GENERAL REGULATIONS ANNEXED TO THE INTERNATIONAL RADIOTELEGRAPH CONVENTION

ARTICLE I

Definitions

In the present Regulations, supplementing the definitions given in Article I of the Convention:

The term "mobile station" means any mobile station.

The term "mobile stations" means all mobile stations, whatever their location.

The term "ship station" means a station on board a vessel not permanently moored.

The term "aircraft station" means a station on board an aircraft.

The term "coast station" means a land station used for communication with ship stations. It may be a fixed station used also for communication with ship stations; it is then considered as a coast station only for the duration of its service with ship stations.

The term "aeronautical station" means a land station used for communication with aircraft stations. It may be a fixed station used also for communication with aircraft stations; it is then considered as an aeronautical station only for the duration of its service with aircraft stations.

The term "station" means any station, without regard to its use.

The term "land station" has a general meaning; it is used when the intention is to cover at the same time communications with ship stations, with aircraft stations, and with any other mobile stations. The term then covers a coast station, in so far as concerns communication with ship stations, an aeronautical station in so far as concerns communication with aircraft stations and any station on land used for communication with any other mobile stations.

The term "broadcasting service" means a service carrying on the dissemination of radiotelephone communications intended to be received by the public, directly or by the intermediary of relay stations.

The term "fixed service" means a service carrying on radio communications of any kind between fixed points, exclusive of broadcasting and special services.

The term "mobile service" means a radio communication service carried on between mobile stations and land stations, and by mobile stations communicating with one another, exclusive of special services.

The term "special services" means the services of radiobeacons, radio compasses, transmission of time signals, notices to navigators, standard waves, transmissions having a scientific object, etc.

The term "radio beacon" means a special station, the transmissions of which are intended to enable a receiving station to determine its bearing or a direction with respect to the radio beacon.

The term "radio-compass station" means a station provided with special apparatus intended to determine the direction of the emissions of other stations.

The term "broadcasting station" means a station used for the dissemination of radiotelephone emissions intended to be received by the public.

The term "private experimental station" means:

1. A private station intended for experiments with a view to the development of radio technique or radio art;
2. A station used by an "amateur," i.e., by a duly authorized person interested in radio technique solely with a personal aim and without pecuniary interest.

The term "administration" means a Government administration.

**ARTICLE 2**

**License**

§1. No radio transmitting station shall be established or operated by an individual or by a private enterprise without special license issued by the Government of the country to which the station in question is subject.

§2. The holder of a license must undertake to preserve the secrecy of correspondence, both telegraph and telephone. Moreover, the effect of the license must be that the interception of radio correspondence other than that which the station is authorized to receive is forbidden, and that, in the case where such correspondence is involuntarily received, it must not be reproduced in writing, communicated to others, or used for any purpose.

§3. In order to facilitate the verification of licenses it is recommended that there be added, where necessary, to the text written in the vernacular, a translation of this text into a language more generally used in international relations.

**ARTICLE 3**

**Choice and calibration of apparatus**

§1. The choice of radio apparatus and devices to be used by a station shall be unrestricted, provided the waves emitted comply with the provisions of these Regulations.

§2. (1) The Administrations must take the necessary measures to assure themselves that the frequency meters (wave meters) employed in the adjustment of the transmitting apparatus are as accurately calibrated as possible by comparison with their national standard instruments.

(2) In case of international disagreement, the comparisons shall be made by an absolute method of measuring frequencies.

**ARTICLE 4**

**Classification and use of radio emissions**

§1. (1) Radio emissions shall be divided into two classes:

A. Continuous waves,

B. Damped waves,

defined as follows:

Class A.—Waves the successive oscillations of which are identical under permanent conditions.

Class B.—Waves consisting of successive trains in which the amplitude of the oscillations, after having reached a maximum, decreases gradually.

(2) Waves of Class A include the following types, which are defined below:

Type A1: Unmodulated continuous waves. Continuous waves, the amplitude or frequency of which is varied by means of telegraphic keying.
Type A2: Continuous waves modulated at audible frequency. Continuous waves, the amplitude or frequency of which is varied in a periodic manner at audible frequency, combined with telegraphic keying.

Type A3: Continuous waves modulated by speech or by music. Continuous waves, the amplitude or frequency of which is varied according to the characteristic vibrations of speech or music.

(3) The above classification, into waves of Types A1, A2, and A3, shall not prevent the use, under conditions fixed by the Administrations concerned, of modulated and/or manipulated waves, by methods not falling within the definitions of Types A1, A2, and A3.

(4) These definitions do not relate to systems of transmitting apparatus.

(5) Waves will be designated in the first place by their frequency in kilocycles per second (kc/s). Following this designation there will be indicated, in parentheses, the approximate length in meters. In the present Regulations, the approximate value of the wave length in meters is the quotient of the number 300,000 divided by the frequency expressed in kilocycles per second.

§2. Waves emitted by a station must be maintained upon the authorized frequency, as exactly as the state of the art permits, and their radiation must also be as free as practicable from all emissions not essential to the type of communication carried on.

§3. The interested Administrations shall fix the tolerance allowed between the mean frequency of emissions and the recorded frequency; they shall endeavor to take advantage of technical improvements progressively to reduce this tolerance.

§4. The width of a frequency band occupied by the emission of a station must be reasonably consistent with good current engineering practice for the type of communication involved.

§5. In cases where frequency bands are assigned to a specified service, stations in that service must use frequencies sufficiently remote from the limits of these bands, so as not to produce serious interference with the work of stations belonging to services to which are allocated immediately neighboring frequency bands.

Article 6

Allocation and use of frequencies (wave lengths) and types of emission.

§1. The Administrations of the contracting countries may assign any frequency and any type of wave to any radio station within their jurisdiction upon the sole condition that no interference with any service of another country will result therefrom.

§2. These Administrations, however, agree to assign to stations which by their nature are believed capable of causing serious international interference, frequencies and types of waves in conformity with the rules for allocation and use of waves as set forth below.

§3. The Administrations agree also to consider the table of allocation of frequency bands (see section 7) as a guide giving, for the different stations, the limits which must be observed by all new stations and to which they shall adapt all existing stations with the least practicable delay, without diminishing the quality of the service which existing stations carry on and taking into account the present state of their installations.

§4. Nevertheless, the frequencies of all broadcasting stations now working on frequencies below 500 kc/s (wave lengths above 1,000 m.) shall, in principle, not later than a year after the present Regulations become effective, be removed either to the band included between 160 and 224 kc/s (wave lengths 1,875–1,340 m.) or to the band included between 550 and 1,500 kc/s (wave lengths 546–200 m.).
§5. No new broadcasting station shall be authorized to work in the frequency band included between 160 and 224 ke/s (wave lengths 1,875–1,340 m) unless no inconveniences therefrom will result to existing radio communication services, including broadcasting services carried on by the stations which are already using the frequencies included in this band, and stations the frequencies of which shall be changed to fall within this same band in conformity with the provision of paragraph 4 above.

§6. The power of existing broadcasting stations using frequencies below 300 ke/s (wave lengths above 1,000 m) shall not be increased if any inconvenience will result therefrom to existing radio communication services.

§7. The following table shows the allotment of frequencies (approximate wave lengths) among the various services:

<table>
<thead>
<tr>
<th>Frequnecies in kilocycles per second (ke/s)</th>
<th>Approximate wave lengths in meters</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>10- 100</td>
<td>3,600–3,000</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>100- 110</td>
<td>3,000–2,725</td>
<td>Fixed services and mobile services.</td>
</tr>
<tr>
<td>110- 125</td>
<td>2,725–2,400</td>
<td>Mobile services.</td>
</tr>
<tr>
<td>125- 155</td>
<td>2,400–2,025</td>
<td>Maritime mobile services open to public correspondence exclusively.</td>
</tr>
<tr>
<td>155- 200</td>
<td>2,025–1,625</td>
<td>Mobile services.</td>
</tr>
<tr>
<td>(a) Broadcasting.</td>
<td></td>
<td>(a) Broadcasting.</td>
</tr>
<tr>
<td>(b) Fixed service.</td>
<td></td>
<td>(b) Fixed service.</td>
</tr>
<tr>
<td>(c) Mobile services.</td>
<td></td>
<td>(c) Mobile services.</td>
</tr>
<tr>
<td>The conditions for use of this band are subject to the following regional arrangements:</td>
<td></td>
<td>The conditions for use of this band are subject to the following regional arrangements:</td>
</tr>
<tr>
<td>All regions where broadcasting stations are in use</td>
<td></td>
<td>(a) Air mobile service exclusively.</td>
</tr>
<tr>
<td>160- 194</td>
<td>1,875–1,550</td>
<td>Broadcasting on frequencies below 200 ke/s (above 1,000 m).</td>
</tr>
<tr>
<td>Other regions</td>
<td></td>
<td>Fixed service.</td>
</tr>
<tr>
<td>(d) Mobile services.</td>
<td></td>
<td>(d) Mobile services.</td>
</tr>
<tr>
<td>Regional arrangements will respect the rights of other regions in this band.</td>
<td></td>
<td>Regional arrangements will respect the rights of other regions in this band.</td>
</tr>
<tr>
<td>194- 250</td>
<td>1,550–1,000</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>285- 316</td>
<td>1,000–350</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>316- 350</td>
<td>350–300</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>350- 400</td>
<td>300–250</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>400- 450</td>
<td>250–200</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>450- 500</td>
<td>200–150</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>500- 600</td>
<td>150–100</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>600- 700</td>
<td>100–75</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>700- 800</td>
<td>75–60</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>800- 900</td>
<td>60–45</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>900- 1,000</td>
<td>45–30</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>1,000- 1,250</td>
<td>30–25</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>1,250- 1,500</td>
<td>25–20</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>1,500- 2,000</td>
<td>150–100</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>2,000- 2,500</td>
<td>100–75</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>2,500- 3,000</td>
<td>75–50</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>3,000- 3,500</td>
<td>50–25</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>3,500- 4,000</td>
<td>25–20</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>4,000- 4,500</td>
<td>20–15</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>4,500- 5,000</td>
<td>15–10</td>
<td>Mobile services.</td>
</tr>
<tr>
<td>5,000- 5,500</td>
<td>10–7.5</td>
<td>Mobile services.</td>
</tr>
<tr>
<td>5,500- 6,000</td>
<td>7.5–5</td>
<td>Mobile services.</td>
</tr>
<tr>
<td>6,000- 6,500</td>
<td>5–3.3</td>
<td>Mobile services.</td>
</tr>
<tr>
<td>6,500- 7,000</td>
<td>3.3–2.2</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>7,000- 7,500</td>
<td>2.2–1.4</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>7,500- 8,000</td>
<td>1.4–1.1</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>8,000- 8,500</td>
<td>1.1–1.0</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>8,500- 9,000</td>
<td>1.0–0.9</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>9,000- 9,500</td>
<td>0.9–0.8</td>
<td>Fixed services.</td>
</tr>
<tr>
<td>9,500- 10,000</td>
<td>0.8–0.7</td>
<td>Fixed services.</td>
</tr>
</tbody>
</table>

### Table of allocation

1. The wave of 165 ke/s (1,875 m) is the calling wave for mobile stations using long continuous waves.
2. The wave of 200 ke/s (1,550 m) is the international calling and distress wave. It may be used for other purposes on condition that it will not interfere with coast signals and distress signals.
3. Mobile services may use the band 500 to 1,300 ke/s (300–200 m) on condition that this will not cause interference with the services of a country which uses this band exclusively for broadcasting.
Table—Continued.

<table>
<thead>
<tr>
<th>Freq. in kilocycle per sec. (756)</th>
<th>Approximate wave lengths in meter</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,205 - 8,205</td>
<td>41 - 51</td>
<td>Fixed services</td>
</tr>
<tr>
<td>8,205 - 9,205</td>
<td>36.4 - 31.1</td>
<td>Mobile service, Fixed services</td>
</tr>
<tr>
<td>9,205 - 10,205</td>
<td>32.7 - 27.8</td>
<td>Mobile service, Fixed services</td>
</tr>
<tr>
<td>10,205 - 11,205</td>
<td>30.1 - 26.0</td>
<td>Mobile service, Fixed services</td>
</tr>
<tr>
<td>11,205 - 12,205</td>
<td>27.4 - 23.5</td>
<td>Fixed service, Broadcasting</td>
</tr>
<tr>
<td>12,205 - 13,205</td>
<td>25.2 - 21.6</td>
<td>Mobile service, Fixed service</td>
</tr>
<tr>
<td>13,205 - 14,205</td>
<td>23.1 - 19.8</td>
<td>Mobile service, Fixed service</td>
</tr>
<tr>
<td>14,205 - 15,205</td>
<td>21.3 - 18.1</td>
<td>Mobile service, Fixed service</td>
</tr>
<tr>
<td>15,205 - 16,205</td>
<td>19.7 - 16.4</td>
<td>Mobile service, Fixed service</td>
</tr>
<tr>
<td>16,205 - 17,205</td>
<td>18.3 - 15.0</td>
<td>Mobile service, Fixed service</td>
</tr>
<tr>
<td>17,205 - 18,205</td>
<td>17.0 - 13.8</td>
<td>Mobile service, Fixed service</td>
</tr>
<tr>
<td>18,205 - 19,205</td>
<td>15.9 - 12.7</td>
<td>Mobile service, Fixed service</td>
</tr>
<tr>
<td>19,205 - 20,205</td>
<td>14.8 - 11.6</td>
<td>Mobile service, Fixed service</td>
</tr>
<tr>
<td>20,205 - 21,205</td>
<td>13.8 - 10.6</td>
<td>Mobile service, Fixed service</td>
</tr>
<tr>
<td>21,205 - 22,205</td>
<td>12.9 - 9.6</td>
<td>Mobile service, Fixed service</td>
</tr>
<tr>
<td>Above 22,000</td>
<td>9.5 - 6.0</td>
<td>Not reserved, Mobile service</td>
</tr>
<tr>
<td>Above 500</td>
<td>Not reserved, Mobile service</td>
<td></td>
</tr>
</tbody>
</table>

NOTE—It is recognized that short waves (frequencies from 5,000 to 25,000 kc/s approximately) wave lengths from 33 to 111 meters approximately) are very efficient for long distance communications. It is recommended that as a general rule this band of waves be reserved for this purpose, in services between fixed points.

Uses designated.

§8. (1) Use of Type B waves of a frequency of less than 375 kc/s (wave lengths above 800 m.) shall be forbidden beginning January 1, 1930, subject to the provisions of paragraph 1 of the present Article and except for existing land stations.

(2) No new transmitting installations using Type B waves shall be made in ships or in aircraft beginning January 1, 1930, except when such transmitters working on full power shall dissipate less than 300 watts measured at the input of the supply transformer at audible frequency.

(3) The use of Type B waves of all frequencies shall be forbidden beginning January 1, 1940, except for transmitters fulfilling the conditions as to power indicated in (2) above.

(4) No new Type B transmitting installation shall henceforth be made in a land or fixed station. Waves of this type shall be forbidden in all land stations beginning January 1, 1933.

§9. The use of Type A2 waves shall not be authorized between 100 and 150 kc/s (3,000 and 1,875 m.).

§10. The use of Type A2 waves shall not be authorized between 100 and 150 kc/s (3,000 and 2,000 m.), except in the band 100-125 kc/s (3,000-2,400 m.), for time signals exclusively.

§11. In the band 400-550 kc/s (650-645 m.) no type of wave likely to render inoperative the distress, alarm, security, or urgent signals sent on 500 kc/s (600 m.) shall be authorized.

§12. In principle, any station carrying on a service between fixed points, on a wave with a frequency below 110 kc/s (wave lengths above 2,725 m.) must use only one frequency, chosen from the bands allocated to that service (section 7 above), for each of its transmitters capable of simultaneous operation. A station shall not be permitted to use a frequency other than that allocated, as stated above, for a service between fixed points.

§13. In principle, stations shall employ the same frequencies and the same types of emission for the transmission of messages by the one-way method as for their normal service. Regional arrangements may be made, however, with a view to exempting stations concerned from the application of this rule.
§14. In order to facilitate the exchange of synoptic meteorological messages in European regions, two frequencies between 37.5 and 100 kc/s (wave lengths of 8,000–3,000 m.) shall be allocated to this service by regional arrangements.

§15. To facilitate rapid transmission and distribution of information of value in the detection of crime and pursuit of criminals, a frequency between 37.5 and 100 kc/s (wave lengths of 8,000–3,000 m.) shall be reserved for this purpose by regional arrangements.

§16. (1) The frequencies assigned by Administrations to all new fixed land or radio broadcasting stations which they may have authorized or of which they may have undertaken the installation must be chosen in such a manner as to prevent so far as practicable interference with international services carried on by existing stations the frequencies of which have already been notified to the International Bureau. In the case of a change of the frequency of an existing fixed land or broadcasting station, the new frequency assigned to this station must comply with the above conditions.

(2) The interested Governments shall agree, in case of need, upon the determination of the waves to be assigned to the stations in question as well as upon the conditions for the use of waves so assigned. If no arrangement intended to eliminate interference can be arrived at, the provisions of Article 20 of the Convention may be applied.

§17. (1) Each administration shall promptly advise the International Bureau when it decides upon, or authorizes, the establishment of a radio communication station, the operation of which necessitates the assignment for its regular service of a particular frequency below 37.5 kc/s (wave length above 8,000 m.) in the case where the use of this frequency might cause international interference over broad areas. This notice must reach the International Bureau four months prior to the construction of the station contemplated in order to dispose of objections which any of the Administrations might raise against the adoption of the proposed frequency.

(2) In the case of a fixed short wave station intended to carry on regular service and the radiation of which would be likely to cause international interference, the Administration concerned must, as a general rule, before the completion of the station and in any case before it is open for service, notify to the International Bureau the frequency assigned to that station.

(3) Such notification, however, shall be sent only when the Administration concerned shall have ascertained that the service in question can be established within a reasonable time.

§18. (1) Each Administration may assign to amateur stations frequencies chosen from the bands allotted to amateurs in the allocation table (section 7 above).

(2) The maximum power which these stations may use shall be fixed by the Administration concerned, taking into account the technical qualifications of the operators and the conditions under which the stations must work.

(3) All the general rules fixed in the Convention and in these Regulations apply to amateur stations. In particular, the frequency of the waves emitted must be as constant and as free from harmonics as the state of the art permits.

(4) In the course of their transmission, these stations must transmit their call signals at frequent intervals.

ARTICLE 6

Service of private experimental stations

§1. The exchange of communications between private experimental stations of different countries shall be forbidden if the Administration
of one of the interested countries has given notice of its opposition to this exchange.

§2. When this exchange is permitted the communications must, unless the interested countries have entered into other agreements among themselves, be carried on in plain language and be limited to messages bearing upon the experiments and to remarks of a private nature for which, by reason of their unimportance, recourse to the public telegraph service might not be warranted.

§3. In a private experimental station authorized to carry on transmission any person operating the apparatus, either on his own account or for another, must have proved his ability to transmit text in International Morse Code signals and to read by ear texts thus transmitted. He can be replaced only by authorized persons possessing the same qualifications.

§4. Administrations shall take such measures as they deem necessary to verify the qualifications, from a technical point of view, of all persons handling the apparatus.

**ARTICLE 7**

**Operators' certificates**

§1. (1) The service of every mobile radiotelegraph of radiotelephone station must be carried on by a radiotelegraph operator holding a certificate issued by the government to which the station is subject. However, in mobile stations equipped with a low-power radiotelephone installation (of a power not exceeding 300 watts input) capable of being used only for telephony, the service may be carried on by an operator holding only a radiotelephone operator's certificate.

(2) In case of the absolute unavailability of the operator in the course of a crossing, flight, or voyage, the master or the person responsible for the mobile may authorize, but only temporarily, an operator holding a certificate issued by another contracting Government to carry on the radio service. When it becomes necessary to employ as temporary operator a person not holding the prescribed certificate, his service must be limited to emergency cases. In any case, the operator or the above-mentioned person must be replaced as soon as practicable by an operator holding the certificate prescribed in the preceding paragraph.

§2. There are two classes of certificates and of special certificates for radiotelegraph operators and one class of certificates for radiotelephone operators.

**Certificates for radiotelegraph operators**

§3. (1) Each Government shall be free to fix the number of examinations deemed necessary to obtain a first-class certificate.

(2) The first-class certificate must state that the operator possesses the requisite qualification for obtaining the radiotelephone operator's certificate. Each government shall be free to require or not the same qualifications in the case of the second-class certificate.

(3) The minimum qualifications for obtaining these certificates shall be the following:

A. *First class*

The first-class certificate shall state the professional and technical qualifications of the operator with regard to:

(a) Knowledge of the general principles of electricity, of the theory of radiotelegraphy and radiotelephony, and of the practical operation of all apparatus used in the mobile service;
INTERNATIONAL RADIO CONVENTION. NOVEMBER 26, 1927.

(b) Theoretical and practical knowledge of the operation of the accessory apparatus, such as motor-generator sets, storage batteries, etc., used in the operation and adjustment of the apparatus specified in subparagraph (a).

(c) Practical knowledge necessary to make, with the means on board, the repairs of damage which may have occurred to the apparatus during a voyage.

(d) Correct transmission and correct reception by ear of code groups (mixed letters, figures, and punctuation marks) at a speed of 20 (twenty) groups per minute, and of text in native plain language, at a speed of 25 (twenty-five) words per minute. Each code group must be composed of five characters, each figure or punctuation mark counting as two characters. The average word of the text in native plain language should contain five characters.

(e) Detailed knowledge of the regulations applying to the exchange of radio communications, knowledge of documents relative to charges for radiotelegrams, knowledge of the radio-telegraph part of the Regulations for the Safety of Life at Sea, and, in the case of aerial navigation, knowledge of the special provisions regulating the aerial navigation radio service.

(f) Knowledge of the general geography of the five parts of the world, and particularly the principal wire and radio connections.

B. Second class

The second-class certificate shall state the professional qualifications of the operator with regard to:

(a) Elementary theoretical and practical knowledge of electricity and radiotelegraphy, as well as knowledge of the adjustment and operation of apparatus used in the mobile service.

(b) Elementary theoretical and practical knowledge of the operation of accessory apparatus, such as motor-generator sets, storage batteries, etc., used in the operation and adjustment of the apparatus mentioned in subparagraph (a).

(c) Practical knowledge sufficient for making small repairs in case of damage to the apparatus.

(d) Correct transmission and correct reception by ear of code groups (mixed letters, figures, and punctuation marks) at a speed of 16 (sixteen) groups per minute and of text in native plain language at a speed of 20 (twenty) words per minute. Each code group must be composed of five characters, each figure or punctuation mark counting as two characters. The average word of the text in native plain language should contain five characters.

(e) Knowledge of the regulations applying to the exchange of radio communications, knowledge of documents regarding charges for radiotelegrams, knowledge of the radiotelegraph part of the Regulations for the Safety of Life at Sea, and, in the case of aerial navigation, knowledge of the special provisions regulating the aerial navigation radio service.

(f) Elementary knowledge of general geography applying to communications by wire and radio.

C. Special certificate

(1) The radiotelegraph service of small vessels (to which the Convention for the Safety of Life at Sea is not applicable) may be carried on by operators holding a special certificate satisfying the following requirements:

(a) The operators of such of these mobile stations as engage in the international service of public correspondence and in the general work of mobile stations must be capable of carrying on radio commu-
nations at the sending and receiving speed required for obtaining a second-class certificate.

(6) When these stations do not participate in this service but normally act in case of distress, and work on a particular wave without thereby disturbing other radio services, it devolves upon each interested government to fix the conditions for obtaining the certificate.

(2) As an exception it is provisionally conceded that the government of New Zealand may issue a special certificate, for which it shall fix the requirements, to operators of small ships of its nationality which do not go far from the coast of that country and which engage only to a limited extent in the international service of public correspondence and in the general work of mobile stations.

§ 4. (1) Before becoming chief operator of a ship station of the first class (Article 20, section 2) a first-class operator must have had at least one year of experience as operator on board a ship or in a coast station.

(2) To become chief operator of a ship station of the second class (Article 20, section 2) a first-class operator must have had at least six months' experience as operator on board a ship or in a coast station.

(3) In order to carry on the service as a first-class operator in an aircraft, the operator must have had the number of flying hours in the radio service fixed by the Administration which issues the certificate.

§ 5. Operators who have successfully passed the examination for a second-class certificate shall received from their Government temporary certificates authorizing them to embark as chief operators in vessels of the third class (Article 20, section 2). After having had six months' service on board ship they may receive the final second-class certificate authorizing them to carry out similar duties in vessels of the second class.

Certificates for radiotelephone operators

§ 6. (1) There is only one class of radiotelephone operator's certificate.

(2) This certificate shall state the professional qualifications of the operator with regard to:

(a) Knowledge of the adjustment and operation of radiotelephone apparatus.

(b) Ability to transmit and receive clearly conversation by telephone apparatus.

(c) Knowledge of the regulations applying to the exchange of radiotelephone communications and the part of the radiotelegraph regulations relating to safety of life.

(3) Holders of radiotelephone operators' certificates can only be employed in ships, aircraft, etc., fitted with a low-power radiotelephone installation (300 watts input at maximum) and only for the telephone service.

(4) Radiotelephone operators in the aeronautical service must have had a minimum number of hours of flight on board an aircraft fixed by the Administration concerned.

(5) The holder of a first class radiotelegraph operators' certificate as well as the holder of a second class radiotelegraph operators' certificate possessing a radiotelephone operator's certificate may carry on the radiotelephone service in any mobile station.

§ 7. Each Administration shall take the necessary measures to require operators to observe the secrecy of correspondence and to prevent to the greatest possible extent the fraudulent use of certificates.
§8. The interested Governments shall take the necessary steps so that certificates issued under former regulations shall remain valid for the holders of those certificates who are able generally to meet the new requirements for issue.

§9. The provisions of the present Article shall become obligatory not later than three years after the present Regulations become effective.

**Article 8**

**Authority of the master**

§1. The radio service of a mobile station shall be placed under the supreme authority of the master or of the person responsible for the vessel, aircraft, or other mobile station.

§2. The master or person responsible, as well as all persons who may have knowledge of the text or simply of the existence of radio telegrams, or of any information whatever obtained by means of the radio service, shall be bound to maintain and ensure the secrecy of correspondence.

**Article 9**

**General procedure in the mobile service**

§1. In the mobile service, the following detailed procedure shall be obligatory, except in the case of distress calls or of distress correspondence, to which the provisions of Article 19 are applicable.

§2. (1) Before proceeding with a transmission, the sending station must make sure that no excessive interference will be caused to other communications in progress within its range on the frequency to be used; if there is probability of such interference occurring, it shall await the first break in the transmission with which it might interfere.

(2) If, in spite of this precaution, a radio transmission in progress is interrupted by the call, the latter must cease at the first request of a land station open to the international service of public correspondence or by any aeronautical station whatsoever. The station requesting this cessation must indicate the approximate duration of the suspension imposed upon the station whose call has been stopped.

§3. In mobile service radiotelegraph correspondence the following procedure shall be used for calling a station:

(1) (a) The calling station shall make the call by transmitting not more than three times the call signal of the station called and the word DE, followed not more than three times by its own call signal.

(b) In making this call the calling station shall use the wave on which the station called keeps watch.

(2) The station called shall reply by transmitting not more than three times the call signal of the calling station, the word DE, its own call signal, and, if it is ready to receive traffic, the letter K (invitation to transmit), followed if deemed useful, by the appropriate abbreviation and by a number indicating the strength of the signals received.

(3) If the station called is unable to receive, it shall replace in the reply formula the letter K by the signal . . . . (wait), followed by a number indicating in minutes the probable duration of the wait. If it is probable that this delay will exceed ten minutes, the delay must be explained.

(4) When there are several radiotelegrams to be transmitted in the same direction, they may be transmitted in series with the consent of the station which is to receive them.

(5) This latter station, in giving its consent, shall indicate the number of radiotelegrams which it is ready to receive in a series, and this indication shall be followed by the letter K.
(8) In principle, a radiotelegram containing more than 100 words shall be considered as forming a series, or shall terminate a series then under way.

(7) As a general rule, long radiotelegrams in plain language, code, or cipher, shall be transmitted in sections, each section containing 50 words in the case of plain language and 20 words or groups where code or cipher is used.

(8) At the end of each section the signal . . . . . (?) meaning: "Have you received the radiotelegram correctly up to this point?" shall be transmitted. If the section has been correctly received, the receiving station shall send the letter K and the transmission of the radiotelegram shall be continued.

9 (c) The transmission of a radiotelegram shall be terminated by the signal . . . . . (end of transmission) followed by the call signal of the sending station and the letter K.

(b) In case of transmission in series, the call signal of the sending station and the letter K shall be sent only at the end of the series.

10 (a) Acknowledgment of receipt of a radiotelegram shall be sent by means of the letter K followed by the number of the radiotelegram; this acknowledgment of receipt shall be preceded by the following formula: call signal of the sending station, word DE, call signal of the receiving station.

(b) Acknowledgment of receipt of a series of radiotelegrams shall be sent by means of the letter K followed by the number of radiotelegrams received as well as by the numbers of the first and of the last telegram composing the series. This acknowledgment of receipt shall be preceded by the formula given above.

(11) The conclusion of work between two stations shall be indicated by each of them, by means of the signal . . . . . (end of work) followed by its own call signal.

§ 4. (1) If the calling station intends to transmit its traffic with a type of wave and/or on a frequency other than those employed for the call, it shall send after its own call signal the service indications defining the type of wave and/or the frequency which it proposes to use for its transmission. The absence of these service indications shall signify that it does not intend to change the type of wave or frequency.

(2) If the station called wishes the calling station to send on a type of wave and/or frequency other than those used for the call, it shall add to the reply formula service indications defining the type of wave and/or the frequency which it desires to use. The absence of these service indications shall signify that it does not desire that the type of wave and/or frequency used for the call be changed.

(3) If the calling station has indicated that it is going to use for transmission a type of wave and/or a frequency other than those with which the call was made, the station called in the reply formula shall precede the letter K by abbreviations, indicating that from then on it will listen on the type of wave and/or the frequency announced and that it itself, will use the said type of wave and/or frequency for the entire period of communication.

(4) If the calling station is a land station which, according to the provisions of the present regulations, may employ a wave other than those which it is possible for the mobile station to transmit, it may after having established contact, use this wave to transmit its traffic. In such case the procedure shall be as follows:

(a) The land station shall call the mobile station by using the wave on which the latter is keeping watch; and after having obtained an answer shall inform it by means of the appropriate abbreviation that it must listen thereafter on the wave which it intends to use.
(6) If the mobile station can receive the wave indicated, it shall send the letter K. If not, it shall inform the land station by means of the appropriate abbreviation that it is impossible to receive the proposed wave and the two stations shall agree to adopt another working wave.

(5) The land station shall continue to use the wave which it has employed until after the transmission of the signal . . . . . . . (end of work), followed by its call signal. This signal, followed by its call signal, shall be repeated by the mobile station on the international calling wave assigned to its service.

(6) When the land station which receives a request to change the type of wave and/or the frequency cannot or does not desire to comply with this request, it shall not transmit the signal K, but shall propose, by employing the appropriate abbreviations, the use of another type of wave and/or another frequency.

§5. (1) On the wave of 500 kc/s (600 m.) (or on an authorized wave, in the case of communications with an aircraft station), the periods of continuous work between two stations must not exceed approximately ten minutes; after each of these periods a pause must be observed in order to permit, if necessary, another station to send a priority call or to transmit a priority message.

(2) On the other waves assigned to the maritime mobile service the length of the period of continuous work shall be controlled by the coast station. In the case of communications between two ship stations, the receiving station shall determine the length of the periods of continuous work.

(3) In communications between aircraft stations the length of the periods of continuous work shall be controlled by the receiving aircraft station, subject to the intervention, for that purpose, of the aeronautical station. In communications between aeronautical stations and aircraft stations, the aeronautical station shall control the length of the periods of continuous work.

§6. When a station receives a call without being certain that such call is intended for it, it shall not reply until the call has been repeated and is understood. When, on the other hand, a station receives a call which is addressed to it, but is uncertain of the call signal of the calling station, it must answer immediately using the signal . . . . . . instead of the call signal of this latter station.

§7. (1) When it is necessary to make test signals in order to adjust the apparatus before proceeding with a call or a transmission, the signals must not be made for more than about ten seconds and they must be composed of a series of V's followed by the call signal of the sending station.

(2) If a station sends test signals at the request of another station to permit the latter to adjust its receiving apparatus, these signals must likewise be composed of a series of V's in which the call signal of the transmitting station shall appear several times.

**ARTICLE 10**

*General call to all mobile stations*

§1. Stations desiring to enter into communication with mobile stations, without, however, knowing the names of the mobile stations which are within their range of action, may use the signal of inquiry CQ, in place of the call signal of the station called in the calling formula, this formula being followed by the letter K (general call for all mobile stations with request for reply).

§2. In regions where traffic is heavy, the use of the call CQ followed by the letter K shall be forbidden except in combination with urgent signals.
§3. The call CQ not followed by the letter K (general call for all mobile stations without request for reply) shall be employed for radiotelegrams of general information, time signals, regular meteorological information, general safety notices, and information of all kinds intended to be read by anyone who can receive them.

ARTICLE 11

Interference

§1. (1) The exchange of unnecessary signals shall be forbidden to mobile stations. Tests and experiments shall be allowed in these stations only to the extent that they do not disturb the service of other stations.

(2) Each Administration shall decide, with a view to their authorization, whether the proposed tests or experiments will be likely to interfere with the service of other stations.

§2. Tests and adjustments in any station, must be conducted so as not to interfere with the service of other stations engaged in authorized correspondence. The test and adjustment signals must be chosen so that no confusion can be produced with a signal, abbreviation, etc., of special meaning defined by the Regulations.

§3. Any station transmitting for tests, adjustments, or experiments must, during the course of these transmissions, send its call signals at frequent intervals.

§4. An Administration or private operating company making a complaint regarding interference must, in order to support and justify this complaint, declare that it regularly uses receiving apparatus of a type equivalent to the best employed in the current practice of the service concerned.

ARTICLE 12

Reporting of infractions

§1. If an Administration has knowledge of a breach of the Convention or of these Regulations, committed in one of the stations of the mobile service which it has authorized, it shall determine the facts, fix the responsibility, and take the necessary measures.

§2. Infractions of the mobile service rules must be reported by the stations detecting them to the Administration to which they are subject by means of a form similar to that shown in Appendix 2.

§3. In the case of repeated infractions on the part of the same station, representations must be made to the Administration of the country to which the station is subject.

ARTICLE 13

Publication of service documents

§1. The International Bureau shall draw up and publish the following service documents:

(a) A table and a chart to be annexed to the nomenclature of ship stations indicating the zones and the hours of service on board vessels of the second class (see Appendices 5 and 6).

(b) An alphabetical list of call signals of all fixed, land, and mobile stations assigned a call signal from the international series. This list shall be drawn up without regard to nationality; it shall be preceded by a table of allocation of call signals naming the countries to which one or more series of call signals are assigned, under the conditions provided in Article 14.
INTERNATIONAL RADIO CONVENTION. NOVEMBER 25, 1927.

(c) Nomenclature of all fixed, land, and mobile stations having a call signal from the international series, whether or not open to public correspondence, and a nomenclature of broadcasting stations.

§2. The nomenclature relating to each class of station shall be published in separate parts as follows:

I. Fixed and land stations

(1) Nomenclature of stations by countries, the names of the countries being arranged in alphabetical order and the names of the stations of the same country being, in their turn, arranged in alphabetical order under the name of that country. This nomenclature shall be preceded by an alphabetical index indicating the names of the stations, the call signals, the characteristic signs and the numbers of the pages where the details regarding these stations may be found.

(2) The word RADIO is printed separately after the name of each coast station.

II. Stations carrying on special services

(1) Nomenclature of stations by countries with an alphabetical index similar to the one in the preceding part. The stations mentioned in this nomenclature shall be those which carry on special services for the needs of maritime and aerial navigation (radio compasses, radiobeacons, time signals, notices to navigators, regular meteorological information, press news addressed to all, etc.).

(2) The words GONO and PHARE, respectively, shall be shown following the name of radio compass stations and radiobeacon stations.

III. Ship stations

Nomenclature of stations arranged in alphabetical order, without considering nationality, and mentioning in abbreviated form the name of the country to which each station belongs.

IV. Aircraft stations

Nomenclature of stations arranged in alphabetical order, without considering nationality, and mentioning in abbreviated form the name of the country to which each station belongs.

V. Broadcasting stations

Nomenclature of stations by countries with alphabetical index similar to that of Parts I and II.

§3. Supplements to the list of call signals and to the respective nomenclatures containing additions, modifications and deletions published in alphabetical order. These supplements shall be monthly, and recapitulative.

Nomenclature of fixed and land stations

§4. (1) The descriptive list of fixed and land stations must include the following data:

(a) Name of the station;

(b) Call signal;

(c) Exact geographical position of the transmitting antenna, indicated by territorial subdivision and by the longitude and latitude in degrees, minutes and seconds, longitude being calculated with respect to the meridian of Greenwich;

(d) Types of waves and transmitting frequencies (wave lengths) for which adjustments are made, the normal transmitting wave being underlined;

613.5°—°—°°—°°—°°°—
(e) Normal radiated power expressed in meter-amps, or, lacking this, the height of the antenna and intensity of the current at the base of the antenna;
(f) Nature of services carried on;
(g) Hours of service (Greenwich Mean Time);
(h) Where necessary in the case of land stations, name of the private company which establishes statements of charges;
(i) Land station charge or charges;
(j) Special information concerning time of call for the transmission of traffic lists or for the transmission of radiotelegrams without acknowledgement of receipt or with deferred acknowledgement of receipt.
(2) The internal telegraph charge of the country to which the land station is subject and the charge applied by that country to telegrams addressed to countries bordering on it, shall be indicated in the nomenclature.

Nomenclature of stations carrying on special services

§6. In addition to the data concerning fixed and land stations the information published must mention:
A. For radiocompass stations:
(a) Whether or not the station is provided with transmitting apparatus, and if not, the sending station with which it is connected;
(b) The wave on which the radiocompass station must be called; the wave on which mobile stations must send the signals provided for the taking of bearings; the wave on which the radiocompass station (or the sending station connected with it) must transmit true bearings obtained, and the sectors in which bearings will normally be accurate;
(c) When necessary, the normal radiated power expressed in meter-amps of the sending station connected with it, or, lacking this, the height of the antenna, and intensity of the current at the base of the antenna.

B. For radiobeacon stations:
(a) Characteristic signals of the stations;
(b) Whether, in addition to its radiobeacon emission, the station can transmit or receive normal communications;
(c) Where necessary, the names of the stations with which communication must be made in order to correspond with the radiobeacon if the latter is not able to send or receive communications;
(d) Sectors in which the emissions of the radiobeacon will give normally accurate bearings.

C. For stations transmitting time signals:
The scheme of signals used and times of transmission.

D. For stations transmitting notices to navigators or regular meteorological observations:
The times of transmission, and if necessary, the designation of the document or documents in which the details concerning these transmissions are to be found.

Nomenclature of ship stations

§8. The descriptive list of stations must contain the following data:
(a) Name of the vessel followed by the call signal in case of similarity of names;
(b) Call signal;
(c) Country to which the station is subject (abbreviated indication);
(d) Types of waves and transmitting frequencies (wave lengths) for which adjustments are made, the normal transmitting wave being underlined;
(e) Normal radiated power expressed in meter amperes; or, lacking this, the height of the antenna and intensity of the current at the base of the antenna;
(f) Nature of services carried on (if the station is equipped with a radiocompass this should be indicated) and the hours of service;
(g) Name of the Administration or private enterprise to which statements of charges must be addressed;
(h) Ship charge.

§7. In the case of similarity of names between two ship stations of the same nationality, as well as in cases where statements of charges must be sent directly to the owner of the ship, mention shall be made of the name of the shipping company to which the ship belongs or of the shipowner.

**Nomenclature of aircraft stations**

§8. The descriptive list of stations must include the following data:
(a) Call signal of the station and, if necessary, the name of the aircraft;
(b) Name of the country to which the station is subject (abbreviated indication);
(c) Mark and type of the aircraft;
(d) Types of waves and transmitting frequencies (wave length) for which adjustments are made, the normal transmitting wave being underlined;
(e) Customary route or port of registry of the aircraft;
(f) Nature of services carried on and hours of service; if the station is equipped with radiocompass this should be indicated;
(g) Name of the Administration or private enterprise with which statements of charges must be exchanged;
(h) Where necessary, the aircraft station charge.

**Nomenclature of broadcasting stations**

§9. The descriptive list of stations must include the following data:
(a) Name of the station;
(b) Where necessary, the call signal;
(c) Exact geographical position of the transmitting antenna, indicated by territorial subdivision and by longitude and latitude in degrees, minutes and seconds, the longitude being calculated with respect to the Meridian of Greenwich;
(d) Transmitting frequency (wave length) of emission;
(e) Normal radiated power expressed in meter amperes; or, lacking this, the height of the antenna and intensity of the current at the base of the antenna;
(f) Optionally, days and hours of emission; the hours shall be indicated in Greenwich Mean Time and countries using Summer Time (Daylight Saving) must indicate the hour for each of the two periods of the year;
(g) Name of the Administration or private enterprise which carries on the transmission.

**Symbols indicating the kind and scope of the service of stations**

§10. The following symbols shall be used in service documents:
- PG Station open to public correspondence.
- PR Station open to limited public correspondence.
- N Station having a continuous day and night service.
INTERNATIONAL RADIO CONVENTION. NOVEMBER 26, 1927.

Y Station opened from sunrise to sunset.
X Station having no fixed hours of service.
Z1 Ship station of the second class, with 8 hours of service.
Z2 Ship station of the second class, with 10 hours of service.
PA Aeronautical station.
PC Coast station.
FS Land station established for the sole purpose of safety of life.
FX Station carrying on communication service between fixed points.
RF Fixed radio beacon station.
RG Radio compass station.
RS Receiving station only, connected with the general communication system.
RW Rotating radio beacon station.

§11. The general form of these various nomenclatures is shown in Appendix 3. Administrations or private enterprises must adopt identical formulae for the descriptive lists of stations to be sent to the International Bureau.

ARTICLE 14

Call signals

§1. Fixed, land, and mobile stations covered by section 1 of Article 2 of the Convention as well as private experimental stations must have a call signal from the international series assigned to each country in the allocation table below. In this table, the first letter or the first letters of the call signals shall identify the nationality of the stations.

Table of Allocation of Call Signals

<table>
<thead>
<tr>
<th>Country</th>
<th>Call signal</th>
<th>Country</th>
<th>Call signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>CAA-CEZ</td>
<td>Suriname</td>
<td>PAA-PZ2</td>
</tr>
<tr>
<td>Canada</td>
<td>CAA-CZ</td>
<td>(Abbreviated)</td>
<td>Q</td>
</tr>
<tr>
<td>China</td>
<td>CAA-CZ</td>
<td>USAI</td>
<td>IRA-EGZ</td>
</tr>
<tr>
<td>Cuba</td>
<td>CAA-CEZ</td>
<td>Peru</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Morocco</td>
<td>CAA-CEZ</td>
<td>Peru</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Portugal</td>
<td>CAA-CEZ</td>
<td>Portugal</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>French Polynesia</td>
<td>CAA-CEZ</td>
<td>French Polynesia</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Rumania</td>
<td>CAA-CEZ</td>
<td>Rumania</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Uruguay</td>
<td>CAA-CEZ</td>
<td>Uruguay</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Germany</td>
<td>CAA-CEZ</td>
<td>Germany</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Spain</td>
<td>CAA-CEZ</td>
<td>Spain</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>British Virgin Islands</td>
<td>CAA-CEZ</td>
<td>British Virgin Islands</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Russia</td>
<td>CAA-CEZ</td>
<td>Russia</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>CAA-CEZ</td>
<td>Dominican Republic</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Belgium</td>
<td>CAA-CEZ</td>
<td>Belgium</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Italy and Countries</td>
<td>CAA-CEZ</td>
<td>Italy and Countries</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>United States of America</td>
<td>CAA-CEZ</td>
<td>United States of America</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Norway</td>
<td>CAA-CEZ</td>
<td>Norway</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Argentina Republic</td>
<td>CAA-CEZ</td>
<td>Argentina Republic</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>CAA-CEZ</td>
<td>Bulgaria</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Czechoslovakia</td>
<td>CAA-CEZ</td>
<td>Czechoslovakia</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Belgium and Netherlands</td>
<td>CAA-CEZ</td>
<td>Belgium and Netherlands</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Iceland</td>
<td>CAA-CEZ</td>
<td>Iceland</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Netherlands</td>
<td>CAA-CEZ</td>
<td>Netherlands</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Canada</td>
<td>CAA-CEZ</td>
<td>Canada</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Dutch West Indies</td>
<td>CAA-CEZ</td>
<td>Dutch West Indies</td>
<td>OAA-EGZ</td>
</tr>
<tr>
<td>Brazil</td>
<td>CAA-CEZ</td>
<td>Brazil</td>
<td>OAA-EGZ</td>
</tr>
</tbody>
</table>
§2. The call signals shall consist of:
(a) Three letters in the case of fixed and land stations;
(b) four letters in the case of ship stations;
(c) five letters in the case of aircraft stations;
(d) the letter or letters indicating the nationality and a single figure followed by a group of not more than three letters, for private experimental stations.

§3. In the aircraft radio service, after communication has been established by means of the five-letter calling signal the aircraft station may employ an abbreviated signal composed of:
(a) In radiotelegraphy, the first and last letters of the complete five letter signal.
(b) In radiotelephony, all or part of the name of the owner of the aircraft (company or individual) followed by the two last letters of the registration mark.

§4. (1) The twenty-six letters of the alphabet may be used to form call signals; accented letters are excluded.
(2) The following combinations of letters, however, may not be used as call signals:
(a) Combinations beginning with A or B, these two letters being reserved for the geographical portion of the International Code of Signals.
(b) Combinations which might be confused with distress signals or with other signals of the same nature.
(c) Combinations reserved for the abbreviations to be used in radio transmissions.
(d) With reference to aircraft stations, combinations including the letter W as the second letter.

§5. (1) Each country shall select the call signals of its stations from the international series assigned to it and shall inform the International Bureau of the call signal assigned to each of them.
(2) The International Bureau shall ensure that the same call signal is not adopted by more than one station and that the call signals which could be mistaken for distress signals or other signals of similar nature are not allotted to any station.

**Article 15**

**Inspection of stations**

§1. Mobile stations having their port of registry in a colony, possession or protectorate may be considered as subject to the authority of such colony, possession or protectorate, as regards the granting of licenses.

§2. The duly authorized Administrations of the countries where a mobile station calls may demand the production of the license; this must be kept in such a way that it may be produced without delay. Where the license is not produced or when manifest irregularities are detected, these Administrations may proceed to the inspection of the radio installations in order to be assured that they satisfy the conditions imposed by the present Regulations.

§3. (1) When an Administration has found it necessary to pursue the course indicated in section 2 above, it shall immediately so inform the Administration to which the mobile station in question is subject. In addition to this, the procedure specified in Article 12 is followed when necessary.
(2) The official of the Administration who has inspected the station must, before leaving it, make known his findings to the Master or to the person responsible (Article 8) or to their representative.
§4. With regard to technical and operating conditions which mobile stations holding licenses must satisfy, in the international radio service, the contracting Governments undertake not to impose upon foreign mobile stations temporarily located within their territorial waters or temporarily located upon their territories, conditions more severe than are contemplated in the present Regulations. These provisions do not affect in any way the provisions which, coming within the scope of the Convention for the Safety of Life at Sea, are not covered by the present Regulations.

ARTICLE 16

Conditions to be observed by mobile stations

§1. (1) Mobile stations must be established in such a way as to conform with reference to frequencies and types of waves, to the general provisions constituting the subject matter of Article 5. In accordance with these provisions, the use by mobile stations of damped waves (Type B) of a frequency below 375 kc/s (wave length above 800 m.), shall be forbidden beginning January 1, 1930.

(2) In addition, no new installations of transmitters of Type B waves shall be made in mobile stations beginning January 1, 1930, except when these transmitters working on full power shall expend less than 300 watts measured at the input of the supply transformer at audible frequency.

(3) Finally, the use of Type B waves of all frequencies shall be forbidden beginning January 1, 1940, except for transmitters fulfilling the same conditions regarding power as above.

§2. (1) Every station installed on board a vessel or an aircraft following a maritime route, such vessel or aircraft being compulsorily equipped with radio apparatus in accordance with an international agreement, must be able to send and receive on a wave of 500 kc/s (600 m.) Type A2 or B. Ship stations must, in addition, be able to use the wave of 375 kc/s (800 m.), Type A2 (or B subject to the provisions of section 1 above).

(2) Aircraft stations must be able to send and receive the wave of 333 kc/s (900 m.) Types A2 or A3 (or B subject to the provisions of section 1 above).

§3. (1) In addition to the fixed waves stipulated above, mobile stations equipped to send waves of Types A1, A2 or A3 may use all the waves authorized in Article 5.

(2) The use of waves of Type B shall be authorized only for the following frequencies (wave lengths):

<table>
<thead>
<tr>
<th>Kc/s</th>
<th>Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>375</td>
<td>800</td>
</tr>
<tr>
<td>410</td>
<td>730</td>
</tr>
<tr>
<td>425</td>
<td>705</td>
</tr>
<tr>
<td>454</td>
<td>660</td>
</tr>
</tbody>
</table>

(3) The use of the Type B wave of 665 kc/s (450 m.) shall be forbidden henceforth in regions where this wave may interfere with broadcasting.

(4) The use of the Type B wave of 1000 kc/s (300 m.) for traffic shall be forbidden, henceforth, between 6:00 P. M. and midnight, local time, and shall be absolutely forbidden, at all times, beginning January 1, 1930 at the latest. This same Type B wave of 1000 kc/s (300 m.) may, however, continue in use indefinitely without restriction as to hours by stations on board fishing vessels, for radio-compass bearings among themselves, provided they do not interfere with broadcasting.
INTERNATIONAL RADIO CONVENTION. NOVEMBER 25, 1927.

§4. All apparatus in mobile stations established for the transmission of Type A1 waves between 125 and 150 kc/s (2400–2000 m.) must permit the use of at least three frequencies chosen from this band, and must permit a rapid change from one to another of these frequencies.

§5. (1) All stations on ships compulsorily equipped with radio apparatus must be able to receive the wave of 500 kc/s (600 m.) and in addition all the waves necessary for the proper accomplishment of the service which they carry on.

(2) Beginning January 1, 1932 they must be able to receive easily and efficiently on the same frequencies, waves of Types A1 and A2.

§6. Transmitting apparatus used in the mobile service must be provided with devices permitting reduction of power. This provision shall not apply to transmitters, the input power of which does not exceed 300 watts.

§7. Receiving apparatus must be such that the current which it produces in the antenna shall be as small as possible and shall not disturb neighboring stations.

§8. The transmitting and receiving apparatus of all mobile stations must be such as to allow changing of frequency as rapidly as possible. All installations must be such that communications once being established the time necessary to change from transmission to reception and vice versa shall be as short as practicable.

ARTICLE 17

Calling and listening waves

§1. (1) In the band between 360 and 515 kc/s (330–580 m.) the only Type B waves permitted shall be the following: 375, 410, 425, 454 and 500 kc/s (800, 730, 705, 580, and 600 m.).

(2) The general calling wave, which must be used by all ships compulsorily equipped and by coast stations, shall be 500 kc/s (600 m.) (A1, A2 or B).

(3) Besides the wave 500 kc/s (600 m.) the use of waves of all types between 485 and 515 kc/s (620–580 m.) shall be forbidden.

(4) The wave of 500 kc/s (600 m.) shall be the international calling and distress wave. It may be used, but with discretion, for other purposes, if it does not interfere with distress, urgent, safety, or call signals.

(5) Coast stations must be able to use at least one wave besides that of 500 kc/s (600 m.). This additional wave shall be underlined in the nomenclature to indicate that it is the normal working wave of the station. The additional waves thus chosen may be the same as those of ship stations or may be different. In any case, the working waves of the coast stations must be chosen in such a way as to avoid interference with neighboring stations.

(6) Besides the normal working waves underlined in the nomenclature, coast and ship stations may use in the authorized band additional waves which they deem suitable. These waves shall be given in the nomenclature without being underlined.

§2. (1) In order to increase safety of life at sea (ships) and over the sea (aircraft), all stations in the mobile maritime service must, during their hours of service, take the necessary measures to assure the watch on the distress wave (500 kc/s–600 m.) for three minutes twice per hour, beginning at the 15th minute and at the 45th minute after each hour Greenwich Mean Time.
(2) Stations carrying on a service of radiotelegraph correspondence, press news, etc., with ships at sea must observe silence during the intervals indicated above. Only the transmissions provided for in Article 19, sections 25 to 27, may be made during these intervals.

(3) As an exception, however, land and ship stations equipped to correspond by means of continuous waves may continue to work during these periods; if they are in a position to maintain at the same time a satisfactory watch on the distress wave as provided for in paragraph (1) of the present section.

§3. The following rules must be observed in the operation of stations in the mobile service using Type A1 waves of the band 100 to 160 kc/s (3000–1875 m.) which is assigned to the mobile service.

(a) Every coast station carrying on communications on a long continuous wave must listen on the wave of 143 kc/s (2100 m.) unless it is otherwise indicated in the nomenclature. The coast stations shall transmit all its traffic on the wave or waves especially assigned to it.

(b) When a mobile station desires to establish communication on a long continuous wave with another station of the mobile service, it must employ the wave of 143 kc/s (2100 m.) unless it is otherwise indicated in the nomenclature. This wave, designated as the general communication wave, must be employed:

(1) For calls and answers thereto.

(2) For sending signals preliminary to the transmission of traffic.

(c) A mobile station after having established communication on the general communication wave, with another station in the mobile service, may transmit its traffic on any wave in the authorized band on condition that it does not disturb the work of a coast station or work in progress on the calling wave.

(d) As a general rule, every mobile station, equipped for service on long continuous waves and not engaged in communication on another wave, must, in order to permit the exchange of traffic with other stations of the mobile service, return to the wave of 143 kc/s (2100 m.) for 10 minutes from the beginning of the 35th minute to the beginning of the 45th minute of each hour, Greenwich Mean Time, during the specified hours, according to the class to which the station in question belongs.

(e) (1) Coast stations shall transmit their traffic lists at specified times, published in the nomenclature, on the wave or waves which are assigned to them.

(2) Besides the times thus fixed for this transmission of their traffic lists, coast stations may call mobile stations individually, at any other time, according to circumstances or according to work which they have to carry on. These individual calls may be made on the wave of 143 kc/s (2100 m.) in regions where there is no congestion of traffic.

(f) The special provisions concerning the service carried on by land stations using long continuous waves shall be shown in detail in a special reference in the nomenclature.

Article 18

Emergency installations

§1. The Convention for the Safety of Life at Sea determines which ships must be provided with emergency installations and defines the conditions to be fulfilled by installations of this class.

§2. In the use of emergency installations, all the provisions of the present Regulations must be observed.
ARTICLE 19

Distress, alarm, urgent and safety signals

§1. The distress signal shall consist of the group . . . . . . . . . which indicates that the ship, aircraft, or other mobile station sending it, is threatened by grave and imminent danger, and requests immediate assistance.

§2. (1) The distress call shall consist of the distress signal sent three times, followed by the word DEE and the call signal of the mobile station in distress, sent three times. This call has absolute priority over all other transmissions. All mobile or land stations hearing it must immediately cease all transmissions capable of interfering with the distress calls or messages and must listen on the wave used for the distress call. This call must not be addressed to a particular station.

(2) The same rules apply to the radiotelephone distress call which consists of the spoken expression MAYDAY, (corresponding to the French pronunciation of the expression “m’ aider” [help me].)

§3. The distress message shall include the distress call followed by the name of the ship, aircraft, or other mobile station in distress, and information concerning its position, the nature of the distress and the kind of assistance desired.

§4. As a general rule and when a ship or aircraft on or over the sea is involved in the position must be expressed in latitude and longitude (Greenwich) using figures for degrees and minutes, accompanied by one of the words NORTH or SOUTH, and by one of the words EAST or WEST. A period shall separate the degrees from the minutes. Where necessary, the true bearing and the distance in nautical miles from a known geographic point may be given.

§5. The distress call and message shall be sent only by the authority of the master or person responsible for the ship, aircraft, or other mobile station.

§6. A ship in distress shall transmit the distress call on the wave of 500 kc/s (600 m.), preferably of Type A2 or B. This call must be followed as soon as possible by the distress message.

§7. The distress call and message must be repeated at intervals until an answer has been received, especially during the periods of silence specified in Article 17, section 2. The intervals must, however, be long enough for stations preparing to reply to the call to have time to start their sending apparatus. In the case where the ship in distress receives no answer to a distress call or message sent on the 500 kc/s (600 m.) wave, the call and the message may be repeated on any other available wave on which attention might be attracted.

§8. Furthermore, a mobile station which is aware that another mobile station is in distress may transmit the distress message on condition that:

(a) the station in distress is not itself in a position to transmit it.

(b) the master (or his relief) of the vessel, aircraft, or other mobile station believes that further help is necessary.
§9. (1) Stations which receive a distress message from a mobile station which unquestionably is in their immediate vicinity, must at once acknowledge receipt thereof (see sections 15 and 16 below), taking care not to interfere with the transmission of the acknowledgments of receipt of the said message sent by other stations.

(2) Stations which receive a distress message from a mobile station which unquestionably is not in their immediate vicinity, must listen for a short period before acknowledging receipt thereof in order to permit the stations nearer to the mobile station in distress to answer and acknowledge receipt without interference.

Distress traffic

§10. Distress traffic shall include all messages relative to immediate relief of the mobile station in distress.

§11. All distress traffic must include the distress signal, sent before the time of filing.

§12. The control of distress communications devolves upon the mobile station in distress or upon the mobile station which, by application of the provisions of section 8, subparagraph (a), sent the distress call. These stations may delegate the control of the distress communications to another station.

§13. All stations which are within the range of the distress communications but which do not take part in them must refrain from using the distress wave until the distress communications are finished. As soon as these communications are established on the distress wave, mobile stations not taking part in them may continue their normal service on other authorized waves of Type A1, if by so doing they are still able effectively to receive the distress traffic.

§14. (1) When distress communications are ended and silence is no longer necessary, the station which has controlled these communications shall send a message on the distress wave addressed to CQ, indicating that the distress communications are ended. This message shall take the following form:

Call CQ (three times), word DE, call signal of the station transmitting the message, distress signal, time of filing the message, name and call signal of the mobile station which was in distress, words “distress traffic ended.”

(2) This message shall be repeated, where necessary, on the other waves on which the distress traffic has been sent.

Acknowledgment of receipt of a distress message—Repetition of a distress call or message

§15. Acknowledgment of receipt of a distress message shall be made in the following form:

Call signal of the mobile station in distress (three times), word DE, call signal of the station acknowledging receipt (three times), group RRRR, distress signal.

§16. Every mobile station which acknowledges receipt of a distress message must make its name and position known as soon as possible (in the form shown in Paragraph 4), taking care not to interfere with other stations more favorably situated to render immediate relief to the station in distress.

§17. If a mobile station employing continuous waves not included in the band 485 to 515 kcs (620–680 m.) hears a distress message sent on the wave of 500 kcs (600 m.), during other than the obligatory silence periods on the wave of 600 kcs (600 m.), and if the ship, aircraft or other mobile station is not in a position to render assistance, the said station must take all possible steps to attract the
attention of other mobile stations in the vicinity, which are working on waves not included in the band mentioned above.

§18. Repetition of the distress call or message, by mobile stations other than the one in distress, shall be permitted only on authorization from the master (or his relief) of said stations, taking care not to cause interference by useless repetition.

§19. A station repeating a distress call or message shall add to the end thereof the word DE followed by its own call signal transmitted three times.

§20. In a case where a station receives a distress call or message but is not in a position to render assistance and has reason to believe that there has been no acknowledgment of receipt of the distress message, it must repeat the message on full power on the distress wave and take all the necessary steps to advise the authorities who are capable of useful intervention.

**Automatic alarm signal**

§21. The composition of the automatic alarm signal must comply with the following conditions:

(a) It must be possible to send this signal by hand or by an automatic apparatus, without difficulty and with a precision as to the measure of time, which must not be greater than that of a watch or a clock indicating seconds.

(b) Its composition must be clear, distinct, and easily recognized by a person ignorant of the Morse Code; and it must be adaptable to the easy and cheap manufacture of an automatic receiving apparatus which:

1. Shall respond to the alarm signal even when numerous stations are working as well as when there is atmospheric interference;
2. Shall not be started by powerful signals or by the atmospheres when these are not accompanied by the alarm signal;
3. Shall possess a sensitivity equal to that of a crystal receiver-detector connected with the same antenna;
4. Shall give warning when its operation ceases to be normal.

(c) The said composition must be different from the signal used for adjustment and functioning of the variometer.

(d) Before an automatic alarm receiver shall be approved for use in ships under the jurisdiction of an Administration, the Administration must be satisfied by practical tests made under suitable conditions of interference, that the apparatus complies with the provisions of these Regulations.

(e) The following alarm signal shall hereafter be recognized:

A series of twelve dashes sent in one minute, the duration of each dash being four seconds and the duration of the interval between two dashes, one second.

(f) This special signal must have for its sole purpose, the operation of the apparatus used to give the alarm. It must be used solely to announce that the distress signal is about to follow.

(g) The adoption of the type of alarm signal mentioned in (e) shall not prevent an Administration from authorizing the use of an automatic apparatus which would comply with the conditions fixed above and would be operated by the regulation distress signal, (· · · · · · · · · · · · · · · · · · · ·).

**Urgent signal**

§22. (1) The urgent signal shall consist of several repetitions of the group XXX, sent by distinctly separating the letters of each group and the successive groups; it shall be sent before a call. This signal shall indicate that the calling station has a very urgent message to transmit concerning the safety of the ship, aircraft, or other vehicle
in which it is located; of a ship, aircraft, or other vehicle in sight; or finally, of the safety of any person on board or in sight therefrom.
In the aircraft radio service the indication PAN shall be used as an urgent signal, by radiotelephony and by radiotelegraphy, when an aircraft station wishes to give notice of damage which compels the aircraft to land without requiring immediate assistance. In the case of radiotelegraphy, the three letters must be well separated in order that the signals AN be not transmitted as the signal P.

(2) The urgent signal shall have priority over all other communications except those of distress, and all mobile or land stations which hear it must avoid interfering with the transmission of such urgent traffic.

(3) As a general rule, the urgent signal may be employed only if the sending mobile station addresses it to a specific station.

§23. (1) Mobile stations which hear the urgent signal must continue to listen for at least three minutes. At the expiration of this period and if no urgent message has been heard, mobile stations may resume their normal service.

(2) Land and ship stations nevertheless, which are in communication on authorized waves, other than that used for the transmission of the urgent signal and of the call which follows it, may continue their normal work without interruption.

§24. The urgent signal shall be transmitted only with the authorization from the master or the person responsible for the ship, aircraft, or other mobile station.

Safety signal

§25. The safety signal shall consist of the transmission of the group TTT, with the letters well separated, followed by the word DE and by the call signal of the station sending it. It shall indicate that this station is about to transmit a message concerning the safety of navigation or giving important information relative to meteorological warning messages.

§26. The safety signal and the safety message shall be sent on the wave of 500 ke/s. (300 m.) and if necessary, on the normal listening wave of ship and aircraft stations.

§27. The safety signal shall be sent once during the first silent period (Article 17, section 2) and near the end of that period. All stations hearing it must continue to listen on the normal calling wave (ship stations) or on the authorized wave (aircraft station) until the message preceded by the safety signal shall have ended. The transmission of this message shall begin immediately after the end of the silent period.

Article 20

Working hours of stations in the mobile service

Land stations

§1. (1) The service of land stations is, so far as practicable, continuous (day and night). Certain land stations, however, may have a service of limited duration. Each Administration or authorized private enterprise whose right so to do is recognized by the laws of its own country, shall fix the hours of service for land stations subject to its jurisdiction.

(2) Land stations whose service is not continuous may not close before having:

1. Finished all operations resulting from a distress call;
2. Exchanged all radiotelegrams originating in, or destined to, mobile stations which are situated within their range of action and have indicated their presence before the actual cessation of work.
(3) The service of aeronautical stations shall be continuous during the entire period of flight in the sector or sectors of the route or routes, for which the station is situated, and carries on the service of radio communications.

**Ship stations**

§2. (1) From the point of view of the international service of public correspondence, ship stations shall be divided into three classes:

1st class: stations carrying on a continuous service.

2nd class: stations carrying on a designated service of limited duration.

3rd class: stations, whose duration of service is less than that specified for the stations in the second class and stations whose duration of service is undetermined.

(2) The provisions of section 1, paragraph 2, of the present Article shall apply strictly to ship stations, so far as concerns distress service and, so far as practicable, in conformity with the spirit of the provisions of (3) of the said paragraph.

(3) It shall be the duty of each of the contracting Governments to ensure the effectiveness of the service in ship stations of its nationality by requiring the presence in such stations of the necessary number of operators, account being taken of its own legislation on this subject.

(4) During navigation, ship stations of the second class must carry on service as follows:

(a) In the case of short voyages, during the hours fixed by the Administration to which they are subject;

(b) In other cases, at least during the hours assigned to them in Appendix 5. Mention of these hours shall be made in the license.

**Aircraft stations**

§3. Aircraft stations shall be divided into two classes:

1st class: stations carrying on service during the entire period of flight.

2nd class: stations not having fixed hours of service.

§4. So far as concerns the international service of public correspondence of mobile stations, the personnel of these stations must include at least:

(a) For mobile stations of the 1st class, an operator holding a 1st class certificate.

(b) For mobile stations of the 2nd class, an operator holding a 1st or 2nd class certificate.

(c) For mobile stations of the 3rd class, an operator who has passed the examination for the 2nd class certificate.

**Article 21**

Information to appear in the license

The Government which issues the license to a ship station or aircraft station shall mention therein the class in which it is placed. For a ship station in the second class, the license shall also mention the period of service assigned to the station in conformity with Appendix 5.

**Article 22**

Address of radiotelegrams

§1. The address of radiotelegrams destined for mobile stations must be as complete as possible; it must be composed of the following:

(a) Name or designation of the addressee, with any additional information, if necessary.
INTERNATIONAL RADIO CONVENTION. NOVEMBER 23, 1927.

(b) Name of the ship or, in the case of an aircraft, the call signal as published in the first column of the nomenclature.

c) Name of the land station charged with the transmission, as it appears in the nomenclature.

(2) The name and call signal provided for under section 1 (1) (b), however, may be replaced at the sender's risk by the designation of the route followed by the mobile station, this route being determined by the names of the ports of departure and of destination, or by any other equivalent information.

(3) When a radiotelegram received from a mobile station is relayed over the general communication system, the land station shall transmit as origin the name of the mobile station whence the radiotelegram emanates as this name appears in the nomenclature, followed by the name of the said land station.

§2. (1) Mobile stations authorized to be without the official nomenclature of telegraph offices may follow the name of the telegraph office of destination by the name of the territorial sub-division, if necessary, by the name of the country of destination, if it is doubted whether, without this addition, the routing will be made without delay.

(2) The name of the telegraph office and the supplementary information shall in this case be counted and charged for only as a single word. The agent of the land station receiving the radiotelegram shall retain or delete this information, or again modify the name of the office of destination as may be necessary or sufficient to route the radiotelegram to its proper destination.

ARTICLE 23

Order of priority in the establishment of communications in the mobile service

The order of priority in the establishment of communications in the mobile service shall be as follows:

1. Distress calls, distress messages, and distress traffic.
2. Communications preceded by an urgent signal.
3. Communications preceded by the safety signal.
4. Communications relative to radio compass bearings.
5. All other communications.

ARTICLE 24

Calling

§1. (1) As a general rule, responsibility for establishing communication with the land station rests with the mobile station; the latter may call the land station, for this purpose, only after arriving within the range of action of said station.

(2) In principle, a land station having traffic for a mobile station which has not indicated its presence, must call this station only if it has reason to believe that the said mobile station is within range and is keeping watch.

§2. (1) Land stations may, however, transmit their traffic list, consisting of the call signals of all mobile stations for which they have traffic on hand, at fixed intervals which have been established by agreements between the Governments concerned. Land stations which transmit their calls on the wave of 500 ke (600 m.) shall transmit the call signals of their traffic list in alphabetical order; land stations which use continuous waves shall transmit these call signals in the most convenient order.
(2) In all cases, mobile stations which, during this transmission, hear their call signal must answer as soon as practicable, complying with provisions of section 1, and following so far as practicable the order in which they were called. The time at which land stations transmit their traffic lists as well as the frequencies and types of waves which they use for this purpose shall be indicated in the nomenclature.

(3) The land station shall inform each mobile station concerned of the frequency and type of wave to be used for work with it, as well as of the approximate time at which the traffic may begin.

§3. When a land station receives calls from several mobile stations at practically the same time, it shall decide the order in which these stations may transmit their traffic to it, its decision being based only on the requirement of permitting each calling station to exchange with it the greatest possible number of radiotelegrams.

§4. (1) When a land station answers a call from a mobile station it may, if deemed necessary, ask the mobile station, by means of appropriate abbreviations, to indicate the number of radiotelegrams on hand.

(2) If information concerning the position, route, speed or port of call of the ship, aircraft or other mobile station appears necessary to the land station, the latter asks for it by means of a free service advice, addressed to the master, or to the person in charge of the ship, aircraft or other mobile station who furnishes it or not at his discretion. The mobile station must give such information to the land station only when it has been requested and furnished as stated above.

§6. In communication between coast and mobile stations, the mobile stations shall follow the instructions of the coast station, in all questions relating to the order and time of transmission, as well as to the suspension of work. This provision shall not apply to cases of distress.

§8. In communication between mobile stations, except in cases of distress, the station called shall control the work as indicated in section 6 above.

§7. (1) When a station called does not answer to a call sent three times at intervals of two minutes, the call must cease and it may be resumed only after an interval of fifteen minutes. The calling station, before resuming the call, must make certain that the station called is not at that moment in communication with another station.

(2) The call may be repeated at shorter intervals if it is not likely to interfere with communications in progress.

§8. When the name and address of the management of a mobile station are not shown in the nomenclature or are no longer in accordance with the data given in the latter, it devolves upon the mobile station to furnish the land station to which it sends traffic all the necessary information, using for this purpose the appropriate abbreviations.

**Article 25**

*Time of filing radiotelegrams*

§1. To indicate the time of filing radiotelegrams accepted in mobile stations, the person in charge shall employ Greenwich Mean Time, and shall use a notation according to the twenty-four hour system. This time shall always be expressed and sent by means of four figures (0000 to 2359).

§2. The Administrations of countries located outside zone "A" (Appendix 6), however, may authorize ship stations following the coast of their countries to use zone time to indicate, by a group of four figures, the time of filing, and in this case the group must be followed by the letter F.
ARTICLE 20
Routing of radiotelegrams

§1. (1) In principle, a mobile station using waves of Type A2, A3 or B shall send its radiotelegrams to the nearest land station.

(2) When, however, the mobile station may choose among several land stations, situated at approximately the same distance it shall give the preference to that located on the territory of the country of destination, or of the normal transit of the radiotelegrams to be sent. When the station chosen is not the nearest, the mobile station must cease work or change the type or frequency of the emission upon the first request made by the land station in the interested service which is actually the nearest, the request being based upon the interference which the work in question causes the latter.

§2. A mobile station using Type A1 waves included in the authorized band may transmit its radiotelegrams to a land station which is not the nearest. It is, however, recommended in this case that preference be given to the land station established on the territory of the country of destination or of the country which it appears could most reasonably effect the transit of the radiotelegrams to be sent.

§3. (1) A coast station, to which one or more waves included in the band 156-158 kcps (2400-2500 m.) are allocated, shall have the right of preference on such wave or waves.

(2) Any other station in the mobile service transmitting public traffic on such wave or waves and thereby causing interference to the said coast station must suspend its work at the request of the latter.

§4. Except in the case of distress, communications between ship stations must not interfere with the work of coast stations. When this work is thus interfered with, the ships stations causing it must stop sending or change waves, upon the first request of the coast station with which they interfere.

§5. If the sender of a radiotelegram filed in a mobile station has designated the land station to which he desires his radiotelegram sent, the mobile station must in order to effect this transmission to the designated land station, wait if necessary until the conditions specified in the preceding paragraphs shall have been fulfilled.

§6. (1) A mobile station which does not have fixed working hours must inform the land station with which it is in communication the time of closing and the time of reopening its service.

(2) Every mobile station whose service is about to close by reason of arrival in port must notify the nearest land station.

ARTICLE 27
Wave to be used in case of distress

In case of distress, the wave of 500 kcps (900 m.) must be used preferably with Type A2 or B. When it is not possible to use one of these types of waves, Type A1 or A3 may be used. No provision of the present Regulations shall prevent the use by a mobile station in distress of any means at its disposal to attract attention, indicate its position, and obtain assistance.

ARTICLE 28
Measure for reducing interference

§1. In the case where waves other than the normal wave may be used, the ship station shall follow the instructions of the coast station with which it is in communication. In principle, the normal
wave of 500 kc/s (600 m.) must not be used for the transmission of long radiotelegrams in regions where the radio work is heavy.
§2. During their hours of service, stations using for their work waves of Type A2, A3 or B, and open to the international service of public correspondence, must continue to listen on the wave of 500 kc/s (600 m.), except when they are exchanging traffic on other waves.
§3. As a general rule, it is recommended that public correspondence traffic be transmitted on waves of Type A1, rather than on waves of Type A2 or B.
§4. All stations in the mobile service are bound to exchange traffic with the minimum of radiated energy necessary to insure good communication.

Article 29

Advice of non-delivery

§1. When for any reason, a radiotelegram originating in a mobile station and destined to land can not be delivered to the addressee, a notice of nondelivery shall be addressed to the land station which received the telegram from the mobile station. This land station, after verification of the address, shall if possible, retransmit the notice to the mobile station, if need be through the intermediary of a land station of the same country or of a neighboring country, insofar as existing conditions or special agreements, if any, permit.
§2. When a radiotelegram received at a mobile station cannot be delivered, the station shall so inform the office or mobile station of origin by a service advice. In the case of a radiotelegram coming from land this service advice shall be sent, whenever possible, to the land station through which the radiotelegram passed, or, if necessary, to another land station of the same country or of a neighboring country, insofar as existing conditions or special agreements, if any, permit.

Article 30

Period of retention of radiotelegrams at land stations

§1. (1) When the mobile station to which a radiotelegram is destined has not indicated its presence to the land station within the period of delay indicated by the sender, or, in the absence of such indication, until the morning of the fifth day following the date of filing, the land station shall so inform the office of origin which shall notify the sender. The latter may ask by telegraphic or postal paid service advice addressed to the land station that his telegram be held until the expiration of the fourteenth day, counting from the day of filing; in the absence of such an advice the radiotelegram shall be cancelled after the seventh day.
(2) The expiration of any of the periods mentioned above shall, however, be ignored if the land station is certain that the mobile station will soon come within its range.
§2. On the other hand, the expiration of those periods shall not be awaited when the land station is certain that the mobile station has definitely gone out of range. If it presumes that no other land station of the administration or of the private enterprise to which it is subject is in communication with the mobile station, the land station shall cancel the radiotelegram insofar as concerns the routing between it and the mobile station, and shall so inform the office of origin which shall inform the sender. In the contrary case, the radiotelegram shall be directed to the land station which is presumed to be in communication with the mobile station, provided, however, that no additional charge results therefrom.
54835—29—pr2—76

HeinOnline -- 45 Stat. 2877 1927-1929
§8. When a radiotelegram cannot be sent to a mobile station due to the arrival of the latter in a port near the land station, the latter station may, if necessary, forward the radiotelegram to the mobile station by other means of communication.

ARTICLE 31

Special services

A. Meteorological services. Time signals. Notices to navigators

§1. Synoptic meteorological messages regarding forecasting and general surveys and time signals must, in principle, be transmitted in conformity with a fixed schedule. Radiotelegrams of this class intended for mobile stations must be sent, so far as practicable, at times which will make their reception possible to those stations having only one operator (see Appendix B); speed of transmission must be so chosen that reading of the signals will be possible to an operator possessing only a second-class certificate.

§2. During transmissions “to all stations” of time signals and of meteorological messages intended for stations of the mobile service, all stations in that service the transmissions of which might interfere with the reception of the signals and messages in question, must keep silent in order to permit all stations so desiring to receive these signals and messages.

§3. Meteorological warning messages and notices concerning the safety of navigation of an urgent nature for the mobile services shall be transmitted immediately and must be repeated at the end of the first silent period which occurs (see Article 17, section 2). These messages and advices must be sent on the frequencies assigned to the mobile service to which they are destined; their transmission must be preceded by the safety signal TTT.

§4. In addition to the regular information services contemplated in the preceding paragraphs, the Administrations shall take the necessary measures so that certain stations shall be charged with sending, upon request, meteorological messages to stations in the mobile service.

§5. In the interest of brevity and of proper usage by mobile stations, the meteorological observations sent by stations in the mobile service must, in principle, be written in an international meteorological code.

B. Service of radiocompass stations

§6. The Administrations to the jurisdiction of which radiocompass stations are subject accept no responsibility for the consequences of an inexact bearing.

§7. These Administrations shall report, for insertion in the nomenclature of radiotelegraph stations, the characteristics of each radiocompass station by indicating, for each one, the sectors in which bearings are normally exact. All changes concerning this information must be published without delay; if the change is of a permanent nature it must be communicated to the International Bureau.

§8. (1) In normal service, coast radiocompass stations must be capable of taking and furnishing bearings to ships stations either on the frequency of 500 kc/s (600 m.) only, or on the frequency of 375 kc/s (800 m.) only, or interchangeably on one or the other of these two frequencies.

(2) An aircraft station desiring its bearings must, in order to request them, call on the 333 kc/s (600 m.) wave or on a wave assigned to the aerial route in which it is flying. In cases where an aircraft station, while in the vicinity of coast stations, calls them in order to obtain a bearing, it must use the frequency of these coast stations.
§9. The procedure to be followed in the radiocompass service is given in Appendix 8.

C. Radio beacon Service

§10. (1) When an Administration deems it useful in the interests of maritime and aerial navigation, to organize a radio beacon service, it may use for this purpose:
   (a) Radio beacons properly so-called, established on land or on vessels permanently moored; their emissions may be either circular or directional.
   (b) Fixed stations, coast stations or aeronautical stations designated to function also as radio beacons, upon request of mobile stations.
   (2) Radio beacons properly so-called shall use waves of 285 kc/s to 315 kc/s (1050–950 m.) of Types A1 and A2 exclusively.
   (3) Other stations designated as radio beacons shall use their normal transmission frequency and their normal type of emission.
   (4) Signals sent by radio beacons must permit efficient functioning of the radiocompass; they must be chosen in such a way as to eliminate all doubt, when the question arises, of distinguishing between two or more radio beacons.

§12. The Administrations which have organized a radio beacon service accept no responsibility for the consequences of inexact bearings obtained by means of the radio beacons of that service.

§13. (1) The Administrations shall report, for insertion in the nomenclature of radiotelegraph stations, the characteristics of each radio beacon properly so-called, and of each station designated to function as a radio beacon, including, if necessary, indications of the sectors in which bearings will normally be exact.
   (2) Any modification or irregularity in operation occurring in the radio beacon service must be published without delay; if the modification or the irregularity of operation is of a permanent nature, it must be communicated to the International Bureau.

Article 32

Accounting

§1. (1) Land station and ship charges shall not enter into the international telegraph accounts.
   (2) Accounts concerning these charges shall be liquidated by the Administrations of the countries concerned. They shall be established monthly by the Administrations to which the land stations are subject and sent by them to the Administrations concerned.

§2. In the case where the operation of the land stations is not by the Administration of the country, the operating company of these stations may be substituted, in so far as accounts are concerned, for the Administration of that country.

§3. For radiotelegrams originating in mobile stations, the Administration to which the land station is subject shall debit the Administration to which the mobile station of origin is subject with the land station charges, with charges accruing from transmission over the general communication system—which will hereafter be called telegraph charges—with the total charges collected for prepaid replies, with the land station and telegraph charges collected for collation, with charges accruing from transmission by special delivery, by mail or air mail, and with charges collected for additional copies of multiple telegrams. Radiotelegrams shall be treated, from the point of view of accounting between the land station and the office of destination,
as telegrams originating in the country where the land station is located.

§4. For radiotelegrams destined to a country beyond that to which the land station is subject, the telegraph charges to be liquidated in accordance with the above provisions are those which result either from the table of rates, relating to international telegraph correspondence, or from special arrangements concluded between the Administrations of neighboring countries and published by these Administrations and not the charges which might be collected by applying the minimum per telegram or by methods of arriving at the cost per telegram in any other manner.

§5. For radiotelegrams and for paid service advices destined to mobile stations, the Administration to which the office of origin is subject shall be debited directly by the one to which the land station is subject, with the land station and ship charges plus the land station and ship charges (for radiotelegrams) applicable to collation, but only in the case where the telegram has been sent to the mobile station. The Administration to which the office of origin is subject shall always be debited, from country to country, if necessary, through the medium of telegraph accounts and by the Administration to which the land station is subject, with the total charges accruing from prepaid replies. Concerning telegraph charges and charges relative to transmission by mail or air mail, and to additional copies, the procedure, in so far as concerns telegraph accounts, shall be in accordance with the normal telegraph procedure. The Administration to which the land station is subject shall, when the radiotelegram has been sent, credit the Administration to which the mobile station of destination is subject, with the ship charge, if any, with the charges due to the intermediary mobile stations, with the total charge collected for prepaid replies, with the ship charge for collation, with the charges collected for additional copies of multiple telegrams, and with the charges collected for transmission by mail or by air mail.

§6. Paid service advices and prepaid replies to telegrams, shall be treated in all respects like other radiotelegrams in so far as radiotelegraph charges are concerned; i.e. accounts relating to routing in the mobile service.

§7. For radiotelegrams exchanged between mobile stations.

(a) Through the intermediary of a single land station:

The Administration to which the land station is subject shall debit the one to which the mobile station of origin is subject, with the land station charge, with the territorial telegraph charge if need be, and with the charge of the mobile station of destination. It shall credit the Administration to which the mobile station of destination is subject with the ship charge due to that station.

(b) Through the intermediary of two land stations:

The Administration to which the first land station is subject shall debit the one to which the mobile station of origin is subject with all charges collected after deduction of the charge accruing to that mobile station. The Administration to which the second land station is subject—which is the one charged with transmitting the radiotelegram to the mobile station of destination—shall directly debit the Administration to which the first land station is subject with the charges accruing from this transmission, but only in the case where the radiotelegram has been sent to the mobile station.

§8. For radiotelegrams which, at the request of the sender, are routed through one or two intermediary mobile stations, each of the latter shall debit the mobile station of destination in the case of a radiotelegram destined to a mobile station, or the mobile station of origin when the radiotelegram originates in a mobile station, with the ship charge due it for transit.
§9. In principle, the liquidation of accounts accruing from communications between mobile stations shall be made directly between the companies operating these stations, the operating company to which the station of origin is subject being debited by that to which the station of destination is subject.

§10. (1) Monthly statements serving as the basis of the special accounting for radiotelegrams, covered in the preceding paragraphs, shall be established radiotelegraph by radiotelegraph with all useful information and within a period of three months beginning with the month to which they relate. This period may exceed three months when exceptional difficulties arise in the transportation of the documents by mail between the radio stations and the Administrations to which they are subject.

(2) Except in the case of an agreement to the contrary, monthly accounts shall serve as a check, and their verification, acceptance and liquidation must be effected within a period of six months from the date of their sending, except when exceptional difficulties arise in the transportation of documents due to exceptionally long duration of voyages.

(3) When the detection of differences prevents the acceptance of an account, the amount thereof shall nevertheless, be paid within the period of six months mentioned above, and such rectifications as are subsequently found necessary shall be included in a subsequent monthly statement. The amounts of the accounts which have not been liquidated within the said period, or the period as lengthened as the result of exceptional transportation difficulties mentioned above, shall bear interest at seven per cent per annum, from the date following the expiration of the six months' period, or, as the case may be, of the period prolonged as shown above.

(4) Rectification or rectification of accounts presented more than two years after the filing date of radiotelegrams to which the accounts refer, may be refused by the debtor Administration.

§11. The Governments reserve the right to make special agreements among themselves and with private operating companies concerned, for the purpose of adopting other provisions relative to accounting.

**Article 33**

*International technical consulting committee on radio communication*

§1. The International Technical Consulting Committee on Radio Communication, established by Article 17 of the Convention, shall be charged with the study of technical and allied questions which relate to international radio communication and which shall have been submitted to it by the participating Administrations or private enterprises. Its function shall be limited to giving advice on questions which it will have studied. It shall transmit this advice to the International Bureau, with a view to its being communicated to the Administrations and private enterprises concerned.

§2. (1) This Committee shall be formed, for each meeting, of experts of the Administrations and authorized private radio operating companies, who wish to participate in its work and who undertake to contribute, in equal parts, to the common expenses of the contemplated meeting. The personal expenses of the experts shall be borne by the Administration or private enterprise which has appointed them.

(2) The experts of such authorized private enterprises shall participate in the work with the right to deliberate but not to vote. When, however, a country is not represented by an Administration, the experts of the authorized private enterprises of that country shall have a right, as a whole and regardless of their number, to a single vote.
§3. The Administration of the Netherlands shall be charged with organizing the first meeting of the International Technical Consulting Committee on Radio Communication and with drawing up the program of work for this meeting.

§4. The Administrations which shall have been represented at a meeting of the Committee shall agree on the designation of the Administration which shall call the following meeting. Questions to be studied by the Committee shall be sent to the Administration organizing the next meeting and that Administration shall determine the date and program of the meeting.

§5. In principle, the meetings of the International Technical Consulting Committee on Radio Communication shall take place every two years.

ARTICLE 34

International Bureau

§1. (1) The additional expenses resulting from the work of the International Bureau of the Telegraph Union on behalf of the radio services, must not exceed 200,000 francs a year, exclusive of: (a) The expenses appertaining to the work of conferences; (b) The expenses appertaining to the work of regularly created committees when, in accordance with the provisions of the General Regulations or of a decision of a conference these expenses shall be borne by all the contracting countries.

(2) The sum of 200,000 francs may be modified later by unanimous consent of the contracting Governments.

§2. The supreme administration of the Swiss Confederation shall be designated to organize the division of radio services of the International Bureau of the Telegraph Union mentioned in Article 16 of the Convention; it shall have the complete supervision thereof, control its expenses, make the necessary advances, and establish the annual account. This account shall be communicated to all the other Administrations.

§3. The amounts advanced for the needs of the radio service by the Administration which controls the International Bureau, must be repaid by the debtor Administration with the least possible delay, and, at the latest, within three months from the date the account is received. After this period of three months, the amounts due shall bear interest in favor of the creditor Administration at seven per cent per annum counting from the date of expiration of the period mentioned.

§4. (1) For the division of the expenses, the contracting States shall be divided into six classes, each contributing on the basis of a certain number of units namely:

<table>
<thead>
<tr>
<th>Class</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st class</td>
<td>25</td>
</tr>
<tr>
<td>2nd class</td>
<td>20</td>
</tr>
<tr>
<td>3rd class</td>
<td>15</td>
</tr>
<tr>
<td>4th class</td>
<td>10</td>
</tr>
<tr>
<td>5th class</td>
<td>5</td>
</tr>
<tr>
<td>6th class</td>
<td>3</td>
</tr>
</tbody>
</table>

(2) The Administrations shall inform the International Bureau of the class in which they wish their countries to be placed.

(3) The above coefficients shall be multiplied for each class by the number of States therein and the sum of the products thus obtained gives the number by which the total expenses shall be divided, to determine the amount of the unit of expense.

In conformity with the provisions of Article 13 of the Washington Convention, the present General Regulations will go into effect January 1, 1928.