

GENERAL NOTICE

COMMUNICATIONS AUTHORITY OF NAMIBIA

No.***** 2005

COMMUNICATIONS ACT, 2005: RADIO REGULATIONS

The Communications Authority of Namibia has under section 108 of the Communications Act, 2005 (Act No. of 2005), made the regulations set out in the Schedule below.

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Chapter 1: Definitions

1. Definitions

In these regulations any word or expression to which a meaning has been assigned in the Act has the same meaning in these regulations and, unless the context otherwise indicates -

"Act" means the Communications Act, 2005;

"aeronautical station" means a land station in the aeronautical mobile service, which may be on board a ship or vehicle in exceptional cases;

"aircraft station" means a mobile station in the aeronautical mobile service on board an aircraft or a spacecraft;

"alarm station" means a transmitting station in the land mobile service that is intended to transmit automatic alarm signals to a central position;

"amateur" means someone interested in radio technique solely with a personal aim and without pecuniary interest and to whom the Authority has granted an amateur radio licence;

"amateur radio station" means a station for a service of self-tuition, intercommunication and technical investigations that is operated by an amateur;

"antenna port" means the last point preceding the feed line to the antenna;

"Authority" means the Communications Authority of Namibia as established in terms of the Act;

"band plan" means the plan issued by the Authority for the use of the frequency spectrum in Namibia;

"base station" means a land station in the land mobile service for a service with land mobile stations;

"breakthrough" means a disturbance to the normal operation of a radio or television receiving apparatus or other electronic or telecommunication apparatus as a result of the presence of strong electromagnetic fields generated by a transmitter;

"call sign" means the allocation of identification letters and numbers as per ITU regulations;

"carrier wave power" means the average power that is supplied by the transmitter to the antenna transmission line and is measured during one radio-frequency cycle in conditions of no modulation;

"cellular radio communication service" means a two-way cellular radio communication service provided by means of radio between cellular stations and/or radio apparatus where the interconnection of stations, where applicable, are affected by means of telecommunication lines, and where a limited number of frequencies is used within each of a number of cells allowing the re-use of the same frequencies in different non-adjacent cells and enabling users to maintain connections by the use of call handover whilst moving between adjacent cells;

"CEPT" means the Conference of European Posts and Telecommunications Authorities;

"citizen-band radio service" means a private, two-way, short-distance speech communication service in the land mobile service for personal and business operations, which may also be used as a paging system;

"coast station" means a land station in the sea mobile service;

"experimental station" means a station that uses radio waves in experiments for the purpose of developing the science or technique but that is not an amateur radio station;

"HAREC" means a Harmonised Amateur Radio Examination Certificate issued in terms of CEPT recommendation TR61-02E;

"ignition system" means apparatus that has been assembled in order to supply and conduct electric energy for the ignition of gas or vapour in an internal combustion engine;

"input" means the direct current input (dc input) to the radio-frequency stage that immediately precedes the antenna;

"inspecting officer" means someone who has been appointed under section 64 of this Regulation;

"land mobile service" means a mobile radio communication service between fixed stations and mobile land stations, or between land mobile stations;

"licensee" means someone to whom a licence has been issued in terms of the Act and under these Regulations;

"Local Area Network (LAN)" means a group of user stations each of which can communicate with at least one other using a common transmission medium commonly managed;

"licence year" in relation to a licence or a certificate, means the period of 12 months of each year from 1 January to 31 December, both dates inclusive;

"mobile station" means a station that is intended to be operated while it is in motion or while it is stationary at an unspecified place;

"paging station" means a receiving station in the land mobile service that is intended to receive selective signals from a central position;

"peak envelope power" means the average power supplied to the antenna transmission line by a transmitter during one radio-frequency cycle at the highest crest of the modulation envelope, taken under conditions of normal operation;

"plain language" means words and expressions that make out an intelligible communication whereby all words and expressions have the meaning usually attached to them in the language to which they belong;

"private communal radio repeater station service" means a land mobile radio-communication service installed, maintained and operated by a private person over repeater stations that are available for communal use;

"radio-beacon station" means a station the radiation of which is intended to enable a mobile station to fix its position or obtain its bearing with regard to the radio beacon;

"radio communication" means telecommunication by means of radio waves;

"ship station" means a mobile station in the maritime mobile service that has been erected on board a vessel other than a life-boat and that is not moored permanently;

"special radio service" means a radio-communication service that is not otherwise defined in these regulations and is operated solely for specified purposes of general benefit but not for public correspondence;

"sound broadcasting service" a broadcasting service destined to be received by a sound radio set;

"suppressor" means an object that is designed to reduce the radiation of electromagnetic energy by the apparatus to which it is fitted;

"telecommunication" means every transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems;

Chapter 2: Radio Dealers

2. Registration of radio dealers

(1) A dealer supplying or selling radio apparatus covered by these Regulations shall be registered as such with the Authority.

(2) Any person purchasing radio apparatus covered by these Regulations shall satisfy himself that the supplier or dealer is registered in terms of these regulations.

3. Register to be kept by radio dealers

(1) A radio dealer shall, in respect of all types of radio apparatus covered by these Regulations that he has sold, hired out, given or supplied in any other manner or has repaired for someone, keep a register in which the following shall be recorded:

- a) The name and address of the person to whom such radio apparatus was sold, hired out, given or supplied or for whom the repairs were done.
- b) The date of the transaction by virtue of which such apparatus was sold, hired out, given or supplied or the date on which the repairs were carried out and the nature of such repairs.
- c) A complete description of the type and nature of the radio apparatus involved and, in the case of two-way apparatus, the serial number as well the frequency on which it operates, for example XYZ two-way radio S/N 1358706 on the frequency 83,500 MHz.
- d) The number or, where applicable, the call sign and the expiry date of the licence issued to the person to whom such radio apparatus was sold, hired out, given or supplied or for whom the repairs were carried out or the call sign or number and expiry date of the licence, radio dealer's registration certificate or particulars of the permit by virtue of which the person to whom the radio apparatus was supplied or for whom the repairs were carried out was exempted from an obligation to be the holder of an appropriate licence for the possession of such apparatus.

(2) The register referred to in subregulation (1) shall be retained by the radio dealer for a period of at least 12 months after the date of the transaction, for inspection by the Authority.

(3) The premises and workshops of the radio dealer shall be open for inspection by the Authority.

(4) Radio apparatus shall not be handed over or returned by the radio dealer to a person or any other radio dealer unless the radio dealer is satisfied that such apparatus is tuned to only that frequency or those frequencies that the licensee may use in terms of the conditions of his licence or that the Authority has otherwise prescribed.

(5) Someone who does business by travelling or going about as representative, agent or employee of someone else or who, as employee of such representative, agent or employee of someone else, sells, hires out, gives or supplies radio apparatus in any other way or who requests, solicits or accepts orders for the

sale, hiring-out or supply of radio apparatus shall in his own capacity also be in possession of a radio dealer's registration certificate. (DELETE???)

Chapter 3: Amateur radio stations

4. General

(1) The amateur radio service is a radio service conducted by amateurs for experimental purposes, technical studies, promotion of contact between nations and the provision of communications during emergencies, and includes communications via satellite.

(2) The guidelines of the International Telecommunications Union (ITU) and the International Amateur Radio Union (IARU) for Region 1 shall be followed, unless prescribed otherwise in these regulations.

5. Conditions for the issuing of amateur radio licences

(1) The Authority may, subject to the provisions of the Act and these regulations and on the conditions that are set out in this Chapter, issue a Class A or Class B licence for the use of an amateur radio station.

(2) A Class A unrestricted licence may be issued to a person who -

- (a) is in possession of a HAREC issued or recognised by the Authority; and
- (b) is in possession of a certificate issued by the national body approved by the Authority attesting that he or she meets the assessment criteria prescribed by the national body for this purpose that demonstrate advanced knowledge of theoretical and practical aspects of amateur radio.

(3) A Class B (restricted) licence may be issued to a person who -

- (a) is in possession of a certificate specified for a Class B licence.

(4) For the purposes of subregulations (2) and (3) "a person" shall mean "a natural person" and shall not include associations, companies or other legal persons, provided that an amateur radio licence may be issued to an amateur radio association or educational institution, in which case a licensed radio amateur shall be responsible for the operation of the station in accordance with the provisions of these regulations.

(5) The Authority may issue an amateur radio licence to a person who is in possession of a valid foreign amateur radio certificate, equivalent to the relevant class of Namibian licence or certificate, issued by a competent foreign authority.

6. Use of amateur radio stations

(1) An amateur radio station shall only be used by the holder of the amateur radio licence issued by the Authority, provided that someone who holds an amateur radio certificate or HAREC issued in terms of the Act may be permitted by the holder of an amateur radio licence to make transmissions over the amateur radio station under the supervision of the licensee on condition that such transmissions shall take place only for short periods for the sole purpose of training.

(2) The holder of an amateur radio licence may use an amateur radio station other than his own with the permission of the licensee concerned.

7. Communication by amateur radio stations

- (1) The licensee is permitted -
 - (a) to engage in communication with other licensed amateur radio stations, using the permitted amateur bands, and such communication shall be restricted to comments on technical investigations, remarks of a personal nature and other items of a common interest, which shall not include commercial or business communication for which the public telecommunication service would have been used had the amateur communications not been available;
 - (b) in the case of an emergency, to communicate with any other stations, using the amateur bands and other bands outside the amateur allocation to prevent loss of life, render assistance, call for assistance or convey health and welfare messages directly connected with the emergency;
 - (c) to provide communications for special events and general community service, as decided by the national body approved by the Authority, in order to increase preparedness and proficiency to provide emergency communications;
 - (d) to transmit reports on behalf of a third person during events that are, in the judgement of the Authority, of public interest.
- (2) Communication by means of an amateur radio station shall be carried on in plain language or in the Q code or other recognised abbreviations.
- (3) Broadcast transmissions (i.e. one-way) are permitted only for the purposes of -
 - (a) initial ("CQ") calls;
 - (b) information bulletins that are of direct interest to amateurs;
 - (c) Morse code for reception by persons learning Morse code operation or for improving their competence in Morse code; and
 - (d) beacons to provide information in respect of radio propagation conditions.
- (4) An amateur radio station shall not be used to advertise any goods or services or to transmit messages for reward nor for communication for monetary consideration.
- (5) The Authority may allow stations registered as amateur radio stations to demonstrate amateur radio to persons who do not hold an amateur radio licence by allowing them to speak and operate the station under the supervision of a licensed amateur participating in, for example, a special event or at educational institutions.
- (6) An amateur radio station shall not transmit political, derogatory, racist, sexual, irreligious, improper, blasphemous, insulting, obscene or threatening remarks.
- (7) The station call sign shall be given at short intervals and at least once every 10 minutes in the case of long transmissions.

8. Log book with regard to amateur radio station activities

The Authority may instruct a licensee to keep a logbook as follows -

- (a) the date, time and nature of each transmission (the date with regard to each individual day's operations need be recorded only once and for the purposes of this paragraph "time of each transmission" shall mean the time that a specific station is called and the time at which the communication with such station is terminated);
- (b) the full name and address of the person making the transmission, provided that the name of the licensee who regularly uses the amateur radio station need be recorded only once in the log book together with an explicit statement that all transmissions are made by him except where stated otherwise;
- (c) the call sign of every station, provided that it need not be recorded repeatedly for calls made to the same station during the course of the communication;
- (d) the transmit power that is used;
- (e) the frequency band that is used, provided that it need be recorded in the log book only once until a change of frequency to another authorised band takes place; and
- (f) the address from where the transmission takes place, provided that such address need be recorded only once should the place of transmission not change.

9. Terms and conditions for amateur licences

(1) Subject to the provisions included in subregulation (2), no person shall transmit over amateur radio stations at frequencies, using modes of emission or at power levels other than those indicated in Table 1 of Annexure D, unless by special permission of the Authority.

(2) The following restrictions and remarks are applicable to subregulation (1):

- (i) The bandwidth of F3E and G3E, emission shall be restricted to 10 kHz in bands under 50 MHz.
- (ii) The bandwidth for 625-line television transmissions (C3F) shall not exceed 7 MHz.
- (iii) Bands where the amateur service allocation is on a secondary basis are shared with other services, and amateur radio stations shall avoid interference with these services. Additionally, users of these bands shall unconditionally accept interference from other services and industrial, scientific and medical (ISM) equipment.
- (iv) The bandwidth of all emissions shall be restricted to a maximum of 25 kHz in the bands 50-430 MHz with the exception of W9E emissions in the band 430-440 MHz.
- (v) For W9E emissions a maximum of 12 channels may be multiplexed and the bandwidth shall not exceed 25 kHz per channel in the bands 430-440 MHz.

- (vi) The bandwidth of all emissions shall not exceed 10 per cent of the band concerned when operating above 1 GHz.
 - (vii) For digital-repeater interlinking at 9600 baud, the frequencies of 438.650-439.100 MHz may be used.
 - (viii) Since high intensities of RF radiation may be harmful, the power flux densities on emissions on frequency bands above 1 GHz must not exceed the limits recommended by competent authorities from time to time.
 - (ix) The bandwidth of J2D and J2E transmissions shall not exceed 3 kHz in the bands under 30 MHz.
- (3) The modes of emission referred to in subregulation (2) are specified in Table 2 of Annexure D.
- (4) Except as provided for in regulation 7 (1)(b), the transmit apparatus used at an amateur radio station shall under no circumstances or at any time be tuned to a frequency other than that referred to in subregulation (1).
- (5) The required frequencies shall be selected and maintained such that no appreciable energy shall be radiated at frequencies other than those referred to in subregulation (1), provided that the bandwidth of emissions on bands that have been allocated to amateur radio stations in terms of these regulations shall be restricted to the minimum.

10. Music transmissions

No form of entertainment shall be transmitted from an amateur radio station, provided that music transmissions for experimental purposes shall be permissible on condition that -

- (a) such transmissions shall last no longer than three minutes;
- (b) at least five minutes shall elapse before any further music is transmitted from the same station;
- (c) when commercial recordings are used the make, name or title of such recordings shall not be mentioned; and
- (d) such transmissions shall not take place in bands other than the following:
 - 3 500 - 3 800 kHz
 - 50 - 54 MHz
 - 144 - 146 MHz
 - 430 - 440 MHz
 - 1 240 -1 300 MHz

11. Spread-spectrum communications

(1) The Authority may, subject to the condition that interference is not caused to other users of the same frequency band and such other conditions as it may deem necessary, on application, authorise the holder of an amateur radio licence to employ spread-spectrum communications.

(2) The frequency (band edges) and the modulation technique/emission designation to be used shall be furnished in the application referred to in subregulation (1).

12. Teleprinter and data working

(1) An amateur radio station may transmit teleprinter (RTTY) or data using a digital code and technique whose technical characteristics have been documented publicly.

(2) Documentation should be adequate to recognise the technique or protocol when observed on air, and to determine call signs of stations and read the content of the transmissions.

13. Restrictions with regard to transmissions by an amateur radio station

(1) Subject to the provisions in subregulations (2), (3) and (4) and any other condition of these regulations, the holder of an amateur radio licence may use any of the modes referred to in section 9.

(2) An amateur radio station may not transmit damped wave emissions.

(3) An amateur or experimental radio station shall not be used for the simultaneous retransmission by automatic or other means of programs or signals originating from another radio station, provided that the holder of an amateur radio licence or experimental station licence may relay legal signals by automatic or other means that originate from a licensed amateur or experimental radio station.

14. Transmitter power of amateur radio stations

(1) The maximum power output of the transmitter, as measured at the antenna port, shall not exceed the levels specified in section 9 for the relevant licence classes. Linearity shall be maintained.

(2) Amateurs should use the minimum power levels required to achieve reliable communications. The maximum power levels imposed by these regulations shall only be used if no harmful interference is caused to other services.

(3) An adequately filtered direct-current power supply shall be used for the transmitting equipment.

(4) The coupling between the antenna and the transmitter shall be such that no direct potential at a power-supply frequency dangerous to life exists on the antenna. The antenna system shall furthermore comply with national and international safety standards and the requirements of the relative local authority.

15. Frequency-measuring equipment

Every amateur or experimental radio station shall have frequency-measuring equipment with an accuracy of at least 0.1 per cent unless the frequencies of all

transmitters of the station are crystal controlled and are accurate to at least 0.1 per cent.

16. Amateur radio certificates

- (1) No person shall obtain a HAREC or a certificate specified for a Class B licence unless he or she has passed an examination as authorised by the Authority, on the syllabuses approved by it for Class A and Class B licences.
- (2) Any person permitted by the Authority may sit for the examination on payment of the prescribed fee.
- (3) The Authority shall appoint an examining national body that shall issue HARECs and certificates for Class B licences on behalf of the Authority.
- (4) The examination shall be conducted at least once a year at centres indicated by the national body, subject to demand.
- (5) If the examining body decides not to accept a candidate or issue the certificate, the examining body must refer the application to the Authority for a final decision.
- (6) HARECs and certificates specified for Class B licences shall be issued to candidates who pass the examination, and such certificates are not recognised for any purpose other than the issuing of an amateur radio licence.
- (7) The possession of such certificate shall not endow the holder to any right or claim to an amateur radio licence.
- (8) Upon application, the Authority or a person nominated by the Authority, shall test the proficiency of a radio amateur to transmit and receive Morse code and shall endorse the certificate of the radio amateur accordingly.

17. Cancellation of amateur radio licences

- (1) The Authority may, by written notice given to a licensed radio amateur, cancel an amateur radio licence and provide reasons therefore.
- (2) The Authority must, in deciding whether to cancel the licence have regard to:
 - (a) any matters to which the Authority must have regard in deciding whether to issue an amateur radio licence;
 - (b) whether the amateur has been convicted of an offence in terms of the Act; and
 - (c) whether the amateur has been convicted of a criminal offence that relates to the Act and other instruments that regulate State security.

Chapter 4: Citizen-band radio service

18. Licences for the operation of a citizen-band radio station

(1) On payment of the prescribed amount the Authority may issue a licence for the operation of a citizen-band radio station to any person provided that in the case of a natural person a licence is not issued, unless such person is at least 18 years of age.

(2) A licence issued in terms of subregulation (1) confers on the licensee the right to use a citizen-band radio station from his car or other vehicle or vessel or home or from any fixed point.

(3) The following persons may also be permitted by the licensee to use his citizen-band radio station on the authority of the licence issued to him:

- (a) A member of the licensee's household who resides with him.
- (b) Any of the licensee's employees, provided the communications concern the business of the licensee only.
- (c) Every partner or employee of a partnership that is a licensee; provided the communications concern the business of the partnership only.
- (d) Every member of an association and employee of an association that is a licensee; provided the communications concern the business of the association only.
- (e) Every official, director or employee of a company that is a licensee provided the communications concern the business of the company only.
- (f) Anybody else, provided the specific permission of the Authority has been obtained.
- (g) In cases (ii) to (v), communication between fixed points for business purposes is prohibited.

19. Frequencies for transmitting over the citizen-band radio-service

(1) No person may transmit in the citizen-band on any frequency other than the following:

Channel	Frequency (MHz)
19	27.185
20	27.205
21	27.215 Emergency channel [see subregulation (2)]
22	27.225
23	27.255
24	27.235
25	27.245
26	27.265
27	27.275

(2) Although any channel may be used for emergency communications or for assistance to travellers, channel 21 may not be used for purposes other than emergency communications or travellers' assistance.

(3) All channels are for the common use of all licensees and no channel will be reserved for the private or exclusive use of any particular station or group of stations, nor for single sideband or AM reception or transmission.

(4) Frequencies in the frequency band 26.96 – 27.28 MHz are intended primarily for industrial, scientific and medical purposes. Users of the citizen-band radio service who work within the limits of this frequency band shall unconditionally accept harmful interference from these sources and the Authority will not investigate complaints about such interference.

20. Communication between citizen-band radio stations

(1) Citizen-band radio stations may only be used to communicate with other licensed citizen-band radio stations. Reception of as well as transmission to foreign radio stations and radio stations not licensed in the citizen-band radio service is prohibited.

(2) Except in the case of paging when one-way communication is permissible, communication in the citizen-band radio service must be by means of two-way conversations in plain language or in the 10 code.

(3) No person shall use the citizen-band radio service to -

- (a) transmit material intended for direct or indirect transmission over a broadcasting station;
- (b) advertise any goods, services or public campaign or canvass votes for a political candidate;
- (c) communicate for business purposes between fixed points; or
- (d) operate the system in such a way as to cause interference to any other radio station.

(4) No licensee or any other person may accept remuneration for the transmission or reception of messages over the citizen-band radio service.

(5) Users of the citizen-band radio service shall be obliged to give priority to emergency communications at all times.

(6) Communication between citizen-band stations must be as brief as practicable and must not exceed five continuous minutes except in the case of an emergency. All stations that participated in such communication shall not transmit again for at least one minute.

(7) A handle, station indicator or other special identification may be used in addition to, but not instead of the call sign allocated to the station by the Authority. Similarly, the phonetic alphabet may be used as an aid to identification.

21. Technical requirements that citizen-band radio apparatus must satisfy

(1) Citizen-band radio apparatus shall satisfy the following technical requirements:

- Power: AM: 4W (carrier wave power)
 SSB: 12W (peak envelope power)

Emission: A3 or A3J

Bandwidth: 6 kHz

Channel spacing: 10 kHz.

Frequency tolerance: ± 1.5 kHz

Antenna: Unity gain (with reference to a quarter-wave ground-plane antenna)

Spurious radiation, including harmonic emissions and intermodulation products:

(i) For fixed and mobile transmitters with an output of 4 W: attenuation at least 30 dB below the mean power of the fundamental frequency.

(ii) For portable radio transmitters of 4W: attenuation at least 30 dB.

(2) No person shall connect or use a linear or additional radio frequency amplifier to a citizen-band radio station. For the purposes of this regulation, it will be assumed that a linear or additional amplifier has been used if -

(a) it is in the possession or on the premises of the user; and/or

(b) there is proof that the citizen-band radio station has been operated with more than the permissible power.

(3) No person shall effect any modification or adjustment to an approved citizen-band radio apparatus without the express approval of the Authority. All repairs or approved adjustments shall be made by or under the direct supervision of a registered radio dealer.

Chapter 5: Radio trunking service

22. Radio trunking service definitions

(1) In this chapter, unless the context otherwise indicates -

"fixed dispatch station" means a station of a user of a radio trunking system which is situated at a fixed address and which is not designed or adapted for use while in movement;

"local radio trunking service" means a radio trunking service provided by means of a local radio trunking system;

"local radio trunking system" means a radio trunking system consisting of a single base station and which provides communication within a limited area in non-urban areas and, under particular circumstances as prescribed by the Authority, in urban areas;

"national radio trunking service" means a radio trunking service provided by means of a national radio trunking system;

"national radio trunking system" means a radio trunking system consisting of various connected regional radio trunking systems expanded along national main road routes and in which could be included local radio trunking systems. in such a manner that communication can take place between the stations of a user over the total national coverage area of the national radio trunking system;

"network operator" means a person authorised to construct, operate and maintain a national radio trunking system or a regional radio trunking system;

"radio trunking" means a technique by means of which free channels out of a group of radio frequency channels allocated to a base station are automatically made available for the establishment of a connection between the stations of a user;

"radio trunking service" means a radio communication service provided by means of a radio communication system;

"radio trunking system" means a radio communication system (i) which utilises radio trunking, (ii) which does not hand over calls between cells, and (iii) of which the primary purpose is not coupling with the public switched telephone network;

"regional radio trunking system" means a radio trunking system consisting of various base stations at multiple sites, which base stations are connected by means of a nodal switch in such a manner that it functions as an integrated system to provide service over the total relevant geographical area inside an urban complex, as determined by the Authority;

"regional radio trunking service" means a radio trunking service provided by means of a regional radio trunking system;

"service provider" means a person who, in agreement with the licensee of a national radio trunking system or a regional radio trunking system, provides airtime or airtime together with radio apparatus to the users of such a system.

23. Conditions applicable to applications for licences and the construction of radio trunking systems

- (1) The Authority may -
 - (a) on application and against the provision of a performance bond to him, authorise a person to construct a national radio trunking system, a regional radio trunking system or a local radio trunking system; and
 - (b) subject to the conditions of section 24 (1), issue to such a person a licence to operate and maintain such a system.
- (2) The total amount of the performance bond referred to in subregulation (1) shall, in respect of a particular authorisation, be the amount of N\$2 000 multiplied by the number of radio frequency channels which is indicated in the relevant authorisation.
- (3) An application for an authorisation shall be accompanied by a Schedule of Construction which, apart from any additional particulars which may be required by the Authority, shall indicate the particulars in respect of -
 - (a) the geographical area, or areas, which will be served; and
 - (b) the addresses, geographical co-ordinates and number of channels required in respect of each base station which the applicant proposes to erect initially and in the future and the proposed month and date of commissioning, in respect of the proposed radio trunking system.
- (4) Any departure from the particulars contained in the Schedule of Construction shall be fully motivated and shall be subject to prior written approval by the Authority.
- (5) An applicant shall provide the performance bond referred to in subregulation (2) within fourteen days after his application has been approved, after which the relevant authorisation may be issued to him.
- (6) The initial construction periods within which radio trunking systems shall be constructed and, subject to section 24 (1), put into operation, are -
 - (a) twenty-four months in the case of a national radio trunking system or a regional radio trunking system; and
 - (b) eighteen months in the case of a local radio trunking system.
- (7) The periods referred to in subregulation (6) shall commence on the date mentioned in the authorisation.
- (8) If a radio trunking system is fully commissioned within the initial construction period with the number of assigned channels and in accordance with the Schedule of Construction, the performance bond provided in favour of the Authority shall be cancelled.
- (9) The following extended construction periods may be granted, subject to the provisions of subregulation (10), if a radio trunking system is not completed within the initial construction period -
 - (a) twelve months for a national radio trunking system or a regional radio trunking system; and
 - (b) six months for a local radio trunking system.

(10) A portion of the performance bond is immediately payable as follows to the Authority for each period of a month. or a portion thereof, with which the initial construction period is exceeded until, subject to subregulation (14), a radio trunking system is completed -

- (a) one twelfth of the amount calculated in terms of subregulation (2) in the case of a national radio trunking system or a regional trunking system; and
- (b) one sixth of the amount calculated in terms of subregulation (2) in the case of a local radio trunking system.

(11) The balance of the performance bond not paid to the Authority in terms of subregulation (10) shall be cancelled if a radio trunking system is fully commissioned within the extended construction period with the number of assigned channels and in accordance with the Schedule of Construction.

(12) The total performance bond or the balance thereof, as the case may be shall be payable to the Authority immediately during the initial and the extended construction periods -

- (a) if a licence is cancelled at the request of the applicant or licensee or as a result of any action taken by him;
- (b) If the Authority is requested to transfer the licence to another person;
- (c) as a result of a transgression of the Act or the violation of any condition of the licence; or
- (d) in the event of the liquidation or dissolution of an authorised person or licensee.

24. Inspection of radio trunking systems, licence fees and periods of validity of licences

(1) A radio trunking system or portion thereof shall not provide a communications service to any person unless such a system or portion thereof has been inspected and approved by the Authority upon which the Authority may issue a licence for the operation of such system.

(2) The licence fee for a radio trunking service is payable as from the date on which the system or any portion thereof is commissioned, or as from the date on which the initial construction period, as determined in section 23 (6), expires, whichever date occurs first.

(3) The licence fee for radio trunking services shall be as prescribed in section 67.

(4) Licence fees are payable annually in advance on the date which is determined by the Authority and no portion thereof is refundable.

(5) Written notification of at least thirty (30) days shall be given by the Authority to a licensee for payment of the licence fee which shall be due on each anniversary of the licence. The licensee shall remit payment within 30 days from the date of notification.

(6) Provided that the licence fee has been paid and unless a licence is cancelled earlier, a licence shall remain valid -

- (a) for fifteen years for a national radio trunking system;
 - (b) ten years for a regional radio trunking system; and
 - (c) five years for a local radio trunking system.
- (7) When a validity period referred to in subregulation (6) has expired, application can be made for the renewal of the licence mentioned therein.

25. General conditions for the operation of a radio trunking system

- (1) No one shall, with regard to the operation of a radio trunking system or the provision of such service do anything which is contrary to the provisions of the Act.
- (2) Except as determined by subregulation (5) a licensee shall, with regard to any client, employ a radio trunking system only to convey messages between the stations of such client.
- (3) Messages implied by subregulation (2) shall be conveyed between different radio trunking systems of the licensee only by means of telecommunications lines of a licensed telecommunications company as defined in the Act.
- (4) The interconnection of radio trunking systems of different licensees shall only be permitted if approved by the Authority.
- (5) The Authority may, on the undermentioned conditions and such other conditions as it may deem necessary, grant approval for the interconnection of the licensee's radio trunking system with the public switched telephone network in order to permit limited communication for essential purposes between users of the licensee's system and users of the public switched telephone network:
- (a) In the case of a regional system the interconnection shall be made at the nodal switching unit in that region.
 - (b) In the case of a national system the interconnection shall be made at the nodal switching unit in each regional component of the national system.
 - (c) Any communication between a mobile station served by the licensee's system and a destination on the public switched telephone network shall only take place over the interconnection serving the area in which the mobile station is situated.
 - (d) The apparatus intended for such interconnection shall be licensed in terms of the Act, and proof thereof shall be furnished to the Authority.
 - (e) The licensee shall regularly monitor the performance of the radio trunking system and ensure that -
 - (i) the interconnection of his system with the public switched telephone network is at most an ancillary feature of the service provided by the licensee;
 - (ii) a communication originating in the public switched telephone network and then carried by the licensee's system, is not again rerouted to the public switched telephone network; and
 - (iii) information, as may be required, is provided to the Authority about

- the total traffic,
- the traffic in respect of different clients, and
- the traffic over the interconnection with the public switched telephone network.

- (6) A person authorised to construct a radio trunking system or a licensee -
- (a) shall not verbally or otherwise convey to any person that the Authority recommends the use of his radio trunking system above that of another radio trunking system, but may disclose that he has been authorised by the Authority to construct a radio trunking system or is licensed to operate and maintain such a system, as the case may be, and may advertise such service;
 - (b) shall not provide radio communication service to a client or allow access from another radio trunking system if such service or such access is or would be in contravention of the provisions of the Act;
 - (c) shall inform the Authority and provide him with particulars about -
 - (i) any proposals for changes to a radio trunking system or to any apparatus comprised therein; and
 - (ii) any new service or facilities being contemplated for incorporation in a radio trunking system;
 - (d) shall keep complete records of -
 - (i) service providers, where applicable;
 - (ii) the type and number of stations which make use of the radio trunking system; and
 - (iii) the grade of service on the installed radio frequency channels;
 and shall assist the Authority to obtain information about the names and addresses of users of a radio trunking system;
 - (e) shall be responsible for complying with any property right requirements that may be applicable to any apparatus, signalling protocols, facilities or any service comprised in a radio trunking system;
 - (f) or any member of his group shall not, in respect of the provision of any aspect of the radio trunking service, show any undue preference for or exercise any discrimination against any service provider or client by subsidising the following:
 - (i) The manufacturing of radio communication apparatus for connection to a radio trunking system;
 - (ii) the provision of radio communication apparatus on a radio trunking system consisting of the installation, maintenance, adjustment, repair, alteration, moving, removal or replacement of such apparatus which is or will be comprised in any radio communication system which is or will be authorised to use a radio trunking system;
 - (iii) the provision of any service which is provided in whole or in part by means of a radio trunking system; and

(iv) the conveyance of messages by means of a radio trunking system; and shall, where such practices take place, take such steps as the Authority may direct to rectify the situation;

(g) shall record, and declare upon request to the Authority, any transfer of apparatus, material or goods between him and service providers, or between him and radio dealers at full cost in his accounting records.

(7) Service providers, where applicable, are responsible to network operators for the proper conduct of business in connection with the provision of radio trunking service to users.

(8) Anyone who provides radio apparatus in connection with a radio trunking system shall be in possession of a valid radio dealers' registration certificate.

26. Conditions for the establishment and operation of base stations

(1) Base stations of a radio trunking system shall, in order to transmit and receive messages between mobile and fixed dispatch stations, be constructed strictly in accordance with the following characteristics as contained in the columns in the Schedule of Operation of, as the case may be, the relevant authorisation or licence -

column 1: base station sites;

column 2: type of apparatus;

column 3: assigned radio frequency channels;

column 4: transmit and receive modes;

column 5: maximum power which shall not be exceeded by the effective radiated power;

column 6: type of antenna;

column 7: maximum antenna height;

column 8: antenna pattern.

(2) A base station shall only be used to convey messages by means of -

(a) radio between mobile stations and between such stations and fixed dispatch stations within the coverage area of that base station; and

(b) subject to section 60, a telecommunications line of a licensed telecommunications operator, as defined in the Act, to any other base station or the nodal switching unit of the licensee's system.

(3) All radio apparatus, including the mobile and fixed dispatch stations, shall comply with the British MPT 1327 and MPT 1343 and associated specifications, as adapted by appropriate industry standards bodies for the frequency bands 254.0-259.4 MHz and 262.0-267.4 MHz, or as specified by the Authority. Acceptable proof of such compliance must be provided to the Authority before a radio trunking system is taken into service.

(4) The facility of system roaming shall be provided in order to enable any person authorised to use a specific radio trunking system to transmit, subject to subregulation (2), messages upon demand via another radio trunking system.

27. Non-compliance with licence conditions

- (1) If a transgression of the provisions of the Act, the Regulations or any special conditions under which an authority or a licence has been issued, is committed, the Authority shall give written notice of such transgression to the authorised person or the licensee, as the case may be, who shall comply with the request contained in the notification within a period of 60 days, or such other period as the Authority may determine.
- (2) Written confirmation of compliance with the notification shall be supplied to the Authority within the period determined.
- (3) Subject to the provisions of the Act an authorisation or a licence shall be suspended or cancelled if an authorised person or a licensee -
- (a) requests in writing that an authority or a licence be suspended or cancelled; or
 - (b) cannot pay the licence fee which is due within the periods allowed; or
 - (c) applies for voluntary liquidation or dissolution; or
 - (d) is placed under provisional or final liquidation.
- (4) The Authority may, if a transgression of the provisions of the Act, the Regulations or any special condition of an authority or a licence persists, make such arrangements as he may deem necessary to ensure that a radio trunking system is operated in accordance with the provisions of the Act, the Regulations, or such special conditions and in the interests of the users of a system.
- (5) If, in the opinion of the Authority, an acceptable grade of service, with reference to specification MPT 1318, is not rendered by a radio trunking system, the Authority may, at its discretion -
- (a) reduce the channels assigned to a licensee; or
 - (b) require that the number of channels be increased if free channels are available for assignment; or
 - (c) order that connection with the public switched telephone network be decreased or ceased.

Chapter 6: Private communal radio repeaters

28. Licensing of private communal radio repeaters

(1) The Authority may, subject to the provisions of the Act and of these Regulations and on the conditions set out in this Chapter, on payment of the prescribed amount issue a licence to a person to operate a private communal radio repeater station service.

(2) Any person who intends to apply to the Authority for the issuance of a licence to operate private communal radio repeater station service shall -

- (a) himself approach existing licensees in the area of operation referred to in paragraph (b)(i) below to obtain suitable frequencies for the purpose of the operation of the private communal radio repeater station service, and the Authority shall consider the assignment of such frequencies or other frequencies in areas where they are readily available;
- (b) furnish the Authority with-
 - (i) a map of the environment indicating the area of operation of the communal radio repeater station service;
 - (ii) particulars of repeater station frequencies allocated to him within the mentioned area of operation as well as to prospective users of the private communal radio repeater service who already hold repeater station licences, in order to enable the Authority to consider the re-allocation or withdrawal thereof;
 - (iii) a copy of such licence and the written approval of the licensee concerned for the re-allocation or withdrawal thereof.

(3) No person shall use a trunking system without the approval of the Authority, provided that such approval will only be considered in cases where multichannel allocations are already in use on the private communal radio repeater station service.

(4) A licence for an additional private communal radio repeater service in a specific area may be issued by the Authority if each of the licensee's existing private communal radio repeater services in the same area (urban and rural) services a minimum of 10 clients and 100 two-way radio stations.

(5) If the licensee's existing private communal radio repeater service(s) does or do not comply with the requirements specified in subregulation (4), a licence may be issued by the Authority if proof of channel occupation to justify the application, is furnished.

29. Technical requirements for the operation of a private communal radio repeater station service

(1) Subject to the provisions of the Act and of these Regulations no person shall operate or use a private communal radio repeater station service unless -

- (a) tone signalling is built into all stations in the system, provided that if the CTCSS signalling method (continuous-tone coded squelch system) is not used, some other method of automatic tone control shall be used to ensure that contact with the repeater station is maintained at

the end of each message in order to enable the recipient of the message to reply;

- (b) each station is equipped with a 2-minute forced repeater release facility, provided that the forced release shall not be exclusively dependent on the discontinuance of the carrier;
- (c) the private communal radio repeater has a facility to prevent any user group from re-engaging it within 1 minute of completing a call;
- (d) all transceivers have a built-in facility to prevent the transmission of a carrier while the private communal radio repeater is being used by other clients and by means of which it can be ascertained whether the system is engaged; and
- (e) the transmitter power is as follows:
 - (i) VHF mid band-base/mobile: 30 Watt RF/30 Watt ERP
VHF mid band-repeater: 50 Watt RF/100 Watt ERP
 - (ii) VHF high band-base/mobile: 30 Watt RF/30 Watt ERP
VHF high band-repeater 30 Watt RF/100 Watt ERP
 - (iii) UHF band-base/mobile: 5 Watt RF/20 Watt ERP
UHF band-repeater: 15 Watt RF/60 Watt ERP

30. Licensee's responsibility to keep a register of users communal radio repeater station service

- (1) (a) The licensee of a private communal radio repeater station service shall keep a register of each user connected by the service, reflecting the user's name as well as the address of the base station, provided that the name and address of the user himself is required in cases where a base station is not used.
- (b) A copy of the register referred to in paragraph (a) shall be made available to the Authority on its request and shall, if an application is made for a licence for an additional private communal radio repeater station in a specific area, accompany such application in confirmation, as prescribed in regulation 28 (4), of the clients and stations served by an existing system in that area.
- (2) (a) At the end of each month the licensee shall send a copy of the register referred to in subregulation (1) by certified post to the Authority.
- (b) On the copy referred to in paragraph (a) the additional users connected to the system during the previous month must be clearly identified.
- (c) Particulars must be provided separately in respect of those persons who cancelled the use of the service during the course of the month to which the copy relates.

Chapter 7: Requirements for operation in certain frequency bands

31. VHF and UHF bands

(1) The maximum Effective Isotropic Radiated Power (EIRP) for operation in the VHF and UHF bands shall be as indicated below, unless licensed otherwise by the Authority and recorded on the licence certificate, or unless specified otherwise in these Regulations for certain types of service.

Frequency Band (MHz)	Mode	Maximum EIRP (Watt)

(2) Bandwidth/channel spacing, migration(or include in above table)

Power: Differentiate urban/rural, get special permission if higher.

32. Very short range band

(1) Licensees who operate stations on the very short range band (26.965 MHz – 27.175 MHz) must ensure that they comply with the following requirements:

- (a) Frequency tolerance: 200 parts in 10^6
- (b) Bandwidth: 6 kHz
- (c) Final stage dc input: 100 mW
- (d) Maximum length of antenna of transmitter: 1.5 m
- (e) Spurious emissions, including harmonic radiations and intermodulation products: 50 μ W or –13 dB (mW) maximum.

(2) Frequencies in the band 26.96 – 27.28 MHz are intended mainly for industrial, scientific and medical purposes. Users of radio communication services who operate within the limits of these frequencies shall unconditionally accept harmful interferences. The Authority, at its discretion, may investigate such interference and take any remedial action it deems appropriate.

33. Spread spectrum / wideband LAN operation in the 2.4 GHz ISM band

(1) This category comprises wireless Local Area Networks (LAN) using spread spectrum/wideband modulation technology operated over short distance inside buildings, offices, warehouses, malls etc and on single sites or pieces of land. This configuration is subject to the conditions indicated in subregulations (2) and (3) below.

(2) The following conditions shall apply for spread spectrum / wideband LAN operation in the 2.4 GHz ISM band:

- (a) 2.4 GHz spread spectrum or other similar type wideband LAN systems may be considered in the ISM band of 2400.0 – 2483.5 MHz.
- (b) Operation of wireless Local Area Networks (LAN) using spread spectrum/wideband modulation technology is unlicensed when confined to within a building, warehouse, office complex, mall etc. and on single sites or contiguous pieces of land not crossed by any public roads or railway lines and between the terminals of the licensee only. Wireless LANs provided on single sites for data access ("hotspots") shall also fall into this category.
- (c) Operation outside of the limits indicated in (b) above is regarded as a Wide Area Network (WAN) and requires licensing as per regulation 34.
- (d) Only equipment type approved by the Authority according to prescribed standards may be used.
- (e) No radio interference may be caused to ISM and other secondary operations within the band or to any other radio users outside the band.
- (f) No complaints of radio interference to spread spectrum or other similar type wideband systems within the band will be investigated.

- (3) Technical specifications:
 - (a) Type approval shall be in accordance with ETS 300 328-2.
 - (b) The RF power limits shall be in accordance with the standard mentioned in subregulation (1) above and the limits indicated below:
 - (i) The maximum EIRP is defined as the total radiated power of the system that will not exceed -10 dBW, 100 mW or 20 dBm.
 - (ii) The peak power density is defined as the highest instantaneous level of the power in Watts per Hertz generated within the power envelope. This shall be -10 dBW or 100 mW per 100 kHz EIRP for equipment using Frequency Hopping Spread Spectrum (FHSS) modulation and -20 dB/W or 10 mW per MHz for other modulation types.
 - (c) In the case of Frequency Hopping Spread Spectrum (FHSS) type modulation technology being employed, a specific or single frequency may not be permanently selected, locked onto or engaged to provide radio communications between points/stations.
- (4) Licence Fees
 - (a) Unlicensed operation: no licence fee.
 - (b) Licensed operation: fees as prescribed in regulation 67.

34. Spread spectrum / wideband WAN operation in the 2.4 GHz ISM band

- (1) This category comprises wireless Wide Area Networks (WAN) using spread spectrum/ wideband modulation technology; used for point-to-point and/or point-to-multipoint radio communications for distances greater than that of a LAN system and employing directional antennas. This configuration is subject to successful radio co-ordination being obtained as well as licensing.
- (2) The following conditions shall apply for spread spectrum / wideband WAN operation in the 2.4 GHz ISM band:
 - (a) WAN spread spectrum or other similar type wideband systems operating above 1 GHz will only be considered in the ISM band 2400.0 – 2483.5 MHz.
 - (b) WANs are seen to be links between two points of radio communication outside of a building between more than one site or piece of land.
 - (c) Only equipment type approved by the Authority according to prescribed standards may be used.
 - (d) No complaints of radio interference to spread spectrum or other similar type wideband systems will be investigated.
 - (e) No radio interference may be caused to ISM and other secondary operations within the band or to any other radio users outside the band.
- (3) Technical specifications:
 - (a) Type approval shall be in accordance with ETS 300 328-2.

- (b) The maximum EIRP (radiated power) of the system/equipment per link or point-to-point operation shall not exceed 1.0 Watt or 30 dBm in the case of FHSS.
 - (c) The maximum EIRP (radiated power) of the system/equipment per link or point-to-point operation shall not exceed 100 mW or 20 dBm in the case of DSSS (Direct Sequence Spread Spectrum) or other modulation types.
 - (d) Other technical parameters pertaining to the LAN configuration will apply.
- (4) Licence Fees
- Licence fees shall be as prescribed in regulation 67.

35. Requirements and policy for low power video surveillance services (LPVS)

- (1) A Low Power Video Surveillance System (LPVS) is defined as a terrestrial point-to-point (P-P) or point-to-multipoint (P-MP) radio communications system comprising one or more low power video devices being controlled by, or connected to, one LPVS control centre or base station which is not interconnected with other similar type control or base stations.
- (2) The transmitted/radiated power of LPVS services must be adjusted to the absolute minimum for satisfactory overall system performance.
- (3) Prior to the purchasing of LPVS and related equipment, users should approach the Authority to discuss the availability of suitable frequencies and, if appropriate, initiate the licensing process. The Authority cannot guarantee the availability of particular frequencies and the prior purchase of equipment cannot be used as motivation or an overriding reason to assign a frequency in a particular band.
- (4) The frequency range of the equipment is determined by the lowest and highest frequencies occupied by the power envelope. The lowest frequency of the power envelope is the frequency furthest below the frequency of maximum power where the output power drops below the level of -80 dBm/Hz spectral power density (-30 dBm if measured in a 100 kHz bandwidth) EIRP. The highest frequency of the power envelope is the frequency furthest above the frequency of maximum power where the output power drops below the level of -80 dBm/Hz spectral power density (30 dBm if measured in a 100 kHz bandwidth) EIRP.
- (5) Frequency Band 2400.0 – 2483.5 MHz:
 - (a) Operation is unlicensed when confined to within a building, warehouse, office complex, mall etc. and on single sites or contiguous pieces of land not crossed by any public roads or railway lines.
 - (b) All other cases not covered in (a) above require licensing and co-ordination of radio frequencies.
 - (c) Operation within this band is on a non-interference and no-protection basis as far as ISM and other secondary services in this band are concerned.

- (d) Only equipment type approved by the Authority in accordance with ETS 300 440 may be used.
 - (e) The maximum allowable EIRP shall be 100mW or 20 dBm.
- (6) Frequency Band 10.026 – 10.081 GHz:
- (a) Operation is unlicensed when confined to within a building, warehouse, office complex, mall etc. and on single sites or contiguous pieces of land not crossed by any public roads or railway lines.
 - (b) All other cases not covered in (a) above require licensing and co-ordination of radio frequencies.
 - (c) Only equipment type approved by the Authority in accordance with ETS 300 440 may be used.
 - (d) The maximum allowable EIRP shall be 1 Watt or 30 dBm.
 - (e) Channel frequencies:
 - 1. 10.029 GHz
 - 2. 10.037 GHz
 - 3. 10.045 GHz
 - 4. 10.053 GHz
 - 5. 10.061 GHz
 - 6. 10.069 GHz
 - 7. 10.077 GHz
 - (f) The maximum bandwidth shall be 8 MHz per channel.
- (7) Frequency Band 31.000 – 31.056 GHz:
- (a) Operation is unlicensed when confined to within a building, warehouse, office complex, mall etc. and on single sites or contiguous pieces of land not crossed by any public roads or railway lines.
 - (b) All other cases not covered in (a) above require licensing and co-ordination of radio frequencies.
 - (c) Only equipment type approved by the Authority in accordance with MPT 1425 may be used.
 - (d) The maximum allowable EIRP shall be 1 Watt or 30 dBm.
 - (e) Channel frequencies:
 - 1. 31.004 GHz
 - 2. 31.012 GHz
 - 3. 31.020 GHz
 - 4. 31.028 GHz
 - 5. 31.036 GHz
 - 6. 31.044 GHz
 - 7. 31.052 GHz
 - (f) The maximum bandwidth shall be 8 MHz per channel.
- (8) Licence Fees

- (a) Unlicensed operation: no licence fee.
- (b) Licensed operation: fees as prescribed in regulation 67.

36. Harmonic radiations and intermodulation products

(1) The licensee is obliged to ensure that parasitic emissions, including harmonic radiations and intermodulation products, do not exceed the following limits at any point in the entire frequency range of 100 kHz to 1000 MHz:

- (a) Below 30 MHz:
 - (i) The mean power output of parasitic emissions of fixed installations may not exceed 50 mW or 17 dB (mW).
 - (ii) The mean power output of parasitic emissions of hand-held portable units of less than 5 W may not exceed 5 mW or 7 dB (mW).
 - (iii) Parasitic emissions of mobile transmitters may not exceed 200 mW or 23 dB (mW).
- (b) 30-235 MHz:
 - (i) Parasitic emissions of transmitters with a mean power output exceeding 25 W may not exceed 1 mW or 0 dB (mW).
 - (ii) Parasitic emissions of transmitters with a mean power output not exceeding 25 W may not exceed 25 μ W or -16 dB (mW).
- (c) 235-470 MHz:

Parasitic emissions of transmitters with a mean power output not exceeding 25 W may not exceed 25 μ W or -16 dB (mW).
- (d) 30-470 MHz:

Parasitic emissions of hand-held portable equipment with a mean power output not exceeding 5 W may not exceed 100 μ W or -10 dB (mW).

(2) Maritime mobile radio telephone apparatus

The mean power of any spurious emission falling in any other international maritime mobile channel owing to products of modulation shall not exceed 10 μ W and the mean power of any other spurious emission on any discrete frequency within the international maritime mobile band shall not exceed 2.5 μ W, but if transmitters with a mean power exceeding 20 W are used, these limits may be increased in proportion to the mean power of the transmitter.

Chapter 8: Use or possession of certain radio apparatus without a radio frequency spectrum licence, certificate, authority or permit

37. Definitions

In this regulation a word or expression has the meaning assigned to it in the Act, unless the context indicates otherwise -

"baby monitors" means radio apparatus used to transmit sound to a remote receiver to monitor the sound or movement of infants;

"effective isotropic radiated power" means the total radiated power relative to an isotropic antenna. This is effectively the measured average output power of the final radio frequency stage immediately preceding the antenna, plus the loss in the antenna cable (if any) plus the gain of the antenna (if any) relative to an isotropic antenna;

"field disturbance and doppler apparatus" ('FDDA') means radio apparatus which operates by producing a radiated field and responding to any disturbance of that field caused by an intrusion or movement within the field;

"high performance radio local area network" ('Hiperlan') means radio apparatus, utilising spread-spectrum modulation techniques, to link computer nodes within a network;

"inductive loop systems" means radio apparatus which operate by producing a controlled magnetic field within which a predetermined recognisable signal is formed. Examples include shop anti-theft tagging systems, car immobiliser keys and door access tokens;

"low power radio" means radio apparatus used for short range two-way voice communications e.g. toy walkie talkies;

"model control apparatus" means radio apparatus used to control the movement of the model in the air, on land or over or under the water surface;

"non specific short range devices" means radio apparatus used for general telemetry, telecommand, alarms and data with a low duty cycle (less than 1.0%);

"road transport and traffic telematics" ('RTTT') means radio apparatus used for traffic management. Applications include automatic road toll collection, route guidance systems, vehicle or container identification, instant traffic information, parking management, advance incident warning and on-vehicle anti-collision radar;

"telecommand" means the use of radio apparatus for the transmission of signals to initiate, modify or terminate functions of equipment at a distance;

"telemetry" means the transmission of remotely measured data;

"video surveillance equipment" means radio apparatus used for security camera purposes to replace the cable between a camera and a monitor;

"wideband wireless systems" means radio apparatus that are general- purpose high bit rate spread spectrum radio systems;

"wireless audio systems" means radio apparatus used to replace the wired headphones or speakers in hi-fi systems; and

"wireless microphones" means radio apparatus used to transmit speech or music over short distances to a remote receiver in places like studios and theatres.

38. Categories of radio apparatus, which shall not require a radio frequency spectrum licence, certificate, authority or permit

The use or possession of the radio apparatus listed in Annexure H shall not require a radio frequency spectrum licence, certificate, authority or permit.

39. Circumstances in which certain radio apparatus shall not require a radio frequency spectrum licence, certificate, authority or permit

The circumstances in which the use or possession of the radio apparatus referred to in section 38 shall not require a radio frequency spectrum licence, certificate, authority or permit are the following:

(1) The apparatus must be operated within and must not exceed the technical parameters set out in each of the applicable columns of the Annexure with respect to -

- (a) the frequency band;
- (b) maximum radiated power or field strength limits and channel spacing;
- (c) relevant standard; and
- (d) duty cycles and antennas to be used as contained in CEPT/ERC/REC 70-03.

(2) The radio apparatus must be type-approved by the Authority in accordance with the Act.

(3) The frequencies, transmitting power and external high-gain antenna of the radio apparatus may not be altered without a new type approval certificate from the Authority.

(4) The antenna of the radio apparatus may not be higher above average ground level than the lowest point of the place where the radio apparatus operates effectively.

(5) The radio apparatus may not cause harmful interference to licensed telecommunication and broadcasting services.

(6) The user of radio apparatus may not claim protection from licensed telecommunication and broadcasting services.

(7) The radio apparatus may not be used to provide a telecommunication service to another person without a telecommunication service licence and in a manner that contravenes the provisions of the Act.

40. Wireless spread spectrum Local Area Networks in the 2.4 GHz ISM band

(1) Wireless spread spectrum Local Area Networks (LANs) operating in the 2.4 GHz ISM band used for short distances on single sites as indicated in regulation 33 shall not require a radio frequency spectrum licence, certificate, authority or permit.

(2) No complaints of interference to spread spectrum systems in the ISM band will be investigated.

41. Wireless Local Area Networks in other ISM bands

(1) Wireless LAN's used for short distance, in the following other ISM bands, namely 433.050 – 434.790 MHz and 5.725 – 5.875 GHz for use on single sites e.g. in an office complex, shall not require a radio frequency spectrum licence, certificate, authority or permit.

(2) Spread spectrum/wide band standards other than ETS 300 328 will be considered within these bands in accordance with the general principles applicable to the 2.4 GHz ISM band, especially with regard to power requirements.

42. Cellular radio communication mobile/portable and handheld units

GSM cellular radio mobile/portable and handheld units operating in the following frequency bands shall not require a radio frequency spectrum licence, certificate, authority or permit:

- | | | |
|-----|---------------|------------------------------------|
| (a) | 880-915 MHz | Mobile transmit (max. 8 watt EIRP) |
| | 925-960 MHz | Mobile receive |
| (b) | 1710-1785 MHz | Mobile transmit (max. 8 watt EIRP) |
| | 1805-1880 MHz | Mobile receive |

Chapter 9: Interference

43. Prohibition against manufacture, import, sale, hiring out, installation or use of certain apparatus

(1) No person shall manufacture, import, sell, hire out, install or use an apparatus that generates and radiates electromagnetic energy that exceeds the limits prescribed in respect of the said apparatus in Annexure F to these regulations.

(2) No person shall import, manufacture or sell radio apparatus, or any other apparatus indicated in Annexure F to these regulations, unless such apparatus complies, with regard to electromagnetic radiation properties, with the standards prescribed by an acceptable international standardisation body. A certificate to this effect shall be supplied to the Authority if so requested.

(3) A list of acceptable international standardisation bodies is available from the Authority.

(4) In the event that a certificate in respect of compliance with international standards is not available, application shall be made to the Authority for the issuing of a certificate in the form set out in Annexure G1 to these regulations.

(5) A person who wishes to apply for a certificate referred to in subregulation (4) shall submit an application to the Authority in the form referred to in Annexure G2 to these regulations.

(6) A model of the apparatus that is the subject of an application referred to in subregulation (5) shall be furnished to the Authority together with the said application or, if it is not practicable thus to furnish the said apparatus, the application shall state the place where the said model may be examined.

44. Fees payable for examination of apparatus

(1) For the examination of a model of apparatus with a view to issuing the certificate referred to in regulation 43 the examination fees in accordance with subregulation (2) shall be paid to the Authority.

(2) Upon application, the Authority shall prepare a quotation for the examination fees that are payable in terms of subregulation (1), based on an amount representing the actual expenditure in respect of material, labour, transport and other costs incurred in connection with the examination plus a surcharge of 20 per cent calculated on the total of that expenditure.

45. Prohibition against the use, import, manufacture, sale or hiring out of certain ignition and internal-combustion engines

(1) No person shall use, sell or hire out or import for sale or manufacture for sale an ignition system or an internal-combustion engine with an ignition system (regardless of whether such internal-combustion engine forms part of a vehicle, vessel or any device) unless such ignition system is fitted with the suppressors referred to in Table 4 of Annexure F to these regulations.

(2) In the implementation of a provision of an ordinance regarding the road-worthiness of vehicles or a provision of any regulation promulgated in terms of such ordinance, a motor vehicle shall be regarded as unworthy if an apparatus

not complying with the requirements of these regulations is installed, mounted or connected in, on or to it.

46. Prohibition against the modification of certain apparatus

No person shall modify an apparatus complying with the provisions of these regulations in such a way that the said apparatus no longer complies with such provisions.

Chapter 10: Miscellaneous provisions

47. Allocation and display of call sign

The Authority allocates a call sign to a radio station. Such call sign shall be conspicuously displayed on the relative radio set or within the station by the licensee, and the call sign must be transmitted at least once during each separate transmission.

48. Radio apparatus must satisfy the Authority's requirements

(1) Radio apparatus shall satisfy the Authority's requirements at all times and shall not be capable of being tuned to frequencies other than those laid down by the Authority in these regulations or separately for use by licensees.

(2) In the event that a radio apparatus is determined to be non compliant, the Authority may confiscate such noncompliant apparatus.

49. Radio receiving apparatus with continuous tuning

No person shall use or have in his possession any radio receiving apparatus with continuous tuning that can be tuned to bands above 30 MHz other than the international broadcasting and amateur bands except where the Authority's prior approval was obtained.

50. Allocation of frequencies on a shared basis

The Authority may allocate frequencies on a shared basis and co-users of them must make mutual arrangements for the satisfactory utilisation of the facility.

51. Authority may require certain modifications to a station

A licensee shall be obliged to effect at his own cost any modification to his radio-communication system that the Authority has indicated, and the Authority shall by no means be liable to the licensee or any other person for any damage or loss arising from such modifications.

52. Interference, condition of station and compliance with requirements of authority and local authority

(1) The licensee shall be obliged to maintain all radio apparatus at a station technically in a good condition and to ensure at all times that it satisfies the requirements of the Authority and does not cause interference with the reception and transmissions of other radio users or telecommunication lines.

(2) The antenna system shall comply with the requirements of the relevant local authority.

(3) The erection of antennas and installation of radio equipment shall be performed by suitably qualified persons in accordance with local authority and national standards.

(4) The licensee of a station shall carry out the routine tests that are necessary for the proper maintenance of his station.

53. Indecent language and fraudulent transmissions over stations prohibited

No person shall transmit insulting, improper, obscene, blasphemous or threatening language over the radio apparatus. Communications shall be concise and limited to essentials, and no music or entertainment of any nature shall be transmitted. Similarly no sounds or effects for entertainment or for the purpose of drawing attention shall be transmitted.

54. Use of station for any purpose other than that of licence prohibited

(1) No person shall use radio apparatus for a purpose other than that for which the licence was issued.

(2) No licensee shall make transmissions from a place outside the area for which he is licensed.

55. Use of station restricted to licensee or someone in his employ or under his control

Except where provided to the contrary in these regulations, only the licensee or someone in his employ or under his control, may operate the station in respect of which the relative licence was issued.

56. Distress signal

No person shall transmit without sound reason the distress signal (i.e., " ●●● — — — ●●● " in radio telegraphy and the word "MAYDAY" in radio telephony).

57. Licence not transferable and must be returned on expiry/suspension

(1) Except with the approval of the Authority no person to whom a licence was issued in terms of the Act or these regulations shall transfer such licence, powers or authority granted to him to any other person or surrender it in any other way in favour of someone else.

(2) A licence issued in terms of the Act and these regulations shall, on expiry or suspension, be returned to the Authority within 14 days of such expiry date or date of suspension.

58. Procedure for the amendments of radio frequency spectrum licences and station licences

(1) To amend any frequency spectrum licence or station licence, the Authority shall give notice of any proposed amendment by publication in the Government Gazette, requiring any interested party to submit written representations with

regard to such amendment within a specified period which shall not be more than thirty (30) calendar days of such publication.

(2) The notice shall specify the nature and extent of such proposed amendment and the time within which the amend mend is intended to take effect.

(3) The notice may further state that if the time for representations limited by the notice elapses and the Authority is not in receipt of any representations from any person, the Authority may then publish the amendment as proposed and the regulation will thus stand amended.

(4) If the Authority is in receipt of representations from any interested party within the time limited by the notice it may hold a hearing in respect thereof.

(5) After considering representations made in terms of item (1) hereof together with any relevant information, the Authority shall make a decision and communicate the same to all interested parties.

59. Sealing or disposing of radio stations

(1) In the event that a radio station licence has been cancelled or has lapsed, the radio equipment shall be sealed unless it is disposed of in a manner acceptable to the Authority.

(2) In all cases referred to in subregulation (1) the antenna system shall be removed.

60. Radio-communication between two or more fixed points and connection with public telephone system prohibited

Except with the approval of the Authority and subject to these regulations, no person shall -

- (a) operate radio-communication between two or more fixed points;
- (b) connect radio apparatus in any way whatsoever to the public telephone system; and
- (c) transfer to another place radio apparatus in respect of which authority was granted for installation at a particular place.

61. Change of address

Every licensee who changes his address shall advise the Authority of the new address of his station within 14 days of the change.

62. Operation of station on board ship while it is in harbour

(1) The master of a ship shall ensure that the radio installation on board is not used for radio-communication while the ship is berthed or anchored in a harbour in the Republic, except for the purposes of type F3 transmissions in the VHF maritime mobile band to communicate with -

- (a) the nearest coast station in the Republic that is open for public correspondence;

- (b) the port operations service; and
- (c) a vessel on its way to the harbour or berth provided the communication is limited to navigational safety.

(2) The restriction contained in subregulation (1) shall not apply to the apparatus used on board ships for establishing communication via any satellite of the INMARSAT organisation.

63. Recognition of licences / certificates issued by other countries

Notwithstanding provisions to the contrary in these regulations the Authority may issue a licence or certificate as required by the Act to a person who, in the opinion of the Authority, possesses a similar licence or certificate issued by another country despite the fact that such person does not satisfy specific other requirements stipulated by these regulations for the acquisition of the licence or certificate.

64. Appointment and authority of investigating officers

(1) The Authority may appoint a person who in his opinion possesses the necessary knowledge and competence to (i) examine apparatus or models thereof and to determine whether such apparatus or models thereof comply with the provisions of these regulations, (ii) to carry out investigations and or inspections under the direction of the Authority; or (iii) otherwise implement the mandates of these regulations and the Act.

(2) The Authority shall issue to a person appointed in terms of subregulation (1) an authority stating the fact that such person was thus appointed.

(3) An investigating officer may -

- (a) at any reasonable time enter premises in or on which an apparatus not complying with the provisions of these regulations is on reasonable grounds suspected to be; and
- (b) examine an apparatus that on reasonable grounds is suspected to be an apparatus referred to in paragraph (a).

(4) The person in charge of premises or apparatus referred to in subregulation (3) shall, at the request of an investigating officer, allow such investigating officer access to such premises or apparatus.

(5) An investigating officer wishing to enter premises referred to in subregulation (3) or to examine an apparatus referred to in that subregulation shall, if requested to do so by the person in charge of such premises or apparatus (as the case may be), produce the authority issued to him in terms of subregulation (2).

(6) If an investigating officer has reasonable grounds to suspect that an apparatus does not comply with the provisions of these regulations and if, in the opinion of such investigating officer, it is not feasible to examine such apparatus in or on the premises where he found it, he may remove the said apparatus to a place equipped with the facilities required for the examination of such apparatus.

(7) An apparatus removed in terms of subregulation (6) shall, on completion of the examination be returned to the person in whose charge the apparatus was at the time of its removal.

65. Use of GSM blocking devices

(1) In principle, the Authority discourages the use of GSM blocking devices (jammers) as these impact on the responsible and legitimate use of mobile telephony and will interfere with the use of mobile telephones in emergency situations.

(2) However, where a person has a valid reason for employing such devices, their use shall be at that person's own risk in view of subregulation (3), and subject to the following restrictions:

- (a) the output power shall be limited to 100 mW EIRP;
- (b) no radiation shall take place outside of the designated GSM frequency bands;
- (c) no interference whatsoever shall be caused to GSM users or other radio equipment outside of the premises to be covered by the blocking device;
- (d) a sign advertising the use of the blocking device shall be prominently displayed at each entrance to the premises covered by such device.

(3) The Authority may, at any time, prohibit the use of a particular device if a valid complaint in respect of interference is received or if the restrictions in subregulation (2) are not being complied with, or may prohibit the use of GSM blocking devices in general, and users of such device shall then remove the device within the grace period allowed by the Authority, without any cause for a claim for loss or damages.

Chapter 11: Licence and examination fees

66. Issuing of licences and period of validity

(1) Subject to the provisions of the Act and of these regulations, the Authority may issue, against the payment of fees as indicated hereunder, licences and certificates for the use of radio-communication and for conducting examinations.

(2) Unless a licence issued in terms of the Act and these regulations was previously suspended by the Authority in terms of the Act, or unless the provisions of the licence provide otherwise, it shall remain valid until 31 December of the year in which it was issued, and thereafter on payment of the prescribed annual licence fee until 31 December of each succeeding year.

67. Licence fees

(1) Licence fees shall be payable in accordance with Annexure A.

(2) Fees in respect of existing licences shall be paid before or on 31 January.

(3) If a licence or certificate referred to in Annexure A is issued during the licence year, the fees payable shall, subject to subregulation (4) be -

- (a) in respect of a licence or certificate issued in the first month of a licence year- the full prescribed fee;
- (b) in respect of a licence or certificate issued in the second month of a licence year- eleven twelfths of the prescribed fee;
- (c) in respect of a licence or certificate issued in the third month of a licence year- ten twelfths of the prescribed fee;
- (d) in respect of a licence or certificate issued in the fourth month of a licence year- nine twelfths of the prescribed fee;
- (e) in respect of a licence or certificate issued in the fifth month of a licence year- eight twelfths of the prescribed fee;
- (f) in respect of a licence or certificate issued in the sixth month of a licence year- seven twelfths of the prescribed fee;
- (g) in respect of a licence or certificate issued in the seventh month of a licence year- six twelfths of the prescribed fee;
- (h) in respect of a licence or certificate issued in the eighth month of a licence year- five twelfths of the prescribed fee;
- (i) in respect of a licence or certificate issued in the ninth month of a licence year- four twelfths of the prescribed fee; .
- (j) in respect of a licence or certificate issued in the tenth, eleventh or twelfth month of a licence year- three twelfths of the prescribed fees plus the prescribed fee for the ensuing year .

(4) If the amount of a fee calculated in accordance with subregulation (2) amounts to a fraction of a cent that fraction shall be rounded off to a full cent.

68. Examination and certificate fees

The fees shown in Annexure B are payable with a view to sitting for the examination indicated, or to acquire the certificate shown.

69. Application fees

(1) The fees shown in Annexure C are payable upon submission of applications referred to in the Annexure.

(2) Applications fees will not be refunded in the event that a licence cannot be issued for whatever reason.

Chapter 12: Application procedures for licences, certificates and authorities and permits

70. Applications for radio frequency spectrum licences, station licences, certificates and authorities

(1) The relevant application form obtainable at any office of the Authority must be completed in full and submitted with the prescribed application fee at any office of the Authority.

(2) In cases where exclusive frequencies and not a shared frequencies are being applied for, the Authority may request the submission of a business plan, details of which can be obtained from the Authority.

(3) Subregulation shall not apply in the case of applications made by the Namibian Defence Force, the Police Services, National Intelligence Agency, certificate and licence holders such as maritime, aeronautical, citizen band, civil defence, amateur radio, 27 MHz and 29 MHz band two way radio, shared simplex HF, VHF and UHF, very short range band and low power devices.

(4) In the event that the applicant is a juristic person or an association, a certified copy of the applicant's registration certificate or constitution of the association must also be submitted with the application form.

(5) When applying for a General Certificate of Competency in Radio Telephony (Aeronautical) Restricted Radio Operator's Certificate (Aeronautical), General Operator's Certificate (Maritime), Restricted Radio Certificate (Maritime), Global Maritime Distress and Safety Systems (GMDSS), the following must be supplied by the applicant:

- (a) Examination results.
- (b) Completed entry form for examination.
- (c) Two identical passport size ID photos.
- (d) The prescribed application fee.

(6) When applying for a licence for high frequency cross border communication system in a territory other than in the Southern African Development Community, the following must be supplied by the applicant:

- (a) Completed application form.
- (b) A copy of the licence issued in the foreign country.
- (c) Proof of validity of the foreign licence.
- (d) Indication that point to point communication is required.
- (e) Completed form of notice in respect of a transmitting terrestrial station.
- (f) The prescribed application fee.

(7) When applying for a licence for high frequency cross border communication system in the Southern African Development Community, the following must be supplied by the applicant:

- (a) Completed application form.
- (b) The prescribed application fee.

(8) When applying for an Amateur Radio Operator's Certificate required for an amateur radio licence, the following must be supplied by the applicant:

- (a) Completed application form.
- (b) Examination results.
- (c) The prescribed application fee.

(9) When applying for an authority to operate Radio Apparatus, authorising the holder of any certificate of competence to operate radio apparatus in accordance with the provisions of such certificate the following must be supplied:

- (a) Certified copy of the original certificate to be evaluated.
- (b) Completed application form.
- (c) The prescribed application fee.

(10) No application will be considered if there is any outstanding licence fee owed by the applicant to the Authority.

71. Procedure for obtaining a permit for possession of radio apparatus

(1) A person who wishes to possess a radio apparatus which will not be used by that person shall apply in writing to the Authority for a permit authorizing such possession.

(2) An application for a permit referred to in subregulation (1) above shall contain the following details:

- (a) full name, address and contact details of the applicant;
- (b) if the applicant is a company, a certified copy of the registration certificate, whether the company is registered in Namibia or in a foreign country;
- (c) the storage location of the radio apparatus for which the permit is applied;
- (d) radio apparatus make and model number;
- (e) the number of units in question;
- (f) technical parameters of such radio apparatus, including, but not limited to, frequency, power and applicable standard.

(3) Where the radio apparatus is not type-approved for use in Namibia and is intended for export purposes only, the applicant shall provide a sworn affidavit stating:

- (a) the country from which the equipment originates;
- (b) country(ies) to which the radio apparatus will be exported;
- (c) that the radio apparatus and containers thereof are sealed;
- (d) that the radio apparatus is not intended the use, sale or distribution in Namibia.

(4) A permit shall only be issued to the applicant upon approval of the application and after payment of the prescribed permit fee, if applicable, to the Authority.

Chapter 12: Control of radio activities for the implementation of migration within frequency bands

Include Migration in regulations or in separate notice?

Also general migration conditions.

ANNEXURE A
LICENCE FEES

Insert table with existing fee structure

Fees for licensable ISM applications and LPVS

Include 1800MHz with GSM spectrum fees

Check if trunking fees are included

ANNEXURE B
EXAMINATION AND CERTIFICATE FEES

Insert table with existing fee structure

Fees for monitoring and other services?

Note that some certificates and examinations are delegated.

ANNEXURE C
APPLICATION FEES

Insert table with existing fee structure

ANNEXURE D

TABLE 1: AMATEUR RADIO FREQUENCIES, MODES AND POWER LEVELS

Frequency Bands (MHz)	Amateur Service	Maximum Power (in dB relative to 1 Watt) PEP		Satellite	Permitted Types of Transmission	Remarks (see details below)
		Class A	Class B			
1.810 – 1.850	Primary	33 dBW	N/A		All except pulse or fast scan television	
1.850 – 2 000	Secondary	17 dBW	N/A		All except pulse or fast scan television	
3.500 – 3.800	Co-primary	33 dBW	17 dBW		All except pulse or fast scan television	
7.000 – 7.100	Primary	33 dBW	17 dBW	Allocated	All except pulse or fast scan television	
7.100 – 7.200	Secondary	33 dBW	17 dBW	Allocated	All except pulse or fast scan television	5
10.100 – 10.150	Secondary	33 dBW	N/A		All except pulse or fast scan television	
14.000 – 14.350 14.070 – 14.099 14.225 – 14.250	Primary	33 dBW	N/A 17 dBW 17 dBW	Allocated	All except pulse or fast scan television	
18.068 – 18.168	Primary	33 dBW	N/A	Allocated	All except pulse or fast scan television	
21.000 – 21.450 21.070 – 21.120 21.300 – 21.450	Primary	33 dBW	N/A 17 dBW 17 dBW	Allocated	All except pulse or fast scan television	

Frequency Bands (MHz)	Amateur Service	Maximum Power (in dB relative to 1 Watt) PEP		Satellite	Permitted Types of Transmission	Remarks (see details below)
		Class A	Class B			
24.890 – 24.990	Primary	33 dBW	N/A	Allocated	All except pulse or fast scan television	
28.000 – 29.700 28.050 – 28.150 28.300 – 28.500	Primary	33 dBW	N/A 17 dBW 17 dBW	Allocated	All except pulse or fast scan television	
29.700 – 30.000	Secondary	33 dBW	30 dBW		All	2
40.675 – 40.685	Primary	13 dBW	N/A	Allocated	All except pulse or fast scan television	3
50.000 – 54.000	Primary	26 dBW	N/A		All except pulse or fast scan television	
70.000 – 70.300	Secondary	13 dBW	13 dBW		All except pulse or fast scan television	
144 – 146	Primary	26 dBW	17 dBW	Allocated	All except pulse or fast scan television	
430 – 440 435 – 438	Primary	26 dBW	17 dBW	Allocated	All except pulse or fast scan television	
1 240 – 1 300 1 260 – 1 270	Secondary	26 dBW	N/A	Allocated	All except pulse	
2 300 – 2 450	Secondary	26 dBW	N/A		All except pulse	4
5 650 – 5 850	Secondary	26 dBW	N/A	Allocated	All except pulse	
10 000 – 10 450	Secondary	26 dBW	N/A	Allocated	All	
10 450 – 10 500	Secondary	26 dBW	N/A	Allocated	All	

Frequency Bands (MHz)	Amateur Service	Maximum Power (in dB relative to 1 Watt) PEP		Satellite	Permitted Types of Transmission	Remarks (see details below)
		Class A	Class B			
24 000 – 24 050	Primary	26 dBW	N/A	Allocated	All	
24 050 – 24 250	Secondary	26 dBW	N/A		All	4
47 000 – 47 200	Primary	26 dBW	N/A	Allocated	All	
75 500 – 76 000	Primary	26 dBW	N/A	Allocated	All	
76 000 – 81 000	Secondary	26 dBW	N/A	Allocated	All	4
142 000 – 144 000	Primary	26 dBW	N/A	Allocated	All	
144 000 – 149 000	Secondary	26 dBW	N/A	Allocated	All	4
241 000 – 248 000	Secondary	26 dBW	N/A	Allocated	All	
248 000 – 250 000	Primary	26 dBW	N/A	Allocated	All	

Remarks:

1. "N/A" in Class B column for Maximum Power indicates Class B operation not permitted.
2. Secondary basis during disaster exercises and emergency situations. Single frequency mobile applications.
3. Propagation study only.
4. Amateurs must accept interference from ISM users.
5. The band 7.100 – 7.200 MHz shall be used on a secondary basis by radio amateurs until it becomes available on a primary basis in 2009.

TABLE 2: MODES OF OPERATION

Mode	Explanation
A1A	Telegraphy without the use of a modulating audio frequency (by on/off keying) for aural reception
A3C	Facsimile (with modulation of the main carrier either directly or by a frequency-modulated subcarrier)
A3E	Double sideband, telephony
C3F	Television by analogue modulation and vestigial-sideband operation
F1A	Telegraphy for aural reception including RTTY and DATA by means of frequency-shift keying without the use of a modulating audio frequency, one or two frequencies being emitted at any instant
F1B	Telegraphy including RTTY and DATA by means of frequency shift keying without the use of a modulating audio frequency, one or two frequencies being emitted at any instant
F1D	Data transmissions by means of frequency shift keying without the use of a modulating audio frequency, with one frequency being emitted at any instant
F2A	Telegraphy for aural reception including RTTY and DATA by the on/off keying of a frequency or by means of the on/off keying of a frequency-modulated emission
F2B	Telegraphy including RTTY and DATA by the on/off keying of a frequency-modulating audio frequency or by means of the on/off keying of a frequency-modulated emission
F3C	Facsimile by direct frequency modulation of the carrier
F3E	Frequency-modulated telephony
G3E	Phase-modulated telephony
J2D	Data transmission with the use of a modulating audio frequency
J2E	Digital telephony with the use of a modulating audio frequency
J3E	Single sideband, suppressed carrier, telephony
J3F	Single sideband, suppressed carrier, modulated by slow scan television audio frequencies
N0N	Emission of an unmodulated carrier
R3E	Single sideband, reduced or variable-level carrier, telephony
W9E	Digital speech multiplexed up to 12 channels

ANNEXURE E
APPLICATION FORM FOR FREQUENCY ASSIGNMENT AND RADIO LICENCES

Insert FORM

ANNEXURE F
LIMITS OF INTERFERENCE

(1) For the purpose of these limits -

- (a) "power-distributed system" shall mean any system for conveying electrical energy from one place to another;
- (b) "interference voltage at the terminals" shall mean the interference voltage measured at the point where the apparatus is connected to the power-distribution system. Limits for the interference voltage at the terminals only apply where the declared mains voltage is not higher than 750V between conductors or not higher than 375V between one conductor and earth.

(2) Limits of interference

Table 1 shows the limits of interference that shall not be exceeded for the classes of apparatus and systems listed in (3) below.

(3) Classification of equipment

- (a) (i) Equipment not covered by classes below;
 - (ii) portable tools incorporating electric motors;
 - 1. rated mains power up to and including 700W;
 - 2. rated mains power above 700W up to and including 1 000W;
 - 3. rated mains power above 1000W up to and including 2 000W;
 - (iii) household and similar appliances;
 - (iv) regulating controls incorporating semiconductor devices;
 - (v) electrical traction systems:
 - 1. trolley buses, tramways;
 - 2. other traction systems;
 - (vi) equipment not connected to a power-distribution system (e.g. battery-operated equipment);
- (b) gas-discharged lamps, neon signs and filament lamps;
- (c) (i) power-distribution systems having a declared voltage between conductors not higher than 750V or a declared voltage between any one conductor and earth not higher than 375V;
- (ii) power-distribution systems having a declared voltage between conductors higher than 750V but not exceeding 15 000V or a declared voltage between any one conductor and earth higher than 375V but not exceeding 15 000V;
- (iii) power-distribution systems having a declared voltage between conductors or between any one conductor and earth exceeding 15 000V;
- (d) ignition systems;
- (e) industrial, scientific and medical apparatus:
 - (i) frequency bands that are not subject to control;
 - (ii) measured on a test site;

- (iii) not measured on a test site;
- (iv) radio-frequency glueing and heating equipment;
- (f) television and radio receivers:
 - (i) local-oscillator radiation from very high frequency (VHF) frequency-modulation receivers for broadcast reception in the band 87.5 to 108 MHz;
 - (ii) local-oscillator radiation and voltage on antenna terminals of receivers for television reception in the band 174 to 1 000 MHz;
 - (iii) time-base voltage on mains terminals of receivers for television reception in the band 174 to 1 000 MHz;
 - (iv) local-oscillator radiation from all receivers not covered by (f)(i) or (f)(ii);
- (g) information technology equipment (ITE):
 - (i) Class A equipment:

Class A equipment is information technology equipment which satisfies the class A interference limits but not the class B limits. It is the supplier's responsibility to ensure that prior to sale the customer is aware that such equipment is not suitable for use in residential or domestic environments. Such information shall be clearly displayed on either the article or its container.
 - (ii) Class B equipment:

Class B equipment is ITE which satisfies the class B interference limits and as such is certified for use in all normal environments.
- (4) Classes (a), (b), (c), (e) and (f) referred to in A3, with the exception of (a)(v) and (a)(vi), apply to equipment designed for connection at its terminals to a distribution system having a declared voltage between conductors not higher than 750V or a declared voltage between any one conductor and earth not higher than 375V.

Notes to Table 1:

- (1) The limit increases linearly with frequency from the lower specified value at the lower frequency to the upper specified value at the upper frequency
- (2) $C = \frac{30}{f_N}$ where factor is given in Table 3 and N is the click rate (for $N > 30$ or for continuous interference, take $N = 30$, and for $N < 0.2$, take $C = 25\ 000$)
- (3) Symmetrical 59 dB μ V at 150 kHz, reducing linearly with frequency to 46 dB μ V at 500 kHz
- (4) Asymmetrical 56 dB/ μ V at 150 kHz, reducing linearly with frequency to 52 dB/ μ V at 500 kHz.
- (5) Symmetrical
- (6) Asymmetrical
- (7) In television broadcasting bands
- (8) Outside television broadcasting bands
- (9) Required only for those television channels in use in the area where the equipment is located
- (10) For television channels not in use in areas where equipment is located
- (11) 34 dB μ V/m at 75 MHz, increasing linearly with frequency to 45 dB μ V/m at 400 MHz
- (12) Measurements to be taken at mains terminals of premises

- (¹³)
) Radiation from industrial, scientific and medical apparatus in these bands is not subject to control. The undermentioned limits apply to all frequencies outside these bands
- (¹⁴)
) Measured at the terminals of the equipment
- (¹⁵)
) Quasi-peak detector limit
- (¹⁶)
) Average detector limit

TABLE 1

Class of apparatus	Frequency range	Interference voltage at mains terminals (dB μ V)	Interference voltage at load terminals and at additional terminals (dB μ V)	Interference signal voltage at mains terminals (dB μ V) ⁽²⁾	Interference signal voltage at antenna terminals dB μ V	Radiated power, dB relative to 1pW (dBpW) ⁽²⁾	Radiated interference field at d metres (dB μ V/m)	Measuring distance d (m)	Measuring distance d from boundary of property (m)
(a)(i)	150 – 350 kHz 350 – 5000 kHz 5 – 30 MHz 30 – 300 MHz			⁽¹⁾ 66- 59+20log ₁₀ C 59+20log ₁₀ C 64+20log ₁₀ C		⁽¹⁾ 45- 55+20log ₁₀ C			
(a)(ii)(1)	150 – 350 kHz 350 – 5000 kHz 5 – 30 MHz 30 – 300 MHz			⁽¹⁾ 66- 59+20log ₁₀ C 59+20log ₁₀ C 64+20log ₁₀ C		⁽¹⁾ 45- 55+20log ₁₀ C			
(a)(ii)(2)	150 – 350 kHz 350 – 5000 kHz 5 – 30 MHz 30 – 300 MHz			⁽¹⁾ 70- 63+20log ₁₀ C 63+20log ₁₀ C 68+20log ₁₀ C		⁽¹⁾ 49- 59+20log ₁₀ C			
(a)(ii)(3)	150 – 350 kHz 350 – 5000 kHz 5 – 30 MHz 30 – 300 MHz			⁽¹⁾ 76- 60+20log ₁₀ C 69+20log ₁₀ C 74+20log ₁₀ C		⁽¹⁾ 55- 65+20log ₁₀ C			
(a)(iii)	150 – 500 kHz 500 – 5000 kHz 5 – 30 MHz 30 – 300 MHz			⁽¹⁾ 66- 56+20log ₁₀ C 56+20log ₁₀ C 60+20log ₁₀ C		⁽¹⁾ 45- 55+20log ₁₀ C			
(a)(iv)	150 – 500 kHz 500 – 5000 kHz 5 – 30 MHz 30 – 300 MHz 300 – 1000 MHz	⁽¹⁾ 66-56 56 60	80 74 74						
(a)(v)(1)	150 – 1605 kHz 1605 – 30000 kHz 30 – 1000 MHz						40	10	
(a)(v)(Not specified								

Class of apparatus	Frequency range	Interference voltage at mains terminals (dB μ V)	Interference voltage at load terminals and at additional terminals (dB μ V)	Interference signal voltage at mains terminals (dB μ V) ⁽²⁾	Interference signal voltage at antenna terminals dB μ V	Radiated power, dB relative to 1pW (dBpW) ⁽²⁾	Radiated interference field at d metres (dB μ V/m)	Measuring distance d (m)	Measuring distance d from boundary of property (m)
2)									
(a)(vi)	150 – 30000 kHz 30 – 300 MHz 300 – 1000 MHz						40 34	10 10	
(b)	Not specified								
(c)(i)	150 – 30000 kHz 30 – 300 MHz 300 – 1000 MHz						46 40	Under route Under route	
(c)(ii)	Not specified								
(c)(iii)	Not specified								
(d)	150 – 30000 kHz 30 – 75 MHz 75 – 400 MHz 400 – 1000 MHz						40 34 ⁽¹¹⁾ 34- 45 45	10 10 10 10	
(e)(i)	13.56 MHz \pm 0.05% ⁽¹³⁾ 27.12 MHz \pm 0.6% 40.68 MHz \pm 0.05%								
(e)(ii)	150 – 285 kHz 285 – 490 kHz 490 – 1605 kHz 1605 – 3950 kHz 3950 – 30000 kHz 30 – 470 MHz 470 – 1000 MHz			70 ⁽¹⁴⁾ 66 ⁽¹⁴⁾ 60 ⁽¹⁴⁾ 60 ⁽¹⁴⁾ 60 ⁽¹⁴⁾			34 48 34 48 34 30 ⁽⁷⁾ 54 ⁽⁸⁾ 40 ⁽⁷⁾ 54 ⁽⁸⁾	100 100 100 100 100 30 30 30 30	
(e)(iii)	150 – 200 kHz 200 – 285 kHz 285 – 490 kHz 490 – 500 kHz 500 – 1605 kHz 1605 – 3950 kHz 3950 – 30000 kHz 30 – 470 MHz			70 ⁽¹²⁾ 66 ⁽¹²⁾ 66 ⁽¹²⁾ 66 ⁽¹²⁾ 60 ⁽¹²⁾ 60 ⁽¹²⁾ 60 ⁽¹²⁾			34 34 48 34 34 48 34		100 100 100 100 100 100 30 ⁽⁹⁾

Class of apparatus	Frequency range	Interference voltage at mains terminals (dB μ V)	Interference voltage at load terminals and at additional terminals (dB μ V)	Interference signal voltage at mains terminals (dB μ V) ⁽²⁾	Interference signal voltage at antenna terminals dB μ V	Radiated power, dB relative to 1pW (dBpW) ⁽²⁾	Radiated interference field at d metres (dB μ V/m)	Measuring distance d (m)	Measuring distance d from boundary of property (m)
	470 – 1000 MHz						34 ⁽¹⁰⁾ 40 ⁽⁹⁾ 54 ⁽¹⁰⁾		100 30 30
	30 – 1000 MHz						46	300	
(e)(iv)	3000 – 6000 kHz						70	300	
(f)(i)	75 – 108 MHz 108 – 132 MHz Harmonics below 300 MHz Harmonics above 300 MHz				60 54 50 52		60 54 52 56	3 3 3 3	
(f)(ii)	174 – 200 MHz 200 – 300 MHz Harmonics below 300 MHz Harmonics above 300 MHz 300 – 1000 MHz Harmonics up to 1000 MHz				50 50 50 50 66		57 66 52 56 70 56	3 3 3 3 3 3	
(f)(iii)	150 – 500 kHz 500 – 1605 kHz	⁽³⁾ 59-46 ⁽⁴⁾ 56-52 ⁽⁵⁾ 46 ⁽⁶⁾ 52							
(f)(iv)	150 – 1605 kHz 1605 – 30000 kHz 30 – 108 MHz 108 – 132 MHz 132 – 300 MHz 300 – 1000 MHz			63.5 63.5	70 40		49.5 49.5 40	3 3 3	
(g)(i)	150 – 500 kHz 500 – 5000 kHz 5000 – 30000 kHz 30 – 230 MHz 230 – 1000 MHz	⁽¹⁾⁽¹⁵⁾ 66-56 ⁽¹⁾⁽¹⁶⁾ 56-46 ⁽¹⁵⁾ 56 ⁽¹⁶⁾ 46 ⁽¹⁵⁾ 60 ⁽¹⁶⁾ 50					30 ⁽¹⁵⁾ 37 ⁽¹⁵⁾	10 10	

ANNEXURE F

TABLE 2

Limits of Noise Voltage at Mains Terminals in the Range 150 to 200 KHz
for Domestic Appliances

<u>Type of appliance</u>	<u>Limit</u>
All appliances not listed below	2 000 x C μ V
Warming plates, cooking ovens, deep-fat fryers, space heaters, forced air heaters, convectors, refrigerators, immersion heaters, boilers, instantaneous water heaters, waffle irons, kettles, coffee percolators, milk boilers, sterilizers, warming pads, blankets, bed warmers, separate thermostats for control of room temperatures (such as water heaters and oil burners), irons, frying pans, stewing pans, automatic toasters, cooking ranges with automatic plates	3 160 x C μ V

TABLE 3

Factor f values for Various Appliances

<u>Type of Appliance</u>	<u>Factor f</u>
All appliances not listed below	1
Stoves	0.5
Appliances with more than one cooking plate controlled by thermostats or energy regulators	0.5
Refrigerators	0.5
Irons	0.66

ANNEXURE F

TABLE 4

Interference Suppression in Internal Combustion Engines

For the purposes of the Annexure the letters and figures in the left-hand column represent the class of suppressor mentioned in the column on the right against the relative or figure.

<u>Suppressor Class</u>	<u>Description</u>
1	Spark-plug suppressor
2	Shielded spark-plug suppressor
3	Suppressed spark-plug or resistor spark-plug
4	Resistive cable
5	Reactive cable
A	Distributor cap with built-in centre resistor (resistor brush) or with plug-in resistor
B	Rotor with resistor
C	Distributor cap with built-in centre resistor (resistor brush) or with plug-in resistor and resistors in the distribution outlets or in the cables near the distribution cap
D	Distributor cap with a resistor in the rotor and resistors in all the spark-plug outlets or spark-plug leads

- (i) Internal-combustion engines with metal engine enclosures or special metal ignition-system enclosures -
 - (a) with distributors shall be equipped with the following classes of suppressors:
 - Class 1 together with class B or C or D
 - Class 2 together with class A or B or C or D
 - Class 3 together with class A or B or C or D
 - Class 4 (all spark-plug leads) together with class A or B
 - Class 4 (all leads)
 - Class 5 (all spark-plug leads) together with class A or B
 - (b) without distributors shall be equipped with the following class of suppressors:
 - Class 1 or 2 or 3 or 4 or 5
- (ii) Internal-combustion engines without metal engine enclosures or special metal ignition-system enclosures-
 - (a) with distributors shall be equipped with the following classes of suppressors:
 - Class 2 together with class C or D
 - Class 3 together with class C or D
 - Class 2 together with 4 or 5 (all leads)
 - Class 3 together with 4 or 5 (all leads)

- (b) without distributors shall be equipped with the following class of suppressor:
Class 2 or 3

ANNEXURE G1

CERTIFICATE OF COMPLIANCE WITH THE RADIO REGULATIONS

This is to certify that the apparatus described below has, in terms of regulation 43 of the Radio Regulations been produced for examination and that, after examination, the apparatus was found to meet the applicable provisions of the said regulations.

Certificate number:

Date of issue:

Description of apparatus:

Issued to:

Address:

.....

.....

.....

Country of manufacture or assembly:

Manufacturer's name:

Trade name of apparatus:

.....

for Communications Authority of Namibia

ANNEXURE G2

APPLICATION FOR CERTIFICATE OF COMPLIANCE

I, (full name of applicant)

..... (name of company)

..... (address)

.....

intend to manufacture for sale / import for sale* the apparatus described below. I hereby apply in terms of regulation 43 of the Radio Regulations, for the issue to me / the above-mentioned company* of a certificate as mentioned in the said regulations.

Description of apparatus:

Country of manufacture or assembly:

Manufacturer's name:

Trade name of apparatus:

A sample of the above-mentioned apparatus is offered for examination with this application / a sample of the above-mentioned apparatus is not offered with this application but may be examined at *

.....

.....

(address where the apparatus may be examined)

.....

Signature of applicant / person authorised by company

Date:

* delete whichever is not applicable

ANNEXURE H

CATEGORIES OF RADIO APPARATUS WHICH SHALL NOT REQUIRE A RADIO FREQUENCY SPECTRUM LICENCE, CERTIFICATE, AUTHORITY OR PERMIT

Column A	Column B	Column C	Column D	Column E
Frequency Bands	Type of Device	Max Radiated Power or Field Strength Limits	Relevant Standard	Additional Requirements
9.00 – 59.75 kHz	Inductive Loop System	72 dBµA/m@10m	EN 300 330 EN 301 489-1,3	CEPT/ERC/REC70-03
59.75 – 60.25 kHz	Inductive Loop System	42 dBµA/m@10m	EN 300 330 EN 301 489-1,3	CEPT/ERC/REC70-03
60.25 – 70.00 kHz	Inductive Loop System	72 dBµA/m@10m	EN 300 330 EN 301 489-1,3	CEPT/ERC/REC70-03
70 – 119 kHz	Inductive Loop System	42 dBµA/m@10m	EN 300 330 EN 301 489-1,3	CEPT/ERC/REC70-03
119 – 135 kHz	Inductive Loop System including RFID's	72 dBµA/m@10m	EN 300 330 EN 301 489-1,3	CEPT/ERC/REC70-03
1606.5 – 1610 kHz	Baby Alarms, Wireless Record Players	1W EIRP		
7400 – 8800 kHz	Inductive Loop System	9 dBµA/m@10m	EN 300 330 EN 301 489-1,3	CEPT/ERC/REC70-03
6.765 – 6.795 MHz	Inductive Loop System	42 dBµA/m@10m	EN 300 330 EN 301 489-1,3	CEPT/ERC/REC70-03
13.553 – 13.567 MHz	Inductive Loop System including RFID's	42 dBµA/m@10m	EN 300 330 EN 301 489-1,3	CEPT/ERC/REC70-03
26.957 – 27.283 MHz	Inductive Loop System	42 dBµA/m@10m	EN 300 330 EN 301 489-1,3	CEPT/ERC/REC70-03
26.957 – 27.283 MHz	Non-specific SRD	10 mW ERP	EN 300 220 EN 301 489-1,3	CEPT/ERC/REC70-03
26.99 – 27.20 MHz	Surface Model Control	100 mW ERP	EN 300 220 EN 301 489-1,3	CEPT/ERC/REC70-03
35.00 – 35.25 MHz	Aircraft Model Control only	100 mW ERP	EN 300 220 EN 301 489-1,3	CEPT/ERC/REC70-03
36.65 – 36.75 MHz	Wireless Microphones	100 mW ERP	EN 300 422	
40.65 – 40.70 MHz	Wireless Microphones	100 mW ERP	EN 300 422	
40.66 – 40.70 MHz	Non-specific SRD	10 mW ERP	EN 300 220 EN 301 489-1,3	CEPT/ERC/REC70-03
46.61 – 46.97 MHz 49.67 – 49.97 MHz	CTO Cordless Phones	10 mW ERP	ICASA TE-013	
53 – 54 MHz	Wireless Microphones	100 mW ERP	EN 300 422	

Column A	Column B	Column C	Column D	Column E
Frequency Bands	Type of Device	Max Radiated Power or Field Strength Limits	Relevant Standard	Additional Requirements
54.4500; 54.4625; 54.4750; 54.4875; 54.5000; 54.5125; 54.5250; 54.5375; 54.5500; 60.0250; 60.0375; 60.0500; 60.0625; 60.0750; 60.0875; 60.1000; 60.1125; 60.1250 MHz	Model Control	5W ERP	EN 300 220-1	
60.1375 – 60.375 MHz	Aircraft Model Control only	5W ERP	EN 300 220-1	This band is to be gradually phased out
141 – 142 MHz	Remote control industrial apparatus	100mW	EN 300 220-1	
148 – 152 MHz	Wildlife telemetry tracking	25mW		The use of this band is restricted to national game parks
173.2125 – 173.2375 MHz	Non-specific SRD telecommand only	10mW ERP:	EN 300 220-1	Channel spacing = 25kHz
173.2375 – 173.2875 MHz	Non-specific SRD	10mW ERP:	EN 300 220-1 EN 301 489-1,3	Channel spacing = 25kHz
173.7 – 175.1 MHz	Wireless Microphones	10mW EIRP:	EN 300 422	CEPT/ERC/REC 70-03
402 – 405 MHz	Medical Implants	25µW ERP	EN 300 220-1 EN 301 489-1,3	CEPT/ERC/REC 70-03
402 – 406 MHz	Doppler shift movement detectors, wireless microphones, garage door openers, motor car alarm systems	10mW ERP:	EN 300 422 EN 300 220-1 EN 301 48-1,3	
433.05 – 434.79 MHz	Non-specific SRD	100 mW ERP:	EN 300 220-1	CEPT/ERC/REC 70-03
463.975 MHz; 464.125 MHz; 464.175 MHz; 464.325 MHz; 464.375 MHz	Low Power Radio	500mW		Channel spacing = 25kHz
863 – 865 MHz	Wireless Audio Systems	10mW ERP:	EN 301 357	CEPT/ERC/REC 70-03
863 – 865 MHz	Wireless Microphones	10mW ERP:	EN 300 422	CEPT/ERC/REC 70-03

Column A	Column B	Column C	Column D	Column E
Frequency Bands	Type of Device	Max Radiated Power or Field Strength Limits	Relevant Standard	Additional Requirements
864.10 – 868.10 MHz	CT2 Cordless phones	10mW ERP:	I-ETS 300 131 EN 301 489-1,10 ICASA TE - 012	
868.00 – 868.60 MHz	Non-specific SRD	25 mW ERP	EN 300 220 EN 301 489-1,3	CEPT/ERC/REC 70-03
868.60 – 868.70 MHz	Alarms	10 mW ERP	EN 300 220 EN 301 489-1,3	CEPT/ERC/REC 70-03
868.70 – 869.20 MHz	Non-specific SRD	25 mW ERP	EN 300 220 EN 301 489-1,3	CEPT/ERC/REC 70-03
869.25 – 869.30 MHz	Alarms	10 mW ERP	EN 300 220 EN 301 489-1,3	CEPT/ERC/REC 70-03
869.40 – 869.65 MHz	Non-specific SRD	500 mW ERP	EN 300 220 EN 301 489-1,3	CEPT/ERC/REC 70-03
869.65 – 869.70 MHz	Alarms	25 mW ERP	EN 300 220 EN 301 489-1,3	CEPT/ERC/REC 70-03
869.70 – 870.00 MHz	Non-specific SRD	5 mW ERP	EN 300 220 EN 301 489-1,3	CEPT/ERC/REC 70-03
915.2 – 915.4 MHz	Passive Tags	-		
1880 – 1900 MHz	DECT cordless phones	250 mW ERP (peak)	EN 300 175 EN 301 489-1,6	
2400.0 – 2483.5 MHz	Non-specific SRD		EN 300 328-2 EN 301 489-1,3	CEPT/ERC/REC 70-03
2400.0 – 2483.5 MHz	Wideband Wireless Systems WLAN	100 mW ERP:	EN 300 328 EN 301 489-1,17	CEPT/ERC/REC 70-03
2400.0 – 2483.5 MHz	FDMA	25 mW ERP:	I-ETS 300 440 EN 301 489-1,3	CEPT/ERC/REC 70-03
2400.0 – 2483.5 MHz	Low Power Video Surveillance	100 mW ERP	EN 300 440 EN 301 489-1,3	CEPT/ERC/REC 70-03
5150 – 5350 MHz	Hiperlan: indoor use only	200 mW EIRP	EN 300 386-1 EN 301 489-1,17	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)23
5470 – 5725 MHz	Hiperlan: indoor and outdoor use	1 W EIRP	EN 300 386-1 EN 301 489-1,17	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)23
5725 – 5875 MHz	Non-specific SRD	25 mW EIRP	I-ETS 300 440 EN 301 489-1,3	CEPT/ERC/REC 70-03

Column A	Column B	Column C	Column D	Column E
Frequency Bands	Type of Device	Max Radiated Power or Field Strength Limits	Relevant Standard	Additional Requirements
5795 – 5805 MHz	RTTT data	2 W EIRP	EN 300 674 ES 201 674	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (92)02
5805 – 5815 MHz	RTTT data	2 W EIRP	EN 300 674 ES 201 674	CEPT/ERC/REC 70-03 CEPT/ERC/DEC (92)02
9200 – 9500 MHz	FDDA	25 mW EIRP	I-ETS 300 440	CEPT/ERC/REC 70-03
9500 – 9975 MHz	FDDA	25 mW EIRP	I-ETS 300 440	CEPT/ERC/REC 70-03
10.5 – 10.6 GHz	FDDA	500 mW EIRP	I-ETS 300 440	CEPT/ERC/REC 70-03
13.4 – 14.0 GHz	FDDA	25 mW EIRP	I-ETS 300 440	CEPT/ERC/REC 70-03
17.1 – 17.3 GHz	Hiperlan	100 mW EIRP		CEPT/ERC/REC 70-03 CEPT/ERC/DEC (99)23
24.00 – 24.25 GHz	Non-specific SRD	100 mW EIRP	I-ETS 300 440	CEPT/ERC/REC 70-03
24.05 – 24.25 GHz	FDDA	100 mW EIRP	I-ETS 300 440	CEPT/ERC/REC 70-03
76 – 77 GHz	RTTT radar	55dBm peak EIRP	EN 301 091	CEPT/ERC/REC 70-03