US340	US282 US283 US340		
4700 – 4750 AERONAUTICAL MOBILE (OR)	4700 – 4750 AERONAUTICAL MOBILE (OR)	4700 – 4750 AERONAUTICAL MOBILE (OR)	4700 – 4750 AERONAUTICAL MOBILE (OR)	4700 – 4750 AERONAUTICAL MOBILE (OR)		
			US340	US340		
4750 – 4850 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE BROADCASTING S5.113	4750 – 4850 FIXED MOBILE except aero- nautical mobile (R) BROADCASTING S5.113	4750 – 4850 FIXED BROADCASTING S5.113 Land Mobile	4750 – 4850 FIXED MOBILE except aero- nautical mobile (R)	4750 – 4850 FIXED MOBILE except aero- nautical mobile (R)	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)	
			US340	US340		

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
4850 – 4995 FIXED LAND MOBILE BROADCASTING S5.113	4850 – 4995 FIXED LAND MOBILE BROADCASTING S5.113	4850 – 4995 FIXED LAND MOBILE BROADCASTING S5.113	4850 – 4995 FIXED MOBILE US340	4850 – 4995 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)	
4995 – 5003 STANDARD FRE- QUENCY AND TIME SIGNAL (5000 kHz)	4995 – 5003 STANDARD FRE- QUENCY AND TIME SIGNAL (5000 kHz)	4995 – 5003 STANDARD FRE- QUENCY AND TIME SIGNAL (5000 kHz)	4995 – 5003 STANDARD FRE- QUENCY AND TIME SIGNAL (5000 kHz) US340	4995 – 5003 STANDARD FREQUENCY AND TIME SIGNAL US340		5000 kHz: standard frequency
5003 – 5005 STANDARD FREQUENCY AND TIME SIGNAL Space Research	5003 – 5005 STANDARD FREQUENCY AND TIME SIGNAL Space Research	5003 – 5005 STANDARD FREQUENCY AND TIME SIGNAL Space Research	5003 – 5005 STANDARD FREQUENCY AND TIME SIGNAL US340 G106	5003 – 5005 STANDARD FREQUENCY AND TIME SIGNAL US340		
5005 – 5060 FIXED BROADCASTING S5.113	5005 – 5060 FIXED BROADCASTING S5.113	5005 – 5060 FIXED BROADCASTING S5.113	5005 – 5060 FIXED US340	5005 – 5060 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
5060 – 5250 FIXED Mobile except aeronautical mobile	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)					
S5.133			US212 US340	US212 US340		
5250 – 5450 FIXED MOBILE except aeronautical mobile	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)					
			US340	US340		
5450 – 5480 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	5450 – 5480 AERONAUTICAL MOBILE (R)	5450 – 5480 FIXED AERONAUTICAL MOBILE (OR) LAND MOBILE	5450 – 5480 AERONAUTICAL MOBILE (R)	5450 – 5480 AERONAUTICAL MOBILE (R)	AVIATION (87)	
			US283 US340	US283 US340		
5480 – 5680 AERONAUTICAL MOBILE (R)	AVIATION (87)					
S5.111 S5.115	S5.111 S5.115	S5.111 S5.115	S5.111 S5.115 US283 US340	S5.111 S5.115 US283 US340		
5680 – 5730 AERONAUTICAL MOBILE (OR)						
S5.111 S5.115	S5.111 S5.115	S5.111 S5.115	S5.111 S5.115 US340	S5.111 S5.115 US340		
5730 – 5900 FIXED LAND MOBILE	5730 – 5900 FIXED MOBILE except aero- nautical mobile (R)	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)				
			US340	US340		

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
5900 – 5950 BROADCASTING S5.134 S5.135 S5.136	5900 – 5950 BROADCASTING S5.134 S5.135 S5.136	5900 – 5950 BROADCASTING S5.134 S5.135 S5.136	5900 – 5950 FIXED MOBILE except aero- nautical mobile (R) US340	5900 – 5950 FIXED MOBILE except aero- nautical mobile (R) US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)	
5950 – 6200 BROADCASTING	5950 – 6200 BROADCASTING	5950 – 6200 BROADCASTING	5950 – 6200 BROADCASTING US340	5950 – 6200 BROADCASTING US340	RADIO BROADCAST (HF)(73)	
6200 – 6525 MARITIME MOBILE S5.109 S5.110 S5.130 S5.132 S5.137	6200 – 6525 MARITIME MOBILE S5.109 S5.110 S5.130 S5.132 S5.137	6200 – 6525 MARITIME MOBILE S5.109 S5.110 S5.130 S5.132 S5.137	6200 – 6525 MARITIME MOBILE S5.109 S5.110 S5.130 S5.132 US82 US296 US340	6200 – 6525 MARITIME MOBILE S5.109 S5.110 S5.130 S5.132 US82 US296 US340	MARITIME (80)	
6525 – 6685 AERONAUTICAL MOBILE(R)	6525 – 6685 AERONAUTICAL MOBILE(R)	6525 – 6685 AERONAUTICAL MOBILE(R)	6525 – 6685 AERONAUTICAL MOBILE (R) US283 US340	6525 – 6685 AERONAUTICAL MOBILE (R) US283 US340	AVIATION (87)	
6685 – 6765 AERONAUTICAL MOBILE(OR)	6685 – 6765 AERONAUTICAL MOBILE(OR)	6685 – 6765 AERONAUTICAL MOBILE(OR)	6685 – 6765 AERONAUTICAL MOBILE (OR) US340	6685 – 6765 AERONAUTICAL MOBILE (OR) US340		
6765 – 7000 FIXED Land Mobile S5.139 S5.138	6765 – 7000 FIXED Land Mobile S5.138	6765 – 7000 FIXED Land Mobile S5.138	6765 – 7000 FIXED Mobile S5.138 US340	6765 – 7000 FIXED Mobile S5.138 US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	6780 ± 15 kHz: industrial, scientific, and medical
7000 – 7100 AMATEUR S5.120 AMATEUR-SATELLITE S5.140 S5.141	7000 – 7100 AMATEUR S5.120 AMATEUR-SATELLITE S5.140 S5.141	7000 – 7100 AMATEUR S5.120 AMATEUR- SATELLITE S5.140 S5.141	7000 – 7100 US340	7000 – 7100 AMATEUR S5.120 AMATEUR-SATELLITE US340	AMATEUR (97)	

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
7100 – 7300 BROADCASTING	7100 – 7300 AMATEUR S5.120 S5.142	7100 – 7300 BROADCASTING	7100 – 7300 S5.142 US340	7100 – 7300 AMATEUR S5.120 S5.142 US340	AMATEUR (97)	
7300 – 7350 BROADCASTING S5.134 S5.135 S5.143	7300 – 7350 BROADCASTING S5.134 S5.135 S5.143	7300 – 7350 BROADCASTING S5.134 S5.135 S5.143	7300 – 7350 FIXED Mobile US340	7300 – 7350 FIXED Mobile US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
7350 – 8100 FIXED Land Mobile	7350 – 8100 FIXED Land Mobile	7350 – 8100 FIXED Land Mobile S5.144	7350 – 8100 FIXED Mobile US340	7350 – 8100 FIXED Mobile US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) PRIVATE LAND MOBILE (90)	
8100 – 8195 FIXED MARITIME MOBILE	8100 – 8195 FIXED MARITIME MOBILE	8100 – 8195 FIXED MARITIME MOBILE	8100 – 8195 MARITIME MOBILE US236 US340	8100 – 8195 MARITIME MOBILE US236 US340	MARITIME (80)	
8195 – 8815 MARITIME MOBILE S5.109 S5.110 S5.132 S5.145 S5.111 US82 US296 US340	8195 – 8815 MARITIME MOBILE S5.109 S5.110 S5.132 S5.145 S5.111 US82 US296 US340	MARITIME (80)				
8815 – 8965 AERONAUTICAL MOBILE (R)	8815 – 8965 AERONAUTICAL MOBILE (R)	8815 – 8965 AERONAUTICAL MOBILE (R)	8815 – 8965 AERONAUTICAL MOBILE (R) US340	8815 – 8965 AERONAUTICAL MOBILE (R) US340	AVIATION (87)	

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
8965 – 9040 AERONAUTICAL MOBILE (OR)	8965 – 9040 AERONAUTICAL MOBILE (OR)	8965 – 9040 AERONAUTICAL MOBILE (OR)	8965 – 9040 AERONAUTICAL MOBILE (OR) US340	8965 – 9040 AERONAUTICAL MOBILE (OR) US340		
9040 – 9400 FIXED	9040 – 9400 FIXED	9040 – 9400 FIXED	9040 – 9400 FIXED US340	9040 – 9400 FIXED US340	INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) Aviation (87)	
9400 – 9500 BROADCASTING S5.134 S5.135 S5.146	9400 – 9500 BROADCASTING S5.134 S5.135 S5.146	9400 – 9500 BROADCASTING S5.134 S5.135 S5.146	9400 – 9500 FIXED US340	9400 – 9500 FIXED US340	INTERNATIONAL FIXED PUBLIC (23) MARITIME (80) Aviation (87)	
9500 – 9900 BROADCASTING S5.147 S5.148	9500 – 9900 BROADCASTING S5.147 S5.148	9500 – 9900 BROADCASTING S5.147 S5.148	9500 – 9900 BROADCASTING S5.147 S5.148 US235 US340	9500 – 9900 BROADCASTING S5.147 S5.148 US235 US340	RADIO BROADCAST (HF)(73) INTERNATIONAL FIXED PUBLIC (23)	
9900 – 9995 FIXED	9900 – 9995 FIXED	9900 – 9995 FIXED	9900 – 9995 FIXED US340	9900 – 9995 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
9995 – 10003 STANDARD FRE- QUENCY AND TIME SIGNAL (10000 kHz) S5.111	9995 – 10003 STANDARD FRE- QUENCY AND TIME SIGNAL (10000 kHz) S5.111	9995 – 10003 STANDARD FRE- QUENCY AND TIME SIGNAL (10000 kHz) S5.111	9995 – 10003 STANDARD FRE- QUENCY AND TIME SIGNAL (10000 kHz) S5.111 US340	9995 – 10003 STANDARD FREQUENCY AND TIME SIGNAL S5.111 US340		10000 kHz: standard frequency

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
10003 – 10005 STANDARD FREQUENCY AND TIME SIGNAL Space Research S5.111	10003 – 10005 STANDARD FREQUENCY AND TIME SIGNAL Space Research S5.111	10003 – 10005 STANDARD FREQUENCY AND TIME SIGNAL Space Research S5.111	10003 – 10005 STANDARD FREQUENCY AND TIME SIGNAL S5.111 US340 G106	10003 – 10005 STANDARD FREQUENCY AND TIME SIGNAL S5.111 US340		
10005 – 10100 AERONAUTICAL MOBILE (R) S5.111	10005 – 10100 AERONAUTICAL MOBILE (R) S5.111	10005 – 10100 AERONAUTICAL MOBILE (R) S5.111	10005 – 10100 AERONAUTICAL MOBILE (R) S5.111 US283 US340	10005 – 10100 AERONAUTICAL MOBILE (R) S5.111 US283 US340	AVIATION (87)	
10100 – 10150 FIXED Amateur S5.120	10100 – 10150 FIXED Amateur S5.120	10100 – 10150 FIXED Amateur S5.120	10100 – 10150 US247 US340	10100 – 10150 AMATEUR S5.120 US247 US340	AMATEUR (97)	
10150 – 11175 FIXED Mobile except aero- nautical mobile (R)	10150 – 11175 FIXED Mobile except aero- nautical mobile (R)	10150 – 11175 FIXED Mobile except aero- nautical mobile (R)	10150 – 11175 FIXED Mobile except aero- nautical mobile (R) US340	10150 – 11175 FIXED Mobile except aero- nautical mobile (R) US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
11175 – 11275 AERONAUTICAL MOBILE (OR)	11175 – 11275 AERONAUTICAL MOBILE (OR)	11175 – 11275 AERONAUTICAL MOBILE (OR)	11175 – 11275 AERONAUTICAL MOBILE (OR) US340	11175 – 11275 AERONAUTICAL MOBILE (OR) US340		
11275 – 11400 AERONAUTICAL MOBILE (R)	11275 – 11400 AERONAUTICAL MOBILE (R)	11275 – 11400 AERONAUTICAL MOBILE (R)	11275 – 11400 AERONAUTICAL MOBILE (R) US283 US340	11275 – 11400 AERONAUTICAL MOBILE (R) US283 US340	AVIATION (87)	
11400 – 11600 FIXED	11400 – 11600 FIXED	11400 – 11600 FIXED	11400 – 11600 FIXED US340	11400 – 11600 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
11600 – 11650 BROADCASTING S5.134 S5.135 S5.146	11600 – 11650 BROADCASTING S5.134 S5.135 S5.146	11600 – 11650 BROADCASTING S5.134 S5.135 S5.146	11600 – 11650 FIXED US340	11600 – 11650 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
11650 – 12050 BROADCASTING S5.147 S5.148	11650 – 12050 BROADCASTING S5.147 S5.148	11650 – 12050 BROADCASTING S5.147 S5.148	11650 – 12050 BROADCASTING US235 US340	11650 – 12050 BROADCASTING US235 US340	RADIO BROADCAST (HF)(73) INTERNATIONAL FIXED PUBLIC (23)	
12050 – 12100 BROADCASTING S5.134 S5.135 S5.146	12050 – 12100 BROADCASTING S5.134 S5.135 S5.146	12050 – 12100 BROADCASTING S5.134 S5.135 S5.146	12050 – 12100 FIXED US340	12050 – 12100 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
12100 – 12230 FIXED	12100 – 12230 FIXED	12100 – 12230 FIXED	12100 – 12230 FIXED US340	12100 – 12230 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
12230 – 13200 MARITIME MOBILE S5.109 S5.110 S5.132 S5.145	12230 – 13200 MARITIME MOBILE S5.109 S5.110 S5.132 S5.145	12230 – 13200 MARITIME MOBILE S5.109 S5.110 S5.132 S5.145	12230 – 13200 MARITIME MOBILE S5.109 S5.110 S5.132 S5.145 US82 US296 US340	12230 – 13200 MARITIME MOBILE S5.109 S5.110 S5.132 S5.145 US82 US296 US340	INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)	
13200 – 13260 AERONAUTICAL MOBILE (OR)	13200 – 13260 AERONAUTICAL MOBILE (OR)	13200 – 13260 AERONAUTICAL MOBILE (OR)	13200 – 13260 AERONAUTICAL MOBILE (OR) US340	13200 – 13260 AERONAUTICAL MOBILE (OR) US340		
13260 – 13360 AERONAUTICAL MOBILE (R)	13260 – 13360 AERONAUTICAL MOBILE (R)	13260 – 13360 AERONAUTICAL MOBILE (R)	13260 – 13360 AERONAUTICAL MOBILE (R) US283 US340	13260 – 13360 AERONAUTICAL MOBILE (R) US283 US340	AVIATION (87)	

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
13360 – 13410 FIXED RADIO ASTRONOMY S5.149	13360 – 13410 FIXED RADIO ASTRONOMY S5.149	13360 – 13410 FIXED RADIO ASTRONOMY S5.149	13360 – 13410 RADIO ASTRONOMY S5.149 G115	13360 – 13410 RADIO ASTRONOMY S5.149		
13410 – 13570 FIXED MOBILE except aeronautical mobile (R) S5.150 US340	13410 – 13570 FIXED S5.150 US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	13560 ± 7 kHz: industrial, scientific and medical			
13570 – 13600 BROADCASTING S5.134 S5.135 S5.151	13570 – 13600 BROADCASTING S5.134 S5.135 S5.151	13570 – 13600 BROADCASTING S5.134 S5.135 S5.151	13570 – 13600 FIXED Mobile except aeronautical mobile (R) US340	13570 – 13600 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
13600 – 13800 BROADCASTING S5.148	13600 – 13800 BROADCASTING S5.148	13600 – 13800 BROADCASTING S5.148	13600 – 13800 BROADCASTING S5.148 US340	13600 – 13800 BROADCASTING S5.148 US340	RADIO BROADCAST (HF)(73) INTERNATIONAL FIXED PUBLIC (23)	
13800 – 13870 BROADCASTING S5.134 S5.135 S5.151	13800 – 13870 BROADCASTING S5.134 S5.135 S5.151	13800 – 13870 BROADCASTING S5.134 S5.135 S5.151	13800 – 13870 FIXED Mobile except aeronautical mobile (R) US340	13800 – 13870 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
13870 – 14000 FIXED Mobile except aeronautical mobile (R) S5.151	13870 – 14000 FIXED Mobile except aeronautical mobile (R) S5.151	13870 – 14000 FIXED Mobile except aeronautical mobile (R) S5.151	13870 – 14000 FIXED Mobile except aeronautical mobile (R) US340	13870 – 14000 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
14000 – 14250 AMATEUR S5.120 AMATEUR-SATELLITE	14000 – 14250 AMATEUR S5.120 AMATEUR-SATELLITE	14000 – 14250 AMATEUR S5.120 AMATEUR-SATELLITE	14000 – 14250 US340	14000 – 14250 AMATEUR S5.120 AMATEUR-SATELLITE US340	AMATEUR (97)	
14250 – 14350 AMATEUR S5.120 S5.152	14250 – 14350 AMATEUR S5.120	14250 – 14350 AMATEUR S5.120 S5.152	14250 – 14350 US340	14250 – 14350 AMATEUR S5.120 US340	AMATEUR (97)	
14350 – 14990 FIXED Mobile except aero- nautical mobile (R)	14350 – 14990 FIXED Mobile except aero- nautical mobile (R)	14350 – 14990 FIXED Mobile except aero- nautical mobile (R)	14350 – 14990 FIXED Mobile except aero- nautical mobile (R) US340	14350 – 14990 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
14990 – 15005 STANDARD FRE- QUENCY AND TIME SIGNAL (15000 kHz) S5.111	14990 – 15005 STANDARD FRE- QUENCY AND TIME SIGNAL (15000 kHz) S5.111	14990 – 15005 STANDARD FRE- QUENCY AND TIME SIGNAL (15000 kHz) S5.111	14990 – 15005 STANDARD FRE- QUENCY AND TIME SIGNAL (15000 kHz) S5.111 US340	14990 – 15005 STANDARD FREQUENCY AND TIME SIGNAL S5.111 US340		15000 kHz: standard frequency
15005 – 15010 STANDARD FREQUENCY AND TIME SIGNAL Space Research	15005 – 15010 STANDARD FREQUENCY AND TIME SIGNAL Space Research	15005 – 15010 STANDARD FREQUENCY AND TIME SIGNAL Space Research	15005 – 15010 STANDARD FREQUENCY AND TIME SIGNAL US340 G106	15005 – 15010 STANDARD FREQUENCY AND TIME SIGNAL US340		
15010 – 15100 AERONAUTICAL MOBILE (OR)	15010 – 15100 AERONAUTICAL MOBILE (OR)	15010 – 15100 AERONAUTICAL MOBILE (OR)	15010 – 15100 AERONAUTICAL MOBILE (OR) US340	15010 – 15100 AERONAUTICAL MOBILE (OR) US340		
15100 – 15600 BROADCASTING S5.148	15100 – 15600 BROADCASTING S5.148	15100 – 15600 BROADCASTING S5.148	15100 – 15600 BROADCASTING S5.148 US340	15100 – 15600 BROADCASTING S5.148 US340	RADIO BROADCAST (HF)(73) INTERNATIONAL FIXED PUBLIC (23)	

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
15600 – 15800 BROADCASTING S5.134 S5.135	15600 – 15800 BROADCASTING S5.134 S5.135	15600 – 15800 BROADCASTING S5.134 S5.135	15600 – 15800 FIXED	15600 – 15800 FIXED	AVIATION (87) INTERNATIONAL PUBLIC FIXED (23)	
S5.146	S5.146	S5.146	US340	US340		
15800 – 16360 FIXED	15800 – 16360 FIXED	15800 – 16360 FIXED	15800 – 16360 FIXED	15800 – 16360 FIXED	AVIATION (87) INTERNATIONAL PUBLIC FIXED (23)	
S5.153	S5.153	S5.153	US340	US340		
17410 – 17480 FIXED	17410 – 17480 FIXED	17410 – 17480 FIXED	17410 – 17480 FIXED	17410 – 17480 FIXED	AVIATION (87) INTERNATIONAL PUBLIC FIXED (23)	
			US340	US340		
17480 – 17550 BROADCASTING S5.134 S5.135	17480 – 17550 BROADCASTING S5.134 S5.135	17480 – 17550 BROADCASTING S5.134 S5.135	17480 – 17550 FIXED	17480 – 17550 FIXED	AVIATION (87) INTERNATIONAL PUBLIC FIXED (23)	
S5.146	S5.146	S5.146	US340	US340		
17550 – 17900 BROADCASTING	17550 – 17900 BROADCASTING	17550 – 17900 BROADCASTING	17550 – 17900 BROADCASTING	17550 – 17900 BROADCASTING	RADIO BROADCAST (HF) (73) INTERNATIONAL FIXED PUBLIC (23)	
S5.148	S5.148	S5.148	S5.148 US340	S5.148 US340		
17900 – 17970 AERONAUTICAL MOBILE (R)	17900 – 17970 AERONAUTICAL MOBILE (R)	17900 – 17970 AERONAUTICAL MOBILE (R)	17900 – 17970 AERONAUTICAL MOBILE (R)	17900 – 17970 AERONAUTICAL MOBILE (R)	AVIATION (87)	
			US283 US340	US283 US340		
17970 – 18030 AERONAUTICAL MOBILE (OR)	17970 – 18030 AERONAUTICAL MOBILE (OR)	17970 – 18030 AERONAUTICAL MOBILE (OR)	17970 – 18030 AERONAUTICAL MOBILE (OR)	17970 – 18030 AERONAUTICAL MOBILE (OR)		
			US340	US340		
18030 – 18052 FIXED	18030 – 18052 FIXED	18030 – 18052 FIXED	18030 – 18052 FIXED	18030 – 18052 FIXED	INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)	
			US340	US340		

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
18052 – 18068 FIXED Space Research	18052 – 18068 FIXED Space Research	18052 – 18068 FIXED Space Research	18052 – 18068 FIXED US340	18052 – 18068 FIXED US340	INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)	
18068 – 18168 AMATEUR S5.120 AMATEUR-SATELLITE S5.154	18068 – 18168 AMATEUR S5.120 AMATEUR-SATELLITE	18068 – 18168 AMATEUR S5.120 AMATEUR-SATELLITE	18068 – 18168 US340	18068 – 18168 AMATEUR S5.120 AMATEUR-SATELLITE US340	AMATEUR (97) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)	
18168 – 18780 FIXED Mobile except aeronautical mobile	18168 – 18780 FIXED Mobile except aeronautical mobile	18168 – 18780 FIXED Mobile except aeronautical mobile	18168 – 18780 FIXED Mobile US340	18168 – 18780 FIXED Mobile US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)	
18780 – 18900 MARITIME MOBILE	18780 – 18900 MARITIME MOBILE	18780 – 18900 MARITIME MOBILE	18780 – 18900 MARITIME MOBILE US82 US296 US340	18780 – 18900 MARITIME MOBILE US82 US296 US340	INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)	
18900 – 19020 BROADCASTING S5.134 S5.135 S5.146	18900 – 19020 BROADCASTING S5.134 S5.135 S5.146	18900 – 19020 BROADCASTING S5.134 S5.135 S5.146	18900 – 19020 FIXED US340	18900 – 19020 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
19020 – 19680 FIXED	19020 – 19680 FIXED	19020 – 19680 FIXED	19020 – 19680 FIXED US340	19020 – 19680 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
19680 – 19800 MARITIME MOBILE S5.132	19680 – 19800 MARITIME MOBILE S5.132	19680 – 19800 MARITIME MOBILE S5.132	19680 – 19800 MARITIME MOBILE S5.132 US340	19680 – 19800 MARITIME MOBILE S5.132 US340	MARITIME (80)	
19800 – 19900 FIXED	19800 – 19900 FIXED	19800 – 19900 FIXED	19800 – 19900 FIXED US340	19800 – 19900 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
19900 – 19995 STANDARD FREQUENCY AND TIME SIGNAL Space Research						
S5.111	S5.111	S5.111	S5.111 US340 G106	S5.111 US340		
19995 – 20010 STANDARD FRE- QUENCY AND TIME SIGNAL (20000 kHz)	19995 – 20010 STANDARD FRE- QUENCY AND TIME SIGNAL (20000 kHz)	19995 – 20010 STANDARD FRE- QUENCY AND TIME SIGNAL (20000 kHz)	19995 – 20010 STANDARD FREQUENCY AND TIME SIGNAL	19995 – 20010 STANDARD FREQUENCY AND TIME SIGNAL		2000 kHz: standard frequency
S5.111	S5.111	S5.111	S5.111 US340 G106	S5.111 US340		
20010 – 21000 FIXED Mobile	20010 – 21000 FIXED Mobile	20010 – 21000 FIXED Mobile	20010 – 21000 FIXED Mobile	20010 – 21000 FIXED		
			US340	US340		
21000 – 21450 AMATEUR S5.120 AMATEUR-SATELLITE	21000 – 21450 AMATEUR S5.120 AMATEUR-SATELLITE	21000 – 21450 AMATEUR S5.120 AMATEUR-SATELLITE	21000 – 21450	21000 – 21450 AMATEUR S5.120 AMATEUR-SATELLITE	AMATEUR (97)	
			US340	US340		
21450 – 21850 BROADCASTING	INTERNATIONAL FIXED PUBLIC (23) RADIO BROADCAST (HF) (73)					
S5.148	S5.148	S5.148	S5.148 US340	S5.148 US340		
21850 – 21870 FIXED S5.155A	21850 – 21870 FIXED	21850 – 21870 FIXED	21850 – 21870 FIXED	21850 – 21870 FIXED	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
S5.155			US340	US340		
21870 – 21924 FIXED S5.155B	21870 – 21924 FIXED S5.155B	21870 – 21924 FIXED S5.155B	21870 – 21924 FIXED	21870 – 21924 FIXED	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
			US340	US340		

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
21924 – 22000 AERONAUTICAL MOBILE (R)	21924 – 22000 AERONAUTICAL MOBILE (R)	21924 – 22000 AERONAUTICAL MOBILE (R)	21924 – 22000 AERONAUTICAL MOBILE (R) US340	21924 – 22000 AERONAUTICAL MOBILE (R) US340	AVIATION (87)	
22000 – 22855 MARITIME MOBILE S5.132 S5.156	22000 – 22855 MARITIME MOBILE S5.132	22000 – 22855 MARITIME MOBILE S5.132	22000 – 22855 MARITIME MOBILE S5.132 US82 US296 US340	22000 – 22855 MARITIME MOBILE S5.132 US82 US296 US340	INTERNATIONAL FIXED PUBLIC (23) MARITIME (80)	
22855 – 23000 FIXED S5.156	22855 – 23000 FIXED	22855 – 23000 FIXED	22855 – 23000 FIXED US340	22855 – 23000 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
23000 – 23200 FIXED Mobile except aero- nautical mobile (R) S5.156	23000 – 23200 FIXED Mobile except aero- nautical mobile (R)	23000 – 23200 FIXED Mobile except aero- nautical mobile (R)	23000 – 23200 FIXED Mobile except aero- nautical mobile (R) US340	23000 – 23200 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
23200 – 23350 AERONAUTICAL MOBILE (OR) FIXED S5.156A	23200 – 23350 AERONAUTICAL MOBILE (OR) FIXED S5.156A	23200 – 23350 AERONAUTICAL MOBILE (OR) FIXED S5.156A	23200 – 23350 AERONAUTICAL MOBILE (OR) US340	23200 – 23350 AERONAUTICAL MOBILE (OR) US340		
23350 – 24000 FIXED MOBILE except aeronautical mobile S5.157	23350 – 24000 FIXED MOBILE except aeronautical mobile S5.157	23350 – 24000 FIXED MOBILE except aeronautical mobile S5.157	23350 – 24000 FIXED MOBILE except aeronautical mobile US340	23350 – 24000 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
24000 – 24890 FIXED LAND MOBILE	24000 – 24890 FIXED LAND MOBILE	24000 – 24890 FIXED LAND MOBILE	24000 – 24890 FIXED MOBILE except aeronautical mobile US340	24000 – 24890 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
24890 – 24990 AMATEUR S5.120 AMATEUR-SATELLITE	24890 – 24990 AMATEUR S5.120 AMATEUR-SATELLITE	24890 – 24990 AMATEUR S5.120 AMATEUR-SATELLITE	24890 – 24990 US340	24890 – 24990 AMATEUR S5.120 AMATEUR-SATELLITE US340	AMATEUR (97)	
24990 – 25005 STANDARD FRE- QUENCY AND TIME SIGNAL (25000 kHz)	24990 – 25005 STANDARD FRE- QUENCY AND TIME SIGNAL (25000 kHz)	24990 – 25005 STANDARD FRE- QUENCY AND TIME SIGNAL (25000 kHz)	24990 – 25005 STANDARD FREQUENCY AND TIME SIGNAL US340	24990 – 25005 STANDARD FREQUENCY AND TIME SIGNAL US340		25000 kHz: standard frequency
25005 – 25010 STANDARD FREQUENCY AND TIME SIGNAL Space Research	25005 – 25010 STANDARD FREQUENCY AND TIME SIGNAL Space Research	25005 – 25010 STANDARD FREQUENCY AND TIME SIGNAL Space Research	25005 – 25010 STANDARD FREQUENCY AND TIME SIGNAL US340 G106	25005 – 25010 STANDARD FREQUENCY AND TIME SIGNAL US340		
25010 – 25070 FIXED MOBILE except aeronautical mobile	25010 – 25070 FIXED MOBILE except aeronautical mobile	25010 – 25070 FIXED MOBILE except aeronautical mobile	25010 – 25070 US340	25010 – 25070 LAND MOBILE US340 NG112	PRIVATE LAND MOBILE (90)	
25070 – 25210 MARITIME MOBILE	25070 – 25210 MARITIME MOBILE	25070 – 25210 MARITIME MOBILE	25070 – 25210 MARITIME MOBILE US82 US281 US296 US340	25070 – 25210 MARITIME MOBILE US82 US281 US296 US340 NG112	MARITIME (80) PRIVATE LAND MOBILE (90)	
25210 – 25330 FIXED MOBILE except aeronautical mobile	25210 – 25330 FIXED MOBILE except aeronautical mobile	25210 – 25330 FIXED MOBILE except aeronautical mobile	25210 – 25330 US340	25210 – 25330 LAND MOBILE US340	PRIVATE LAND MOBILE (90)	
25330 – 25550 FIXED MOBILE except aeronautical mobile	25330 – 25550 FIXED MOBILE except aeronautical mobile	25330 – 25550 FIXED MOBILE except aeronautical mobile	25330 – 25550 FIXED MOBILE except aeronautical mobile US340	25330 – 25550 US340		

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
25550 – 25670 RADIO ASTRONOMY	25550 – 25670 RADIO ASTRONOMY	25550 – 25670 RADIO ASTRONOMY	25550 – 25670 RADIO ASTRONOMY US74	25550 – 25670 RADIO ASTRONOMY US74		
S5.149	S5.149	S5.149	S5.149	S5.149		
25670 – 26100 BROADCASTING	25670 – 26100 BROADCASTING	25670 – 26100 BROADCASTING	25670 – 26100 BROADCASTING US25 US340	25670 – 26100 BROADCASTING US25 US340	RADIO BROADCAST (HF) (73) Remote Pickup (74D)	
26100 – 26175 MARITIME MOBILE S5.132	26100 – 26175 MARITIME MOBILE S5.132	26100 – 26175 MARITIME MOBILE S5.132	26100 – 26175 MARITIME MOBILE S5.132 US340	26100 – 26175 MARITIME MOBILE S5.132 US340	AUXILIARY BROADCASTING (74) MARITIME (80)	
26175 – 26480 FIXED MOBILE except aeronautical mobile	26175 – 26480 FIXED MOBILE except aeronautical mobile	26175 – 26480 FIXED MOBILE except aeronautical mobile	26175 – 26480 US340	26175 – 26480 LAND MOBILE US340	AUXILIARY BROADCASTING (74)	
26480 – 26950 FIXED MOBILE except aeronautical mobile	26480 – 26950 FIXED MOBILE except aeronautical mobile	26480 – 26950 FIXED MOBILE except aeronautical mobile	26480 – 26950 FIXED MOBILE except aeronautical mobile US10 US340	26480 – 26950 US10 US340		
26950 – 26960 FIXED MOBILE except aeronautical mobile	26950 – 26960 FIXED MOBILE except aeronautical mobile	26950 – 26960 FIXED MOBILE except aeronautical mobile	26950 – 26960 S5.150 US340	26950 – 26960 FIXED S5.150 US340	INTERNATIONAL FIXED PUBLIC (23)	
26960 – 27230 FIXED MOBILE except aeronautical mobile	26960 – 27230 FIXED MOBILE except aeronautical mobile	26960 – 27230 FIXED MOBILE except aeronautical mobile	26960 – 27230 S5.150 US340	26960 – 27230 MOBILE except aeronautical mobile S5.150 US340	PERSONAL (95)	27120 ± 163 kHz: industrial, scientific and medical

International table			United States table		FCC use designators	
Region 1 -- allocation kHz	Region 2 -- allocation kHz	Region 3 -- allocation kHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation kHz (4)	Allocation kHz (5)	(6)	(7)
27230 – 27410 FIXED MOBILE except aeronautical mobile S5.150	27230 – 27410 FIXED MOBILE except aeronautical mobile S5.150	27230 – 27410 FIXED MOBILE except aeronautical mobile S5.150	27230 – 27410 S5.150 US340	27230 – 27410 FIXED MOBILE except aeronautical mobile S5.150 US340	PERSONAL (95) PRIVATE LAND MOBILE (90)	
27410 – 27500 FIXED MOBILE except aeronautical mobile	27410 – 27500 FIXED MOBILE except aeronautical mobile	27410 – 27500 FIXED MOBILE except aeronautical mobile	27410 – 27500 US340	27410 – 27500 FIXED LAND MOBILE US340	PRIVATE LAND MOBILE (90)	

International table			United States table		FCC use designators	
Region 1 -- allocation MHz	Region 2 -- allocation MHz	Region 3 -- allocation MHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation MHz (4)	Allocation MHz (5)	(6)	(7)
27.5 – 27.54 METEOROLOGICAL AIDS FIXED MOBILE	27.5 – 27.54 METEOROLOGICAL AIDS FIXED MOBILE	27.5 – 27.54 METEOROLOGICAL AIDS FIXED MOBILE	27.5 – 27.54 US340	27.5 – 27.54 FIXED LAND MOBILE US340	PRIVATE LAND MOBILE (90)	
27.54 – 28 METEOROLOGICAL AIDS FIXED MOBILE	27.54 – 28 METEOROLOGICAL AIDS FIXED MOBILE	27.54 – 28 METEOROLOGICAL AIDS FIXED MOBILE	27.54 – 28 FIXED MOBILE US298 US340	27.54 – 28 US298 US340		
28 – 29.7 AMATEUR AMATEUR-SATELLITE	28 – 29.7 AMATEUR AMATEUR-SATELLITE	28 – 29.7 AMATEUR AMATEUR-SATELLITE	28 – 29.7 US340	28 – 29.7 AMATEUR AMATEUR-SATELLITE US340	AMATEUR (97)	
29.7 – 29.8 FIXED MOBILE	29.7 – 29.8 FIXED MOBILE	29.7 – 29.8 FIXED MOBILE	29.7 – 29.8 US340	29.7 – 29.8 LAND MOBILE US340	PRIVATE LAND MOBILE (90)	

International table			United States table		FCC use designators	
Region 1 -- allocation MHz	Region 2 -- allocation MHz	Region 3 -- allocation MHz	Government	Non-Government	Rule part(s)	Special-use frequencies
(1)	(2)	(3)	Allocation MHz (4)	Allocation MHz (5)	(6)	(7)
29.8 – 29.89 FIXED MOBILE	29.8 – 29.89 FIXED MOBILE	29.8 – 29.89 FIXED MOBILE	29.8 – 29.89 US340	29.8 – 29.89 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
29.89 – 29.91 FIXED MOBILE	29.89 – 29.91 FIXED MOBILE	29.89 – 29.91 FIXED MOBILE	29.89 – 29.91 FIXED MOBILE US340	29.89 – 29.91 US340		
29.91 – 30 FIXED MOBILE	29.91 – 30 FIXED MOBILE	29.91 – 30 FIXED MOBILE	29.91 – 30 US340	29.91 – 30 FIXED US340	AVIATION (87) INTERNATIONAL FIXED PUBLIC (23)	
*	*	*	*	*	*	*
158.115 – 161.575 FIXED MOBILE except aeronautical mobile	158.115 – 161.575 FIXED MOBILE	158.115 – 161.575 FIXED MOBILE	158.115 – 161.575	158.115 – 161.575 FIXED LAND MOBILE S5.226 NG6 NG28 NG70 NG112 NG124 NG148	PUBLIC MOBILE (22) PRIVATE LAND MOBILE (90) MARITIME (80)	
S5.226 S5.229	S5.226 S5.230 S5.231 S5.232	S5.226 S5.230 S5.231 S5.232	S5.226			
*	*	*	*	*	*	*

S5.92 Some countries of Region 1 use radiodetermination systems in the bands 1606.5-1625 kHz, 1635-1800 kHz, 1850-2160 kHz, 2194-2300 kHz, 2502-2850 kHz and 3500-3800 kHz, subject to agreement obtained under Article 14/No. S9.21. The radiated mean power of these stations shall not exceed 50W.

S5.93 *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Moldova, Mongolia, Nigeria, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Chad, Turkmenistan and Ukraine, the bands 1625-1635 kHz, 1800-1810 kHz and 2160-2170 kHz are also allocated to the fixed and land mobile services on a primary basis, subject to agreement obtained under Article 14/No. S9.21.

S5.103 In Region 1, in making assignments to stations in the fixed and mobile services in the bands 1850-2045 kHz, 2194-2498 kHz, 2502-2625 kHz and 2650-2850 kHz, administrations should bear in mind the special requirements of the maritime mobile service.

S5.104 In Region 1, the use of the band 2025-2045 kHz by the meteorological aids service is limited to oceanographic buoy stations.

S5.105 In Region 2, except in Greenland, coast stations and ship stations using radiotelephony in the band 2065-2107 kHz shall be limited to class J3E emissions and to a peak envelope power not exceeding 1kW. Preferably, the following carrier frequencies should be used: 2065.0 kHz, 2079.0 kHz, 2082.5 kHz, 2086.0 kHz, 2093.0 kHz, 2096.5 kHz, 2100.0 kHz and 2103.5 kHz. In Argentina and Uruguay, the carrier frequencies 2068.5 kHz and 2075.5 kHz are also used for this purpose, while the frequencies within the band 2072-2075.5 kHz are used as provided in No. 4323BD/S52.165.

S5.106 In Regions 2 and 3, provided no harmful interference is caused to the maritime mobile service, the frequencies between 2065 kHz and 2107 kHz may be used by stations of the fixed service communicating only within national borders and whose mean power does not exceed 50 W. In notifying the frequencies, the attention of the Bureau should be drawn to these provisions.

S5.107 *Additional allocation:* in Saudi Arabia, Botswana, Eritrea, Ethiopia, Iraq, Lesotho, Libya, Malawi, Somalia, Swaziland and Zambia, the band 2160-2170 kHz is also allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis. The mean power of stations in these services shall not exceed 50 W.

S5.108 The carrier frequency 2182 kHz is an international distress and calling frequency for radiotelephony. The conditions for the use of the band 2173.5-2190.5 kHz are prescribed in Articles N38/S31 and 60/S52 and in Articles 37 and 38/Appendix S13.

S5.109 The frequencies 2187.5 kHz, 4207.5 kHz, 6312 kHz, 8414.5 kHz, 12577 kHz and 16804.5 kHz are international distress frequencies for digital selective calling. The conditions for the use of these frequencies are prescribed in Article N38/S31.

S5.110 The frequencies 2174.5 kHz, 4177.5 kHz, 6268 kHz, 8376.5 kHz, 12520 kHz and 16695 kHz are international distress frequencies for narrow-band direct-printing telegraphy. The conditions for the use of these frequencies are prescribed in Article N38/S31.

S5.111 The carrier frequencies 2182 kHz, 3023 kHz, 5680 kHz, 8364 kHz and the frequencies 121.5 MHz, 156.8 MHz and 243 MHz may also be used, in accordance with the procedures in force for terrestrial radiocommunication services, for search and rescue operations concerning manned space vehicles. The conditions for the use of the frequencies are prescribed in Article N38/S31 and in Article 38/Appendix S13.

The same applies to the frequencies 10003 kHz, 14993 kHz and 19993 kHz, but in each of these cases emissions must be confined in a band of ± 3 kHz about the frequency.

S5.112 *Alternative allocation:* in Belgium, Bosnia and Herzegovina, Cyprus, Denmark, Spain, France, Greece, Iceland, Italy, Malta, Norway, the United Kingdom, Singapore, Sri Lanka, Turkey and Yugoslavia, the band 2194-2300 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

S5.113 For the conditions for the use of the bands 2300-2495 kHz (2498 kHz in Region 1), 3200-3400 kHz, 4750-4995 kHz and 5005-5060 kHz by the broadcasting service, see Nos. S5.16 to S5.20, S5.21 and 2666/S23.3 to 2673/S23.10.

S5.114 *Alternative allocation:* in Belgium, Bosnia and Herzegovina, Cyprus, Denmark, Spain, France, Greece, Iraq, Italy, Malta, Norway, the United Kingdom, Turkey and Yugoslavia, the band 2502-2625 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

S5.115 The carrier (reference) frequencies 3023 kHz and 5680 kHz may also be used, in accordance with Article N38/S31 and Article 38/Appendix S13 by stations of the maritime mobile service engaged in coordinated search and rescue operations.

S5.116 Administrations are urged to authorize the use of the band 3155-3195 kHz to provide a common worldwide channel for low power wireless hearing aids. Additional channels for these devices may be assigned by administrations in the bands between 3155 kHz and 3400 kHz to suit local needs.

It should be noted that frequencies in the range 3000 kHz to 4000 kHz are suitable for hearing aid devices which are designed to operate over short distances within the induction field.

S5.117 *Alternative allocation:* in Belgium, Bosnia and Herzegovina, Cameroon, Cyprus, Côte d'Ivoire, Denmark, Egypt, Spain, France, Greece, Iceland, Italy, Liberia, Malta, Norway, the United Kingdom, Singapore, Sri Lanka, Togo, Turkey and Yugoslavia, the band 3155-3200 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

S5.118 *Additional allocation:* in the United States, Japan, Mexico, Peru and Uruguay, the band 3230-3400 kHz is also allocated to the radiolocation service on a secondary basis.

S5.119 *Additional allocation:* in Honduras, Mexico, Peru and Venezuela, the band 3500-3750 kHz is also allocated to the fixed and mobile services on a primary basis.

S5.120 For the use of the bands allocated to the amateur service at 3.5 MHz, 7.0 MHz, 10.1 MHz, 14.0 MHz, 18.068 MHz, 21.0 MHz, 24.89 MHz and 144 MHz in the event of natural disasters, see Resolution 640.

S5.122 *Alternative allocation:* in Argentina, Bolivia, Chile, Ecuador, Paraguay, Peru and Uruguay, the band 3750-4000 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis.

S5.123 *Additional allocation:* in Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe, the band 3900-3950 kHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under Article 14/No. S9.21.

S5.124 *Additional allocation:* in Canada, the band 3950-4000 kHz is also allocated to the broadcasting service on a primary basis. The power of broadcasting stations operating in this band shall not exceed that necessary for a national service within the frontier of this country and shall not cause harmful interference to other services operating in accordance with the Table.

S5.125 *Additional allocation:* in Greenland, the band 3950-4000 kHz is also allocated to the broadcasting service on a primary basis. The power of the broadcasting stations operating in this band shall not exceed that necessary for a national service and shall in no case exceed 5 kW.

S5.126 In Region 3, the stations of those services to which the band 3995-4005 kHz is allocated may transmit standard frequency and time signals.

S5.127 The use of the band 4000-4063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see No. 4374/S52.220 and Appendix 16/S17).

S5.128 In Afghanistan, Argentina, Armenia, Australia, Azerbaijan, Belarus, Botswana, Burkina Faso, Central African Republic, China, Georgia, India, Kazakhstan, Mali, Moldova, Niger, Kyrgyzstan, Russia, Tajikistan, Chad, Turkmenistan and Ukraine, in the bands 4063-4123 kHz, 4130-4133 kHz and 4408-4438 kHz, stations of limited power in the fixed service which are situated at least 600 km from the coast may operate on condition that harmful interference is not caused to the maritime mobile service.

S5.129 On condition that harmful interference is not caused to the maritime mobile service, the frequencies in the bands 4063-4123 kHz and 4130-4438 kHz may be used exceptionally by stations in the fixed service communicating only within the boundary of the country in which they

are located with a mean power not exceeding 50 W.

S5.130 The conditions for the use of the carrier frequencies 4125 kHz and 6215 kHz are prescribed in Articles N38/S31 and 60/S52 and in Articles 37 and 38/Appendix S13.

S5.131 The frequency 4209.5 kHz is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing techniques (see Resolution 339 WRC-95).

S5.132 The frequencies 4210 kHz, 6314 kHz, 8416.5 kHz, 12579 kHz, 16806.5 kHz, 19680.5 kHz, 22376 kHz and 26100.5 kHz are the international frequencies for the transmission of Maritime Safety Information (MSI) (see Resolution 333 (Mob-87) and Appendix 31/S17).

S5.133 *Different category of service:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Latvia, Lithuania, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 5130-5250 kHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. S5.33).

S5.134 The use of the bands 5900-5950 kHz, 7300-7350 kHz, 9400-9500 kHz, 11600-11650 kHz, 12050-12100 kHz, 13570-13600 kHz, 13800-13870 kHz, 15600-15800 kHz, 17480-17550 kHz and 18900-19020 kHz by the broadcasting service is limited to single-sideband emissions with the characteristics specified in Appendix 45/S11 to the Radio Regulations.

S5.135 The use of the bands 5900-5950 kHz, 7300-7350 kHz, 9400-9500 kHz, 11600-11650 kHz, 12050-12100 kHz, 13570-13600 kHz, 13800-13870 kHz, 15600-15800 kHz, 17480-17550 kHz and 18900-19020 kHz by the broadcasting service shall be subject to the planning procedures to be drawn up by a competent world administrative radio conference.

S5.136 The band 5900-5950 kHz is allocated, until 1 April 2007, to the fixed service on a primary basis, as well as to the following services: in Region 1 to the land mobile service on a primary basis, in Region 2 to the mobile except aeronautical mobile (R) service on a primary basis, and in Region 3 to the mobile except aeronautical mobile (R) service on a secondary basis, subject to application of the procedure referred to in Resolution 21 (Rev.WRC-95). After 1 April 2007, frequencies in this band may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

S5.137 On condition that harmful interference is not caused to the maritime mobile service, the bands 6200-6213.5 kHz and 6220.5-6525 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W. At the time of notification of these frequencies, the attention of

the Bureau will be drawn to the above conditions.

S5.138 The following bands:

6765-6795 kHz (centre frequency 6780 kHz),

433.05-434.79 MHz (centre frequency 433.92 MHz) in Region 1 except in the countries mentioned in No. S5.280,

61-61.5 GHz (centre frequency 61.25 GHz),

122-123 GHz (centre frequency 122.5 GHz), and

244-246 GHz (centre frequency 245 GHz)

are designated for industrial, scientific and medical (ISM) applications. The use of these frequency bands for ISM applications shall be subject to special authorization by the administration concerned, in agreement with other administrations whose radiocommunication services might be affected. In applying this provision, administrations shall have due regard to the latest relevant ITU-R Recommendations.

S5.139 *Different category of service:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Latvia, Lithuania, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 6765-7000 kHz to the land mobile service is on a primary basis (see No. S5.33).

S5.140 *Additional allocation:* in Angola, Iraq, Rwanda, Somalia and Togo, the band 7000-7050 kHz is also allocated to the fixed service on a primary basis.

S5.141 *Alternative allocation:* in Egypt, Eritrea, Ethiopia, Guinea, Libya, Madagascar and Malawi, the band 7000-7050 kHz is allocated to the fixed service on a primary basis.

S5.142 The use of the band 7100-7300 kHz in Region 2 by the amateur service shall not impose constraints on the broadcasting service intended for use within Region 1 and Region 3.

S5.143 The band 7300-7350 kHz is allocated, until 1 April 2007, to the fixed service on a primary basis and to the land mobile service on a secondary basis, subject to application of the procedure referred to in Resolution 21 (Rev.WRC-95). After 1 April 2007, frequencies in this band may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

S5.144 In Region 3, the stations of those services to which the band 7995-8005 kHz is allocated may transmit standard frequency and time signals.

S5.145 The conditions for the use of the carrier frequencies 8291 kHz, 12290 kHz and 16420 kHz are prescribed in Articles N38/S31 and 60/S52 and in Article 38/Appendix S13.

S5.146 The bands 9400-9500 kHz, 11600-11650 kHz, 12050-12100 kHz, 15600-15800 kHz, 17480-17550 kHz and 18900-19020 kHz are allocated to the fixed service on a primary basis until 1 April 2007, subject to application of the procedure referred to in Resolution 21 (Rev. WRC-95). After 1 April 2007, frequencies in these bands may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

S5.147 On condition that harmful interference is not caused to the broadcasting service, frequencies in the bands 9775-9900 kHz, 11650-11700 kHz and 11975-12050 kHz may be used by stations in the fixed service communicating only within the boundary of the country in which they are located, each station using a total radiated power not exceeding 24 dBW.

S5.148 The bands 9775-9900 kHz, 11650-11700 kHz, 11975-12050 kHz, 13600-13800 kHz, 15450-15600 kHz, 17550-17700 kHz and 21750-21850 kHz are allocated to the fixed service on a primary basis subject to the procedure described in Resolution 8. The use of these bands by the broadcasting service shall be subject to provisions established by the World Administrative Radio Conference for the Planning of the HF Bands Allocated to the Broadcasting Service (see Resolution 508). The provisions of Resolution 512 (HFBC-87) also apply. Within these bands, the date of commencement of operations in the broadcasting service on a planned channel shall not be earlier than the date of completion of satisfactory transfer, according to the procedures described in Resolution 8, of all assignments to stations in the fixed service operating in accordance with the Table and other provisions of the Radio Regulations, which are recorded in the Master Register and which may be affected by broadcasting operations on that channel.

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S5.150 The following bands:

13533-13567 kHz (centre frequency 13560 kHz),
26957-27283 kHz (centre frequency 27120 kHz),
40.66-40.70 MHz (centre frequency 40.68 MHz),
902-928 MHz in Region 2 (centre frequency 915 MHz),
2400-2500 MHz (centre frequency 2450 MHz),
5725-5875 MHz (centre frequency 5800 MHz), and
24-24.25 GHz (centre frequency 24.125 GHz)

are also designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within these bands must accept harmful interference which may be caused by these applications. ISM equipment operating in these bands is subject to the provisions of No. 1815/S15.13.

S5.151 The bands 13570-13600 kHz and 13800-13870 kHz are allocated, until 1 April 2007, to the fixed service on a primary basis and to the mobile except aeronautical mobile (R) service on

a secondary basis, subject to application of the procedure referred to in Resolution 21 (Rev.WRC-95). After 1 April 2007, frequencies in these bands may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

S5.152 *Additional allocation:* in Armenia, Azerbaijan, Belarus, China, Côte d'Ivoire, Georgia, the Islamic Republic of Iran, Kazakhstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 14250-14350 kHz is also allocated to the fixed service on a primary basis. Stations of the fixed service shall not use a radiated power exceeding 24 dBW.

S5.153 In Region 3, the stations of those services to which the band 15995-16005 kHz is allocated may transmit standard frequency and time signals.

S5.154 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Moldova, Uzbekistan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan and Ukraine, the band 18068-18168 kHz is also allocated to the fixed service on a primary basis for use within their boundaries, with a peak envelope power not exceeding 1 kW.

S5.155 *Additional allocation:* in Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakhstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the band 21850-21870 kHz is also allocated to the aeronautical mobile (R) services on a primary basis.

S5.155A In Armenia, Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Kazakhstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, the Czech Republic, Russia, Tajikistan, Turkmenistan and Ukraine, the use of the band 21850-21870 kHz by the fixed service is limited to provision of services related to aircraft flight safety.

S5.155B The band 21870-21924 kHz is used by the fixed service for provision of services related to aircraft flight safety.

S5.156 *Additional allocation:* in Nigeria, the band 22720-23200 kHz is also allocated to the meteorological aids service (radiosondes) on a primary basis.

S5.156A The use of the band 23200-23350 kHz by the fixed service is limited to provision of services related to aircraft flight safety.

S5.157 The use of the band 23350-24000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.

S5.226 The frequency 156.8 MHz is the international distress, safety and calling frequency for

the maritime mobile VHF radiotelephone service. The conditions for the use of this frequency are contained in Article N38/S31 and Article 38/Appendix S13.

In the bands 156-156.7625 MHz, 156.8375-157.45 MHz, 160.6-160.975 MHz and 161.475-162.05 MHz, each administration shall give priority to the maritime mobile service on only such frequencies as are assigned to stations of the maritime mobile service by the administration (see Articles N38/S31 and 60/S52 and Article 38/Appendix S13).

Any use of frequencies in these bands by stations of other services to which they are allocated should be avoided in areas where such use might cause harmful interference to the maritime mobile VHF radiocommunication service.

However, the frequency 156.8 MHz and the frequency bands in which priority is given to the maritime mobile service may be used for radiocommunications on inland waterways subject to agreement between interested and affected administrations and taking into account current frequency usage and existing agreements.

S5.229 Alternative allocation: in Morocco, the band 162-174 MHz is allocated to the broadcasting service on a primary basis. The use of this band shall be subject to agreement with administrations having services, operating or planned, in accordance with the Table which are likely to be affected. Stations in existence on 1 January 1981, with their technical characteristics as of that date, are not affected by such agreement.

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UNITED STATES (US) FOOTNOTES

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US340 The 2-30 MHz band is available on a secondary noninterference basis to Government and non-Government maritime and aeronautical stations for the purposes of measuring the quality of reception on radio channels. See 47 C.F.R. § 87.149 for the list of protected frequencies and bands within this frequency range. Actual communications shall be limited to those frequencies specifically allocated to the maritime mobile and aeronautical mobile services.

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NON-GOVERNMENT (NG) FOOTNOTES

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NG155 The bands 159.500-159.675 MHz and 161.375-161.550 MHz are allocated to the maritime service as described in Part 80 of this chapter. Additionally, the frequencies 159.550, 159.575 and 159.600 MHz are available for low-power intership communications.

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III. Part 80 - Stations in the Maritime Services

5. The authority citation for Part 80 continues to read as follows:

AUTHORITY: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303, unless otherwise noted. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-155, 301-609; 3 UST 3450, 3 UST 4726, 12 UST 2377.

6. Section 80.13 is amended by revising paragraph (b) to read as follows:

§ 80.13 Station license required.

* * * * *

(b) One ship station license will be granted for operation of all maritime services transmitting equipment on board a vessel. Radiotelegraph and narrow-band directing-printing equipment will not be authorized, however, unless specifically requested by the applicant.

7. Section 80.25 is amended by revising paragraphs (a) and (b) to read as follows:

§ 80.25 License term.

(a) Licenses for ship stations in the maritime services will normally be issued for a term of ten years from the date of original issuance, major modification, or renewal. Licensees may apply for renewal of the station license up to ninety (90) days after the date the license expires.

(b) Licenses other than ship stations in the maritime services will normally be issued for a term of five years from the date of original issuance, major modification, or renewal. Licenses, other than Public Coast and Alaska Public Fixed stations, may be renewed up to ninety (90) days after the date the license expires.

* * * * *

8. In Section 80.89, the text in paragraph (f) is amended to read as follows:

§ 80.89 Unauthorized transmissions.

(a) * * *

(f) Transmit while on board vessels located on land unless authorized under a public coast station license. * * * * *

9. A new Section 80.123 is added under Special Procedures-Public Coast Stations to read as follows:

§ 80.123 Service to stations on land.

Marine VHF public coast stations, including AMTS coast stations, may provide public correspondence service to stations on land in accordance with the following:

- (a) The public coast station licensee must provide each associated land station with a letter, which shall be presented to authorized FCC representatives upon request, acknowledging that the land station may operate under the authority of the associated public coast station's license;
- (b) Each public coast station serving stations on land must afford priority to marine-originating communications through any appropriate electrical or mechanical means.
- (c) Land station identification shall consist of the associated public coast station's call sign, followed by a unique numeric or alphabetic unit identifier;
- (d) Radio equipment used on land must be type accepted for use under Part 22, Part 80, or Part 90 of this chapter. Such equipment must operate only on the public correspondence channels authorized for use by the associated public coast station;
- (e) Transmitter power shall be in accordance with the limits set in § 80.215 for ship stations and antenna height shall be limited to 6.1 meters (20 feet) above ground level;
- (f) Land stations may only communicate with public coast stations and must remain within radio range of associated public coast stations; and,
- (g) The land station must cease operation immediately upon written notice by the Commission to the associated public coast station that the land station is causing harmful interference to marine communications.

10. A new Section 80.133 is added under Special Procedures-Private Coast Stations to read as follows:

§ 80.133 Private coast stations using facsimile in Alaska.

Facsimile techniques may be implemented in accordance with the following paragraphs.

- (a) Private coast stations in Alaska are eligible to use facsimile techniques with associated ship stations and other private coast stations in accordance with § 80.505(b) of this Chapter.
- (b) The frequency 156.425 MHz is assigned by rule to private coast stations in Alaska for facsimile transmissions.
- (c) Equipment used for facsimile operations is subject to the applicable provisions of Subpart E

of this Part.

* * * * *

11. In Section 80.153 paragraph (b) is amended by revising the entry titled "Coast telephone, all classes:" to read as follows:

§ 80.153 Coast station operator requirements.

* * * * *

(b) * * *

Minimum Operator License

* * * * *

Coast telephone, all classes -- None.

* * * * *

12. Section 80.177 is amended by revising paragraph (c) to read as follows:

§ 80.177 When operator license is not required.

* * * * *

(c) No operator license is required to operate coast telephone stations or marine utility stations.

* * * * *

13. Section 80.179 is amended by revising paragraphs (b), (c) and (d) to read as follows:

§ 80.179 Unattended operation.

* * * * *

(b) Automatic use of a transmitter during narrow-band direct-printing (NB-DP) operations in accordance with § 80.219.

(c) Automatic use of a transmitter during selective calling operations in accordance with § 80.225.

(d) Automatic use of a transmitter when operating as part of the Automated Maritime Telecommunications System (AMTS), an automated multi-station system for which provisions

are contained in this Part, or an automated public coast station.

* * * * *

14. Section 80.203 is amended by adding a new paragraph (n) to read as follows:

§ 80.203 Authorization of transmitters for licensing.

* * *

(n) Applications for type acceptance of all marine radio transmitters operating in the 2-27.5 MHz band or the 156-162 MHz band received on or after June 17, 1999, must have a DSC capability in accordance with § 80.225. This requirement does not apply to transmitters used with AMTS or hand-held portable transmitters.

15. In Section 80.205, the table in paragraph (a) is amended by modifying the second "J2B" entry to read as follows:

§ 80.205 Bandwidths.

(a) * * *

Classes of emission	Emission designator	Authorized bandwidth (kHz)
* * * J2B ⁵ * * * * *	300HJ2B	0.5

⁵ NB-DP radiotelegraph and data transmissions for communications with public coast stations.
* * * * *

16. In Section 80.207, paragraph (a) is revised, paragraphs (a)(1)-(4) are deleted and the table listed in paragraph (d) is amended by revising footnote 1, footnote 2 and adding footnote 13 to read as follows:

§ 80.207 Classes of emission.

(a) Authorization to use radiotelephone and radiotelegraph emissions by ship and coast stations includes the use of digital selective calling and selective calling techniques in accordance with § 80.225.

* * * * *

(d) * * *

Ship Stations¹

Radiotelegraphy:

* * *

1605-27500 kHz

* * *

NB-DP¹³.....F1B, J2B

* * *

Land Stations¹

Radiotelegraphy:

* * *

4000-27500 kHz:

* * *

NB-DP¹³.....F1B, J2B

* * * * *

¹ Excludes distress, EPIRBs, survival craft, and automatic link establishment.

² Frequencies used for public correspondence and in Alaska 156.425 MHz. See §§ 80.371(c), 80.373(f) and 80.385(b). Transmitters type accepted before January 1, 1994, for G3E emissions will be authorized indefinitely for F2C, F3C, F1D and F2D emissions. Transmitters type accepted on or after January 1, 1994, will be authorized for F2C, F3C, F1D or F2D emissions only if they are type accepted specifically for each emission designator.

* * * * *

¹³ NB-DP operations which are not in accordance with CCIR Recommendation 625 or 476 are permitted to utilize any modulation, so long as emissions are within the limits set forth in § 80.211(f) of this Chapter.

* * * * *

17. In Section 80.209, the table is amended by adding a new footnote 6 to paragraph (a)(5)(i) to read as follows:

§ 80.209 Transmitter frequency tolerance.

(a) * * *

(5) * * *

(i) Coast stations:

For stations licensed to operate with a carrier power:

Below 3 watts.....10.

3 to 100 watts.....5⁶

* * * * *

⁶ For transmitters operated at private coast stations with antenna heights less than 6 meters (20 feet) above ground and output power of 25 watts or less the frequency tolerance is 10 parts in 10⁶.

* * * * *

18. In Section 80.211 paragraph (d) is revised to read as follows:

§ 80.211 Emission limitations.

* * * * *

(d) The mean power of emissions from radiotelephone survival craft transmitters, 9 GHz search and rescue transponders, and radiotelegraph survival craft transmitters must be attenuated below the mean output power of the transmitter as follows:

(1) On any frequency removed from the assigned frequency by more than 50 percent, up to and including 100 percent of the authorized bandwidth: at least 25 dB;

(2) On any frequency removed from the assigned frequency by more than 100 percent of the authorized bandwidth: at least 30 dB.

* * * * *

19. In Section 80.219, the text is amended to read as follows:

§ 80.219 Special requirements for narrowband direct-printing (NB-DP) equipment.

NB-DP and data transmission equipment installed in ship and coast stations before October 1, 1990, that operates on the frequencies in the 4,000-27,500 kHz bands must be capable of operation in accordance with the technical requirements of either CCIR Recommendation 476 or CCIR Recommendation 625 and may be used indefinitely. Equipment installed on or after October 1, 1990, must be capable of operation in accordance with the technical requirements of CCIR Recommendation 625. NB-DP and data transmission equipment are additionally permitted to utilize any modulation, so long as emissions are within the limits set forth in Section 80.211(f) of this chapter and the equipment is also capable of operation in accordance with CCIR recommendation 625.

20. In Section 80.225, the title is amended, the first sentence in the introductory paragraph is amended, paragraphs (a) and (c)(3) are amended, and new paragraphs (c)(3)(i)-(iv) are added to read as follows:

§ 80.225 Requirements for selective calling equipment.

This section specifies the requirements for voluntary digital selective calling (DSC) equipment and selective calling equipment installed in ship and coast stations. * * *

(a) DSC equipment voluntarily installed in coast or ship stations must meet either the

requirements of CCIR Recommendation 493 (including only equipment classes A, B, D, and E) or RTCM Paper 56-95/SC101-STD. DSC equipment must not be used with the sensors referred to in § 80.179(e)(2). DSC equipment used on compulsorily fitted ships must meet the requirements contained in Subpart W for GMDSS.

(b) * * *

(c) Selective calling equipment, other than that designed in accordance with paragraph (a) of this section, is authorized as follows:

(3) Equipment functioning under the provisions of § 80.207(a) includes the brief use of radiotelegraphy, including keying only the modulating audio frequency, tone signals, and other signalling devices to establish or maintain communications provided that:

(i) these signalling techniques are not used on frequencies designated for general purpose digital selective calling (DSC) and distress and safety DSC calling as listed in § 80.359;

(ii) the authorized radiotelephone emission bandwidth is not exceeded;

(iii) documentation of selective calling protocols must be available to the general public; and,

(iv) harmful interference is not caused to stations operating in accordance with the International Radio Regulations.

21. A new Section 80.229 is added at the end of Subpart E to read as follows:

§ 80.229 Special requirements for automatic link establishment (ALE).

Brief signalling for the purposes of measuring the quality of a radio channel and thereafter establishing communication shall be permitted within the 2 MHz - 30 MHz band. Public coast stations providing high seas service are authorized by rule to use such signalling under the following conditions:

a) The transmitter power shall not exceed 100 W ERP;

b) Transmissions must sweep linearly in frequency at a rate of at least 60 kHz per second, occupying any 3 kHz bandwidth for less than 50 milliseconds;

c) The transmitter shall scan the band no more than four times per hour;

d) Transmissions within 6 kHz of the following protected frequencies and frequency bands must not exceed 10 µW peak ERP:

i) Protected frequencies (kHz)

2091.0	4188.0	6312.0	12290.0	16420.0
2174.5	4207.5	8257.0	12392.0	16522.0
2182.0	5000.0	8291.0	12520.0	16695.0

2187.5	5167.5	8357.5	12563.0	16750.0
2500.0	5680.0	8364.0	12577.0	16804.5
3023.0	6215.0	8375.0	15000.0	20000.0
4000.0	6268.0	8414.5	16000.0	25000.0
4177.5	6282.0	10000.0		

ii) Protected bands (kHz)

- 4125.0-4128.0
- 8376.25-8386.75
- 13360.0-13410.0
- 25500.0-25670.0

e) The instantaneous signal, which refers to the peak power that would be measured with the frequency sweep stopped, along with spurious emissions generated from the sweeping signal, must be attenuated below the peak carrier power (in watts) as follows:

- i) On any frequency more than 5 Hz from the instantaneous carrier frequency, at least 3 dB,
- ii) On any frequency more than 250 Hz from the instantaneous carrier frequency, at least 40 dB, and
- iii) On any frequency more than 7.5 kHz from the instantaneous carrier frequency, at least $43 + 10\log_{10}$ (peak power in watts) db.

22. In Section 80.363, a new paragraph (c) is added to read as follows:

§ 80.363 Frequencies for facsimile.

* * * * *

(c) The frequency 156.425 MHz is assigned by rule to private coast stations and ship stations in Alaska for ship-to-shore and ship-to-ship facsimile transmissions using F2C or F3C emissions.

23. In Section 80.371 the introductory text of paragraph (c) is revised to read as follows:

§ 80.371 Public correspondence frequencies.

* * * * *

(c) Working frequencies in the marine VHF 156-162 MHz band. The frequency pairs listed in the table below are available for assignment to public coast stations for public correspondence communications with ship stations and units on land.

* * * * *

24. In Section 80.373, the table in paragraph (f) is revised by adding a new footnote 17 to read as follows:

§ 80.373 Private communications frequencies.

* * * * *

(f) * * *

¹⁷ The frequency 156.425 MHz is assigned by rule to private coast stations in Alaska for facsimile transmissions as well as voice communications.

* * * * *

25. Section 80.405 is amended by revising the third sentence of paragraph (c) to read as follows:

§ 80.405 Station license.

* * * * *

(c) * * * When the station license cannot be posted as in the case of a marine utility station operating at temporary unspecified locations or the ship or recreational boat does not have an enclosed wheelhouse, it must be kept where it will be readily available for inspection. * * *

26. Section 80.453 is amended by adding paragraph (a)(4) to read as follows:

§ 80.453 Scope of communications.

(a) * * *

(4) With units on land in accordance with § 80.123;

* * * * *

27. Section 80.477 is amended by revising the title and revising paragraph (a) to read as follows:

§ 80.477 AMTS Points of Communication

(a) AMTS coast stations may communicate with fixed platform stations located in the offshore waters of the Gulf of Mexico, with ship stations, and with land units in accordance with § 80.123.

* * * * *

28. Section 80.507 is amended by adding a new paragraph (d) to read as follows:

§ 80.507 Scope of service.

* * *

(c) Each private coast station is authorized by rule to use hand-held marine radios in the vicinity of the stations fixed transmitter site on those frequencies assigned to the private coast station. Hand-held communications must conform to those normally permitted under a marine utility station authorization and must be limited to contact with the associated private coast station and ship stations in the vicinity of the private coast station.

29. Section 80.519 is amended by revising paragraph (b) to read as follows:

§ 80.519 Station identification.

* * *

(b) Marine utility stations, private coast stations, and associated hand-held radios, when exchanging communications, may be identified by a unit identifier in lieu of the call sign. Identification by transmission of the assigned call sign must be at the end of the exchange or at least once every 15 minutes.

30. Section 80.653 is amended by revising paragraph (b)(2) to read as follows:

§ 80.653 Scope of communications.

* * *

(b)* * *

(2) Transmissions necessary for the test and maintenance of maritime radio equipment at repair shops and at temporary unspecified locations;

* * * * *

IV. 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, 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 by revising paragraphs (a) and (b) to read as follows:

§ 87.27 License term.

(a) Licenses for aircraft stations will normally be issued for a term of ten years from the date of original issuance, major modification or renewal. Licensees may apply for renewal of the station license up to ninety (90) days after the date the license expires.

(b) Licenses other than aircraft stations in the aviation services will normally be issued for a term of five years from the date of original issuance, major modification, or renewal. Licensees, other than Aeronautical Advisory (unicom) stations licensed under § 87.215(b), Aeronautical Fixed, Aeronautical Enroute, and Airport Control Tower stations, may apply for renewal of the station license up to ninety (90) days after the date the license expires.

(c) * * *
* * * * *

3. In Section 87.131, the table is amended by adding a new footnote 8 to read as follows:

§ 87.131 Power and emissions.

* * *

Authorized Emission(s) ⁸

* * *

⁸Excludes automatic link establishment.

* * * * *

4. A new Section 87.149 is added to read as follows:

§ 87.149 Special requirements for automatic link establishment (ALE).

Brief signalling for the purposes of measuring the quality of a radio channel and thereafter establishing communication shall be permitted within the 2 MHz - 30 MHz band. Public coast stations licensed under Part 80 of this chapter providing high seas service are authorized by rule to use such signalling under the following conditions:

- a) The transmitter power shall not exceed 100 W ERP;
- b) Transmissions must sweep linearly in frequency at a rate of at least 60 kHz per second, occupying any 3 kHz bandwidth for less than 50 milliseconds;
- c) The transmitter shall scan the band no more than four times per hour;
- d) Transmissions within 6 kHz of the following protected frequencies and frequency bands must not exceed 10 µW peak ERP:

i) Protected frequencies (kHz)

2091.0	4188.0	6312.0	12290.0	16420.0
2174.5	4207.5	8257.0	12392.0	16522.0
2182.0	5000.0	8291.0	12520.0	16695.0
2187.5	5167.5	8357.5	12563.0	16750.0
2500.0	5680.0	8364.0	12577.0	16804.5
3023.0	6215.0	8375.0	15000.0	20000.0
4000.0	6268.0	8414.5	16000.0	25000.0
4177.5	6282.0	10000.0		

ii) Protected bands (kHz)

4125.0-4128.0
8376.25-8386.75
13360.0-13410.0
25500.0-25670.0

- e) The instantaneous signal, which refers to the peak power that would be measured with the frequency sweep stopped, along with spurious emissions generated from the sweeping signal,

must be attenuated below the peak carrier power (in watts) as follows:

- i) On any frequency more than 5 Hz from the instantaneous carrier frequency, at least 3 dB,
- ii) On any frequency more than 250 Hz from the instantaneous carrier frequency, at least 40 dB,
and
- iii) On any frequency more than 7.5 kHz from the instantaneous carrier frequency, at least $43 + 10\log_{10}(\text{peak power in watts})$ db.

APPENDIX F - PROPOSED RULES

Chapter I of Title 47 of the Code of Federal Regulations, Part 80 is proposed to be amended as follows:

Part 80 - Stations in the Maritime Services

1. The authority citation for Part 80 continues to read as follows:

AUTHORITY: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303, unless otherwise noted. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-155, 301-609; 3 UST 3450, 3 UST 4726, 12 UST 2377.

2. Section 80.25 is revised to read as follows:

§ 80.25 License term.

* * * * *

- (b) Licenses other than ship stations in the maritime services will normally be issued for a term of ten years from the date of original issuance, major modification, or renewal.

* * * * *

3. Section 80.49 is revised to read as follows:

§ 80.49 Construction and regional service requirements.

(a) *Public coast stations.* Each VHF public coast station licensee must demonstrate that it is providing substantial service within its region or service area (subpart P) within ten years of the initial license grant. For LF, MF, and HF band and AMTS public coast station licensees, when a new license has been issued or additional operating frequencies have been authorized, if the station or frequencies authorized have not been placed in operation within twelve months from the date of the grant, the authorization becomes invalid and must be returned to the Commission for cancellation.

(b) *Public fixed stations.* When a new license has been issued or additional operating frequencies have been authorized, if the station or frequencies authorized have not been placed in operation within twelve months from the date of the grant, the authorization becomes invalid and must be returned to the Commission for cancellation.

4. Section 80.215 is amended by revising paragraph (h)(5) to read as follows:

§ 80.215 Transmitter power.

* * * * *

(h) * * *

(5) The transmitter power, as measured at the input terminals to the station antenna, must be 50 watts or less.

* * * * *

5. Section 80.303 is amended by revising paragraph (b) to read as follows:

§ 80.303 Watch on 156.800 MHz (Channel 16).

* * * * *

(b) A coast station is exempt, by rule, from compliance with the watch requirement when Federal, State, or Local Government stations maintain a watch on 156.800 MHz over 95% of the coast station's service area. Each licensee exempted by rule must notify the appropriate Coast Guard District office at least thirty days prior to discontinuing the watch, or in the case of new stations, at least thirty days prior to commencing service.

* * * * *

6. Section 80.357 is amended by revising paragraph (b) to read as follows:

§ 80.357 Morse code working frequencies.

* * * * *

(b) * * *

(2) * * *

(ii) Frequencies above 5 MHz may be assigned primarily to stations serving the high seas and secondarily to stations serving inland waters of the United States, including the Great Lakes, under the condition that interference will not be caused to any coast station serving the high seas.

* * * * *

7. Section 80.361 is amended by redesignating paragraph (a)(1) as paragraph (a) and deleting paragraph (a)(2).

8. Section 80.371 is amended by deleting paragraph (b)(4) and revising paragraph (c) to read as follows:

§ 80.371 Public correspondence frequencies.

* * * * *

(c) Working frequencies in the marine VHF 156-162 MHz band. The frequency pairs listed below are available for assignment to a single licensee in each of the nine United States Coast Guard Districts, as they are defined in 33 C.F.R. Part 3. Each regional licensee may place stations anywhere within its region so long as it provides protection to co-channel incumbent licensees, as defined in Subpart P. For purposes of this section, co-channel incumbent licensees include public coast stations and Industrial and Land Transportation stations authorized under Part 90 of this chapter on a primary basis. Each regional licensee may also operate on offset frequencies in areas where the regional licensee is authorized on both frequencies adjacent to the offset frequency. Regional licensees that share a common border may either distribute the available frequencies upon mutual agreement or request that the Commission assign frequencies along the common border. Operation along international borders is subject to coordination with foreign administrations.

* * * * *

9. Section 80.374 is amended by deleting paragraph (a) and redesignating paragraphs (b) and (c) as (a) and (b) respectively.

10. A new Section 80.481 is added to read as follows:

§ 80.481 Alternative technical parameters for AMTS transmitters.

In lieu of the technical parameters set forth in this part, AMTS transmitters may utilize any modulation or channelization scheme so long as emissions are attenuated, in accordance with 47 C.F.R. § 80.211, at the band edges of each station's assigned channel group or groups.