

## Appendix E: Distress and Emergency Signals

### Overview

Many signals have been devised over the years to signal a condition of distress or other emergency status. Those listed in this Appendix are those which are most common, have been accepted by international agreement or national custom, or which may be significant for occasional use by SAR units.

Because of the large number of possible signals of various types that may be used to indicate an emergency condition or may be used for emergency communication, this list is not all-inclusive.

### International Distress Signals

- a) A gun or other explosive signal fired at intervals of about one minute;
- b) A continuous sounding of any fog-signalling apparatus;
- c) Rockets or shells, throwing red stars fired one at a time at short intervals.
- d) A signal made by any signalling method consisting of the group ...---... (SOS) in the Morse Code;
- e) A signal sent by radiotelephony consisting of the spoken word 'Mayday'
- f) The International Code Signal of distress indicated by the code group NC; (See the International Code of Signals for other code groups with emergency significance.)
- g) A signal consisting of a square flag having above or below it a ball or anything resembling a ball;
- h) Flames on a vessel (as from a burning tar barrel, etc.);
- i) A rocket parachute flare or a hand flare showing a red light;
- j) A smoke signal giving off a volume of orange-coloured smoke;
- k) An orange coloured sheet with a black square and circle or a black "V" or other appropriate symbol;
- l) Slowly and repeatedly raising and lowering arms outstretched to each side;
- m) The radiotelephone alarm signal consisting of two tones transmitted alternatively over periods of from 30 seconds to 1 minute;
- n) Signals transmitted by Emergency Position Indicating Radio Beacons, EPIRB's or Personal Locator Beacons (PLB's), Emergency Locator Transmitters (ELT's);
- o) Approved signals transmitted by radio communication systems;
- p) A dye marker; and
- q) Transponder Squawk Codes 7700 Emergency, 7600 Communications failure, 7500 Unlawful interference.

### Search and Rescue Signals – Australian Area

#### *Signals with Surface Craft*

When it is necessary for an aircraft to direct a surface craft to the place where an aircraft or surface craft is in distress, the aircraft shall do so by transmitting precise instructions by any means at its disposal. If such precise instructions cannot be transmitted or when necessary

for any other reason, the instructions shall be given by using the procedure prescribed herein.

The following procedures performed in sequence by an aircraft shall mean that the aircraft is directing a surface craft towards an aircraft or a surface craft in distress:

- a) Circling the surface craft at least once;
- b) Crossing the projected course of the surface craft, close ahead at a low altitude, opening and closing the throttle or changing the propeller pitch; and
- c) Heading in the direction in which the surface craft is to be directed.

The following procedure performed by an aircraft shall mean that the assistance of the surface craft to which the signal is directed is no longer required:

- a) Crossing the wake of the surface craft close astern at a low altitude, opening and closing the throttle or changing the propeller pitch.
- b) Repetition of such procedures shall have the same meaning. Current maritime signalling procedures include:
  - i) For acknowledging receipt of signals:
    - ii) The hoisting of the Code Pennant (vertical red and white stripes) close up (meaning understood);
    - iii) The flashing of a succession of T's by signal lamp in Morse code; and
    - iv) The changing of heading.
  - c) For indicating inability to comply:
    - i) The hoisting of the international flag N (a blue and white checked square); and
    - ii) The flashing of a succession of Ns in Morse code.

### **Civil Air-Ground Code**

Australian Civil Authorities use the following air-ground codes:

<b>Signal</b>	<b>Meaning</b>
Aircraft orbits ground party at low level changing engine noise	I require your attention
Aircraft flies overhead ground party at low level and sets off in a particular direction.	Follow aircraft in same direction
Aircraft rocks wings and orbits.	Investigate object/position underneath aircraft orbit
Aircraft drops smoke on a particular location	Investigate object/position adjacent to smoke

Aircraft drops message canister.	Retrieve and read instructions contained in the canister
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Table E-1 Ground-Air Visual Signal Code

### International SAR Signals

The following visual signals are internationally recognised. They are authorised for use in the Australian SRR.

Number	Message	Code Symbol
1	Require Assistance	V
2	Require Medical Assistance	X
3	Proceeding in this Direction	
4	Yes or Affirmative	Y
5	No or Negative	N

Table E-2 Ground-Air Visual Signal Code for use by Survivors

**Note:** If in doubt use International Signal – SOS

Number	Message	Code Symbol
1	Require Fodder	FF
2	Require Evacuation	III
3	Power Failure	VI

Table E-3 Ground-Air Visual Signal Code for use in Civil Emergencies

**Notes:**

1. Aldis Lamp Signals
  - a. Red flashes indicate not understood
  - b. Green flashes indicate message understood
2. Air-Ground Signals

The following signals by aircraft mean that the signals have been understood:

- a. During hours of daylight – rocking the aircraft’s wings
- b. During hours of darkness – by flashing the aircraft’s landing or navigation lights ON and OFF twice. Lack of the above signals indicates that the message has not been understood.
3. Tables E-1 and E-2 conform to ICAO and NATO standards

