



Direct Bearing Network Resource

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The Direct Bearing Network



The Direct Bearing Network represents a group of people responsible for risk management in their organizations.

Members gain access to risk management related articles, studies, tools, templates and links to quality resources that have been vetted by the Direct Bearing Team.

The Network also serves to put you in touch with other people working in similar areas with challenges not unlike your own.

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Radio Communications

TYPES OF RADIOS

FMS/GMRS - Small handheld radios for recreational use. Range from 2 KM (FMS 0.5 Watt output) to 20 KM (GMRS 2 Watt output). Dedicated channels for use between radios on the same system. Other users on the network tend to be recreationalists (hikers, hunters, families, etc.). Very affordable and convenient to use. No operator's license required to use.

Marine VHF - Handheld version of these radios are able to communicate with the marine network used by boaters and monitored by the Canadian Coast Guard. Range from 16 KM (2 Watt output) to 40 KM (5 Watt output) Use is regulated by Industry Canada. A Restricted Operator's Certificate is required to operate.

Other VHF Radios - Many other users have specifically designated radio frequencies for communicating in remote environments. These radios communicate on specific frequencies with very few users – they do not work on other networks. In an emergency situation, you may be able to reach someone who can relay a message to emergency services on one of these networks. Citizen's Band (CB) radios are another type of communication means that might be useful for relaying emergency information.

EMERGENCY PROTOCOL

Classify your transmission by using one of three distress levels. The term represents the degree of urgency and is always repeated three times. The distress term (repeated three times) is always followed by who you are and your location (preferably your LAT/Long position), your situation and what you are requesting.

"MAYDAY" – You are (or you know of someone) threatened by grave or imminent danger and require immediate assistance.

"PAN-PAN" – You have a very urgent message to transmit concerning or advising of possible jeopardy to life.

"Security" – You have a message to transmit concerning safety of navigation, roads alerts or weather warnings.

SAMPLE DISTRESS CALL

"MAYDAY, MAYDAY, MAYDAY. This is Kayak Expedition True North. Location. North four six degrees, one six minutes. West seven seven degrees three four minutes. We have one victim with severe medical emergency. Request evacuation by helicopter of injured party. OVER.

Standard Voice Phrases

ACKNOWLEDGE	Let me know that you have received and understood this message.
AFFIRMATIVE	Yes, agree, permission granted.
CLEAR	No further transmission from this station.
CORRECTION	An error has been made in the previous message. The correct version is...
GO AHEAD	Continue - proceed with your message.
NEGATIVE	No, permission not granted or no I do not agree.
SAY AGAIN	Please re-say your last transmission.
RADIO CHECK	Please tell me how clearly you understand what I am saying. (Based on scale 1-5)
ROGER or COPY	I have received and understand all of your last transmission.
ROGER - OUT	Received and understand your last - no need to communicate further at this time.
STANDBY	I am busy for a moment. Please wait and listen to the radio until I can get back to you.
STANDING BY	I have received your message to wait and will wait silently until you get back to me.
'Call Sign' - OUT	(Give your call sign and say OUT) Conversation has ended and no response expected.
OVER	My transmission is ended and I expect a response from you.

Phonetic Alphabet

A	Alpha	E	Echo	I	India	M	Mike	Q	Quebec	U	Uniform	Z	Zulu	3	Tree	7	Sev-en
B	Bravo	F	Fox-trot	J	Juliet	N	November	R	Romeo	V	Victor	0	Ze-ro	4	Fow-er	8	Ait
C	Charlie	G	Golf	K	Kilo	O	Oscar	S	Sierra	X	X-Ray	1	Wun	5	Fife	9	Nin-er
D	Delta	H	Hotel	L	Lima	P	Papa	T	Tango	Y	Yankee	2	Too	6	Six		

Radio Type Summary

Type	Output	Range*	Emergency Channel	Frequency Range (MHz)	Channels
FRS (Family Radio Service)	Up to 0.5 Watts	Up to 2 Km	None assigned	462.5625 to 467.7125	1-14
GMRS (General Mobile Radio Service)	Up to 2.0 Watts	Up to 20 Km	None assigned	462.5500 to 462.7250	15-22 (1-14 as FRS)
CB (Citizens Band)	Up to 4 Watts	Up to 30+ Km	Ch. 9 (Ch.19 on hwsys)	26.965 to 27.405	1-40
Marine Radio	Up to 5 Watts	Up to 40+ Km	Channel 16 (156.8 MHz)	156 - 174	1-88

* The range of a handheld radio is affected by weather, humidity, obstructions, foliage, buildings and a host of other factors. Don't count on handhelds for long distance communications unless a repeater has been worked into the system you are using. While it may be possible to get the "rated range" out of the radio in perfect conditions – don't count on it!