

Canadian Preppers Network



Ham Radio Quick Reference Guide

Here's a quick reference guide for Canadian ham radio, including Q-codes, band plans, and general operating practices:

1. Q-Codes (Commonly Used in Canadian Ham Radio)

Q-codes are a standardized set of three-letter codes used to convey information quickly and clearly over radio. Here are some of the most frequently used Q-codes:

Q-Code	Meaning
QTH	What is your location? / My location is...
QRZ	Who is calling me? / I am calling you.
QRM	Interference from other stations
QRN	Atmospheric noise or interference
QRP	Reducing power (low-power operation)
QSL	Acknowledgement or receipt of message
QSO	A conversation between two stations
QRT	Closing down (turning off transmitter)
QRV	Are you ready? / I am ready
QSY	Change frequency
QTH	My location is...
QRM	I am being interfered with by another station
QRL	Is the frequency in use? / The frequency is in use
QSB	Signal fading

2. HF (High Frequency) Bands

Band	Frequency Range (MHz)	CW	SSB	FM	Digital Modes
160m	1.800 - 2.000	1.800 - 1.810	1.810 - 2.000	Not typically used	1.840 - 1.843 (PSK31)
80m	3.500 - 4.000	3.500 - 3.525	3.600 - 3.800	3.550 - 3.600 (FM)	3.580 - 3.590 (FT8)
40m	7.000 - 7.300	7.000 - 7.030	7.030 - 7.300	7.100 - 7.150 (FM)	7.040 - 7.050 (FT8)
20m	14.000 - 14.350	14.000 - 14.035	14.100 - 14.350	14.250 - 14.300 (FM)	14.070 - 14.080 (PSK31, FT8)
17m	18.068 - 18.168	18.068 - 18.110	18.110 - 18.168	Not typically used	18.100 - 18.103 (PSK31, FT8)
15m	21.000 - 21.450	21.000 - 21.060	21.150 - 21.450	21.200 - 21.250 (FM)	21.080 - 21.100 (PSK31, FT8)
12m	24.890 - 24.990	24.890 - 24.920	24.920 - 24.990	Not typically used	24.920 - 24.930 (FT8, PSK31)
10m	28.000 - 29.700	28.000 - 28.060	28.300 - 28.500	29.500 - 29.700 (FM)	28.060 - 28.080 (FT8, PSK31)

3. VHF (Very High Frequency) Bands

Band	Frequency Range (MHz)	CW	SSB	FM	Digital Modes
6m	50.000 - 54.000	50.000 - 50.080	50.100 - 50.300	52.000 - 54.000 (FM)	50.290 - 50.310 (FT8, PSK31)
2m	144.000 - 148.000	144.000 - 144.050	144.100 - 144.300	146.000 - 148.000 (FM)	144.150 - 144.200 (PSK31, FT8)
1.25m	222.000 - 225.000	223.000 - 223.050	223.100 - 223.300	224.000 - 225.000 (FM)	223.200 - 223.250 (FT8)
70cm	430.000 - 450.000	432.000 - 432.050	432.100 - 432.300	446.000 - 450.000 (FM)	432.100 - 432.150 (FT8, PSK31)

4. UHF (Ultra High Frequency) Bands

Band	Frequency Range (MHz)	CW	SSB	FM	Digital Modes
23cm	1240.000 - 1300.000	1240.000 - 1240.100	1240.100 - 1260.000	1270.000 - 1300.000 (FM)	1240.200 - 1240.250 (FT8)
13cm	2300.000 - 2450.000	2300.000 - 2305.000	2305.000 - 2400.000	Not typically used	2305.000 - 2310.000 (FT8)
9cm	3300.000 - 3400.000	3300.000 - 3305.000	3305.000 - 3400.000	Not typically used	3305.000 - 3310.000 (FT8)

LSB (Lower Sideband) is typically used for the lower frequency bands (40, 80, and 160 meters), while USB (Upper Sideband) is used for the higher frequency bands (20, 17, 15, 12, 10 meters, and all VHF/UHF)

Morse Code Chart

Character	Morse Code	Character	Morse Code
A	.-	0	-----
B	-...	1	.----
C	-.-.	2	..---
D	-..	3	...--
E	.	4-
F	..-.	5
G	--.	6	-....
H	7	--...
I	..	8	---..
J	.---	9	----.
K	-.-	Period (.)	.-.-.
L	.-..	Comma (,)	--..--
M	--	Question Mark (?)	..--..
N	-.	Apostrophe (')	.-...
O	---	Hyphen (-)	-....-
P	.-.-	Slash (/)	-.-.
Q	----	Colon (:)	---...
R	.-.	Semicolon (;)	-.-.
S	...	Equal Sign (=)	...-
T	-	Plus Sign (+)	.-.-.
U	..-	Minus Sign (-)	-....-
V	...-	Slash ("/")	-.-.
W	.-.-		
X	-.-.		
Y	-.--		
Z	---..		

Morse Code Basics

- A **dot** is represented by a short signal (.) or a "dit."
- A **dash** is represented by a longer signal (-) or a "dah."
- The **space** between dots and dashes within a character is **1 unit** of time.
- The **space** between characters within a word is **3 units** of time.
- The **space** between words is **7 units** of time.

This is the standard Morse Code used for communication in ham radio and is commonly used on the **CW (Morse Code)** portion of the bands!

Common Mode Frequency Ranges

- **CW (Morse Code)**: CW is typically found in the lower part of the bands, often in the 1st 20 kHz.
- **SSB (Single Side Band)**: SSB frequencies are generally between 1.5 and 3 kHz wide and are most common in the middle part of each band.
- **FM (Frequency Modulation)**: FM is most often used in local communications (especially on VHF and UHF) and is allocated in the higher part of the band.
- **Digital Modes (FT8, PSK31, RTTY)**: Digital modes such as FT8, PSK31, and RTTY use narrow bandwidths (typically less than 1 kHz) and are typically found in the lower parts of the band.

Additional Notes:

- **Bandwidths**: Always consider the bandwidth restrictions in place. CW typically requires the least bandwidth, followed by digital modes, and then SSB. FM is the widest.
- **Splits**: In certain bands, FM repeaters may have a **duplex split**, meaning the receiving and transmitting frequencies differ (e.g., 2m FM may listen on 147.000 MHz while transmitting on 142.000 MHz).
- **Propagation Considerations**: **Propagation on higher bands (like 10m or 6m) can be sporadic and vary significantly depending on solar activity, time of day, and weather conditions.**

ARES Frequencies

1. HF (High Frequency)

HF bands are often used for **long-distance communications**, especially when local repeater systems are unavailable due to emergencies. These frequencies can be used for **regional** or **national** communications.

Band	Frequency Range (MHz)	Common Usage
80m	3.750 - 3.950	ARES Emergency, Voice (SSB)
40m	7.090 - 7.095	ARES Emergency, Voice (SSB)
20m	14.290 - 14.300	National ARES Emergency Net, Voice
15m	21.360 - 21.380	Emergency and Health Net (SSB)
10m	28.300 - 28.350	Emergency, Voice, & Digital (SSB/FT8)

2. VHF (Very High Frequency) ARES Frequencies

VHF bands are commonly used for **local communications** and **repeater** networks. These frequencies are often utilized in areas where **FM repeaters** are available to facilitate emergency communications.

Band	Frequency Range (MHz)	Common Usage
2m	144.000 - 148.000	ARES Emergency, Local Communication (FM)
2m	146.520	National ARES Simplex Emergency Channel (FM)
2m	147.420	National ARES Simplex Emergency Channel (FM)
2m	146.550	General ARES Local Communications (FM)
1.25m	223.500 - 224.000	Local Emergency, Simplex (FM)

3. UHF (Ultra High Frequency) ARES Frequencies

UHF bands can be used for **shorter-distance** communications and are often found in **urban areas** with repeater systems. They are useful for **local events** and **direct communication** between operators.

Band	Frequency Range (MHz)	Common Usage
70cm	430.000 - 450.000	Local ARES Communications (FM)
70cm	446.000	National Simplex Emergency Channel (FM)
70cm	441.000	ARES Communications (FM)
70cm	433.000	Local ARES Net (FM)

Weather Radio Frequencies

NOAA 1	162.400 MHz
NOAA 2	162.425 MHz
NOAA 3	162.450 MHz
NOAA 4	162.475 MHz
NOAA 5	162.500 MHz
NOAA 6	162.525 MHz
NOAA 7	162.550 MHz

FRS/GMRS Frequencies

1	462.5625	FRS & GMRS 1	12	467.6625	FRS 12
2	462.5875	FRS & GMRS 2	13	467.6875	FRS 13
3	462.6125	FRS & GMRS 3	14	467.7125	FRS 14
4	462.6375	FRS & GMRS 4	15	462.5500	GMRS 11
5	462.6625	FRS & GMRS 5	16	462.5750	GMRS 8
6	462.6875	FRS & GMRS 6	17	462.6000	GMRS 12
7	462.7125	FRS & GMRS 7	18	462.6250	GMRS 9
8	467.5625	FRS 8	19	462.6500	GMRS 13
9	467.5875	FRS 9	20	462.6750	GMRS 10
10	467.6125	FRS 10	21	462.7000	GMRS 14
11	467.6375	FRS 11	22	462.7250	GMRS 15

