

(5) The Commission will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Commission.

Section 5.87 Frequencies for field strength surveys or equipment demonstrations.

(a) Authorizations issued under §§ 5.3 (e) and (f) will normally not have specific frequencies designated in a station license. Prior to the commencement of a survey or demonstration, the licensee will request a specific frequency assignment and submit the following information:

- (1) Time, date and duration of survey.
- (2) Frequency to be used.
- (3) Location of transmitter and geographical area to be covered.
- (4) Purpose of survey.
- (5) Method and equipment to be used.
- (6) Names and addresses of persons for whom the survey is conducted.

Section 5.89 School and student authorizations.

The Commission may issue an authorization to schools or students for the purpose of presenting experiments or technical demonstrations for school or school approved projects that require the use of radio for a limited period of time. Such authorizations may be granted at the discretion of the Commission.

(a) An application for a school or student authorization may be filed in letter form and must comply with the provisions of § 5.63, except where specified below. The application must be accompanied by a signed statement from a member of faculty of the school, on appropriate letterhead, indicating the person under whose general supervision the project will be conducted. In the case of student authorizations, the letter must state that the project has the approval of the school

(b) Frequencies in the following bands are available for assignment in authorizations issued under this section:

27.23-27.28 MHz.

460-461 MHz.

462.525-467.475 MHz.

2402-2483.5 MHz.

10.00-10.50 GHz.

(c) Operations under this section shall not exceed a peak envelope output power of 4 watts. The Commission may authorize a greater power if a satisfactory showing is made that

such greater power is necessary and that appropriate measures will be taken to prevent interference.

(d) The frequency of operation must be measured or checked prior to each time of operation.

(e) Subject to the provisions of (b), (c) and (d), the provisions in Subpart C of this part are waived insofar as such provisions require a station authorized under this section to observe the technical and operating restrictions set forth therein.

(f) The licensee holding an authorization issued under this section shall maintain a record of operation containing the following information:

(1) A brief description of the experimentation being conducted.

(2) The date and time of each period of operation.

(3) The frequency of operation as measured or checked at the beginning of each period of operation.

(g) The record of operation shall be retained for one month after the termination of the authorization.

Section 5.91 Notification to the National Radio Astronomy Observatory.

In order to minimize possible harmful interference at the National Radio Astronomy Observatory site located at Green Bank, Pocahontas County, West Virginia, and at the Naval Radio Research Observatory site at Sugar Grove, Pendleton County, West Virginia, any applicant for a station authorization other than mobile, temporary base, temporary fixed, Personal Radio, Civil Air Patrol, or Amateur seeking a station license for a new station, or a construction permit to construct a new station or to modify an existing station license in a manner that would change either the frequency, power, antenna height or directivity, or location of such a station within the area bounded by 39 deg. 15' N on the north, 78 deg. 30' W on the east, 37 deg. 30' N on the south and 80 deg. 30' W on the west shall, at the time of filing such application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, P.O. Box NZ2, Green Bank, West Virginia, 24944, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinates of the antenna, antenna height, antenna directivity if any, frequency, type of emission, and power. In addition, the applicant shall indicate in its application to the Commission the date notification was made to the Observatory. After receipt of such applications, the Commission will allow a period of twenty (20) days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the twenty-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

Section 5.93 Limited market studies.

Unless otherwise stated in the instrument of authorization, licenses granted for the purpose of limited market studies pursuant to § 5.3(j) are subject to the following conditions:

(a) All transmitting and/or receiving equipment used in the study shall be owned by the licensee.

(b) The licensee is responsible for informing anyone participating in the experiment that the service or device is granted under an experimental authorization and is strictly temporary.

(c) The size and scope of the experiment are subject to limitations as the Commission shall establish on a case-by-case basis. If the Commission subsequently determines that a market study is not so limited, the study shall be immediately terminated.

Section 5.95 Experiments performed in conjunction with pioneer's preference applications.

An applicant for a pioneer's preference pursuant to § 1.402 of this chapter may file an experimental license application for a limited geographical area, generally including no more than one Metropolitan Statistical Area. In order to be eligible for a preference at the time of a report and order in a proceeding addressing a new service or technology, the experimental applicant must demonstrate the technical feasibility of its proposal by summarizing its experimental results in its preference application, unless it instead submits an acceptable showing of technical feasibility. If a pioneer's preference applicant wishes the Commission to consider in conjunction with the application experimental material filed subsequent to the application, the applicant must summarize this material and submit the summary to the Commission prior to the Sunshine Notice announcing that a report and order pertaining to the new service or technology will be considered by the Commission at a public meeting, or--if a report and order is considered by notation--prior to submission of the report and order to the Commission for vote. All experimental material must be summarized and its relevance to the pioneer's preference application explained in order for it to be considered by the Commission.

Subpart C--Technical Standards and Operating Requirements**Section 5.101 Frequency stability.**

An applicant must propose to use a frequency tolerance that would confine emissions within the band of operation, unless permission is granted to use a greater frequency tolerance. Equipment is presumed to operate over the temperature range -20 to +50 degrees celsius with an input voltage variation of 85% to 115% of rated input voltage, unless justification is presented to demonstrate otherwise.

Section 5.103 Types of emission.

Stations in the Experimental Radio Service may be authorized to use any of the classifications of emissions covered in Part 2 of this chapter.

Section 5.105 Authorized bandwidth.

Each authorization issued to a station operating in this service will show, as the prefix to the emission classification, a figure specifying the maximum necessary bandwidth in kilohertz for the emission used. The authorized bandwidth is considered to be the occupied or necessary bandwidth, whichever is greater. This bandwidth should be determined in accordance with § 2.202 of Part 2 of this chapter.

Section 5.107 Transmitter control requirements.

Each licensee shall be responsible for maintaining control of the transmitter authorized under its station authorization. This includes both ensuring that transmissions are in conformance with the operating characteristics prescribed in the station authorization and that the station is operated only by persons duly authorized by the licensee.

Section 5.109 Antenna and tower requirements.

(a) Applicants with fixed stations that use antennas that exceed 6 meters in height above the ground level or more than 6 meters in height above an existing building must comply with the requirements of Part 17 of this chapter.

(b) The licensee of any radio station that has an antenna structure required to be painted and illuminated pursuant to the provisions of Section 303(q) of the Communications Act of 1934, as amended, and Part 17 of this chapter, shall perform the inspections and maintain the tower marking and lighting, and associated control equipment, in accordance with the requirements of §§ 17.43 through 17.57 of this chapter.

Section 5.111 General limitations on use.

(a) The following transmission limitations are applicable to all classes of stations in the Experimental Radio Service:

(1) Stations may make only such transmissions as are necessary and directly related to the conduct of the licensee's stated program of experimentation as specified in the application for license and the related station instrument of authorization, and as governed by the provisions of the rules and regulations contained in this part. All transmissions shall be limited to the minimum practical transmission time.

(2) When transmitting, the licensee must use every precaution to insure that the radio frequency energy emitted will not cause harmful interference to the services carried on by stations operating in accordance with the Table of Frequency Allocations of Part 2 of this chapter and, further, that the power radiated is reduced to the lowest practical value consistent with the program of experimentation for which the station authorization is granted. If harmful interference to an established radio service develops, the licensee shall cease transmissions and such transmissions shall not be resumed until it is certain that harmful interference will not be caused.

(b) If experimental stations are to be used to retransmit signals of any other station or to render any communications service to third parties, a full disclosure of this must be made in the application for license.

Section 5.113 Adherence to program of research.

(a) The program of experimentation as stated by an applicant in its application for license or in the station instrument of authorization, shall be substantially adhered to unless the licensee is authorized to do otherwise by the Commission.

(b) Where some phases of the experimental program are not covered by the general rules of the Commission or by the rules of this part, the Commission may specify supplemental or additional requirements or conditions in each case as deemed necessary in the public interest, convenience, or necessity.

Section 5.115 Station identification.

Each class of station in the experimental services shall, unless specifically exempted by the terms of the station authorization, transmit its assigned call sign at the end of each complete transmission: Provided, however, that the transmission of the call sign at the end of each transmission is not required for projects requiring continuous, frequent, or extended use of the transmitting apparatus, if, during such periods and in connection with such use, the call sign is transmitted at least once every thirty minutes. The station identification shall be transmitted in clear voice or Morse code. All digital encoding and digital modulation shall be disabled during station identification.

Section 5.117 Suspension of transmission required.

The radiations of the transmitter shall be suspended immediately upon detection or notification of a deviation from the technical requirements of the station authorization until such deviation is corrected, except for transmissions concerning the immediate safety of life or property, in which case the transmissions shall be suspended as soon as the emergency is terminated.

Section 5.119 Posting station licenses.

The current original authorization for each station shall be retained on the premises as a permanent part of the station records but need not be posted.

Section 5.121 Retention of station records.

Records required to be kept by this part shall be retained for a period of at least one year.

Section 5.123 Inspection of stations.

All stations and records of stations in the Experimental Radio Service shall be made available for inspection at any time while the station is in operation or shall be made available for inspection upon reasonable request of an authorized representative of the Commission.

Section 5.125 Authorized points of communication.

Generally, stations in the Experimental Radio Service may communicate only with other stations licensed in the Experimental Radio Service. Nevertheless, upon a satisfactory showing that the proposed communications are essential to the conduct of the research project, authority may be granted to communicate with stations in other services and U.S. Government stations.

B. Part 90 of Title 47 of the Code of Federal Regulations is proposed to be amended as follows:

PART 90 - PRIVATE LAND MOBILE RADIO SERVICES

1. The authority citation for Part 90 continues to read as follows:

AUTHORITY: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303, and 332, unless otherwise noted.

2. Section 90.203 is proposed to be amended by revising paragraph (a) and by adding a new paragraph (k), to read as follows:

Section 90.203 Type acceptance required.

(a) Except as specified in paragraphs (b) and (k) of this section, each transmitter utilized for operation under this part and each transmitter marketed as set forth in § 2.803 of Part 2 of this chapter must be of a type that is included in the Commission's current Radio Equipment

List as type accepted for use under this part; or, be of a type that has been type accepted by the Commission for use under this part in accordance with the procedures in paragraph (a)(2) of this section.

* * * * *

(k) Ocean buoy and wildlife tracking transmitters operating in the band 40.66-40.70 MHz or 216-220 MHz under the provisions of Section 90.248 of this part shall be authorized under the notification procedure pursuant to Subpart J of Part 2 of this chapter.

3. A new Section 90.248 is proposed to be added, to read as follows:

Section 90.248 Wildlife and ocean buoy tracking.

(a) The frequency bands 40.66-40.70 MHz and 216-220 MHz may be used for the tracking of, and the telemetry of scientific data from, ocean buoys and animal wildlife.

(b) Transmitters operating under the provisions of this section are not subject to the technical standards contained in §§ 90.205-90.217. In lieu thereof, the transmitters shall comply with the provisions in this section.

(c) Classes of emission are limited to N0N, A1A, A2A, A2B, F1B, J2B, F2A, F2B, and/or F8E.

(d) The authorized bandwidth shall not exceed 1 kHz.

(e) Frequency stability:

(1) For transmitters operating in the 40.66-40.70 MHz frequency band, the frequency stability shall be sufficient to ensure that, at the carrier frequency employed, the sum of the authorized bandwidth plus the bandwidth required for frequency stability are confined within this band.

(2) In the 216-220 MHz frequency band, transmitters shall employ a minimum frequency stability of 0.005 percent (50 parts per million). The carrier frequency shall be selected to ensure that the sum of the authorized bandwidth plus the bandwidth required for frequency stability are confined within this band.

(3) The frequency stability standards shall be met over a temperature range of -30° to +50° centigrade at normal supply voltage and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of +20° C. For battery operated equipment, the equipment tests shall be performed using a new battery.

(f) The maximum peak transmitter output (carrier) power shall not exceed 1 milliwatt for airborne wildlife applications, 10 milliwatts for terrestrial wildlife applications or 100 milliwatts for ocean buoys.

(g) Emissions appearing outside of the authorized bandwidth shall be attenuated below the carrier power by at least 26 dB, following the procedures specified in § 90.210(m).

4. Section 90.259 is proposed to be amended, to read as follows:

Section 90.259 Assignment and use of frequencies in the bands 216-220 MHz and 1427-1435 MHz.

Frequencies in the bands 216-220 MHz and 1427-1435 MHz may be assigned to applicants under this part provided the bands are listed in the individual radio service under which they establish eligibility. Use of these bands is limited to telemetering purposes, except that the 216-220 MHz band may also be used for wildlife and ocean buoy tracking operations pursuant to § 90.248. All operation is secondary to Federal Government operations, and operation in the 216-220 MHz band is also secondary to the maritime mobile service and operation in the 1427-1429 MHz band is also secondary to the space operation service (earth-to-space). Base stations authorized in these bands shall be used to perform telecommand functions with associated mobile telemetering stations. Base stations may also command actions by the vehicle itself, but will not be authorized solely to perform this function. Airborne use will not be authorized. Each application will be coordinated with the Federal Government by the Federal Communications Commission and is subject to such technical and operational limitations as may be imposed by the government. Each application should include precise information concerning emission characteristics, transmitter frequency deviation, output power, type and directional characteristics, if any, of the antenna, and the minimum necessary hours of operation.

APPENDIX B: INITIAL REGULATORY FLEXIBILITY ANALYSIS

As required by Section 603 of the Regulatory Flexibility Act,²¹ the Commission has prepared an Initial Flexibility Analysis (IRFA) of the expected significant economic impact on small entities by the policies and rules proposed in this Notice of Proposed Rule Making (Notice) to "Amendment of Part 5 of the Commission's Rules to Revise the Experimental Radio Service Regulations." Written public comments are requested on the IRFA. Comments must be identified in response to the IRFA and must be filed by the deadlines for comments on the Notice provided in paragraph 26. The Secretary shall send a copy of this Notice, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with paragraph 603(a) of the Regulatory Flexibility Act.

Need for and Objectives of the Proposed Rule: We believe that the Experimental Radio Service (ERS) rules have become outdated and must change to keep pace with an evolving telecommunications industry. The competitive and rapidly developing telecommunications market has demonstrated the increased importance and the usefulness of the ERS. The ERS continues to be utilized to foster development of new service concepts and technologies that stimulate economic growth, create new jobs, and increase spectrum utilization and efficiency. The ERS rules were last updated in 1983 and contain obsolete practices and unnecessary regulations. We propose to modernize the ERS and improve the experimental licensing process by encouraging experiments and streamlining and updating Part 5 of the rules. Additionally, the proposals would eliminate outdated and cumbersome regulatory requirements and unnecessary paperwork.

Legal Basis: The proposed action is authorized by Sections 4(i), 303(c), 303(f), 303(g) and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154(i), 303(c), 303(f), 303(g) and 303(r). These provisions authorize the Commission to make such rules and regulations as may be necessary to encourage more effective use of radio in the public interest.

Description and Estimate of the Number of Small Entities To Which the Proposed Rules Will Apply: For purposes of this Notice, the RFA defines a "small business" to be the same as a "small business concern" under the Small Business Act, 15 U.S.C. § 632, unless the Commission has developed one or more definitions that are appropriate to its activities.²² Under the SBA, a "small business concern" is one that: (1) is independently owned and

²¹ 5 U.S.C. § 603.

²² 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 5 U.S.C. § 632).

operated; (2) is not dominant in its field of operation; and (3) meets any individual criteria established by the Small Business Administration (SBA).²³

The Commission has not developed a definition of small entities applicable to experimental licensees. Therefore, the applicable definition of small entity is the definition under the Small Business Administration (SBA) rules applicable to radiotelephone companies. SBA has defined a small business for Standard Industrial Classification (SIC) category 4812 (Radiotelephone Communications) to be small entities when they have fewer than 1500 employees.²⁴

The Commission processes approximately 1,000 applications a year for experimental radio operations. About half of these are renewals and the other half are for new licenses. The majority of experimental licenses are issued to companies such as Motorola and Department of Defense contractors such as Northrop, Lockheed and Martin Marietta. Businesses such as these may have as many as 200 licenses at one time. The majority of these applications, 70 percent, are from entities such as these. Given this fact, the remaining 30 percent of applications, we assume, for purposes of our evaluations in the IRFA, will be awarded to small entities, as that term is defined by the SBA.

Description of Projected Reporting, Recordkeeping, and Other Compliance

Requirements: Our proposals are intended to decrease the regulatory burden on all experimental license applicants, including small entities. For example, we propose to permit applicants the option of applying for a five-year experimental license, in addition to maintaining the current two-year license. We anticipate that a longer term license would reduce the number of renewal applications, and thereby decrease the regulatory burden. We are also proposing to remove an unnecessary requirement that STA applicants hold experimental licenses, and are clarifying the STA rules. We are also proposing to replace existing Sections 5.55(a) and 5.55(b) of our rules with a single provision that would allow an applicant to apply for all of the stations in its experimental system, including fixed stations and associated mobile units, on one experimental license application; and similarly to modify Section 5.62 to permit the filing of only a single application for multiple experiments, when doing so would be appropriate for the proposed project. Additionally, this action proposes to increase the opportunities for students to obtain experimental authorizations, proposes to remove requirements that certain licensees notify the FCC's field offices prior to commencing operations, and proposes to eliminate obsolete rules. These changes should have a positive effect on small entities; however, we are unable to quantify all potential effects on such entities. We invite specific comments on this point by interested parties.

²³ 15 U.S.C. § 632.

²⁴ 13 C.F.R. § 121.201 Standard Industrial Classification (SIC) Code 4812.

Significant Alternatives Minimizing the Impact on Small Entities and Consistent with the Stated Objectives: We believe that our proposed actions to revise our ERS rules will eliminate unnecessary and burdensome regulations for small entities. Section 303(g) of the Communications Act of 1934, as amended, charges the Commission with encouraging the larger and more effective use of radio in the public interest. We have considered the alternative of not making the proposed revisions; however, we believe that would not serve the public interest and would continue to place an unnecessary burden on licensees. We solicit comment on specific alternatives to the proposed rule changes listed in the Notice. Some or all of the proposals may be adopted or altered in future actions in this proceeding.

Federal Rules That Duplicate, Overlap, or Conflict With the Proposed Rule: None.