

In the Matter of)	
)	Docket No. 20777
Deregulation of Part 97 of)	
the Commission's Rules)	RM-1429, RM-2163,
regarding emissions)	RM-2170, RM-2330,
authorized in the Amateur)	RM-2429, RM-2507,
Radio Service.)	RM-2545, RM-2550

NOTICE OF PROPOSED RULE MAKING

Adopted: April 14, 1976; Released: April 22, 1976

By the Commission:

1. Notice of Proposed Rule Making in the above entitled matter is hereby given.
2. The Commission has before it the above listed petitions (also listed in more detail in Appendix I) for rulemaking. Principally, petitioners seek amendment of the rules for the Amateur Radio Service regarding authorized emissions. Of these petitions, RM-1429, RM-2163 and RM-2170 relate to the use of facsimile. RM-2330 relates to the use of wide-band frequency modulation in the 50-54 MHz Amateur band. RM-2429 and RM-2550 would expand the types of codes and speeds permitted by Amateur radioteletypewriter (RTTY) stations. RM-2507 and RM-2545 would amend the frequencies available for use by Amateur television (ATV) repeater stations in the 420-450 MHz band.
3. In RM-1429, RM-2163 and RM-2170, petitioners all propose to increase the frequencies available to stations using type A4 or F4 (facsimile) emission. In RM-2170, petitioner asserts that "... (technology has) reached a point where the economical transmission of pictures is possible in a bandwidth no greater than a standard single sideband signal.... Tests have indicated that it is even possible to transmit and receive high quality pictures in a band width as narrow as 1900 Hz...." In RM-2330, petitioner claims "... the region from 51.0 to 52.5 MHz is largely unused in current practice." Several reasons are cited as justification for this claim, including the present rule which limits the bandwidth of an F3 emission to the same maximum bandwidth of an A3 emission. This, it is claimed, has also had an adverse effect on the growth and development of repeater stations in the 52 to 54 MHz band. In RM-2429, petitioner asserts that "ASCII, American Standard Code for information interchange has become the most popular mode of mechanical and digital encoding for both computer and communication teletypewriter applications due to greater character and function versatility." The rules presently authorize only the use of the International Telegraphic Alphabet No. 2 five-unit (start-stop) teletypewriter code for amateur teletypewriter stations at standard speeds of 60, 67, 75, or 100 words per minute. In RM-2550, the American Radio Relay League, Inc., proposes to delete all references to teletypewriter operating speeds and to permit the use of any of the standard codes in military or commercial usage. In RM-2507 and RM-2545, petitioners propose to permit operation of amateur television repeaters on frequencies on the 420-450 MHz band which are not presently available for repeater stations.

4. Rather than further complicate the present rules with additional provisions to accommodate the petitioners requests, we are herein proposing to delete all references to specific emission types in Part 97 of the Rules. We propose, instead, to replace the present provisions with limitations on the permissible bandwidth which an amateur signal may occupy in the various amateur frequency bands. Within the authorized bandwidth limitations, any emission type would be permitted.

5. We propose that maximum permissible bandwidth increments be established as follows: less than 0.35 kHz, less than 3.5 kHz, less than 35 kHz, or 35 kHz or more. Each Amateur sub-band would have an appropriate maximum permissible occupied bandwidth. For instance, Morse code and teleprinter emissions would generally fall within the 0.35 kHz bandwidth sub-bands. Telephony, facsimile and slow-scan television emissions using conventional single sideband techniques could operate in the 3.5 kHz bandwidth sub-bands. Double sideband amplitude modulation, narrow-band frequency modulation and independent sideband emissions would be excluded from these sub-bands. However, these emissions using conventional amplitude modulation or frequency modulation techniques could operate in the 35 kHz bandwidth sub-bands. In addition, any other emissions that satisfy the bandwidth limitations would be permitted on all appropriate amateur frequencies. We also propose to establish a finite limit on the maximum permissible output power of all emissions outside the authorized occupied bandwidth, including spurious modulation products, harmonics, parasitic oscillations, etc. Because of a significant increase in activity in the 420-450 MHz band, we propose to limit the maximum authorized bandwidth in this band to 35 kHz. Since adoption of this proposal would eliminate the use of fast scan television, we invite comments as to what useful purpose is served, other than experimentation, by transmission of television signals in the Amateur Service.

6. The Commission is aware that some amateurs desire to use modes of emission which are not specifically provided for in the rules. We hope, through this proceeding, to produce amended rules which will encourage amateurs to develop and implement techniques for more efficient utilization of the radio spectrum, and to increase service to the public through the establishment of improved communications systems. Many new and unusual emission types will eventually appear on amateur frequencies as a result of these amendments. It should therefore be noted that the provisions of Section 97.117, which prohibit the use of codes or ciphers for the purpose of obscuring the meaning of the communications, will remain in effect. However, the employment of signals encoded solely for the purpose of facilitating communications would be permitted under the revised rules. In order to facilitate identification of stations using these emissions, we are proposing a minor change to clarify the present rule for station identification which would continue the requirement for use of either the international Morse code or unencoded telephony.

7. The specific rules changes proposed herein are set forth in the attached Appendix II. Authority for these proposed amendments is contained in Sections 4(i) and 303 of the Communications Act of 1934, as amended.

8. Pursuant to applicable procedures set forth in §1.415 of the Commission's Rules, interested persons may file comments on or before June 23, 1976, and reply comments on or before July 23, 1976. In accordance with the provisions of §1.419(b) of the Commission's Rules, an original and eleven copies of all statements, briefs, and comments filed shall be furnished the Commission. All relevant and timely comments and reply comments will be considered by the Commission before final action is taken. The Commission may also take into account other relevant information before it, in addition to specific comments invited by this Notice. Responses will be available for examination by interested parties during regular business hours in the Commission's public reference room at its headquarters in Washington, D. C., (1919 M Street, N. W.).

FEDERAL COMMUNICATIONS COMMISSION

Vincent J. Mullins
Secretary

Attachments

Appendix I

Appendix II

A P P E N D I X I

Petition Number

Petitioner

RM-1429	James L. Turrin
RM-2163	Jerome C. Grokowsky
RM-2170	Howard M. Krawetz
RM-2330	Gordon Schlesinger
RM-2429	Raymond E. Heimberger
RM-2507	Bruce J. Brown
RM-2545	Biagio Presti for Apron Laboratories
RM-2550	Robert M. Booth, Jr., for The American Radio Relay League, Inc.

A P P E N D I X I I

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

1. In §97.7, sub-paragraph (d)(2) is amended to read as follows:

§97.7 Privileges of operator licenses.

* * * * *

(d)(2) Radio telegraphy using the international Morse code is authorized in the frequency bands 3700-3750 kHz, 7100-7150 kHz (7050-7075 kHz when the terrestrial location of the station is not within Region 2), 21,100-21,200 kHz, and 28,100-28,200 kHz.

* * * * *

2. In §97.61, the headnote, paragraphs (a) and (c) and sub-paragraphs (b)(11) and (b)(13) are amended to read as follows:

§97.61 Authorized frequencies and bandwidth.

(a) Following are the frequency bands and associated bandwidth available to amateur radio stations, other than repeater stations, subject to the limitations stated in paragraph (b) of this section, §§97.65, 97.109, and 97.110.

Frequency band	Maximum authorized bandwidth (kHz)	Limitations (See paragraph (b))
kHz		
1300-2000	3.5	1,2
3500-3775	0.35	-----
3775-4000	3.5	4
4383.8	3.5	13
7000-7150	0.35	3,4
7075-7100	3.5	11
7150-7300	3.5	3,4
14000-14200	0.35	-----
14200-14350	3.5	-----
MHz		
21.000-21.250	0.35	-----
21.250-21.450	3.5	-----
28.000-28.500	0.35	-----
28.500-29.700	35.0	-----
50.000-50.100	0.35	-----
50.100-54.000	35.0	-----

144.0-144.1	0.35	-----
144.0-148.0	35.0	-----
220-225	35.0	5,6
420-450	35.0	5,7
GHz		
1.215-1.300	-----	5
2.300-2.450	-----	5,8
3.300-3.500	-----	5,12
5.650-5.925	-----	5,9
10.000-10.500	-----	5
24.000-24.250	-----	5,10
48.000-50.000	-----	-----
71.000-76.000	-----	-----
165.00-170.00	-----	-----
240.00-250.00	-----	-----
Above 300.00	-----	-----

* * * * *

(b)(11) The use of an authorized bandwidth in excess of 0.35 kHz in this band is limited to amateur radio stations located outside Region 2.

* * * * *

(b)(13) The frequency 4383.8 kHz, telephony using single sideband amplitude modulation with reduced or suppressed carrier, maximum power of 150 Watts, may be used by any station authorized under this part to communicate with any other station authorized in the State of Alaska for emergency communications. No airborne operations will be permitted on this frequency. Additionally, all stations operating on this frequency must be located in or within 50 nautical miles of the State of Alaska.

(c) The following transmitting frequency bands and the associated bandwidths authorized in paragraph (a) of this section are available for repeater stations, including both input (receiving) and output (transmitting):

- FREQUENCY BAND (MHz)
- 29.5-29.7
- 52.0-54.0
- 146.0-148.0
- 222.0-225.0
- 442.0-450.0

any amateur frequency above 1.215 GHz.

3. In §97.65 the headnote, (a) and (b) are amended, and (c.), (d), (e) and (f) are deleted to read as follows:

§97.65 Bandwidth of emissions.

(a) Occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

(b) The authorized bandwidth is the maximum occupied bandwidth authorized to be used by a station.

§97.69 [deleted]

4. §97.69 is deleted.

5. In §97.73, the headnote and text is amended to read as follows:

§97.73 Purity of emissions.

The mean power of emissions on any frequency removed from the upper or lower limit of the authorized bandwidth, by more than 250 percent of the authorized bandwidth, shall be attenuated at least 40 decibels below the peak output power of the transmitter.

6. In §97.87, paragraph (h) is amended to read as follows:

§97.87 Station identification.

* * * * *

(h) The identification required by paragraphs (a), (b), (c), (d) of this section shall be given on each frequency being utilized for transmission and shall be transmitted either by telegraphy using the international Morse code, or by unencoded telephony, using the English language. If an automatic device is used for identification by telegraphy, the code speed shall not exceed 20 words per minute. The use of a national or internationally recognized standard phonetic alphabet as an aid for correct telephone identification is encouraged.

7. §97.93 is amended to read as follows:

§97.93 Modulation of carrier.

Except for brief tests or adjustments, and authorized remote control or experimental purposes, an Amateur station shall not transmit an unmodulated carrier on frequencies below 51.0 MHz.