

**TELECOMMUNICATION AUTHORITY
OF SINGAPORE ACT**
(CHAPTER 323)

RADIO-COMMUNICATION REGULATIONS

Rg 3

1995 Ed.

**G.N. No.
S 328/94**

Amended by

S 144/96

S 161/97

S 615/98

S 227/99

REVISED EDITION 1999
(1.7.1999)

1.7.1999

TELECOMMUNICATION AUTHORITY OF
SINGAPORE ACT
(CHAPTER 323, SECTION 131)

RADIO-COMMUNICATION REGULATIONS

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[19th August 1994]

PART I
PRELIMINARY

Citation

1. These Regulations may be cited as the Radio-communication Regulations.

Definitions

2. In these Regulations, unless the context otherwise requires —

“Amateur Station” means a station in respect of which an Amateur Station licensee is authorised in the licence to use;

“armed forces” means the Singapore Armed Forces established under the Singapore Armed Forces Act (Cap. 295) and includes any visiting force, not being a police force, which is lawfully present in Singapore;

“Armed Forces Communication” means radio-communication —

(a) between stations of the armed forces; or

(b) between stations of the armed forces and any other radio-communication station, whether on shore or on any vessel or aircraft;

“authorised officer” means any person authorised by the Authority to act on its behalf;

“class licence” means a class licence granted under regulation 53A;

“class licensee” means a person who is deemed to have been granted a class licence;

“International Telecommunication Convention” means the Convention of the International Telecommunication Union signed at Nairobi in 1982 or any subsequent revision or modification thereof to which the Government of Singapore is a party;

- “licence” means any licence granted under these Regulations in respect of any station or network, but does not, except in relation to regulations 3, 4 (1), (2) and (6), 6, 14, 16, 19, 21 and 60, include a class licence;
- “licensee” means any person to whom a licence has been granted under these Regulations, and includes his employees, but does not, except in relation to regulations 6, 14 and 19, include a class licensee;
- “localised private network” means a private network that provides radio coverage of a confined or restricted area as specified by the Authority and that comprises at least 2 stations each operating generally at an effective radiated power of 5 watts or below;
- “Localised Radio-communication Station” means a station which can only be used for communication with a base station or with another station within a defined power limit specified by the Authority;
- “network” means 2 or more stations operated by a person and used or intended to be used in communication with one another;
- “private network” means a network which exists to meet the exclusive internal telecommunication needs of the licensee or which has a number of common interest groups of subscribers or users and radio channels as the Authority may specify;
- “public mobile network” means any public network that enables radio-communications through the use of portable or mobile stations and may include any of the following telecommunication systems licensed under section 26 of the Act:
- (a) a public cellular mobile telephone system;
 - (b) a public radio paging system;
 - (c) a public data system; or
 - (d) a public trunked radio system;
- “public network” means a network which is accessible to any member of the public generally and which is used or intended to be used to provide telecommunication services by means of radio-communication to the general public;

“Radio Regulations” means the Radio Regulations annexed to the International Telecommunication Convention and includes every revision or modification thereof which the Government has ratified or accepted;

“station” means a transmitter, receiver, a combination of transmitters and receivers or any accessory thereto which is used or intended to be used for radio-communication;

“wide-area private network” means a private network that provides radio coverage of a wide area as specified by the Authority and that comprises one or more stations operating generally at an effective radiated power of more than 5 watts.

PART II

GENERAL LICENSING CONDITIONS

Licensing authority

3. The licensing authority in respect of every licence granted under these Regulations shall be the Authority acting with the consent of, or under the terms of a general authority given by, the Minister.

Licence required before establishment of station or network

4.—(1) Except as provided in the First Schedule, no person shall possess, establish, install or use any station in any place or on board any local vessel or aircraft or in any vehicle in Singapore unless he has a valid licence granted under these Regulations.

(2) Notwithstanding the grant of any licence under these Regulations in respect of any station, no person shall establish or operate any network in Singapore unless he has a valid network licence granted under these Regulations.

(3) Every application for a licence shall be made in such form and manner which the Authority may, from time to time, determine for each class of licence and shall be supported by such information as the Authority may require.

(4) The Authority may require any application for any licence to be submitted, instead of to the Authority, to any operator of a telecommunication system or service authorised by the Authority to

receive and process applications for licences on the Authority's behalf.

(5) A licensee shall notify the Authority of any change in his personal particulars specified in a licence within 14 days of such change.

(6) A licence granted under these Regulations shall be valid for such period as the Authority may determine unless revoked or suspended in accordance with the provisions of the Act or these Regulations, and shall be subject to such conditions, restrictions and limitations as the Authority may, from time to time, determine.

(7) The Authority may at any time vary all or any of the conditions upon which a licence is granted or impose additional conditions and a licensee shall, at his own expense, comply with the varied or additional conditions.

No assignment, transfer, etc., of benefits of licence

5.—(1) Except with the consent in writing of the Authority, a licensee shall not assign, transfer, sublet or otherwise dispose of the benefit of any licence granted under these Regulations, or permit another person to participate in any of the benefits, powers or authority granted under such licence.

(2) Except with the consent in writing of the Authority, every licensed station and network shall be under the control of the licensee.

Employees of licensee

6. The licensee shall ensure that his employees comply with the provisions of the Act, these Regulations and the conditions of the licence.

Equipment in stations or networks

7.—(1) The Authority may, in respect of any individual or class of station or network licence, specify the type of equipment that the licensee is authorised to use and, if applicable, the type of equipment to be comprised in the individual or class of station or network.

(2) A licensed station or network shall not be changed or modified in respect of any of the particulars mentioned in the licence, including the equipment comprised therein, the operating frequencies and the

location at which the station or network is installed, except with the prior approval of the Authority.

Records

7A.—(1) A licensee of a network shall keep an up-to-date record of the radio-communication equipment comprised in the network.

(2) The record shall —

(a) contain such information;

(b) be kept in such form; and

(c) be submitted to the Authority at such intervals,

as the Authority may, from time to time, require.

(3) The licensee shall, at all reasonable times, permit an authorised officer to inspect and make copies of any entry in the record.

Restriction on grant of licence

8. A licence shall only be granted by the Authority, in its discretion, to —

(a) a person who is a citizen of Singapore;

(b) a company incorporated under the Companies Act (Cap. 50);

(c) a business registered under the Business Registration Act (Cap. 32); or

(d) such other person as the Authority may, in its discretion, think fit.

Replacement licence

9.—(1) If the Authority is satisfied that any licence issued by it has been lost, destroyed or defaced, the Authority may, upon payment of a fee of \$5, issue a replacement licence.

(2) No replacement licence shall be issued in place of a defaced licence unless the defaced licence is surrendered to the Authority for cancellation.

Amendment of licence

10.—(1) Amendments to a licence for the transfer of location of a station other than a portable or mobile station from one site to another or any change in the radio-communication equipment

comprised in the station may only be made if the station has been satisfactorily inspected by an authorised officer and the Authority has approved the transfer or change.

(2) Where an authorised officer inspects a station or network under paragraph (1), the Authority may impose a fee of \$70 for the inspection.

(3) Any amendment to a licence for a change in the base or repeater station in the network may only be made if —

- (a) the licensee has notified the Authority of the change;
- (b) the base or repeater station has been inspected to the satisfaction of an authorised officer; and
- (c) the Authority approves the change.

Renewal of licence

11. Every application for the renewal of a licence under these Regulations shall be in such form and manner as the Authority may require.

Suspension and revocation of licence

12.—(1) The Authority may suspend or revoke a licence granted under these Regulations by notice in writing addressed to the licensee on the grounds that the licensee had in his application for the licence furnished false, misleading or inaccurate information or that there has been misuse of equipment or failure to comply with any of the provisions of the Act, these Regulations or with any condition of the licence.

(2) Where a licence is suspended or revoked by the Authority, the licensee shall surrender the licence to the Authority if requested by the Authority within such time as the Authority may specify.

(3) Where a licence is suspended or revoked by the Authority or where a licence is terminated by a licensee, no compensation shall be paid by the Authority to the licensee and no fee or part thereof shall, unless provided for in the licence, be refunded by the Authority to the licensee in respect of the unexpired period of such licence.

Return of licence

13.—(1) When a licensee ceases to operate a station or network or when a licence ceases to be valid, the licensee shall return the licence

to the Authority for cancellation and the Authority may require the licensee to seal, disable or dismantle the radio-communication equipment comprised in the station or network in the presence of any authorised officer.

(2) Unless authorised by the Authority, the licensee may only dispose of or offer the station, network or any radio-communication equipment comprised therein for sale if it has first been sealed, disabled or dismantled.

(3) Where any radio-communication equipment has been sealed, disabled or dismantled under paragraph (1), no person shall, unless authorised by the Authority, break or tamper with the seal or reassemble the equipment, as the case may be.

Licensee not exempted from other laws

14. The grant of any licence under these Regulations shall not exempt the licensee from obtaining any other permits, licences or other authorisations required by law for or in connection with the installation, operation or use of any station or network.

Power of Authority to change or withdraw frequency

15. The Authority may, in its discretion and without paying compensation and upon giving such notice as it may consider appropriate, change or withdraw any frequency allocated to the licensee in a licence without assigning any reason therefor.

Secrecy

16.—(1) Except as may be provided by section 78 (2) of the Act, no person shall intercept or acquaint himself with the contents of any radio-communication other than those transmitted for general information or for the information of licensees belonging to the same licensed network.

(2) Except as otherwise provided in these Regulations or by the terms and conditions of a station or network licence granted for the reception of radio-communications only, every person having access to radio-communications shall hold strictly secret all radio-communications, other than those transmitted for general information, which may pass through his hands or come to his knowledge.

(3) Such person shall not, directly or indirectly, disclose the contents thereof except to a person entitled to become acquainted with the radio-communications or to an authorised officer or to a court and shall not make other use of such radio-communications.

(4) No person having unauthorised access to radio-communications shall print or publish or cause to be printed or published in any newspaper, pamphlet, book or document, any radio-communication that may pass through his hands or come to his knowledge, whether such radio-communication be for private or general reception.

Station and network to be used for lawful purposes

17. No person shall operate or use any station or network for or in furtherance of any unlawful purpose.

Technical requirements

18.—(1) Before a licence is granted, the applicant shall satisfy the Authority that the station or network in respect of which the licence is to be granted conforms to such technical requirements as may be imposed by the Authority.

(2) All equipment comprised in a station or network shall be approved by the Authority before use.

(3) Every station or network in respect of which an application for a licence has been made or for which a licence has been granted may at any time be inspected and tested by an authorised officer.

Restrictions on transmission

19.—(1) The transmission of superfluous signals by a station or network is prohibited.

(2) No test, trial or practical transmission shall be permitted except in such circumstances as to preclude the possibility of interference with any other station or network.

(3) All tests, unless prior approval from the Authority has been obtained, shall be conducted on dummy load.

(4) No person shall transmit —

(a) any message containing indecent, obscene or offensive language;

- (b) any message for an improper or illegal purpose;
- (c) any message which interferes with the operation of any authorised station or network; or
- (d) any message which, to his knowledge, is false or misleading and likely to prejudice the efficiency of any life-service or endanger the safety of any person or of a place or premises, vessel, aircraft or vehicle.

(5) A licensee shall ensure that a station or network is worked in a manner which is safe and which does not impair or interfere with —

- (a) any Armed Forces Communication; or
- (b) the efficient and convenient working or maintenance of any other station or network, or telecommunication system or service in Singapore authorised by the Authority under the Act or these Regulations.

(6) A licensee shall cease operating his station or network and shall take any other immediate action which the Authority stipulates as soon as it observes, or when it has been informed by the Authority or any other competent authority, that the working of his station or network causes interference to radio-communication.

(7) The licensee shall, where so directed by the Authority in writing, cease to operate any or all of the equipment comprised in his station for such period or periods of time as may be required by the Authority for the purposes of investigation of interference to radio-communications.

International Telecommunication Convention

20.—(1) The provisions of the International Telecommunication Convention and the regulations for the time being in force thereunder shall, so far as they are applicable, apply to any station or network established or operated in Singapore and to any message transmitted or received by such station or network.

(2) The Authority may, in its discretion, waive the application of any of the provisions or regulations to any station, network or message.

Inspection of radio-communication equipment

21.—(1) For the purpose of ensuring that the Act, these Regulations and any condition of a licence granted hereunder are

complied with, an authorised officer shall be entitled, upon production of proof of identity, to enter any building, premises, compound or other place, vehicle, vessel or aircraft where a station or network is installed, or is being installed and may inspect, examine or test any equipment comprised therein.

(2) The owner or occupier of such building, premises, compound or other place, vehicle, vessel or aircraft shall allow the authorised officer to enter and inspect such station, network or equipment.

(3) Where the owner or user of a station or network requests the Authority to inspect, for the second or subsequent time, any station or network licensed or to be licensed under these Regulations to verify that the station or network or any equipment comprised therein is designed, constructed, installed, established, maintained or operated in accordance with any of the provisions of the Act, these Regulations or any condition of the licence, the Authority may impose a fee of \$70 for the inspection.

Inspection of licence

22.—(1) A police officer not below the rank of sergeant or an authorised officer shall be entitled, upon production of proof of identity, to examine the licence of a station or network or if it is not immediately available, require its production at the office of the Authority or a named police station within a reasonable period.

(2) A police officer not below the rank of sergeant or an authorised officer may search and seize any radio-communication equipment which is found by him in any place, vehicle, vessel or aircraft without a licence.

Fees

23.—(1) The fee payable for a station licence is specified in Part I of the Second Schedule.

(2) The application and processing fees for use of a frequency in the course of operating or using a station or network under these Regulations are specified in Part II of the Second Schedule.

(3) The annual fee payable for use of a frequency in the course of operating or using a station or network under these Regulations is specified in Part III of the Second Schedule.

(4) The Authority may, in the interest of spectrum economy and after considering the re-usability of a frequency, the area of coverage involved and the period of use of an assigned frequency, reduce the application and processing fees payable under paragraph (2) or the annual fee payable under paragraph (3) or both.

(5) For any multi-channel radio-communication equipment used for transmitting or receiving, the frequency charge payable shall be in accordance with the bandwidth of frequencies assigned as specified in Part III of the Second Schedule.

Network licence fees

24. The fee payable for a network licence is specified in Part I of the Second Schedule.

Late payment fee

25. All fees shall be paid in advance and if any fee remains unpaid 7 days after the date on which a licence should have been renewed, the following late payment fee shall be charged:

- (a) where the licence is renewed after 7 days but less than 15 days following the expiration of the previous licence, a sum of \$10;
- (b) where the licence is renewed after 14 days but less than 31 days following the expiration of the previous licence, a sum of \$20; and
- (c) where the licence is renewed after 30 days following the expiration of the previous licence, a sum of \$50.

PART III

CLASSES OF LICENCE

Network Licence

Network licence

26.—(1) The Authority may grant the following classes of network licences:

- (a) localised private network licence;
- (b) wide-area private network licence; and
- (c) public mobile network licence.

(2) The grant of a private network licence shall not, unless the Authority otherwise determines, authorise the licensee to provide, directly or indirectly, any telecommunication service to the general public.

(3) A network licence shall only be granted in respect of a network which meets all technical standards and any other requirements which the Authority may, from time to time, stipulate.

(4) The Authority may refuse to grant a localised private network licence or wide-area private network licence if it is satisfied that —

- (a) the licensee failed to meet the minimum channel loading criteria set by the Authority from time to time for the network; or
- (b) the radio-communication service that is, or is intended to be, provided by or through the network may be adequately provided by or through a public telecommunication system or by any other means.

Ship Station Licence

27.—(1) A Ship Station Licence may be granted by the Authority if —

- (a) the ship has a valid internationally recognised Safety Radio certificate;
- (b) the station is operated by an appropriate number and category of radio operators holding a Certificate of Competency granted under the Radio-communication (Certificates of Competency for Ship Station Operators) Regulations (Rg 2) or a competent foreign authority recognised by the Authority, except where the vessel is used solely or principally for pleasure purposes;
- (c) the ship has an accounting authority acceptable to the Authority; and
- (d) the ship complies with such other requirements as may be determined by the Authority from time to time.

(2) A person who is unable to furnish all the information required by the Authority in the application form for a Ship Station Licence may, upon payment of the prescribed fee and upon satisfying such other requirements as may be determined by the Authority, be

granted a Provisional Ship Station Licence which shall be valid for such period and subject to such conditions as may be determined by the Authority.

Restrictions on grant of Ship Station Licence

28. A Ship Station Licence shall only be granted in respect of a ship, including its lifeboats, which is registered or licensed by the competent authority in Singapore.

Compliance with Radio Regulations, Authority's requirements, etc.

29. A Ship Station licensee shall —

- (a) provide on board the ship all documents either considered necessary by the Authority or required under the Radio Regulations for the efficient operation of the ship station; and
- (b) comply with the working procedures set out in the Radio Regulations and with such other requirements as the Authority may determine.

Equipment not to cause interference

30.—(1) A station on board any ship in the waters of Singapore shall be operated in such manner as not to interfere with —

- (a) any Armed Forces Communication; or
- (b) the efficient and convenient working of a government or of any licensed station or network in Singapore.

(2) A station on board any ship shall cease operation as soon as the crew of the ship observes, or when the crew has been informed by the Authority that the working of the ship station causes interference to radio-communication.

Restrictions on use of equipment while in territorial waters

31.—(1) No station on board a ship shall be used while the ship is within the territorial waters of Singapore.

(2) Notwithstanding paragraph (1), a station on board a ship, whether licensed by the Authority or by a foreign competent authority, may be used while the ship is within the territorial waters of Singapore for the purposes of —

- (a) safety of navigation, life or property or for any other purposes as may be authorised by the Authority; and
- (b) communication on such frequency bands as may be specifically authorised by the Authority, subject to such conditions as may be determined by the Authority, provided that the use of such station shall not cause interference to the working of any other authorised station or network.

Aircraft Station Licence

Restrictions on grant of Aircraft Station Licence

32. An Aircraft Station Licence shall be granted only in respect of a commercial or privately-owned aircraft registered in Singapore.

Duty of licensee in respect of equipment, Radio Regulations, etc.

33.—(1) All equipment comprised in a station on board any aircraft shall be approved by the Director-General of the Civil Aviation Authority of Singapore and a certificate to this effect shall accompany the application for the licence.

(2) The licensee of a station on board an aircraft shall observe the provisions of the Radio Regulations and any other local or international rules and regulations applicable to stations on board an aircraft.

Restrictions on use of aircraft station

34. No station fitted in an aircraft shall be operated or used while such aircraft is at rest on land or on water in Singapore except —

- (a) in exceptional cases or in time of emergency or distress;
- (b) if communication by means of a telecommunication line system is not available, for communication in exceptional circumstances on matters relating to air navigation and services with the nearest aeronautical station, or, if communication with such station is impracticable, with any other station; or
- (c) for the purpose of carrying out experimental tests, with the written consent of and subject to such conditions as may be determined by the Authority or for the purpose of carrying

out functional tests to determine the serviceability of the station, provided that such tests shall not be carried out on international distress frequencies.

Amateur Station Licence

Amateur Station Licence

35.—(1) The Authority may grant the following classes of Amateur Station Licence to qualified or approved persons interested in the operation of radio-communication equipment solely for pleasure and for the furtherance of radio-communication techniques and not for pecuniary gain:

- (a) General Class;
- (b) Restricted Class; and
- (c) any other class of licence which the Authority considers appropriate.

(2) An Amateur Station Licence may only be granted to a natural person and shall not authorise the use of radio-communication equipment by the licensee's employees.

Age restrictions

36.—(1) An Amateur Station Licence shall not be granted to a person below the age of 16 years.

(2) Any application for an Amateur Station Licence by an applicant below the age of 21 years shall be countersigned by the applicant's parent, guardian or by any other person approved by the Authority.

(3) An Amateur Station licensee between the ages of 16 and 21 years may only operate or use any Amateur Station if supervised by a qualified person approved by the Authority and who has agreed to supervise the licensee, and that qualified person shall ensure that the licensee observes and complies with all duties and obligations specified in the licence and in these Regulations.

Qualifications

37.—(1) An applicant for an Amateur Station Licence shall, unless exempted by the Authority —

(a) have passed the Radio Amateur Examination set by the Authority; or

(b) be in possession of an Amateur Radio Certificate acceptable to the Authority.

(2) The fee payable to sit for the Radio Amateur Examination referred to in paragraph (1) is specified in the Third Schedule.

Conditions

38. An Amateur Station licensee shall observe the following conditions:

(a) the station shall only be operated at locations approved by the Authority;

(b) the station shall in all cases be operated by the licensee or by persons named in the licence;

(c) the station and all equipment used or intended to be used by the licensee shall be erected, fixed, placed and used, so as not to interfere with the efficient and convenient working of other authorised stations;

(d) the licensee shall identify himself by the transmission of the callsign assigned to him by the Authority at the beginning and end of each transmission;

(e) any change in the approved location, equipment, mast or antenna system must be approved by the Authority prior to the change being made;

(f) the licensee shall obtain the approval of all relevant authorities before erecting any mast or antenna to be used in connection with the operation of the station; and

(g) the licensee shall —

(i) keep a running record of all transmission periods showing the date and time of each period of transmission and the frequency and type of emission employed;

(ii) preserve the record of each entry made for one year; and

(iii) make the record mentioned in sub-paragraph (ii) available for inspection at all reasonable times by an authorised officer.

Prohibition on use of encryption devices

39. An Amateur Station licensee may not make use of encryption devices or equipment in the operation or use of any station.

Restrictions on transmission

40.—(1) Messages transmitted through an Amateur Station shall be in plain language and shall relate solely to the licensee's experiments or personal affairs (not being business affairs), or to the personal affairs of the person with whom the licensee is communicating.

(2) An Amateur Station shall not be used for transmitting news, advertisements, communications of a business or non-experimental character, messages for pecuniary reward or messages for or on behalf of a third party.

(3) Except with the written permission of the Authority, no licensee of an Amateur Station shall call or transmit to any station other than an Amateur Station.

(4) Messages may only be exchanged with another Amateur Station, except where prohibited by law.

(5) Transmission shall not commence without listening in on the frequency to be used in order to ascertain that no interference is likely to be caused to any other station which may be functioning.

Power of Authority to order transmission

41. The Authority may, in exceptional circumstances, by notice in writing, require the licensee to transmit any message by means of his licensed Amateur Station.

Portable stations

42. The Authority may approve an Amateur Station as a portable or mobile station, subject to such conditions as the Authority may impose.

Experimental Station Licence

Experimental Station Licence

43. The Authority may grant an Experimental Station Licence —

- (a) to such educational institutions, training establishments or qualified persons as the Authority may determine for the purpose of conducting research and development activities, experiments or demonstrations in radio-communication; or
- (b) to licensed dealers in, or manufacturers or importers of, radio-communication equipment for the purpose of testing, demonstration or conducting research and development in radio-communication equipment.

Power limitations

44. The Authority may limit the maximum power of a station in respect of which an Experimental Station Licence has been issued, having regard to the purpose for which the station has been authorised and the conditions under which it is to work.

Localised Radio-communication Station Licence

Localised Radio-communication Station Licence

45. The Authority may grant a Localised Radio-communication Station Licence to approved applicants to use the following equipment:

- (a) remote control devices;
- (b) local area paging devices;
- (c) wireless microphones;
- (d) transceivers (CB walkie talkies);
- (e) telemetry or alarm systems or both;
- (f) wireless data or voice systems;
- (g) cordless telephones; and
- (h) any other radio-communication equipment as may be authorised by the Authority from time to time.

Sharing of frequencies

46.—(1) The frequencies allocated to any Localised Radio-communication Station may be shared by other users and the Authority shall not be held responsible for any interference arising from such use.

(2) Licensees operating on shared frequencies shall accept any interference that may result from the legitimate operation of stations, including the operation of industrial, scientific and medical (I.S.M.) equipment, functioning in the I.S.M. Band.

General Radio-communication Station Licence

General Radio-communication Station Licence

47. The Authority may grant a General Radio-communication Station Licence to approved applicants for the purpose of enabling them to transmit, receive or transmit and receive messages by means of radio-communication.

Common based station and shared frequencies

48. The Authority may, in the interest of frequency spectrum economy or for any other reason, require a General Radio-communication Station licensee to work with a common base station operated or licensed by the Authority or to share a frequency with other stations, subject to any terms and conditions which the Authority may impose.

Navigation or detection of objects

49. The Authority may grant a General Radio-communication Station Licence to an approved applicant for the purpose of navigating or detecting objects by means of radio-communication.

Satellite Communication Station Licence

Satellite Communication Station Licence

50. The Authority may grant the following classes of Satellite Communication Station Licence to enable the licensee to transmit, receive or transmit and receive messages by means of satellite communication for such purposes as may be authorised by the Authority:

- (a) Very Small Aperture Terminal (VSAT) Licence;
- (b) Tracking, Telemetry and Command (TT&C) Earth Station Licence; and
- (c) Earth Station Licence.

Obligations of licensee

51.—(1) A Satellite Communication Station licensee shall seek the approval of the Authority for access to any space segment and shall comply with the relevant rules, regulations and procedures imposed by the satellite operator for station access, booking and fees.

(2) Unless exempted by the Authority, the licensee shall at all times comply with the provisions of the International Telecommunication Convention and all regulations and recommendations annexed thereto or made thereunder as are applicable to Singapore.

Restrictions on frequencies, use, etc.

52.—(1) A Satellite Communication Station licensee may only use or work within the frequencies or frequency bands approved by the Authority for his use.

(2) Except with the written approval of the Authority, a Satellite Communication Station licensee shall not use any satellite communication equipment in respect of which a Satellite Communication Licence has been issued to provide telecommunication services to the public.

Special Purpose Station Licence

Special Purpose Station Licence

53.—(1) The Authority may issue a Special Purpose Station Licence for the installation and operation of any special purpose station.

(2) For the purposes of this regulation, a “Special Purpose Station” is a station not otherwise defined in these Regulations which is established exclusively for such purpose and upon such terms and conditions as the Authority may specify.

PART IIIA

CLASS LICENCE

Class licence

53A.—(1) A person who possesses or uses a relevant radio-communication station shall be deemed to have been granted a class licence by the Authority for that purpose.

(2) A class licence shall be subject to the conditions specified in the Fourth Schedule.

(3) Where a person has an existing licence for the possession or use of a relevant radio-communication station, that licence shall be revoked as from 1st April 1997 and he shall be deemed to have been granted a class licence.

(4) For the purposes of this regulation and the Fourth Schedule, “relevant radio-communication station” means a radio-communication station that is connected with any of the following telecommunication systems licensed under section 26 of the Act:

- (a) a public cellular mobile telephone system;
- (b) a public radio paging system;
- (c) a public data system;
- (d) a public trunked radio system;
- (e) a public satellite mobile telephone or data system,

and includes a radio-communication station that is capable of being used in connection with any of the telecommunication systems referred to in sub-paragraphs (a) to (e) but which is not in use and not so connected.

PART IV

INTERFERENCE TO TELECOMMUNICATIONS

Inspection to determine cause of interference

54. An owner or user of electrical, electronic or radio-communication equipment causing or suspected of causing electrical or radiated interference or disturbance to telecommunication equipment, stations, networks or systems belonging to or authorised or approved by the Authority shall permit an authorised officer to inspect his equipment in order to determine whether the interference is in fact caused by his equipment.

Investigation by Authority upon request

55.—(1) The Authority may, where requested by any person to —

- (a) investigate, for the second or subsequent time, the cause of electrical or radiated interference or disturbance to telecommunication equipment, stations, networks or systems; or

- (b) measure and compute the field-strength of radiated electromagnetic energy of any electrical, electronic or radio-communication equipment,

levy a fee of \$100 per hour or part thereof for work done.

(2) Where the Authority undertakes to measure and compute the field-strength of radiated electromagnetic energy under paragraph (1), the Authority shall determine the measuring device to be used, the method by which and the conditions under which tests are to be conducted and the manner in which the field-strength from readings afforded by the measuring device is computed.

Instructions to eliminate or reduce interference

56.—(1) Where the Authority determines that interference or disturbance to telecommunication equipment, stations, networks or systems is or may be caused by any particular electrical, electronic or radio-communication equipment, the Authority may, by notice in writing, direct the owner or user of that electrical, electronic or radio-communication equipment to do, at his own expense, any one or more of the following:

- (a) take suitable measures to eliminate or reduce the interference or disturbance;
- (b) remedy a fault in or the improper operation of the equipment;
- (c) modify or alter the equipment; or
- (d) disconnect the equipment.

(2) The Authority may require any action required to be taken under paragraph (1) to be effected within such period of time as the Authority may determine having regard to the circumstances of each case.

(3) If the owner or user fails to comply with the directions issued by the Authority under paragraph (1) or (2), the Authority may, by notice in writing, prohibit the installation or use of that equipment unless and until such directions are complied with.

(4) In addition to any action the Authority may take under this regulation, the Authority may, where it considers it necessary —

- (a) seal or remove the electrical, electronic or radio-communication equipment or any part thereof referred to in paragraph (1); and

- (b) by notice in writing, direct any supplier of electricity to stop the supply of electricity to the owner or user of the electrical, electronic or radio-communication equipment.

PART V

MISCELLANEOUS

Offence

57. Any person who contravenes or fails to comply with any of the provisions of these Regulations shall be guilty of an offence.

Composition of offences

58. An employee of the Authority specially authorised by name in that behalf by the Chief Executive may, in his discretion, compound any offence under these Regulations by collecting from the person reasonably suspected of committing the offence a sum not exceeding \$1,000.

Radio-communications by members of the armed forces and other forces

59. No member of any armed forces, Singapore Civil Defence Force or police force shall use any station owned by him or by the said forces without a licence granted under these Regulations, unless such member uses the station in the course of his duties or in connection with a network used exclusively by the forces.

Waiver and exemption

60. The Minister or the Authority (subject to the directions of the Minister) may waive any or all of the terms and conditions in any licence and any fee payable under these Regulations and may exempt any person from any or all of the provisions of these Regulations.

FIRST SCHEDULE

Regulation 4 (1)

EQUIPMENT* FOR WHICH NO STATION LICENCE
IS REQUIRED FOR IN-BUILDING OR
LOCALISED ON-SITE OPERATIONS

<i>Equipment</i>	<i>Authorised Frequency Bands</i>	<i>Maximum Approved Field Strength (dB) (V/m) or power (mW)</i>
1. CB Walkie Talkie Transceivers	26.96 — 27.28 MHz	500 mW ERP
2. Multi-channel Walkie Talkie Transceivers	477.000 — 477.250 MHz	500 mW ERP
3. Wireless Microphones	0.51 — 1.60 MHz	57 dB @ 3m
	40.66 — 40.70 MHz	65 dB @ 10m
	88.00 — 108.00 MHz	60 dB @ 10m
	180.000 — 200.000 MHz	112 dB @ 10m
	487.000 — 507.000 MHz	112 dB @ 10m
4. CB Band Radio Paging Systems	26.96 — 27.28 MHz	MHz 500 mW ERP
	40.66 — 40.70 MHz	500 mW ERP
5. Induction Loop Communication Systems	0.016 — 0.150 MHz	100 dB @ 3m
6. VHF Radio Paging System	151.125 MHz	1000 mW ERP
	151.150 MHz	1000 mW ERP

*Other low power equipment that operate in frequency bands other than those listed, but which meet the output power limits specified for the same type of equipment are exempted from licensing as long as both the output power limits and the frequency bands are approved by the Telecommunication Authority of Singapore.

FIRST SCHEDULE — *continued*

<i>Equipment</i>	<i>Authorised Frequency Bands</i>	<i>Maximum Approved Field Strength (dB) (V/m) or power (mW)</i>
7. Radio Detection and Alarm Systems	0.016 — 0.150 MHz	100 dB @ 3m
	26.96 — 27.28 MHz	500 mW ERP
	146.350 — 146.500 MHz	100 mW ERP
	240.150 — 240.300 MHz	100 mW ERP
	300.000 — 300.300 MHz	100 mW ERP
	314.700 — 315.000 MHz	100 mW ERP
	444.400 — 444.800 MHz	100 mW ERP
	10.50 — 10.55 GHz	117dB @ 10m
(a) Car Theft Alarm Systems		
(b) Burglar Alarm Systems		
(c) Field Disturbance Sensing Devices		
(d) Other Miscellaneous Radio Detection and Alarm Systems		
8. Medical and Biological Telemetry Devices	40.500 — 41.000 MHz	0.01 mW ERP
	454.000 — 454.500 MHz	2 mW ERP
9. Wireless Modem	72.080 MHz	1000 mW ERP
	72.200 MHz	1000 mW ERP
	72.400 MHz	1000 mW ERP
	72.600 MHz	1000 mW ERP
	158.275/162.875 MHz	1000 mW ERP
	158.325/162.925 MHz	1000 mW ERP
	453.7250/458.7250 MHz	1000 mW ERP
	453.7375/458.7375 MHz	1000 mW ERP
	453.7500/458.7500 MHz	1000 mW ERP
453.7625/458.7625 MHz	1000 mW ERP	

FIRST SCHEDULE — *continued*

<i>Equipment</i>	<i>Authorised Frequency Bands</i>	<i>Maximum Approved Field Strength (dB) (V/m) or power (mW)</i>
10. Radio Telemetry Equipment	26.96 — 27.28 MHz	500 mW ERP
	29.700 — 30.000 MHz	500 mW ERP
11. Remote Control Devices (a) Garage Door Openers (b) Cameras (c) Toys, Robots (d) Battery-operated Cars and Boats (e) TV Receivers/ Radio Systems (f) Other Miscellaneous Remote Control Devices	26.96 — 27.28 MHz	500 mW ERP
	40.66 — 40.70 MHz	500 mW ERP
12. Cordless Telephones/ Wireless PABX	1.605 — 1.800 MHz	94dB @ 3m
	40.00 — 40.50 MHz	57dB @ 3m
	46.50 — 47.00 MHz	90dB @ 3m
	49.50 — 50.00 MHz	90dB @ 3m
	864.10 — 868.10 MHz	10 mW ERP
	1,880.00 — 1,918.10 MHz	250 mW EIRP
13. Wireless LAN/Low Power Devices	433.79 — 434.79 MHz	10 mW ERP
	864.10 — 868.60 MHz	10 mW ERP
	819.00 — 823.00 MHz	100 mW ERP
	1,880.00 — 1,930.00 MHz	250 mW EIRP
	2,445.00 — 2,483.50 MHz*	100 mW EIRP
	5,725.00 — 5,875.00 MHz	100 mW EIRP
	18,820 — 18,870 MHz	500 mW EIRP
	19,160 — 19,210 MHz	500 mW EIRP
24,000 — 24,250 MHz	100 mW EIRP	

*For in-building operations only.

FIRST SCHEDULE — *continued*

<i>Equipment</i>	<i>Authorised Frequency Bands</i>	<i>Maximum Approved Field Strength (dB) (V/m) or power (mW)</i>
14. Stand-alone GPS Receivers	1,575.420 MHz	
15. Communication Receivers (excluding scanning devices) and Microwave Multipoint Distribution Systems (MMDS) Receivers	2505.250 MHz	
	2521.250 MHz	
	2537.250 MHz	
	2553.250 MHz	
	2569.250 MHz	
	2601.250 MHz	
	2617.250 MHz	
	2633.250 MHz	
	2649.250 MHz	
	2665.250 MHz.	

SECOND SCHEDULE

Regulations 23 and 24

PART I

FEEES FOR STATION/NETWORK LICENCE

<i>First column</i>	<i>Second column</i>
<i>Types of licences</i>	<i>Fee payable per annum</i>
1. Ship Station	\$50
2. Aircraft Station	\$50
3. Amateur Station —	
(a) General Class	\$50
(b) Restricted Class	\$25
4. Experimental Station	\$50

SECOND SCHEDULE — *continued*

PART I — *continued*

<i>First column</i>	<i>Second column</i>
<i>Types of licences</i>	<i>Fee payable per annum</i>
5. Localised Radio-communication Station —	
(a) Remote Control Devices (aircraft models and cranes)	(i) \$25 (Personal use) (ii) \$50 (Business use)
(b) Local Area Paging Devices Base Station	\$50
(c) Wireless Microphones	(i) \$25 (Personal use) (ii) \$50 (Business use)
(d) Transceivers (CB Walkie Talkies)	(i) \$25 (Personal use) (ii) \$50 (Business use)
(e) Telemetry and/or Alarm Systems	\$50
(f) Wireless Data/Voice Systems	(i) \$50 for 50 stations or less (ii) \$100 for more than 50 stations
6. General Radio-communication Station —	
(a) Base/Fixed Station	\$100
(b) Mobile Station	\$50
(c) Fixed Link/Relay Station	\$100
(d) Radiodetermination Station	\$50
(e) Coast Station	\$100
(f) Aeronautical Station	\$100
7. Satellite Communication Station —	
(a) Very Small Aperture Terminal (VSAT)	\$100
(b) Tracking, Telemetry and Command (TT & C) Earth Station	\$100
(c) Ground Earth Station	\$100
(d) Portable Satellite Communication Terminal	\$50

SECOND SCHEDULE — *continued*

PART I — *continued*

<i>First column</i>	<i>Second column</i>
<i>Types of licences</i>	<i>Fee payable per annum</i>
8. Localised Private Network —	
(a) Portable/Mobile Station	\$100 per network
(b) Base/Repeater Station	\$100
9. Wide-area Private Network —	
(a) Portable/Mobile Station	\$500 per group of 50 stations or part thereof
(b) Base/Repeater Station	\$100
10. Public Mobile Network —	
(a) 300 Base Stations or less	\$100 per station
(b) 301 to 500 Base Stations	\$80 per station for all stations
(c) 501 to 700 Base Stations	\$60 per station for all stations
(d) 701 Base Stations or more	\$40 per station for all stations.

PART II

APPLICATION AND PROCESSING FEE
FOR USE OF A FREQUENCY

<i>First column</i>	<i>Second column</i>
<i>Category</i>	<i>Fee payable per frequency</i>
1. Commonly Assigned Frequencies (for temporary or occasional use)	\$100
2. All Other Frequencies —	
(a) Bandwidth of 25 kHz or less	\$290
(b) Bandwidth of more than 25 kHz but less than 500 kHz	\$450
(c) Bandwidth of 500 kHz or more but less than 1 MHz	\$1,350
(d) Bandwidth of 1 MHz or more but less than 20 MHz	\$2,700
(e) Bandwidth of 20 MHz or more	\$4,650
3. Satellite Downlink Frequencies	\$750 per band.

SECOND SCHEDULE — *continued*

PART III

ANNUAL FEES FOR USE OF FREQUENCY

<i>First column</i>	<i>Second column</i>	
<i>Radio Frequency Spectrum</i>	<i>Fee payable per frequency per annum</i>	
1. Frequencies for Networks and Systems —		
(a) Exclusive Use		
(i) Bandwidth of less than 1 MHz	\$300 per 25 kHz of occupied bandwidth or part thereof	
(ii) Bandwidth of 1 MHz or more	\$12,000 for the first MHz of occupied bandwidth, and \$300 per subsequent MHz of occupied bandwidth or part thereof	
(b) Shared Use		
(i) Bandwidth of less than 300 kHz	\$300 per 25 kHz of occupied bandwidth or part thereof	
(ii) Bandwidth of 300 kHz or more but less than 20 MHz	\$3,500	
(iii) Bandwidth of 20 MHz or more	\$6,200.	
2. Satellite Downlink Frequencies	\$600 per band	
3. Common Frequencies for In-building or On-site Wireless Systems —		
	<i>ISM Band</i>	<i>Non ISM Band</i>
(a) Bandwidth of 20 MHz or less	\$ 50	\$100
(b) Bandwidth of more than 20 MHz but not exceeding 50 MHz	\$100	\$200
(c) Bandwidth of more than 50 MHz	\$150	\$300
4. Block of Assigned Frequencies for Multi-channel Radio Communication Networks and Systems	\$15.	

THIRD SCHEDULE

Regulation 37 (2)

RADIO AMATEUR EXAMINATION FEES

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Type of examination</i>	<i>Fees payable by full-time secondary, pre-university, Institute of Technical Education, Singapore, and tertiary students</i>	<i>Fees payable by all other persons</i>
1. Part I (Theory)	\$20	\$40
2. Part II (Morse Sending and Receiving)	\$25	\$50.

FOURTH SCHEDULE

Regulation 53A

CONDITIONS OF CLASS LICENCE

1. No fee is payable for a class licence.
2. A class licensee shall comply with the technical specifications laid down from time to time by the Authority in relation to the relevant radio-communication station.
3. A class licensee shall ensure that the relevant radio-communication station is approved by the Authority before it is used for connection to any telecommunication system or equipment belonging to a public telecommunication licensee, and that the relevant radio-communication station is not tampered with or modified in any manner after the approval of the Authority has been obtained.
4. A class licensee shall ensure that the relevant radio-communication station is not used for any unlawful purpose.
5. The Authority may cancel or suspend a class licence if it is satisfied that the class licensee is contravening, or has contravened and is likely again to contravene, any of these conditions or the provisions of the Act or any regulations made thereunder.

[G.N. Nos. S 328/94; S 144/96; S 161/97; S 615/98; S 227/99]
