

# **WIP. Tidy up this Document.**

## **Amateur Radio Band Usage**

### **From 160 metres to 10 metres**

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#### **1800 to 1950 kHz - 160 metres ("topband" or "one-sixty")**

1800-1810 Digimodes

1840 FT8

1810-1850 CW

1810 CW QRP

1836.6 WSPR beacons

1838 JT65A

1840-1843 Digimodes

1843-1950 SSB

1910 SSB QRP

#### **3500 to 3900 kHz - 80 metres ("eighty" or "seventy five")**

3500-3525 CW DX Window simplex or split, listen for op's instructions (no local ragchewing)!

3530 IOTA CW

3559 Hellschreiber (Region 3)

3560 QRP CW

3570 BPSK31

3573 FT8

3575 Hellschreiber

3576 JT65A

3579 QRSS Beacons

3580 RTTY

3590 RTTY DX

3592.6 WSPR beacons

3600-3900 SSB

3620-3640 VK/ZL digimodes window

3710 QRP CW

3730-3740 SSTV (ITU Region 1)

3755 IOTA SSB

3776-3800 SSB DX window for intercontinental traffic

3791 ALE

3845 SSTV (ITU Region 2)

3885 AM

## **5060-5428kHz - 60 metres ("five megs")**

ZL is currently operating on 60m on a trial basis with two spot frequencies:  
(The trial ends July 2018)

5353 USB Phone

5362 - 5364 Narrow band modes (FT8 / CW)

Note a power limit of 10W EIRP. See: [60m information](#).

## **7000 to 7300 kHz - 40 metres ("forty")**

7000-7025 CW DX Window simplex or split, listen for op's instructions (no local ragchewing)!

7030 IOTA CW

7030-7040 Hellschreiber

7035-7040 BPSK31 (ITU Regions 1 & 3)

7035-7045 RTTY (ITU Regions 1 & 3)

7039 JT65A

7039 Hellschreiber

7040 RTTY DX

7040 QRP (ITU Region 2)

70599 QRSS Beacons

7070-7075 BPSK31 (ITU Region 2)

7074 FT8

7076 JT65A (USB)

7080 RTTY (ITU Region 2)

7083.6 WSPR beacons

7084 Hellschreiber (USB Region 1)

7075-7.100 SSB Calling Simplex or split listen for op's instructions

7100-7.200 SSB (Region 1)

7125-7.300 SSB (Region 2)

7171 SSTV

7185.5 ALE

7285 QRP SSB

7290 AM

New Zealand is in ITU Region 3 but ZL amateurs are also allowed to use digimodes on the frequencies allocated to ITU Region 2 (the Americas).

## **10100 to 10150 kHz - 30 metres ("thirty")**

10100-10110 CW DX Window simplex or split listen for op's instructions (no local ragchewing)!

10115 IOTA CW

10116 QRP CW

10135-10145 Hellschreiber

10136 FT8

10138.7 WSPR beacons

10139 JT65A

10140 QRSS Beacons

10140 PSK  
10140-10150 RTTY  
10147 MFSK16

### **14000 to 14350 kHz - 20 metres ("twenty")**

14000-14025 CW DX Window simplex or split, listen for op's instructions (no local ragchewing)!  
14040 IOTA CW  
14060 CW QRP  
14070-14073 PSK  
14071-14075 Hellschreiber  
14073 Hellschreiber DX calling frequency  
14074 FT8  
14076 JT65A  
14078-14080 Throb  
14078-14082 MFSK16  
14080-14090 RTTY  
14090-14110 Packet, AMTOR, PACTOR  
14095.6 WSPR beacons  
14098.9 QRSS Beacons  
14101 ROS  
14103 ROS  
14107.5 Olivia 32/100  
14100 NCDXF International beacon Network (Do not transmit here)  
14109-14111 MT63  
14115-14350 SSB (14170-14220 DX Calling Simplex or split listen for op's instructions)  
14227 SSTV  
14230 SSTV  
14233 SSTV  
14236 SSTV  
14260 IOTA SSB  
14285 SSB QRP  
14286 AM  
14346 ALE

### **18068 to 18168 kHz - 17 metres ("seventeen")**

18070-18080 CW DX Window simplex or split listen for op's instructions (no local ragchewing)!  
18090 IOTA CW  
18100 PSK  
18100 FT8  
18102 JT65A  
18104-18107 Hellschreiber  
18104.6 WSPR beacons  
18105 MFSK16  
181089 QRSS Beacons  
18110 NCDXF International Beacon Network (Do not transmit here)

18117.5 ALE  
18128 IOTA SSB  
18120-18168 SSB

### **21000 to 21450 kHz - 15 metres ("fifteen")**

21000-21025 CW DX Window simplex or split listen for op's instructions(no local ragchewing)!  
21040 IOTA CW  
21060 QRP CW  
21063-21070 Hellschreiber  
21070-21080 PSK  
21074 FT8  
21074 Hellschreiber  
21076 JT65A  
21080 MFSK16  
21080 RTTY DX  
21080-21110 RTTY  
21094.6 WSPR beacons  
21100-21450 SSB  
21150 NCDXF International Beacon Network (Do not transmit here)  
21340-21430 SSTV  
21385 QRP SSB  
21260 IOTA SSB  
21432.5 ALE

### **24890 to 24990 kHz - 12 metres ("twelve")**

24890-24910 CW DX Window simplex or split listen for op's instructions (no local ragchewing)  
24915 FT8  
24917 JT65A  
24920-24925 PSK  
24920-24930 RTTY  
24924 Hellschreiber  
24924.6 WSPR beacons  
24930 NCDXF International Beacon Network (Do not transmit here)  
24932 ALE  
24935-24990 SSB  
24950 IOTA SSB calling frequency

### **28000 to 29700 kHz - 10 metres ("ten")**

28000-28025 CW DX Window simplex or split listen for op's instructions (no local ragchewing)  
28060 QRP CW  
28063-28070 Hellschreiber  
28074 FT8  
28074 Hellschreiber  
28076 JT65A  
28080 RTTY DX

28080-28110 RTTY  
28120 PSK  
28124.6 WSPR beacons  
28160-28300 Beacons (Do not transmit here)  
28200 NCDXF International Beacon Network (Do not transmit here)  
28312.5 ALE  
28321 QRSS beacons  
28385 QRP SSB  
28350-28700 SSB  
28460 IOTA SSB  
28560 IOTA SSB  
28675-28685 SSTV  
28885 Six metre liaison frequency  
29000-29200 AM  
29300-29510 Satellite downlinks (Do not transmit here)  
29520-29580 FM repeater inputs (duplex, listen 100 kHz higher)  
28590-28610 FM simplex  
29600 FM simplex calling frequency  
29620-29680 FM repeater outputs (duplex, transmit 100 kHz lower)

## Notes

This list is not definitive.

Check your transmitting license for the explicit terms and conditions according to the New Zealand law.

All frequencies are dial settings in kiloHertz.

In order to prevent your transmissions extending out of band, do not transmit right at the band edges.

Keep your power, microphone gain and speech processing down to reduce spurious transmissions and overmodulation, especially on digimodes.

Stay clear of the beacon and satellite downlink frequencies to avoid interfering with reception of very weak signals.

On SSB, use LSB on 40m and lower frequency bands, or USB on 20m and up.

Most digimodes use USB on all bands. If you cannot decode a good signal, try LSB or 'invert', assuming you are using the appropriate digimode and speed!

Some of the frequencies shown are not available to amateurs in other countries, who may therefore be found elsewhere. In particular, novices often have restrictions on the bands, frequency-ranges and transmit power.

CW is permitted across the entirety of each band, but is usually found in the segments indicated.

DXpeditions and rare DX stations usually operate "split" (half-duplex): listen to the DX operator's instructions or tune around to find other callers. Avoid calling on the DX station's transmit frequency (simplex) unless you are sure he is taking callers there.

All frequencies except band edges are approximate. Always listen carefully for a clear frequency before transmitting (including when operating split).

The 30m, 17m and 12m bands have been known as "the WARC bands" since they were initially allocated at a World Amateur Radio Conference.

Some bands (such as 80 & 30 metres) are shared with other radio services: do not interfere with them. They may have primary rights.

Please report pirates and intruders to the IARU Monitoring Service (see <http://www.nzart.org.nz/nzart/monitoring-service/>)

## Operating modes

Morse code: CW

Voice modes: SSB, FM, AM and digital speech

Digimodes: JT65A, MT63, PSK, MFSK, Throb, RTTY, Packet, AMTOR, PACTOR, Clover, OLIVIA, DominoEX, ALE, CMSK, Piccolo and others

Raster-scanning modes: Hellschreiber, SSTV

ALE (in USB mode): MIL-STD 188-141 ; FED-1045 (8FSK - 2kHz Bandwidth)

## Glossary

AM Amplitude Modulation

AMTOR Amateur Telex Over Radio

CMSK Correlated, Convolved, Chat-mode MSK (see <http://www.qsl.net/zl1bpu/CMSK/cmsk.htm>)

CW Continuous Wave

Digimodes Digital data modes

Duplex Transmit on one frequency while simultaneously receiving on another

FM Frequency Modulation

Half-duplex, split Transmit on one frequency, then receive on another

IOTA Islands On The Air

ITU International Telecommunications Union

LSB Lower Sideband

MSK Multi-Shift Keying

NCDXF Northern California DX Foundation (see <http://www.ncdxf.org/pages/beacons.html>)

Packet Packet radio (TCP/IP)

PACTOR Packet Telex Over Radio (100 baud increasing to 200 baud on good links)

PSK Phase Shift Keying (mostly 31 baud i.e. PSK31, with some activity on PSK63, PSK125 and occasionally other variants)

QRP Low transmit power (up to 5 watts output)

QRSS Very slow speed CW (takes seconds to send each element)

RTTY Radio Teletype (usually 170 Hz shift and 50 baud, sometimes 75 baud)

Simplex Transmit and receive on the same frequency

SSB Single Sideband

SSTV Slow-scan Television

USB Upper Sideband

WSPR Weak Signal Propagation Reporter beacon use MEPT\_JT mode, similar to JT65A (see <http://WSPRnet.org>)