AMATEUR RADIO – THE RULES explained

Establishing and Operating an Amateur Radio Station in New Zealand

This booklet was first compiled in the 1970s and maintained since by Fred Johnson MNZM ZL2AMJ, (ARX2106). Revised September 2013, © 2013, J.F.C.Johnson. email: zl2amj@nzart.org.nz. You may copy it for personal study. The moral copyright of items published is asserted on behalf of the many contributing authors.

The *'Regulatory'* topics you need to be familiar with for the New Zealand Amateur Radio Examination are here.

CONTENTS

INTRODUCTION

The Ministry of Business, Innovation and Employment, Radio Spectrum Management, (MBIE, RSM) appoints and audits "Approved Radio Examiners". The ARXs administer examinations and callsign procedures in accord with the Ministry's "*Public Information Brochures*". (See PIB45 and PIB46 downloadable from the Ministry's website. The MBIE was previously the Ministry of Economic Development, MED).

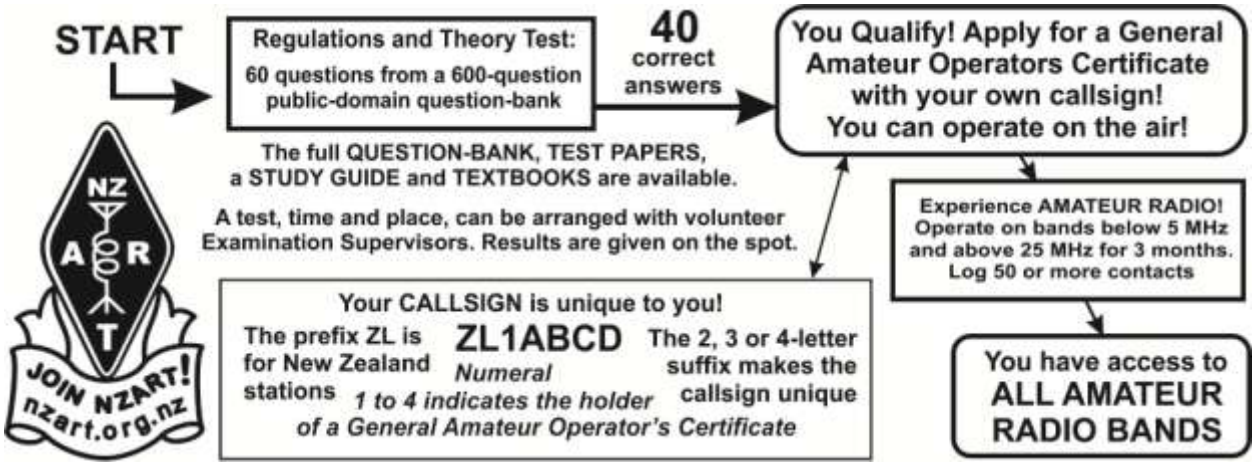
Enquiries about training materials, examination arrangements and callsigns should be directed to an ARX listed as currently active at the Ministry's website and who has Examiner status in the category "amateur". Go to: http://www.rsm.govt.nz/cms. Insert "ARX" or "PIB46" in the Search Box at top right of the screen then click the appropriate links.

For qualification purposes to ensure the integrity of the examination process is maintained, an examination must be conducted within the ARX's approved examination system and procedures.

You will need some 'technical books'. Excellent books on the basics of amateur radio and radio theory are available including a downloadable "Study Guide" and the complete Question-bank – ask your ARX.

Overseas books do not cover the ***New Zealand regulatory requirements*** for the examination, that need is filled by this "***Rules Explained***" booklet. Many "Amateur Radio Handbooks" cover the technical topics of the Syllabus. Borrow or buy them.

When you are ready for the examination, make contact with an ARX of your choice who will guide you. An examination can be arranged for you at a mutually-agreed time and place. Good luck with your studies!



AMATEUR RADIO – The RULES explained

Establishing and Operating an Amateur Radio Station in New Zealand

The New Zealand Radiocommunications Regulations and Amateur Radio

These notes cover the regulatory topics for the Amateur Radio Examination and are for reference use by New Zealand radio amateurs.

The "*regulatory aspects*" of Amateur Radio are very important, so important that these notes cover many topics in *very much greater detail* than is necessary for the examination. As a radio amateur you need to be aware of many regulatory things and to know where to find them in the various documents!

Operating a radio transmitter in the crowded radio frequency spectrum requires a good understanding of what you are ***permitted*** to do, what you are ***required*** to do, and what you ***MUST NOT*** do.

There are many privileges and responsibilities to being a radio amateur:

- Radio amateurs are not constrained to any fixed frequencies but may operate on frequencies of their own choosing within the frequency bands allocated to amateur radio distributed throughout the radio frequency spectrum.
- Radio amateurs may use communication modes of their own choosing.
- The equipment used by radio amateurs need not be 'type-approved' like the equipment used by most other radio services.
- Radio amateurs can construct and operate their own equipment on any of the many amateur radio frequency bands.

There are **TWO** important documents. These are:

1. The "***General User Radio Licence for Amateur Radio Operators***". It can be viewed by anyone at an official government website and downloaded and printed.

(This **G U R L** permits the holder of a "***General Amateur Operators Certificate of Competency***" to operate an amateur radio station in New Zealand. This G U R L lists terms, conditions and restrictions, including a schedule of the amateur radio frequency bands.)

2. The "***General Amateur Operators Certificate of Competency***". Amateur Radio Operators are qualified persons, they have each passed a written examination and each is the holder of an individual ***Certificate of Competency***.

(Each operator's name, address and other information is entered and held in an official on-line database. The Certificate is downloaded and printed from this database and is kept in the possession of the individual operator.)

Each **"*Certificate of Competency*"** identifies the operator and lists one or more individual and unique ***callsigns***, unique to that individual operator. The callsign(s) listed on the Certificate are used on-air by the named operator to identify that particular station.

You must know and understand more about these two documents.

The GURL: A copy is attached in *Appendix 3*. Study it carefully. It is available at: **http://www.rsm.govt.nz/cms/licensees/types-of-licence/general-user-licences**

The Certificate of Competency: The Amateur Radio ***database records*** are held by the ***Radio Spectrum Management's*** **SMART** - "***S****pectrum* ***M****anagement* ***A****nd* ***R****egistration* ***T****echnology*". SMART is accessible on-line by anyone for viewing any certificate-holder's callsign and information: **http://www.rsm.med.govt.nz/pls/web/dbssiten.main**

With the aid of a supplied confidential "*Client Key*" and "*Password*", each amateur operator, i.e. you as a certificate and callsign holder, has access to your personal contact details in the database. You are required to keep your own address and other contact details up-to-date. You can also order a replacement *Certificate of Competency* and it can be emailed to you.

If you don't have the facilities to do this on-line, an **ARX** (Approved Radio Examiner) can do it for you. An ARX is a person authorised to make new entries to the database for candidates who pass the Amateur Radio Examination and, among other things, to arrange callsigns for newly-qualified amateurs.

A list of persons with ARX privileges can be found on the web at: **http://www.rsm.govt.nz/cms**

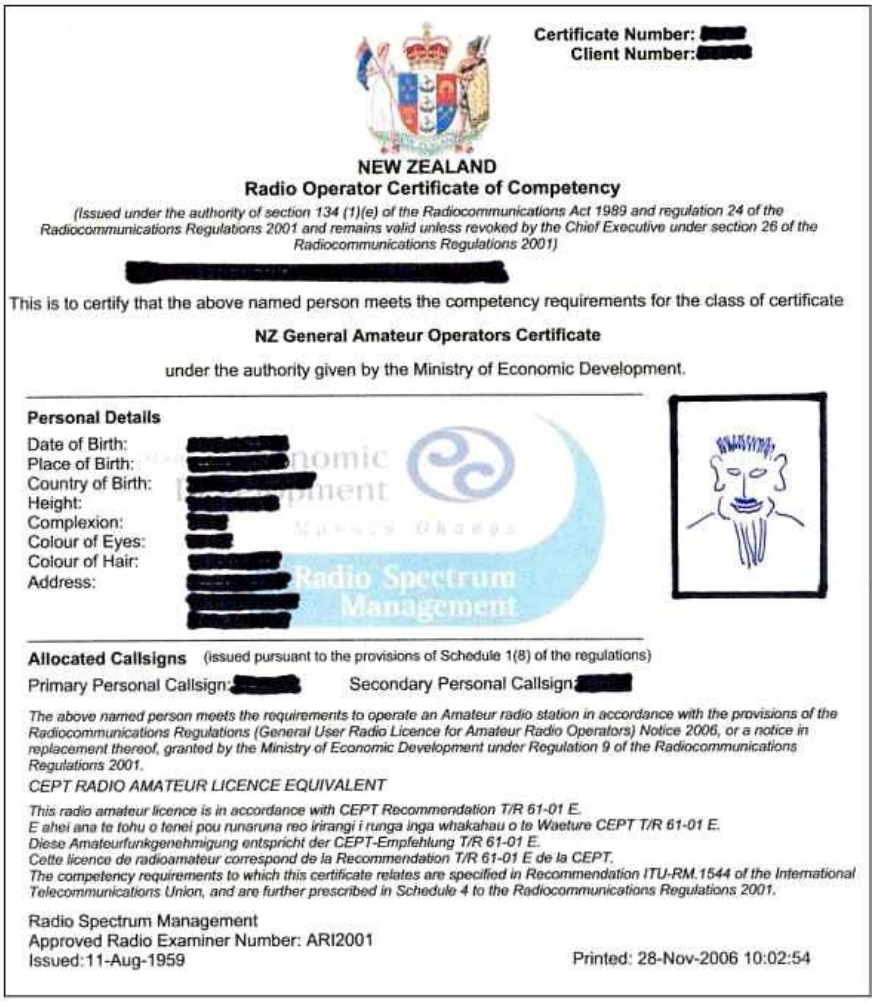
An ARX can attend to these matters for you. There may be a fee charged by some to cover the costs of these administrative services.

The Regulations:

The **Amateur Radio Examination** requires a knowledge of the relevant ***national*** and ***international*** regulations, as covered in this booklet. An understanding of some basic radio theory and some radio operating knowledge is also required.

Please refer to the downloadable **SYLLABUS** and **QUESTION BANK** documents to see the ***coverage*** and the ***standard of knowledge required*** for the examination.

There are two "Radio Regulations" documents - the **International Radio Regulations** and our **New Zealand Radio Regulations**. You are expected to have an understanding of both of them. ***It is not necessary to learn them off in parrot-fashion!*** The important parts are here:



Certificate Number: [redacted]
Client Number: [redacted]

NEW ZEALAND
Radio Operator Certificate of Competency

(Issued under the authority of section 134 (1)(e) of the Radiocommunications Act 1989 and regulation 24 of the Radiocommunications Regulations 2001 and remains valid unless revoked by the Chief Executive under section 26 of the Radiocommunications Regulations 2001)

[redacted]

This is to certify that the above named person meets the competency requirements for the class of certificate

NZ General Amateur Operators Certificate

under the authority given by the Ministry of Economic Development.

Personal Details

Date of Birth: [redacted]
Place of Birth: [redacted]
Country of Birth: [redacted]
Height: [redacted]
Complexion: [redacted]
Colour of Eyes: [redacted]
Colour of Hair: [redacted]
Address: [redacted]

Allocated Callsigns (issued pursuant to the provisions of Schedule 1(8) of the regulations)

Primary Personal Callsign: [redacted] Secondary Personal Callsign: [redacted]

The above named person meets the requirements to operate an Amateur radio station in accordance with the provisions of the Radiocommunications Regulations (General User Radio Licence for Amateur Radio Operators) Notice 2006, or a notice in replacement thereof, granted by the Ministry of Economic Development under Regulation 9 of the Radiocommunications Regulations 2001.

CEPT RADIO AMATEUR LICENCE EQUIVALENT

This radio amateur licence is in accordance with CEPT Recommendation T/R 61-01 E.
E ahei ana te tohu o tenei pou runaruna reo irirangi i runga inga whakahau o te Waeture CEPT T/R 61-01 E.
Diese Amateurfunkgenehmigung entspricht der CEPT-Empfehlung T/R 61-01 E.
Cette licence de radioamateur correspond de la Recommendation T/R 61-01 E de la CEPT.
The competency requirements to which this certificate relates are specified in Recommendation ITU-RM.1544 of the International Telecommunications Union, and are further prescribed in Schedule 4 to the Radiocommunications Regulations 2001.

Radio Spectrum Management
Approved Radio Examiner Number: ARI2001
Issued:11-Aug-1959 Printed: 28-Nov-2006 10:02:54

1.57 *amateur-satellite service:* A *radiocommunication service* using *space stations* on earth *satellites* for the same purposes as those of the *amateur service*.

Regions:

For regulatory purposes, the International Radio Regulations divide the world into three 'Regions':

Region 1 is Europe, the 'old USSR' areas and Africa.

Region 2 is North and South America.

Region 3 is the rest of the world, including New Zealand.

The radio frequency allocations can differ between the three regions, but at this time this does not concern your studies for the amateur radio examination.

More background:

You should know about these **INTERNATIONAL** and **LOCAL** organisations:

1. Extracts from the *International* Radio Regulations:

The International Radio Regulations of interest to radio amateurs are collected here in *Appendix 1*. Important regulations are in Article 25.

2. Extracts from the *New Zealand* Radio Regulations:

A copy of **Schedule 1** from the New Zealand Radiocommunications Regulations 2001 is attached. See *Appendix 2*.

*(Note the reference to the **International Radio Regulations** in **1** and **2** of **Schedule 1 to the NZ Regulations**.)*

(**For reference purposes:** The complete NZ Radiocommunications Regulations 2001 and the Radiocommunications Act can be found at: www.legislation.govt.nz)

Both the International and the New Zealand Radio Regulations give authority for the issuing of radio licences - but we don't need to go looking to find the exact regulations or to study their words.

Two important **Amateur Radio** definitions taken from the ***International Radio Regulations*** are:

1.56 *amateur service:* A *radiocommunication service* for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

The ITU: The world telecommunications body

The International Telecommunication Union

The International Telecommunication Union, headquartered in Geneva, Switzerland, is an international organisation within which governments and the private sector coordinate global telecom networks and services. It is an agency of the United Nations.

It can be viewed as an assembly of ***representatives from governments***. Further details may be obtained from the ITU web page: **http://www.itu.int/**

Through its various conferences and activities, the ITU produces the ***International Radio Regulations***. This document is constantly evolving through the work of ITU conferences.

As shown in *Appendix 1*, the Amateur Service is listed in these regulations, with many matters concerning the Amateur Service in Article 25. This sets many aspects of the activities of radio amateurs.

New Zealand is a member of the ITU and the Ministry of Business, Innovation and Employment (MBIE), Radio Spectrum Management (RSM) attends to ITU matters for the New Zealand government.

The New Zealand ***Administration*** is ***the Ministry of Business, Innovation and Employment (MBIE,) Radio Spectrum Management (RSM).***

The MBIE RSM web page with spectrum management detail is at: **http://www.med.govt.nz/rsm**

The IARU: The world amateur radio body

The International Amateur Radio Union

Because it uses an international natural resource, the radio spectrum, Amateur Radio must organise nationally and internationally for better mutual use of the radio spectrum among radio amateurs throughout the world, to develop Amateur Radio worldwide, and to successfully interact with the agencies responsible for regulating and allocating radio frequencies.

At the international level, national societies throughout the world work together for the international good of Amateur Radio under the auspices of the International Amateur Radio Union (IARU). The IARU web page is at: **http://www.iaru.org**

The IARU is an organisation in which its ***Members*** are Amateur Radio ***societies***.

Created in Paris in 1925, the IARU has been the watchdog and spokesman for the world Amateur Radio community.

The IARU Constitution organises the Union into three Regional Organisations that correspond to the three administrative regions of the ITU. (See IARU Region 3 following.)

The IARU is a member of the ITU Radio Sector and the ITU Development Sector. Representatives from IARU may attend ITU meetings and conferences, representing the Amateur Service and the Amateur Satellite Service.

The IARU has its headquarters, the 'International Secretariat', at the headquarters of the USA society, the American Radio Relay League (ARRL), in Newington, Connecticut, USA.

The prime purpose of the IARU is the ***protection of the Amateur Services***. The IARU objectives, as shown in the IARU Constitution, are:

1. The name of this organization is the International Amateur Radio Union (IARU), hereinafter also referred to as the IARU.

2. Its objectives shall be the protection, promotion, and advancement of the Amateur and Amateur-Satellite Services within the framework of regulations established by the International Telecommunication Union, and to provide support to Member-Societies in the pursuit of these objectives at the national level, with special reference to the following:

a) representation of the interests of amateur radio at and between conferences and meetings of international telecommunications organizations;

b) encouragement of agreements between national amateur radio societies on matters of common interest;

c) enhancement of amateur radio as a means of technical self-training for young people;

d) promotion of technical and scientific investigations in the field of radiocommunication;

e) promotion of amateur radio as a means of providing relief in the event of natural disasters;

f) encouragement of international goodwill and friendship;

g) support of Member-Societies in developing amateur radio as a valuable national resource, particularly in developing countries; and

h) development of amateur radio in those countries not represented by Member-Societies.

The IARU Constitution may be viewed at:
http://www.iaru.org/iarucnst.html

NZART: New Zealand's society for radio amateurs

The New Zealand Association of Radio Transmitters Incorporated

Founded in 1926, the New Zealand Association of Radio Transmitters (NZART) is recognised by the New Zealand Government as the body representing New Zealand's radio amateurs. Further details about NZART can be obtained from its web page: **http://www.nzart.org.nz**

There are several categories of NZART membership which include 'Transmitting' and 'Non-Transmitting'. Anyone interested in radio can join. YOU SHOULD JOIN TODAY! Enquiries to NZART, P.O. Box 40 525, Upper Hutt or to **nzart@nzart.org.nz**

NZART has been a member of IARU since 1929.

NZART is not a "do everything" society but is to encourage and ensure the best regulatory and operating circumstances for enthusiasts and specialists to organise themselves and to follow their own interests and "do their own thing" be it Contests, DX, Awards, to name a few.

The Objectives of the NZART are given in the NZART Constitution at:
http://www.nzart.org.nz/assets/pdf/2011/constitution.pdf

IARU Region 3: The REGIONAL amateur radio body:

IARU Region 3

IARU has adopted the same three Regions as the ITU and each Region has its own amateur radio organisation. IARU Region 3 was founded in Sydney in 1968 with NZART one of the founding member societies. The Headquarters of IARU Region 3 is in Tokyo, Japan, at the headquarters of the Japan Amateur Radio League (JARL).

The Objects of IARU Region 3 are similar to those of IARU but centred on the Asia-Pacific area. An IARU Region 3 web page is at:

http://www.jarl.or.jp/iaru-r3/

The following extract is from the IARU Region 3 Constitution:

‘The name of the organisation shall be the International Amateur Radio Union Region 3 herein called 'IARU Region 3’.

Object and Activities:

The object of IARU Region 3 is to

promote, represent and advance in whatsoever manner IARU Region 3 thinks fit,

the interest of Radio Amateurs in all countries of Region 3 of the International Telecommunications Union (and without limiting the generality of the foregoing)

by the furtherance of the objects of the International Amateur Radio Union and

having regard to the special interest of radio amateurs in Asia and Oceania

which interests are to protect and enhance radio amateur privileges in all of the countries in the Region,

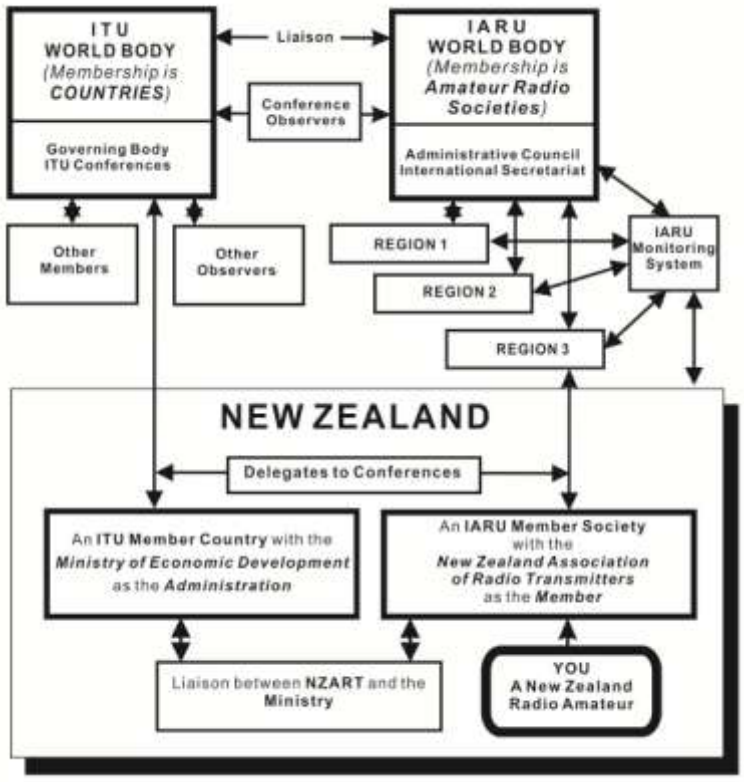
to encourage an awareness of the value of radio amateurs by the administrations of all the countries in the Region,

to educate and encourage potential radio amateurs in all of the countries of the Region,

to represent radio amateurs both nationally and internationally, and

to protect and retain amateur radio frequency allocation as frequencies allocated for the sole use of radio amateurs

and provided always shall exercise its powers in support of IARU and not in substitution for the exercise of power by IARU.’



How does all this fit together?

Every two years or so, the **ITU** holds an international **conference**, at which the ***International Radio Regulations*** and other documents are discussed and modified. New Zealand is represented at these conferences by a delegation led by the New Zealand *Ministry of Business, Innovation and Employment* (MBIE), *Radio Spectrum Management* (RSM). An NZART member may sometimes be a part of the New Zealand Delegation to represent the Amateur Service. The MBIE RSM is **the New Zealand "Administration"**.

Each **IARU Region** holds a **conference** every three years and these are arranged in sequence, so there is a regional amateur radio conference held each year in one of the three regions.

National Radio Regulations:

Countries set additional local licensing conditions for their radio amateurs. These differ greatly in detail, but all should conform to the *International Radio Regulations*.

As stated earlier, the current document is the ***New Zealand Radiocommunications Regulations 2001***. Those Regulations set many things a radio amateur must observe. Many of these are considered below.

So, how do I get started?

If you require assistance with your studies, or wish to attend a class, or when you are ready for an examination, you should contact your local Amateur Radio club. Contact details are given on web sites.

You will soon require the services of an "Approved Radio Examiner" (ARX) - approved by the Ministry of Business, innovation and Employment, Radio Spectrum Management. The ARX will be pleased to provide any further information you may require. Contact details are on the MBIE RSM website.

A "***General Amateur Operators Certificate of Competency***", in your name, with a ***callsign,*** can be granted after passing a written examination.

The diagram shown on the front page of this booklet gives the sequence to follow to obtain the amateur radio qualification.

The Examination Process:

*(In New Zealand there is only **one** amateur radio examination and **one** grade of licence. Some countries have several examinations that must be attempted and passed in sequence - with several grades of licence too.)*

The written examination comprises 60 multiple-choice questions covering **Regulations** and **Theory** in a single two-hour examination. This is conducted by appointment and held at a mutually-agreed place and time by volunteer Examination Supervisors.

The written test uses questions randomly selected from a 600-question public-domain question-bank. The STUDY GUIDE contains ***ALL*** those questions and some sample tests for you to try! A booklet with all the questions in the question-bank can be downloaded from the website.

A **pass** requires **40 or more** correct answers. Your (provisional) result is given to you after the examination, on the spot. A successful "*Radio Examination Result*" (RER) is recognised by the MBIE RSM for certificate/callsign application purposes. An ARX can enter the results of a successful candidate into SMART and set up the records for a new client radio amateur, including selecting a callsign.

Variations to the established Examining Process:

The Radiocommunications Regulations 2001 Regulation 28 (2) provides, at the MBIE Chief Executive's discretion, for variation to the manner in which an examination is carried out. If there is need to vary the examination process for a candidate with a particular disability, the local Examination Supervisors should ensure the candidate is fully aware of the established exam procedure and is encouraged to state a preferred variation to the examination procedure as determined by personal circumstances. The Supervisors should approach the MBIE RSM Head Office with a recommendation for a variation to the examining process and obtain approval for that variation before the examination takes place. The Ministry will deal with each case as it arises and sees referral by a medical expert and use of a neutral reader/writer as its preferred option.

Receiving a Certificate:

A *Radio Examination Result* (RER) is issued on-the-spot after each examination by the examination Supervisors. This is provisional until the results are checked and confirmed by the ARX. A successful RER is recognised for certificate-application purposes. The Certificate of Competency is emailed after the ARX has successfully put the entries into SMART. *(RSM's Spectrum Management and Registration Technology*). You can feel really proud and hang a ***certificate*** on your wall to recognise your achievement. You have a qualification that has international recognition.

Callsigns:

The ARX will set up your callsign at the time when your personal and examination result details are first entered into SMART.

The arrangements and the format for the ARX to follow when generating an amateur radio callsign are given in the Ministry's public information brochure "***Approved Radio Examiners (ARX) Manual – Radio Operator Certificate and Callsign Rules***" document **PIB46**. This Brochure is available from the Ministry of Business, Innovation and Employment, Radio Spectrum Management web site.

More can be learned about callsigns by investigating the MBIE RSM website and by checking existing and yet-to-be-allocated callsigns using the SMART on-line facility.

Find some not-yet-allocated ones! Your callsign selections should fit the regular broad patterns: ZL1, ZL2, ZL3 or ZL4, with a two, three, or four-letter suffix.

After a successful examination you will be asked to provide your choice of ***several* callsign selections, *in priority order***, to the ARX with your **RER** and **Radio4A** form, all completed and legible. This is your application to become a radio amateur.

An operator can request the address to be withheld for privacy reasons - but remember that some stations worked prefer to post their QSL cards direct to you (to confirm your contact) and will require your address. Let your address be seen.

Applications for a New Callsign

Candidates wishing to sit the amateur radio examination must present some official document to confirm their identity and must also **present a passport photo ID** complete with a witness' signature confirming the identity of the candidate. For a successful candidate, this will later be placed electronically on the Certificate of Competency.

Application form **Radio 4A** will be provided by the Supervisors and must be completed by the applicant and sent together with the **passport photo ID** and the RER to the ARX for checking and processing.

Please ensure that ALL the information entered on these forms is accurate, clear and READABLE!

Where an e-mail address is provided by the candidate, upon completion by the ARX of processing a new amateur's details on-line in SMART, a copy of the certificate will be sent direct to the candidate by e-mail.

If all the information above is not provided at the processing time, or if the information provided is illegible, the application will be delayed and a callsign cannot be issued.

Existing Callsign Holders

Existing callsign holders have received a special Client ID and password from the RSM Office giving on-line access to their records in the Ministry's SMART system.

The callsign holder can make change-of-address, amend other contact details and request a replacement certificate on-line. There are no fees to access your own information or to make any amendments yourself. A hard-copy certificate, printed in colour, and framed, can then be arranged by you.

Change of address

You are required by the *Radiocommunications **Act** 24A* to make updating changes to your residential address within 1 month of the change or arrange for an ARX to do it for you. To not do so is an infringement offence.

(You are required by the *Radiocommunications **Regulations** Schedule 1* to update the permanent address within 7 days for individual radio apparatus such as

beacons and digipeaters covered by radio licences for use at a specific location.)

Reactivation

Should your Client ID and password have been misplaced, reactivate it by contacting the RSM Processing Centre Freephone: 0508 776 463.

Amateur Radio Operating Conditions:

The amateur radio qualification does not permit operation for commercial or business purposes, or for "pecuniary gain" (i.e. for making money). (See the ***definition*** of the **Amateur Service.)**

A General Amateur Operators Certificate of Competency entitles the holder to operate transmitters in the ***bands of frequencies*** designated for amateur radio use in the GURL.

Please note that the GURL and the Certificate do not specify any ***transmission mode*** to be used on any ***amateur band***. That is the licensee's choice. (Note too the details about Band-planning discussed below.)

Note that ***radio amateurs*** are permitted to use the designated industrial, scientific and medical (***ISM***) band at 27.12 MHz ***for telecontrol and telemetry operation only.*** It is ***not an amateur band*** but all amateurs are permitted to use it.

Amateur stations may communicate with other amateur stations ***only***. Amateurs may **not** communicate with commercial or other stations operating legally or illegally either inside or outside the designated amateur bands.

The only exception to this is under ***emergency conditions***. This approval is specified in the *International Radio Regulations* (see **RR 4.9**). If safety of human life is at risk, communication on any frequency by anyone is permitted. Very occasionally a distress call has been received by an amateur operator. If no official station replies, an amateur may make contact and should also immediately alert the NZ Police. If an official station does reply, all other stations are obliged to clear the frequency.

A visiting amateur should use his/her own callsign if in control of a station visited. If the owner is present and in control, it is permitted to use the owner's callsign.

Regulatory information undergoes frequent revision and circumstances change, so you are advised to check the MBIE RSM web site from time-to-time to check for up-to-date versions of the GURL and other documents. **http://www.med.govt.nz/rsm.**

The MBIE RSM will give sympathetic consideration to requests for ***reasoned variation*** to individual amateur operating conditions. An example is the temporary use of higher-power for moon-bounce experiments.

Other important points are:

There is no upper or lower age limit.

Your certificate can be inspected by an authorised officer from the MBIE at any time.

You must be a citizen or a permanent resident of New Zealand, to receive a New Zealand callsign.

To replace your lost certificate, you yourself can download one or get a new one downloaded by an ARX from the MBIE RSM's SMART.

All amateur stations, regardless of the mode of transmission used, must be equipped with a reliable means for determining the operating radio frequency.

You must announce your callsign at least once in 15 minutes when operating.

It is important to note that radio amateurs are not "broadcasters". The transmission of music and entertainment by radio amateurs is ***not permitted***.There is a separate ITU definition for broadcasters: "*Broadcasting Service:* A *radiocommunication service* in which the transmissions are intended for direct reception by the general public ..."etc. You are not permitted to make broadcasts.

When first on the Air:

On receiving your certificate and callsign you are permitted to operate only on the bands below 5 MHz and on the bands above 25 MHz. After experiencing three months of practical operating and with 50 or more contacts in your log book, you are then permitted to operate on all the amateur bands. You must keep the log book and produce it on request. See paragraph 3(3) in the GURL.

Log Books:

You are required to keep a station log book to log at least 50 contacts when you are first qualified. This is the only regulatory requirement for a log book. However, it is recommended that radio amateurs keep a log book for at least two important reasons:

First, it is a record of your operating and may be a useful record and protection for when a neighbour reports interference to broadcast or television reception. Were you actually operating at the time claimed?

Second, it is an important document for amateur radio contests and awards – and for keeping track of each contact and the subsequent QSL card actions, noting the cards sent and the cards received.

A suitable station log book with columns for the appropriate entries can be purchased from amateur radio suppliers.

Third Party Traffic:

Other people ("third parties") may pass "brief personal messages" using an amateur's station ***only if*** the owner/operator is present and in control of the station. They should not manipulate the transmitting controls of the station. Under no circumstances may an unqualified person operate an amateur's station.

New Zealand permits third party traffic with any other country. But **BEWARE**! Other countries **may not be permitted to handle third party traffic with you**. Many countries have country-to-country diplomatic agreements for amateur radio third-party traffic. New Zealand is not a party to any such agreement. This situation can only be changed by the other country, it is not New Zealand's problem. So make sure that the station you work is permitted to handle third-party traffic with you before

doing so. Don't put your certificate or the certificate/licence of the distant station at risk.

NZART has developed a document "*Guidelines for THIRD PARTY TRAFFIC*". A copy can be obtained from NZART Headquarters: nzart@nzart.org.nz

The internet is now frequently used for station linking. Be sure that unlicensed persons cannot get access to amateur radio spectrum.

Mobile and portable operating:

A separate licence/qualification and callsign is not necessary when "operating mobile" or when "operating portable". Use your home station callsign and *call*/P or *call*/M when using CW and "*callsign* Mobile", or "*callsign* Portable" when away from home for short periods.

No "secret codes":

Amateur radio communication is **NOT** permitted to use ***"secret codes"*** at any time. Encryption of messages for the purpose of *hiding the contents* from other amateurs or listeners is illegal.

The only exception is for ***licensees*** of repeaters and beacon stations and for satellites to carry out control functions. A different licence is issued for a repeater station and for a beacon station. Establishing a repeater or beacon station is ***not permitted under the amateur operator GURL***.

Some modes (for example packet radio, PSK31 and digital Amateur TV) *do* use forms of encryption, but these are legal because the decoding protocols are public knowledge and can in principle be decoded by other amateurs and by monitoring stations. The Q-Code is public knowledge!

Overseas Travellers:

Overseas radio amateurs visiting New Zealand:

The amateur radio GURL provides for overseas radio amateurs who intend to visit and to operate their own station in New Zealand.

In effect, the overseas visitor can walk down the gangplank and commence operating immediately upon arrival in New Zealand! A "*General User Radio Licence*" (GURL) is a licence that provides for a given class of radio transmitter to be used without requiring a licence in the owner's own name.

New Zealand radio amateurs travelling overseas:

New Zealand amateur radio qualifications are widely recognised overseas. Reciprocal licensing agreements of several different kinds exist between New Zealand and many other countries.

New Zealand operators who are contemplating travelling overseas are advised to contact the ***NZART Reciprocal Licensing Bureau***, (an NZART Service), for up-to-date information about using the New Zealand qualification overseas or getting a local licence to operate in other countries. There are different systems in place in different countries. Check the website of the amateur radio society in the country you intend to visit.

If a Morse code test pass is required for a reciprocal licence, a Morse test can be arranged with NZART Morse Testers.

Overseas regulatory arrangements and requirements are always changing so an early enquiry before travel would be wise. The web pages of some overseas administrations may give the information and the procedures required. See also:
www.arrl.org/field/regulations/io/recip-country.html

Harmful Interference:

Harmful interference is defined in the International Radio Regulations (See **RR 1.169**). In short, it is *any radiation or emission which seriously obstructs or repeatedly interrupts other licensed radio services.*

Amateurs are not permitted to block or to interfere with another amateur's transmissions. Such deliberate transmissions would create "malicious" interference.

Television interference (TVI) caused to neighbours is *not necessarily harmful interference* if the amateur is transmitting signals free from spurious radiation within the terms of the GURL.

It is ***correct operating practice*** to check that the frequency you propose to use is free from other users ***BEFORE*** you transmit.

Unwanted Emissions

The GURL in para 5 (9) refers to ***unwanted emissions*** and to the ETSI document: ETS 300 684. (You can find this on-line using Google.) The important points are on page 6 (where it refers to commercial "amateur" equipment only) and on page 23 (where levels of measurement are given).

The GURL makes it clear that these measurements refer to ***all*** unwanted transmissions from amateur gear that fall ***outside amateur bands***. This is encouragement for home-constructors of transmitting equipment. The view taken is that "*what amateurs do within their own bands is their own problem and for them to fix*". Keep your transmissions "clean"!

Transmitter Power Output:

The GURL in para 5 (5) states that the radio frequency power output shall not exceed 1000 watt peak envelope power (PEP). Note: It is independent of mode. The definition **1.157** is in the International Radio Regulations.

The technicalities of this matter are considered in the Study Guide.

At *all times* amateurs are required to use *the* ***minimum*** *power and* ***minimum*** *bandwidth necessary to ensure satisfactory service*.

Frequency Bands:

A knowledge of the frequency bands between 130 kHz and 440 MHz is required for the examination. (See the GURL, *Appendix 3*).

The International Radio Regulations, in Article 2, say that as the unit of frequency is the hertz (Hz), frequencies shall be expressed:

– in kilohertz (kHz), up to and including 3 000 kHz;

– in megahertz (MHz), above 3 MHz, up to and including 3 000 MHz;

– in gigahertz (GHz), above 3 GHz, up to and including 3 000 GHz.

Note: Prefix: k = kilo (10^3), M = mega (10^6), G = giga (10^9).

Symbols	Frequency range (lower limit exclusive, upper limit inclusive)	Corresponding Metric Subdivision
VLF	3 to 30 kHz	Myriametric waves
LF	30 to 300 kHz	Kilometric waves
MF	300 to 3 000 kHz	Hectometric waves
HF	3 to 30 MHz	Decametric waves
VHF	30 to 300 MHz	Metric waves
UHF	300 to 3 000 MHz	Decimetric waves
SHF	3 to 30 GHz	Centimetric waves
EHF	30 to 300 GHz	Millimetric waves
	300 to 3 000 GHz	Decimillimetric waves

Sharing of Bands:

Amateurs share some frequency bands with stations of other services. Full details about "sharing" are provided in the *International Radio Regulations* but only the general principles of sharing and the bands involved are needed for this examination.

Several ***Notes*** to the Amateur Frequency Allocation Chart (in the GURL), explain the use by amateur stations of the "shared bands". See ***"Notes 2 and 3 to the Table".***

Favourable access by radio amateurs to some bands used by other radio services has been given by the regulatory authorities. It is very important that these arrangements be respected so they can continue. The golden rule is: **Don't cause any interference to any other stations.**

As an amateur station licensee, you have "frequency agility", you can change your operating frequency to avoid other stations. Other services are usually licensed for one assigned frequency only and cannot shift.

Additional note regarding other bands:

The band 50 to 54 MHz is shown in the *International Radio Regulations* as AMATEUR but in New Zealand, only 51 to 53 MHz is available. Because the band 50 - 51 MHz is used by commercial television in New Zealand, a special permit is required and may be available from MBIE RSM for amateur stations wishing to operate there. Special conditions apply. With the change of commercial TV broadcasting stations to digital transmission, changes to the Amateur arrangements are expected on 30 August 2015 or earlier.

Two spot frequencies near 5 MHz are available for use by the ***Amateur Radio Emergency Communications*** (AREC). Special conditions apply.

AREC is also permitted to use the band-edge 3.9 MHz upper-sideband.

Access to a UHF band for digital amateur television repeater use is currently under consideration by FMTAG with the Ministry.

Frequency Band	**Metre Band**
130-190 kHz	1750 metres
505-515 kHz	600 metres
1800-1950 kHz	160 metres
3.50-3.90 MHz	80 metres
7.00-7.30 MHz	40 metres
10.10-10.15 MHz	30 metres
14.00-14.350 MHz	20 metres
18.068-18.168 MHz	17 metres
21.00-21.45 MHz	15 metres
24.89-24.99 MHz	12 metres
26.95-27.30 MHz	11 metres
28.00-29.70 MHz	10 metres
50.00-54.00 MHz	6 metres
144.0-148.0 MHz	2 metres
430-440 MHz	70 centimetres

Amateur Radio Bandplanning and Frequency Coordination:

NZART has a group called FMTAG, the ***NZART Frequency Management and Technical Advisory Group,*** to coordinate the use of the amateur radio bands in New Zealand. This is a group of volunteers who advise the NZART Council on technical matters, including those relating to the frequencies to be used for VHF/UHF repeaters and beacons.

The ***Amateur Frequency Allocation Chart*** (in the GURL) sets down the bands ***to which a radio amateur has access***. How radio amateurs can best organise themselves for operations ***within those bands*** is notified by the ***Bandplans*** which are published from time-to-time usually in the NZART Annual CallBook and on the website.

A letter from the New Zealand Administration, the NZ Post Office at that time and published in "*Break-In*", July 1983, pages 2, 3 and 4, made radio amateurs ***responsible for their own band-planning***. FMTAG is the NZART response for this national task.

The bandplans are ***to ensure that your operations do not impose problems on other operators and that their operations do not impact on you.*** It is to the mutual advantage of all operators that the published bandplan provisions be respected.

Please note that all radio amateurs have equal "rights" to use amateur radio frequencies. This means that courtesy in operating must prevail.

It is ***correct operating practice*** to check that the frequency you propose to use is free from other users ***BEFORE*** you transmit.

No radio licence confers upon its holder a monopoly on the use of any frequency or frequency band specified on the radio licence. (See the NZ Regulations, *Schedule 1*, 6, in *Appendix 2*.)

Compliance and Enforcement:

The enforcement for non-compliance with, or breaching of, any regulatory condition is a clear ***Ministry function***. There is no question about this – it is a statutory function. **The Ministry has compliance auditing and enforcement arrangements in place, active and being strengthened.**

You have worked hard to obtain your AMATEUR RADIO QUALIFICATION. Value it. Don't put it at risk. Be aware of the conditions and restrictions under which you can operate. By world standards these are very liberal. Respect them at all times.

Possession and Presumptions

The Radiocommunications **ACT** (note: the ***ACT*** not the Regulations – see Reference on page 3) says (in Part 13, Radio Licences):

"114 Presumptions

(1) For the purposes of section 113, any person who erects, constructs, establishes, maintains, or is in possession of any radio transmitter is presumed to have used the radio transmitter unless and until the contrary is proved.

(2) Where a radio transmitter is temporarily inoperative or has been partially dismantled, that radio transmitter is deemed to be, and to remain, capable of transmitting radiocommunications unless the Secretary is satisfied that the transmitter has been rendered inoperative."

Possession of a (temporarily disabled) transmitter by someone who is not holder of a licence of some sort or another can be deemed illegal. This point is also in other legislation in various ways. Responsible common-sense is exercised by the authorities.

Amateur Radio - a Summary:

As already explained above, all radio amateurs must hold a *General Amateur Operators* ***Certificate of Competency*** to operate in the frequency bands and under the terms and conditions given in the ***General User Radio Licence*** *for Amateur Radio Operators* and must observe the requirements of the international and national regulations.

Read, re-read, revise, look at the question lists! ***Keep up-to-date with any changes too!***

Appendix 1
Extracts from the International Radio Regulations

The International Radio Regulations are important to all New Zealand radio licence holders. The local *New Zealand Radiocommunications Regulations* include the words:

> "Any radio transmitter operating under a radio licence must comply with the requirements of the International Radio Regulations (to the extent that they reasonably apply to the category of service specified on the radio licence or exemption)".

A complete copy of the *International Radio Regulations*, published by the International Telecommunication Union, can be obtained from the ITU at Geneva. It fills several volumes and is ***very*** expensive (CHF 252). It is also available on CD-ROM at a similar cost.

The following regulations, extracted from the International Radio Regulations, are those of most importance to radio amateurs.

ARTICLE 1

Terms and Definitions

1.2 *Administration:* Any governmental department or service responsible for discharging the obligations undertaken in the Constitution of the International Telecommunication Union, in the Convention of the International Telecommunication Union and in the Administrative Regulations.

1.56 *Amateur Service:* A *radiocommunication service* for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

1.57 *Amateur-Satellite Service:* A *radiocommunication service* using *space stations* on earth *satellites* for the same purposes as those of the *amateur service*.

1.157 *peak envelope power* (of a radio transmitter)*:* The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle at the crest of the modulation envelope taken under normal operating conditions.

1.166 *Interference:* The effect of unwanted energy due to one or a combination of *emissions*, *radiations*, or inductions upon reception in a *radiocommunication* system, manifested by any performance degradation, misinterpretation, or loss of information which could be extracted in the absence of such unwanted energy.

1.169 *Harmful Interference: 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 these Regulations.

ARTICLE 4

Assignment and Use of Frequencies

Section I. General Rules

4.4 Administrations of the Members shall not assign to a station any frequency in derogation of either the Table of Frequency Allocations in this Chapter or the other provisions of these Regulations, except on the express condition that such a station shall not cause harmful interference to, and shall not claim protection from harmful interference caused by, a station operating in accordance with the provisions of the Constitution, the Convention and these Regulations.

4.9 No provision of these Regulations prevents the use by a station in distress, or by a station providing assistance to it, of any means of radiocommunication at its disposal to attract attention, make known the condition and location of the station in distress, and obtain or provide assistance.

ARTICLE 17

Secrecy

17.1 In the application of the appropriate provisions of the Constitution and the Convention, administrations bind themselves to take the necessary measures to prohibit and prevent:

17.2 *a)* the unauthorized interception of radiocommunications not intended for the general use of the public;

17.3 *b)* the divulgence of the contents, simple disclosure of the existence, publication or any use whatever, without authorization of information of any nature whatever obtained by the interception of the radiocommunications mentioned in No. **17.2**.

ARTICLE 18

Licences

18.1 (1) No transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations by or on behalf of the government of the country to which the station in question is subject (however, see Nos. **18.2**, **18.8** and **18.11**).

ARTICLE 22

Space Services

Section I. Cessation of Emissions

22.1 § 1. Space stations shall be fitted with devices to ensure immediate cessation of their radio emissions by telecommand, whenever such cessation is required under the provisions of these Regulations.

ARTICLE 25

Amateur services

Section I – Amateur service

25.1 § 1 Radiocommunication between amateur stations of different countries shall be permitted unless the administration of one of the countries concerned has notified that it objects to such radiocommunications. (WRC-03)

25.2 § 2 1) Transmissions between amateur stations of different countries shall be limited to communications incidental to the purposes of the amateur service, as defined in **No. 1.56** and to remarks of a personal character. (WRC-03)

25.2A 1A) Transmissions between amateur stations of different countries shall not be encoded for the purpose of obscuring their meaning, except for control signals exchanged between earth command stations and space stations in the amateur-satellite service. (WRC-03)

25.3 2) Amateur stations may be used for transmitting international communications on behalf of third parties only in case of emergencies or disaster relief. An administration may determine the applicability of this provision to amateur stations under its jurisdiction. (WRC-03)

25.4 (SUP - WRC-03)

25.5 **§ 3** 1) Administrations shall determine whether or not a person seeking a licence to operate an amateur station shall demonstrate the ability to send and receive texts in Morse code signals. (WRC-03)

25.6 2) Administrations shall verify the operational and technical qualifications of any person wishing to operate an amateur station. Guidance for standards of competence may be found in the most recent version of Recommendation ITU-R M.1544. (WRC-03)

25.7 § 4 The maximum power of amateur stations shall be fixed by the administrations concerned. (WRC-03)

25.8 § 5 1) All pertinent Articles and provisions of the Constitution, the Convention and of these Regulations shall apply to amateur stations. (WRC-03)

25.9 2) During the course of their transmissions, amateur stations shall transmit their call sign at short intervals.

25.9A § 5A Administrations are encouraged to take the necessary steps to allow amateur stations to prepare for and meet communication needs in support of disaster relief. (WRC-03)

25.9B § 5B An administration may determine whether or not to permit a person who has been granted a licence to operate an amateur station by another administration to operate an amateur station while that person is temporarily in its territory, subject to such conditions or restrictions it may impose. (WRC-03)

Section II – Amateur-satellite service

25.10 § 6 The provisions of Section I of this Article shall apply equally, as appropriate, to the amateur-satellite service.

25.11 § 7 Administrations authorizing space stations in the amateur-satellite service shall ensure that sufficient earth command stations are established before launch to ensure that any harmful interference caused by emissions from a station in the amateur-satellite service can be terminated immediately (see No. **22.1**). (WRC-03)

Appendix 2

*Extract from the **New Zealand**:*

RADIOCOMMUNICATIONS REGULATIONS 2001

SCHEDULE 1

TERMS, CONDITIONS, AND RESTRICTIONS APPLYING TO EVERY RADIO LICENCE AND EXEMPTION FROM RADIO LICENSING

1. Technical compliance—

Any radio transmitter operating under a radio licence or an exemption must comply with the requirements of the International Radio Regulations (to the extent that they reasonably apply to the category of service specified on the radio licence or exemption), and with any technical specifications or standards that are specified on the radio licence or exemption, or that may be notified from time to time by the chief executive by notice in the *Gazette*.

2. Operational compliance—

The operation of any radio transmitter operating under a radio licence or exemption must comply with the requirements of the International Radio Regulations to the extent that they reasonably apply to the category of radiocommunication service specified on the radio licence or exemption.

3. Responsibility for observance of provisions—

Observance of all terms, conditions, and restrictions relating to a radio licence or exemption by any person authorised to operate a radio transmitter under a radio licence or exemption remains the personal responsibility of the holder of the radio licence or exemption, as the case may be.

4. Notification of change of address—

If a radio licence applies specifically to a radio transmitter at a particular address, the licensee must, within 7 days of removing the radio transmitter from the address, notify the chief executive of the removal.

5. Compliance with directions—

The holder of a radio licence or an exemption must comply with any directions given by the chief executive, or by any person authorised by the chief executive to give directions on the chief executive's behalf, for the use of the radio transmitter operating under the radio licence or exemption.

6. No monopoly conferred—

No radio licence or exemption confers upon the holder of the radio licence or exemption a monopoly on the use of any frequency or frequencies or frequency band or frequency bands specified on the radio licence or exemption.

7. Operator of radio transmitter to hold valid operator certificate—

If a radio licence specifies that the operator of any radio transmitter operating under the radio licence must be the holder of a certificate of competency of the class specified on the radio licence, the radio transmitter must not be operated by any person who is not the holder of a certificate of competency of the required class or of a certificate recognised by the chief executive.

8. Callsigns—

(1) If a radio licence requires the use of a callsign, the callsign of the person operating the radio transmitter in accordance with the radio licence must be—

(a) the callsign shown on the radio licence; or
(b) the callsign shown on the certificate of competency of the person who is operating the radio transmitter; or
(c) a temporary callsign that the operator is authorised to use in accordance with subclause (2).

(2) The chief executive may, by notice in the *Gazette*, authorise a person or a class of persons to use a temporary callsign for the period, and in accordance with the terms and conditions, specified in the notice.

9. Documents must be available for inspection—

The holder of a radio licence or exemption must arrange for the radio licence or exemption, as the case may be, to be available at all times for inspection by an authorised officer.

10. Dismantling of radio transmitter when contravention has taken place—

If an authorised officer is of the opinion that a contravention of the Act or these regulations has taken place and requires that a radio transmitter cease operating, the licensee under the relevant radio licence must comply with the requirement.

Appendix 3

Extract from "The New Zealand Gazette", 1/8/2013, No. 97, p. 2588:

[The text is spread out here to make it more "readable"!]

Radiocommunications Regulations (General User Radio Licence for Amateur Radio Operators) Notice 2013

Pursuant to section 111 of the Radiocommunications Act 1989 and Regulation 9 of the Radiocommunications Regulations 2001, and acting under delegated authority from the chief executive, I give the following notice.

Notice

1. Short title and commencement

1. This notice is the Radiocommunications Regulations (General User Radio Licence for Amateur Radio Operators) Notice 2013.
2. This notice comes into force on **1 August 2013.**

2. General user radio licence

A general user radio licence is granted for the transmission of radio waves by amateur radio operators in New Zealand, for the purpose of communications in the amateur radio service in accordance with the terms, conditions and restrictions of this notice.

3. Terms, conditions and restrictions applying to New Zealand amateur operators

1. Persons who hold a General Amateur Operator's Certificate of Competency and a callsign issued pursuant to the Regulations may operate an amateur radio station in New Zealand.
2. The callsign prefix of "ZL" may be substituted with the prefix "ZM" by the callsign holder for the period of, and participation in, a recognised contest, or as the control station for special event communications.
3. Operation on amateur bands between 5 MHz and 25 MHz is not permitted unless a person has held a General Amateur Operators Certificate of Competency for three months and logged 50 contacts during this period. The person must keep the logbook record for at least one year and, during this period, produce it at the request of the chief executive.

4. Terms, conditions and restrictions applying to visiting amateur operators

1. Persons visiting New Zealand who hold a current amateur certificate of competency, authorisation or licence issued by another administration, may operate an amateur station in New Zealand for a period not exceeding 90 days, provided the certificate, authorisation or licence meets the requirements of Recommendation ITU-R M.1544 or CEPT T/R 61-01 or CEPT T/R 61-02 and is produced at the request of the chief executive.
2. The visiting overseas operator must use the national callsign allocated by the other administration to the operator, in conjunction with the prefix or suffix "ZL" which is to be separated from the national callsign by the character "/" (telegraphy), or the word "stroke" (telephony).
3. The visiting overseas operator may use the prefix or suffix:
   a. ZL7 when visiting the Chatham Islands
   b. ZL8 when visiting the Kermadec Islands
   c. ZL9 when visiting the Sub-Antarctic Islands

5. Terms, conditions and restrictions applying to all amateur operators

1. The use of callsigns, including temporary and club callsigns, must be in accordance with publication PIB 46 "Radio Operator Certificate and Callsign Rules" published at www.rsm.govt.nz
2. Callsigns must be transmitted at least once every 15 minutes during communications.
3. National and international communication is permitted only between amateur stations, and is limited to matters of a personal nature, or for the purpose of self-training, intercommunication and radio technology investigation, solely with a personal aim and without pecuniary interest. The passing of brief messages of a personal nature on behalf of other persons is also permitted, provided no fees or other consideration is requested or accepted.
4. Communications must not be encoded for the purpose of obscuring their meaning, except for control signals by the operators of remotely controlled amateur stations.
5. Except as provided to the contrary in this notice, transmitter power output must not exceed 1000 watts peak envelope power (pX), as defined in ITU Radio Regulation 1.157.
6. Amateur stations must, as far as is compatible with practical considerations, comply with the latest ITU-R recommendations to the extent applicable to the amateur service.

7. In accordance with Article 25 of the International Radio Regulations, amateur operators are encouraged to prepare for, and meet, communication needs in support of disaster relief.
8. Amateur beacons, repeaters and fixed links may not be established pursuant to this licence.
9. Unwanted emissions outside the frequency bands specified in this Schedule must comply with the requirements of technical standard ETSI ETS 300 684 published by the European Telecommunications Standards Institute (ETSI).
10. This general user radio licence applies only to transmissions within the frequency ranges set out in the Schedule to this licence. All such transmissions must be made in accordance with the notes for the frequency range in which that transmission take place and in accordance with the other conditions set out in this licence.

6. Consequential revocation of licences

The Radiocommunication Regulations (General User Radio Licence for Amateur Radio Operators) Notice 2012 dated the 29th day of November 2012 and published in the *New Zealand Gazette*, 6 December 2012, No. 147, page 4287, is revoked.

Schedule

Frequency Range	Notes
130 to 190 kHz	2, 4, 6
472 to 479 kHz	2, 7
505 to 515 kHz	2,4,7,8,9
1.80 to 1.95 MHz	2
3.50 to 3.90 MHz	2
7.00 to 7.10 MHz	1
7.10 to 7.20 MHz	
7.20 to 7.30 MHz	2
10.10 to 10.15 MHz	2
14.00 to 14.35 MHz	1
18.068 to 18.168 MHz	1
21.00 to 21.45 MHz	1
24.89 to 24.99 MHz	1
26.95 to 27.30 MHz	2, 3, 5, 6
28.00 to 29.70 MHz	1
51.00 to 53.00 MHz	2
144.00 to 146.00 MHz	1
146.00 to 148.00 MHz	2
430.00 to 440.00 MHz	1, 2, 3
921.00 to 928.00 MHz	3, 7
1.24 to 1.30 GHz	1, 2
2.396 to 2.45 GHz	1, 3
3.30 to 3.41 GHz	1, 2
5.65 to 5.85 GHz	1, 3
10.00 to 10.50 GHz	1, 2
24.00 to 24.05 GHz	1, 3
24.05 to 24.25 GHZ	3
47.00 to 47.20 GHz	1
75.50 to 76.00 GHz	1, 2
76.00 to 81.00 GHz	1, 2
122.25 to 123.00 GHz	2, 3
134.00 to 136.00 GHz	1
136.00 to 141.00 GHz	1,2
241.00 to 248.00 GHz	1, 2, 3
248.00 to 250.00 GHz	1
275.00 to 1000 GHz	2, 4

Notes to Schedule

1. The following ranges of frequencies may also be used for amateur satellite communications:

7.00 to 7.10 MHz	3.40 to 3.41 GHz
14.00 to 14.25 MHz	5.65 to 5.67 GHz (a)
18.068 to 18.168 MHz	5.83 to 5.85 GHz (b)
21.00 to 21.45 MHz	10.45 to 10.50 GHz
24.89 to 24.99 MHz	24.00 to 24.05 GHz
28.00 to 29.70 MHz	47.00 to 47.20 GHz
144.00 to 146.00 MHz	75.50 to 81.00 GHz
435.00 to 438.00 MHz	134.00 to 141.00 GHz
1.26 to 1.27 GHz (a)	241.00 to 250.00 GHz
2.40 to 2.45 GHz	

   a. Limited to the earth-to-space direction.
   b. Limited to the space-to-earth direction.
2. These frequencies are, or may be, allocated for use by other services. Amateur operators must accept interference from, and must not cause interference to, such other services.
3. The frequencies:

27.12 MHz	(26.957 - 27.283 MHz),
433.92 MHz	(433.05 - 434.79 MHz),
921.5 MHz	(915 - 928 MHz),
2.45 GHz	(2.4 - 2.5 GHz),
5.8 GHz	(5.725 - 5.875 GHz),
24.125 GHz	(24.00 - 24.25 GHz),
122.5 GHz	(122 - 123 GHz), and
245 GHz	(244 - 246 GHz)

   are designated for industrial, scientific and medical (ISM) purposes. These frequencies may also be allocated to Short Range Device (SRD) services. Amateur operators must accept interference from ISM and SRD services within these frequency ranges.
4. Allocated to the amateur service on a temporary basis until further notice.
5. Telecommand and telemetry operation only.
6. Radiated power must not exceed 5 watts e.i.r.p.
7. Radiated power must not exceed 25 watts e.i.r.p.
8. The bandwidth of emissions must not exceed 200 Hz.
9. Use of this band is not permitted after 31 December 2013.

Dated at Wellington this 30th day of July 2013.
JEFFREY DENNIS HICKS, Manager, Radio Spectrum

Management Licensing, Ministry of Business, Innovation and Employment.

Explanatory Note

This note is not part of the notice, but is intended to indicate its general effect.

This notice:

1. Prescribes that, pursuant to Regulations made under the Radiocommunications Act 1989, a general user radio licence is granted for the transmission of radio waves by amateur radio operators in New Zealand, for the purpose of communications in the amateur radio service, in accordance with the terms, conditions, and restrictions of this notice. This notice comes into force on **1 August 2013**.
2. This notice replaces the Radiocommunications Regulations (General User Radio Licence for Amateur Radio Operators) Notice 2012. The principal change from that notice is the changes to visiting amateur callsign requirements.

Appendix 4
The Q-code

Newcomers are often puzzled by the codes and abbreviations used by radio amateurs. These codes make international communication possible with operators with little knowledge of English and they save time conveying information.

A full listing of the Q-code can be found in publications of the International Telecommunication Union.

Listed below are some Q-codes used by radio amateurs.

The Q-code is used in two ways - with or without a question mark. Sometimes a figure, a callsign or a frequency, accompanies a Q-code. For example:

QTC? (note the question mark) means "have you any messages for me?".

QTC3 means "I have three messages for you".

QRG	Will you tell me my exact frequency (or that of ...)? Your exact frequency (or that of ...) is ... kHz
QRH	Does my frequency vary? Your frequency varies
QRK	How intelligible are my transmissions? The intelligibility of your signal is … (1, 2, 3, 4, 5)
QRL	Are you busy? I am busy
QRM	Am I being interfered with? You are being interfered with
QRN	Are you troubled by static? I am troubled by static
QRO	Shall I increase power? Increase power
QRP	Shall I decrease power? Decrease power
QRQ	Shall I send faster? Send faster
QRS	Shall I send slower? Send slower
QRT	Shall I stop sending? Stop sending
QRW	Shall I inform ... that you are calling him on ... kHz? Please inform ... that I am calling on ... kHz
QRX	When will you call me again? I will call you again at ... hours.
QRZ	Who is calling me? You are being called by ...
QSA	What is my signal strength? Your signal strength is ... (1, 2, 3, 4, 5)
QSB	Are my signals fading? Your signals are fading
QSK	Can you hear me between your signals? I can hear you between my signals
QSL	Please acknowledge receipt. I acknowledge receipt
QSO	Can you communicate with ... ? I can communicate with ...
QSY	Shall I shift frequency? Shift frequency to ...
QTC	Have you any messages? I have ... messages for you
QTH	What is your location? My location is ...

Appendix 5

Callsigns

Identification of Stations

The ***Identification of Stations*** is in **Article 19** of the International Radio Regulations. It includes the ***Formation of callsigns*** for stations and the formats to be followed for the callsigns used in different radio services.

The International Call Sign Series

The "***Table of allocation of international call sign series***" is in **Appendix 42** of the International Radio Regulations. *(Copies of Article 19 and Appendix 42 are available upon enquiry.)*

The information contained in the Appendix is simply a compilation of what has been supplied to the ITU by administrations.

The callsign series **ZKA-ZMZ** is allocated to **New Zealand**.

So, the ZK, ZL and ZM prefixes are allocated to the New Zealand administration. What use is made of these prefixes is an internal matter for the New Zealand administration. See PIB46 from the Ministry's website.

As far as the ITU is concerned, the purpose of a call sign prefix is only to identify the responsible administration, not to identify the geographic location of the station.

Items for Reference and Further Study

The International Amateur Radio Club, IARC, based in Geneva, Switzerland, maintains an amateur radio station **4U1ITU** at the Headquarters of the ITU. The club maintains a web site with the International Radio Regulations of significance to the Amateur Service. To access this information, Google: **4U1ITU**.

Emission Designators

The International Radio Regulations provide a system to classify emitted signals with an emission designator. Examples are:

060HA1AAN	(25 wpm Morse),
2K85J3EJN	(SSB voice telephony),
16K0F3EJN	(FM voice telephony) and
4M00G7WWX	(digital amateur television)

The IARC website provides access to Article 2 and Appendix 1 of the International Regulations where the complete details of Emission Designators can be found.