

/\* The full text of the FCC Ham Radio Regulations with comments follows. '73. \*/

## APPENDIX A

Part 97 of Chapter 1 of Title 47 of the Code of Federal Regulations is amended, as follows:

1. The authority citation for Part 97 continues to read as follows:

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

2. Part 97 is revised as follows:

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## Subpart A -- General Provisions

### S 97.1 Basis and purpose.

The rules and regulations in this Part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

- (a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.
- (b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.
- (c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art.
- (d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.
- (e) Continuation and extension of the amateur's unique ability to enhance international goodwill.

### S 97.3 Definitions.

(a) The definitions of terms used in Part 97 are:

- (1) Amateur operator. A person holding a written authorization to be the control operator of an amateur station.
- (2) Amateur radio services. The amateur service, the amateur-satellite service and the radio amateur civil emergency service.
- (3) Amateur -- satellite service. A radiocommunication service using stations on Earth satellites for the same purpose as those of the amateur service.
- (4) Amateur service. A radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

- (5) Amateur station. A station in an amateur radio service consisting of the apparatus necessary for carrying on radiocommunications.
- (6) Automatic control. The use of devices and procedures for control of a station when it is transmitting so that compliance with the FCC Rules is achieved without the control operator being present at a control point.
- (7) Auxiliary station. An amateur station transmitting communications point-to-point within a system of cooperating amateur stations.
- (8) Bandwidth. The width of a frequency band outside of which the mean power of the total emission is attenuated at least 26 dB below the mean power of the total emission, including allowances for transmitter drift or Doppler shift.
- (9) Beacon. An amateur station transmitting communications for the purposes of observation of propagation and reception or other related experimental activities.
- (10) Broadcasting. Transmissions intended for reception by the general public, either direct or relayed.
- (11) Control operator. An amateur operator designated by the licensee of a station to be responsible for the transmissions from that station to assure compliance with the FCC Rules.
- (12) Control point. The location at which the control operator function is performed.
- (13) CSCE. Certificate of successful completion of an examination.
- (14) Earth station. An amateur station located on, or within 50 km of, the Earth's surface intended for communications with space stations or with other Earth stations by means of one or more other objects in space.
- (15) EIC. Engineer in Charge of an FCC Field Facility.
- (16) External RF power amplifier. A device capable of increasing power output when used in conjunction with, but not an integral part of, a transmitter.
- (17) External RF power amplifier kit. A number of electronic parts, which, when assembled, is an external RF power amplifier, even if additional parts are required to complete assembly.
- (18) FAA. Federal Aviation Administration.
- (19) FCC. Federal Communications Commission.
- (20) Frequency coordinator. An entity, recognized in a local or regional area by amateur operators whose stations are eligible to be auxiliary or repeater stations, that recommends transmit/receive channels and associated operating and technical parameters for such stations in

order to avoid or minimize potential interference.

(21) Harmful interference. Interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radiocommunication service operating in accordance with the Radio Regulations.

(22) Indicator. Words, letters or numerals appended to and separated from the call sign during the station identification.

(23) Information bulletin. A message directed only to amateur operators consisting solely of subject matter of direct interest to the amateur service.

/\* This is opposed to broadcasting. The transmission of a "message" generally related to solely ham information is not broadcasting. \*/

(24) International Morse code. A dot-dash code as defined in International Telegraph and Telephone Consultative Committee (CCITT) Recommendation F.1 (1984), Division B, I. Morse code.

(25) ITU. International Telecommunication Union.

(26) Line A. Begins at Aberdeen, WA, running by great circle arc to the intersection of  $48^{\circ}\text{N}$ ,  $120^{\circ}\text{W}$ , thence along parallel  $48^{\circ}\text{N}$ , to the intersection of  $95^{\circ}\text{W}$ , thence by great circle arc through the southernmost point of Duluth, MN, thence by great circle arc to  $45^{\circ}\text{N}$ ,  $85^{\circ}\text{W}$ , thence southward along meridian  $85^{\circ}\text{W}$ , to its intersection with parallel  $41^{\circ}\text{N}$ , thence along parallel  $41^{\circ}\text{N}$ , to its intersection with meridian  $82^{\circ}\text{W}$ , thence by great circle arc through the southernmost point of Bangor, ME, thence by great circle arc through the southernmost point of Searsport, ME, at which point it terminates.

(27) Local control. The use of a control operator who directly manipulates the operating adjustments in the station to achieve compliance with the FCC Rules.

(28) National Radio Quiet Zone. The area in Maryland, Virginia and West Virginia Bounded by  $39^{\circ}\text{N}$  on the north,  $78^{\circ}\text{W}$  on the east,  $37^{\circ}\text{N}$  on the south and  $80^{\circ}\text{W}$  on the west.

(29) Question pool. All current examination questions for a designated written examination element.

(30) Question set. A series of examination questions on a given examination selected from the question pool.

(31) Radio Regulations. The latest ITU Radio Regulations to which the United States is a party.

(32) RACES (radio amateur civil emergency service). A radio service using amateur stations for civil defense communications during periods of local, regional or national civil emergencies.

(33) Remote control. The use of a control operator who indirectly manipulates the operating adjustments in the station through a control link to achieve compliance with the FCC Rules.

(34) Repeater. An amateur station that automatically retransmits the signals of other stations.

(35) Space station. An amateur station located more than 50 km above the earth's surface.

(36) Spurious emission. An emission, on frequencies outside the necessary bandwidth of a transmission, the level of which may be reduced without affecting the information being transmitted.

(37) Telecommand station. An amateur station that transmits communications to initiate, modify or terminate functions of a space station.

(38) Third party communications. A message from the control operator (first party) of an amateur station to another amateur station control operator (second party) on behalf of another person (third party).

(39) VE. Volunteer examiner.

(40) VEC. Volunteer-examiner coordinator.

(b) The definitions of technical symbols used in this Part are:

(1) EHF (extremely high frequency). The frequency range 30- 300 GHz.

(2) HF (high frequency). The frequency range 3-30 MHz.

(3) Hz. Hertz.

(4) m. Meters

(5) MF (medium frequency). The frequency range 300-3000 kHz.

(6) PEP (peak envelope power). The average power supplied to the antenna transmission line by a transmitter during one RF cycle at the crest of the modulation envelope taken under normal operating conditions.

(7) RF. Radio frequency.

(8) SHF (super-high frequency). The frequency range 3-30 GHz.

(9) UHF (ultra-high frequency). The frequency range 300-3000 MHz.

(10) VHF (very-high frequency). The frequency range 30-300 MHz.

(11) W. Watts.

(c) The following terms are used in this Part to indicate emission types. Refer to S 2.201 of the FCC Rules, Emission, modulation and transmission characteristics, for information on emission type designators.

(1) CW. International Morse code telegraphy emissions having designators with A, C, H, J or R as the first symbol; 1 as the second symbol; A or B as the third symbol; and emissions J2A and J2B.

(2) Data. Telemetry, telecommand and computer communications emissions having designators with A, C, D, F, G, H, J or R as the first symbol; 1 as the second symbol; D as the third symbol; and emission J2D. Only a digital code of a type specifically authorized in this Part may be transmitted.

(3) Image. Facsimile and television emissions having designators with A, C, D, F, G, H, J or R as the first symbol; 1, 2 or 3 as the second symbol; C or F as the third symbol; and emissions having B as the first symbol; 7, 8 or 9 as the second symbol; W as the third symbol.

(4) MCW. Tone-modulated international Morse code telegraphy emissions having designators with A, C, D, F, G, H or R as the first symbol; 2 as the second symbol; A or B as the third symbol.

(5) Phone. Speech and other sound emissions having designators with A, C, D, F, G, H, J or R as the first symbol; 1, 2 or 3 as the second symbol; E as the third symbol. Also speech emissions having B as the first symbol; 7, 8 or 9 as the second symbol; E as the third symbol. MCW for the purpose of performing the station identification procedure, or for providing telegraphy practice interspersed with speech. Incidental tones for the purpose of selective calling or alerting or to control the level of a demodulated signal may also be considered phone.

(6) Pulse. Emissions having designators with K, L, M, P, Q, V or W as the first symbol; 0, 1, 2, 3, 7, 8, 9 or X as the second symbol; A, B, C, D, E, F, N, W or X as the third symbol.

(7) RTTY. Narrow-band direct-printing telegraphy emissions having designators with A, C, D, F, G, H, J or R as the first symbol; 1 as the second symbol; B as the third symbol; and emission J2B. Only a digital code of a type specifically authorized in this Part may be transmitted.

(8) SS. Spread-spectrum emissions using bandwidth-expansion modulation emissions having designators with A, C, D, F, G, H, J or R as the first symbol; X as the second symbol; X as the third symbol. Only a SS emission of a type specifically authorized in this Part may be transmitted.

(9) Test. Emissions containing no information having the designators with N as the third symbol. Test does not include pulse emissions with no information or modulation unless pulse emissions are also authorized in the frequency band.

S 97.5 Station license required.

(a) When a station is transmitting on any amateur service frequency from a geographic location within 50 km of the Earth's surface where the amateur service is regulated by the FCC, the person having physical control of the apparatus must hold an FCC- issued written authorization for an amateur station.

(b) When a station is transmitting on any amateur service frequency from a location within 50 km of the Earth's surface and aboard any vessel or craft that is documented or registered in the United States, the person having physical control of the apparatus must hold an FCC-issued written authorization for an amateur station.

(c) When a station is transmitting on any amateur-satellite service frequency from a location more than 50 km above the Earth's surface aboard any craft that is documented or registered in the United States, the person having physical control of the apparatus must hold an FCC-issued written authorization for an amateur station.

(d) The types of written authorizations that permit amateur station operation where the amateur service is regulated by the FCC are:

(1) An operator/primary station license (FCC Form 660) issued to the person by the FCC. A primary station license is issued only to a person, together with an operator license on the same document. Every amateur operator licensed by the FCC must have one, but only one, primary station license. Except a representative of a foreign government, any person who qualifies by examination is eligible to apply for an operator/primary station license.

(2) A club station license (FCC form 660) issued to the person by the FCC. A club station license is issued only to the person who is the license trustee designated by an officer of the club. The trustee must hold an FCC-issued Amateur Extra, Advanced, General, or Technician operator license. The club must be composed of at least two persons and must have a name, a document of organization, management and a primary purpose devoted to amateur service activities consistent with this Part.

(3) A military recreation station license (FCC Form 660) issued to the person by the FCC. A military recreation station license is issued only to the person who is the license custodian designated by the official in charge of the United States military recreational premises where the station is situated. The custodian must not be a representative of a foreign government. The custodian need not hold an amateur operator license.

(4) A RACES station license (FCC Form 660) issued to the person by the FCC. A RACES station license is issued only to the person who is the license custodian designated by the official responsible for the governmental agency served by that civil defense organization. The custodian must not be a representative of a foreign government. The custodian must be the civil defense official responsible for coordination of all civil defense activities in the area concerned. The custodian need not hold an amateur operator license.

(5) A reciprocal permit for alien amateur licensee (FCC Form 610-AL) issued to the person by the FCC. A reciprocal permit for alien amateur licensee is issued only to a person who is a citizen of a country with which the United States has arrangements to grant reciprocal operating permits

to visiting alien amateur operators. The person must be a citizen of the same country that issued the amateur service license. No person who is a citizen of the United States, regardless of any other citizenship also held, is eligible for a reciprocal permit for alien amateur licensee. No person holding an FCC-issued amateur service license will be issued a reciprocal permit for alien amateur license.

(6) An amateur service license issued to the person by the Government of Canada. The person must be a Canadian citizen.

(e) The written authorization for an amateur station authorizes the use in accordance with the FCC Rules of all transmitting apparatus under the physical control of the station licensee at points where the amateur service is regulated by the FCC. The original written authorization document or a photocopy thereof must be retained at the station.

#### S 97.7 Control operator required.

When transmitting, each amateur station must have a control operator. Only a person holding one of the following documents may be the control operator of a station:

(a) An operator/primary station license (FCC Form 660) issued to the person by the FCC.

(b) A reciprocal permit for alien amateur licensee (FCC Form 610-AL) issued to the person by the FCC.

(c) An amateur service license issued to a Canadian citizen by the Government of Canada.

#### S 97.9 Operator license.

(a) There are 5 classes of operator licenses: Novice, Technician, General, Advanced and Amateur Extra. An operator license authorizes the holder to be the control operator of a station with the privileges of the operator class specified on the license. The license document or a photocopy thereof must be in the personal possession of the licensee at all times when the person is the control operator of a station.

(b) A person holding a Novice, Technician, general, or Advanced Class operator license who has properly filed with the FCC an application for a higher operator class which has not yet been acted upon, and who holds a CSCE indicating that the person completed the necessary examinations within the previous 365 days is authorized to exercise the rights and privileges of the higher operator class.

#### S 97.11 Stations aboard ships or aircraft.

(a) The installation and operation of an amateur station on a ship or aircraft must be approved by the master of the ship or pilot in command of the aircraft.

(b) The station must be separate from and independent of all other radio apparatus installed on the ship or aircraft, except a common antenna may be shared with a voluntary ship radio installation. The station's transmissions must not cause interference to any other apparatus

installed on the ship or aircraft.

(c) The station must not constitute a hazard to the safety of life or property. For a station aboard an aircraft, the apparatus shall not be operated while the aircraft is operating under Instrument Flight Rules, as defined by the FAA, unless the station has been found to comply with all applicable FAA Rules.

#### S97.13 Restrictions on Stanton locations.

(a) Before placing an amateur Stanton on land of environmental importance or that is significant in American history, architecture or culture, the licensee may be required to take certain actions prescribed by SS 1.1305-1.1319 of the FCC Rules.

(b) A station within 1600 m (1 mile) of an FCC monitoring facility must protect that facility from harmful interference. Failure to do so could result in imposition of operating restrictions upon the amateur station by an EIC pursuant to S 97.121 of this Part. Geographical coordinates of the facilities that require protection are listed in S 0.121(c) of the FCC Rules.

#### S 97.15 Station antenna structures.

(a) Unless the amateur station licensee has received prior approval from the FCC, no antenna structure, including the radiating elements, tower, supports and all appurtenances, may be higher than 61 m (200 feet) above ground level at its site.

(b) Unless the amateur Stanton licensee has received prior approval from the FCC, no antenna structure, at an airport or heliport that is available for public use and is listed in the Airport Directory of the current Airman's Information Manual or in either the Alaska or Pacific Airman's Guide and Chart Supplement; or at an airport or heliport under construction that is the subject of a notice or proposal on file with the FAA, and except for military airports, it is clearly indicated that the airport will be available for public use; or at an airport or heliport that is operated by the armed forces of the United States; or at a place near any of these airports or heliports, may be higher than:

(1) 1 m above the airport elevation for each 100 m from the nearest runway longer than 1 km within 6.1 km of the antenna structure.

(2) 2 m above the airport elevation for each 100 m from the nearest runway longer than 1 km within 3.1 km of the antenna structure.

(3) 4 m above the airport elevation for each 100 m from the nearest landing pad within 1.5 km of the antenna structure.

(c) An amateur station antenna structure no higher than 6.1 m (20 feet) above ground level at its site or no higher than 6.1 m above any natural object or existing manmade structure, other than an antenna structure, is exempt from the requirements of paragraphs (a) and (b) of this Section.

(d) Further details as to whether an aeronautical study and/or obstruction marking and lighting

may be required, and specifications for obstruction marking and lighting, are contained in Part 17 of the FCC Rules, Construction, Marking, and Lighting of Antenna Structures. To request approval to place an antenna structure higher than the limits specified in paragraphs (a), (b) and (c) of this Section, the licensee must notify the FAA on FAA Form 7460-1 and the FCC on FCC Form 854.

(e) Except as otherwise provided herein, a station antenna structure may be erected at heights and dimensions sufficient to accommodate amateur service communications. [State and local regulation of a station antenna structure must not preclude amateur service communications. Rather, it must reasonably accommodate such communications and must constitute the minimum practicable regulation to accomplish the state or local authority's legitimate purpose. See PRB-1, 101 FCC 2d, 952 (1985) for details.]

#### S 97.17 Application for new license.

(a) Any qualified person is eligible to apply for an amateur service license.

(b) Each application for a new operator/primary station license must be made on FCC Form 610. Each application for a reciprocal permit for alien amateur licensee must be made on FCC Form 610-A. No new license for a club, military recreation, or RACES station will be issued.

(c) Each application for a new operator/primary station license and each application involving a change in operator class must be submitted to the VEs administering the qualifying examination.

(d) Any qualified person is eligible to apply for a reciprocal permit for alien amateur licensee. The application must be submitted to the FCC, P.O. Box 1020, Gettysburg, PA 17326.

(e) No person shall obtain or attempt to obtain, or assist another person to obtain or attempt to obtain, an operator license or reciprocal permit for alien amateur licensee by fraudulent means.

(f) A call sign will be assigned systematically to each station. The FCC will issue public announcements detailing the policies and procedures of the call sign assignment system. The FCC will not grant any request for a specific call sign.

#### S 97.19 Application for a renewed or modified license.

(a) Each application for a renewed or modified operator/primary station license must be made on FCC Form 610. Each application for a renewed or modified club, military recreation or RACES station license must be made on FCC Form 610-

B. A reciprocal permit for alien amateur licensee is not renewable. A new reciprocal permit may be issued upon proper application.

(b) Each application for a renewed or modified amateur service license must be accompanied by a photocopy of the license document or the original document. Each application for a modified operator license involving a change in operator class must be submitted to the VEs administering the qualifying examination. All other applications must be submitted to: FCC, P.O. Box 1020, Gettysburg, PA 17326.

(c) When the licensee has submitted a timely application for renewal of an unexpired license (between 60 and 90 days prior to the end of the license term is recommended), the licensee may continue to operate until the disposition of the application has been determined. If a license expires, application for renewal may be made during a grace period of 2 years after the expiration date. During this grace period, the expired license is not valid. A license renewed during the grace period must be dated as of the date of the renewal.

#### S 97.21 Mailing address and station location.

Each application for an amateur service license and each application for a reciprocal permit for alien amateur licensee must show a mailing address and a station location (the addresses may be the same) in an area where the amateur service is regulated by the FCC. The mailing address must be one where the licensee can receive mail delivery by the United States Postal Service. The station location must be a place where a station can be physically located. (A Postal Service box, RFD number, or general delivery is unsuitable as a station location.)

#### S 97.23 License term.

- (a) An amateur service license is normally issued for a 10- year term.
- (b) A reciprocal permit for alien amateur licensee is normally issued for a 1-year term.

#### S 97.25 FCC modification of station license.

(a) The FCC may modify a station license, either for a limited time or for the duration of the term thereof, if it determines:

- (1) That such action will promote the public interest, convenience and necessity; or
- (2) That such action will promote fuller compliance with the provisions of the Communications Act of 1934, as amended, or of any treaty ratified by the United States.

(b) When the FCC makes such a determination, it will issue an order of modification. The order will not become final until the licensee is notified in writing of the proposed action and the grounds and reasons therefor. The licensee will be given reasonable opportunity of no less than 30 days to protest the modification; except that, where safety of life or property is involved, a shorter period of notice may be provided. Any protest by a licensee of an FCC order of modification will be handled in accordance with the provisions of 47 U.S.C. S 316.

#### S 97.27 Replacement license.

Each licensee or permittee whose original document is lost, mutilated or destroyed must request a replacement. The request must be made to: FCC, P.O. Box 1020, Gettysburg, PA 17326. A statement of how the document was lost, mutilated or destroyed must be attached to the request. A replacement license must bear the same expiration date as the license that it replaces.