



**PUBLIC UTILITIES  
COMMISSION  
BELIZE**

# Belize Amateur Radio Framework - 2022

Belize

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## 1 Introduction

Amateur Radio is a recognized national asset, providing trained operators, technical specialist and emergency communications in time of need. Amateur Radio is governed by the Belize Telecommunication Act [CAP.229 of 2020] and associated Statutory Instrument [No. 110 of 2002] and managed by the Public Utilities Commission (PUC).

Amateur Radio and amateur satellite services are for qualified persons 12 years and above who are interested in radio technique solely with a personal aim and without financial gain. This document has been formulated to provide guidance to persons who are desirous of obtaining Amateur Radio privileges and for those who are operating in the Amateur Radio environment in Belize.

The objectives of this document are to provide clear direction about the Amateur Radio Administration and operation in Belize, and to foster increased participation and cooperation. In addition to activities of licensed Amateur operators, it is intended for local clubs and associations to maintain their activities, promote, and build the Amateur Radio community in Belize.

## 2 Scope

The purpose of this document is to provide a clear and comprehensive outline for amateur radio operations in Belize. It shall describe, among other things, licenses, rules, standards, important procedures and operating limits for amateur operations.

In the event of any inconsistencies between this framework and the Act or Regulations, the provisions of the Act or applicable Regulation shall take precedence.

## 3 Glossary of Terms – applicable to this Framework

**Act** – The Telecommunication Act [CAP.299 of 2020] in Belize, Central America.

**Amateur Radio** – A radio communications service for the purpose of self-training, intercommunication and technical investigations carried out by amateur, that is, duly authorized persons interested in radio technique solely with a personal aim and without pecuniary (monetary) interest.

**Amateur Radio License** – A license issued to an amateur radio operator that specifies the class of amateur radio operations granted and associated privileges and/or permits

an amateur radio to use and to be in possession of telecommunication equipment required to engage in amateur radio operations.

**Amateur Radio Operator** – A person holding an amateur radio license permitting the operation of an amateur radio station.

**Amateur Radio Station** – A station licensed for amateur radio operations, including necessary equipment, used for amateur communication.

**Amateur Radio Operations** – Radio communications for the purpose of self-training, intercommunication and technical investigations carried out by amateurs conducted in the prescribed manner in line with proper conduct and procedures for Amateur Radio communication.

**Applicant** – A person applying for a license or a frequency authorization under the Act.

**Application** – An application for a license or frequency authorization, including a modification or renewal of a license.

**Application fees** – The fees payable by applicant for a license or frequency authorization.

**Auxiliary Station** – An amateur radio station, other than a message forwarding system, transmitting communication point-to-point within a system of co-operating amateur radio stations.

**Band** – A range of frequencies. An Amateur Band is a range of frequencies on which amateurs are allowed to transmit.

**Bandwidth** – is the range of frequencies that a radio signal occupies. For the purposes of this Framework, the width of a frequency band outside of which the mean power is attenuated at least 26 dB below the mean power of the transmitted signal within the band.

**Beacon Station** – An amateur station transmitting communications for the purposes of observation of propagation and reception or other related experimental activities.

**Broadcasting** – One-way transmissions intended to be received by the general public, either direct or relayed.

**Call sign** – The letters and numbers that identify a specific amateur and the country in which the license was granted. Assigned to an amateur operator upon qualifying for a specific Amateur license class.

**Contest** – An amateur radio activity in which amateur radio operators and their stations compete to contact the most stations within a designated period of time.

**Control operator** – The person designated by the licensee of a station to be responsible for the transmissions of an amateur station.

**CW** – Abbreviation for “continuous wave”. Radio communications transmitted by on/off keying of a continuous radio-frequency signal (Morse code).

**Data** – Telemetry, telecommand and compute communications emissions having designations with A, C, D, F, G, H, J or R as the first symbol; 1 as the second symbol; D as the third symbol; and emissions J2D.

**DX** – An amateur radio abbreviation for distance or foreign countries.

**Earth Station** – An amateur station located on or within 50 km of the Earth’s surface, intended for communications with space stations or with other Earth stations by means of one or more objects in space.

**Emergency communications** – Communications conducted under adverse conditions where normal channels of communications are not available.

**Emission designator** – a mode of classifying the types of emissions, modulation and transmission characteristics of a transmitter. The predominant format is that set by the International Telecommunications Union (ITU), and a guide to this format for emission designation has been supplied in Appendix A.

**FM** – Abbreviation for Frequency Modulation.

**Harmful interference** – Interference that seriously degrades, obstructs or repeatedly interrupts a radio communication service operating in accordance with the Telecommunication Act.

**License fees** – Initial and annual fees that are payable by amateur radios operator [S.I 110of 2022]

**Log** – also called Station Log, a record of communications by amateur radio operators which can be in print or electronic format.

**Mode** – The combination of a type of information and a method of transmission. For example, FM radiotelephony of FM phone consists of using FM modulation to carry voice information. The combination of a satellite’s *uplink* and *downlink* bands.

**Morse code** – The system of encoding characters as dots and dashes invented by Samuel Morse implemented by keying on/off of a continuous wave radio signal.

**PEP** - Peak Envelope Power. The average power supplied to the antenna transmission line by a transmitter during one RF cycle at the crest of the modulation envelope taken under normal operating conditions.

**Phone** – Emissions carrying speech or other sound information having designators with A, C, D, F, G, H, J, or R as the first symbol; 1, 2 or 3 as the second symbol; E as the third symbol. Also includes speech emissions having B as the first symbol; 7, 8 or 9 as the second symbol; E as the third symbol.

**Public Utilities Commission** – The "PUC" or "the Commission", established under Chapter 223 of 2000.

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

**RF** – Abbreviation for radio frequencies. Radio signals are generally considered to be any electrical signals with a frequency higher than 20,000 Hz up to 300 GHz.

**Regulations** – Refers to the regulations that have been made under the Telecommunication Act CAP.299 of 2020 in Belize.

**Repeater** – A station that retransmits the signals of other stations to give them greater range.

**RTTY** – Narrow band direct-printing telegraphy emissions having designators with A, C, D, F, G, H, J or R as the first symbol; 1 as the second symbol; B as the third symbol; and emission J2B.

**Space station** – An amateur station located more than 50 km above the Earth's surface.

**Spurious emissions** – Signals from a transmitter on frequencies other than the operating frequency.

**SSB** – Single Side Band is a form of amplitude modulation in which one sideband and carrier are removed.

**SSTV** – Slow Scan Television. A television system used by amateurs to transmit pictures within the bandwidth required for a voice signal.

**Telecommand** – A one-way radio transmission to start, change or end functions of a device at a distance.

**Telecommunications** – the transmission, emission or reception of signs, signals, writings, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.

**Telemetry** – Information about a device sent to a receiving station by radio.



## 4 Amateur Radio Licenses

The following Amateur Radio Licenses can be granted in Belize:

- (i) Local License; (personal license)
  - a. Technician Class Amateur Radio License
  - b. General Class Amateur Radio License
  - c. Advanced Class Amateur Radio License
- (ii) Reciprocal License; (personal license)
- (iii) Special Events Amateur Radio License; (non-personal license)
- (iv) Special Station Amateur Radio License; (non-personal license)

The Amateur Radio Licenses listed as '**personal licenses**' is an operator license that recognizes the skills that have been acquired by specifying the class of amateur radio operations granted and associated privileges. It is also a station license that permits the amateur radio operator to use and to be in possession of telecommunication equipment required to engage in amateur radio operations.

The Special Events and Special Station Amateur Radio Licenses are considered as '**non-personal licenses**' that can only be granted to licensed amateur radio operators or to recognized groups of amateur radio operators. Where the applicant is a club, association or other recognized group, there must be a designated representative who must be at least a General Class licensed amateur radio operator.

The Technician Class, General Class, Advanced Class, Special Events and Special Station Amateur Radio Licenses are available to resident citizens only. Reciprocal Licenses are awarded on the strength that applicants possess and maintain valid amateur radio licenses in their country of origin.

### 4.1 Technician Class: Description, Requirements and Privileges

#### 4.1.1 Description

A Technician Class Amateur Radio License is the most basic Amateur Radio License available to the individual operator to introduce him/her to the hobby. It is non-exportable and so it is only valid in Belize. Upon the grant of this license, the operator has basic operating privileges

#### 4.1.2 Requirements

To be considered for Technician Class Amateur Radio License, the applicant

- (i) must be a citizen of Belize,
- (ii) must be at least twelve (12) years old,
- (iii) must pass the Technician Class Examination administered by the PUC or equivalent exam provided by recognized certifying entities on a case-by-case basis.
- (iv) must satisfy the requirements of the application process.

#### 4.1.3 Privileges

The operating privileges for the Technician Class are:

- (i) access to frequencies in the HF and VHF Band, as specified in [Section 13.1](#), *Approved Frequency Band, Modes of Operations and Power Limits*.

## 4.2 General Class: Description, Requirements and Privileges

### 4.2.1 Description

The General Class Amateur Radio License is the next license level above the Technician Class License available to Belizeans and is considered a license of recognized standing. The operator is required to have extensive knowledge of amateur radio theory and the corresponding practical skills. For amateur radio operators licensed at the Technician Class, it is expected that they will be mentored by an experienced operator, holding at least a General Class Amateur Radio License to ensure that adequate practice at the skills and standards associated with the General Class Amateur Radio is attained.

### 4.2.2 Requirements

To be considered for a General Class Amateur Radio License, the applicant must:

- (i) be a citizen of Belize.

- (ii) have successfully completed General Class Examinations administered by the PUC or equivalent exam provided by recognized certifying entities on a case-by-case basis.
- (iii) have sat and successfully passed the Technician Class Examinations,
- (iv) have been an active Technician Class Amateur Radio Operator for at least one (1) year,
- (v) maintain technician status/valid license,
- (vi) satisfy the requirements of the application process.

#### 4.2.3 Privileges

The operating privileges for the General Class are:

- (i) access to frequencies in the HF, UHF, and VHF Bands, as specified in [Section 13.2](#), *Approved Frequency Band, Modes of Operations and Power Limits*,
- (ii) to apply for and be granted a Special Event Amateur Radio License, in keeping with [Section 4.5](#),
- (iii) to own and operate Special Stations, as discussed in [Section 4.6](#),
- (iv) The license for holders of a General Class Amateur Radio License is exportable to territories where mutual or reciprocal agreements with Belize exist.

### 4.3 Advanced Class: Description, Requirements and Privileges

#### 4.3.1 Description

The Advanced Class Amateur Radio License is the most senior license available to Belize citizens and is a license of recognized standing. The operator is required to have extensive practical skills, in keeping with the privileges associated with the General Class Amateur Radio License, which would create a solid foundation for the skills and operating privileges associated with the Advanced Class Amateur Radio License.

In addition to an examination requirement, the prospective Advanced Class amateur radio operator should display exceptional performance as an amateur radio operator which

could include, but is not limited to, national service in emergency communications and time spent as an active amateur radio operator (at least three years).

#### 4.3.2 Requirements

To be considered for an Advanced Class Amateur Radio License, the applicant must:

- (i) Be a citizen of Belize,
- (ii) Have successfully completed the Advanced Class Amateur Radio Examinations administered by the PUC or equivalent exam provided by recognized certifying entities on a case-by-case basis.
- (iii) Have maintained a valid General Class Amateur Radio License for at least 3 years,
- (iv) Satisfy the requirements of the application process.

#### 4.3.3 Privileges

The operating privileges for the Advanced Class are:

- (i) access to frequencies in the HF, UHF, and VHF Bands as specified in [Section 13.3](#), *Approved Frequency Band, Modes of Operations and Power Limits*,
- (ii) to apply for and be granted a Special Events Amateur Radio License, in keeping with [Section 4.5](#),
- (iii) to own and operate Special Stations, as discussed in [Section 4.6](#),
- (iv) The license for holders of an Advanced Class Amateur Radio License is exportable to the territories where mutual or reciprocal agreements with Belize exist.

### 4.4 Reciprocal License: Description, Requirements and Privileges

#### 4.4.1 Description

The Reciprocal Amateur Radio License is granted to non-national, non-resident Amateur Radio Operators visiting Belize. The operator must hold a valid license of at least a General Class in his/her home territory for the duration of the term that the Reciprocal Amateur Radio License that would be issued in Belize. The license would be valid up to

a term of five years of the validity of their home territory's license five year in Belize only. The license fee is applied for each year for the duration requested. The license is non-exportable. Upon expiry, the operator would be required to re-apply. The call sign issued would comprise the Belize V3 prefix / the operator's overseas call sign.

#### 4.4.2 Requirements

To be considered for a Reciprocal Amateur License the applicant must:

- (i) possess an Amateur Radio License from country of origin comparable to that of Belize's General Class Amateur Radio License, which must be valid at the time of application.
- (ii) Satisfy the requirements of the application process.

#### 4.4.3 Privileges

The operating privileges for the Reciprocal License Class are:

- (i) access to frequencies in the HF, UHF, and VHF Bands, as specified in [Section 13.2](#), *Approved Frequency Band, Modes of Operations and Power Limits*.

### 4.5 Special Events: Description, Requirements and Privileges

#### 4.5.1 Description

The Special Events Amateur Radio License can be granted for special events such as fairs, radios shows, conventions, or to commemorate special occasions. Special Events Amateur Radio License is a station license for which a separate call sign will be issued. The license will only be issued to local amateur radio operators and must be under the supervision of a holder of at least a valid General Class Amateur Radio License. This license and call sign are non-exportable and is valid for up to one (1) week and is renewable.

#### 4.5.2 Requirements

To be considered for a Special Events Amateur Radio License, the applicant, which can also be a group, club or association, must:

- (i) be the holder of a valid Belize Amateur Radio License of at least General Class. For groups, clubs, and associations, a holder of a Belize Amateur Radio License of at least General Class must be designated as the responsible party,
- (ii) clearly state the purpose for which a Special Events Amateur Radio License and call sign are required,
- (iii) clearly state the duration for which the Special Events Amateur Radio License would be required,
- (iv) satisfy the requirements of the application process

#### 4.5.3 Privileges

The operating privileges and/or restrictions, if any, for a Special Events Amateur Radio License would be indicated in the license.

### 4.6 Special Station: Description, Requirements and Privileges

#### 4.6.1 Description

A Special Station Amateur Radio License may be granted to

- (i) permit the permanent establishment and operations of the following fixed stations by individually licensed amateur radio operators,
  - a. Auxiliary Stations,
  - b. Beacon Stations,
  - c. Repeater Stations,
  - d. Earth Stations, or

- (ii) Essential services, recognized clubs, societies, associations and organizations approved/recognized by the PUC that desire or need access to the amateur radio service, or wish to establish and operate the above-stated fixed stations.

The Special Station Amateur Radio License can be granted for a term of up to three (3) years and is non-exportable.

The individual amateur radio operator who desires a Special Station Amateur Radio License must be the holder of a Belize Amateur Radio License of at least the General Class.

For recognized clubs, societies, associations, and organizations, the operating privileges and obligations would be those associated with General Class amateur radio operations, unless otherwise specified.

#### 4.6.2 Requirements

To be considered for a Special Station Amateur Radio License, the applicant, which can also be a group, club, or association, must:

- (i) Be the holder of a Belize Amateur Radio License of at least General Class. For groups, clubs, and associations, a holder of a valid Belize Amateur Radio License of at least general Class must be designated as the responsible party,
- (ii) Clearly state the purpose for which a Station Amateur Radio License is required,
- (iii) Satisfy the requirements of the application process.

#### 4.6.3 Privileges

Privileges and restrictions to be recommended by the PUC on a case-by-case basis.

## 5 Examinations

One of the key requirements in order to obtain a Technician Class, General Class, and Advanced Class Amateur Radio License is to have passed the Commission approved examination for the respective levels.

The PUC has a different set of rules for each type of radio use. These uses are called services. Each service was created for a specific purpose — Land Mobile, Aviation and Broadcasting, for example. All services require that a license be obtained before transmissions are made. These are called licensed services and the Amateur service is one such service.

Most services do not require an examination to be licensed. This is because strict technical standards apply for the radio equipment used in these services and restricts how those radios may be used. This trade-off reduces the training required for those radio users. Licensing in these services is primarily a method to control access to the airwaves.

An Amateur license exist to ensure that the holder understands the basics before transmitting. Amateur operators have great latitude in how they use radios. Operators can build and repair their own radios and procedures of communications are flexible with few restrictions. This flexibility requires that amateurs be more knowledgeable than the typical user in other services. This is the reason why amateurs have to pass a licensing examination.

## 5.1 Examination Syllabus

In Belize, the PUC administers the exams for Amateur Radio licenses. The exams are patterned from the American Radio Relay League (ARRL) Ham Radio Manual and questions are derived from a pool of questions based on the content of the study manual. The syllabus may comprise but is not limited to the following topics:

- (i) Basic Operating Principles;
- (ii) Amateur Station Operating Principles;
- (iii) Radio Wave Propagation;
- (iv) Amateur Radio Practices;
- (v) Electrical Principles;
- (vi) Circuit Components;
- (vii) Practical Circuits;
- (viii) Signals and Emissions;
- (ix) Antennas and Feed lines;
- (x) Electrical and RF Safety.



## 5.2 Preparation for Examinations

Information for exams are generalized in scope and are based on the ARRL question study manuals for Technician, General, and Advanced Class Amateur level exams curriculum. Study guide support is readily available online and can also be accessed through the local Belize Amateur Radio Club (BARC). The question pool is also made available on the PUC's website to aid in exam preparation for the respective class of Amateur License (<https://www.puc.bz/telecommunications/>)

## 5.3 Examination Appointment

Examinations for Amateur Radio Licenses are made available by appointment. Exam days are designated for Mondays and Wednesdays of a typical work week. Consideration for examinations on other days may be considered on a case-by-case basis.

## 5.4 Examination Registration

Prospective candidates may set appointments in person, post or electronically. The deadline date for setting an appointment would be at least one (1) week before the examination date, which would also be the deadline for payment of the examination fee.

Upon setting the appointment, examination candidates will be assigned an examination number that will represent the candidate on the exam answer sheet. Also, the candidate will receive confirmation of the examination date via electronic means, post, or telephone.

## 5.5 Format of Examination

The exam will be provided as follows:

- (i) Exam question books will be provided to each candidate based on amateur class. The candidate must not write in the question booklet.
- (ii) Each candidate will be given a multiple-choice answer sheet to indicate their answers. Extra work paper will be made available to candidates as needed.

- (iii) Each question booklet has a corresponding code which is to be included on the answer sheet in addition to other required identification fields to be completed by the candidate.
- (iv) Standard calculators are allowed. Phones are not to be used to substitute for calculators.
- (v) The exam will be invigilated and has a duration of one and a half hours (1 ½ hr).

## 5.6 Examination Results

The minimum passing grade for Amateur Radio License examinations is 75%, and the examination results will indicate that a candidate has either been '**successful**' or '**unsuccessful**'.

The examination results will be made available no later than two (2) weeks after an examination has been written. Additionally, the Commission may, using the examination numbers publish these examination results on its website.

Unless otherwise specified, final examination results will be sent directly to the candidates by post or electronically, after the provisional results have been approved by the Commission.

## 5.7 Special Requirements for Examinations

For prospective examination candidates who have special needs or circumstances that might affect their ability to perform under examination conditions and which ought to be considered, these matters should be presented upon registration, as they will be dealt with on a case-by-case basis.

## 6 Application Process for an Amateur Radio License

An application for an Amateur Radio License shall be submitted to the Commission at its office at Marina Towers, #4 Princess Margaret Drive, 2<sup>nd</sup> Floor, Belize City and shall be:

- (i) in the prescribed form and contain such information and particulars as specified in the form which may be found in Appendix B of this document and on the PUC web site, and
- (ii) accompanied by the prescribed application fee found in the Fees section.

Upon receipt of the application, the Commission shall:

- (i) Issue a receipt in respect of the application fees paid.
- (ii) Acknowledge receipt of the application.
- (iii) Conduct a preliminary review of the application to ensure that all sections of the application have been completed and that all stated supporting documents have been supplied. If the application is deemed complete, it will initiate its formal review process.
- (iv) If omissions have been identified in the application as submitted, notify the applicant and specify a deadline to supply the outstanding information.
- (v) When the deadline for submitting the outstanding information has lapsed, promptly initiate its review procedure.

## 7 Assessment of Amateur Radio Applications by the Commission

The Commission will assess the application and when necessary, it might request additional information from the applicant in order to complete its review of the application.

In reviewing applications for an Amateur Radio License, the Commission will ensure that, in addition to receiving all stated supporting documents, the required technical content and equipment listing have been provided (where applicable). Further, the assessment will verify the existence of some degree of technical competence, in keeping with the

class of license that is being applied for and the operating privileges that would be bestowed.

Upon completion of its evaluation, the Commission will decide whether or not the applicant should be awarded an Amateur Radio License.

## 8 Licensing Process

As prescribed by Statutory Instrument No. 110 of 2002, the Commission shall decide whether or not to grant a license to the applicant.

### 8.1 Commission Decides to Grant License

Upon notification that the Commission has decided to grant an Amateur Radio License, the prospective licensee must make arrangements:

- (i) to pay the license fee, and
- (ii) to arrange with the PUC for the delivery of the license.

### 8.2 Commission Decides Not to Grant License

In the event that the Commission decides not to grant a license, the applicant will be informed on the reason for the decision.

### 8.3 License Document

As prescribed under the S.I. 110 of 2002, the license will also detail the operating parameters pertinent to the license, including the privileges and obligations on the licensee as an amateur radio operator.

## 9 Fees

The main fees associated with amateur radio examination is prescribed below:

- (i) application fee of \$10,
- (ii) examination fee of \$20.

Fees for the Amateur Radio Operators License is prescribed under the Statutory Instrument No.110 of 2002. Application fees are payable to the Commission upon submission of an Application for an Amateur Radio License. License fees are payable to the Commission on the grant of an Amateur Radio License and subsequently in January of the following calendar year. Examination fees are payable to the Commission to register to sit an amateur radio examination.

## 10 Renewal of an Amateur Radio License

Renewal of an Amateur Radio License will become necessary when the term of an existing license is about to expire and the operator does not intend to change his or her class of license.

The Commission may notify the licensee of the pending expiration date and provide guidance as to the process for renewal of the license. The licensee should begin the renewal process at least two months (2) before the expiration date of his or her existing license by submitting all prescribed forms and supporting documents (where necessary).

The Commission shall review the application for renewal of a license and shall decide as to whether or not the amateur radio license should or should not be renewed.

## 11 Harmful Interference

Under the International Telecommunication Union Radio Regulations (RR1-16 – 1.169), 'harmful interference' is defined as "...interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs, or repeatedly interrupts a radiocommunication service operating in accordance with Radio Regulations."

Under the Telecommunication Act (CAP.299 of 2020), the Commission is mandated to "...investigate and resolve complaints related to harmful interference". In accordance with

investigating harmful interference, the Commission may issue a directive suspending the operation of a station on that particular frequency for a period not exceeding 30 days pending investigation of the complaint.

These regulations apply to amateur radio operators using bands with Primary Service Allocations. It can be invoked by amateur radio operators should they be victim of harmful interference on frequencies that they are permitted to use on a primary basis, or can be applied against amateur radio operators should their stations be the alleged source of harmful interference outside of the amateur radio bands.

## 12 Termination of an Amateur Radio License

An amateur radio license, and by extension a license granted under the Telecommunication Act, can be terminated for a variety of reasons. It can be terminated when a Licensee fails to comply with the conditions of the license, Act, or Regulations. Under less severe circumstances, a license may be suspended for a specified period of time.

When an amateur radio license has been terminated, cancelled or revoked, the former licensee is not permitted to use nor be in possession of the amateur radio equipment. In situation where a license has been suspended, a time frame is indicated for the period of suspension.

## 13 Approved Frequency Bands, Modes of Operation and Power Limits

For each class of license, there are associated privileges. These privileges are defined in terms of wavelengths (or frequency segments/bands), the approved modes of operation for those bands, their corresponding power limits.

The following subsections will outline the frequency privileges for the Technician Class, general Class, and Advanced Class Amateur Radio licenses. Privileges for some frequency segments might be available to all or more than one license class. Prudent operation is expected to ensure that all amateur radio operators enjoy the privileges to which they are entitled.

### 13.1 Technician Class Frequency Privileges

| Wavelength | Frequency Segments (MHz) | PEP <sup>1</sup> (Watts) | Modes of Operation               |
|------------|--------------------------|--------------------------|----------------------------------|
| 80 m       | 3.525 – 3.600            | 200                      | CW                               |
| 40 m       | 7.025 – 7.125            | 200                      | CW                               |
| 15 m       | 21.025 – 21.2            | 200                      | CW                               |
| 10 m       | 28.0 – 28.3              | 200                      | CW, RTTY/Data                    |
| 10 m       | 28.3 – 28.5              | 200                      | CW, Phone                        |
| 6 m        | 50.0 – 50.1              | 1500                     | CW                               |
| 6 m        | 50.1 – 54.0              | 1500                     | CW, Phone, Image, MCW, RTTY/DATA |
| 2 m        | 144.0 – 144.1            | 1500                     | CW                               |
| 2 m        | 144.1 – 148.0            | 1500                     | CW, Phone, Image, MCW, RTTY/Data |
| 1.25 m     | 222.0 – 225.0            | 50                       | CW, Phone, Image, MCW, RTTY/Data |
| 70 cm      | 420.0 – 450.0            | 1500                     | CW, Phone, Image, MCW, RTTY/Data |
| 33 cm      | 902.0 – 928.0            | 1500                     | CW, Phone, Image, MCW, RTTY/Data |
| 23 cm      | 1240 - 1300              | 1500                     | CW, Phone, Image, MCW, RTTY/Data |
|            | 2300 - 2450              | 1500                     | All modes                        |
|            | 5650 - 5925              | 1500                     | All modes                        |
|            | 10000 - 10500            | 1500                     | All modes                        |
|            | 24000 – 24250            | 1500                     | All modes                        |
|            | 47000 - 47200            | 1500                     | All modes                        |
|            | 76000 - 81000            | 1500                     | All modes                        |
|            | 122250 - 123000          | 1500                     | All modes                        |
|            | 134000 - 141000          | 1500                     | All modes                        |
|            | 241000 - 250000          | 1500                     | All modes                        |

Table 1 - Technician Class Frequency Privileges

<sup>1</sup> PEP – means “Peak Envelope Power”

## 13.2 General Class Frequency Privileges

| Wavelength | Frequency Segments (MHz)     | PEP (Watts) | Modes of Operation                    |
|------------|------------------------------|-------------|---------------------------------------|
| 2200 m     | 135.7 kHz – 137.8 kHz        | 1           | CW, Phone, Image, RTTY/Data           |
| 630 m      | 472 kHz – 479 kHz            | 5           | CW, Phone, Image, RTTY/Data           |
| 160 m      | 1.800 – 2.000                |             | CW, Phone, Image, RTTY/Data           |
| 80 m       | 3.525 – 3.600                |             | CW, RTTY/Data                         |
| 80 m       | 3.800 – 4.000                |             | CW, Phone, Image                      |
| 60 m       | 5.3515 – 53665 (Channelized) | 100 (EIRP)  | CW, Phone (USB), RTTY/Data (<60Hz BW) |
| 40 m       | 7.025 – 7.125                | 1500        | CW, RTTY/Data                         |
| 40 m       | 7.175 – 7.300                | 1500        | CW, Phone, Image                      |
| 30 m       | 10.100 – 10.150              | 200         | CW, RTTY/Data                         |
| 20 m       | 14.025 – 14.150              |             | CW, RTTY/Data                         |
| 20 m       | 14.175 – 14.350              |             | CW, Phone, Image                      |
| 17 m       | 18.068 – 18.110              |             | CW, RTTY/Data                         |
| 17 m       | 18.110 – 18.168              |             | CW, Phone, Image                      |
| 15 m       | 21.025 – 21.200              |             | CW, RTTY/Data                         |
| 15 m       | 21.275 – 21.450              |             | CW, Phone, Image                      |
| 12 m       | 24.890 – 24.930              |             | CW, RTTY/Data                         |
| 12 m       | 24.930 – 24.990              |             | CW, Phone, Image                      |
| 10 m       | 28.000 – 28.300              |             | CW, RTTY/Data                         |
| 10 m       | 28.300 – 29.700              |             | CW, Phone, Image                      |
| 6 m        | 50.0 – 50.1                  | 1500        | CW                                    |
| 6 m        | 50.1 – 54.0                  | 1500        | CW, Phone, Image, MCW, RTTY/DATA      |
| 2 m        | 144.0 – 144.1                | 1500        | CW                                    |
| 2 m        | 144.1 – 148.0                | 1500        | CW, Phone, Image, MCW, RTTY/Data      |
| 1.25 m     | 222.0 – 225.0                | 50          | CW, Phone, Image, MCW, RTTY/Data      |
| 70 cm      | 420.0 – 450.0                | 1500        | CW, Phone, Image, MCW, RTTY/Data      |
| 33 cm      | 902.0 – 928.0                | 1500        | CW, Phone, Image, MCW, RTTY/Data      |
| 23 cm      | 1240 - 1300                  | 1500        | CW, Phone, Image, MCW, RTTY/Data      |
|            | 2300 - 2450                  | 1500        | All modes                             |
|            | 5650 - 5925                  | 1500        | All modes                             |
|            | 10000 - 10500                | 1500        | All modes                             |
|            | 24000 – 24250                | 1500        | All modes                             |
|            | 47000 - 47200                | 1500        | All modes                             |
|            | 76000 - 81000                | 1500        | All modes                             |
|            | 122250 - 123000              | 1500        | All modes                             |
|            | 134000 - 141000              | 1500        | All modes                             |
|            | 241000 - 250000              | 1500        | All modes                             |

Table 2 - General Class Frequency Privileges



### 13.3 Advanced Class Frequency Privileges

| Wavelength | Frequency Segments (MHz)     | PEP (Watts) | Modes of Operation                    |
|------------|------------------------------|-------------|---------------------------------------|
| 2200 m     | 135.7 kHz – 137.8 kHz        | 1           | CW, Phone, Image, RTTY/Data           |
| 630 m      | 472 kHz – 479 kHz            | 5           | CW, Phone, Image, RTTY/Data           |
| 160 m      | 1.800 – 2.000                |             | CW, Phone, Image, RTTY/Data           |
| 80 m       | 3.500 – 3.600                |             | CW, RTTY/Data                         |
| 80 m       | 3.600 – 4.000                |             | CW, Phone, Image                      |
| 60 m       | 5.3515 – 53665 (Channelized) | 100 (EIRP)  | CW, Phone (USB), RTTY/Data (<60Hz BW) |
| 40 m       | 7.000 – 7.125                | 1500        | CW, RTTY/Data                         |
| 40 m       | 7.125 – 7.300                | 1500        | CW, Phone, Image                      |
| 30 m       | 10.100 – 10.150              | 200         | CW, RTTY/Data                         |
| 20 m       | 14.000 – 14.150              |             | CW, RTTY/Data                         |
| 20 m       | 14.150 – 14.350              |             | CW, Phone, Image                      |
| 17 m       | 18.068 – 18.110              |             | CW, RTTY/Data                         |
| 17 m       | 18.110 – 18.168              |             | CW, Phone, Image                      |
| 15 m       | 21.000 – 21.200              |             | CW, RTTY/Data                         |
| 15 m       | 21.200 – 21.450              |             | CW, Phone, Image                      |
| 12 m       | 24.890 – 24.930              |             | CW, RTTY/Data                         |
| 12 m       | 24.930 – 24.990              |             | CW, Phone, Image                      |
| 10 m       | 28.000 – 28.300              |             | CW, RTTY/Data                         |
| 10 m       | 28.300 – 29.700              |             | CW, Phone, Image                      |
| 6 m        | 50.0 – 50.1                  | 1500        | CW                                    |
| 6 m        | 50.1 – 54.0                  | 1500        | CW, Phone, Image, MCW, RTTY/DATA      |
| 2 m        | 144.0 – 144.1                | 1500        | CW                                    |
| 2 m        | 144.1 – 148.0                | 1500        | CW, Phone, Image, MCW, RTTY/Data      |
| 1.25 m     | 222.0 – 225.0                | 50          | CW, Phone, Image, MCW, RTTY/Data      |
| 70 cm      | 420.0 – 450.0                |             | CW, Phone, Image, MCW, RTTY/Data      |
| 33 cm      | 902.0 – 928.0                |             | CW, Phone, Image, MCW, RTTY/Data      |
| 23 cm      | 1240 - 1300                  |             | CW, Phone, Image, MCW, RTTY/Data      |
|            | 2300 - 2450                  |             | All modes                             |
|            | 5650 - 5925                  |             | All modes                             |
|            | 10000 - 10500                |             | All modes                             |
|            | 24000 – 24250                |             | All modes                             |
|            | 47000 - 47200                |             | All modes                             |
|            | 76000 - 81000                |             | All modes                             |
|            | 122250 - 123000              |             | All modes                             |
|            | 134000 - 141000              |             | All modes                             |
|            | 241000 - 250000              |             | All modes                             |

Table 3 - Advanced Class Frequency Privileges

## 14 Call Signs

Call signs are a distinctive arrangement of characters assigned to amateur radio operators, to special stations, and for special events, primarily for identification purposes. The format for the creation of call signs will be addressed in the sections below.

### 14.1 Format

The format for amateur radio call signs is that prescribed by the International Telecommunications Union (ITU) in Article 19 on the *Identification of Stations*. Two formats are prescribed for the formation of amateur radio call signs:

- (i) one character and a single digit, followed by a group of not more than four letters, or
- (ii) two characters and a single digit, followed by a group of not more than four letters. (Belize uses this format).

The first two characters for Belize is **V3** which constitute the national identifier. The formulation of a call sign for Belize would be:

- (i) **V3** + a single digit + a group of not more than four letters,

Where a single digit comprises numbers between 0 to 9, and a group of not more than four (4) letters suggests any combination between A and ZZZZ is permissible for call sign creation.

The single digit is utilized for the identification of the class of operation. The following table 14.1 presents the format of call signs in Belize for various types of amateur radio operations. Belize will restrict the last digits to three characters (A – ZZZ) until the need arises for expanding call signs format to available trailing characters.

| National Identifier | Number | Group of Letters | Purpose          |
|---------------------|--------|------------------|------------------|
| V3                  | 0      | A – ZZZ          | Advanced Class   |
| V3                  | 1      | A – ZZZ          | General Class    |
| V3                  | 2      | A – ZZZ          | Technician Class |
| V3                  | 3      | -                | Unassigned       |
| V3                  | 4      | A – ZZZ          | Special Events   |
| V3                  | 5      | A – ZZZ          | Special Station  |

*Table 4 - Format of call signs for various types of amateur radio operations*

**Examples:**

Advanced Class: V30-XXX  
General Class: V31-XXX  
Technician Class: V32-XXX  
Special Events: V34-XXX  
Special Station: V35-XXX

## 14.2 Register of Call Signs

The Commission will maintain register of call signs comprising the following listings:

- (i) Un-issued Call Signs - for call signs that have not issued;
- (ii) Active Call Signs - for those assigned to valid holders of amateur radio licenses granted in Belize;
- (iii) Quarantined Call Signs - for call signs that had been assigned, but are not active for reasons which might include, but not limited to, the license is expired and was not renewed, the licensee has progressed to another class of license or is deceased. Call signs might be quarantined for a period of up to six (6) months.
- (iv) Inactive Call Signs - for call signs that have not reverted to active status after their term in quarantine has elapsed. Inactive call signs will be transferred immediately to the Un-issued call sign listing.

For call signs that had been issued under a Special Events Amateur Radio License, the maximum periods on the quarantine listing would be six (6) months. The call sign would re-join the Un-issued call sign listing after the 6 months have elapsed.

## 14.3 Creation of Call Signs

The call signs issued by the Commission are based on the above stated formats which is dependent on the authorized type of operation. Where possible, the licensee will be given the opportunity to request a particular call sign. In the event that the proposed call sign is not available, the Commission will assign one.

## 14.4 Assignment of Call Signs

Call signs associated with personal licenses are non-assignable, but are renewable, provided that the amateur radio operator remains in the same license class.

## 15 Operating Rules and Standards

The following rules and standards provide guidelines for amateur radio operations in Belize. These guidelines are by no means complete, but are formulated to provide a foundation for proficient, consistent, and responsible amateur radio operations in compliance with telecommunication legislation and amateur radio standard procedures.

### 15.1 Permitted Users

The Licensee shall operate or permit the operation of his or her Amateur Radio Station only under the terms and limitations of his or her Amateur Radio License.

The Amateur Radio Station shall be operated only;

- (i) By the Licensee personally; or
- (ii) By a licensed Belize Amateur Radio operator; or
- (iii) in the presence of and under the direct supervision of the Licensee by a person who does not hold a valid Belize Amateur Radio License.

If an Amateur Radio License has been issued to a club, association, or other recognized group, the designated representative may authorize any club, association or group member who holds a valid Belize Amateur Radio License to use and supervise the operation of the Station on his behalf under this License.

## 15.2 Authorized Transmissions

### 15.2.1 Two-way communications:

An amateur radio station may transmit the following two-way communications:

- (i) transmissions necessary to exchange messages with other stations in the amateur radio service, except those in any country whose administration has given notice that it objects to such communications;
- (ii) transmissions necessary to exchange messages with a station in another regulated service while providing emergency communications, including automatic link establishment in a digital mode;

### 15.2.2 One-way communications:

In addition to one-way transmissions specifically authorized elsewhere in this document, an amateur radio station may transmit the following types of one-way communications:

- (i) brief transmissions necessary to make adjustments to stations;
- (ii) brief transmissions necessary to establish two-way communications with other stations;
- (iii) telecommand;
- (iv) transmissions necessary to provide emergency communications;
- (v) transmissions necessary to assist persons learning or improving proficiency in the international Morse code;
- (vi) transmissions necessary to disseminate information bulletins;
- (vii) telemetry transmissions.

## 15.3 Prohibited Traffic and Transmissions

No amateur radio shall transmit:

- (i) communications specifically prohibited elsewhere in this document;

- (ii) communication for hire or for material compensation, direct or indirect, paid or promised, except as otherwise provided;
- (iii) communications in which the station licensee or control operator has a pecuniary interest, including communications on behalf of an employee;
- (iv) messages in codes and ciphers intended to obscure the meaning thereof, except as otherwise provided;
- (v) communications intended to facilitate a criminal act;
- (vi) obscene or indecent words or language;
- (vii) false or deceptive messages, signals, or identification;
- (viii) communications on a regular basis which could reasonably be done alternatively through other radio services.
- (ix) Any transmission that contravenes provisions in the Telecommunication Act [CAP.299 of 2020].

No amateur radio shall:

- (i) engage in any form of broadcasting nor transmit one-way communications, except as specifically provided in this document, nor
- (ii) engage in any activity related to programme production or news gathering for broadcast purposes, except that communications directly related to the immediate safety of human life and the protection of property may be provided by amateur radio stations to broadcasters for dissemination where no other means of communication is reasonably available before or at the time of the event.
- (iii) A control operator may accept compensation as an incident of a position of teaching during periods when an amateur station is used by that teacher as a part of classroom instruction.
- (iv) No station shall re-transmit programmes or signals emanating from any type of radio station other than an amateur radio station, except propagation and weather forecast information intended for use by the general public or originated from meteorological and disaster management offices.

## 15.4 Station Identification

Each amateur radio station, except a space station or telecommand station, must transmit its assigned call sign on its transmitting frequency at the end of each communication, or at least every 10 minutes during a communication for the purposes of station identification.

No station may transmit unidentified communications or signals, or transmit as the station call sign, any call sign not authorized to the station.

The call sign must be transmitted using an emission authorized for the transmitting frequency.

## 15.5 Third Party Transmissions

An amateur radio station may transmit messages for a third party to any amateur radio station in Belize, and with any amateur radio station within the jurisdiction of any foreign government that permits third-party transmissions.

The third party may participate in stating the message where:

- (i) the control operator is present at the control point and is continuously monitoring and supervising the third party participation; and
- (ii) the third party is not a former amateur radio licensee whose license was revoked or suspended, or who is the subject of a cease and desist order which relates to amateur radio operations and which is still in effect.

## 15.6 Recorded or Retransmitted Messages

A Licensee may record and retransmit messages addressed to another Amateur Radio Operator from other licensed Amateur Radio Operators:

- (i) with whom the Licensee is in direct communication; or
- (ii) which are intended for retransmission to a specified Amateur Radio operator.

The License may send messages by (or as part of) the intermediate relaying of the messages to or from other Amateur Radio Operators:

- (i) with whom the Licensee is in direct communication; or
- (ii) which are intended for retransmission to a specified Amateur Radio Operator.

When recording and retransmitting the message of another Amateur Radio Operator, if the Licensee also records and retransmits the call sign of that Amateur Radio Operator, then the Licensee shall transmit the call sign in such a way that the origin of the message and the origin of the retransmission are clear.

Notwithstanding the above conditions, the Licensee shall not operate his or her Amateur Radio Station as:

- (i) a mailbox or bulletin board (each being a device which stores, in a readable form, complete messages, which are not to or from the Licensee, for re-transmission on behalf of other licensed amateurs) for commercial purposes; or
- (ii) a telephony repeater (a facility which receives and simultaneously re-transmits messages by telephony for or on behalf of other licensed amateur radio operators).

## 15.7 Transmitting Equipment

The Amateur Radio Operator shall ensure that:

- (i) the emitted frequency of the apparatus comprised in the Amateur Radio Station is as stable and as free from unwanted emissions as the state of technical development for amateur radio apparatus reasonably permits; which ought to be in keeping with existing national standards, and
- (ii) whatever class of emission is in use, the bandwidth occupied by the emission is such that not more than 1% of the mean power of the transmission (not including the power contained in spurious emissions) falls outside the frequency band.

Notwithstanding any other term of the Amateur License, the License shall ensure that the apparatus comprised in the Station is designed, constructed, maintained, and used so that its use does not cause any undue interference to any other forms of wireless communication.



## 15.8 Unwanted Emissions

If any undue interference to other wireless communications systems is caused by the radiation of unwanted emissions or field strength of electromagnetic energy radiated from the amateur radio station, then the amateur radio operator shall suppress the unwanted emissions or reduce the level of the field strength to the degree satisfactory to the Commission.

The amateur radio operator shall conduct tests from time to time to ensure that the unwanted emission fall within the acceptable limits.

## 15.9 Equipment Standards

Under Regulation 3 of the Telecommunication (Importation and Distribution of Type Approved Telecommunication, Broadcasting and Radio Communication Equipment) Regulations, 152 of 2002, “No person or entity shall import, install, sell for use or use any item of equipment in Belize listed in the Schedule to these Regulations, unless the PUC grants a permit in respect of that equipment”. The permit process requires that the equipment be Type approved for which the recognition of type approval from other countries is typically accepted. Based on the Schedule [Regulation 3], amateur radio operators would be required to ensure that the following equipment be type approved or permitted by the Commission:

- (i) HF/VHF/UHF – Amateur Transmitters/Receivers/Transceivers
- (ii) Radio Frequency (RF) Amplifiers
- (iii) Radio Frequency (RF) Transmitting Antennae
- (iv) Other regulated telecommunication equipment referenced under the regulations.

In the event that the amateur radio operator builds his or her own equipment, section 16.7 would apply.

## 15.10 Inspections

A Licensee shall permit a representative of the Commission, in accordance to the Telecommunication Act, to inspect an Amateur Station and Equipment for the purpose of verifying compliance with the terms of the License.

## 16 Special Stations

The Special Station Amateur Radio License shall be granted when a station and non-personal license is required. The stations license would allow recognized clubs, groups, and organizations the operations to the General Class level.

### 16.1 Auxiliary Stations

An auxiliary station is a unit in a system of co-operating amateur radio stations. This type of operation is inherently closed. This means that it is not available to all amateur radio operators. All operators on the system must be authorized control operators.

Auxiliary stations can be permitted to undertake the following activities:

- (i) Remote control of a station, where a radio link is used. This means sending some form of signals, such as DTMF tones, to another station to change its operating parameters, turn it on or off, change frequencies or power, rotate antennas, etc. These control signals are considered to be a form of "primary" control of the station, or the control of those parameters for which the station licensee and/or any other control operators are primarily responsible. This does not include various "secondary" control functions, such as those which may be used by "users" of a repeater, i.e., to access an auto-patch, etc.
- (ii) Voice links between two or more stations within a system of stations, such as:
  - a. Point-to-point links from a repeater's remote receiver(s) back to the main repeater site;
  - b. Dedicated point-to-point links between different repeaters in a "system" of either full-time or part-time linked repeaters;
  - c. Combination remote-control and voice point-to-point links intended to control and carry the voice signals to the transmitter(s) of a remotely-controlled station. This form of auxiliary operation is commonly referred to as an "up-link" (from the control point up to the remote station);

- d. Point-to-point links from the receiver(s) of a remotely located station back to the control point. This form of auxiliary operation is commonly referred to as a "down-link" (from the remote station down to the control point).
- e. An auxiliary station may be automatically controlled and may transmit one-way communications.

### 16.1.1 Requirements & Operating Limits

In order to operate an auxiliary station, amateur radio operators must apply to the Commission for a Special Station Amateur Radio License. The operator must hold at least a General Class Amateur Radio License in order to operate and be licensed to operate this station.

Auxiliary stations can only transmit in amateur radio frequency bands above 222 MHz (2 m and shorter wavelengths), but the following frequencies are **excluded**:

- (i) 144.0 – 144.5 MHz;
- (ii) 219 – 220 MHz;
- (iii) 222.000 – 222.150 MHz;
- (iv) 431 – 433 MHz;
- (v) 435 – 438 MHz.

## 16.2 Beacon Station

Beacons, which are more correctly known as "propagation beacons", are used primarily to determine what frequencies are reliable at a given time to establish radio communications. In the amateur radio service, beacon stations are used primarily to study radio wave propagation, to determine when a band is open to different parts of the country or the world.

### 16.2.1 Requirements & Operating Limits:

In order to operate a beacon, amateur radio operators must apply to the Commission for a Special Station Amateur Radio License. The operator must hold at least a General

Class Amateur Radio License in order to operate and be licensed to operate a beacon station.

Beacon must not concurrently transmit on more than one frequency (channel) in the same amateur radio band, from the same location.

The transmitter power of a beacon must not exceed 100 W.

Automatically controlled beacons can only transmit on the following frequency segments:

- (i) 28.19 – 28.30 MHz,
- (ii) 50.0 – 50.1 MHz,
- (iii) 50.4 – 50.5 MHz (Digital),
- (iv) 144.275 – 144.300 MHz,
- (v) 144.4 – 144.5 MHz (Digital),
- (vi) 222.05 – 222.06 MHz,
- (vii) 222.06 – 222.07 MHz (Digital),
- (viii) 432.300 – 434.400 MHz,
- (ix) 432.4 – 432.42 MHz (Digital) or
- (x) On the 33 cm and shorter wavelength bands.

## 16.3 Repeater Station

A repeater is essentially an unmanned amateur radio station, which receives and automatically retransmits signals. They are necessary in situations where it is difficult for radio amateurs to receive signals such as a valley. Repeaters are usually set up on hillsides to ensure the required coverage.

### 16.3.1 Requirements & Operating Limits:

In order to operate a repeater station, amateur radio operators must apply to Commission for a Special Station Amateur Radio License. The operator must hold at least a General Class Radio License in order to operate and be licensed to operate a repeater station.

Repeater stations can operate on any authorized frequencies for amateur radio operations above 29.5 MHz (the 10 m or shorter wavelengths), but the following frequencies are **excluded**:

- (i) 28.0 – 29.5 MHz;
- (ii) 50.0 – 51.0 MHz;
- (iii) 144.0 – 144.5 MHz;
- (iv) 145.5 – 146.0 MHz;
- (v) 222.0 – 222.15 MHz;
- (vi) 431.0 – 433.0 MHz;
- (vii) 435.0 – 438.0 MHz.

Repeaters may be automatically controlled.

## 16.4 Earth Stations

An Earth Station, in the sphere of amateur radio operations, refers to a type of amateur radio station used to communicate with satellite systems that permit amateur radio operations

### 16.4.1 Requirements & Operating Limits:

In order to operate an earth station, amateur radio operators must apply to the Commission for a Special Station Amateur Radio License. The operator must hold at least a General Class Amateur Radio License in order to operate and be licensed to operate that station.

The following frequency bands and segments are authorized for use by Earth Stations:

| Frequency Bands: |      |      |      |     |     |     |     |
|------------------|------|------|------|-----|-----|-----|-----|
| 17 m             | 15 m | 12 m | 10 m | 6mm | 4mm | 2mm | 1mm |

*Table 5 - Earth Stations Frequency Bands*

and segments

- (i) 7.0 – 7.1 MHz;
- (ii) 14.00 – 14.25 MHz;
- (iii) 144 – 146 MHz;
- (iv) 435 – 438 MHz; (NFAT Secondary service 432 - 438 MHz: Footnote 5.279A)

- (v) 2400 – 2450 MHz;
- (vi) 5.83 – 5.85 GHz;
- (vii) 10.45 – 10.50 GHz;
- (viii) 24.00 – 24.05 GHz;

## 17 Lost, Misplaced and Stolen Equipment

Any incident involving to the lost or theft of Amateur Radio equipment must be immediately reported to the nearest Police Station and to the Commission at the earliest opportunity.

For lost or theft of equipment, the report to the Commission shall include the following information:

- (i) The name of amateur radio operator making the report;
- (ii) The call sign of the amateur radio operator;
- (iii) The date when the equipment was stolen or lost, or realized to have been lost or stolen;
- (iv) The make, model/type of equipment;
- (v) The serial number of the equipment;
- (vi) A description of the equipment.

The amateur radio operator would be required to make a declaration in respect to the truthfulness of the report.

## 18 Emergency Response by Amateur Radio Operators

The participation of amateur radio operators in emergency response communications, such as those required during national emergencies, or periods of natural or man-made disasters, is purely voluntary.

Amateur radio operators are advised to liaise with emergency management agencies, such as the National Emergency Management Organization (NEMO), which would be responsible for coordinating information transfer to the appropriate organizations.

## 19 Reciprocal Agreements and Mutual Recognition

### 19.1 Recognition of Amateur Radio Licenses from other countries

For non-citizens of Belize holding Amateur Radio Licenses granted by another jurisdiction or sovereign territory who wish to conduct amateur radio operation within the jurisdiction of Belize, recognition of their foreign Amateur Radio License will only be allowed if reciprocal operating or mutual recognition arrangements exist between their home territory and Belize. On a special note, to extend accommodation for foreign amateur operators, despite the assurance of reciprocal opportunity to Belize Amateur operators, licenses are assessed and granted on a case-by-case basis.

### 19.2 Recognition of the International Amateur Radio Permit

As a member of the Organization of American States (OAS), Belize is currently not a signatory to the Inter-American Convention on an International Amateur Radio Permit. The Convention allows citizens of any Member State who are authorized to operate in the Amateur Service in their country to operate temporarily in the Amateur Service in any other CITELE Member State, and requires that a State recognizes the International Amateur Radio Permit (IARP) issued under the conditions specified in the Convention. Since Belize has not signed the Convention, the IARP would not be in effect in Belize.

### 19.3 Recognition of European Conference of Postal and Telecommunications (CEPT) Licenses

Belize is not required to recognize the licenses granted by member states of the European Conference of Postal and Telecommunications (CEPT). However, Belize does assess and grant licenses on a case-by-case basis.

## 20 Amateur Radio Clubs, Societies, and Associations

Any group of amateur radio operators can form a club, society, or other organized body. Such groups can be either informal or formal and are encouraged for the promotion of amateur radio operations in Belize.

The Commission shall recognize registered organizations and so confer certain privileges on those organizations which include but is not limited to

- (i) Eligibility for a Special Station Amateur Radio License and call sign.

In order to be eligible for privileges, it must first be established that the amateur radio clubs, societies, or associations is recognized by the Commission. Privileges must be applied for, to ensure that the group has the requisite resources and is committed to the responsibilities associated with the desired privileges.

## 20.1 Recognition of Clubs, Societies and Associations by the Commission

To be recognized as a club, society, or unincorporated association by the Commission, the following criteria must be met:

- (i) there must be a constitution for the club, society, or association;
- (ii) it must be clear that the organization's focus is on amateur radio operations and fostering its development in Belize;
- (iii) it must have at least officers filling executive posts, with stated procedures for the elections of executive officers;
- (iv) it must have a general membership of at least five (5) licensed amateur radio operators;
- (v) there should be provisions for regular meetings and the recording minutes of those meetings;
- (vi) there must also be some evidence of its willingness and intention to self-regulate its members;
- (vii) there must be some indication of the role that it intends to play in disasters or emergency situations.

This information must be submitted to the Commission for its review and approval.



## Appendix A

### Classification of emissions and necessary bandwidths

Excerpt from Appendix 1 (REV.WRC-19)

§ 1 1) Emissions shall be designated according to their necessary bandwidth and their classification as explained in this Appendix.

2) Formulae and examples of emissions designated in accordance with this Appendix are given in Recommendation ITU-R SM.1138-3. Further examples may be provided in other ITU-R Recommendations. These examples may also be published in the Preface to the International Frequency Information Circular (BR IFIC). (WRC-19)

#### Section I – Necessary bandwidth

§ 2 1) The necessary bandwidth, as defined in No. 1.152 and determined in accordance with the formulae and examples, shall be expressed by three numerals and one letter. The letter occupies the position of the decimal point and represents the unit of bandwidth. The first character shall be neither zero nor K, M or G.

2) Necessary bandwidths<sup>22</sup>:

between 0.001 and 999 Hz shall be expressed in Hz (letter H);

between 1.00 and 999 kHz shall be expressed in kHz (letter K);

between 1.00 and 999 MHz shall be expressed in MHz (letter M);

between 1.00 and 999 GHz shall be expressed in GHz (letter G).

3) For the full designation of an emission, the necessary bandwidth, indicated in four characters, shall be added just before the classification symbols. When used, the necessary bandwidth shall be determined by one of the following methods:

3.1) use of the formulae and examples of necessary bandwidths and designation

of corresponding emissions given in Recommendation ITU-R SM.1138-3; (WRC-19)

3.2) computation, in accordance with other ITU-R Recommendations;

<sup>2</sup> Examples:

|          |   |      |           |   |      |          |   |      |
|----------|---|------|-----------|---|------|----------|---|------|
| 0.002 Hz | = | H002 | 6 kHz     | = | 6K00 | 1.25 MHz | = | 1M25 |
| 0.1 Hz   | = | H100 | 12.5 kHz  | = | 12K5 | 2 MHz    | = | 2M00 |
| 25.3 Hz  | = | 25H3 | 180.4 kHz | = | 180K | 10 MHz   | = | 10M0 |
| 400 Hz   | = | 400H | 180.5 kHz | = | 181K | 202 MHz  | = | 202M |
| 2.4 kHz  | = | 2K40 | 180.7 kHz | = | 181K | 5.65 GHz | = | 5G65 |

3.3) measurement, in cases not covered by § 3.1) or 3.2) above.

### Section II – Classification

§ 3 The class of emission is a set of characteristics conforming to § 4 below.

§ 4 Emissions shall be classified and symbolized according to their basic characteristics as given in Sub-Section IIA and any optional additional characteristics as provided for in Sub-Section IIB.

§ 5 The basic characteristics (see Sub-Section IIA) are:

- 1) first symbol – type of modulation of the main carrier;
- 2) second symbol – nature of signal(s) modulating the main carrier;
- 3) third symbol – type of information to be transmitted.

Modulation used only for short periods and for incidental purposes (such as, in many cases, for identification or calling) may be ignored provided that the necessary bandwidth as indicated is not thereby increased.

#### Sub-Section IIA – Basic characteristics

- § 6
- 1) *First symbol* – Type of modulation of the main carrier
    - 1.1) Emission of an unmodulated carrier N
    - 1.2) Emission in which the main carrier is amplitude-modulated (including cases where sub-carriers are angle-modulated)
      - 1.2.1) Double-sideband A
      - 1.2.2) Single-sideband, full carrier H
      - 1.2.3) Single-sideband, reduced or variable level carrier R
      - 1.2.4) Single-sideband, suppressed carrier J
      - 1.2.5) Independent sidebands B
      - 1.2.6) Vestigial sideband C
    - 1.3) Emission in which the main carrier is angle-modulated
      - 1.3.1) Frequency modulation F
      - 1.3.2) Phase modulation G

- |          |   |   |
|----------|---|---|
| 1.4)     | Emission in which the main carrier is amplitude-and angle-modulated either simultaneously or in a pre-established sequence  | D |
| 1.5)     | Emission of pulses <sup>3</sup>   |   |
| 1.5.1)   | Sequence of unmodulated pulses  | P |
| 1.5.2)   | A sequence of pulses  |   |
| 1.5.2.1) | modulated in amplitude  | K |
| 1.5.2.2) | modulated in width/duration   | L |
| 1.5.2.3) | modulated in position/phase   | M |
| 1.5.2.4) | in which the carrier is angle-modulated during the angle-period of the pulse  | Q |
| 1.5.2.5) | which is a combination of the foregoing or is produced by other means   | V |
| 1.6)     | Cases not covered above, in which an emission consists of the main carrier modulated, either simultaneously or in a pre-established sequence, in a combination of two or more of the following modes: amplitude, angle, pulse | W |
| 1.7)     | Cases not otherwise covered   | X |
| 2)       | <i>Second symbol</i> – Nature of signal(s) modulating the main carrier  |   |
| 2.1)     | No modulating signal  | 0 |
| 2.2)     | A single channel containing quantized or digital information without the use of a modulating sub-carrier <sup>4</sup>   | 1 |
| 2.3)     | A single channel containing quantized or digital information with the use of a modulating sub-carrier <sup>4</sup>  | 2 |
| 2.4)     | A single channel containing analogue information  | 3 |
| 2.5)     | Two or more channels containing quantized or digital information  | 7 |

<sup>3</sup> Emissions where the main carrier is directly modulated by a signal which has been coded into quantized form (e.g. pulse code modulation) should be designated under § 1.2) or 1.3).

<sup>4</sup> This excludes time-division multiplex.

|      |  |   |
|------|--|---|
| 2.6) | Two or more channels containing analogue information   | 8 |
| 2.7) | Composite system with one or more channels containing quantized or digital information, together with one or more channels containing analogue information | 9 |
| 2.8) | Cases not otherwise covered  | X |
| 3)   | Third symbol – Type of information to be transmitted <sup>5</sup>  |   |
| 3.1) | No information transmitted   | N |
| 3.2) | Telegraphy – for aural reception   | A |
| 3.3) | Telegraphy – for automatic reception   | B |
| 3.4) | Facsimile  | C |
| 3.5) | Data transmission, telemetry, telecommand  | D |
| 3.6) | Telephony (including sound broadcasting)   | E |
| 3.7) | Television (video)   | F |
| 3.8) | Combination of the above   | W |
| 3.9) | Cases not otherwise covered  | X |

**Sub-Section IIB – Optional characteristics for the classification of emissions**

§ 7 Two optional characteristics should be added for a more complete description of an emission. These are:

*Fourth symbol* – Details of signal(s)

*Fifth symbol* – Nature of multiplexing

Where the fourth or fifth symbol is used it shall be as indicated below.

Where the fourth or the fifth symbol is not used this should be indicated by a dash where each symbol would otherwise appear.

- 1) *Fourth symbol* – Details of signal(s)
  - 1.1) Two-condition code with elements of differing numbers and/or durations A
  - 1.2) Two-condition code with elements of the same number and duration without error-correction B

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<sup>5</sup> In this context the word “information” does not include information of a constant, unvarying nature such as is provided by standard frequency emissions, continuous wave and pulse radars, etc.

- |       |  |   |
|-------|--|---|
| 1.3)  | Two-condition code with elements of the same number and duration with error-correction                           | C |
| 1.4)  | Four-condition code in which each condition represents a signal element (or one or more bits)                    | D |
| 1.5)  | Multi-condition code in which each condition represents a signal element (of one or more bits)                   | E |
| 1.6)  | Multi-condition code in which each condition or combination of conditions represents a character                 | F |
| 1.7)  | Sound of broadcasting quality (monophonic)   | G |
| 1.8)  | Sound of broadcasting quality (stereophonic or quadraphonic)   | H |
| 1.9)  | Sound of commercial quality (excluding categories given in § 1.10) and 1.11))                                    | J |
| 1.10) | Sound of commercial quality with the use of frequency inversion or band-splitting                                | K |
| 1.11) | Sound of commercial quality with separate frequency-modulated signals to control the level of demodulated signal | L |
| 1.12) | Monochrome   | M |
| 1.13) | Colour   | N |
| 1.14) | Combination of the above   | W |
| 1.15) | Cases not otherwise covered  | X |
| 2)    | <i>Fifth symbol</i> – Nature of multiplexing   |   |
| 2.1)  | None   | N |
| 2.2)  | Code-division multiplex <sup>6</sup>   | C |
| 2.3)  | Frequency-division multiplex   | F |
| 2.4)  | Time-division multiplex  | T |

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<sup>6</sup> This includes bandwidth expansion techniques.

- 2.5) Combination of frequency-division multiplex and time-division multiplex W
- 2.6) Other types of multiplexing X

## Appendix B

### Application Form for an Amateur Radio License

#### A. Applicant details

##### A.1 Name:

Title of licensee (optional) (eg. Mr, Ms, Dr, Other) \_\_\_\_\_

First Name: \_\_\_\_\_

Middle name (optional): \_\_\_\_\_

Last Name: \_\_\_\_\_

Date of Birth: (DD/MM/YYYY) \_\_\_\_ / \_\_\_\_ / \_\_\_\_

##### A.2 Main station address:

Your permanent station address (or normal operating address of a club) must be in Belize.

Street:

\_\_\_\_\_

City/Town: \_\_\_\_\_ District: \_\_\_\_\_

P.O. Box: \_\_\_\_\_ Country: \_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

\_\_\_\_\_

##### A.3 Mailing address (if different from above)

Licensing documentation and correspondence will be sent to this address.

In the case of a Reciprocal License, indicate your Belize mailing address if applicable.

Street:

\_\_\_\_\_

City/Town: \_\_\_\_\_ District: \_\_\_\_\_

P.O. Box: \_\_\_\_\_ Country: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Home/Business/Mobile (delete as appropriate)

Email: \_\_\_\_\_

\_\_\_\_\_

#### B. Examination details (applies to all)

**B.1 Advanced, General, and Technician license applicants who have passed the relevant exam must provide the information below**

Your candidate ID provided: \_\_\_\_\_ Level of license (eg.General): \_\_\_\_\_

**C. Club License Call Sign applicants only**

**C.1 Please give details of the Club Official who is to be the representative for the Club's assigned Call sign.**

Club name: \_\_\_\_\_

Official of Club: First name: \_\_\_\_\_ Last name: \_\_\_\_\_

Call sign: \_\_\_\_\_ must hold at least a General Class license

**D. Call sign assignment**

D.1 Confirm the type of license you are applying for: \_\_\_\_\_

Please assign the next available call sign  Tick if appropriate

Or

Please assign (in order of preference from left to right) one of the following call signs if available

1<sup>st</sup> \_\_\_\_\_ 2<sup>nd</sup> \_\_\_\_\_ 3<sup>rd</sup> \_\_\_\_\_

If these call signs are not available then the next available call sign will be assigned.

**E. Additional information for Reciprocal License applicants**

For visitors from countries which have reciprocal licensing agreement with Belize.

**E.1 Give your contact details with your permanent (home) address in your country**

Street: \_\_\_\_\_

City/Town: \_\_\_\_\_ Province: \_\_\_\_\_

Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Home/Business/Mobile (delete as appropriate)

Email: \_\_\_\_\_

**E.2 Please indicate your communication preference:** Email  Letter



**E.3 In which country do you hold a valid amateur radio license?** \_\_\_\_\_

Which type or class of license do you hold? \_\_\_\_\_

State the full call sign issued to you in your own country: \_\_\_\_\_

**E.4 On what date do you require the Belize Reciprocal License to start?**

(DD/MM/YYYY) \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**E.5 Mailing details**

**I wish my license to be sent to:** (tick one box only)

My Belize mailing address

My permanent (home) address in my home country

**Tick to confirm you have attached:**

A copy of your current license (from your home country)

Copy of Bio page of passport

License renewal payment receipt (if applicable)

**F Declaration**

By signing this form, I confirm that I have read and understood the notes. Any information provided is correct and complete to the best of my knowledge and belief. I declare that I am responsible for compliance with the license, use, and supervision of the radio equipment which is the subject of the license and have due authority to make this declaration and sign this application.

Signature of licensee: \_\_\_\_\_

Today's date: (DD/MM/YYYY) \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Print name: \_\_\_\_\_

**Where to send this form**

**Please do not include payment with this form, as you will be invoiced at a later date  
Ensure that you enclose all relevant certification and any attached pages as applicable and send to:**

Public Utilities Commission  
4 Princess Margaret Drive  
2<sup>nd</sup> Floor Marina Towers  
P.O. Box 300  
Belize City  
Belize  
Email: [telecom@puc.bz](mailto:telecom@puc.bz) / [info@puc.bz](mailto:info@puc.bz)  
Website: [www.puc.bz](http://www.puc.bz)  
Telephone: +501 223 4938

For assistance, kindly email.