

DEFINITIONS

- Wave length is the linear measurement of a wave.
- Trough is the lowest part of the wave.
- Crest is the highest part of the wave.
- Cycle is one complete vibration from trough to trough or crest to crest.
- Frequency is number of cycles per second.
- Hertz is a measurement of frequencies. Usually measured in kilohertz or megahertz.

Low and Medium Frequency:

- Frequencies between 200KHz and 535KHz are known as **low or medium** frequencies.
- Commercial broadcast radio stations and homing devices all transmit on **low or medium** frequencies.

High Frequency:

Frequencies between 2,500KHz and 30,000KHz are known as **high** frequencies. They are excellent for air/ground communication facilities in the northern remote areas of Canada.

Very High Frequencies:

Frequencies between 30MHz and 300MHz are known as **very high** frequencies. Used for aviation, for commercial and private aircraft.

Ultra High Frequency:

- Frequencies between 300MHz and 3000MHz are known as **ultra high** frequencies.
- Used for upper level aircraft and special government use.

Ground Waves

Travel along the surface of the earth and are dulled by obstacles.

Sky Waves

Travel upward into the air and are reflected back to the surface from the ionosphere.

Skip Zone

Is an area located between the ground waves and the sky waves. Transmissions are very erratic or unheard.

Line of Sight

VHF radio waves travel straight through the air. Therefore, an aircraft must be able to see the station in order to receive their transmission. This is known as "line of sight".

EMERGENCIES

The emergency frequency is 121.50MHz

Distress

- The first distress call should be placed on the current frequency, if there is no response then transmit on the emergency frequency.
- Distress calls can be used when the flight is threatened by grave or imminent danger and requires immediate assistance.
- The call format is the word **MAYDAY** repeated three times. A pilot should include present position, nature of emergency, and intentions.

Urgency

- The urgency call should be placed to a specific station.
- Urgency calls can be used with concerns of the safety of the aircraft, any person on board or within sight.
- The call format is the word **PAN** repeated three times. A pilot should include present position, nature of urgency, and intentions.

Safety

Message concerning the safety of navigation or important meteorological warning to aircraft in flight.

- The call format is the word **SECURITY** repeated three times.

Priority of Communication:

The following are the priority of calls by Flight Service Stations (FSS):

- 1) Emergency Communications
- 2) Flight Safety Communications
- 3) Scheduled Broadcasts
- 4) Unscheduled Broadcasts
- 5) Other air/ground Communications

Communication Check

The readability scale employed is as follows:

<u>Symbol</u>	<u>Meaning</u>	<u>Scale</u>
1	Unreadable	Bad
2	Readable now and then	Poor
3	Readable with difficulties	Fair
4	Readable	Good
5	Perfectly readable	Excellent