

COMMUNICATIONS INSTRUCTIONS

DISTRESS AND RESCUE

PROCEDURES

ACP-135(E)

MARCH 1996

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FOR ACP 135 (E)

1 March 1996

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**COMMUNICATIONS INSTRUCTIONS
DISTRESS AND RESCUE PROCEDURES**

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CHAPTER 1

GENERAL

References

101. Distress, Urgency and Safety procedures are detailed in the International Telecommunications Union (ITU) Radio Regulations and in the International Civil Aviation Organisation (ICAO) Convention and Procedures for Air Navigation Services, Annex 10.

Applicability

102. The procedures detailed in this publication are extracted from the references in para 101. THEY ARE NOT INTENDED TO PRECLUDE ANY MOBILE UNIT IN DISTRESS (AIRCRAFT, SURFACE OR OTHERWISE) FROM USING ANY MEANS AT ITS DISPOSAL TO ATTRACT ATTENTION, MAKE KNOWN ITS POSITION, AND OBTAIN HELP.

Definitions

103. a. **Distress.** Distress is a condition of being threatened by serious and/or imminent danger and of requiring immediate assistance.

b. **Urgency.** Urgency is a condition concerning the security of a ship, aircraft or other vehicle, or of some person on board or within sight, but which does not require immediate assistance.

c. **Safety.** Safety is that condition which necessitates the transmission of a message concerning the safety of navigation or providing important meteorological warnings.

Precedence

104. a. **Distress.** Distress traffic shall have absolute priority over all other transmissions. All stations which hear the distress call shall immediately cease any transmission capable of interfering with the distress traffic and shall continue to listen on the frequency used for the emission of the distress call.

b. **Urgency.** Urgency traffic shall have priority over all other communications, except distress. All stations which hear the urgency signal shall take care not to interfere with the transmission of the message which follows the urgency signal.

Transmission Speed

105. In cases of distress, urgency or safety, transmissions:

a. by radiotelegraphy, when using Morse, shall not in general exceed a speed of sixteen words per minute;

b. by radiotelephony, shall be made slowly and distinctly, each word being clearly pronounced to facilitate transcription.

Terminology

106. Throughout the text of this publication, CW is to be interpreted as "radiotelegraphy", VOICE as "radiotelephony" and RATT as "radioteletype" and NBDP as Narrow Band Direct Printing.

Radio Services

107. a. **Aeronautical Mobile Service.** The Aeronautical Mobile Service is the service provided between aeronautical stations (normally a land station but may be placed on board a ship or an earth satellite) and aircraft stations or between aircraft stations in which survival craft stations may also participate.

b. **Maritime Mobile Service.** The Maritime Mobile Service is that service between coast stations and ship stations, or between ship stations, in which survival craft stations may also participate.

Global Maritime Distress and Safety System (GMDSS)

108. The Global Maritime Distress and Safety System is administered by the International Maritime Organisation (IMO). It was introduced on 1 February 1992 and is to be fully implemented by 1 February 1999. GMDSS regulations specify emergency equipment and procedural requirements for particular areas of operation.

GMDSS Operational Areas

109. **Area A1:** within range of shore-based VHF coast stations (20 to 30 nautical miles)

Area A2: within range of shore-based MF coast stations (excluding A1 areas) (approximately 100-150 nautical miles)

Area A3: within the coverage of INMARSAT communications satellites (excluding A1 and A2 areas - approximately between the latitudes of 70 degrees North and 70 degrees South); and

Area A4: the remaining areas outside areas A1, A2 and A3 (generally the Polar regions)

Major Changes with the Introduction of GMDSS

110. The GMDSS uses modern technology, including satellite and digital selective calling techniques on MF, HF, and VHF bands, known as terrestrial systems, enabling a distress alert to be transmitted and received automatically over short and long distances.

111. The system allows search and rescue authorities ashore, as well as shipping in the vicinity of the ship in distress to be rapidly alerted to a distress incident so that they can assist in a co-ordinated search and rescue operation with the minimum of delay.

112. The new equipment and procedures will progressively replace the existing 'Wireless Telegraphy' (W/T) and Radio Telephony (R/T) system during the implementation period. Ships not subject to SOLAS (Safety of Life at Sea) agreement may continue to use existing safety systems.

CHAPTER 2
INTERNATIONAL DISTRESS PROCEDURES - FOR THE MARITIME MOBILE SERVICE

Applicability

201. The procedures in this Chapter are in accordance with ITU radio regulations and are obligatory in the Maritime Mobile Service and for communications between aircraft stations and stations of the Maritime Mobile Service.

Authority

202. The distress call and message shall be sent only on the authority of the master or person responsible for the ship, aircraft or any other vehicle carrying the mobile station.

Distress Procedure

203. Distress procedure comprises all communications relating to the immediate assistance required by the mobile station in distress. Distress procedure consists of:

- a. In CW:
 - (1) The alarm signal; followed in order by:
 - (2) The distress call and an interval of two minutes;
 - (3) The distress call;
 - (4) The distress message;
 - (5) Two dashes of ten to fifteen seconds duration each;
 - (6) The call sign of the Station in distress.
- b. In voice:
 - (1) The alarm signal (whenever possible) followed by;
 - (2) The distress call;
 - (3) The distress message.
- c. In RATT/NBDP:
 - (1) The distress call;
 - (2) The distress message.

When time is vital, the second step of the CW procedure (or even the first and second steps) may be omitted or shortened. These two steps of the distress procedure may also be omitted in circumstances where transmission of the alarm signal is considered unnecessary.

Distress Signal

204. The distress signal consists of:

- a. In CW - the group SOS, transmitted as a single signal in which the dashes are emphasised so as to be clearly distinguished from the dots.
- b. In voice - the word MAYDAY, pronounced as the French expression "m'aider".
- c. In RATT - the signal SOS is to be typed.

Alarm Signal

205. The alarm signal consists of:

- a. In CW - A series of 12 dashes sent in one minute, the duration of each dash being four seconds with an interval of one second between each dash.
- b. In voice - Two substantially sinusoidal audio frequency tones transmitted alternatively. One tone has a frequency of 2200 Hz and the other 1300 Hz. The duration of each tone is 250 milliseconds. The signal is to be sent continuously for a period of from 30 seconds to one minute.

The purpose of the alarm signal is to alert the operators on watch or to activate 2182kHz watchkeeping receivers to warn operators that a distress call or message is to follow.

Note: With the introduction of GMDSS, Digital Selective Calling (DSC) entered service. DSC is a paging technique used to automate the initial call between two stations. It operates on MF, HF and VHF marine bands for distress, urgency and safety alerting.

Distress Call

206. The distress call consists of:

- a. In CW:
 - (1) The distress signal SOS, sent three times.
 - (2) The prosign DE.
 - (3) The call sign of the mobile station in distress sent three times.
- b. In voice:
 - (1) The distress signal MAYDAY, spoken three times.
 - (2) The proword THIS IS.
 - (3) The call sign or other identification of the mobile station in distress, spoken three times.

- c. In RATT/NDPB:
 - (1) The distress signal SOS, typed three times.
 - (2) The prosign DE.
 - (3) The call sign of the mobile station in distress sent three times.

The distress call shall not be addressed to a particular station and acknowledgement of receipt shall not be given before the distress message which follows it is sent.

Distress Message

207. The distress message shall consist of:
- a. The distress signal SOS, or MAYDAY as appropriate.
 - b. The name, or other identification, of the mobile station in distress.
 - c. Particulars of its position.
 - d. The nature of the distress and the kind of assistance desired.
 - e. Any other information which might facilitate the rescue

The distress message, preceded by the distress call (and the alarm signal if necessary), shall be repeated at intervals, until an answer is received. The intervals shall, however, be sufficiently long for stations preparing to reply to start their sending apparatus.

Aircraft Distress Message

208. Aircraft distress procedures are detailed in chapter 3. Under normal circumstances an aircraft distress message will be transmitted on the Aeronautical Mobile Service frequency in use, however, an aircraft transmitting in the Maritime Mobile Service shall as a general rule, and if time permits, include in its distress message the following information:

- a. Estimated position and time of estimate.
- b. Heading in degrees (state whether magnetic or true).
- c. Indicated air speed.
- d. Altitude.
- e. Type of aircraft.
- f. Nature of distress and type of assistance required.
- g. Any other information which might facilitate the rescue (including the intention of the person in command, such as forced alighting on the sea or crash landing).

Position

209. As a general rule, a ship signals its position in latitude and longitude, with the numerals suffixed by NORTH or SOUTH, and EAST or WEST. In CW the prosign AAA is used to separate the degrees from the minutes. When known, the true bearing and the distance (in nautical miles) from a known geographical point may be given.

Distress Frequency

210. a. 500 kHz. The frequency 500 kHz is the International Distress Frequency for CW. The distress message, preceded by the distress call, must be repeated at intervals on this frequency, especially during the periods of silence. The periods of silence in all ITU regions have a duration of three minutes, commencing at 15 and 45 minutes past each hour.

Note: With effect from 1 February 1992, monitoring of 500 kHz is no longer required.

b. 2182 kHz. The frequency 2182 kHz (and its supplementary frequencies 4125 and 6215 kHz) is the International Distress frequency for voice. The silence periods for this frequency in ITU regions 1 and 3 have a duration of three minutes commencing on the hour and half hour.

Note: Although in ITU region 2, Canadian coast stations observe the above silence periods.

c. 156.8 MHz. The frequency 156.8 MHz is the International Distress, Safety and Calling frequency for the maritime mobile VHF radiotelephone service. To facilitate the receptions of distress calls all transmissions on 156.8 MHz shall be kept to a minimum and shall not exceed one minute.

d. When the mobile station in distress receives no answer to a distress message sent on a distress frequency, the message may be repeated on any other available frequency on which attention might be attracted. If time permits, the mobile station should transmit an appropriate phrase or operating signal (Q signal) before shifting frequency.

Direction Finding

211. a. In CW, to permit direction-finding stations to determine the position of the station in distress, the transmission of two 10 to 15 seconds dashes followed by the station call sign may be repeated at frequent intervals if necessary.

b. Immediately before a crash landing or a forced landing (on land or sea) of an aircraft, as well as before total abandonment of a ship or an aircraft, the radio equipment should be set for continuous emission.

Receipt of Distress

212. Stations of the mobile service which receive a distress message which is, beyond any possible doubt, in their vicinity, shall obtain the approval of the local commander before acknowledging receipt, wherever practicable. However, in areas where reliable communications with one more coast stations are practicable, mobile stations should defer this acknowledgement for a short time so that a land or coast station may acknowledge receipt, (see paragraphs 216, 218c and 308). The acknowledgement of receipt of a distress message shall be given in the following format:

- a. In CW:
 - (1) The distress signal SOS.
 - (2) The call sign of the station sending the distress message, sent three times.
 - (3) The prosign DE.
 - (4) The call sign of the station acknowledging receipt, sent three times.
 - (5) The group RRR.
 - (6) The distress signal SOS.

- b. In voice:
 - (1) The distress signal MAYDAY.
 - (2) The call sign or other identification of the station sending the distress message, spoken three times.
 - (3) The proword THIS IS.
 - (4) The call sign or other identification of the station acknowledgement receipt, spoken three times.
 - (5) The word RECEIVED (or RRR spoken as ROMEO in case of language difficulties).
 - (6) The distress signal MAYDAY.

- c. In RATT/NBDP:
 - (1) The distress signal SOS.
 - (2) The call sign of the station sending the distress message, sent three times.
 - (3) The prosign DE.
 - (4) The call sign of the station acknowledging receipt, sent three times.
 - (5) The group RRR.
 - (6) The distress signal SOS.

Stations of the mobile service which receive a distress message from a mobile station which, beyond any possible doubt, is not in their vicinity, shall allow a short interval of time to elapse before acknowledging receipt of the message in order to permit stations nearer to the station in distress to acknowledge receipt without interference. However, stations which received a distress message from mobile station which, beyond any possible doubt, is a long distance away need not acknowledge receipt (see paragraph 218).

Control of Distress Traffic

213. The control of distress traffic is the responsibility of the mobile station in distress or the station originating or relaying the distress message, on behalf of the station in distress. These stations may, however, delegate control to another station.

Silence

214. The station in distress or the station controlling distress traffic may impose silence either on all stations of the mobile service in the area or on any station which interferes with the distress traffic. It shall address these instructions "to all Stations" (CQ) or to one station only, according to the circumstances. In either case the form of the signal will be:

- a. By CW - The signal QRT SOS.
- b. By voice - The words SEELONCE MAYDAY.
- c. By RATT/NBDP - The signal QRT SOS.

Silence Imposed by Mobile Station Near the Distress

215. If it is believed to be essential, any station on the mobile service near the ship, aircraft or other vehicle in distress may also impose silence. In this case the distress signal is substituted by the word DISTRESS followed by imposing station's call sign as follows:

- a. In CW - QRT DISTRESS followed by the transmitting station's call sign.
- b. In voice - SEELONCE DISTRESS followed by the transmitting station's call sign.
- c. In RATT/NBDP - QRT DISTRESS followed by the transmitting station's call sign.

Station Monitoring Distress Traffic

216. Any station of the mobile service which has knowledge of distress traffic and which cannot itself assist the station in distress shall continue to follow such traffic until it is evident that assistance is being provided. Until they receive a message indicating that normal working may be resumed all stations which are aware of the distress traffic, and which are not taking part in it, are forbidden to transmit on the frequencies on which the distress traffic is being passed.

Follow-up Message

217. Every mobile station which acknowledges receipt of a distress message must, on the order of the person in command, transmit as soon as possible the following information in the order shown:

- a. Its identification.
- b. Its position.
- c. The speed at which it is proceeding towards, and the approximate time it will take to reach, the mobile station in distress.
- d. If the position of the station in distress appears doubtful, the true bearing of that station preceded by the operating signal QTE.

Before transmitting this message, the station shall ensure that it will not interfere with the emissions of other stations better situated to render immediate assistance to the station in distress.

Action by Station not itself in Distress

218. A mobile station or land station which learns that a mobile station is in distress shall transmit a distress message in any of the following cases:

- a. When that station in distress is not itself in a position to send a distress message.
- b. When the master or person responsible for the ship, aircraft or other vehicle not in distress, considers that further help is necessary.
- c. When, although not in a position to render assistance, it has heard a distress message which has not been acknowledged.

The transmission of a distress message under these conditions shall be made on one or more of the international distress frequencies (500 kHz (AM), 2182 kHz (USB), 156.8 MHz (FM), or on any other frequency that may be used in case of distress. The station transmitting the message shall take all necessary steps to notify the authorities who may be able to render assistance.

Relayed Distress Message

219. The relayed distress message described in para 218 shall be preceded wherever possible by the alarm signal. In addition, the transmission of the distress message will always be preceded by the following call:

- a. In CW:
 - (1) The signal DDD SOS SOS SOS DDD;
 - (2) The prosign DE.
 - (3) The call sign of the transmitting station, sent three times.
- b. In voice:
 - (1) The signal MAYDAY RELAY spoken three times;
 - (2) The proword THIS IS.
 - (3) The call sign or other identification of the transmitting station spoken three times.
- c. In RATT/NBDP:
 - (1) The signal DDD SOS SOS SOS DDD;
 - (2) The prosign DE.
 - (3) The call sign of the transmitting station, sent three times.

Cessation of Distress Traffic

220. When distress traffic has ceased on a frequency which has been used for distress traffic, the station which has controlled this traffic shall transmit on that frequency a message addressed "to all stations" (CQ) indicating that normal working may be resumed. This message consists of:

- a. In CW:
 - (1) The distress signal SOS.
 - (2) The call "to all stations" (CQ), sent three times.
 - (3) The prosign DE.
 - (4) The call sign of the station sending the message.
 - (5) The time of handing in the message.
 - (6) The name and call sign of the mobile station which was in distress.
 - (7) The operating signal QUM ("normal working may be resumed").
 - (8) The prosign AR.
- b. In voice:
 - (1) The distress signal MAYDAY.
 - (2) The call "HELLO ALL STATIONS" or CQ (SPOKEN AS CHARLIE QUEBEC) spoken three times.
 - (3) The proword THIS IS.
 - (4) The call sign or other identification of the station sending the message.
 - (5) The time of handing in of the message.
 - (6) The name and call sign of the station which was in distress.
 - (7) The words SEELONCE FEENEE.
 - (8) The proword OUT.
- c. In RATT/NBDP:
 - (1) The distress signal SOS.
 - (2) The call "to all stations" (CQ), sent three times.
 - (3) The prosign DE.
 - (4) The call sign of the station sending the message.

- (5) The time of handing in the message.
- (6) The name and call sign of the mobile station which was in distress.
- (7) The operating signal QUM ("normal working may be resumed").
- (8) The prosign AR.

When a station in distress has delegated control of distress working to another station, the person in charge of the station in distress should, when he considers silence no longer justified, immediately inform the controlling station, who will act in accordance with the above.

Cessation of Silence

221. When complete silence is no longer necessary on a frequency which is being used for distress traffic, the station controlling the traffic shall transmit on that frequency a message addressed "to all stations" (CQ) indicating that restricted working may be resumed. This message has the same format as detailed in para 220 with the Operating Signal QUZ replacing QUM or the words PRU-DONCE (pronounced as the French word "prudence") replacing SEELONCE FEENEE in the CW and VOICE messages respectively.

CHAPTER 3

AIRCRAFT DISTRESS PROCEDURES

Applicability

301. The procedures detailed in Chapter 2 are generally applicable to aircraft in distress and shall be employed in communications between aircraft stations and stations in the maritime mobile service. However, the following procedures will normally be employed by stations within the aeronautical mobile service, and will be used by aircraft operating on military communications network.

Action by Aircraft in Distress

302. An aircraft commander should have no hesitation in declaring a state of distress if there is any indication that such exists. As soon as distress conditions arise, all installed automatic emergency equipment (e.g. IFF etc.) should be switched on. When the distress conditions cease to exist, a message is to be sent cancelling the distress condition.

Distress Signal

303. The distress signal shall be used at the commencement of the first distress communication. It shall also be used, if it is considered necessary, at the commencement of any subsequent distress communication.

Distress Message

304. In addition to being preceded by the distress call (SOS or MAYDAY, depending on the mode of communication), preferably transmitted three times, the distress message sent by an aircraft in distress should:

- a. Be on the air-ground frequency in use at the time.
- b. Consist of as many as possible of the following elements, in the following order:
 - (1) Position and time
 - (2) Heading
 - (3) Air speed
 - (4) Altitude
 - (5) Aircraft type
 - (6) Nature of distress
 - (7) Captain's intentions
 - (8) Any other information that may facilitate rescue

c. ICAO distress message should consist of as many as possible of the following elements, in the following order:

- (1) Nature of Distress
- (2) Captains Intentions
- (3) Position
- (4) Heading
- (5) Altitude
- (6) Any other information that may facilitate rescue

Distress Message

305. The provision above are not intended to prevent:

- a. The distress message of an aircraft in distress being made on another aeronautical mobile frequency, if considered necessary or desirable. In many areas, a continuous watch by aeronautical stations is maintained on 121.5 MHz and/or 243MHz.
- b. The distress message of an aircraft in distress being broadcast, if time and circumstances make this course preferable.
- c. The aircraft transmitting on the maritime mobile international distress frequencies.
- d. The aircraft using any means at its disposal to attract attention and make known its condition (including the activation of the appropriate IFF mode and code).
- e. Any station taking any means at its disposal to assist an aircraft in distress.
- f. Any variation of the elements of the distress message when the transmitting station is not itself in distress, provided that such situation is clearly stated in the distress message.

Action by Station Addressed

306. The station addressed by the station in distress, or the first station acknowledging the distress message shall:

- a. Immediately acknowledge the distress message. (See Figure 3-1)
- b. Take control of the communications, or specifically and clearly transfer that responsibility, advising the aircraft if a transfer is made.
- c. Take immediate action to ensure that all necessary information is made available as soon as possible to:
 - (1) The Air Traffic Service (ATS) unit concerned.

(2) The aircraft operating agency concerned, or its representative, in accordance with pre-established arrangements. (This requirement does not have priority over any other action which involves the safety of the flight in distress, or of any other flight in the area, or which might affect the progress of the expected flights in the area.)

d. Warn other stations as appropriate, in order to prevent the transfer of traffic to the frequency of the distress communication.

Imposition of Silence

307. The station in distress, or the station in control of the distress traffic, may impose silence, either on all stations of the mobile service in the area or on any station which interferes with the distress traffic. It shall address these instructions "to all stations" or to one station only, according to circumstances. In either case the form of the signal will be:

- a. By CW - QRT SOS
- b. By voice - STOP TRANSMITTING - MAYDAY
- c. By RATT - QRT SOS

The use of these signals is reserved for the aircraft station in distress and for the station controlling the distress traffic.

Action by all Other Stations

308. Distress communications have absolute priority over all other communications, and a station aware of them shall not transmit on the frequency concerned, unless:

- a. The distress is cancelled or the distress traffic is terminated.
- b. All distress traffic is transferred to other frequencies.
- c. It had itself to render assistance.

Any station which has knowledge of distress traffic, shall nevertheless continue listening to such traffic until it is obvious that assistance is being provided.

Termination of Distress

309. When an aircraft is no longer in distress, it shall transmit a message cancelling the distress condition. When the station which has controlled the distress communication traffic becomes aware that the distress condition is ended, it shall take immediate action to ensure that this information is made available, as soon as possible, to:

- a. The ATS unit concerned.
- b. The aircraft operating agency concerned, or its representative, in accordance with pre-established arrangements.

Termination of Silence

310. The distress communication and silence condition shall be terminated by transmitting a message, on the frequency or frequencies being used for distress traffic. This message shall be transmitted in the format shown in Figure 3-2. This message shall be originated only by the station controlling the communications when, after reception of the message cancelling the distress condition, it is authorised to do so by the appropriate authority.

Acknowledging Receipt of a Distress Message		
RATT	CW	VOICE
1. Distress Signal SOS (if considered necessary)	1. Distress Signal SOS (if considered necessary)	1. Distress Signal MAYDAY (if considered necessary)
2. Call sign of station sending message sent three times	2. Call sign of station sending distress messages sent three times	2. Call sign or other identification of station in distress - spoken three times
3. The prosign DE	3. The prosign DE	3. The proword THIS IS
4. The call sign of station acknowledging receipt - sent three times	4. The call sign of station acknowledging receipt - sent three times	4. The call sign or other identification of station acknowledging receipt - three times
5. The group RRR	5. The group RRR	5. The word ROGER
6. The distress signal SOS	6. The distress signal SOS	6. The distress signal MAYDAY
7. The prosign AR	7. The prosign AR	7. The proword OUT

Figure 3-1

Message Format for Cessation of Distress Traffic		
RATT	CW	VOICE
1. Distress signal SOS (if considered necessary)	1. Distress signal SOS (if considered necessary)	1. Distress signal MAYDAY (if considered necessary)
2. Call CQ	2. Call CQ ("to all stations")	2. The call HELLO ALL STATIONS three times
3. Prosign DE	3. Prosign DE	3. Proword THIS IS
4. Call sign of station sending message (once)	4. Call sign of station sending message (once)	4. Identification of station transmitting message (once)
5. Time of handing in of message	5. Time of handing in of message	5. Time of handing in of message
6. Identification and call sign of station which was in distress	6. Identification and call sign of station which was in distress	6. Identification and call sign of station which was in distress
7. Operating signal QUM	7. Operating signal QUM (Normal working may be resumed).	7. The words DISTRESS TRAFFIC ENDED
8. The prosign AR	8. The prosign AR	8. The proword OUT

Figure 3-2

Examples of Aircraft Distress Traffic			
Traffic	RATT	CW	VOICE
Distress Call	SOS SOS SOS DE PQ6F PQ6F PQ6F AR	SOS SOS SOS DE PQ6F PQ6F PQ6F AR	MAYDAY MAYDAY MAYDAY THIS IS SOLENT ONE SIX SOLENT ONE SIX SOLENT ONE SIX OUT
Distress Message	SOS SOS SOS DE PQ6F PQ6F PQ6F QTH 15 NM SE DOVER 1212Z QTL 270 QTJ 200 QAH 8000 FT B-29 ENGINE FAILURE DITCHING PQ6F K	SOS SOS SOS DE PQ6F PQ6F PQ6F QTH 15 NM SE DOVER 1212Z QTL 270 QTJ 200 QAH 8000 FT B-29 ENGINE FAILURE DITCHING PQ6F K	MAYDAY MAYDAY MAYDAY THIS IS SOLENT ONE SIX SOLENT ONE SIX SOLENT ONE SIX - POSITION ONE FIVE NAUTICAL MILES SOUTH EAST DOVER ONE TWO ONE TWO ZULU HOURS - HEADING (stating whether magnetic or true) TWO SEVEN ZERO - INDICATED AIR SPEED TWO HUNDRED KNOTS - EIGHT THOUSAND FEET - BRAVO TWO NINE - ENGINE FAILURE - DITCHING - SOLENT ONE SIX OVER
Relay Distress Message	DDD SOS SOS SOS DDD AFA3 DE RY7Z BT PQ6F ENGINE FAILURE DITCHING QTH 3821N 07345W QAH 16000 QTL 260 BT K	DDD SOS SOS SOS DDD AFA3 DE RY7Z BT PQ6F ENGINE FAILURE DITCHING QTH 3821N 07345W QAH 16000 QTL 260 BT K	MAYDAY RELAY MAYDAY RELAY MAYDAY RELAY ANDREWS THIS IS FIREBRAND TWO ZERO-BREAK SOLENT ONE SIX ENGINE FAILURE DITCHING POSITION THREE EIGHT TWO ONE NORTH ZERO SEVEN THREE FOUR FIVE WEST FLIGHT LEVEL ONE SIX ZERO HEADING TWO SIX ZERO OVER

Figure 3-3 (Continued next page)

Examples of Aircraft Distress Traffic (Continued)			
Traffic	RATT	CW	VOICE
Acknowledgement of Distress Message	(SOS) PQ6F DE AFA3 RRR SOS AR	(SOS) PQ6F DE AFA3 RRR SOS AR	(MAYDAY) SOLENT ONE SIX THIS IS ANDREWS ANDREWS ROGER MAYDAY OUT (The word RECEIVED is prescribed for maritime mobile service vice ROGER)
Imposing Silence	(SOS) CQ CQ CQ DE AFA3 QRT SOS AR	(SOS) CQ CQ CQ DE AFA3 QRT SOS AR	(MAYDAY) ALL STATIONS ALL STATIONS ALL STATIONS THIS IS ANDREWS STOP TRANSMITTING - MAYDAY OUT
Cancellation of Distress	(SOS) AFA3 DE PQ6F QTA DISTRESS ENGINES OPERATING QRF BASE K	(SOS) AFA3 DE PQ6F QTA DISTRESS ENGINES OPERATING QRF BASE K	(MAYDAY) ANDREWS THIS IS SOLENT ONE SIX CANCEL DISTRESS ENGINES OPERATING AM RETURNING BASE OVER
Terminating Silence	(SOS) CQ CQ CQ DE AFA3 1421Z PQ6F QUM AR	(SOS) CQ CQ CQ DE AFA3 1421Z PQ6F QUM AR	(MAYDAY) ALL STATIONS ALL STATIONS ALL STATIONS THIS IS ANDREWS - TIME ONE FOUR TWO ONE ZULU - SOLENT ONE SIX - DISTRESS TRAFFIC ENDED - OUT

Figure 3-3 (Continued from previous page)

CHAPTER 4

URGENCY AND SAFETY COMMUNICATIONS

Urgency Signal

401. a. The URGENCY SIGNAL (XXX OR PAN PAN) indicates that the calling station has a very urgent message to transmit concerning the safety of a ship, aircraft, or other vehicle, and/or the safety of personnel. It has priority over all other communications except distress. All stations which hear it shall take care not to interfere with the transmission which follows the URGENCY SIGNAL. The composition of the signal is:

(1) CW - Three transmissions of group XXX, sent with the letters of each group and each successive group clearly separated from each other.

(2) VOICE - Three transmissions of the group of words PAN PAN, pronounced as the French word "PANNE".

(3) RATT - Three transmissions of group XXX, sent with the letters of each group and each successive group clearly separated from each other.

The URGENCY SIGNAL is transmitted before the call.

b. The URGENCY SIGNAL may be sent only on the authority of the person in command of the ship, aircraft or other vehicle carrying the mobile station. It may be transmitted by a land station only with the approval of the responsible authority. Within the aeronautical Mobile Service the Urgency Signal shall be sent at the commencement of the first Urgency communications, and should be used if it is considered necessary at the commencement of any subsequent communications.

c. The automatic alarm signal may be used preceding the urgency signal and message concerning the loss of a person or persons overboard when assistance of other ships is required and cannot be obtained satisfactorily by the use of the urgency signal only.

Frequencies

402. a. Maritime Mobile Service. The Urgency Signal and the message following it shall be sent on one or more of the international distress frequencies (refer to chapter 6) or any other frequency which may be used in case of distress. However, the message shall be transmitted on a working frequency:

(1) In the case of a long message or a medical call; or

(2) In areas of heavy traffic when repeating the message transmitted on any of the international distress frequencies.

b. Aeronautical Mobile Service. In the aeronautical mobile service the Urgency Signal and the message which follows it should be sent on the air-ground frequency in use at the time. If unsuccessful, contact should be attempted on any of the SAR assistance frequencies indicated in paragraphs 218, 305 and 604.

Urgency Messages

403. In the aeronautical mobile service an Urgency Message should:
- a. Be preceded by the Urgency Signal (XXX or PAN) preferably transmitted three times.
 - b. Consist of as many of the following elements spoken distinctly and, if possible, in the following order:
 - (1) Name of Station Addressed or "All Stations"
 - (2) Identification of Aircraft
 - (3) Request for Navigation Assistance (If Required)
 - (4) Position and Time
 - (5) Heading
 - (6) Air speed
 - (7) Altitude
 - (8) Aircraft Type
 - (9) Available Flight Time
 - (10) Nature of Emergency
 - (11) Captain's Intentions

In the maritime mobile service, urgency messages may be addressed either to all stations or to a particular station.

Action by Station Addressed

404. Within the aeronautical mobile service the station addressed will normally be the station communicating with the aircraft or in whose area of responsibility the aircraft is operating. The station addressed by an aircraft reporting an Urgency condition shall:
- a. Acknowledge the Urgency message.
 - b. Take immediate action to ensure that all necessary information is made available, as soon as possible, to:
 - (1) The ATS unit concerned.
 - (2) The aircraft operating agency concerned.
 - c. If necessary, exercise control of communications concerned.

Action by all other Stations

405. All other stations which hear the Urgency signal are to continue to listen for at least three minutes. Thereafter, normal working may be resumed but stations are to take care not to interfere with the transmission of urgency traffic.

Cancellation

406. A station which transmits the Urgency signal or message is to cancel the state of Urgency as soon as it knows that action is no longer necessary.

SAFETY**Safety Signal**

407. The safety signal indicates that the station is about to transmit a message containing an important navigational or meteorological warning. All stations hearing the Safety signal shall listen to the safety message until they are satisfied that the message is of no concern to them. They shall not make any transmission likely to interfere with the message. The composition of the Safety Signal is:

- a. CW - three transmissions of the group TTT, the individual letters of each group, and the successive groups clearly separated from each other. It is sent before the call.
- b. VOICE - the word SECURATE (pronounced say-cur-i-tay) spoken three times and transmitted before the call.

Frequencies

408. a. The safety signal and call are to be transmitted on one or more of the international frequencies refer Chapter 6) or on any other frequency which may be used in case of distress. In the aeronautical mobile service they are to be transmitted on the frequency in use at the time.
- b. The safety message which follows the call should be sent on a working frequency. A suitable announcement to this effect should be made at the end of the call.

Safety Message

409. In the maritime mobile service, safety messages shall generally be addressed to all stations. In some cases (e.g. in the aeronautical mobile service) they may be addressed to a particular station.

- a. With the exception of messages transmitted at fixed times, the SAFETY SIGNAL, when used in the maritime mobile service, shall be transmitted towards the end of the first available silence period. The message shall be transmitted immediately after the silence period.

- b. In certain cases the SAFETY SIGNAL and associated message shall be transmitted as soon as possible, and shall be repeated at the end of the first following silence period. These cases are shown in Figure 4-1.

Medical Transports

410. a. The term "MEDICAL TRANSPORTS" refers to any means of transportation by land, water or air, whether military or civilian, permanent or temporary, assigned exclusively to medical transportation and under control of a competent authority of a party to a conflict or of neutral states and of other states not parties to an armed conflict, when these ships, craft and aircraft assist the wounded, the sick and the shipwrecked.

b. For the purpose of announcing and identifying aircraft for medical transports, a transmission of the urgency signal described in paragraph 401 shall be followed by:

- (1) CW - the addition of the group YYY
- (2) VOICE - the addition of the single word MAY-DEE-CAL
- (3) RATT/NBDP - the addition of the single group YYY

c. The use of the signals described in paragraph 410.b. indicates that the message which follows concerns a protected medical transport. The message shall convey the following data:

(1) The call sign or other recognised means of identification of the medical transports.

(2) Position of the medical transports.

(3) Number and type of medical transport.

(4) Intended route.

(5) Estimated time en route and of departure and arrival as appropriate.

(6) Any further information such as flight altitude, radio frequencies guarded, languages used and secondary surveillance radar modes and codes.

Safety Signals Which Require Immediate Transmission	
METEOROLOGICAL WARNINGS FOR THE MARITIME MOBILE SERVICE	transmit immediately and repeat at the end of the first silent period which follows their receipt and at the end of the first silent period which occurs in the working hours of a ship-station having a single operator. They are preceded by the SAFETY SIGNAL.
CYCLONE TYPHOON OR HURRICANE WARNINGS ORIGINATED BY MOBILE STATIONS	Transmit immediately to other mobile units in the area and to the appropriate authorities at the first point of the coast with which contact can be established. The transmission is preceded by the SAFETY SIGNAL.
INFORMATION ON THE PRESENCE OF DANGEROUS ICE, WRECKS OR ANY OTHER DANGER IMMINENT TO MARITIME NAVIGATION	Transmit as soon as possible to the other ship stations in the vicinity and to the appropriate authorities at first point of the coast with which contact can be established. Precede the transmission with the SAFETY SIGNAL.

Figure 4-1

CHAPTER 5

DISTRESS AND EMERGENCY SIGNALS

Distress Signals

501. In addition to the International Distress Signal (SOS), many other signals have been devised over the years to indicate distress. The following list describes those signals which are most common, having been accepted by international agreement:

- a. A gun or other explosive signal fired at intervals of about a minute.
- b. A continuous sounding with any fog-signaling device.
- c. Rockets or shells, throwing red stars, fired one at a time at short intervals.
- d. The International Code Signal of distress indicated by the code group NC.
- e. Signal consisting of a square flag having above or below it a ball or anything resembling a ball.
- f. Flames on a vessel (as from a burning barrel of tar or oil).
- g. A rocket parachute flare or a hand flare showing a red light.
- h. A smoke signal giving off a volume of orange smoke.
- i. Slowly and repeatedly raising and lowering arms outstretched to each side.
- j. One red, or a succession of reds by flashing light.
- k. Inverted national flag.
- l. Green fluorescent dye marker.
- m. Flashes from a signal mirror.
- n. Smoke from three signal fires arranged in a triangular pattern.
- o. Squawking Code 7700 on IFF mode 3/A.

Emergency Ground/Air Visual Signal

502. a. Simple visual signals are used in emergencies by personnel who crash or parachute on land or sea (including search parties) to indicate a need for medical assistance, food, information regarding an escape route, etc. Four types of such visual signals are shown in Figures 5-1, 5-2, 5-4 and 5-5. The use of these signals depends on individual circumstances and the availability of signal material. Special instructions are included in the figures.

b. When a ground signal has been displayed and is understood by an aircraft, it shall acknowledge by:

- (1) during daylight, rocking the aircraft's wings;
- (2) during darkness, flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

c. An aircraft seeing but not understanding ground signals by day will fly a complete right circle and by night will make red flashes with a signal lamp. A search aircraft may also fire a green signal every five minutes to indicate to a crew in distress that they should fire red signals.

d. When an aircraft must convey information to survivors or search parties on the ground and two-way radio is not available, it shall, if practicable, convey the information by dropping a message or communications equipment to enable establishment of direct contact.

Ground/ Air Visual Signals for Use in Emergency by Survivors

No.	Message	Code Symbol Signal	No.	Message	Code Symbol Signal
1	Require doctor - serious injuries		10	Will attempt to take off	>
2	Require medical supplies		11	Aircraft seriously damaged	└┘
3	Unable to proceed	X	12	Probably safe to land here	△
4	Require food and water	≡	13	Require fuel and oil	L
5	Require firearms and ammunitions	∨ ∨	14	All well	LL
6	Require map and compass	□	15	No	N
7	Require signal lamp with battery and radio	 	16	Yes	Y
8	Indicate direction to proceed	└	17	Not understood	└└
9	Am proceeding in this direction	↑	18	Require engineer	W

Figure 5-1

Ground/Air Visual Signals for Use in Emergency by Search Parties

No	MESSAGE	CODE	No	MESSAGE	CODE
1	Require Assistance	V	5	Proceeding in this direction	
2	Require medical assistance	X	6	If in doubt, use international symbol	SOS
3	No or negative	N			
4	Yes or affirmative	Y			

Figure 5-2

NOTES:

1. From signals by any available means such as strips of fabric, parachute material, pieces of wood, stones, marking the surface by tramping with the feet, starting with oil, etc.
2. Make signals not less than 8 FEET (2.5 metres) in length.
3. Lay out signals exactly as shown to avoid confusion.
4. Provide as much colour contrast as possible between material used for the signal and the background.
5. Make every effort to attract attention by other means also such as radio, flares, smoke, reflected light, etc.

Signal by Survivors Afloat in a Dinghy or Lifeboat

503. Survivors afloat in a dinghy or lifeboat should use any or all available methods of attracting attention. Some of the methods are shown in figure 5-3.

SOME METHODS OF ATTRACTING ATTENTION WHEN IN A DINGHY OR LIFEBOAT
<p style="text-align: center;">IF NO AIRCRAFT OR SURFACE CRAFT ARE SEEN OR HEARD IN THE VICINITY</p> <ol style="list-style-type: none"> 1. Operate emergency transmitter approximately 5 minutes of each 15 minutes, coinciding with the international silence periods. The time of transmission should extend through the silence period. 2. Operate VHF/UHF radio. Broadcast call sign and nature of emergency intermittently. 3. Erect radar "corner reflectors" (or similar equipment) immediately. 4. Operate personal locator beacon continuously.
<p style="text-align: center;">WHEN AN AIRCRAFT OR SURFACE CRAFT IS BELIEVED TO BE IN THE VICINITY</p> <ol style="list-style-type: none"> 1. Operate personal locator beacon continuously. 2. Operate emergency transmitter continuously. 3. Operate VHF/UHF personal radio equipment as required to home and communicate with rescue unit. 4. Keep radar "corner reflectors" erected until rescue is completed. 5. Use pyrotechnics. 6. Use visual paulin (Figure 5-5). 7. Use mirror for flashing signaling. 8. Blow whistle in fog or darkness. 9. Use emergency dye markers.

Figure 5-3

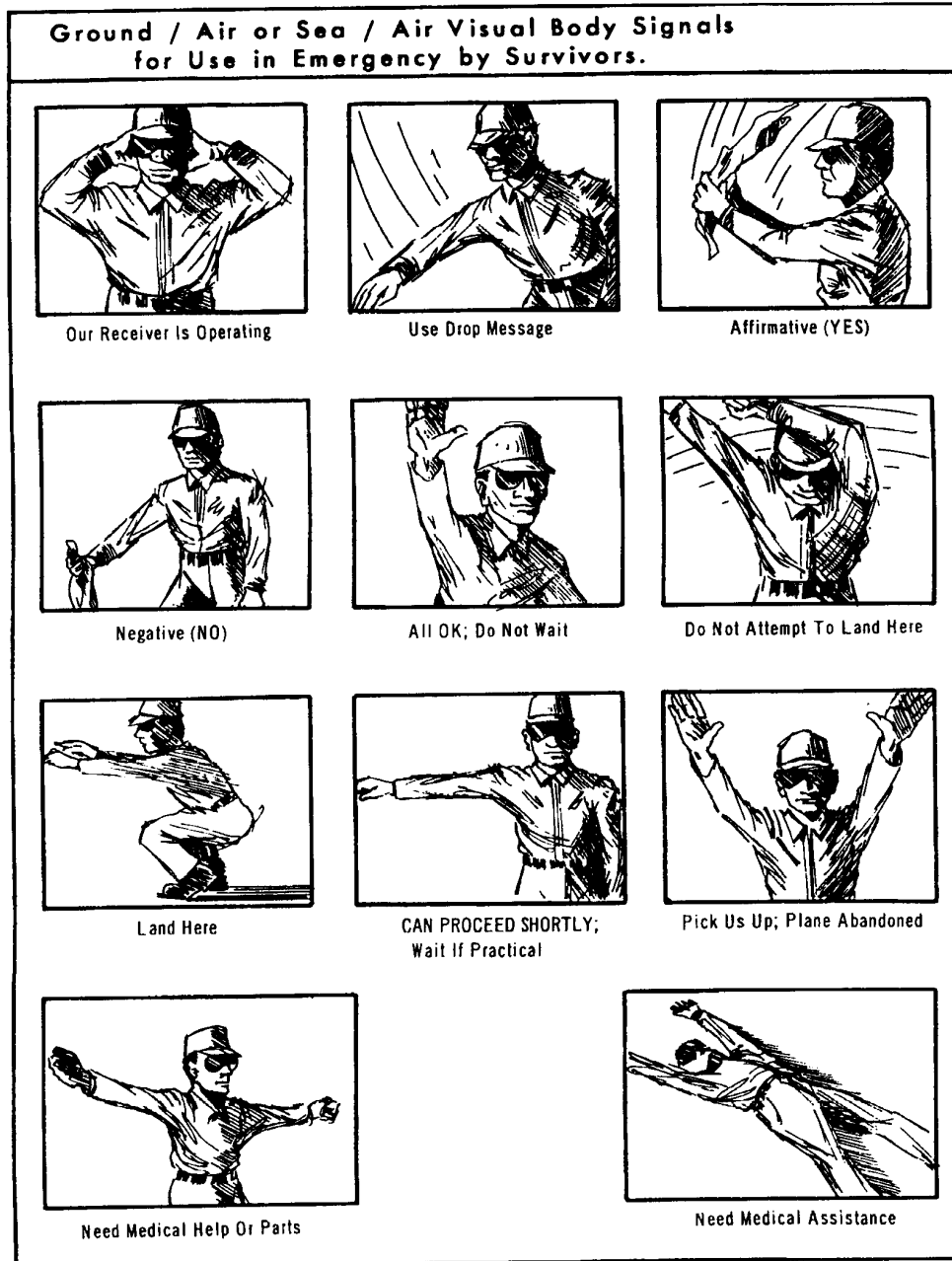


Figure 5-4

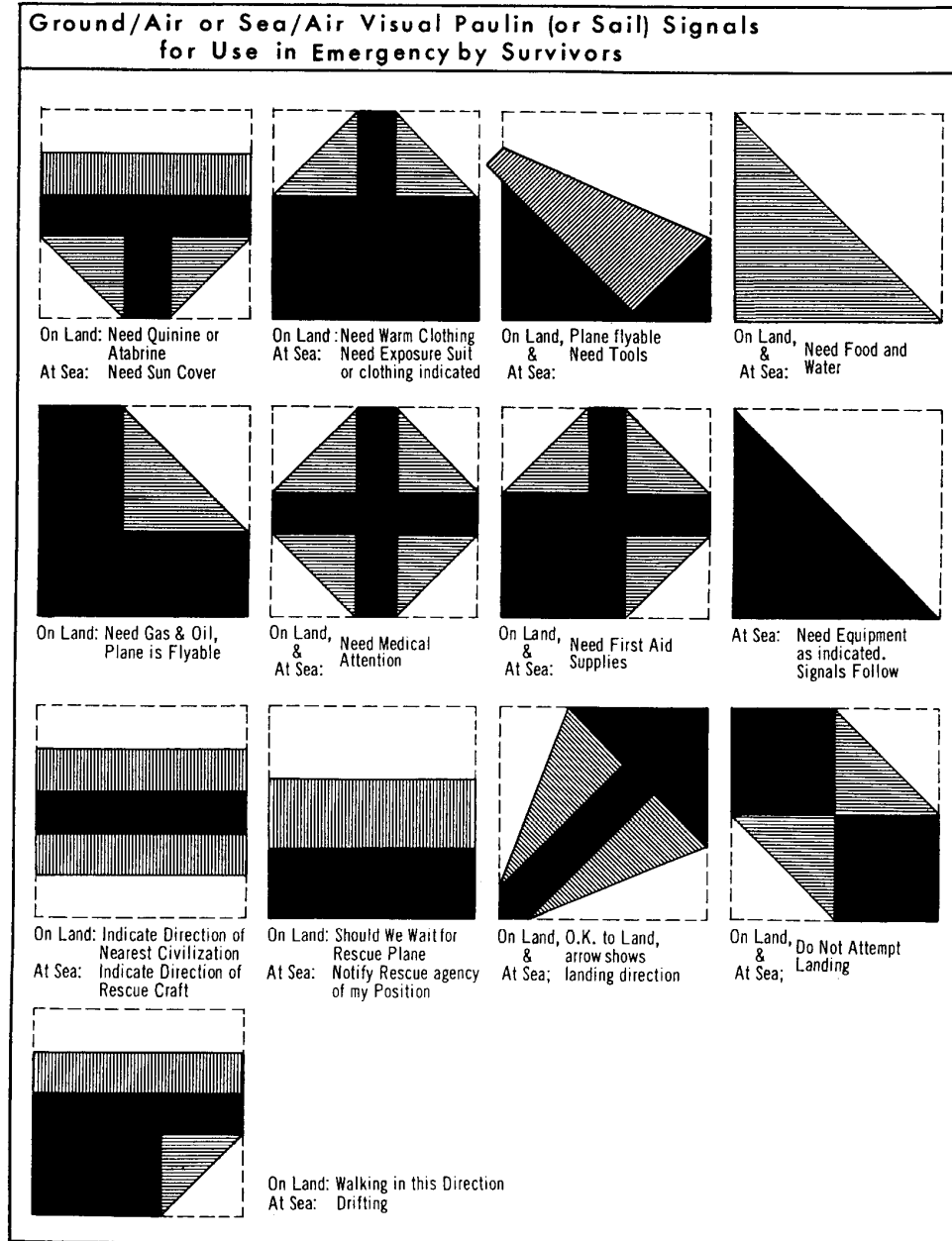


Figure 5-5

CHAPTER 6

FREQUENCIES FOR DISTRESS AND SAR

General

601. Special radio frequencies are designated for use by mobile stations or survival craft for distress, safety or emergency purposes. These frequencies are detailed in figure 6-1.

Distress and Emergency Frequency Usage

602. Distress and emergency frequencies may be used only to provide a communication channel to and from airborne, ground and surface craft or other survival stations experiencing an actual emergency or distress condition. This includes immediate assistance by other aircraft, surface units or stations in the vicinity acting to alleviate or arrest the emergency or distress condition. These latter communications do not include those incident to a coordinated SAR operation which should be conducted on appropriate channels shown in figure 6-2 or as otherwise directed.

Initial Emergency Transmission Frequency

603. The first transmission by an aircraft, ship or survival craft in distress or experiencing an emergency condition will normally be made on the frequency in use. In the absence of any response to this initial transmission the aircraft, ship or survival craft will preferably initiate a distress call on the International Aeronautical Emergency Frequency 121.5 MHz or on the Distress and Emergency Frequency 243.0 MHz. However, the aircraft may use any other available frequency prescribed in figure 6-1.

Surface Craft Frequencies

604. Search surface craft which are dispatched on an emergency rescue mission shall guard the following frequencies continuously as practicable and appropriate:

- a. 500 kHz (use D/F facilities if available)
- b. 2182 kHz
- c. 3023 kHz
- d. 4125 kHz
- e. 5680 kHz
- f. 6215 kHz
- g. 123.1 MHz
- h. 121.5 MHz

- i. 243.0 MHz
- j. 282.8 MHz
- k. 156.8 MHz
- l. 156.3 MHz
- m. The appropriate "Rescue Control Frequency" as designated by the Rescue Control Centre concerned.
- n. The appropriate Search and Rescue frequency to be used at the scene of the distress or emergency incident.

Distress/Emergency Frequencies
Figure 6-1

Frequency	Usage
500 kHz	INTERNATIONAL DISTRESS AND CALLING FREQUENCY for CW. To be used for this purpose by ships, aircraft or survival craft having equipment in the 405 to 535 kHz band when requesting assistance from maritime services. It shall be used for distress call and distress traffic, the URGENCY signals and messages, the SAFETY signal and, outside regions of heavy traffic, short safety messages. Where practicable, safety messages shall be transmitted on the working frequency after a preliminary announcement on 500 kHz. Ship and aircraft stations which cannot transmit on 500 kHz should use any other available frequency on which attention might be attracted. The class of emission is A2A, A2B, H2A or H2B with 500 kHz being the carrier frequency.
2182 kHz	INTERNATIONAL DISTRESS AND CALLING FREQUENCY for voice. Used by mobile stations, survival craft and emergency position-indicating radiobeacons using frequencies in the authorised bands between 1605 and 4000 kHz when requesting assistance from the maritime services. Used for the distress call and traffic, for signals of emergency position-indicating radiobeacons, for the URGENCY signal and messages and for the SAFETY signal. SAFETY messages shall be transmitted, where practicable on a working frequency after a preliminary announcement on 2182 kHz. Class of emission is H3E or J3E. A3E may continue to be used by apparatus intended solely for Distress, Urgency and Safety purposes.
4125 kHz and 6215 kHz	These frequencies are used to supplement the carrier frequency 2182 kHz for DISTRESS and SAFETY purposes and for call and reply. They are also used for DISTRESS and SAFETY traffic by radiotelephony. Class of emission is J3E.
121.5 MHz	INTERNATIONAL AERONAUTICAL EMERGENCY FREQUENCY for aircraft and those aeronautical stations primarily concerned with the safety and regularity of flight along national or international civil air routes and having equipment in the 118-136 MHz band. Mobile stations of the maritime mobile service may communicate on this frequency for safety purposes with stations of the aeronautical mobile service. (Class A3E emissions)

Figure 6-1 (continued)

Frequency	Usage
156.8 MHz	For international use by the MARITIME MOBILE VHF RADIOTELEPHONE SERVICE as a distress, safety and calling frequency. It is used for DISTRESS signal, call and traffic, for the URGENCY signal and traffic and the SAFETY signal. SAFETY messages shall be transmitted, where practicable, on a working frequency after a preliminary announcement on 156.8 MHz. The emission class is limited to G3E.
243 MHz	Agreed internationally for use by equipment provided for use in SURVIVAL CRAFT STATIONS, which is capable of operating on bands between 235 and 328.6 MHz. (This includes emergency position-indicating radiobeacons). The emission class is A3E, AM VOICE.

Search and Rescue Frequencies (SAR)

Figure 6-2

Frequency	Usage
3023 kHz and 5680 kHz	These frequencies are common to both the Aeronautical Mobile (Route) Service (Aem(R)) and the Aeronautical Mobile (Off-Route) (Aem(OR)) Service and are available to all mobile units at the scene of a search and rescue operation, and by fixed stations for communicating with aircraft proceeding to or from a search and rescue scene. The emission class is A2A, A3E, or H3E with 3023 kHz or 5680 kHz being the carrier frequency. All stations using single sideband (SSB) on 3023 and 5680 kHz shall transmit on those frequencies a carrier of sufficient amplitude or permit reception on a double sideband (AM) receiver and shall be able to receive DSB (AM) transmissions.
8364 kHz	FOR USE INTERNATIONALLY BY SURVIVAL CRAFT STATIONS equipped to transmit on frequencies in the band 4 - 27.5 MHz and if they desire to establish with stations of the Maritime and Aeronautical Mobile Services communications relating to search and rescue operations. The emission class is A2A or H2A with 8364 kHz being the carrier frequency.
123.1 MHz	For world-wide use when communicating with enroute aircraft participating in SAR operations. 123.1 MHz is the aeronautical frequency auxiliary to 121.5 Mhz and mobile stations of the maritime mobile service may communicate on this frequency for safety purposes with stations of the aeronautical mobile service. Emission class is A3E - AM VOICE.
282.8 MHz	For world-wide use when communicating with enroute aircraft participating in SAR operations. 282.8 MHz is the aeronautical frequency auxiliary to 243.0 MHz and mobile stations may communicate on this frequency for safety purposes with stations of the aeronautical mobile service. Emission class is A3E - AM VOICE.

Frequencies for Use by GMDSS Ship Stations
Figure 6 - 3

DISTRESS, URGENCY, SAFETY and CALLING FREQUENCIES (kHz)

Radiotelephone	DSC	NBDP
2182	2187.5*	2174.5*
4125	4207.5*	4177.5*
6215	6312.0*	6268.0*
8291*	8414.5*	8376.5*
12290	12577.0*	12520.0*
16420	16804.5*	16695.0*
VHF CH16 (FM)	VHF CH70 (FM)	NOT USED

* Reserved exclusively for distress, emergency, and safety traffic.

ON SCENE SAR FREQUENCIES

HF (kHz)	VHF (MHz)
2182.0	123.1 (AM)
3023.0	156.8 (FM) CH16
4125.0	156.3 (FM) CH6
5680.0	

INTERSHIP NAVIGATION SAFETY COMMUNICATIONS

156.65 MHz (VHF CH13)

HF WORKING and MARITIME SAFETY INFORMATION FREQUENCIES

COAST STATION TRANSMIT (kHz)	COAST STATION TRANSMIT (kHz)
2201	2201
4426	4134 (RADPHONE CH424)
6507	6206 (RADPHONE CH603)
8176	8176
12365	12365

MARINE SAFETY INFORMATION FREQUENCIES (kHz)

490.0	6314.0	19680.5
518.0	8416.5	22376.0
4209.5	12579.0	26100.5
4210.0	16806.5	

LOCATING/HOMING FREQUENCIES

121.5 MHz (AM)	COSPAS/SARSAT and AIRCRAFT HOMING
156-174 MHz (FM)	CH70 VHF DSC and EPERBS
406.025 MHz	COSPAS/SARSAT
9200-9500 MHz	X BAND RADAR TRANSPONDERS

INMARSAT COMMUNICATIONS

1530-1544 MHz	DOWNLINK: COMMERCIAL, DISTRESS and SAFETY
1544-1545 MHz	DOWNLINK: DISTRESS and SAFETY ONLY
1626.5-1645.5 MHz	UPLINK: COMMERCIAL, DISTRESS and SAFETY
1645.5-1646.5 MHz	UPLINK: DISTRESS and SAFETY ONLY

CHAPTER 7

SEARCH AND RESCUE AND SCENE OF ACTION CALL SIGNS

Purpose

701. Voice call signs are provided herein for:
- a. Search and Rescue (SAR) missions
 - b. Scene of Action (SOA) communications

Search and Rescue (SAR) Call Sign List

702. Call signs for assigned SAR craft will consist of the prefix "RESCUE" followed by the normal SAR call sign. In the case of helicopters and boats the SAR call sign will be "RESCUE Helicopter/Boat (No. _____)".

Examples:

1. Airborne Lifeboat No. _____ with survivors ARK (No. _____).
2. Air Rescue Service Aircraft engaged in emergency and precautionary air-to-air interceptions, escorts, and/or orbits for the purpose of providing precautionary air rescue coverage for air movements DUCKBUTT (plus letter).
3. Any or all SAR planes at BULLMOOSE (plus location).
4. Landbased SAR aircraft PLUTO
5. Life Raft No. _____ with survivors GOODYEAR (No. _____).
6. Lighter than Air Ship employed in SAR mission CIGAR.
7. Controller No. _____ COLLECT (No. _____).

Use of Identifying Numbers and Place Numbers

703. Identifying numbers and/or geographical place names will be appended to the SAR voice call signs in order to complete the voice call sign.

Examples:

1. Any or all Search and Rescue planes, Argentina Newfoundland RESCUE BULLMOOSE ARGENTINA.
2. SAR Boat Number 4 RESCUE Boat No. Four.
3. Coordination Center at RESCUE (Location).

4. Plane No. _____ PLAYMATE (No. _____).
5. Ship No. _____ BARGE (No. _____).
6. Task Group No. _____ SPAULDING (No. _____).
7. Commander Task Group No. _____ HOOKWORM (No. _____).
8. Rescue Submarine or Surface Ship LIFEGUARD.
9. Rescue Team (Land) SAINT BERNARD.
10. Station Vessel of Ship assigned rescue duty OCEAN STATION (plus letter).

Scene of Action (SOA) Call Sign List

704. Aircraft I am calling by flashing light	*LINK
Any Air Force plane at SOA	*HAWK
Any airship at SOA	*CITY
Any Army plane at SOA	*HUGO
Any Army unit in the field	*TROT
Any helicopter at SOA	*ABLE
Any Navy plane at SOA	*CREW
Any ship or aircraft at SOA	*FEAR
Any surface ship at SOA	*DEAF
Friendly force, which friendly aircraft is approaching	*YELP
Senior Officer Present at SOA	*TIFF
Ship which I am circling (Aircraft to surface)	*TOOL

*Used in military and non-military communications.

International Emergency Signals

705. Distress Signal (SOS)	*MAYDAY
Safety Signal	*SECURITY
Urgency Signal	*PAN PAN

*Used in military and non-military communications.

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Notice	iii	Original
Letter of Promulgation	iv	Original
Record of Changes	v	Original
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Chapter 2	2-1 to 2-9	Original
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