EMERGENCY FREQUENCY AND MESSAGES

1. Definition

The international emergency frequency is 121.500MHz in the VHF band.
It shall be used for emergency purposes only.

The emergency frequency is called GUARD in IVAO ATC client. GUARD is an old denomination that should not be used any more (Rules of the air).

2. Emergency frequency: air traffic controller use

An air traffic controller shall not use the emergency frequency for air traffic clearance and communication with a pilot. This frequency is considered to be a pilot's emergency frequency.

If there is an ATC critical situation, **where safety is endangered** (virtually of course, but if you want it as real as it gets...) controllers may use the emergency frequency.

3. Emergency frequency: pilot use

3.1. Pilot already in contact with an air traffic controller

Facing an emergency situation, the pilot shall communicate the distress message "mayday" and remain on the ATC frequency.

There is no reason for the pilot to communicate on or to switch to the emergency frequency.

3.2. Pilot in emergency entering a controlled area

After declaring an emergency or distress call with a squawk of **7700**, a pilot can use the emergency frequency 121.500MHz in order to communicate his intention **only** if he cannot join any active air traffic controllers in this airspace after several attempts.

Under distress, a pilot can possibly panic and may not know how to change the frequency.

3.3. Pilot outside any controlled areas

After declaring an emergency or distress call with a squawk of 7700, a pilot shall declare a state of emergency and continue to communicate on UNICOM 122.800MHz.

The pilot can only use the GUARD frequency 121.500MHz if he realizes that other pilots don't react to his emergency message on UNICOM.

4. State of Emergency

There are two states of emergency: Distress or Urgency.

There are many factors and different circumstances that determine whether an urgency or emergency exists or not. An engine failure with a four-engine aircraft is very different from an engine failure of a single-engine aircraft.

In general, the pilot in command decides about the situation he faces. The situation can be:

- A minor failure or an urgency
- An emergency or a distress

4.1. Distress

A distress is a condition of being threatened by serious and/or imminent danger and of requiring immediate assistance.

Examples: ditching, crash landing imminent, total engine failure...

If a pilot finds himself in such a situation, obviously he will have to:

- transmit a distress message:

  "Mayday, Mayday, Mayday", (3 times mayday)
  "This is [aircraft call sign]"
- transmit as many of the following elements as necessary and as time permits :
  - aircraft position and heading
  - flight level, altitude or height
  - aircraft type and POB (number of persons on board)
  - nature of emergency
  - intentions and abilities or limitations
  - any other relevant piece of information (weather, endurance, intentions...)

If the pilot is unable to send any radio message at that time, he can and should try to set his transponder to squawk 7700.

In IVAO, it is recommended to squawk 7700 in any case of declared emergency. When an aircraft is no longer in a state of distress, a cancellation message shall be transmitted on the frequencies used for the (original) distress message.

4.2. Urgency

Urgency is a condition concerning the safety of an aircraft or some persons on board but which does not require immediate assistance.

Examples: lost, fuel shortage, partial engine failure, navigation system failure...

If a pilot finds himself in such a situation, obviously he will have to:

- transmit an urgency message:

  "Pan Pan, Pan Pan, Pan Pan", (3 times pan pan)
  "this is [aircraft call sign]

- transmit as many of the following elements as necessary and as time permits:
  - aircraft position and heading
  - flight level, altitude or height
  - aircraft type and POB (number of persons on board)
  - nature of urgency
  - intentions and abilities or limitations
  - any other relevant piece of information (weather, endurance, intentions...)

Normally in this case the transponder squawk remains as before, since this is not an emergency.

When an aircraft is no longer in a state of urgency, a cancellation message shall be transmitted on the frequencies used for the (original) urgency message.

5. Emergency procedures

In principle, the captain decides what the situation is. If the captain decides that there is an emergency situation, he will declare an emergency.

If the captain thinks that a state of "urgency" is good enough at that time, he will say so.
In other words, one situation may be different from the other, but also do remember that one situation may not be the same as the next. Each has to be evaluated on its own merits.

The main focus of the pilot is to safeguard his aircraft, its passengers and cargo. Quite often this may mean a priority or precautionary landing. The pilot may ask for priority, but is not obliged to do so.
In other words, the captain is and remains responsible and he will act accordingly.

In addition he should try to inform ATC as much as possible about his state and above all, his intentions. But he is not obliged to if he cannot inform ATC. The most important task is to fly the aircraft, keeping it safe is the most important thing.