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# Auxiliary Specialty Course

## COMMUNICATIONS

### (AUXCOM)



## STUDENT STUDY GUIDE

**PUBLISHED FOR EDUCATIONAL PURPOSES ONLY**

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16794

JUN 04 2010

## MEMORANDUM

From: M.D. RIZZO, CAPT  
COMDT (CG-542)

Reply to: CG-5421  
Attn of: Ms. L. McDaniel

To: Distribution

Subj: AUXILIARY COMMUNICATIONS SPECIALTY COURSE (AUXCOM) STUDENT  
STUDY GUIDE

Ref: (a) Auxiliary Manual, COMDTINST M16790.1(series)

1. PURPOSE. This publication is intended for use as the student study guide for the Auxiliary Communications Specialty Course. It is published for instructional purposes only and is not policy material.

2. ACTION. Elected and appointed leaders and program managers at all levels of the Auxiliary organization shall ensure Auxiliarists who oversee, direct, or participate in Auxiliary operations adhere to this publication's provisions.

3. PUBLICATION AFFECTED. The Auxiliary Communications Specialty Course Student Study Guide, Commandant Publication 16794.32B is canceled.

4. DISCUSSION. The Auxiliary Communications Specialty Course Student Study Guide is not a substantial revision of earlier text materials.

5. SUMMARY OF CHANGES. Changes to this course are listed below:

- a. Chapter test questions now reference page number where answer may be found.
- b. The pages for creating slides have been removed.
- c. Added chapter for information relating to Rescue 21.
- d. Added chapter for Communication Staff Officer responsibilities.

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## CHAPTER ONE - BASIC MARINE RADIOTELEPHONE SYSTEMS NOMENCLATURE AND THEORY

### A. INTRODUCTION

1. General. Radio equipped vessel, aircraft, some fixed land, and direction finding stations of the Auxiliary normally operate radios as certified facilities authorized by the Coast Guard to operate on specific government frequencies. The operation, qualification, and certification procedures are covered in Chapter Five.
2. Civilian operators of radios aboard private aircraft and vessels operate their radios as private, non-government stations under the authority of the Federal Communications Commission (FCC). Emphasis is placed on providing the student with a basic understanding of the operation and proper use of the radiotelephone systems.

### B. COMMUNICATIONS NOMENCLATURE

1. In order to become an Auxiliarist Communications Specialist, it is necessary for the student to have a basic knowledge of the terminology and principles of electronic communications. For this reason, the following definitions of basic terms and a discussion of the basic principles are presented.
  - a) Cycle - a single complete reversal of an alternating current (Fig.1-1). This involves a maximum rise in one direction and a return to zero followed by a maximum rise in the other direction and a return to zero.
  - b) Frequency - the number of cycles per second of an alternating current. The basic measurement of frequency is in Hertz (Hz).
  - c) Hertz - one Hz equals one cycle per second. 1,000 Hz equals one kilohertz (kHz); 1,000,000 Hz or 1,000 Hz equals one megahertz (MHz); and 1,000,000 kHz or 1,000 MHz equals one gigahertz (GHz).
  - d) These units of frequency measurement honor Heinrich Hertz, an early pioneer in radio. Again referring to Fig. 1-1, the distance from A to B, from B to C, and from C to D each represent one cycle of the sine wave shown. Since this wave represents itself three times in one second, the frequency of the wave is 3 cycles per second (3Hz).
  - e) The low frequency end of the electromagnetic spectrum has been divided into bands by the International Telegraph Union (ITU). These bands have been made part of the US Code, 47 USC 2102, by the FCC. The Bands have been given names and contain the frequencies of interest in radio communications as shown in Table 1-1.

Table 1-1 Bands of the Frequency Spectrum

<b>Band Designation</b>	<b>Band Name</b>	<b>Frequency</b>	<b>Typical Use</b>
VLF	Very Low Frequency	3 to 30 kHz	Navigation, sonar
LF	Low Frequency	30 to 300 kHz	Radio beacons, navigational aids
MF	Medium Frequency	300 to 3000 kHz	AM broadcasting, maritime radio, Coast Guard communications, direction finding
HF	High Frequency	3 to 30 MHz	International shortwave broadcasts, ship-to-coast, and ship-to-aircraft.
VHF	Very High Frequency	30 to 300 MHz	Television, FM broadcasts, air-traffic control, police, and navigational aids.
UHF	Ultra High Frequency	300 to 3000 MHz	Television, satellite communications, surveillance radar, and navigational aids.
SHF	Super High Frequency	3 to 30 GHz	Airborne radar, land mobile communications, and satellite communication.
EHF	Extremely High Frequency	30 to 300 GHz	Radar, experimental.

2. The frequency spectrum is the portion of the electromagnetic spectrum between 3 kHz and 300 GHz. Frequencies which range from about 15 to 15,000 Hz are called audio frequencies because the vibrations of air particles at these frequencies are generally recognizable by the human ear. Frequencies greater than 30 kHz to 30,000 MHz are generally referred to as radio frequencies because they are used in radio communications. The RF spectrum is further divided into bands of designated ranges of frequencies, as shown above. The Auxiliarist will be primarily interested only in the Medium, High, and Very High Frequency bands. The FCC and the National Telecommunications and Information Administration (NTIA) jointly allocated frequencies for specific use. The Interdepartmental Radio Advisory Committee (IRAC), chaired by NTIA, has representation from 20 Federal Agencies. NTIA controls frequency use by Federal Agencies while the FCC regulates State, local government, business, and private use. The frequency allocation table is displayed on the NTIA web

site and published in 47 CFR 2.10. Federal agencies may not use the non-federal frequencies subject to agreement between the NTIA and the FCC.

3. Radio waves travel in space at the same speed as light - 300,000,000 meters or about 186,000 miles per second. These waves are set up by an RF current flowing in an antenna. The rapidly changing current sets up a magnetic field that alternates at the same rate as the electric field which, in turn, creates another electric field, and so on, and so on. When this happens, the two fields move outwards at the speed of light.
4. Suppose an RF current has a frequency of 2,000,000 Hz (2 MHz). The fields will go through a complete reversal (one cycle or Hz) in  $\frac{1}{2,000,000}$  of a second. In that same period of time, the wave will move 300,000,000/2,000,000 meters. By the time the wave has moved that distance, the next cycle has begun and a new wave has started out. The first wave, in other words, covers a distance of 150 meters before the beginning of the next one. This distance is called the wavelength.

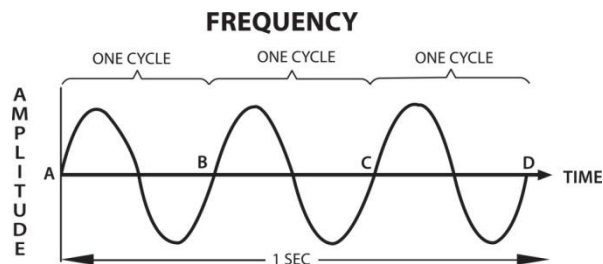


Fig. 1-1 The Sine Wave, Cycles, and Frequency

5. The wavelength is normally measured in meters. The relationship between the wavelength and the frequency is shown by the formula:  $\lambda = 300,000,000/f$ .

Where  $\lambda$  = wavelength in meters and  $f$  = frequency in kHz.

6. The term amplitude is used to describe the size or magnitude of a wave measured from zero to its peak or greatest value.
7. When an RF or carrier is radiated from an antenna, it occupies a specific portion of the frequency band called bandwidth. When the carrier is modulated with audio (voice) the bandwidth is increased proportionally to the frequency and strength of the audio. For single sideband (SSB), the bandwidth is equal to the highest audio modulating frequency used. For frequency modulation (FM), the bandwidth is defined as the width of the band of frequencies where the radiated power appears. Stations transmit on an assigned frequency which is normally the center of the band of frequencies. The FCC requires all radio transmitting equipment, including that used in both 2-30 MHz SSB and 156-162 MHz VHF-FM marine radiotelephone systems, be designated with a specific frequency tolerance to keep the carrier within a relatively few cycles of the assigned frequency.

8. For purposes of communications, daytime is defined as the period extending from two hours after local sunrise until two hours before local sunset (at the transmitter, unless otherwise indicated). Nighttime extends from two hours prior to local sunset until two hours after local sunrise (at the transmitter, unless otherwise indicated).

### C. CHARACTERISTICS OF RADIO WAVES

1. Radio waves, like light, are a form of electromagnetic radiation. These waves can be reflected or refracted.
2. An electromagnetic wave is composed of moving fields of electric and magnetic force. The medium in which these waves travel has a marked effect on the speed with which they move. When the medium is empty space, the speed is 300,000,000 meters per second (1 meter = 39.37 inches).
3. The intensity of a wave is inversely proportional to the square of the distance from the source. Therefore, in a uniform medium, one receiving point is twice as far from the transmitter as another, the field strength at the more distant point will be just one-fourth the field strength at the nearer point. The inverse-distance law is based on the assumption that there is nothing in the medium to absorb energy from the wave as it travels. This is not the case in practical communication along the ground and through the atmosphere.
4. According to the altitudes of the paths along which they are propagated, radio waves may be classified as ionospheric waves, tropospheric waves, or ground waves.
  - a) Ionospheric or sky wave is that part of the total radiation that is directed towards the ionosphere. The ionosphere is a region of rarefied and ionized atmosphere surrounding the earth at an altitude from 50 to 250 miles. Depending upon the variable conditions in that region, as well as upon the transmitting wave length, the ionospheric wave may or may not be returned to earth by the effects of refraction (Fig. 1-2).

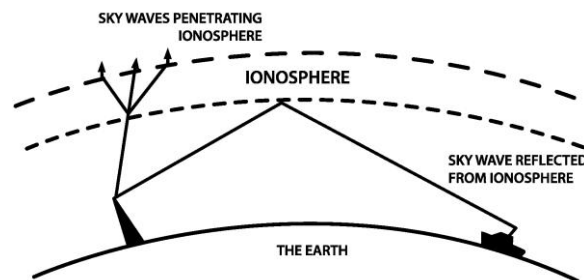


Fig. 1-2 Sky Waves and Ionosphere

- b) Tropospheric wave is that part of the total radiation that undergoes refraction and reflection in the troposphere, which may occur at the boundaries between air

masses of differing temperatures and moisture content. The troposphere is the region of atmosphere at the earth's surface which varies from about five miles in height at the poles to about eleven miles at the equator.

- c) Ground wave refers to waves which stay close to the earth and do not reach their destination by reflection or refraction from the ionosphere.
- 5. Except for distances of a few miles, nearly all communication on frequencies between 2 and 30 MHz is by means of the sky wave. The area between the end of the useful ground wave and beginning of reception of the sky-wave is called the skip zone, (2-30 MHz) and the distance from the transmitter to the nearest point where the sky wave returns to earth is called the skip distance (Fig 1-3). The extent of the skip zone depends upon the frequency and the state of the ionosphere, and also upon the height of the layer in which the refraction takes place. The skip distance may be as much as 2500 miles. Multiple skips make possible trans-oceanic communication.

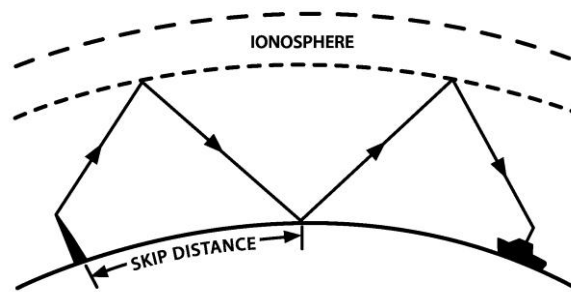


Fig. 1-3 Skip Distance

- 6. Radio waves in the 2-30 MHz band permit reliable long range communications in the higher portions of the band during daylight hours. As nighttime approaches, the frequencies must be lowered in order to maintain long range communications. This is due to the changing state of the ionosphere caused by radiation from the sun.
- 7. Although the range of VHF-FM is referred to as line-of-sight, typical ranges of 25 miles or more can be normally obtained. The range is primarily dependent upon the height of the transmitting antenna and receiving antenna. The radio horizon is more distant than the visible horizon because radio waves are refracted more than visible light. The distance to the radio horizon is given by the formula:  $D=1.23x(h)^{1/2}$ , which is approximately 15% greater than the visible horizon. The formula assumes the height is measured in feet and the distance in miles. An antenna height of 16 feet gives a range of about 5 miles while an antenna height of 1,600 feet has a range of 49 miles.
- 8. Radio waves in the 2-30 MHz band permit reliable long range communications in the higher portions of the band during daylight hours. As nighttime approaches, the frequencies must be lowered in order to maintain long range communications. This is due to the changing state of the ionosphere caused by radiation from the sun.



9. A comparison of the propagation characteristics of the 2-30 MHz SSB and the 156-162 MHz VHF-FM marine radiotelephone systems is shown in Fig. 1-4.

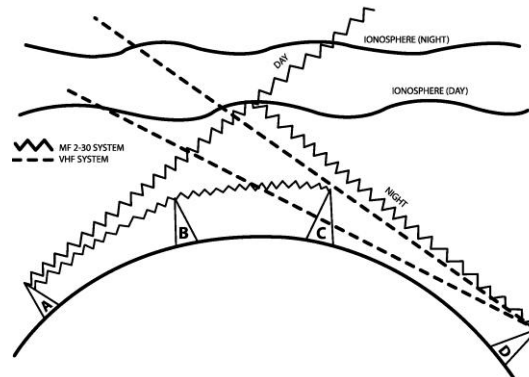


Fig 1-4. Comparison of Propagation Characteristics

#### D. TYPES OF CIRCUITS

1. A circuit is defined as an electronic path between two or more locations capable of providing one or more channels. The most basic of these, the **SIMPLEX CIRCUIT**, is one which provides a single channel or frequency on which information flows in one direction at a time. All stations on the circuit are capable of transmitting and receiving information, but not simultaneously. A **DUPLEX CIRCUIT**, on the other hand, is one which provides two channels or frequencies linking two different stations, allowing for the simultaneous exchange of information (Fig. 1-5).

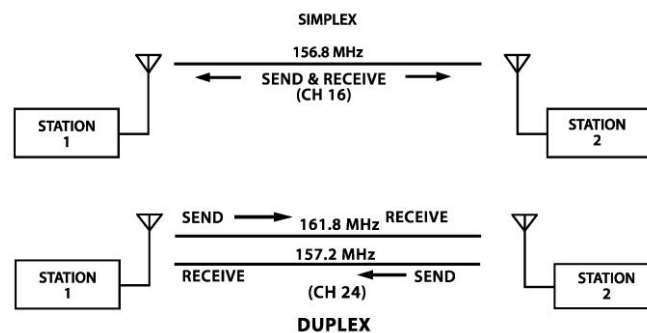


Fig. 1-5 Types of Circuits

#### E. RADIOTELEPHONE SYSTEMS

1. General. There are two voice radio communication systems available to marine users which adequately serve dual requirements of both safety and utility. Both systems permit communications between ships and between ship and shore. They are

commonly referred to as the Single Sideband (SSB) and the VHF-FM (156-162) system.

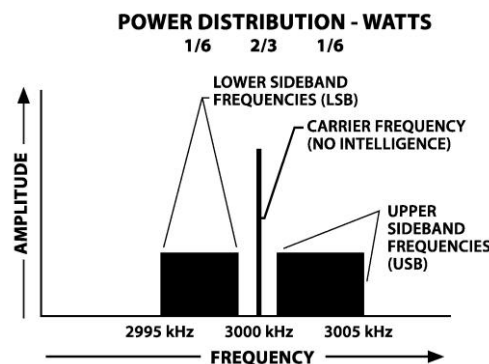
2. Basic functions. Marine radiotelephone systems provide three basic communication functions. In order of priority these are:
  - a) The Safety function is provided by internationally designating one frequency from each system for safety communications between all stations. 2182 kHz has been designated as the SSB International Distress and Calling frequency in the 2-30 MHz system. Similarly, 156.8 MHz (Channel 16) has been designated as the International Distress and Calling frequency for the VHF-FM radiotelephone system. The designated safety frequencies are used for calling and answering to insure that a maximum number of stations stand watch on these frequencies. Provision has been made in the SSB system and the VHF-FM system for shore broadcasts of weather reports, notices to mariners, and information necessary to the safety of navigation.
  - b) The Operational function is concerned with the exchange of information pertaining to the navigation, the movement, or the management of vessels.
  - c) The Business function is concerned with the economic and commercial matters relating directly to the purpose for which the ship is being used.
3. SSB System. The International Distress and Calling frequency 2182 kHz is in the SSB radiotelephone system. This relatively long range frequency is widely guarded by ship and shore stations, and the chances of being heard in an emergency are excellent. The other frequencies available for use in this band have the same distinguishing characteristic of relatively long range. Congestion is a problem in many areas. This band is badly affected by both natural and man-made interference. Range is dependent on the RF power output of the transmitter. The greater the output, the greater the range. Skip is most common in this band especially at night. This can be annoying when a skip transmission drowns out your local contact. The FCC normally limits transmitter power to 150 watts in this system. Some commonly used frequencies in this system together with their use. Asterisk (\*) commercial vessels may also use for business.
4. Numerous other frequencies are available in the 2-30 MHz band for radiotelephony as well as digital selective calling, Morse code, facsimile, radio printer, and data transmission. There are a large number of frequencies assigned for public correspondence (marine operators). Additionally, the frequencies 4125 kHz, 6215 kHz, 8291 kHz, 12290 kHz, and 16420 kHz have been specifically assigned on a simplex basis for handling distress and safety communications.

FREQUENCY	USE	AREAS
2003 kHz	Ship-to-Ship *	Great Lakes
2182 kHz	Distress-Safety-calling	All
2638 kHz	Ship-to-Ship *	All
2738 kHz	Ship-to-Ship *	All less Great Lakes and Gulf of Mexico
2830 kHz	Ship-to-Ship *	Gulf of Mexico

## F. SINGLE SIDEBAND

1. When an RF carrier is modulated by a single audio tone, two additional frequencies are produced. These are the sum and the difference of the carrier and the tone. When the modulating signal is made up of complex tones, as in speech or music, each individual frequency of the modulating signal produces its own sum and difference frequencies. These side frequencies occupy a band of frequencies lying between the carrier frequency and the lowest produced frequency (difference), and the carrier frequency and the highest produced frequency (sum) (Fig. 1-6). The frequency spread between the sum and the difference frequency is the bandwidth of the modulated carrier.
2. The bands of frequencies containing the side frequencies are called the sidebands. The sum frequency is the upper sideband (USB) and the difference frequency is the lower sideband (LSB) as shown in Fig. 1-6. Note that both sidebands contain the same information. Therefore, if one of the sidebands is filtered out through various technical applications, and only the remaining sideband is transmitted to the distant station, the same information is received. Additionally, if the transmitting and receiving stations both know beforehand the transmit frequency and which sideband will be used, the carrier can also be filtered out and only the desired sideband transmitted. This will permit all available power to be concentrated into the one sideband.

Fig. 1-6 Sidebands Radiated when a 3000 Hz Carrier is Amplitude Modulated by a 1 to 5 Hz Complex Audio Signal.



3. This is known as single sideband. In this mode, all power is transmitted in one sideband, instead of being divided between the carrier and both sidebands, as in commercial broadcasting (550-1600 kHz) which uses conventional amplitude modulation (AM). This provision amounts to an increase in power for the desired sideband. Of equal importance is that the bandwidth required for SSB voice carrier is approximately half that needed for the conventional AM (Fig. 1-7).

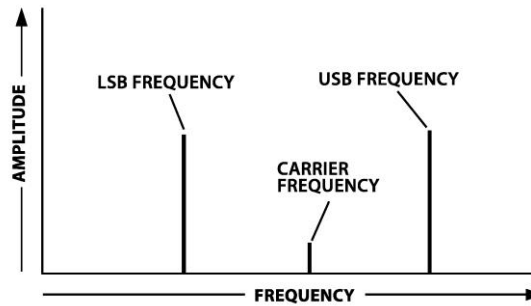


Fig. 1-7 Single Sideband (SSB) Operation Showing Increased "Talk Power" Over Conventional Amplitude Modulation (AM).

4. The advantages of SSB over AM are numerous and only a few are presented below.
  - a) **Minimizing of distortion.** In AM, if the sidebands and carrier arrive at the receiver out of phase the signal heard can be fuzzy and distorted. Eliminating one sideband and suppressing the carrier in SSB almost eliminates that problem.

Increased effective power. In an AM system two-thirds of the total power is in the carrier and one sixth in each of the two sidebands. Converting to SSB will concentrate all the power in one sideband and have an end result of increasing the power of the modulation you wish to transmit by five sixths. This will greatly increase the range of a SSB transmission over an AM transmission for the same given power output.
  - b) Provision for double the number of channels. Converting from AM to SSB will cut the bandwidth in half. Twice as many SSB channels can occupy a given part of the RF spectrum as AM channels.
  - c) Reduction of interference. In AM systems the carrier is transmitted. When several carriers are present they will heterodyne with each other and the result will be squeals and howls in the loudspeaker. In SSB, the carrier and one sideband are greatly reduced (suppressed) with an equal reduction in the interference.

#### G. 156-162 MHz VHF-FM SYSTEM

1. The VHF-FM (156-162 MHz) maritime mobile communication system in the United

States offers a number of channels, including weather channels, which are closely controlled by the FCC. This system uses Frequency Modulation (FM) which is superior to AM but has a wider signal and uses more bandwidth. The system is located in the VHF band where more RF space is available to handle the wider signals. VHF communications are essentially "line of sight". The communication ranges realized are directly dependent on the height of the transmitting and receiving antennas while being relatively independent of the transmitting power. Communication ranges of up to 25 miles are typical. The FCC limits transmitter power in this system to 25 watts output with the provision to reduce power to 1 watt for short range communications.

2. Channel 16 (156.8 MHz) of the VHF-FM marine band has been designated as a national distress, safety, and calling channel. Channel 09 (156.450 MHz) has been designated in some areas as an alternate calling channel for recreational vessels. There are non-commercial channels available for the recreational boater to conduct operational communications as well as commercial channels for the tug, barge, or marina operator to conduct their business. There are public correspondence channels for making regular phone calls from a vessel. Calls from vessels are also made by cell phones, satellite communications, and HF email. For further information concerning the regulations pertaining to channel usage in this system, reference should be made to the current FCC Rules and Regulations on marine communications (47 CFR, Part 80).
3. A general list of the frequencies available in the 156-162 VHF-FM system together with their normal use is below. Note: In some areas certain channels have been diverted to other use, such as the Vessel Traffic System (VTS), recreational vessel calling, etc. A check of the FCC regulations and/or with local boating interests should be made prior to operation to determine if additional channels are available and their use.

Table 1 - 2 VHF Marine Channels

Channel Number	Transmit MHz	Receive MHz	Use
01A	156.050	156.050	Port Operations and Commercial, VTS. Available only in New Orleans and Lower Mississippi area.
05A	156.250	156.250	Port Operations or VTS in the Houston, New Orleans, and Seattle areas.
06	156.300	156.300	Intership Safety
07A	156.350	156.350	Commercial
08	156.400	156.400	Commercial (Intership only)
09	156.450	156.450	Boat Calling (Commercial and Non-Commercial)
10	156.500	156.500	Commercial
11	156.550	156.550	Commercial. VTS in selected areas.
12	156.600	156.600	Port Operations. VTS in selected areas.
13	156.650	156.650	Intership Navigation Safety (Bridge-to-Bridge). Ships Greater than 20 Meters length must maintain a listening watch on this channel in US waters.

<b>Channel Number</b>	<b>Transmit MHz</b>	<b>Receive MHz</b>	<b>Use</b>
14	156.700	156.700	Port Operations. VTS in selected areas.
15		156.750	Environmental (receive only). Used by Class C EPIRBs.
16	156.800	156.800	International Distress, Safety, and Calling. Ships required to carry radio, USCG, and most coast stations maintain a listening watch on this channel.
17	156.850	156.850	State Control.
18A	156.900	156.900	Commercial
19A	156.950	156.950	Commercial
20	157.000	161.600	Port Operations (duplex)
20A	157.000	157.000	Port Operations
21A	157.050	157.050	U.S. Coast Guard only.
22A	157.100	157.100	Coast Guard Liaison and Maritime safety Information Broadcasts. Broadcasts announced on Channel 16.
23A	157.150	157.150	U.S. Coast Guard only.
24	157.200	161.800	Public Correspondence (Marine Operator).
25	157.250	161.850	Public Correspondence (Marine Operator)
26	157.300	161.900	Public Correspondence (Marine Operator)
27	157.350	161.950	Public Correspondence (Marine Operator)
28	157.400	162.00	Public Correspondence (Marine Operator)
63A	156.175	156.175	Port Operations and Commercial, VTS. Available only in New Orleans and Lower Mississippi area.
65A	156.275	156.275	Port Operations
66A	156.325	156.325	Port Operations
67	156.375	156.375	Commercial. Used for Bridge-to-Bridge communications in Lower Mississippi River. Intership only.
68	156.425	156.425	Non-Commercial
69	156.475	156.475	Non-Commercial
70	156.525	156.525	Digital Selective Calling (voice communications not allowed)
71	156.575	156.575	Non-Commercial
72	156.625	156.625	Non-Commercial (Intership only)
73	156.675	156.675	Port Operations
74	156.725	156.725	Port Operations
77	156.875	156.875	Port Operations (Intership only)
78A	156.925	156.925	Non-Commercial
79A	156.975	156.975	Commercial. Non-Commercial in Great Lakes only.
80A	157.025	157.025	Commercial. Non-Commercial in Great Lakes only.
81A	157.075	157.075	U.S. Government only. Environmental protection operations.
82A	157.125	157.125	U.S. Government only.
83A	157.175	157.175	U.S. Coast Guard only.
84	157.225	161.825	Public Correspondence (Marine Operator)
85	157.275	161.875	Public Correspondence (Marine Operator)
86	157.325	161.925	Public Correspondence (Marine Operator)

<b>Channel Number</b>	<b>Transmit MHz</b>	<b>Receive MHz</b>	<b>Use</b>
87	157.375	157.375	Public Correspondence (Marine Operator)
88A	157.425	157.425	Commercial. Inter-ship only.
AIS 1	161.975	161.975	Automatic Identification System (AIS)
AIS 2	162.025	162.025	Automatic Identification System (AIS)

4. The separation between channels is 25 kHz while the bandwidth (current wide-band) is 16 kHz. This ensures that adjacent channels will not cause mutual interference. Narrow band channels with a channel separation of 12.5 kHz have been specified in 47 CFR 80.371(c)(C). The ITU has proposed a 6.25 kHz channel separation but this is not yet authorized in the maritime service.
5. The separation between channels is 25 kHz while the bandwidth (current wide-band) is 16 kHz. This ensures that adjacent channels will not cause mutual interference.

#### H. CELL PHONES

1. Cell phones are not preferable to VHF-FM radios.
  - a) Cell phone coverage on the water is not consistent depending on the availability of cell phone towers.
  - b) The Coast Guard cannot monitor cell phone frequencies.
  - c) Cell phones are intended for private communications.
  - d) The great advantage of the VHF-FM radio is that all receivers in your area can receive your distress call and respond if they are able to.

#### I. CITIZENS BAND RADIO (CB)

1. The Citizens Band Service is no longer monitored by the U.S. Coast Guard or the Auxiliary for the following reasons.
  - a) No provisions exist for the timely broadcast of emergency weather and marine information.
  - b) No radio watch is required.
  - c) No protection from radio interference is provided.
  - d) No provision is made for foreign vessels or US Government vessels to participate in the Citizens Band Service.
  - e) Power is limited to 5 watts.

## J. FRS, GMRS, and MURS RADIOS

1. The Family Radio Service (FRS) and the General Mobile Radio Service (GMRS) can be used on water and on land. Common courtesy should be exercised when using a FRS, a GMRS, or a MURS radio. Do not use profane, obscene, or abusive language.

The FRS is part of the Citizen Band Radio Services (CB). FRS is an improved system using channelized frequencies in the Ultra-High Frequency (UHF) band. FRS radios can only operate on 0.5 watts and do not require a license. The range is about one mile. FRS cannot be used to make phone calls. It can be used for personal and business-related communications. You can operate a FRS radio wherever the FCC regulates radio communications. The radio has to be an unmodified certified unit. There are no age or citizenship requirements to operate one.

2. GMRS radio is for short-range communications (47 CFR 95.179). GMRS is authorized for up to 5 watts and requires an FCC license, is good for five years, renewable, and includes everyone in the household of the license holder. The license holder is responsible for the stations operation. GMRS allows repeaters with 50 watts maximum power.
3. Many users can operate FRS and GMRS radios without the annoyance of overcrowded channels. The numerous channels and the sub-audible tone squelch (CTCSS and DCS) codes can filter out other users on the same channel. These codes provide no protection against eavesdropping. Signals can be swamped by stronger units on the same frequency.
4. FRS and GMRS uses include ship-to-shore communications and communications between boats underway. The versions with headsets can be used by boat crews for communicating while underway or in noisy areas. Most important, there is no standard calling or distress channel on either FRS, GMRS, or MURS.
5. The Multi-Use Radio Service (MURS) is part of the Citizen Band Radio Service (47 CFR 95). MURS is a 5 channel, limited to 2 watts, short range voice or data, communications service for personal or business use. External gain antennas may be used. The channels assigned are only for mutual use. MURS users must cooperate in both the selection and use of the channels. Anywhere a CB can be used, MURS can be used. MURS use is not authorized aboard an aircraft while in flight. MURS communications may:
  - a) transmit voice or data signals as permitted in 47 CFR 95.631(j).
  - b) transmit any emission type listed in 47 CFR 95.631(j).
  - c) be used for remote control and telemetering functions.
  - d) not be operated in the continuous carrier transmit mode.



6. The highest point of a MURS antenna cannot be more than 60 feet from the ground. Nor can it be more than 20 feet above the highest point of the structure on which it is mounted.
7. MURS stations are prohibited from:
  - a) operating as a repeater station or as a signal booster.
  - b) interconnection with the public switched network.
  - c) connection through automatic or manual means of multi-use radio stations.

#### K. REMOTE BASE STATION OPERATION

1. The Coast Guard, along with many commercial operators, enhances its communications capabilities in the VHF range and elsewhere through the use of remotely-operated base stations.
2. These consist of paired radio receivers and transmitters located on radio towers or the tops of buildings ("high sites") in order to provide longer range reception and transmission than would otherwise be possible. Usually, a CG communications hub will have multiple high sites available at the communications console, each selectable for use. At the base station hub, a control console will be used to select frequencies at the remote site(s) and provide audio and control functions to the operator.
3. Some high sites may consist of multiple receivers and switchable transmit frequencies, so that several channels may be monitored simultaneously. These systems may extend the usable communications distances many hundreds of miles from the base station hub.

#### L. RADIO REPEATERS

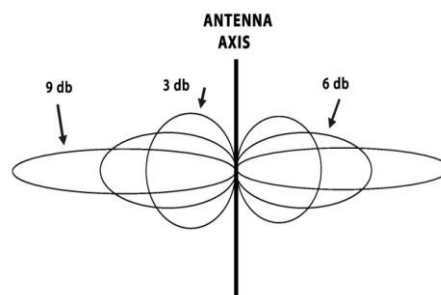
1. Concept. A repeater is a combination of a VHF-FM receiver/transmitter coupled together with special circuitry to allow the transmitter to retransmit the signals heard by the receiver. Most marine operator public correspondence channels operate in this manner in that a monitoring station can hear both the vessel and the land based marine operator on one frequency. A repeater is located at as high an elevation as possible, usually 500 to several thousand feet, to provide wide area long distance coverage. Typically, coverage from one handheld radio to another is less than 1 to 2 miles. With a repeater, coverage can be extended to more than 50 miles.
2. Auxiliary Use. A repeater needs two frequencies (duplex operation) to operate: one to listen on, called the input; and one to transmit on, called the output. In addition to repeating signals on its frequencies, a repeater can also be equipped to provide many diverse services such as:
  - a) interconnection to commercial telephone lines to permit telephone calls from mobile stations (auto-patch).
  - b) speed dialing services to frequently called numbers.

- c) retransmission of other simplex radio frequencies, such as marine channels, to allow remote monitoring.
  - d) digital data operation with proper ancillary equipment.
3. Operation. A repeater acts as a long distance radio relay as well as a convenient net where Auxiliarists can communicate anytime. Many Auxiliarists will leave their repeater radio on all the time. They can "check in" with their call sign and often find another member monitoring the system. It is an excellent tool to coordinate DF net operations, VE or VSC stations, PE classes, and finding crews for patrols or special events. The usefulness of a repeater in emergency and disaster situations cannot be over emphasized.
  4. Authorization. Establishing and maintaining a repeater system is costly and requires long term support from dedicated qualified members. Repeaters also involve full time operation and special frequency assignments and authorization. Prior to any expenditures, a concept of operation should be coordinated with the Auxiliary National Staff, Operations Department, Telecommunications Division (DVC-OT).

#### M. ANTENNAS

1. The basic radio station consists of three components, the power source, the radio equipment, and an antenna system. All three are equally important to the successful operation of the station. The antenna system is possibly the most misunderstood. In shipboard HF operation the antenna is usually a long whip type antenna with a tuner at the transmitter. At land stations, the HF antenna is usually a wire type or a directional beam type antenna. Since numerous sizes and types are available, they will not be discussed further in this text. Anyone desiring to install a HF antenna should consult with an experienced person to determine the best course of action.
2. The VHF antenna is, due the frequencies involved, much smaller than the HF antenna and usually can be installed without much difficulty. The key to VHF operation is the higher the antenna the farther the radio horizon and, hence, the greater the coverage. Shipboard VHF antennas are usually constructed of fiberglass and are rated by gain factors, such as 3, 6, or 9 db. The "db" is short for decibel and is a logarithmic expression of the gain increase over an antenna with a zero gain factor.

Fig. 1-8 Vertical Antenna Gain Patterns



3. VHF antennas can be constructed so that the power radiated from the antenna can be concentrated in a beam on a plane 90 degrees to the antenna (Horizontal concentration from a vertical antenna). The higher the db gain the more the concentration but the more stable the antenna platform must be in order to have uniform coverage. Most sailboats are heeled over to some degree when underway and therefore most use 3 db antennas. Small power boats and runabouts usually have 6 db antennas. 9 db antennas are usually found only on large power boats. Figure 1-8 shows a theoretical representation of various gains.
4. VHF antennas for land stations can be tailored to the local area of desired coverage. Directional antennas can be used but most stations use omni-directional antennas. Vessel antennas or antennas designed specifically for land use can be installed. Lightning protection should be included in any installation, especially on those antennas installed higher than the surrounding objects. This can be accomplished in various ways with antennas designed for land use being the most easily protected. Fiberglass antennas can be struck by lightning just as easily as metal antennas. Lightning arrestors and a good grounding system are desired. However, the best the best lightning protection is to disconnect everything when not in use and do not activate the station during electrical storms.
5. The feed line, that is the coaxial cable between the radio and the antenna, is also a critical part of the antenna system. All feed lines have some loss or resistance to the RF energy. The amount is dependent on the type of cable and frequency being used. VHF marine antennas using the popular RG-58 cable will have a loss of 4 to 6 db per hundred feet of cable which may negate the entire gain factor of the antenna. Switching to a larger cable, such as RG-8 or RG-214, may reduce the line loss to 2 to 3 db without any appreciable increase in cost. Other feed lines are available which can reduce the loss to around 1 db but these are larger, bulkier, and more costly. Feed lines should be routed in such a manner to avoid sharp bends or kinks. The condition of an antenna and feed line can be easily checked with a testing meter called a Standing Wave Ratio (SWR) meter. Check with a more experienced person on the availability and use of an SWR meter if system testing is desired.
6. A final note of caution on antenna installations. Always locate the antenna and feed line away from power and telephone lines. Make sure that, should the antenna fall, it and the feed line will not come into contact with any other line that could result in an electrical shock. Also, exercise extreme caution during the installation to avoid accidental contact with lethal conductors.

## N. CHAPTER ONE STUDY QUESTIONS

1. In communications nomenclature, the band named “very-high frequency” covers what frequency range? (*page 2*)
  - a) 3 - 30 kHz
  - b) 30 - 300 kHz
  - c) 30 - 300 MHz

- d) 3-300 MHz.
2. Express 2.182 MHz in kilohertz (kHz). (*page 7*)
- a) 2182 kHz.
  - b) 21.82 kHz.
  - c) 2.182 kHz.
  - d) 218.2 kHz.
3. What is the typical range of VHF-FM radio communications? (*page 5*) (*page 15*)
- a) Up to 25 miles, depending on antenna height.
  - b) Line of sight.
  - c) Handhelds, 1 - 2 miles.
  - d) All of the above.
4. What is a most important characteristic of the VHF-FM frequencies? (*page 5*)
- a) Free of interference and static.
  - b) Usually line of sight.
  - c) Only specific frequencies permitted.
  - d) All the above.
5. What is the difference between Simplex and Duplex circuits? (*page 6*)
- a) Simplex circuits use one frequency for both send and receive.
  - b) Duplex circuits have separate send and receive frequencies.
  - c) There is no difference.
  - d) Both a and b.
6. Skip is most often found within what range of frequencies? (*page 5*)
- a) 156 - 162 MHz
  - b) VLF frequencies
  - c) 2 to 30 MHz
  - d) 3 to 30 GHz
7. What is the SSB Distress and Calling frequency? (*page 7*)
- a) 2182 kHz
  - b) Channel 16
  - c) 156.8 MHz
  - d) Channel 13
8. What is the VHF-FM marine calling and distress frequency? (*page 7*)
- a) 2182 kHz
  - b) Channel 16

- c) 156.60 MHz
  - d) Channel 13
9. The bridge tender will likely be listening on what channel? *(page 10)*
- a) Channel 16.
  - b) Channel 09.
  - c) Channel 12.
  - d) Channel 13.
10. After calling a commercial vessel on Channel 16, what are some of the working channels you could switch to? *(page 11)*
- a) Channel 68.
  - b) Channel 69.
  - c) Channel 71.
  - d) All of the above.
11. Why is Class D Citizens Band unreliable for boaters? *(page 12)*
- a) No radio watch maintained.
  - b) No broadcast of emergency information.
  - c) No communication with Coast Guard.
  - d) All the above.
12. What is a radio repeater? *(page 15)*
- a) A radio station that receives on one frequency and retransmits on another frequency.
  - b) A radio station that can be a relay.
  - c) A radio station that can extend the communications range.
  - d) All of the above.
13. List the three basic communication functions of the marine radiotelephone system in priority order. *(page 7)*
- a) Safety, Operational, Business.
  - b) Operational, Safety, Business.
  - c) Business, Safety, Operational.
  - d) Business, Operational, Safety.
14. What are the major components of a radio station? *(page 16)*
- a) Radio equipment, feed line, antenna.
  - b) Power supply, radio equipment, antenna.
  - c) Power supply, feed line, antenna.

d) Power supply, radio equipment, feed line.

15. Lightning protection should be used with what type of antennas? (*page 17*)

- a) All types of antennas.
- b) Only beam antennas.
- c) Only vertical antennas.
- d) One horizontal antennas.

16. What are some of the precautions that should be taken when erecting an antenna. (*page 17*)

- a) Locate the antenna away from power lines.
- b) Locate the antenna away from telephone lines.
- c) Exercise extreme caution while installing to avoid contact with any lethal conductors.
- d) All of the above.

#### O. REFERENCES AND FOOTNOTES FOR CHAPTER ONE.

1. For a complete description of the System International (SI) units and conventions, see: <http://www.nist.gov/cuu/Units/prefixes.html>. While 20 prefixes have been adopted, only kilo (k,  $10^3$ ), mega (M,  $10^6$ ), giga (G,  $10^9$ ), milli (m,  $10^{-3}$ ), micro ( $\mu$ ,  $10^{-6}$ ), nano (n,  $10^{-9}$ ), and pico (p,  $10^{-12}$ ) are of interest to radio operators. See also: <http://physics.nist.gov/Pubs/SP811/sec04.html>.
2. While the speed of light in a vacuum ( $C_0$ ) is exactly 299 792 458 m/s, using the value 300,000 km/s (or 300 Mm/s) introduces only a 0.2% error. 186,000 mi/sec or  $1.8 \times 10^{12}$  furlongs/fortnight are equivalent values.
3. The standard symbols for wavelength ( $\lambda$ ) and frequency (f) are established by the International Electrotechnical Commission (IEC). See: <http://www.electropedia.org>.
4. Federal Standard 1037C, available at: <http://www.its.bldrdoc.gov/fs-1037c.htm>.

## CHAPTER TWO - VOLUNTARILY INSTALLED MARINE RADIOTELEPHONE STATION REGULATIONS

### A. GENERAL

1. This chapter summarizes the most significant rules which should be familiar to all licensees and operators of voluntarily installed ship radiotelephone stations. Rules for mandatory installations and special rules applicable only in small areas are not included. It must be understood that this rule digest and the paraphrased rules appearing elsewhere in this text may not fully agree with the current rules of the Federal Communications Commission (FCC).
2. The rules under which maritime communications operate are constantly being changed to increase safety at sea and utilize the latest technological advances in telecommunications. The Telecommunications Act of 1996 brought about sweeping changes in the telecommunication radiotelephone regulations. Students are cautioned to check the accuracy of the material herein against the current edition of the complete FCC regulations on this subject, 47 CFR Part 80.
3. The textual material presented below is a summary of pertinent FCC regulations, either in force or proposed at the time of printing. As a convenience in locating the in force rules in CFR 47, Part 80; the applicable rule numbers are indicated at the beginning of pertinent text.

### B. STATION LICENSE

1. Authorization.
  - a) 80.13. A voluntarily installed radio station in the maritime service may operate, in US waters and in accordance with the current FCC rules and regulations, VHF-FM, Radar, AIS, and/or EPIRBs without a license provided the station does not travel to foreign ports or make international communications. Satellite, MF/HF SSB, or operation in non - US waters requires a valid station license issued by the FCC.
  - b) 80.15. A station license may be granted, except to an alien, on submission of a properly completed formal application (and payment of any required fee).
2. Posting of License.
  - a) 80.405. When a station license, if required, cannot be posted as in the case of a recreational boat without an enclosed wheelhouse, it must be kept on board and be readily available for inspection.
3. Application.

- a) 80.23. Appropriate application forms may be obtained from any FCC field office on-line. Applications must be filed with the FCC per the instructions noted on the form. The appropriate fee must accompany those applications requiring payment of fees.

4. Interim Station License.

- a) If an applicant needs to operate the ship's radiotelephone station while waiting for FCC action on a formal application, the applicant may immediately generate an Interim Ship Station License by following the instructions on the application form.

5. Renewal of Station License.

- a) Application for renewal of a station license should be made within 90 days but not later than 30 days before its expiration date. Timely application for renewal will assure the licensee of uninterrupted operation. Failure to receive a renewed license in a timely manner should be brought to the attention of the FCC.

C. OPERATOR LICENSE

1. Persons Operating in the Domestic Maritime Service.

- a) There is no requirement for an operator license on a voluntarily installed marine radiotelephone station in the continental United States. However, if foreign operation is anticipated, the Restricted Radiotelephone Operator Permit is available and should be obtained (47 CFR 80.151).

2. Persons Authorized to Adjust Equipment.

- a) 80.169. All adjustments or tests of the radiotelephone transmitter must be performed by or under the immediate supervision and responsibility of a person holding a First or Second Class Radiotelegraph or a General Radiotelephone Operator License, who shall be responsible for the proper operation of the station equipment.

D. DISTRESS AND CALLING FREQUENCIES

1. 2-30 MHz Band.

- a) 80.369. For ship radiotelephone stations operating in the 2-30 MHz band, the distress and calling frequency is 2182 kHz. An efficient listening watch must be maintained on 2182 kHz when the radio is on and is not in use for communications on another frequency.

2. 156-162 MHz Band.



- a) 80.369. For ship radiotelephone stations operating in the VHF band, the distress, calling and safety frequency is 156.800 MHz (Channel 16). An efficient listening watch is required on this frequency at all times when the radio is on and is not in use for other communication. 156.525 MHz (Channel 70) is the distress frequency for DSC equipped vessels and is monitored in lieu of Channel 16.

### 3. Use of Distress and Calling Frequencies.

- a) The operational use of 2182 kHz and 156.800 MHz (Channel 16) is restricted to:
  - (1) 80.314. The Distress signal Mayday, followed by a distress message.
  - (2) 80.237. The Urgency signal Pan-pan (pronounced "Pawn-pawn"), followed by a very urgent message directly concerning safety.
  - (3) 80.329. The Safety signal Sécurité (pronounced "See-cure-it-tay"), followed by a brief message concerning the safety of navigation or an important meteorological warning.
  - (4) 80.369. Call to or reply to a specific station (Channel 9 may also be used for recreational vessels).
  - (5) 80.116. Brief operating signals. Such as agreeing on a working channel.

### 4. Time Limitations.

- a) 80.116. Calling a particular station shall not continue for a period of more than 30 seconds in each instance. If you do not hear the called station reply, wait at least 2 minutes before calling again. When a station does not reply to a call sent three times at intervals of 2 minutes, cease calling and do not call again until after an interval of 15 minutes. However, this 15 minute interval may be reduced to 3 minutes if the channel is unused and no interference will result. These limitations do not apply in emergency situations.

### 5. Establishing Communications.

- a) 80.116. Ship stations first establish contact on 156.800 MHz or 2182 kHz and then switch to an appropriate working frequency. However, when a calling station knows that the called station is maintaining a listening watch on an authorized working channel, or alternate calling channel, contact may be initiated on that channel (i.e., Public Correspondence Channels, bridge tenders).

## E. SHIP TO SHIP WORKING FREQUENCIES

### 1. 2-30 MHz Ship-to-Ship Working Frequencies.

- a) 80.373. The following frequencies are currently assigned for inter-ship "working", primarily for communications regarding safety and secondarily for certain operational business purposes:
    - (1) 2003 kHz, for use exclusively in the Great Lakes.
    - (2) 2082.5 kHz, for use in all areas except in the Great Lakes.
    - (3) 2142 kHz, Pacific Coast south of latitude 42 degrees north, on a daytime basis only.
    - (4) 2203 kHz, for use in the Gulf of Mexico.
    - (5) 2638 kHz, for use in all areas.
    - (6) 2738 kHz, for use in all areas except in the Great Lakes and the Gulf of Mexico.
    - (7) 2830 kHz, for use in the Gulf of Mexico.
  - b) All emissions in the U.S. are now made on single sideband (SSB) using the upper sideband.
2. 156-162 MHz Ship-to-Ship Working Frequencies.
- a) The following frequencies are currently assigned for use in all areas in the VHF 156-162 band:
    - (1) 156.300 MHz (Channel 6) for inter-ship safety. This channel is mandatory on ships. International VHF-FM ship-to-ship frequency (Internationally used for on scene Search and Rescue (SAR) communications).
    - (2) 156.800 MHz (Channel 16) for Distress, Safety and Calling. This channel is mandatory.
    - (3) 156.425 MHz (Channel 68) for inter-ship and ship-to-coast use.
    - (4) 156.625 MHz (Channel 72) for inter-ship use.
    - (5) 156.450 MHz (Channel 9) for inter-ship and ship-to-coast use (Shared with commercial vessels). Also, designated in some areas as an alternate calling channel for recreational vessels.
    - (6) 156.525 (Channel 70) for Digital Selective Calling (DSC).

### 3. Use of Ship-to-Ship Working Frequencies.

- a) Use of the inter-ship “working frequencies in the SSB band (2-30 MHz) requires a license and is authorized solely for communications pertaining to safety, operational, and ship business purposes. Permissible use is further limited according to the class of vessel, as explained below.
- b) The PRIMARY use of these inter-ship frequencies by all ship radiotelephone stations is for safety communications, defined as follows:
  - (1) 80.5. Safety communications: the transmission or reception of distress, alarm, or safety signals or any communications preceded by one of these signals, or any form of radio communication which, if delayed in transmission or reception, may adversely affect the safety of life and property.
- c) On a SECONDARY basis, on condition that interference is not a cause to safety communications, these inter-ship frequencies may be used by commercial vessels for OPERATIONAL COMMUNICATIONS concerning navigation, movement, or management of a ship or ships. These terms are defined as follows:
  - (1) NAVIGATION: Piloting of the vessel.
  - (2) MOVEMENT: Information and necessary communication relative to when and where there will be ship movement, for example, a rendezvous with tugs for a berthing assignment.
  - (3) MANAGEMENT: Obtaining the necessary supplies for the ship, limited to the immediate needs and the scheduling of repairs to the ship or changes in the movement of the ship as a result of those repairs.
- d) Noncommercial inter-ship frequencies in the VHF-FM (156-162 MHz) band are subject to the following conditions of use:
  - (1) 156.425 MHz (Channel 68) is available to fulfill the wide scope of needs of noncommercial boats. It should not be used in lieu of channels allocated for Distress, Calling, and Safety or those allocated for Port Operations or Public Correspondence.
  - (2) 156.625 (Channel 72) is available, on an interim basis, for noncommercial inter-ship communications during localized fleet operations during a cruise or rendezvous.
- e) All transmissions on an inter-ship working frequency between two more stations, engaged in any one exchange of signals or communications with each other, shall take place on only one frequency (simplex operation). This requirement, however, is waived in the event of an

emergency whenever interference or limitations of equipment prevent simplex operation.

- f) When you cannot use VHF and must use SSB, remember that a FCC license is required, an assigned call sign must be used, and that you share the 2-30 MHz frequencies with other ship stations worldwide. It is obvious that unless each one of the multitude of users of these shared frequencies exercises restraint and common sense, the circuits will easily be reduced to an intolerable confusion and made useless for their legitimate purposes. Because of the propagation characteristics of these frequencies, your transmissions may seriously interfere with other stations thousands of miles away even though you are not able to contact or are not plainly heard by another relatively close station. The only solution, other than transferring your operations to the VHF band, is to:

- (1) Use your transmitter only when necessary and only for authorized types of transmissions.
- (2) Use the lowest power output required to maintain contact.
- (3) Keep your transmissions short.
- (4) Announce your call sign clearly.
- (5) Habitually treat other users with courtesy.

#### 4. Time Limitation of Ship-to-Ship Working Frequencies.

- a) 80.116. Any one exchange of communication between any two ships on an inter-ship working frequency shall not exceed 3 minutes in duration after the two stations have established contact by calling and answering.
- b) 80.116. Subsequent to such exchange of communications on the inter-ship working frequencies in the 2-30 MHz band, these frequencies shall not be used again for communications between the same two stations until 10 minutes has elapsed.
- c) The foregoing time limitations are not applicable in the event of an emergency involving safety.

## F. STATION IDENTIFICATION AND REQUIRED DOCUMENTS

### 1. Identification of Station with Permanent License.

- a) 80.102. All transmissions shall be identified by a voice announcement in the English language of the FCC station's assigned call sign. This identification shall be made:
  - (1) at the beginning and the end of each communication with any other station.

- (2) at the beginning and the end of each transmission for any other purpose.
- (3) at intervals not exceeding 15 minutes whenever transmission is sustained for a period exceeding 15 minutes.

2. Identification of Station without a License.

- a) A ship station, such as a recreational vessel without SSB, which does not require a permanent license, will utilize the name of the vessel as its call sign and operate as outlined in the paragraph above.

3. Required Documents.

- a) 80.13. A station license, if required, issued by the FCC, must be carried on the vessel. One ship station license will be granted for operation of all maritime services transmitting equipment on board a vessel.
- b) A copy of the station license must be posted at the operating position. However, if this is not feasible, a copy must be kept aboard that is readily available to the operator.

G. ADJUSTMENTS TO RADIOTELEPHONE EQUIPMENT

1. Responsibility for Proper Technical Operation.

- a) The station licensee is responsible for the proper technical operation of the equipment. All the transmitter adjustments or tests that may affect the proper operation of the station must be made under the supervision and responsibility of a person holding a First or Second Class Radiotelegraph or a General Radiotelephone Operator License. For this reason, it is important to only use a properly license and reliable technician.

2. Requirements for Proper Radio Ground Connection.

- a) Effective operation of the antenna system of a SSB shipboard installation depends on an adequate radio ground connection. This is usually obtained by making a connection directly to metallic hull vessel or installing a ground plate on the hull of non-metallic vessel. Usually a corrosive-resistant metal surface of at least 12 square inches mounted below the waterline and connected to the radio ground terminal, will be suffice. VHF stations usually utilize antenna systems that do not require grounding systems.

H. SECRECY OF COMMUNICATIONS

1. Divulgence of Communications Prohibited.

- a) 80.88. The station licensee, vessel master, radio operator, or any person who may have knowledge of the radio communications must observe the secrecy requirements of the Communications Act and Radio Regulations.
- b) Obviously, the above requirement of secrecy does not apply to radio communication relating to ships in distress, nor to any broadcast intended for use by the general public. It does apply, however, to all other communications. These statutory secrecy provisions cover messages addressed to a specific station or to a person via such a station. For example, calls made on public correspondence channels by other vessels and overheard by your station should not be divulged nor can the knowledge thereby gained be used.

## I. OBSENTY, INDECENCY, AND PROFANITY

### 1. Prohibited.

- a) When two or more ship stations are communicating with each other, they are talking over an extensive party line. Users should always bear this fact in mind and assume that many persons are listening. These listeners include family members who are monitoring in order to hear other family members or relatives on board vessels at sea. All users therefore have a compelling moral obligation to avoid offensive remarks. They also have a strict legal obligation, inasmuch as the U.S. Criminal Code makes it a criminal offense for any person to transmit communications containing obscene, indecent, or profane words, language, or meaning. Fines of not more than \$10,000 or imprisonment for not more than five years can be imposed.

## J. REVOCATION AND SUSPENSION OF LICENSE

### 1. Revocation of Station License or Authorization.

- a) Use of a radio station may be revoked for:
  - (1) Willful or repeated violation of or willful or repeated failure to observe any provision of the Communications Act or any rule or regulation of the Commission authorized by treaty ratified by the United States.
  - (2) Willful or repeated failure to operate substantially as set forth in the regulations.
  - (3) Violation of or failure to observe any cease-and-desist order issued by the Commission.
  - (4) False statements knowingly made either in the application for a license or in any statement of fact which may be required pursuant to such application.
  - (5) Conditions coming to the attention of the Commission which would cause it to refuse to grant a license on an original application.

## 2. Suspension of Radio Operator License.

- a) A radio operator license is not required for domestic operation in the VHF-FM band. However, a minimum of a Restricted Radiotelephone Operator Permit is required for voice communications below 30 MHz (SSB) and for international voyages. The operator license may be suspended if the FCC has sufficient proof that the operator has violated any provision, act, treaty, or convention binding the United States or any regulation promulgated by the FCC. This is not limited to but includes the following:
  - (1) False or deceptive signals, including false MAYDAY's.
  - (2) Superfluous or obscene communications.
  - (3) Malicious or willful interference.
  - (4) Willful damage or permitting radio apparatus or installations to be damaged.
  - (5) Obtaining, or attempting to obtain, or assisting another to obtain a license by fraudulent means.

## K. MONETARY FORFEITURES (FINES)

### 1. Offenses against Licensee and Operator.

- a) In addition to any of the penalties already stated, both the licensee and the person operating the station, if they are not the same person, may be fined for the following offenses:
  - (1) Operation of a radio station without proper station identification at the times and in the manner prescribed.
  - (2) Transmission of a false call sign or a false distress call or message.
  - (3) Transmission of unauthorized communications on any frequency designated as a distress or calling frequency.
  - (4) Operation of a radio station that interferes with any distress calls or distress messages.

### 2. Offenses against the Licensee Only.

- a) The licensee only may be fined for the following offenses:
  - (1) Operation of a radio station on a frequency not authorized by the FCC for that station.

This includes operating FM stations with a frequency deviation beyond tolerances.

- (2) Failure to attenuate spurious emissions of a radio station as required.
- (3) Operation of a radio station with power in excess of that authorized.
- (4) Use of a radio station to transmit unauthorized communications.
- (5) Operation of a radio station with a type of emission not authorized.
- (6) Operation of a radio station with transmitting equipment not authorized by the FCC.
- (7) Failure to respond to a written official communication from the FCC.

### 3. Amount of Fines.

- a) Fines are imposed for willful or repeated violations of the types listed above. The second offense for the same violation is sufficient to constitute a repeated violation. A fine can be as much as \$100 for each separate instance of a repeated violation. There are certain maximum amounts for multiple offenses within 90 days prior to the date of notice of apparent liability (i.e., \$500 for the licensee and \$400 for the operator if it is a different person from the licensee). Additionally, it is now a felony offense to knowingly and willfully cause the U.S. Coast Guard to respond to false calls for help. Fines of up to \$250,000 and imprisonment of up to six years can be levied against individuals convicted of this felony.
- b) The FCC completes its legal responsibility for notifying you of these fines when it mails a notice to the last address of record. The burden is on the licensee to keep the FCC informed of their latest address. This is important if they wish to take advantage defense procedures provided subsequent to a notice of apparent liability for forfeiture.

## L. SUMMARY OF RADIO TELEPHONE OPERATING PRACTICE

### 1. Licensee Responsibility for Transmission.

- a) A radio operator should remember that the station being operated must be authorized by the FCC. In order to prevent interference and give others an opportunity to use the airways, unnecessary calls and transmissions should be avoided. Always remember that radio signals normally travel outward in all directions and can be heard by anyone within range of the station.
- b) Before making a call, the operator should listen on the channel to insure that interference will



- c) not be caused to a communication already in progress. An operator should be courteous at all times.
- d) Station identification should be made clearly and distinctly so that unnecessary repetition of call signs is avoided and to enable other stations to clearly identify all calls.
- e) While a radio transmitter is in a public place, it should be attended at all times by a qualified operator or the transmitter should be made inaccessible to unauthorized persons, especially children or any irresponsible persons.
- f) When radio communications at a station are unreliable or disrupted due to static or fading, it is not a good practice for the operator to continuously call other stations in attempting to make contact because his calls may cause interference to other stations that are not experiencing static or fading.

## 2. Operator's Voice Technique.

- a) Radiotelephone operators should make an effort to train their voice for the most effective communication. The voice should be loud enough to be distinctly heard by the receiving operator and not too loud to be distorted and difficult to understand. Operators should articulate their words and avoid speaking in a monotone as much as possible. The working distance range of the transmitter is affected to some extent by the loudness of the speaker's voice. Speaking too low will decrease the effective range, however, speaking too loud can result in distortion and reduce the effective range to zero. In noisy locations the operator may cup his hands over the microphone to exclude background noise. Normally, the microphone is held from 2 to 3 inches from the operator's lips.

## 3. Proper use of Pro-words and Abbreviations.

- a) It is important in radiotelephone communications that operators use familiar and well known words and phrases in order to insure accuracy and clarity. Many communications services use the same operating pro-words as the military. For example, ROGER means "I have received all of your last transmission". WILCO means "your last message received, understood, and will be complied with". OUT means "my transmission has ended and I do not expect an answer". OVER means "my last transmission has ended and I do expect an answer". These are some of the pro-words used in marine communications. See Table 6-2 for pro-words and their meanings.

## 4. Use of the Phonetic Alphabet.

- a) Often in radiotelephone communications a "phonetic alphabet" or word list is useful identifying letters or words that may sound like other letters or words of different meaning. For example, "group" may sound like "scoop", or "bridge" may sound like "ridge". A phonetic alphabet or word list consists of a list of 26 words each beginning with a different letter for identifying that particular letter.

Spelling the word “group” phonetically could be “Golf, Romeo, Oscar, Uniform, Papa” and would be transmitted as “Group, I spell Golf, Romeo, Oscar, Uniform, Papa”.

#### 5. Proper Radiotelephone Procedures.

- a) When testing a radio telephone transmitter the operator should clearly indicate it is a test. The station call sign or name of the vessel, as required by the rules, should be clearly spoken. Test should be as brief as possible.
- b) If a radio station is used for occasional calls, it is a good practice to test the station regularly. Regular tests may reveal defects or faults which, if corrected immediately may prevent delays when communications are necessary. Caution should be observed by persons testing a station to make certain their test message will not interfere with other communications in progress on the same channel.
- c) Radio checks with the Coast Guard on VHF-FM Channel 16 are strictly forbidden unless specifically authorized. Licensed FCC technicians and/or FCC inspectors are authorized to conduct radio checks with the Coast Guard when conducting station repairs or inspections.
- d) Technical repairs or adjustments to radiotelephone communication stations are made only by or under the immediate supervision and responsibility of operators holding the appropriate FCC technician license.
- e) When an operator of a radiotelephone station permits another person talk on the air, they must remember that they are still responsible for the proper operation of the station.

#### M. GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM

1. Global Maritime Distress and Safety System (GMDSS) is a worldwide maritime system that was first defined in the 1974 International Maritime Organization (IMO) Convention for the Safety of Life At Sea (SOLAS). The GMDSS is designed to provide efficient and effective emergency and safety communications and to disseminate maritime safety information to all ships regardless of location and atmospheric conditions.
2. Implementation of the GMDSS started in 1988 and became operational on 1 February 1999. It incorporates the resources of numerous MF, HF, VHF, and satellite communications systems operating in a Digital Selective Call (DSC) mode. When operated in conjunction with a Global Positioning System (GPS), GMDSS allows for automatic transmission and reception of distress calls that will identify the vessel and give its location. The system will also provide exchanges of navigational and

meteorological warnings and forecasts and any other urgent safety messages related to ships.

3. If the Maritime Mobile Service Identity MMSI number of another vessel is known, then it is possible to place a DSC call to the vessel without making an open call on any other channel, just as you normally use a telephone. The DSC call would tell the called party on which channel to respond. Voice communication on Channel 70 is forbidden.
  - a) DSC has been supplemented with the Universal Ship-borne Automatic Identification System (AIS). AIS and DSC both use the same MMSI. Picture a shipboard display system (e.g. radar, ECDIS, chart plotter, etc.) with an overlaid electronic chart data that includes a mark for every significant ship within radio range; each as desired with a velocity vector (indicating speed and heading). Each ship “mark” could reflect the actual size of the vessel, with GPS position. By clicking on a vessel “mark”, you could learn the vessel’s name, course and speed, classification, call sign, registration number, MMSI, and other information. Maneuvering information, closest point of approach (CPA), Time to Closest Point of Approach (TCPA), and other navigational information, more accurate and timely than information from an automatic radar plotting aid, could also be available. Display information previously available only to modern Vessel Traffic Safety (VTS) operations centers is now available to every AIS-equipped vessel.
  - b) With this information, you can call any vessel over VHF-FM radiotelephone by name, rather than by “ship off my port bow” or some other imprecise means. Or you could dial it up directly using the GMDSS equipment. Or you could send to the vessel, or receive from it, short safety-related email messages.
  - c) The AIS (47 CFR 80.5, AIS Definition) is a shipboard broadcast system that acts like a transponder, operating in the VHF-FM marine band, that is capable of handling well over 4,500 reports per minute and updates as often as every two seconds. Shipboard AIS devices use either Self-Organizing Time Division Multiple Access (SOTDMA) or Carrier-Sense Time Division Multiple Access (CSTDMA) technology.
4. AIS transponders are on the market in a price range within the reach of recreational boaters.
5. The present VHF-FM system is expected to stay in place and co-exist with the digital system. Radios are capable of operating in both modes. There are various Coast Guard sponsored working groups evaluating methods of system interoperability, the establishment of additional marine radio channels, and the impact of recent FCC regulatory changes, as well as keeping the boating public informed.

6. While the GMDSS will probably not have much impact on inland recreational boating, any waters where international shipping is present will be effected. Auxiliary communicators should be aware of GMDSS and what it means to boating interests in their area. Possibly, some Auxiliarist radio facilities may be required to operate dual, FM and DSC, facilities in order to properly support the Coast Guard mission.
7. The Coast Guard National Distress System and Rescue 21. The Coast Guard began modernizing CGNDS in 2003. Prior to 2003, CGNDS was not compatible with GMDSS. There were holes in the coverage, no direction-finding capability, using high-sites for transmission prevented reception of distress calls at the high-site and the entire system reaching the end of its life cycle. Rescue 21 was designed to completely modernize the system, ensuring complete compatibility with GMDSS, provide direction finding capability, and provide improved coverage in coastal regions and the Western Rivers. While the implementation of Rescue 21 is incomplete, there is a listing of MMSI numbers for currently installed CG Stations at:  
<http://www.uscg.mil/acquisition/rescue21/benefits.asp>.

## N. CHAPTER TWO STUDY QUESTIONS

1. A non-government radio station may only be operated in accordance with the rules and regulations established by? (*page 1*)
  - a) FCC
  - b) IRAC
  - c) ITU
  - d) NTIA
2. All ship radiotelephone stations using the 2-30 MHz marine band must maintain an efficient listening watch on which frequency? (*page 2*)
  - a) 2182 MHz
  - b) 2182 kHz
  - c) 2182 HZ
  - d) 2182 GHz
3. An efficient listening watch is required on which VHF-FM channel and under what conditions? (*page 3*)
  - a) Channel 16 (156.8 MHz) if radio is on and not in use.
  - b) Channel 70 (156.525 MHz) for non-DSC equipped vessels.
  - c) Channel 68 (156.425 MHz) unless another channel is being used.
  - d) Channel 17 (156.850 MHz) unless another channel is being used.
4. When a station does not respond to a call sent three times at intervals of two minutes, you are permitted to call again after how many minutes have elapsed? (*page 3*)

- a) Five
  - b) Ten
  - c) Fifteen
  - d) Twenty
5. What is the procedure to initiate a call on a ship's radiotelephone? *(page 10)*
- a) Listen to see if the channel is free.
  - b) make contact on the calling frequency.
  - c) switch to a working channel.
  - d) All of the above.
6. Is it always necessary to establish contact on a calling channel? *(page 3)*
- a) Yes, it is required.
  - b) No, if you know the other station is monitoring a working channel, it is okay to call them on it.
  - c) No, it is not required.
  - d) None of the above.
7. What is the PRIMARY use of the inter-ship frequencies? *(page 5)*
- a) Talk about fishing conditions.
  - b) Safety of navigation.
  - c) Business requirements.
  - d) Docking procedures.
8. After two ship stations have established contact on an inter-ship working frequency, FCC regulations limit maximum duration of the communication to what time period? *(page 6)*
- a) No limit, talk as long as you want.
  - b) Three minutes.
  - c) Five minutes.
  - d) Fifteen minutes.
9. All transmitter adjustments to marine radiotelephone transmitters must be performed by or under the immediate supervision of a person holding which class of license? *(page 2)*
- a) General Radiotelephone.
  - b) First Class Radiotelegraph.
  - c) Second Class Radiotelegraph.
  - d) Any of the above.

10. The secrecy provision of the communications regulations does not apply to what type of communications? (*page 8*)
- a) Location of good fishing spots.
  - b) Distress.
  - c) Current location, speed, and heading of the vessel.
  - d) Plans to dump stock because of market values.
11. What are some of the violations which can cause license revocation or fines against the licensee or operator? (*page 8*) (*page 9*)
- a) Transmission of false distress signals.
  - b) Use of obscene, indecent, or profane language.
  - c) Repeated violation of FCC regulations.
  - d) All of the above.
12. What are desirable voice characteristics when speaking on the radio? (*page 11*)
- a) A high pitched monotone.
  - b) A low pitched monotone.
  - c) Normal speaking tone, yet distinct.
  - d) Use of extreme dialect and accent.
13. Under what conditions are radio checks with the Coast Guard allowed on Channel 16? (*page 12*)
- a) Never.
  - b) When made by licensed FCC technicians and inspectors when making station repairs or adjustments.
  - c) At the beginning of your voyage.
  - d) Only between 0001 and 0030 hours.
14. Use of VHF-FM Channel 16 is restricted to what type of communications? (*page 3*)
- a) All types of communications are permitted.
  - b) Distress, Safety, and Calling.
  - c) Fishing reports.
  - d) Distress, calling, and fishing reports.
15. Which SSB working frequency can be used in all areas? (*page 4*)
- a) 2638 kHz
  - b) 2082.5 kHz
  - c) 2009 kHz

- d) 2203 kHz
16. What is the VHF distress and calling frequency for the GMDSS? *(page 13)*
- a) Channel 16 (156.8 MHz)
  - b) Channel 09 (156.45 MHz)
  - c) Channel 70 (156.525 MHz)
  - d) Channel 06 (156.3 MHz)
17. What is AIS? *(page 13)*
- a) Global Maritime Distress and Safety System.
  - b) Automatic ID System.
  - c) Automatic Position Indicating System.
  - d) Automatic Distress Reporting System.
18. What channel is used for DSC in VHF-FM? *(page 13)*
- a) Channel 16
  - b) Channel 09
  - c) Channel 70
  - d) Channel 68
19. On which VHF-FM channel is voice communication forbidden? *(page 13)*
- a) Channel 06
  - b) Channel 09
  - c) Channel 13
  - d) Channel 70
20. What is the maximum penalty for willingly making a false MAYDAY call? *(page 10)*
- a) 5 years imprisonment and a \$20,000 fine.
  - b) 6 years imprisonment and a \$250,000 fine.
  - c) 5 years probation.
  - d) 5 years imprisonment.
21. Two ships have communicated for three minutes and need to continue communicating. How long do they have to wait before they can communicate again? *(page 6)*
- a) Five minutes.
  - b) Ten minutes.
  - c) Fifteen minutes.
  - d) Twenty minutes.

## O. FOOTNOTES AND REFERENCES FOR CHAPTER TWO

1. Full text of 47 CFR Part 80 can be found at:  
[http://www.access.gpo.gov/nara/cfr/waisidx\\_08/47cfr80\\_08.html](http://www.access.gpo.gov/nara/cfr/waisidx_08/47cfr80_08.html)
2. <http://www.fcc.gov/licensing.html>
3. The FCC permits the use of the vessel's name where this is more practicable.  
47 CFR 2.401
4. [http://www.imo.org/About/mainframe.asp?topic\\_id=389](http://www.imo.org/About/mainframe.asp?topic_id=389)
5. <http://www.navcen.uscg.gov/marcomms/gmdss/dsc.htm>
6. <http://www.boatus.com/MMSI/default.asp>  
[http://www.seatow.com/boating\\_safety/mmsi.asp](http://www.seatow.com/boating_safety/mmsi.asp)
7. <http://www.fcc.gov/Forms/Form605/605.html>
8. <http://www.itu.int/publications/sector.aspx?lang=en&sector=1>
9. <http://www.navcen.uscg.gov/enav/ais/default.htm>
10. <http://www.navcen.uscg.gov/marcomms/cgcomms/nds.htm>
11. <http://www.uscg.mil/acquisition/rescue21/>
12. <http://www.boatus.com/mmsi/>



## CHAPTER THREE - CALLING AND ANSWERING PROCEDURES

### A. CALLING PROCEDURE

#### 1. General.

- a) Operators must listen carefully to make certain the frequency is not busy. They will usually hear voices on the busy frequencies and an intermittent busy tone from most of the public correspondence stations.
- b) Operators usually establish contact on the Distress and Calling frequencies (Channel 16 or 2182 kHz) or where available, the Alternate Calling Channel (Channel 9) and then immediately shift to an agreed upon working channel. Calls may also be initiated on a working channel if it is known that the other station maintains a listening watch on that frequency in addition to the distress frequency (Channel 16 or 2182 kHz). The calling procedures on Channel 16 and on 2182 kHz are the same.
- c) When the conversation is to take place through a commercial shore station, initial contact should be made on the working channel for that station. This procedure will reduce congestion on the calling and distress frequencies.
- d) The Coast Guard Navigation Center has a wealth of information on the radio procedures, the calls (including examples), and the rules.

#### 2. Ship-to-Ship Calls.

- a) The operator must first listen to make sure the frequency is not busy. When not busy, the transmitter is turned on (usually by depressing the microphone push-to-talk button) and the operator should say:

**"(Station called) THIS IS (Name and FCC call sign of calling vessel) OVER".**

***Note:** Since the deregulation of the vessel rules by the FCC, most recreational vessels do not have assigned FCC call signs. Therefore, that part of the call would be omitted and only the name of the vessel used.*

- b) When necessary, the identification of the station called, the call sign, and the name of the calling vessel may each not be repeated more than three times. The entire calling transmission must not last longer than 30 seconds. If contact is not established, the call may be repeated two times after an interval of at least 2 minutes between each call. The reply to the initial call should be:

**"(Name of the calling vessel) THIS IS (Name and call sign of vessel) OVER".**

- c) Upon receiving the reply to the original call, the calling vessel should use an "Abbreviated Form" (omitting the call sign) since communication has been established, and the calling vessel should also designate the local working frequency desired, by saying:

**"(The name of the vessel called) THIS IS (Name of the calling vessel) SHIFT TO (The local working frequency desired) THIS IS (The name and the call sign of the vessel calling) OVER."**

- d) When the working frequency designated is satisfactory, the reply should be:

**"THIS IS (The name and the call sign of the vessel called) WILCO OUT".**

- e) Upon receiving the above reply the calling vessel will shift to the working frequency and listen to make certain the frequency is clear. The vessel called also shifts to the agreed frequency and stands by for the originator of the call to say:

**"(Name of the vessel called) THIS IS (The name and the call sign of the vessel calling) OVER".**

- f) The reply should be as follows:

**"(The name of the calling vessel) THIS IS (The name of the vessel called) OVER".**

- g) The following reply, which omits the name of the vessel called, should be:

**"THIS IS (The name of the calling vessel), (The message), OVER".**

- h) After receiving the transmission, the called vessel replies:

**"THIS IS (The name of the vessel called), (The response to the message) OVER".**

- i) A response is made if necessary, otherwise the transmission is concluded as follows:

**"THIS IS (The name and the call sign of the calling vessel) OUT".**

- j) The operator should not say "Returning to Channel 09 or 16 or 2182 kHz" at the conclusion of the communication. This action is legally required and thus understood without saying.

- k) By following the above procedure, calling should be completed within the 30 second legal time allotment.

- l) Contact with the same vessel shall not be established again until at least 10 minutes has elapsed.
3. Ship-to-Shore Public Correspondence (telephone Calls).
  - a) The prevalence of cell phones has caused a significant decrease in the use of ship-to-shore public correspondence for inland and near coastal areas. It is still used on HF frequencies.
  - b) The operator should listen to make certain the telephone channel is not busy. If clear, the transmitter may be turned on and the operator should say:  
  
**"(The coast station desired) MARINE OPERATOR, THIS IS (The name and the call sign of the vessel calling) OVER".**
  - c) When the Marine Operator responds, the vessel operator should say:  
  
**"THIS IS (The name and the call sign of the vessel calling) I WISH TO PLACE A CALL TO (The name of the city, the state, the area code, and the telephone number desired) OVER".**
  - d) The Marine Operator will usually confirm the name and the number and determine the billing procedures and then initiate the phone call.
  - e) Upon conclusion of the telephone call the vessel operator should say:  
  
**"THIS IS (The name and the call sign of the calling vessel) OUT".**
  - f) The billing is usually accomplished with a credit card, collect call, or marine telephone charge account.

## B. ANSWERING PROCEDURES

1. General.
  - a) Vessels can only be reached when the receiver is turned on and tuned to the frequency on which calls are expected.
  - b) The receiver used to maintain watch on Channel 09 or 16 or 2182 kHz will provide for the receipt of calls from other stations.
  - c) To receive calls on other frequencies, an additional receiver will be required in order to maintain a listening watch on the distress and calling frequencies.

- d) Many modern radio units have a dual watch or scanning capability which allows more than one frequency to be monitored and negates the requirement for a second receiver.

## C. TEST TRANSMISSIONS

### 1. Procedures.

- a) When making a test transmission, every precaution must be taken so as not to cause interference. Reduce the power output as much as possible.
- b) Before making the test, the operator should listen to be certain the frequency on which the test is to be made is not busy. Permission must also be obtained prior to making the test by saying:

**"THIS IS (The name and the call sign of the vessel testing) TEST".**

- (1) If the reply "WAIT" is not received, the operator may proceed with the test by saying:

**"THIS IS (The name and the call sign of the vessel calling) TESTING (A number count or other phraseology which will not confuse listeners, of not more than 10 seconds duration, followed by the name and the call sign of the vessel calling and it's general location), OUT".**

- c) An operator does not use figures in response to a request for a radio check, such as "I HEAR YOU FIVE BY FIVE".
- d) An operator should always use the word "**HEAR**" rather than "READ". The word "READ" implies a check by a meter.
- e) The increasing volume of radio checks directed to Coast Guard stations has placed a potentially dangerous burden on the safety and distress frequencies. FCC rules and regulations have made illegal to call a Coast Guard station Channel 16 (156.8 MHz or 2182 kHz) for a radio check unless tests are being conducted by an FCC representative or when qualified radio technicians are installing equipment or correcting deficiencies in the station radio equipment. In these cases the test shall be identified as "FCC" or "TECHNICAL" and logged accordingly.

## D. REQUESTS FOR RADIO CHECKS

### 1. Procedures.

- a) The request for a radio check must be made directly to a specific station, using the

procedures prescribed in paragraph A.2.a. through i. of this Chapter, for establishing contact.

- b) After properly establishing contact and moving to a working channel, the operator should say:

**"HOW DO YOU HEAR ME"?**

- c) The proper response to such a request is as follows:

**"I HEAR YOU LOUD AND CLEAR", or "I HEAR YOU WEAK BUT CLEAR", or "YOU ARE LOUD BUT DISTORTED", etc.**

- d) An operator does not respond to a call which is not directed to the operator's station.

#### E. CHAPTER THREE STUDY QUESTIONS

1. What should you do before calling a station? (*page 1*)
  - a) Press the PTT button; then decide who to call.
  - b) Listen to see if the frequency is in use.
  - c) Decide if the call is necessary.
  - d) Press the PTT button and announce your intent to use the frequency.
2. Are the calling procedures on the 2-30 MHz the same as on the VHF-FM marine band? (*page 1*)
  - a) Yes
  - b) No, CB methods are used in the MF/HF band.
  - c) No
  - d) None of the above.
3. At the end of your call to establish radio contact with another vessel what pro-word should be used? (*page 2*)
  - a) Out
  - b) Roger
  - c) Wilco
  - d) Over
4. When calling another station, what are the time limitations on the initial call and any additional calls? (*page 1*)
  - a) Transmission limit of thirty seconds, may be sent three times at 2 minute intervals.

- b) Call for no more than 30 seconds every two minutes until the call is answered.
  - c) Make three calls of no more than one minute at three minute intervals and then announce, "No response from the station called".
  - d) There are no time limits for calls.
5. Who may conduct radio checks with the Coast Guard when installing equipment?  
(page 4)
- a) Anyone
  - b) Only a person holding a General Radiotelephone license.
  - c) Only FCC technicians and inspectors.
  - d) b or c.
6. Who may answer requests for a radio check? (page 4) (page 5)
- a) Any station hearing the request.
  - b) Only the station to which the request is made.
  - c) All stations hearing the request.
  - d) Only the Coast Guard.

#### F. REFERENCES AND FOOTNOTES FOR CHAPTER THREE

1. <http://www.navcen.uscg.gov/marcomms/boater.htm>
2. <http://www.naval.com/hf-freq.htm>

## CHAPTER FOUR - DISTRESS, URGENCY, AND SAFETY MESSAGES

### A. GENERAL

1. Most communications, as specified by FCC rules and regulations as well as Coast Guard policies and procedures are usually directed to a specific station. Distress, urgency, and safety messages, because of their special nature, are exceptions and are broadcast to any and all stations.

### B. DISTRESS

1. Procedures.
  - a) The distress call should be transmitted on VHF-FM Channel 16 (156.8 MHz) or 2182 kHz only when grave or imminent danger exists and immediate assistance is required.
  - b) The distress call is preceded by the radiotelephone alarm signal (if available).
  - c) The distress call is made by transmitting the word "**MAYDAY**" spoken three times.
  - d) "**MAYDAY**" is from the French expression "m'aider" meaning "(you) COME HELP ME".
2. Responsibility.
  - a) The distress call shall be sent only on the authority of the Master of the vessel or in the case of an aircraft, the Aircraft Commander. Common sense shall prevail as to who shall assume the responsibility in the absence or the incapacitation of the person initially responsible.
3. Priority.
  - a) The distress message (MAYDAY) has absolute priority over all other transmissions (PAN PAN (urgency), and SECURITE (safety)). Stations hearing a distress call will immediately cease transmission and continue to listen and record the distress message.
4. Radiotelephone Alarm Signal.
  - a) The international radiotelephone alarm consists of two audible tones of different frequencies transmitted alternately. This signal is transmitted continuously for at least 30 seconds but shall not exceed 1 minute. The purpose of this signal is to attract the attention of persons on radio watch and to activate automatic devices

which will sound an alarm. It is used only to announce that a distress call or message is about to follow or announce the loss of a person overboard.

5. Distress Call.

- a) A distress call shall be transmitted as follows:

**"MAYDAY, MAYDAY, MAYDAY, THIS IS"** (The name of the distressed vessel transmitted three times).

- b) The radiotelephone distress call and message transmission shall be made slowly and distinctly, each word being clearly pronounced to facilitate transcription.

6. Distress Message.

- a) If aboard a vessel in trouble give:

- (1) Who you are (your vessel's name and call).
- (2) Where you are (your vessel's position in latitude/longitude or true bearing and distance in nautical miles from a widely known geographical point - local names known only in the immediate vicinity are confusing).
- (3) What is wrong (the nature of distress or the difficulty).
- (4) Number of persons aboard and condition of any injured.
- (5) The present seaworthiness of your vessel.
- (6) Description of your vessel - length, type, cabin, masts, power, color of hull, superstructure, and trim.
- (7) Your listening frequency and schedule.

- b) If observing another vessel in difficulty give:

- (1) Your position and the bearing and the distance of the vessel in difficulty.
- (2) The nature of the distress or the difficulty, if not in distress.
- (3) The description of the vessel in the distress or the difficulty.
- (4) Your intentions, course, speed, etc.



- (5) The name of your vessel, your radio call sign, listening frequency, and schedule.

7. The Distress Call and the Message Example.

- a) Channel 16 (156.8 MHz) or 2182 kHz.

**"MAYDAY, MAYDAY, MAYDAY, THIS IS BLUE DUCK, WHISKEY ZULU 6789, BLUE DUCK, WHISKEY ZULU 6789, BLUE DUCK WHISKEY ZULU 6789. MAYDAY BLUE DUCK WHISKEY ZULU 6789, 133 DEGREES TRUE 12 MILES OFF MONTAUK POINT, STRUCK SUBMERGED OBJECT, TAKING WATER FAST, ENGINE DISABLED, ESTIMATE CANNOT STAY AFLOAT MORE THAN ONE HOUR. FOUR PERSONS ON BOARD, BLUE DUCK IS A 26 FOOT CABIN CRUISER, WHITE HULL. MAINTAINING A CONTINUOUS WATCH ON 2182. THIS IS BLUE DUCK WHISKEY ZULU 6789, OVER "**

8. How and When to Acknowledge the Receipt of a Distress Message.

- a) Vessels shall defer acknowledgment of distress messages for a short interval in areas where reliable communications with the Coast Guard exist, to permit the Coast Guard to acknowledge first. However, the message acknowledgment shall be made by a vessel in the immediate vicinity of the distressed vessel when prompt acknowledgement is not made by the Coast Guard, or by other vessels nearer the distressed vessel. An acknowledgment of the receipt of a distress call shall be as follows:

**"MAYDAY"** (One time)

"(The name and the call sign of the distressed vessel, transmitted three times)"

**"THIS IS"**

"(The name and the call sign of the acknowledging vessel, transmitted three times)"

**"RECEIVED MAYDAY"**

- b) The acknowledgement vessel shall transmit the following information after a momentary pause to insure that it is not interfering with another vessel better situated to render assistance:

**"MAYDAY"**

"(The name and the call sign of the distressed vessel)"

**"THIS IS"**

"(The name and the call sign of the acknowledging vessel)"

"(The position of the acknowledging vessel by latitude and longitude or true bearing and distance from known charted geographical point)"

"(The speed of the acknowledging vessel and the estimated time it will require to reach the distressed vessel)"

9. The Distress Acknowledgment Message Example.

**"MAYDAY BLUE DUCK, WHISKEY ZULU 6789, BLUE DUCK, WHISKEY ZULU 6789, BLUE DUCK, WHISKEY ZULU 6789, THIS IS WHITE WHALE, WHISKEY XRAY 9876, WHITE WHALE, WHISKEY XRAY 9876, WHITE WHALE WHISKEY XRAY 9876, RECEIVED MAYDAY."**

Following a momentary delay to permit stations which might be closer to the distressed vessel to acknowledge, the following is transmitted:

**"MAYDAY BLUE DUCK, WHISKEY ZULU 6789, THIS IS WHITE WHALE, WHISKEY XRAY 9876, WE ARE 9 MILES FROM MONTAUK LIGHT ON A BEARING OF 82 DEGREES, 10 MILES FROM YOUR POSITION ON A COURSE TO YOU OF 175 DEGREES. OUR SPEED IS 12 KNOTS, WILL REACH YOU IN 50 MINUTES, THIS IS WHITE WHALE, WHISKEY XRAY 9876 OVER".**

10. Frequency Shifts.

- a) Frequencies should only be shifted in cases of non-distress, and then care should be used to ensure communications are not lost with the person calling the Coast Guard.

11. Distress Communications.

- a) Distress communications consist of all messages from a vessel requiring immediate assistance.
- b) Each distress communication shall be preceded by the distress signal **"MAYDAY"**.
- c) The vessel in distress or the station in control of the distress communication may impose silence on any station which interferes, by transmitting the following:

**"SEELONCE MAYDAY"** (Pronounced "*C-LONCE MAYDAY*")

- d) Silence may also be imposed by any other station which believes it is essential, by transmitting the following:

**"SEELONCE DISTRESS"** (Pronounced "*C-LONCE DISTRESS*")  
(The name and the call sign of the station imposing silence)

12. Transmission of a Distress Message by a Vessel or a Coast Station not itself in Distress.

- a) A vessel or shore station which learns that a vessel is in distress shall transmit a distress message in any of the following cases:

- (1) When the vessel in distress is not capable of sending a message.
- (2) When a vessel or a shore station considers that further help is needed.
- (3) When, it has heard a distress message, which has not been acknowledged.
- (4) In such cases, the transmission shall consist of:

**"MAYDAY RELAY, MAYDAY RELAY, MAYDAY RELAY, THIS IS"**  
"(The name and the call sign of the vessel or the shore station spoken three times)"

- (5) When a vessel transmits a distress under these conditions, it shall take all steps necessary to contact the Coast Guard.

### 13. Termination of Distress.

- a) When the distress traffic has ceased, or when silence is no longer necessary, the station in control shall transmit the following message:

**"MAYDAY, HELLO ALL STATIONS, HELLO ALL STATIONS, HELLO ALL STATIONS. THIS IS"**

"(The name and the call sign of the station terminating the distress)"

"(The time)"

"(The name and the call sign of the vessel in distress)"

**"SEELONCE FEENEE"** (Pronounced "*C-LONCE FEE-NEE*")

(The French word *Seelonce Feenée* means "Silence Finished" and is spoken phonetically for correct pronunciation)

### 14. Urgency Message.

- a) Procedures.

- (1) The urgency signal consists of the word **"PAN PAN"** (Pronounce "*PAHN-PAHN*") spoken three times, and indicates that the calling station has a very urgent message concerning the safety of a vessel, aircraft, or other vehicle, or the safety of a person(s). This call is made on Channel 16 (156.8 MHz) or 2182 kHz.

- b) Responsibility.

- (1) Responsibility for transmission of the urgency message shall be the same as that indicated for the distress message.

c) Priority.

- (1) The urgency message shall have priority over all other communications except distress and shall be recorded by all stations hearing the message.

d) Urgency Message Example.

- (1) On Channel 16 (156.8 MHz) or 2182 kHz:

**"PAN PAN, PAN PAN, PAN PAN, THIS IS DOLPHIN WHISKEY ZULU 2345, 3 MILES EAST OF BARNEGAT LIGHT, HAVE LOST MY RUDDER, AM DRIFTING TOWARD SHORE AND REQUIRE A TOW, SEVEN PERSONS ONBOARD, DOLPHIN IS A 32 FOOT CABIN CRUISER, GREEN HULL, WHITE DECK HOUSE. THIS IS DOLPHIN WHISKEY ZULU 2345 OVER ".**

15. Safety Message.

a) Procedures.

- (1) The safety signal "SECURITE" (Pronounced "SEE-CURE-IT-TAY") is spoken three times and indicates that the station is about to transmit a message concerning the safety of navigation or give important meteorological warnings. The SECURITE call is broadcast on a distress and listening frequency such as Channel 16 (156.8 MHz) or 2182 kHz and then the frequency changed to a working channel for the body of the message. Auxiliarists on patrol in areas where Coast Guard radio is not available should prepare and broadcast SECURITE messages as required, with the Auxiliary call sign being used. In areas where Coast Guard radio coverage is available, the information for the broadcast should be forwarded to the Coast Guard station for its information and decision as to whether or not to broadcast the message.

b) Responsibility.

- (1) Responsibility for the transmission of a safety message shall be the same as that indicated for the distress and urgency messages.

c) Priority

- (1) The safety message shall have priority over all transmissions except distress and urgency.
- (2) All stations hearing the safety signal should listen to the safety message until they are satisfied that the message does not concern them.

d) Safety Message Example.

(1) On Channel 16 (156.8 MHz) or 2182 kHz:

**"SECURITE, SECURITE, SECURITE, THIS IS BARBARA ANN WHISKEY ZULU 3456 SHIFT TO (a local working channel) FOR SAFETY MESSAGE. THIS IS BARBARA ANN WHISKEY ZULU 3456 OUT".**

(2) On a local working channel:

**"SECURITE, SECURITE, SECURITE, THIS IS BARBARA ANN WHISKEY ZULU 3456, A LOG APPROXIMATELY 20 FEET LONG AND 2 FEET IN DIAMETER IS ADRIFT OFF HAINES POINT IN THE POTOMAC RIVER. THIS IS BARBARA ANN WHISKEY ZULU 3456 OUT".**

16. The Distress Radio Beacons.

a) The Distress radio beacons, also known as the emergency beacons, are tracking transmitters which aid in the detection and location of boats, aircraft, and people in distress. The basic purpose of the distress radio beacons is to get people rescued as soon as possible. The majority of survivors can usually be saved within the first 24 hours following a traumatic event.

b) The Types of Distress Radio Beacons.

(1) Emergency Position-Indicating Radio Beacons (EPIRB).

(a) EPIRB used to signal maritime distress.

(b) An EPIRB is a device which is designed to save your life if you get into trouble by alerting rescue authorities and indicating your location.

(c) EPIRBs are a component of the Global Maritime Distress Safety System (GMDSS).

(d) Most commercial off-shore working vessels with passengers are required to carry a self-deploying EPIRB, while most in-shore and fresh-water craft are not.

(e) Current types of EPIRBs.

(i) Class A 121.5/243 MHz. Have been phased out by the FCC, are no

longer recognized, and may not be marketed, sold, or used in the U.S.

- (ii) Class B 121.5/243 MHz. Manual version of Class A. Have been phased out by the FCC, except for certain devices used as personal locator beacons. May not be marketed, sold, or used in the U.S.
  - (iii) Class C VHF Channel 15/16. Have been phased out by the FCC and may not be marketed, sold, or used in the U.S.
  - (iv) Class S 121.5/243 MHz. Have been phased out by the FCC and may not be marketed, sold, or used in the U.S.
  - (v) Category I 406/121.5 MHz. Automatically activated, float free. Is detectable by satellite anywhere in the world and recognized by GMDSS.
  - (vi) Category II 406/121.5 MHz. Similar to category I, except is manually activated. Some models are also water activated.
  - (f) These devices are coded with vessel information and when activated this coded information will be transmitted via the satellite system to the appropriate Rescue Coordination Centers.
  - (g) These devices provide accurate location information worldwide.
  - (h) SOLAS and other classes of vessels (e.g. fishing vessels) will be required to carry Category I 406 MHz Satellite EPIRBs. These EPIRBs transmit for at least 48 hours.
- (2) 121.5/243 MHz EPIRBs.
- (a) The SARSAT System ceased satellite processing of the 121.5/243 MHz beacons on 1 February 2009.
  - (b) Although Emergency Locator Transmitters used by aircraft may still be in use, alerts from these devices or from 121.5/243 MHz EPIRBs will no longer be acted upon unless detected by an overflying aircraft.
- (3) 406 MHz EPIRBs.
- (a) They are designed to operate with satellites.
  - (b) The 406 MHz beacons transmit bursts of digital distress information to orbiting satellites, and may also contain a small integrated analog (121.5 MHz) homing beacon.

- (c) The advanced 406 MHz beacons are capable of transmitting a highly-accurate GPS location within their distress message, thus, the process of distress relief is reduced from "search and rescue" to "get to and rescue".

(4) Category I and II EPIRBs.

- (a) These are the only EPIRBs which can transmit identification.
- (b) They are detectable by satellite anywhere in the world.
- (c) The identification used to access the registration database is maintained by the National Oceanic and Atmospheric Administration (NOAA).
- (d) The information from this database, permits location accuracy that allows the Coast Guard to immediately respond to the alert.
- (e) It is important that all 406 MHz EPIRBs are registered with NOAA and that this information is kept up to date at all times.
- (f) There is no cost to register an EPIRB with NOAA.

(5) False alerts.

- (a) False alerts from EPIRBs that are activated inadvertently or deliberate false alarms are a significant problem for the Coast Guard.
- (b) Each alert must be acted on until it is determined that it is not a genuine distress case.
- (c) Through a cooperative agreement with the Federal Communications Commission (FCC), the Coast Guard routinely refers cases involving the non-distress activation of an EPIRB (e.g., as a hoax, through gross negligence, carelessness, or improper storage and handling) to them for prosecution.
- (d) However, the Coast Guard has suspended forwarding non-distress activations by properly registered 406 MHz EPIRBs to the FCC, unless activation was due to a hoax or gross negligence.
- (e) These cases are not routinely reported because they are costly to prosecute due to the database information and, also, as an incentive to ensure that their EPIRB is registered.

17. Emergency Locator Transmitter (ELT).

- a) An ELT is not an EPIRB or a PLB.
- b) The ELTs are used to signal aircraft distress.
- c) The aircraft ELTs are the only 121.5 MHz beacons still legal in the U.S.
- d) An ELT must meet FAA specifications for automatic operation.
- e) An ELT may operate on 121.5 MHz or 406 MHz.
- f) The digital 406 MHz allows the search and rescue personnel to have vital information specific to the aircraft and the owner.
- g) As of February 1, 2009, the international COSPAS-SARSAT satellite system discontinued the satellite-based monitoring of the 121.5/243 MHz frequencies.
- h) The 121.5 MHz distress signals will only be detected by the ground-based receivers such as the local airports and the air traffic control facilities or by the overflying aircraft.
- i) The existing 121.5 MHz ELTs, although still legal from the FAA's perspective, will provide extremely limited assistance if an aircraft crashes, especially in a remote location.
- j) Aircraft ELTs are not EPIRBs, although they are intended to accomplish pretty much the same thing.

#### 18. Personal Locator Beacons (PLB).

- a) A PLB is used to indicate a person in distress.
- b) PLBs are used for crew saving applications.
- c) All PLBs transmit in the 406 MHz digital mode.
- d) A PLB is an emergency beacon you can carry in your pocket.
- e) A PLB is required to transmit for 24 hours at cold temperatures (-40 C.).
- f) There are two PLB classes; Class I is rated for -40 C.; Class II for -20 C.
- g) The transmit time is considerably extended at warmer temperatures.
- h) The PLB transmits on two frequencies, 406 MHz and 121.5 MHz.



- i) On 406 MHz, a digital alert is received by Low Earth Orbiting (LEO) satellites.
- j) On 121.5 MHz, a homing signal guides the rescuers to the location of the party in distress using existing homing devices used by most SAR services.
- k) Some PLB models incorporate a GPS chip which can provide location to within a few hundred feet.

## C. CHAPTER FOUR STUDY QUESTIONS

1. Who is authorized to issue a distress call? (*page 1*)
  - a) The first person who sees the problem.
  - b) The person responsible for the unit in distress.
  - c) The person who knows how to call for help.
  - d) Any of the above.
2. Distress radio beacons aid in the detection and location of? (*page 7*)
  - a) Aircraft in distress.
  - b) Boats in distress.
  - c) People in distress.
  - d) All of the above.
3. You hear a distress broadcast and the nearby Coast Guard station does not answer. What action should you take? (*page 3*)
  - a) Ignore the call.
  - b) You should acknowledge the call.
  - c) Tell them to call the Coast Guard on a landline.
  - d) None of the above.
4. The vessel in distress or the station in control of distress communications may impose silence on any station that interferes by saying what? (*page 4*)
  - a) SEELONCE DISTRESS
  - b) SEELONCE MAYDAY
  - c) SEELONCE FEENEE
  - d) Any of the above.
5. When a MAYDAY situation is in progress, any station which believes silence is essential may transmit what? (*page 4*)
  - a) SEELONCE DISTRESS

- b) SEELONCE MAYDAY
  - c) SEELONCE FEENEE
  - d) Any of the above.
6. What is the Urgency signal? (*page 5*)
- a) MAYDAY spoken three times.
  - b) SECURITE spoken three times.
  - c) PAN PAN spoken three times.
  - d) None of the above.
7. What precedes an announcement of a message to be transmitted concerning the safety of navigation? (*page 6*)
- a) SECURITE spoken three times.
  - b) PAN PAN spoken three times.
  - c) Both A and B.
  - d) None of the above.
8. What is the priority order for distress, urgency, and safety messages? (*page 1*)
- a) PAN PAN, SECURITE, and MAYDAY.
  - b) MAYDAY, PAN PAN, and SECURITE.
  - c) MAYDAY, SECURITE, and PAN PAN.
  - d) SECURITE, PAN PAN, and MAYDAY.
9. What class of EPIRBs transmit an identification and on what frequency? (*page 9*)
- a) Only Category I on 121.5/243 MHz.
  - b) Only Category II on 121.5/243 MHz.
  - c) Category I and II on 406 MHz.
  - d) Any of the above.

## CHAPTER FIVE - AUXILIARY COMMUNICATIONS SYSTEM

### A. THE AUXILIARY COMMUNICATIONS SYSTEM

1. The Auxiliary communications system consists of the Auxiliary fixed land, land mobile, and Radio Direction Finding (RDF) stations which the Director of the Auxiliary (DIRAUX) accepts as radio facilities. It also includes the boats and aircraft which have radios. Auxiliarists may not use any single radio for more than one facility. A radio facility is operational if it passes the facility inspection, the owner offers it for use, and the DIRAUX accepts it.
2. Definitions.
  - a) A fixed land radio facility is the radio equipment which an Auxiliarist permanently operates from a fixed location (home, garage, office, etc.). It may or may not have RDF capabilities. A transportable station is a type of fixed land radio facility which an Auxiliarist transports to various locations but does not use while in motion.
  - b) A land mobile radio facility is the radio equipment an Auxiliarist can operate from a vehicle or while walking. It may be installed in a vehicle or hand carried. It may or may not have RDF capabilities.
  - c) The radios on boat and aircraft facilities, equipped to operate on designated Coast Guard frequencies, with or without RDF capabilities, are not facilities in themselves. They are simply functional equipment installed on board the facility. The DIRAUX must not count this equipment as a radio facility.
  - d) The VHF RDF facilities are those facilities with the passive direction finding capability, separate and independent of any other facility, and where land-line or other non-marine communications are available. RDF units meeting the requirements of Section 5 of the Radio Facility and Inspection and Offer for Use Form ANSC 7004 (10-08) are eligible for facility status.
  - e) The portable radios are radios which an Auxiliarist can hand carry and operate by means of a self-contained antenna and power system.
3. Purpose.
  - a) The primary purpose of the Auxiliary communications system in order of precedence.
    - (1) Coordinating authorized Auxiliary activities in support of Coast Guard operations.
    - (2) Augmenting the Coast Guard communications system, when required.

- (3) Communicating urgent matters of official Auxiliary business.
- (4) Training.
- (5) Assisting national resources in time of disaster (disaster communications).

*Note: The use of the Auxiliary radio frequencies for personal business is prohibited.*

#### 4. Control.

- a) The Chief, Telecommunications Division (dt), under the District Commander, is responsible for the proper planning, organization, operation, inspection, supervision, and coordination of the Coast Guard Auxiliary communications system. This includes such activities as training and drills. The Auxiliary radio facilities may use certain frequencies authorized by the District Commander for specific authorized Auxiliary activities including regattas, coordinated CME efforts, patrols, drills, training, and administration.
- b) Auxiliarists must conduct operations on the Coast Guard frequencies per the current instructions.
- c) The Coast Guard and Auxiliary communication plans may include frequency assignments and the Auxiliary call signs. If not, then reference publications that contain such data.
- d) Each Auxiliary district must conduct communications drills on a monthly basis. The operators of the radio facilities must conduct these drills using the guidelines issued by the Coast Guard District Telecommunications Branch (dt).
- e) The District Commanders may authorize the use of the Federal Telecommunications System (FTS) and the local Coast Guard landline voice and data systems for the relay of official Auxiliary administrative messages. The District Commanders may also issue FTS calling cards to selected Auxiliarists to relay official Auxiliary communications.

### B. RADIO FACILITIES.

#### 1. Government Station.

- a) Any radio station or VHF RDF station, while assigned to Coast Guard duty, is a radio station of the Coast Guard and a "government station" within the meaning of 14 USC Sec. 829. To operate as a government station, the DIRAUX must accept an Auxiliary radio station for use as a radio facility or the radio equipment must be on board a surface or aircraft facility.
- b) Auxiliarists who meet the owner/operator requirements may operate Auxiliary radio facilities on government frequencies. Auxiliarists under the direct

supervision of the owner/operator may also operate these facilities without meeting the requirements of Paragraph B.7. Compliance with the regulations and procedures is the responsibility of the facility owner.

- c) When under orders, the operators of radio equipped boats and aircraft may operate on assigned government frequencies. All boat and aircraft facilities must be VHF-FM equipped. The District Commander may grant a facility waiver but only on a case by case basis.
- d) Auxiliarists may only use the frequency designated by the appropriate District Commander as their local working frequency.
- e) Additional frequencies available for Auxiliary use when required and authorized by the District Commander are listed below.
- f) The DIRAUX may accept VHF RDF stations as facilities if they meet the following criteria.
  - (1) The antenna height will provide a minimum range of 10 nautical miles.
  - (2) The arc of unobstructed direction finding must be a minimum of 130 degrees with no reflected signals noted.
  - (3) The operator must orient the station to cover the anticipated area of transmissions.
  - (4) The demonstrated bearing error does not exceed plus or minus 5 degrees within the service arc.
  - (5) The Auxiliarist locates the station close to the assigned patrol areas. It must also provide accurate DF support to operational facilities working in the patrol area.
  - (6) The station must have landline or non-marine communications capability to relay the Lines of Position (LOPs) and fixes.
  - (7) The RDF operators may not pass LOPs and fixes on VHF marine channels unless requested by a Coast Guard unit commander.
  - (8) Two or more stations operating together to form a network should appoint one station as the plot station. Each station in the network should provide the plot station with their geographical coordinates. The plot station will receive the LOPs, plot the positions, and report the fix coordinates to the unit commander. The plot station must give the Coast Guard unit handling the case all the LOPs, a fix if available, and other pertinent information as soon as possible.
  - (9) The owner must show all radio station equipment on their ANSC 7004 (10-08). This includes non-marine radios which operate on an authorized

Auxiliary frequency. The acceptance of the RDF station by the DIRAUX will also authorize use of the supporting radio. The support radio is not a radio facility, but Auxiliarists must operate it under the current Coast Guard procedures.

g) Auxiliary Radio Facilities Operation.

- (1) The Auxiliary radio facilities may operate, according to the Coast Guard policy, only on authorized Coast Guard and Auxiliary frequencies. The operation on these frequencies is subject to the conditions noted and the network control of the Coast Guard commands or the Auxiliary in the operating area. In addition, the Auxiliary may operate:
  - (a) on the frequencies specifically authorized by Commandant (CG-62).
  - (b) on any frequency that is required to maintain valid SAR communications for the duration of an incident.

*Note: The use of any other frequency by the Auxiliary radio facilities is prohibited.*

- (2) The Auxiliary fixed land radio facilities that need the authority to operate on radio frequencies not presently authorized for that station must receive frequency assignments from Commandant (CG-62). The Auxiliarists must send the authorization requests via their District Communications Staff Officer (DSO-CM) to the National Operations Department, Telecommunications Division Chief (DVC-OT). The DVC-OT must coordinate and forward the request to Commandant (CG-62) via the cognizant DIRAUX and District Telecommunications staff. The facilities requesting the authorization for new frequencies may not use any of the new frequencies contained in the request until Commandant (CG-62) grants approval. The fixed land stations which require authorization for new frequencies are only required to obtain the authorization one time. The authorization remains valid until any change in facility characteristics reported as part of the original request is made (that is frequencies, location, antenna, call sign, etc.). Then another request is necessary.
- (3) Auxiliarists may only activate the Auxiliary fixed land, land mobile, and RDF facilities:
  - (a) for missions ordered or scheduled by the Coast Guard.
  - (b) when necessary to handle valid distress traffic.
  - (c) while conducting technical tests to determine a facility's capability (for example, facility inspections).

- (d) when necessary to contact a Coast Guard unit to determine if Auxiliary help is needed.
- (e) when conducting network drills.
- (f) for assisting in times of disasters or national emergencies.
- (g) when necessary to conduct authorized Auxiliary activities as assigned by an appropriate Auxiliary Operational Commander or Staff Officer.

*Note: The use of radio facilities without proper authority may affect the protection and benefits afforded to those Auxiliarists properly assigned to Coast Guard duty.*

## 2. Portable Radio.

- a) The DIRAUX may certify a portable radio as the primary radio aboard a facility (operational or special purpose) if the DIRAUX determines the portable radio is appropriate for the facility's missions. One facility, operating in confined waters, may only require a portable radio while another, operating off-shore, may require a larger radio (i.e., 25 watts) and a permanently installed boat antenna. The DIRAUX may require additional antenna, power, or other capabilities to augment the performance of a basic portable radio.

## 3. FCC License.

- a) An Auxiliary surface or aircraft facility does not require a Federal Communications Commission (FCC) license when operating under orders or when performing a mission directed or scheduled by the Coast Guard. However, most Auxiliarists use their facilities for non-government (recreational, etc.) and government (orders, etc.) purposes. For that reason, Auxiliarists must have an FCC license if required (i.e., for foreign port visits) for the appropriate facility inspection. If Auxiliarists use a specific facility exclusively for government purposes, the DIRAUX may issue a waiver of the license required at the request of the owner. Auxiliarists that use fixed land and land mobile facilities in accordance with this manual are considered government stations and, therefore, do not require FCC licenses.
  - (1) License applications by Auxiliarists shall not refer to an Auxiliary affiliation of the use of the equipment for official government business.
  - (2) Auxiliarists must route all communications with the FCC about Auxiliary communications matters via the appropriate chain of command to the Commandant (CG-62). Auxiliarists may not communicate directly with the FCC regarding official Auxiliary business.

## 4. Owner or Operator.

- a) Auxiliarists owning or operating an Auxiliary communications facility must have

the following training.

- (1) Auxiliarists owning or operating fixed land, land mobile, or RDF facilities must complete the Auxiliary Telecommunications Operator Personal Qualification Standard (TCO PQS) training after 1 August 2008, or the Communications Specialty (AUXCOM) course prior to 1 August 2008. They must take any other training required by the District Commander.
- (2) Auxiliarists operating radios on boats, aircraft, or special purpose facilities must have the appropriate boat or aircrew qualifications or they must complete the TCO PQS or AUXCOM and any other training required by the District Commander.
- (3) Auxiliarists standing communication watches at a Coast Guard unit must be Basically Qualified (BQ) or higher and meet the qualification requirements set by the unit.

#### 5. Equipment.

- a) For a fixed land, land mobile, or RDF station to qualify for facility status, it must meet all facility, frequency, and inspection requirements. It must have a transmitter that is FCC type/accepted approved. A receive only RDF station is exempt from the transmitter type requirement. The stations operating on authorized frequencies outside the VHF marine band (for example, repeaters) must also be type/accepted approved. However, they do not have to contain all the required frequencies.

### C. RADIO CALL SIGNS.

#### 1. Authorization.

- a) All Auxiliary radio facilities must use Auxiliary radio call signs when:
  - (1) Conducting SAR, emergency, or routine patrol communications.
  - (2) Conducting official Coast Guard business on appropriate Coast Guard frequencies. This includes official Auxiliary business such as the coordination of training exercises, CME stations, and operational training.

Note: Auxiliarists must never use a FCC call sign with any Auxiliary call sign. Written orders are not required in order to use Auxiliary call signs.

#### 2. Designations.

- a) Auxiliary fixed land facilities co-located with a Coast Guard radio facility:

"Coast Guard (unit name) Auxiliary Radio".



Example: **"COAST GUARD MIAMI AUXILIARY RADIO"**.

b) Auxiliary fixed land facility:

"Coast Guard Auxiliary (geographical location of station) radio".

Example: **"COAST GUARD AUXILIARY LAKE POWELL RADIO"**.

Auxiliarists may not use the name of an existing Coast Guard unit unless co-located as described above. If two or more fixed land stations exist within the same geographical area, the DIRAUX must assign each station a call sign using their subdivision, street, or other local area name or simply using a unique number for each.

Example: **"COAST GUARD AUXILIARY LAKE POWELL RADIO 3"**.

*Note: In lieu of the above, fixed land facilities, if so equipped, may request from the Coast Guard Auxiliary Chief, Telecommunications Division (DVC-OT), for district assignment of an international call sign for use only on the 2-30 MHz SSB frequencies.*

c) Auxiliary land mobile facility:

"Coast Guard Auxiliary (flotilla geographical name from charter) mobile number" or a district approved land mobile numbering system. The Auxiliary may not use the name of an existing Coast Guard radio equipped unit.

d) Auxiliary aircraft facility:

**"COAST GUARD AUXILIARY AIRCRAFT** (aircraft identification number)".

e) Auxiliary surface facilities:

**"COAST GUARD AUXILIARY VESSEL** (number)".

All Auxiliary surface vessels facilities must use a District approved number call sign. For example, a six number call sign where the first two digits are the boat's length in feet, the third digit shows the type of propulsion, and the last three digits are in sequence with the acceptance of the facilities for use. Another example is the five digit number system where the first two digits are the length in feet and the last three digits are the last three digits from the boat's registration or documentation number.

*Note: Authorized short term events (e.g., CME stations, conferences, training, exercises, etc.) may use temporary call signs to facilitate operations.*

*Example: "OPTEX RADIO".*

*The event coordinator may assign the call signs but may assign only those call signs (e.g., NACO, DCDR, DOCK MASTER, CONTROL, etc.) that would not be confused with District approved call signs.*

#### D. ADMINISTRATION

##### 1. Coast Guard.

- a) The DIRAUX, under the guidelines established by the cognizant Coast Guard Telecommunications Staff, will:

- (1) coordinate the general supervision over all the Auxiliary communications.
- (2) approve potential fixed land, land mobile, or RDF station owners for membership in the Auxiliary.
- (3) accept or reject the radio facility inspections.
- (4) approve the communication drill exercises.
- (5) encourage the development of the Auxiliary communications system to the maximum level of effectiveness.
- (6) keep a current listing of the available Auxiliary communications facilities.
- (7) promulgate the approved radio call sign numbering system.

##### 2. Decal Display.

- a) Auxiliarists may display the miniature decal and wreath on the exterior or interior of the building in which the communications equipment is housed. Auxiliarists may also display the decal on any legal place on a motor vehicle or on the radio itself. Radio facilities must not use the large size decal and wreath.

#### E. RADIOTELEPHONE COMMUNICATIONS

- 1. The Auxiliary surface vessels must follow the provisions of the Bridge to Bridge Radiotelephone Act as implemented by 33 CFR Part 26, unless exempted therein. The Auxiliary surface facilities must follow the applicable provisions of any mandatory Vessel Traffic Services (VTS).

#### F. CITIZENS BAND RADIO (CB)

- 1. The Coast Guard once participated to a limited extent in the use of CB radio at Search and rescue stations. In 1989, the Coast Guard removed all requirements for monitoring or supporting CB radios.

- ## G. RADIO LOGS

### Fig. 5-1 Radiotelephone Station Log

- 9

4. Auxiliarists must maintain the radio logs for one year except when distress traffic is recorded. When distress traffic is recorded, the retention period is three years. If the radio log contains information pertinent to an investigation or claim, the retention period will be longer.
5. Auxiliarists must not allow the act of keeping a radio log to interfere with the safe operation of the facility. If completing a log entry during an event could create an unsafe situation or is impractical (as in the case of a land mobile handheld facility), the Auxiliarist may defer the log entry until the event is over. The use of an audio cassette recorder is helpful.

## H. COMPUTERS

1. Auxiliarists may apply computers in Auxiliary operations and communications where possible, including administrative communications. Computers are effective for activities such as SAR planning and the transmission of "electronic mail" through bulletin boards. The National Staff's Telecommunications Division of the Operations Department is the focal point to coordinate the efforts to expand Auxiliary computer use in the operational area.

## I. AUTHORIZED/REQUIRED FREQUENCIES

1. The following list contains some of the frequencies authorized for Auxiliary use. A complete list of the authorized frequencies for Auxiliary use can be obtained from your communications staff officer. Auxiliarists may use the authorized frequencies for official use. Facility radios must contain the required frequencies as indicated below.

Table 5-1 Authorized and Required Frequencies

Purpose	VHF-FM Channel	Frequency (MHz)	Mode	Max Power	Land	RDF	Air/ Surface	REMARKS
Intership Safety	06	156.300	FM	25 W	X	X (DF)	X	For SAR or Safety
Distress	16	156.800	FM	25 W	X	X (DF)	X	Note 3
U.S. Coast Guard only	21A	157.050	FM	25 W	X		X	Note 2
U.S. Coast Guard	22A	157.100	FM	25 W	X		X	Government to non-government
U.S. Coast Guard only	23A	157.150	FM	25 W	X		X	Note 2
U.S. Government	81A	157.075	FM	25 W	X		X	Note 2
U.S. Coast Guard only	83A	157.175	FM	25 W	X		X	Note 1, 2

## NOTES:

Note 1: Channel 83A (157.175 MHz) must not be used in areas where interference with Canadian users of this frequency is possible.

Note 2: Facilities only need the appropriate group/sector/district VHF-FM working frequencies for the operational area. The DIRAUX, with the approval of the cognizant District Chief of Telecommunications, may also authorize facilities to use secondary Coast Guard working frequencies on a sole use or shared basis.

Note 3: The following limitations apply to the Auxiliary aircraft use of VHF-FM marine band and non-marine VHF working frequencies.

- (1) Aircraft must not use air-to-air VHF-FM except when needed for a common band on multiple unit SAR operations.
- (2) Aircraft must use 1-watt power output. The higher power may be used only when needed to ensure communications.
- (3) Aircraft must not transmit on VHF-FM frequencies when operating more than 3,000 above ground level. The only exception is in an emergency or when no other means of communications with a Coast Guard or Auxiliary ground station is available.
- (4) Aircraft must monitor Channel 16 (156.8 MHz) or the Coast Guard working frequency specified by the controlling base station, if practical.
- (5) Vessel and aircraft facilities must be capable of operating on channels 6, 16, 22A, and a Group working channel.

## J. INSPECTION

1. The DIRAUX must arrange to conduct an initial inspection of each fixed land, land mobile, or RDF station. The annual inspection requirement will be every three years (a 2006 inspection will be good through 2008). An AUXOP qualified member or a flotilla, division, district, or National Communications Staff Officer who has successfully completed the TCO PQS or the Auxiliary Communications Specialty Course may conduct an inspection. The inspector must report the results on the Radio Facilities Inspection Report ANSC 7004 (10-08) to the DIRAUX. The Auxiliary will complete all inspections following the initial inspection before the district deadline set by the DIRAUX. The RDF stations must meet the RDF technical requirements.
2. The radio equipment permanently installed on the operational boats and aircraft is boat/aircraft equipment. The boat or aircraft inspector must report the initial and each annual inspection on inspection form ANSC 7003 (04-07) or ANSC 7005 (1-08) as appropriate.
3. The owner of the inspected radio equipment is solely responsible for the proper and timely maintenance of the equipment.

4. Auxiliarists may not inspect their own radio facility or those owned by members of their immediate family.
5. Land mobile owners may carry a copy of their approved Radio Facility Inspection Report, ANSC 7004 (10-08), in the vehicle. The inspection form lists the basic radio unit as well as any supporting equipment. This, along with facility decal and the Auxiliarist's ID card, will probably satisfy any enforcement agency query as to why the equipment is in a vehicle (or being carried) and for what purpose.

#### K. MILITARY AUXILIARY RADIO SYSTEM (MARS)

1. The Military Auxiliary Radio System (MARS) provides emergency communications as an adjunct to normal Army, Air Force, and Navy communications. The Coast Guard Auxiliary can use MARS for administrative and other quasi-official traffic, exercise traffic, drill messages, and emergency communications.
  - a) Auxiliarists holding a technician class or higher Amateur Radio license, wishing to join the MARS program, or need its services, may contact their local MARS program director either directly, if known, or through their DSO-CM.
  - b) Auxiliarists should keep their DSO-CM advised of their MARS activity.

#### L. REPORTING RADIO VIOLATIONS

1. Auxiliarists hearing a violation of FCC rules should submit a Report of Violation of Radio Regulations or Communications Instructions, CG-2861A (06-04). The Auxiliarist must tape record, if possible, all violations, especially hoax distress calls. When recording violations, turn the radio receiver squelch off. This will permit an analysis of transmitter signature characteristics.
2. Auxiliarists must submit the violation reports, along with the recording, to the District Commander (d).
3. The violation reports must include the name and location of the alleged offender, if known, the date and time of the offense, the description, and the circumstances of the violation. The report must include, if available, a transcript or an audio tape of the transmissions in the violation.
4. If a violation case goes to court, the Auxiliarist may be required to testify. Therefore, always maintain a complete log with notes of the relevant activities.
5. The facility owners with 406.025 MHz RDF capability must be especially alert for false EPIRB alarms. Up to 95% of EPIRB transmissions are due to negligence, carelessness, improper handling, or stowage.

#### M. AUXILIARY COMMUNICATIONS WATCHSTANDERS

1. The Auxiliary communicators are an integral part of the Coast Guard's radio network.

To the mariner, an Auxiliary communicator is the Coast Guard, not a volunteer, a part-timer, or a novice. The Auxiliary communicator must strive to maintain the public trust in the integrity of the Coast Guard radio network.

## 2. Qualifications.

### a) At Coast Guard units.

- (1) An Auxiliary Communications Watchstander at regular units must meet the unit's training and qualification requirements. This means completing the Group and Station Communications Watchstander Qualification Guide, COMDTINST M16120.7A (Series) and any local requirements.

### b) At Auxiliary facilities.

- (1) An Auxiliary Communications Watchstander at an Auxiliary facility must have completed the TCO PQS after November 1, 2008 or the Auxiliary Communications Specialty Course prior to November 1, 2008, and any other requirements established by the DIRAUX.

### c) Local Knowledge.

- (1) The Auxiliary Watchstanders, in addition to the local qualifications training, should be thoroughly familiar with the local operating area. This includes the local names of places that may not be the same as those charted.

## 3. On the Air.

- a) The Auxiliary communicators deal with people exhibiting a wide variety of emotions. These include confusion, hysteria, impaired thinking (due to alcohol, drugs, fatigue, or hypothermia), aggression, panic, and simple ignorance. By talking in a calm, professional tone of voice, the Auxiliary communicator can soothe a distressed boater enough to complete the necessary communications and effectively provide help. Some important skills for the communicator are:

- (1) Speech - keep it even, not too fast, not too slow.
- (2) Speak clearly.
- (3) Concentrate - be clear on what you intend to say - THINK.
- (4) Relate to the level of the caller - adult, child, novice, fisherman, professional mariner, etc.
- (5) Give your full attention - LISTEN, TAKE NOTES.
- (6) Use Coast Guard radio procedures, but not slang or acronyms. The average boater may not understand words like POB, PIW, and PFD.

- (7) Do not be defensive. Keep calm.
- (8) Be confident - remember, you represent the Coast Guard.
- (9) Accept the distance between you and the crisis. You cannot reach through the microphone and help.
- (10) Know your Area of Responsibility (AOR).
- (11) Be objective - overcome personal reactions to objections.
- (12) Accept there is only so much you can do.

#### N. RESPONDING TO MARINERS IN DISTRESS

1. Mariners, from time to time, request Auxiliary communicators to provide various types of information. The Auxiliary communicator may respond to information requests as per the below policies. The local Coast Guard policies will guide the Auxiliary communications watchstander at the active duty units.
  - a) Navigational Information.
    - (1) The Auxiliarist may pass any information contained in any recognized published document. This includes current National Oceanic and Atmospheric Administration (NOAA) and Army Corps of Engineers charts, Local Notices to Mariners, Light Lists, Coast Pilots, etc. The Auxiliarist may provide bearings (either true or magnetic) between charted objects. The Auxiliarist may not give or recommend compass courses because of the unique aspects of deviation, wind, and current. In all cases, the Auxiliarist must make sure the mariner understands whether true or magnetic bearings are being provided. If a mariner asks for a specific compass course, the Auxiliarist should advise that these cannot be determined or calculated over the radio. When using bearings on buoys, the Auxiliarist must advise the mariner that the charted position is being used and the buoys could be off station.
  - b) Lost or Disoriented.
    - (1) Finding the lost or disoriented boater without on scene reference points is difficult, if not impossible.
      - (a) Even with the RDF units an appreciable error may exist. Ask the boater about any visual landmarks, Aids to Navigation (ATONS), or area characteristics that could help determine the location.
      - (b) If a general location can be determined, an appropriate response may be: "Based on the information you have provided, your boat appears to be in the vicinity of..... Recommend you study the chart for that area or consult with a passing boat before proceeding further".



- (c) If poor visibility or darkness is the cause, suggest the boater anchor until the situation changes. Before making this suggestion, always evaluate all of the on scene factors to be sure the suggestion will not change the situation to distress.
- c) Weather.
  - (1) The Auxiliarist may pass weather information, but remember the Coast Guard does not forecast the weather. Advise boaters requesting weather information to listen to the continuous National Weather Service (NWS) broadcast and what channels to use in the local area. If a boater does not have NWS capability, the Auxiliarist may read the entire text of the latest NWS local weather forecast or warnings (small craft, gales, etc.). The Auxiliarist must read the weather forecast exactly as written, including stating that it is NWS information for a particular area, the geographic area for the weather information, and the period for which the forecast is valid. The Auxiliarist may also pass observed weather conditions, as long as they are reported as "observed" and the time and the location of the observation noted. Always make a log entry of the transmission and the weather information passed.
- d) Third Party Radio Traffic.
  - (1) The Coast Guard does not normally handle third party traffic. The Auxiliary radio facility operators should advise boaters requesting this type of service of the local marine operator channels. This does not prevent an Auxiliary facility from passing requests for non-distress help per the Coast Guard policy. This allows the Auxiliarist to pass information to a local salvor, a marina, or a friend who could help.
- e) Accuracy.
  - (1) The Auxiliary communicator must always remember that they represent the Coast Guard. They must do everything possible to be sure no transmission places the organization in jeopardy or impairs the public trust. Do not assume, guess, or try to have all the answers. Stick to the facts and be sure the person receiving the information understands the source, the limiting factors, and the cautions of all information. Make sure when passing information that it is prudent and based on fact. The Auxiliarist must never pass information which is opinion or conjecture. Always make a log entry of the transmission and the information passed.
- f) Timeliness.
  - (1) The Auxiliarist must immediately respond to requests where the boater's navigation safety is in jeopardy. The Auxiliarist may pass other types of information, usually for the convenience of the mariner, if it does not interfere with operations.

## O. COMMUNICATION WITH CIVILIAN EMERGENCY SERVICES

Many SAR and disaster situations involve both Coast Guard resources and civilian (non-federal government) emergency services. In these situations it may be necessary for all emergency resources to communicate with each other to coordinate the use and safety of emergency personnel. The preferred communications method is for the civilian station to shift to a government frequency for the duration of the case. On VHF-FM, this would be Channel 21A, 23A, or 83A. Remember, using Channel 22A would probably cause interference problems if any other SAR situations developed in the local area. Use Channel 81A only if the event is an environmental problem. The use of a government frequency by a non-government station is allowed by the FCC rules. Using a government frequency precludes Auxiliary facility involvement in possible law enforcement actions or operation with a civilian service which has a totally different set of operating procedures. If the non-Coast Guard station is another federal government station, such as a Civil Air Patrol (CAP) or Department of Defense (DOD) unit, the same guidance applies. Most units in maritime SAR have radio equipment capable of working on the VHF-FM marine channels.

## P. FREQUENCY REQUEST

1. The following is a sample letter format for requesting new frequency assignments.

DEPARTMENT OF HOMELAND SECURITY

UNITED STATES COAST GUARD AUXILIARY

(AUTHORIZED BY CONGRESS 1939) THE CIVILIAN COMPONENT OF THE U.S.  
COAST GUARD

FROM: (Name) (Member Number)

TO: DVC-OT

VIA: DSO-CM

SUBJ: REQUEST FOR FREQUENCY ASSIGNMENTS FOR AUXILIARY RADIO  
STATION

REF: (a), Auxiliary Operations Policy Manual, COMDTINST M16798.3E (Series)  
ANNEX 4 TELECOMMUNICATIONS, SECTION G AUTHORIZED/REQUIRED  
FREQUENCIES AND RADIOTELEPHONE COMMUNICATIONS, Section G.2.  
Frequency Requests.

1. As per reference (a), I request authority for an Auxiliary Radio Station, (state reason for request).
2. DATES REQUIRED: (Specify)
3. TRANSMITTER LOCATION: (Specify)
4. TRANSMITTER COORDINATES: (Latitude and Longitude in degrees, minutes and seconds)

5. CALL SIGN: (If required)
6. FREQUENCIES: (Specify)
  - a. (NOTE: If more than one frequency is required, provide frequency separation criteria between F1, F2, etc.
  - b. If frequency separation criteria is not required, state: "Frequency separation not applicable").
7. EMISSIONS: (e.g. 16KF3E, 6KA3E, etc)
8. POWER: (Maximum power for each emission)
  - a. TYPE: (point to point, ship/shore, air/ground, radio navigation, test and maintenance, etc.)
  - b. ANTENNA DATA: (Required for all land station emissions above 30 MHz.)
    - 1) Antenna name: (Generic preferred)
    - 2) Orientation:
    - 3) Gain: (Nominal)
    - 4) Site (terrain) elevation above mean sea level:
      - a) Antenna height above terrain:
      - b) Antenna polarization:  
(Required only for assignments above 420 MHz. For fixed (point to point) assignments, receiver location, coordinates, and antenna data for receiving site are also required.)
9. EQUIPMENT NOMENCLATURE: (for example, Manufacturer's model number or series)
10. MILEAGE RADIUS AND NUMBER OF MOBILES: (Specify)  
(owner's name and signature)

#### Q. CHAPTER FIVE STUDY QUESTIONS

1. Can an individual radio used on a boat or aircraft facility be used as an Auxiliary radio for in any other facility? (*page 1*)
  - a) Yes
  - b) No
  - c) With a DIRAUX waiver
  - d) None of the above.
2. What are the various types of Auxiliary radio facilities? (*page 1*)
  - a) Fixed land.
  - b) Land mobile.
  - c) RDF.

- d) All of the above.
3. Can a portable radio qualify as a facility? (*page 5*)
- a) No
  - b) Yes
  - c) Only if it supports RDF
  - d) None of the above.
4. All operations on the Coast Guard frequencies by Auxiliarists must be conducted in accordance with the rules and procedures promulgated by? (*page 2*)
- a) The District Commander.
  - b) The DIRAUX.
  - c) The District Commodores.
  - d) An Auxiliary communications staff officer.
5. Vessel facility radios are considered government stations under what conditions? (*page 5*)
- a) While in personal use.
  - b) After being certified as a radio facility.
  - c) While assigned to Coast Guard duty.
  - d) All of the above.
6. Can land mobile radio facilities engage in personal business on the facility radio frequencies? (*page 1*) (*page 2*)
- a) When it is only their personal business.
  - b) No
  - c) When personal business includes only Auxiliarists.
  - d) Always.
7. Under what conditions may fixed land, land mobile, and RDF facilities be activated? (*page 4*) (*page 5*)
- a) When necessary to handle valid distress traffic.
  - b) When conducting network drills.
  - c) For assisting in times of disaster or national emergency.
  - d) All of the above.
8. What training is required for an Auxiliarist to operate a vessel facility radio? (*page 6*)
- a) TCO PQS or Auxiliary Communications Specialist course completion.
  - b) Crew qualification.
  - c) Any additional District required training.
  - d) All of the above.

9. What are the requirements for VHF RDF stations with respect to its location and capabilities? *(page 3)*
- a) It must be near a patrol area.
  - b) No requirements.
  - c) It must meet specific technical requirements.
  - d) Both A and C.
10. How should LOPs from a RDF be reported? *(page 3)*
- a) On VHF-FM 83A.
  - b) VIA non-marine channels.
  - c) By landline.
  - d) Either B or C.
11. Who can inspect radio equipped aircraft facilities? *(page 11)*
- a) An aircraft inspector.
  - b) Someone AUXOP qualified.
  - c) DIRAUX.
  - d) A communications staff officer.
12. What are the conditions under which a CB radio can be utilized? *(page 8)*
- a) Whenever a CB radio is available.
  - b) When no other method of communicating is available.
  - c) Always.
  - d) None of the above.
13. Under what circumstances may an Auxiliarist contact the FCC about an Auxiliary radio problem? *(page 5)*
- a) Whenever there is a violation of radio procedures.
  - b) When the radio malfunctions.
  - c) None: Auxiliary communication problems are referred through the chain-of-command.
  - d) When the Auxiliarist thinks it is necessary.
14. Vessel and aircraft facilities must be capable of operating on which VHF-FM marine channels? *(page 11)*
- a) Only Channel 16.
  - b) Only Channel 22A.
  - c) Only Channel 83A.
  - d) Channels 6, 16, 22A, and a Group working channel.
15. Communication with civilian emergency services is preferred on what channels? *(page 16)*

- a) Any working channel.
- b) Government channels.
- c) A CB channel.
- d) None of the above.

## CHAPTER SIX - MESSAGES

### A. INTRODUCTION

#### 1. General.

- a) As an Auxiliarist, you have accumulated some knowledge of messages. You know a message is any thought or idea expressed briefly and prepared in a form suitable for transmission by any means of communication. Although the exchange of most Auxiliary information is done in an informal manner, the information that is required to be a matter of record shall be put into a precise format and sent as a formal message.
- b) There are many varieties of messages, each requiring slightly different formatting. The messages that may be encountered by the Auxiliary will be discussed here. An Auxiliarist qualifying as a communications watchstander at a Coast Guard activity will learn additional formatting and message switching system information as part of the Active Duty Watchstander qualification process.
- c) The three basic types of messages are Single Address, Multiple Address, and General Messages.
  - (1) A Single Address message is destined for only one addressee, either ACTION or INFO, which will be discussed later.
  - (2) A Multiple Address message has two or more addressees.
  - (3) A General Message has a wide distribution, such as ALDIST for all Coast Guard Districts.
  - (4) Several types of messages may be transmitted or received, but most Auxiliary messages will deal with operations which concern the movement of SAR resources. These messages may be either actual or drill in nature. A proper understanding of messages is necessary if you are to function effectively as a member of the Auxiliary. Your concern for messages originated and transmitted is that they reach their destination accurately, securely, and promptly. The same requirements apply for the messages received.
- d) The Auxiliary administrative matters which deal with the routine subjects, the personnel, and the logistic requirements are usually handled in the non-message channels such as mail, email, telephone, facsimile, etc.

#### 2. Originator and Drafter.

- a) Messages are released by an individual designated to authorize the transmission of a message for and in the name of the originator. The command by whose authority

a message is sent is called the "originator". The person who actually composes the message for release by the originator is the "drafter". The originator and the drafter may be the same individual.

- b) There are separate responsibilities for originating and drafting a message.
  - (1) The Originator's responsibility.
    - (a) Determine if a message is necessary.
    - (b) A message is not to be used when another form of communication will suffice.
    - (c) Determine the addressee(s) and the type of message.
    - (d) Indicate the necessary references when essential for brevity or clarity.
    - (e) Determine the precedence.
    - (f) Forward the message for draft and transmission.
  - (2) The Drafter's responsibilities.
    - (a) Prepare the text of a message, making it clear, accurate, and brief. Brevity must not be sought at the expense of clarity or accuracy.
    - (b) Use proper format for the type of message being drafted.

## B. MESSAGE PARTS

### 1. General.

- a) The parts of the message are the "heading", the "text", and the "end". The parts are subdivided by specific "Form Lines" numbered 5 through 13. Each part will be discussed separately below. Lines 1 through 4 are the initial call and identify the intended recipient, the sender, and the notification that a message will follow. On land line digital message switching systems, these lines also contain switching symbols used by the system to properly route the message.
- b) Heading.
  - (1) The Heading consists of format lines 5 through 10, which contain the precedence, date-time group, originator, action addressees, information addressees, exempt addressees, and accounting information.
- c) Text.
  - (1) The text of the message, format line 12B, is the basic thought or idea the originator wishes to communicate. The difficult words or groups within the



text of a message are spelled out using the phonetic alphabet. The groups or words to be spelled are preceded by the pro-word "**I SPELL**". If the operator can pronounce the word, it should be done before and after it is spelled.

- d) Format lines 11 and 13 consist of the pro-word "**BREAK**". Line 11 separates the heading from the text and line 13 marks the end of the message.

## MESSAGE PARTS

### INITIAL CALL

Line No	Message Content
1	Station Called
2	THIS IS Station Calling
3	MESSAGE FOLLOWS
4 OVER	

### HEADING

5	Precedence and Date-Time Group
6	FROM (Originator)
7	TO (Action Addressee)
8	INFO (Information Addressees)
9 Exempt Address - Not used	
10	ACCT (Accounting Symbol) Not Used
11	BREAK

### TEXT

12A	UNCLAS (SSIC - Not used)
12B	Text of Message
13	BREAK

## 2. Heading.

- a) The heading of a message determines where it is going and how it will be handled. It is determined by the originator and cannot be altered by anyone other than the originator.
- (1) Format line 5 contains the precedence, the Date-Time Group (DTG), and, if required, the operating signals. The operating signals are usually not used in

the Auxiliary messages.

(a) Precedence designations.

- (i) The first letter in the heading of a message is the precedence pro-sign. This precedence is assigned to a message by the originator to show the relative order in which the message is to be transmitted. The precedence is placed on a message to show the receiving station the relative order in which it is to be handled and delivered. A Priority (P) message is an important one. It takes priority over the handling of Routine (R) messages. If an operator has many messages of the same precedence, for example three priorities to be transmitted, they should be sent out in the order in which they were received. When messages of the same precedence are being relayed, they are relayed in the order in which they are received. The precedence designations are listed in order of importance and, although abbreviated in the written message, are transmitted as the word and not as the phonetic initial.

PRECEDENCE DESIGNATION

Z	Flash
O	Immediate
P	Priority
R	Routine

- (b) The Flash (Z) precedence is reserved for initial enemy contact reports. It is also used for special emergency operational combat traffic originated by the specifically designated senior commanders of the units directly affected. The Z messages take priority over all of the other traffic. The Z traffic will not be encountered in the Auxiliary communications.
- (c) The Immediate (O) precedence is used for the important messages pertaining directly to the operations in progress. O is also used, when necessary, for the messages concerning aircraft flight information, flight plans and changes, aircraft movements, initial surface distress, medico information, affirmative replies to, and messages declaring uncertainty or communications alert, requests or directions concerning distress assistance, reports or warnings or grave natural disaster (hurricane, tornado, tsunami, etc.). This precedence is only given to the operational traffic. The O messages are handled and transmitted ahead of all other traffic except Flash (Z).
- (d) The Priority (P) precedence is used for messages pertaining to SAR Situation Reports (SITREPS), Aids to Navigation (A/N) deficiencies,

important weather information, and urgent administrative matters. P is the highest precedence normally authorized for the administrative messages. The Priority messages are handled ahead of the Routine messages.

- (e) The Routine (R) precedence is used for normal operational messages, ship movements, and administrative matters requiring rapid transmission.
- (f) The Date-Time Group (DTG), a series of six numbers and a letter suffix, is used primarily for reference purposes identifying individual messages. The first two numbers indicate the day of the month, the second two numbers indicate the hour of the day, and the final two numbers stand for the minutes of the hour. The designating letter suffix indicates the time zone used. This is followed by the three letter month abbreviation and the last two digits of the year.
- (g) The Coast Guard communications operates on the Universal Coordinated Time (UTC), previously called Greenwich Mean Time (GMT). All clocks are set at the same time. The time zones change as the ships travel, but with the reference to UCT, the communication clocks never change. The Date-Time Group 050630Z means the message originated on the fifth day of the month at 0630 UCT. The Date-Time Group 162315Z means the message originated on the sixteenth day of the month at 2315 UCT. The date is the date in Greenwich and the time is UCT (GMT). Fig. 6-1 shows the world time zones, suffixes used for each time zone, and the correction factor showing the difference between the UCT and each time zone. Note that Greenwich, England is in the "Z" or "ZULU" zone which has a zero factor. The map should be referred to in order to eliminate confusion and errors resulting from incorrect calculation of the Date-Time Group. World Time Map below.

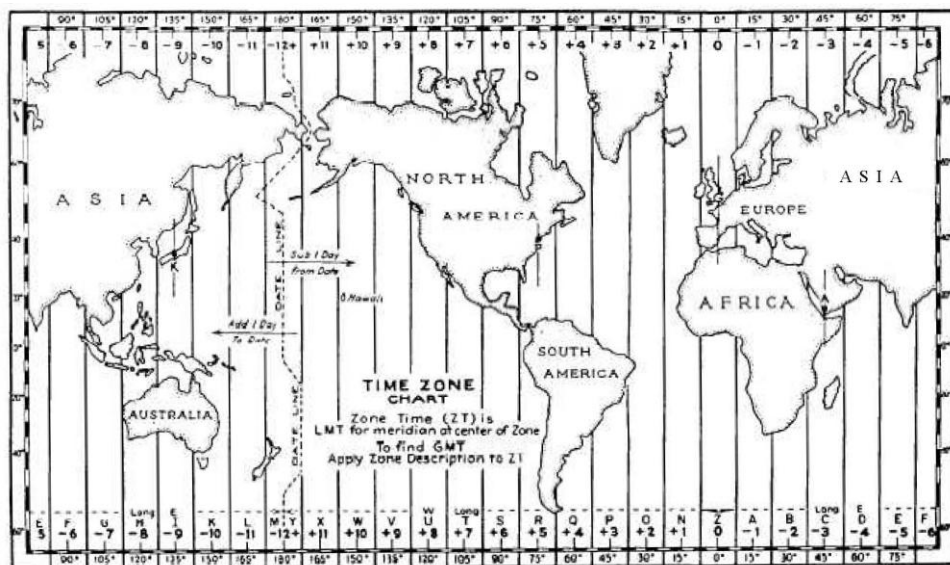


Figure 6-1 Standard Time Zones

West Zone	Description	Suffix
7-1/2 E to 22-1/2 E	+ 1	Z
22-1/2 E to 37-1/2 E	+ 2	A
37-1/2 E to 52-1/2 E	+ 3	B
52-1/2 E to 67-1/2 E	+ 4	C
67-1/2 E to 82-1/2 E	+ 5	D
82-1/2 E to 97-1/2 E	+ 6	E
97-1/2 E to 112-1/2 E	+ 7	F
112-1/2 E to 127-1/2 E	+ 8	G
127-1/2 E to 142-1/2 E	+ 9	H
142-1/2 E to 157-1/2 E	+ 10	I
157-1/2 E to 172-1/2 E	+ 11	J
172-1/2 E to 180	+ 12	K

East Zone	Description	Suffix
7-1/2 W to 22-1/2 W	+ 1	N
22-1/2 W to 37-1/2 W	+ 2	O
37-1/2 W to 52-1/2 W	+ 3	P
52-1/2 W to 67-1/2 W	+ 4	Q
67-1/2 W to 82-1/2 W	+ 5	R
82-1/2 W to 97-1/2 W	+ 6	S
97-1/2 W to 112-1/2 W	+ 7	T
112-1/2 W to 127-1/2 W	+ 8	U
127-1/2 W to 142-1/2 W	+ 9	V
142-1/2 W to 157-1/2 W	+ 10	W
157-1/2 W to 172-1/2 W	+ 11	X
172-1/2 W to 180	+ 12	Y

**NOTE:**

*GMT is indicated by suffix Z. For the time midway between zones, use both letters. Letter N is also used designated -13. This is to provide for the ships in zone -12 keeping daylight savings time. In the continental United States the following time zones apply when operating under Standard Time:*

*EST-ROMEO+5; CST-SIERRA+6; MST-TANGO+7; PST-UNIFORM+8;*

*The following applies when operating under Daylight Savings (DST) Time:*

*EDT-QUEBEC+4; CDT-ROMEO+5; MDT-SIERRA+6; PDT-TANGO+7;*

- (h) To convert from local time to UCT/GMT time find the local time and add the number of hours indicated. For example, if the local time is 1300 Mountain Daylight Time (MDT), the addition of 6 hours would produce 1900 hours GMT. Remember to add or subtract a day if the time conversion crosses the 24 hour mark.
- (2) Address. Format Line 6 contains the pro-word "**FROM**" and the identity of the originator. Line 7 contains the pro-word "**TO**", followed by the action addressees. Line 8 contains the pro-word "**INFO**" followed by the information addressees. Line 9, Exempt Addressees, is not used in the Auxiliary messages. Normally, lines 6, 7, and 8 are sent as shown in the example below.

TRANSMITTED	MEANING
"FROM"	Originators sign
"COMMANDER COAST GUARD ACTIVITIES BALTIMORE"	The address group (or call sign) of the originator
"TO"	Action addressee sign
"COMMANDER COAST GUARD DISTRICT FIVE"	The address group(s) and/or call sign(s) of the action addressees
"INFORMATION"	The information addressee sign
"COAST GUARD AUXILIARY VESSEL 42122"	The address group(s) and/or call sign(s) of the information addressee(s)

- (a) The originator's sign "**FROM**" (FM) marks the beginning of the address. It means the originator of this message is indicated by the call sign or the address group(s) immediately following.
- (b) The "addressee" is the authority to whom a message is directed by its originator. There are both "action" and "information" addressees. The action addressee is the authority to whom the message is directed for whatever action is necessary. The information addressee is the authority to whom the originator directs the message for information only. For instance, a SITREP message closing the case of an assist in the Annapolis area would be addressed to the Commander Activities Baltimore with info for Coast Guard Group Annapolis which had handled the local aspects of the case.

- (3) Format line 10 contains "**ACCT**" indicating the accounting symbol, followed by an accounting symbol and a program designator code. This line is not used in the Auxiliary messages.

### 3. Text.

- a) The format line 12 is the text of the message and is subdivided into lines 12A and 12B. Line 12A contains the message classification and the Standard Subject Identification Code (SSIC). The Auxiliary messages are unclassified (UNCLAS) and do not use SSICs. Line 12B is the text of the message and starts with a subject line followed by the thought the originator wishes to communicate to the addressee(s). The Auxiliarist should use only standard abbreviations and terminology when drafting the text. When the events in the text include a time, that time precedes the statement of the event or action. Time in the text is stated as the local time with its appropriate letter suffix. Fig. 6-1, Table 6-1, and the local District instructions should be consulted for determination of the letter suffix for a local area. Sample messages with typical texts are included in this chapter.

### 4. Break.

- a) The format lines 11 and 13 contain the pro-word "**BREAK**". The line 11 "**BREAK**" separates the message heading from the text. The line 13 "**BREAK**" marks the end of the message. It may be followed by final instructions such as message corrections, more messages will follow, or if the sending station needs to pause. The radiotelephone transmission must end with one of the pro-words "**OVER**" or "**OUT**". With the use of "**OVER**", the sender tells the receiver to go ahead and transmit because this is the end of my transmission to you and a response is necessary. With the use of "**OUT**", the sender tells the receiver this is the end of my transmission to you and no response is required. **Never use "OVER" and "OUT" together.**

## C. TRANSMITTING THE MESSAGE

### 1. Introduction.

- a) Auxiliarists studying the radiotelephone transmitting procedures must remember they are subject to continual improvement and change. This Chapter furnishes the basic knowledge, but one can keep current only by the continued study the updated communications instructions, policies, and procedures.
- b) Auxiliarists must remember that they are transmitting on government frequencies assigned to the U.S. Coast Guard and are subject to the Coast Guard rules and regulations.

### 2. Voice Radio.

- a) The radiotelephone, commonly known as the voice radio, is an effective and

convenient method of communication. It is used extensively for ship-to-ship communication, for the control of airborne aircraft, and for the countless tasks requiring rapid communications.

- b) The voice radio supplements both the digital and the visual methods of communications, but does not replace either. It has the advantage of simplicity of operation and the direct transmission of the spoken word, but the ease of operation can lead to abuse. The careless use of voice procedures, plus the circuits being overloaded with unnecessary traffic, have often created confusion at times when good communications were imperative. Whether in a small boat or an aircraft, the Auxiliarist must always use the proper voice radio procedures.

### 3. Operation.

- a) The voice radio is considered the most insecure means of communication. A message sent by radio is open to interception by anyone who has the necessary equipment and is within reception range. The following practices are specifically forbidden.
  - (1) Violation of radio silence.
  - (2) Unofficial conversation between operators.
  - (3) Transmitting in a directed network without permission.
  - (4) Extensive tuning and testing or radio checking.
  - (5) Unauthorized use of plain language.
  - (6) Transmission of an operator's name or personal call sign.
  - (7) Use of unauthorized pro-words.
  - (8) Profane, indecent, or obscene language.
- b) There are important DOs and DON'Ts in the operation of a microphone.
  - (1) Always listen before transmitting. Unauthorized breaking is lubberly and causes confusion. Often, neither transmission gets through.
  - (2) Speak clearly and distinctly. Both slurred syllables and clipped speech are difficult to understand.
  - (3) Speak slowly at a copying speed in short phrases. Give the recorder a chance to get the entire message the first time. You save time and repetitions.
  - (4) Avoid extremes of voice pitch. A high voice best cuts through interference, but is shrill and unpleasant. A lower pitch is easier on the ear, but is hard to understand.

- (5) Be natural. Maintain a normal speaking rhythm. Send your message phrase by phrase instead of word by word.
- (6) Use standard pronunciation. Speech with geographical peculiarities is difficult for persons from other parts of the country to understand.
- (7) Keep a correct distance between the lips and the microphone. A distance of about 2-3 inches from the mouth is correct for most microphones.
- (8) Speak in a moderately strong voice. This overrides unavoidable background noises and reduces requests for repeats.
- (9) Shield your microphone. Keep your head and body between noise-generating sources and the microphone while transmitting.
- (10) Keep the volume of a handset earphone low.
- (11) Keep speaker volumes to a moderate level.
- (12) Give an accurate evaluation in response to a request for a radio check.
- (13) Pause momentarily from time to time, when transmitting long messages, to allow any station with higher precedence messages to break in. Use the pro-word "**BREAK**" after transmitting each section of a long message.
- (14) Adhere strictly to the prescribed procedures.
- (15) Transmit your message and get off the air. It is not necessary to blow into a microphone to test it, nor to repeat portions of messages when no repetition is requested.
- (16) Do not transmit while surrounded by other persons talking loudly, as it can confuse the receiving stations.
- (17) Do not hold the microphone button in the push-to-talk position until you are ready to transmit. This will block any reception and the "open mike" will hinder other communications. However, a good practice includes a brief half-beat pause after engaging the push-to-talk button before beginning to talk to assure you send the beginning of your transmission.
- (18) Do not loosely hold a handset. A firm pressure on the microphone button prevents an unintentional release and consequent transmission interruptions.
- (19) Do not send test signals for longer than 10 seconds.
- (20) DO NOT use your FCC call sign when operating on the Coast Guard frequencies.
- (21) Do not use the phonetics "Charlie Golf Alpha" when transmitting. Use "Coast



Guard Auxiliary", and your vessel name, aircraft, or facility ID for identification.

4. Pronouncing Numerals.

- a) Care must be taken to distinguish numerals from similarly pronounced words. The pro-word "**FIGURES**" is used to proceeding numerals. Pronounce numerals as follows:

NUMERAL	SPOKEN AS	NUMERAL	SPOKEN AS
0	Ze-ro	5	Fi-yiv
1	Wun	6	Six
2	Too	7	Sev-en
3	Tree	8	Ate
4	Fow-er	9	Niner

- b) The numeral "0" is always spoken as "ZE-RO" and never as "OH", and when written has a slant bar through it so it is not confused with the letter "O", OSCAR.

(1) The decimal points are spoken as "DAY-SEE-MAL".

- (2) In the text, the numbers are transmitted digit by digit, except for exact multiples of hundreds and thousands, and are spoken as follows:

NUMBER	SPOKEN AS
44	Fow-er Fow-er
90	Niner ze-ro
136	Wun thur-ree six
500	Fi-yiv hun-dred
1478	Wun fo-wer seven ate
7000	Seven thow-zand
16000	Wun six thow-zand
164000	Wun six fo-wer thow-zand
812681	Ate wun too six ate wun

- c) The Roman Numerals are transmitted as the corresponding letters prefixed by the word "ROMAN NUMERAL".

For example, IV would be spoken as "ROMAN NUMERAL FOW-ER".

- d) The punctuation shall be spoken as follows:

<b>PUNCTUATION</b>	<b>SPOKEN AS</b>
Comma	COMMA
Period	PERIOD
Parenthesis	PAREN/UNPAREN or OPEN BRACKETS/CLOSE BRACKETS
Oblique Stroke	SLANT
Quotation Marks	QUOTE/UNQUOTE
Hyphen	HYPHEN
Colon	COLON
Semicolon	SEMICOLON

- (1) Bearings are always given in three digits and are transmitted digit by digit. True bearings are always used unless otherwise stated. Examples are:

<b>BEARING</b>	<b>SPOKEN AS</b>
090	Zero niner zero
189	Wun ate niner
295	Too niner fi-yiv

#### 5. Phonetic alphabet.

- a) Any letter of the alphabet that occurs in a radiotelephone transmission is identified by using the standard phonetic alphabet equivalent. Accent is on **hi-lited**.

<b>LETTER</b>	<b>PHONETIC</b>	<b>PRONUNCIATION</b>	<b>LETTER</b>	<b>PHONETIC</b>	<b>PRONUNCIATION</b>
A	ALFA	<b>AL</b> FAH	N	NOVEMBER	NO <b>VEM</b> BER
B	BRAVO	<b>BRAH</b> VOH	O	OSCAR	<b>OSS</b> CAH
C	CHARLIE	<b>CHAR</b> LEE	P	PAPA	<b>PAH</b> PAH
D	DELTA	<b>DELL</b> TAH	Q	QUEBEC	<b>KAY</b> BECK
E	ECHO	<b>ECK</b> OH	R	ROMEO	<b>ROW</b> ME OH
F	FOXTROT	<b>FOKS</b> TROT	S	SIERRA	SEE <b>AIR</b> RAH
G	GOLF	GOLF	T	TANGO	<b>TANG</b> GO
H	HOTEL	HO <b>TELL</b>	U	UNIFORM	<b>YOU</b> NEE FORM
I	INDIA.	<b>IN</b> DEE AH	V	VICTOR	<b>VIC</b> TAH
J	JULIETT	<b>JEW</b> LEE ETT	W	WHI SKEY	<b>WHISS</b> KEY
K	KILO	<b>KEY</b> LOH	X	X RAY	<b>ECKS</b> RAY
L	LIMA	<b>LEE</b> MAH	Y	YANKEE	<b>YANG</b> KEY
M	MIKE	MIKE	Z	ZULU	<b>ZOO</b> LOO

- b) The phonetic spelling is desirable in expressing the letter designations and in spelling the words in the radiotelephone operations. However, they are not to be used when the:

- (1) actual word might be used; e.g., 26 degrees West instead of 26 degrees Whiskey.
- (2) abbreviation is readily recognizable and authorized; e.g., USCG or CGAUX.

6. Pro-words.

- a) The procedure words (pro-words) are the words and phrases used to speed the transmission of the radiotelephone messages. They perform the same functions and are used in the same manner as the procedure signs (pro-signs) used in the digital transmissions. Many pro-signs and pro-words have the similar meanings, such as the pro-word "**FROM**" and the pro-sign "**FM**".
- b) Table 6-2 contains a list of pro-words with an explanation of each.

<b>PROWORD</b>	<b>MEANING</b>
"ALL AFTER"	All after
"ALL BEFORE"	All before
" BREAK "	Separation of text from other portions of the message
"CORRECTION"	Error
"DISREGARD THIS TRANSMISSION"	This transmission is in error-disregard it
"FIGURES "	Numerals or numbers follow
" FROM "	Originator's sign
" INFO"	The addressee(s) designation immediately following are addressed for information
" INITIAL "	The following phonetic equivalent is to be recorded as a single letter initial
"I READ BACK"	The following is my response to the instructions to read back
"I SAY AGAIN"	I am repeating transmissions or portion indicated
"I SPELL"	I shall spell the next word phonetically
"I VERIFY"	I have verified with originator and am repeating
"MESSAGE "	A message requiring recording is about to follow
"OUT "	End of transmission: no receipt required (Not used with OVER)
"OVER"	Go ahead or this is the end of my transmission a reply is expected. (Never used with OUT)
"READ BACK"	Repeat this entire transmission back exactly as received

"RELAY (TO)"	Transmit this message to all addressees immediately following
"ROGER"	I have received your last transmission satisfactorily
"SAY AGAIN"	Repeat (Never say REPEAT. Repeat is an artillery command to repeat fire mission)
"SPEAK SLOWER"	Your transmission is too fast. Speak slower
"THAT IS CORRECT"	Correct
"THIS IS"	From
"TIME "	What follows is time or Date-Time Group of this message
"TO"	Action addressee
"UNKNOWN STATION"	Unknown station
"VERIFY"	Verify with originator and repeat
" WAIT "	I must pause a few seconds
"WAIT OUT"	I must pause longer than a few seconds
"WILCO"	I have received your message, I understand, and I will comply
"WORD AFTER"	Word after
"WORD BEFORE"	Word before
"WORDS TWICE"	Communication is difficult -transmit each phrase twice (Can be used as an order or as a request)
"WRONG"	Your last transmission was incorrect - the correct version is [...]
"MEANING"	Meaning?

## 7. Radiotelephone Network

- a) The radiotelephone network is an organization of the stations capable of direct communications on a common channel or frequency.
- b) The radiotelephone networks are categorized with respect to the use for which the network was primarily established.
  - (1) Administrative network.
    - (a) A network primarily established for administrative purposes linking any echelon of authority with the immediate subordinates and such other stations as may be specifically designated.

- (2) Traffic network.
  - (a) A network primarily established to handle record message traffic.
- (3) Training network.
  - (a) A network primarily established to promote technical and procedural training in matters pertaining to the Coast Guard and the Coast Guard Auxiliary operations.
- (4) Command and Control networks.
  - (a) A network primarily established for coordination purposes between the District Commander, the District units, and the Auxiliary Communication Units as may be specifically authorized. The network would be used for alerting the Auxiliarists of an emergency or an exercise, and to promulgate the information relating to such events.
- (5) Operational networks.
  - (a) A network primarily established to meet the communication requirements of the Auxiliary operations among the Auxiliary Communications Units.

8. Full Call and Answer.

- a) The radiotelephone communications are usually established by the use of the full call to the station desired, such as:

<b>"COAST GUARD AUXILIARY VESSEL 42122</b>	Call sign of called station
<b>THIS IS</b>	From
<b>COAST GUARD ANNAPOLIS STATION,</b>	Call of calling
<b>OVER"</b>	Go ahead and transmit

- b) The reply is in full form also:

<b>"COAST GUARD ANNAPOLIS STATION</b>	Call name of calling
<b>THIS IS</b>	From
<b>COAST GUARD AUXILIARY VESSEL 42122,</b>	Call name of called Station
<b>OVER"</b>	Go ahead; transmit

- c) Units calling the foreign vessels or stations should use the words "UNITED STATES" before "COAST GUARD" on the initial call to clearly identify the unit as an official government facility.

9. Abbreviated Call and Answer.

- a) After the communications have been established, the call sign of the called station may be omitted.

(1) This is also allowed only when no confusion will result between the stations.

**"122 THIS IS ANNAPOLIS OVER"**

(2) The abbreviated reply to the abbreviated call is:

**"THIS IS 122, OVER"**

10. Collective Call.

- a) A Collective call is one that includes a group of stations usually operating together. They are prescribed and used when many transmissions are expected to be sent to all the concerned stations.

11. Phonetic Spelling.

- a) The procedure for spelling difficult words is to use the pro-words "**I SPELL**", followed by the word in phonetics:

**THE NAME OF THE OWNER IS MILJANOVITCH, I SPELL MIKE INDIA  
LIMA JULIETT ALPHA NOVEMBER OSCAR VICTOR INDIA TANGO  
CHARLIE HOTEL, MILJANOVITCH**

12. Repetitions.

- a) When words are missing or are doubtful, repetition is requested by the receiving station. The pro-words "**SAY AGAIN**", alone or with the pro-words "**ALL BEFORE**", "**ALL AFTER**", "**WORD BEFORE**", "**WORD AFTER**", and "**TO**" to indicate how much to repeat, is used for this purpose. In complying with such requests, the transmitting station identifies that portion to be repeated.
- b) An example of this is Coast Guard Auxiliary vessel 42122 has sent a message to Coast Guard Auxiliary vessel 34013. 34013 missed the word following "boat".

34013 transmits (using an abbreviated call)

**"THIS IS 13 - SAY AGAIN WORD AFTER BOAT - OVER"**

42122 transmits (using abbreviated call)

**"THIS IS 122 - I SAY AGAIN WORD AFTER BOAT - SIGHTED - OVER"**

- c) Having received the doubtful portion of the message, 34013 receipts for the entire message with:

**"THIS IS 013 - ROGER - OUT"**

13. Correcting an Error.

- a) When an error is made by a transmitting operator, the pro-word **"CORRECTON"** is sent. The operator then repeats the last word or phrase correctly sent, sends the correct words, and proceeds with the rest of the message. An example:

**"1305Q RECEIVED FROM SUBJECT ON CHANNEL 22A. HE WAS DISABLED TWO MILES NORTH OF HOWELL POINT. CORRECTION TWO MILES NORTHWEST OF HOWELL POINT"**

- b) The completed message, fully transmitted and concluded with the pro-words **"OVER"** or **"OUT"**, requires a new message to make a correction.

14. Cancelling a Message during Transmission.

- a) During the transmission of a message and prior to the transmission of the pro-words **"OVER"** or **"OUT"**, the message may be cancelled by the use of the pro-words **"DISREGARD THIS TRANSMISSION"**. A message which has been completely transmitted can only be cancelled by another message.
- b) An example of this: During the transmission of a message, Coast Guard Station Annapolis discovers it is being sent to the wrong station. At the place where the error is discovered the pro-words **"DISREGARD THIS TRANSMISSION"**, is inserted, followed by **"OUT"**.

**"COAST GUARD AUXILIARY VESSEL 22782 - THIS IS COAST GUARD ANNAPOLIS STATION ROUTINE TIME ZERO SIX ZERO TWO ZULU - BREAK COMMENCE PATROL AT DAWN SIXTEENTH - PROCEED - DISREGARD THIS TRANSMISSION - OUT"**

15. Read Back.

- a) When necessary to verify the accuracy of the reception or the recording of a message you are sending, use the pro-words **"READ BACK"**. Identify the message and that portion of the message you want read back. Transmit the

pro-words **"READ BACK"** immediately after the call and acknowledgement.

**"THIS IS 22782 - READ BACK TEXT - TIME ONE SIX THREE ZERO ZULU - BREAK - PATROL DELAYED ONE HOUR - BREAK - OVER"**

The reply would be:

**"THIS IS 39300 - I READ BACK TEXT - PATROL DELAYED ONE HOUR - OVER"**

The reply: **"THIS IS 782 - THAT IS CORRECT - OUT"**

16. Wrong.

- a) There are times when the transmission is distorted and the read back is incorrect. The pro-word **"WRONG"**, followed by the corrected version is transmitted. In the example given in Paragraph C.15, assume that 22782 made a mistake when transmitting the message back to 39300. 22782 must correct.

**"THIS IS 782 - WRONG - PATROL DELAYED ONE HOUR - OVER"**

39300 will reply:

**"THIS IS 300 - I READ BACK - PATROL DELAYED ONE HOUR - OVER"**

22782 replies:

**"THIS IS 782 - THAT IS CORRECT - OUT"**

17. Words Twice.

- a) The pro-words, **"WORDS TWICE"**, may be used when the communications are difficult.

An example:

**"22782 - 22782 - THIS IS - 39300 - 39300 - OVER"**

The replay is also with, **"WORDS TWICE"**.

**"39300 – 39300 - THIS IS - 22782 - 22782 - OVER"**.

39300 then sends the message:



**"22782 - 22782 - THIS IS - 39300 - 39300 - WORDS TWICE - WORDS TWICE - SUPPLIES REQUESTED - SUPPLIES REQUESTED - ARE ENROUTE - ARE ENROUTE - BREAK - OVER"**

18. Acknowledgement.

- a) An acknowledgement is a reply from an addressee indicating that a message has been received, is understood, and can be complied with. The word, **"ACKNOWLEDGE"**, which is not a pro-word, may also be used to request an acknowledgement. When used as a request, it must be the last word of the message text. An example (after the call and the acknowledgment of the call):

**"THIS IS - ANNAPOLIS - PROCEED TO GALESVILLE WITH THE DISABLED CRAFT - ACKNOWLEDGE - OVER"**

393000 wishes to consider the condition of the disabled craft before acknowledging and he transmits:

**"THIS IS - 300 - ROGER - WAIT OUT"**

If 39300 can acknowledge without evaluating the situation, he transmits:

**"THIS IS - 300 - WILCO - OUT"**

19. Relay.

- a) The pro-word, **"RELAY"**, used alone indicates the station called is to relay the message to all the addressees. The word, **"RELAY TO"**, followed by an addressee, means that the station called is to relay the message to the station indicated. When more than one station is called, the call sign of the station to relay precedes the pro-word **"RELAY TO"**.

20. Auxiliary Facility Under Operational Orders.

- a) The operational messages from the Auxiliary facilities under official orders should be addressed to the command originating the orders. When necessary, these messages may be sent by relay.

21. Auxiliary Facility Not Under Operational Orders.

- a) The messages from Auxiliary facilities not operating under official orders should be addressed to the nearest Coast Guard unit, or to the unit concerned with the subject of the message to be transmitted.

22. Transmitting Speed.

- a) "Never transmit faster than you can copy" is a good rule to follow. Transmit messages in short phrases and not word by word.

23. News Category Broadcasts by Auxiliary Units.

- a) No information concerning any operational action by the Coast Guard Auxiliary units or the Coast Guard units may be released to the public news agencies. Such news releases may only be made by the Coast Guard.
- b) No Coast Guard Auxiliary unit may make public radio news broadcasts from an Auxiliary facility without the specific authority of the District Commander. The request for permission for such a broadcast must be made through and fully coordinated with the DIRAUX.

24. Confidential Status of an Auxiliary Radiotelephone Station.

- a) The unauthorized disclosure or the improper use of any information gained in the course of any official assignment of duties renders the Auxiliarist liable to legal action(s) under the security regulations.

25. Unusual Circumstances.

- a) The use of initiative and common sense are the rules to follow in all unusual circumstances.

26. False Messages.

- a) No person shall knowingly or willfully send by any communications system a false or forged message, or deliver or cause to be delivered to any person, a message falsely purporting to have been received by the Coast Guard Communication System.

D. RECEIVING MESSAGES

1. Introduction.

- a) The incoming messages are those communications addressed to or received by you for your action or information, and/or relay to the other addressee(s). Always be prepared to copy, that is, have paper, a copying surface (a notebook, a cleared hard surface, or a clipboard), and several pencils at the receiver location at all times. Do not use red pencils or pens, since normally the only light you should use at night on the bridge is a red light which renders red print invisible. A suitable light and timepiece must be located near the radiotelephone station.

2. Message.

- a) When the pro-word "**MESSAGE**" is received, it is a verbal order to copy all-of-the

message as it is received. The pro-word means "A message that requires recording is about to follow".

### 3. Abbreviations.

- a) The word "abbreviation", as used in this Chapter, means a shortened form of a word or phrase which will convey the same unmistakable meaning as though the word or phrase itself were written.
- b) Use of Abbreviations.
  - (1) The abbreviations are intended for Auxiliarists to use only to shorten the message recording, thereby saving time when receiving a message. The use of the abbreviations must be limited and kept within the confines of assured intelligibility. The overuse of the abbreviations places brevity above clarity with a resulting loss of message precision. To avoid misunderstanding, the use of abbreviations by the Auxiliary is restricted to those which are well recognized and fall into one of the following categories:
    - (a) The points of the compass and the chart coordinates.
    - (b) Military commands and activities.
    - (c) Titles, ranks, and grades.
    - (d) The geographic locations.
    - (e) Common dictionary abbreviations.
    - (f) Punctuation.

### 4. Abbreviations for Message.

- a) Refer to the abbreviation index.

### 5. Simple Message Format.

- a) The use of the Radiotelephone Log in Fig. 6-2 is suggested to make the message coping faster and easier for the Auxiliarist.

## E. SAMPLE MESSAGES

### 1. Introduction.

- a) This section summarizes the elements and provides examples of the messages which an Auxiliarist might originate, draft, and transmit. The message formats may differ slightly from District to District. Contact the Flotilla, Division, or District Communications Officers to determine if there are any district peculiarities in the message format or the desired text content.

RADIOTELEPHONE MESSAGE FORMAT		
ADMIN	FREQ. _____ MSG FILE NR. _____	STATION CALLSIGN _____
C A L L	Station(s) called: _____	
	<u>THIS IS</u> _____	
	Station calling: _____	
	<u>MESSAGE FOLLOWS</u>	
H E A D I N G	Precedence: <u>ROUTINE</u> <u>PRIORITY</u> Date-Time-Group _____ Z _____ <u>IMMEDIATE</u>	
	FROM _____	
	TO _____	
	INFO _____	
S E P A R A T I O N	ACCT _____	
	<u>BREAK</u>	
	UNCLAS *SAR Phase: <u>UNCERTAINTY</u> <u>ALERT</u> <u>DISTRESS</u> *SITREP NR. _____ * <u>AND FINAL</u>	
	Subj. or *case ident. _____	
T  E  X  T	Ref: A. _____	
	Body: 1. _____	
	_____	
	_____	
S E P A R A T I O N	_____ * CASE CLOSED	
	<u>BREAK</u>	
	Final insts: <u>WAIT</u> <u>CORRECTION</u> <u>DISREGARD THIS TRANSMISSION</u> Ending sign: <u>OVER</u> <u>OUT</u>	
	ADMIN TOR/TOD _____ BY _____	

FIGURE 6-2 SAMPLE MESSAGE FORM

## 2. General Outgoing Message Format.

a) The basic elements of the text of an outgoing message are explained as follows: (Whenever any of the elements listed are not required, they should be omitted.)

- (1) UNCLAS. Always the first word in a message text since all Auxiliary messages are Unclassified.
- (2) Subject Line. Must be brief and concise (e.g., SITREP for Situation Report, MOVREP for Movement Report, Overdue Vessel Flare Sightings, etc.).
- (3) Reference Line. Identifies the reference material relative to the textual content. The references should normally be available to all the addressees. All the references in the text to these references shall be stated as "REF A", "REF B", etc.
- (4) Body of Text. This contains the message information.

- (a) The paragraphs are numbered.
  - (b) The sub-paragraphs are indented and lettered.
  - (5) A radio operator may receive case information directly from the reporting source (R/S). Sample check sheets for SAR, Overdue, and Flare Sighting Reports can be found in Paragraph H.
3. Pleasure Cruise Available for SAR.

- a) This type of message may be sent when departing on a pleasure cruise or other outing to advise the Coast Guard of your availability for deployment.
- b) The suggested text for this type of message is:

BT  
UNCLAS  
AVAILABILITY FOR SAR

- (1) The time and the place departing.
- (2) The operating area.
- (3) The planned time and place of return.
- (4) The total number of persons onboard and the number of Auxiliarists onboard.

BT

An example follows:

**R 011105Z APR 06  
FM COGARDAUX 25894  
TO COMCOGARDSEC NEW ORLEANS LA  
BT  
UNCLAS  
AVAILABILITY FOR SAR  
1. 0500s DEPARTED EMPIRE, LA  
2. OPERATING GULF OF MEXICO SW PASS TO GRAND  
ISLE  
3. ETR EMPIRE 1700s  
4. 4 POB INCL 2AUX  
BT**

- c) If you send an Availability message, you must also send a message before securing

your radio watch. The suggested text for this type of message is:

BT  
UNCLAS  
A. MY (Date-Time-Group of your U/W message)  
(1) Time Secured

An example follows:

**R 012135Z APR 06**  
  
**FM COGARDAUX 25894**  
**TO COMCOGARDGRU NEW ORLEANS LA**  
**BT**  
**UNCLAS**  
**A. MY 011105Z APR 96**  
**(1) 15258 SECURED**  
**BT**

4. Patrols.

- a) Patrols, whether Safety, Regatta, ATON, etc., usually require a minimum of two messages, one stating the time the patrol commences, and the other stating the time the patrol secures. Both of the messages should be address to the Sector Commander or the Coast Guard unit authorizing the patrol. If there is a significant time difference between the time underway and the time on station, separate "underway" and "on station" messages may be required.
- b) The suggested text for reporting a facility on station for patrol is:

BT  
UNCLAS  
AUXILIARY SAFETY PATROL  
(1) Time UNDERWAY/ON STATION Patrol Area  
(2) No. of Auxiliarists onboard  
BT

An example follows:

**R 152205Z JUN 96**  
**FM COGARDAUX 25894**  
**TO COMCOGARDSEC NEW ORLEANS LA**  
**BT**  
**UNCLAS**  
**AUXILIARY SAFETY PATROL**  
**1. 1700 UNDERWAY/ON STATION SOUTH BAY**

## **2. 4 AUX POB**

**BT**

- c) The suggested format for securing from a patrol is:

**BT**

**UNCLAS**

**A. MY (Date-Time-Group of your U/W message)**

- (1) Time OFF STATION/MOORED (Often the same time)
- (1) District policy may require additional information such as the total time underway, the number of assists and whether any damage occurred during the patrol.

An example follows:

**R 160322Z JUN 96**

**FM COGARDAUX 25894**

**TO COMCOGARDSEC NEW ORLEANS LA**

**BT**

**UNCLAS**

**AUXILIARY SAFETY PATROL**

**A. MY 152205Z JUN 96**

- 1. 2215R MOORED NEW CANAL PATROL SECURED**
- 2. TIME U/W 5 HRS**
- 3. ASSISTS 2**
  - A. C/C SANDY DISABLED**
  - B. F/V BIG ROCK AGROUND**
- 4. NO DAMAGE THIS UNIT**

**BT**

- a) Any damage incurred to the patrol unit should be reported a separate message as directed by the DIRAUX. Assists are reported in SITREP format.

## **5. Situation Report (SITREP).**

- a) The Situation Report message commonly referred to as a "**SITREP**", is addressed and transmitted as per instructions contained in the District OPLAN and/or COMPLAN. A PRIORITY (P) or IMMEDIATE (O) precedence is used for all SITREPs except the final SITREP which may be sent ROUTINE (R) if the nature of the situation so dictates.
- b) All SITREP messages relative to any one situation sent by any unit are serially numbered. The last SITREP message concerning the situation states the last serial number and the words, "AND FINAL", in the subject line of the text, following the

word "UNCLAS". Then the entire case is complete "AND FINAL". All SITREP messages, having the word, "FINAL", at the beginning of the text, must conclude with the words, "CASE CLOSED THIS UNIT".

- c) Consecutive SITREP messages relative to the same case should not repeat the information stated in a prior SITREP.
- d) The emergency phase is identified in the SITREP message as UNCERTAINTY, ALERT, or DISTRESS, as appropriate. Omit the emergency phrase in the final SITREP.
- e) The SITREP messages should follow a standard format. It is intended to furnish enough data so that the addressee need not refer to the standard format to understand the message. Be brief but clear. Paragraphs and sub-paragraphs of the format pertinent to the case are numbered, lettered, and indented as appropriate.
- f) The suggested format of the SITREP is:

BT

UNCLAS

SITREP Number (AND FINAL on the last SITREP)

(Phase) uncertainty, alert, distress (delete if FINAL SITREP)

(Case identification) Vessel name and/or number and problem (i.e. sinking, aground, adrift, taking on water, etc)

A. (References to previous messages when applicable)

Paragraph 1. Situation sub para:

A. Description of distress and position. (Include source of report of incident.)

B. Description of vessel.

C. POB, name, address and phone number of Owner and operator, names and ages of crew.

D. Survival, signaling and communications equipment including radio frequencies board distressed vessel.

E. Weather on scene (wind, visibility, sea conditions, precipitation).

F. Additional information on situation not already covered by the above.

G. Your position (initial SITREP).

Paragraph 2. Action Taken sub para:

A. Local time of each action followed by the action you have taken. (Underway, enroute scene, speed, course, estimated time of arrival, commenced attempt to dewater, evacuate personnel, extinguish fire, took subject in tow, etc.)

Paragraph 3. Future Plans and Recommendations sub para:

A. Your intentions when on scene, etc.

B. What assistance, in your opinion, would be beneficial to the proper prosecution of the case.

(Helicopter for search, C.G. units with pumps, etc.)

Paragraph 4. Amplifying information such as damage to ATON's, pollution or



anything not covered in previous paragraphs. (USE ONLY AS NEEDED.)  
Paragraph 5. Case Closed This Unit (USE ONLY ON FINAL SITREP, DO NOT  
USE PARA 5 ON CASE STILL IN PROGRESS)  
BT (Break)

Sample SITREPs follow:

Sample SITREP #1:

**0 241435Z JAN 06**  
**FM COGARDAUX 42122**  
**TO COMCOGARDSEC NEW ORLEANS LA**  
**INFO COGAR.DSTA NEW CANAL LA**  
**COGAR AIRSTA NEW ORLEANS LA**  
**BT**  
**UNCLAS**  
**DISTRESS SITREP ONE C/C SHADY LADY LA 231 FA**  
**SINKING**  
**1. SITUATION**  
**A. 0815 RECD DISTRESS CALL FM SUBJ ON VHF CH 16 SUBJ LOC 5**  
**MI WEST OF NORTH DRAW OF LAKE PONTCHARTRAIN**  
**CAUSEWAY. SUBJ RPTD STRIKING SUBMERGED OBJECT HOLING**  
**HULL STBD SIDE FWD BEWW WATERLINE. EST CAN STAY**  
**AFLOAT 1 HR.**  
**B. DESC 42 FT C/C WHITE HULL AND DECK WITH BLUE CABIN**  
**C. 2 POB**  
**D. PFD UNK**  
**E. WX, WIND NE 5 KTS, SEA CALM, VIS 8 MI**  
**F. 0815s SHY BELLE POS 8 MI NORTH OF NEW CANAL STATION**  
**2. ACTION TAKEN**  
**A. 0815s U/W ENR SCENE SOA 32 KTS, ETA 0850s.**  
**3. FUTURE PLANS AND RECOMMENDATIONS**  
**A. REQUEST UTB FM NEW CANAL BE DISPATCHED WITH ADDL**  
**DEWATERING EQUIP**  
**B. REQUEST ACFT BE LAUNCHED FOR POSITION CONFIRMATION**  
**BT**

Sample SITREP #2:

**P 241615Z JAN 06**  
**FM COGARDAUX 42122**  
**TO COMCOGARDGRU NEW ORLEANS LA**  
**INFO COGARDSTA NEW CANAL LA**  
**COGARDAUX ACFT 3156B**  
**BT**

**UNCLAS**

**DISTRESS SITREP TWO C/C SHADY LADY LA 231 FA SINKING**

**1. SITUATION**

- A. 0/0 JOHN A HANCOCK, 117 NORTH RAMPART ST, APT 307, NEW ORLEANS, PHONE 524-9116, CREW; BELLE STARR, 415 BOURBON ST, NEW ORLEANS**

**2. ACTION TAKEN**

- A. 0830s CGAUX ACFT 3165B LOCATED SUBS IN RPTD POS AND VECTORED UNITS TO SCENE.**
- B. 0850s ARRIVED ON SCENE AND COMMENCED DEWATERING**
- C. 0900s SECURED TARPAULIN OVER DAMAGED SECTION OF HULL USING LINES FROM DECK**
- D. 1000s CG 41330 ARRIVED ON SCENE AND TRFD ADDL DEWATERING PUMP TO SUBJ**
- E. 1010s CG 41330 TOOK SUBJ IN TOW ENR NEW CANAL, SOA 5 KTS, ETA 1400s**
- F. 1012s CGAUX ACFT 3165B DEP SCENE**

**3. FUTURE PLANS AND RECOMMENDATIONS**

- A. 0/0 REQUESTS GRUCOM CONTACT SCARIANO SHIPYARD AND ARRANGE FOR HAUL OUT UPON ARRIVAL**
  - B. THIS UNIT WILL ESCORT UNLESS OTHERWISE DIRECTED**
- BT**

Sample SITREP #3 and FINAL:

**R 242050Z JAN 06**

**FM COGARDAUX 42122**

**TO COMCOGARDGRU NEW ORLEANS LA**

**INFO COGARDSTA NEW CANAL LA**

**BT**

**UNCLAS**

**SITREP THREE AND FINAL C/C SHADY LADY LA 231 FA SINKING**

**1. ACTION TAKEN**

- A. 1410s MOORED SUBJ SCARIANO SHIPYARD**
- B. 1415s SUBJ HAULED**
- C. 1430s CG 41330 SECURED FROM CASE**
- D. 1445s 42122 SECURED FROM CASE**

**2. NO DAMAGES THIS UNIT**

**3. CASE CLOSED THIS UNIT**

**BT**

- g) If you are involved in an uncomplicated and short case, a SITREP ONE AND FINAL may be all that is indicated. This special SITREP is used when the case is completed before any messages are sent. The same basic format is used as follows:

Sample SITREP #1 and FINAL:

**P 232015Z AUG 06  
FM COGARDAUX 34013  
TO COMCOGARDGRU NEWORLEANS LA  
INFO CGC PT ESTERO  
BT  
UNCLAS  
SITREP ONE AND FINAL F/V PAM BAY TAKING ON WATER**

**1. SITUATION**

- A. 1350R SUBJ ADVISED CGC PT ESTERO ON THE VHF CH 16 THAT HE WAS TAKING ON WATER AT THE NORTH END OF FREEMASON ISLAND**
- B. DESC 65 FT F/V WHITE HULL AND CABIN, GRAY DECK**
- C. 2 POB, MASTER J B HARRIS, 2205 SMITH DR, PENSACOLA, FL, PHONE 305-887-6187**
- D. OWNER, AJAX SEAFOOD CO, 203 WEST DR, PANAMA CITY, FL**
- E. WX: WIND NE 5 KTS, SEAS CALM, VIS 8 MI**
- F. 1305R F/V PAM BAY LOC 5 MI EAST OF FREEMASON ISLAND IN BRETON SOUND**

**2. ACTION TAKEN**

- A. 1310R U/W ENR SCENE**
- B. 1320R LOC SUBJ IN POS 30-49.7 N, 88-58.4 W**
- C. 1340R TRFD PUMP TO SUBJ AND COMMENCED DEWATERING**
- D. 1405R DEWATERING COMPLETE. LEAK DUE BROKEN WATER HOSE REPAIRED**
- E. 1408R SUBJ U/W UNDER OWN POWER. NO FURTHER COGARD ASSISTANCE REQUIRED**

**3. NO DAMAGE THIS UNIT**

**4. CASE CLOSED THIS UNIT**

**BT**

**6. Medico SITREP.**

- a) This special form of the SITREP is used in a situation requiring medical advice from the Coast Guard and/or evacuation of the patient as a result of that advice.

The IMMEDIATE (O) precedence is normally used for the MEDICO messages.

- b) The suggested format for the MEDICO message is:

BT

UNCLAS

MEDICO SITREP (Number)

(Case Identification)

1. SITUATION

- A. (Source of information, what has happened to patient)
- B. (Patient 's name, address, phone, age)  
(patient is/is not conscious, pulse rate, breathing, temperature, additional information describing the vital signs)
- C. (Location of patient, destination, course, speed)
- D. (Radio frequencies available)
- E. (Weather on scene, wind, visibility, sea state, fog, precipitation)
- F. (Name of vessel's owner)
- G. (Medication administered)
- H. (Skipper does/does not request evacuation of patient)

An example follows:

**O 170241Z DEC 05**

**FM COGARDAUX 39300**

**TO CCGD EIGHT NEW ORLEANS LA**

**INFO COMCOGARDSEC NEW ORLEANS LA**

**COGARDAIRSTA NEW ORLEANS LA**

**BT**

**UNCLAS**

**MEDICO SITREP ONE M/V EXPLORER**

**1. SITUATION**

- A. 2020s SUBJ ADVISED ON VHF CH 16 THAT AT 2000s A CREW MEMBER SUFFERED COMPOUND FRACTURE OF UPPER LEFT ARM**
- B. VICTIM J E JONES, MALE, AGE 24, OF GOLDEN MEADOW, LA ZIP 70003**
- C. VICTIM CONSCIOUS, PULSE RAPID, BREATHING SHALLOW, NORMAL TEMP, BLEEDING SLIGHTLY WHERE BONE PROTRUDING THRU SIDE OF ARM**
- D. 2000s SUBJ POS 25 MI SSE GRAND ISLE, LA. CSE 020T, SOA 8 KTS**
- E. COMMSVHF CH 6, 16, 18, AND 22. 30 MIN COMM SKED ON CH 22**
- F. WX: WIND ENE 10 KTS, SEAS 2 FT, VIS 4- 6 MI, OCC FOG**
- G. OWNER, GULF EXPLORATION INC., GRAND ISLE, LA. PHONE 504-894-7653**

**H. MEDICATION ON BOARD ASPIRIN, IODINE, GAUZE AND TAPE, THREE ASPIRIN ADMINISTERED AND PRESSURE BANDAGE APPLIED OVER WOUND. NO ONE ON BOARD ABLE TO RESET BONE**

**I. MASTER REQUESTS EVACUATION OF VICTIM**

**2. FUTURE PLANS AND RECOMMENDATIONS**

**A. CONTINUE COMM SKED**

**B. REQUEST CONTACT OWNER AND ADVISE SITUATION**

**BT**

7. Aid-to-Navigation Discrepancy.

- a) The malfunction of an Aid-to-Navigation is a hazard to the safety of navigation. Such a discrepancy should be promptly reported by message with PRIORITY (P) precedence to the local Coast Guard station or group.
- b) The suggested text for such a format is:

BT

UNCLAS

(Name of Aid and number as stated in the current Light List)

(1) (Time) SUBJ AID OBSERVED (State the type of discrepancy noted)

A sample follows:

**P 040330Z JUN 06**

**FM COGARDAUX 24895**

**TO COMCOGARDSEC NEW ORLEANS LA**

**BT**

**UNCLAS**

**SOUTH PASS LB3 LLNR 803**

**1. 2215R SUBJ AID OBSERVED EXTINGUISHED**

**BT**

F. SIGNALING

There are occasions when the radio equipment may fail or there is no common language between the stations involved and it is necessary to communicate by flag or Morse code signals. It is recommended the Auxiliarist keep onboard a copy of the International Code of Signals (United States Edition) H.O. No. 102, published by the U.S. Naval Oceanographic Office and available from the U.S. Government Printing Office, Washington, DC 20402. This book, which is printed in most countries in their language, contains common instructions on signaling methods and an extensive list of

the typical messages.

## G. COAST GUARD FORMS

1. The following forms are used by the Coast Guard for gathering data on an Initial SAR Check Sheet, an Unreported Overdue Vessel Report, and a Flare Sighting Report. These forms are presented to make the recording of data associated with the reports easier for the Auxiliarist.
2. The Initial SAR Check Sheet

Radio Call	Frequency:	High Site:	DF Bearing:
Type of Comms:		Original	Relay
Time:	Date:	UCN:	Initials:

**-- Initial SAR Check Sheet --**

<b>1. Position</b>		<i>Type of Position:</i>	
How determined?		<input type="checkbox"/> Lat/Long <input type="checkbox"/> Loran Lines <input type="checkbox"/> Geographic Reference	
<b>2. Number of Persons On Board</b>		Adults:	Children:
		Total:	
<b>3. Nature of Distress</b> (if PIW complete additional PIW box below)			
<b>4. Description of Vessel</b>		Name:	Length:
		Make:	Type:
<b>5. Have all persons on board the vessel put on Personal Flotation Devices / adequate number of PFD's available?</b> Y / N			

**\*\* ADVISE REPORTING SOURCE OF INTENDED ACTIONS AT THIS TIME \*\***

<b>6. Determine Initial Severity / Emergency Phase</b>	
<input type="checkbox"/> <b>Distress</b> <input type="checkbox"/> Dispatch Resources / Activate SAR Alarm <input type="checkbox"/> <i>Advise reporting source of Coast Guard's Actions</i> <input type="checkbox"/> Issue Urgent Marine Information Broadcast (UMIB) <input type="checkbox"/> Brief Group / District <input type="checkbox"/> Provide emergency instructions to vessel in distress <input type="checkbox"/> Complete additional check-sheets as situation dictates	<input type="checkbox"/> <b>Uncertainty</b> <input type="checkbox"/> <b>Alert</b> <i>Additional information is needed</i> <i>Complete one or more of the following:</i> <input type="checkbox"/> Supplemental Check-sheet <input type="checkbox"/> Overdue Check-sheet <input type="checkbox"/> Flare Sighting Check-sheet <input type="checkbox"/> MEDEVAC/MEDICO Check-sheet <input type="checkbox"/> Grounding Check-sheet

<b>Persons in the Water</b>		
Number:	Description:	<input type="checkbox"/> PFD - type/color:
Time:		<input type="checkbox"/> Exposure Suit
Confirmed? <input type="checkbox"/>		<input type="checkbox"/> Light

**\*\* Complete all of the above before shifting frequency; Complete below before hanging up phone \*\***

<b>Reporting Source</b>
Name:
Vessel Name:
Call back number (with area code):
<input type="checkbox"/> cell phone
<input type="checkbox"/> radio / call sign: / MMSI:
Address:

<b>On Scene Weather</b>			
Wind	Seas	Swells	Visibility
Weather Type			

- a) The purpose of the Initial SAR Check Sheet is to obtain reporting source information such as the nature of the distress, the number of persons onboard, the position of the vessel, the description of the vessel, and if all the persons onboard have PFDs on, along with other pertinent information.

### 3. The Unreported and Overdue Vessel Report.

#### UNREPORTED AND OVERDUE VESSEL

<p><b>PROCEDURES</b></p> <p><b>A. AWARENESS</b>          ____ 1. Fill out the INITIAL SAR CHECKSHEET.          ____ 2. Fill out the Overdue Vessel CHECKSHEET.          ____ 3. Assume or designate SMC.</p> <p><b>B. INITIAL ACTION</b>          ____ 1. Evaluate the emergency phase.          Consider:          ____ Wx (past, present, predicted).          ____ POB's health, age.          ____ Commitments of POB.          ____ Number of hours overdue.          ____ Size, type of vessel.          ____ Size of area involved.          ____ Comms capability.          ____ Expertise level of operator/crew.          ____ 2. Issue UMIB.          ____ 3. Brief SC.          ____ 4. Commence Pre/ExComms.</p> <p><b>C. PLANNING/ OPERATIONS</b>          ____ 1. Dispatch SRUs if appropriate.          ____ 2. Develop SAP.          ____ 3. Seek additional information from persons who may be aware of vessel's situation.          ____ 4. Designate one POC for the NOK. Keep NOK informed of progress.          ____ 5. Continue to analyze all possible scenarios.</p> <p><b>D. MISSION CONCLUSION</b>          ____ 1. Close the case or request ACTSUS.          ____ 2. Dealert SRUs.          ____ 3. CX UMIB.          ____ 4. Debrief.          ____ 5. Case administration.</p>	<p>Complete both sides of this checksheet.          One of the following might be reason to immediately launch an asset:          Sig Hrs Overdue, Medical Concerns, Commitments, WX History, Age of POB</p> <hr/> <p>VSL LPOC: _____ Date / Time: _____          Did R/S confirm departure: Y / N</p> <p>VSL NPOC: _____ Date / Time: _____          Did R/S confirm non-arrival: Y / N</p> <p>Intended Route: _____</p> <p>POB: Adults: _____ Children: _____ HRS OVERDUE: _____</p> <p>Have they taken this trip before: Y / N UNK          Do they usually stop over anywhere: Y / N UNK          Do they have a habit of being late: Y / N UNK</p> <p>Last comms DTG: _____ Method: (VHF, L/L, etc.): _____</p> <p>Intentions at last comms: _____</p> <hr/> <table border="1"> <tr> <td> <p><b>Vessel Description:</b></p> <p>Name: _____            Homeport: _____</p> <p>Type Vsl: PWR / Speed / Row / Sail            Reg/Doc #: _____            Length: _____ Ft / M            Make: _____ Draft: _____ Ft / M            Hull Clr: _____ Hull Mat: _____            S/S Clr: _____ Trim Clr: _____            Sail Clr: _____ Fuel O/B _____            Propulsion: I/B O/B I/O Single Twin            Prominent Features: _____</p> </td> <td> <p><b>Owner:</b>            Address: _____</p> <p>Phone: _____            Is he/she on board? Y / N</p> <p><b>**Contact Owner if not on Board**</b></p> <hr/> <p><b>Electronics Equipment:</b>  <u>Radar</u> <u>Fath</u> <u>GPS</u> <u>LORAN</u> <u>SATNAV</u>  <u>EPIRB</u> Type: _____</p> <p>Radios: VHF / HF / SSB / CB            Call sign: _____ Freqs: _____            Celular Phone: _____            Pager/Beeper: _____</p> </td> </tr> </table> <hr/> <p style="text-align: center;"><b>ADDITIONAL INFORMATION</b></p>	<p><b>Vessel Description:</b></p> <p>Name: _____            Homeport: _____</p> <p>Type Vsl: PWR / Speed / Row / Sail            Reg/Doc #: _____            Length: _____ Ft / M            Make: _____ Draft: _____ Ft / M            Hull Clr: _____ Hull Mat: _____            S/S Clr: _____ Trim Clr: _____            Sail Clr: _____ Fuel O/B _____            Propulsion: I/B O/B I/O Single Twin            Prominent Features: _____</p>	<p><b>Owner:</b>            Address: _____</p> <p>Phone: _____            Is he/she on board? Y / N</p> <p><b>**Contact Owner if not on Board**</b></p> <hr/> <p><b>Electronics Equipment:</b>  <u>Radar</u> <u>Fath</u> <u>GPS</u> <u>LORAN</u> <u>SATNAV</u>  <u>EPIRB</u> Type: _____</p> <p>Radios: VHF / HF / SSB / CB            Call sign: _____ Freqs: _____            Celular Phone: _____            Pager/Beeper: _____</p>
<p><b>Vessel Description:</b></p> <p>Name: _____            Homeport: _____</p> <p>Type Vsl: PWR / Speed / Row / Sail            Reg/Doc #: _____            Length: _____ Ft / M            Make: _____ Draft: _____ Ft / M            Hull Clr: _____ Hull Mat: _____            S/S Clr: _____ Trim Clr: _____            Sail Clr: _____ Fuel O/B _____            Propulsion: I/B O/B I/O Single Twin            Prominent Features: _____</p>	<p><b>Owner:</b>            Address: _____</p> <p>Phone: _____            Is he/she on board? Y / N</p> <p><b>**Contact Owner if not on Board**</b></p> <hr/> <p><b>Electronics Equipment:</b>  <u>Radar</u> <u>Fath</u> <u>GPS</u> <u>LORAN</u> <u>SATNAV</u>  <u>EPIRB</u> Type: _____</p> <p>Radios: VHF / HF / SSB / CB            Call sign: _____ Freqs: _____            Celular Phone: _____            Pager/Beeper: _____</p>		

# **UNREPORTED AND OVERDUE VESSEL**

<b>SURVIVAL EQUIPMENT::</b> PFD's:           Y   N   UNK Flares:           Y   N   UNK Flashlight:       Y   N   UNK Dye:             Y   N   UNK Mirror:           Y   N   UNK Smoke Marker    Y   N   UNK Smoker           Y   N   UNK Spotlight:       Y   N   UNK AUX elec pwr:    Y   N   UNK Radar Reflector:Y   N   UNK Drogue:           Y   N   UNK Anchor:           Y   N   UNK Anchor Line:     Y   N   UNK Food:             Y   N   UNK Water:            Y   N   UNK Raft:             Y   N   UNK Description: Dinghy:           Y   N   UNK Description:	<b>OPERATOR:</b> Address:  Phone: POC/NOK: Phone: Experience w/ boat: Y / N Experience in area: Y / N Swimmer: Good Fair Poor Non Clothing: Desc: HT:   WT:   Eyes: Hair:   Race:   Age: Health: Good Fair Poor Unk Commitments:
<b>VEHICLE:</b>  Make: _____ Model: _____ Licence NR: _____ Color: _____ Trailer Lic: _____ Color: _____  Second Vehicle:  Licence NR: _____ Color: _____ Trailer Lic: _____ Color: _____	<b>PASSENGER:</b> Address:  Phone: POC/NOK: Phone: Experience w/ boat: Y / N Experience in area: Y / N Swimmer: Good Fair Poor Non Clothing: Desc: HT:   WT:   Eyes: Hair:   Race:   Age: Health: Good Fair Poor Unk Commitments:
Wind: _____ / _____ Seas: _____ / _____  Vis: _____ Sea Temp: _____	<b>PASSENGER:</b> Address:  Phone: POC/NOK: Phone: Experience w/ boat: Y / N Experience in area: Y / N Swimmer: Good Fair Poor Non Clothing: Desc: HT:   WT:   Eyes: Hair:   Race:   Age: Health: Good Fair Poor Unk Commitments:
<b>ADDITIONAL NOTES:</b>    	



#### 4. The Flare Sighting Report.

##### FLARE SIGHTING

<b>PROCEDURES</b>	<b>OBTAIN A CLEAR MENTAL PICTURE OF WHAT THE R/S OBSERVED</b>		
<b>A. AWARENESS</b> ____ 1. Fill out the INITIAL SAR CHECKSHEET. ____ 2. Fill out the FLARE SIGHTING checksheet. ____ 3. Assume or designate SMC.	DTG of Report: _____ Reporting Source Name: _____  Address: _____ Phone: _____		
<b>B. INITIAL ACTION</b> ____ 1. Attempt to correlate w/ other SAR incidents. ____ 2. Brief SC. ____ 3. If other than red, orange, or white, and no correlating incidents exist, retain report for future reference. ____ 4. Evaluate emergency phase. ____ 5. Issue UMIB.	Flare color: RED AMBER WHITE GREEN OTHER: _____ # Observed: _____ Type of flares: PARACHUTE HANDHELD METEOR OTHER: _____ Time interval between flares: _____ Duration of burn: _____ Trajectory: RISE FALL ARC STEADY OTHER: _____ Additional Information: _____		
<b>C. PLANNING/ OPERATIONS</b> ____ 1. Dispatch SRU. ____ 2. Develop SAP. ____ 3. Contact local agencies/ DOD units; check for pyro exercises in area. ____ 4. Have R/S vector SRU to scene. ____ 5. Conduct PRECOMS/solicit info from local contacts. ____ 6. SRU question all vsls/people in area for further info. ____ 7. If origin located, confirm that the subj fired a flare. ____ 8. Prep for next/first light search.	R/S Position: _____  Position Uncertainty: _____		
<b>D. MISSION CONCLUSION</b> ____ 1. Close the case or request ACTSUS. ____ 2. Dealert SRU. ____ 3. CX UMIB. ____ 4. Debrief. ____ 5. Case administration.	<b>DETERMINE THE ANGLE OF ELEVATION</b> To determine the angle of elevation, particularly from the inexperienced R/S, ask the R/S to hold his/her arm at arm's length, make a fist, and place the bottom of the fist on the horizon. If the elevation of the flare is ABOVE the fist, the angle is greater than 8 degrees. Any elevation above 8 degrees can be approximated as the distance to the flare is within 1 NM. If the elevation is BELOW the top of the fist, ascertain how high up the fist, i.e. 1/4, 1/2, 3/4 or number of fingers. The distance to the source of the flare is much greater for any angle below 8 Degrees. The conversion tables from the CG Addendum to NSM (pg 2-45) are reproduced on the back of this checksheet for convenience.  Angle of Elevation: _____deg NLT: _____deg NMT: _____deg How Determined: _____ <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">           Distance from R/S based on            angle of elevation (as per NSM):            NLT: _____nm + / - _____nm            NMT: _____nm + / - _____nm         </td> <td style="width: 50%;">           Bearing from R/S:            _____deg T / M + / - _____deg         </td> </tr> </table> Apparent origin of flare: SURFACE AIR OTHER: _____ Relation to the horizon: ABOVE BELOW ON OTHER: _____ R/S height of eye: _____ Any vsls or aircraft sighted in vic: _____ Obstruction in line of sight: TREES BLDGS OTHER: _____ O/S Weather: Wind: ____/____ Seas: ____/____ Vis: ____ Sea temp: ____ Additional notes: _____ If R/S is on a vessel, will R/S respond to sighting: Y / N ETA O/S: _____ Intended action by R/S: _____ If R/S is on land, will R/S remain by the phone to vector SRU: Y / N Advise R/S of Coast Guard intentions: _____	Distance from R/S based on angle of elevation (as per NSM): NLT: _____nm + / - _____nm NMT: _____nm + / - _____nm	Bearing from R/S: _____deg T / M + / - _____deg
Distance from R/S based on angle of elevation (as per NSM): NLT: _____nm + / - _____nm NMT: _____nm + / - _____nm	Bearing from R/S: _____deg T / M + / - _____deg		

### FLARE SIGHTING

TYPE	TRAJECTORY	AVERAGE HEIGHT	CANDLEPOWER NOMINAL RANGE****
METEOR*	RAPID RISE AND FALL	200 - 675 FT	10,000-30,000 15 – 17 NM
PARACHUTE**	RAPID RISE/ SLOW DESCENT	200 – 1200 FT	20,000 – 40,000 14 – 20 NM
HANDHELD***	STEADY	ASSUME 10 FT	500 – 15,000 8 – 16 NM
*Meteor flares have no minimum altitude requirements. **Parachute flare requirements by SOLAS: 300 Meter (990') height, 30K candlepower ***Handheld candlepower requirements: USCG – 500; SOLAS – 15,000 ****Nominal Range: Allard's Law Nomogram for 10nm visibility & no moon.			

CONVERT ESTIMATED "NOT MORE THAN" VERTICAL ANGLE TO ESTIMATED MINIMUM DISTANCE OF FLARE FROM OBSERVER				
ESTIMATED "NMT" VERTICAL ANGLE		TYPE OF FLARE		
DEGREES	HANDS (FIST)	HANDHELD	METEOR	PARACHUTE
On the horizon or too small to estimate		0.1	1.0	4.0
2	¼	0.05	0.5	2.0
4	½	0.00	0.25	1.00
8	1	0.00	0.1	0.5
16	2	0.00	0.05	0.2
24	3	0.00	0.00	0.15
32	4	0.00	0.00	0.1
DISTANCE IN NAUTICAL MILES				
<b>NOTES:</b> (1) If estimated "NMT" value is not listed, use the next greater entering value to yield the least minimum distance. (2) This table for observers at or less than 20' elevation.				

CONVERT ESTIMATED "NOT LESS THAN" VERTICAL ANGLE TO ESTIMATED MINIMUM DISTANCE OF FLARE FROM OBSERVER				
ESTIMATED "NLT" VERTICAL ANGLE		TYPE OF FLARE		
DEGREES	HANDS (FIST)	HANDHELD	METEOR	PARACHUTE
On the horizon or too small to estimate		6.0	28.0	30.0
2	¼	4.0	24.0	26.0
4	½	2.0	6.0	8.0
8	1	1.0	3.0	4.0
16	2	0.5	1.0	1.5
24	3	0.25	0.5	0.75
32	4	0.1	0.25	0.5
Distance in Nautical Miles				
<b>NOTES:</b> (1) If estimated "NLT" value is not listed, use the next lesser entering value to yield the greatest maximum distance. (2) This table for observers at or less than 20' elevation.				
ADDITIONAL INFORMATION:				

## H. CHAPTER SIX STUDY QUESTIONS

1. Why is the knowledge of message types and formats important for an Auxiliarist? *(page 1)*
  - a) A proper understanding of messages is necessary if you are to function as an effective Auxiliarist.
  - b) To distinguish between authentic and false messages.
  - c) To help understand the message.
  - d) To enable the Auxiliarist to make any corrections to the message.
2. What are the three basic types of messages? *(page 1)*

- a) Single Address, General Message, Routing Address
  - b) Single Address, Multiple Address, General Message
  - c) Single Address, Multiple Address, Routing Address
  - d) Single Address, Multiple Address, Return Address
3. What is the key responsibility of a message originator? (*page 2*)
- a) Transmit the message.
  - b) Prepare the message.
  - c) Determine if a message is necessary.
  - d) Follow-up on the message.
4. What are the major parts of a message and their locations in the message format? (*page 2*)
- a) Heading, lines 5-10; Text, line 12.
  - b) Heading, lines 5-10; Text, line 12; Ending.
  - c) Heading, lines 5-10; Ending.
  - d) Text, line 12; Ending.
5. What separates the parts of a message? (*page 3*)
- a) Break or BT.
  - b) Blank spaces.
  - c) Message blocks.
  - d) Dividing lines.
6. What are the message precedents and their corresponding abbreviations? (*page 4*)
- a) Z-Flash; O-Immediate; P-Priority; U-Urgent.
  - b) Z-Flash; P-Priority; U-Urgent; R-Routine.
  - c) Z-Flash; O-Immediate; P-Priority; R-Routine.
  - d) Z-Flash; O-Immediate; U-Urgent; R-Routine.
7. The Coast Guard communications organization operates on what time? (*page 5*)
- a) Universal Coordinated Time (UTC).
  - b) Local time.
  - c) Daylight savings time.
  - d) Washington DC Standard time.
8. What techniques should be utilized when using a microphone? (*page 9*) (*page 10*)
- a) Listen before transmitting.
  - b) Use standard pronunciation.
  - c) Avoid extremes of voice pitch, etc.
  - d) All of the above.
9. How should the distance 5,000 yards be spoken? (*page 11*)

- a) Fi-ve thou-sand yards.
  - b) Fi-ve thow-zand yards.
  - c) Fi-yiv thow-zand yards.
  - d) None of the above.
10. What is the pro-word to indicate numerals follow? *(page 11)*
- a) Numbers.
  - b) Figures.
  - c) Numerals.
  - d) Any of the above.
11. What is the meaning of the pro-word ROGER? *(page 14)*
- a) I have received your message, I understand, and will comply.
  - b) I have received the last transmission satisfactorily.
  - c) I am ending this transmission, no reply expected from you.
  - d) None of the above.
12. What is the meaning of the pro-word OUT? *(page 8)*
- a) I have received your message, I understand, and will comply.
  - b) I have received the last transmission satisfactorily.
  - c) I am ending this transmission, no reply expected from you.
  - d) None of the above.
13. What is the meaning of the pro-word WILCO? *(page 14)*
- a) I have received your message, I understand, and will comply.
  - b) I have received the last transmission satisfactorily.
  - c) I am ending this transmission, no reply expected from you.
  - d) None of the above.
14. What is the pro-word that indicates a reply is necessary? *(page 8)*
- a) WILCO
  - b) ROGER
  - c) OVER
  - d) OUT
15. You are transmitting a message by radiotelephone and before you have said OVER or OUT you discover that you have made an error. What is the proper procedure to correct it? *(page 17)*
- a) Stop transmitting and start from the beginning.
  - b) Transmit the word CORRECTION, return to the last word or phrase sent correctly, make the correction, and proceed with the rest of the message.

- c) Transmit the word CORRECTION and wait a second before continuing with the rest of the message.
  - d) Transmit the word CORRECTION, say OUT, and start from the beginning.
16. During the transmission of a message and prior to the transmission of the pro-word OVER or OUT, the message may be cancelled by the use of what pro-word? *(page 17)*
- a) Cancel this message.
  - b) Disregard this message.
  - c) Disregard this transmission.
  - d) Cancel this transmission.
17. Safety patrols usually require a minimum of two messages. What are they? *(page 24)*
- a) The time the patrol begins and the time the patrol secures.
  - b) The name of the coxswain and the names of the crew.
  - c) The name of the facility and the patrol area.
  - d) None of the above.
18. Who determines the addressee of a message? *(page 2)*
- a) The person sending the message.
  - b) The person receiving the message.
  - c) The originator of the message.
  - d) Any of the above.
19. What publication will assist in communicating with foreign vessels? *(page 31)*
- a) AUXCOM Manual.
  - b) Coast Guard Watchstander Manual.
  - c) The International Code of Signals, H.O., No. 102
  - d) None of the above.

## CHAPTER SEVEN - THE RADIOTELEPHONE LOG

### A. REQUIREMENTS

#### 1. General.

- a) Radio logs and formal message logs must be maintained on a current basis by the owner/operator of a radio facility. As outlined in Chapter Five, the mobile stations in vehicles, vessels, and aircraft do not have to make log entries when they are communicating with a fixed land Coast Guard or Auxiliary station. In these cases, the fixed land station is keeping the required log for the mobile station. If, one mobile station is communicating with another mobile station, the required log entries must be made by the mobile stations. Chapter Five further outlined the requirements for log retention, availability, and precautions to be taken in log keeping.

#### 2. Purpose.

- a) The purpose of this chapter is to explain how to fill the radio log keeping requirements of the Coast Guard through the use of a standard log book format and organization.

#### 3. Minimum Coast Guard Requirements.

- a) When an Auxiliary communications unit operates as a government station a record of the communications must be kept. This may be accomplished by recording in ink in a ledger or log book, tape recording communications, or by computer. All entries should be accurate, legible, readable, and made in such a manner that another communicator can interpret the log. The tape log recordings and the computer file disks must be retained the same as the hand written logs. Most stations will make transcripts of tapes or print hard copies of computer logs and file these in a log book binder. The log book should be divided into the following three sections.
  - (1) The Log Section contains the record of the communications as outlined in Paragraph A.4.b., below.
  - (2) The Message File Section contains a file of all the recorded messages transmitted or received.
  - (3) The Reference Section contains a file of all the information which the Auxiliarist may require for rapid reference relative to communications.
- b) Auxiliary communication units operating as government stations may use either the Log Section shown below in Fig. 7-1 or any format which contains the required format easily understood.

#### 4. Log Section.

- a) This section shall contain the sheets necessary for the recording of the required entries.
- b) The following entries are required by the Coast Guard and correspond with the suggested Sample Log Sheet below.
  - (1) The name of the vessel, aircraft, or facility written on each page.
  - (2) The call sign of the vessel, aircraft, or facility written on each page.
  - (3) The pages numbered in ascending sequence.
  - (4) The date of the log entries.
  - (5) The time zone abbreviation for the local time used.
  - (6) The time the watch has begun.
  - (7) When the time watch is interrupted or ended.
  - (8) The frequency used and guarded.
  - (9) The station called or the station calling.
  - (10) Message summary or the reference page number in the Message File section.
  - (11) The operator's signature. May be signed at the end of the watch by all operators making entries.

[illegible]

### Fig. 7-1 Radiotelephone Station Log





circumstances. The following suggested information is furnished only to serve as a guide to use in assembling the reference material which will best serve the local operational demands.

- (a) Phonetic alphabet
  - (b) Pro-words
  - (c) International code flag chart
  - (d) International Morse code alphabet and numerals
  - (e) Body signal chart
  - (f) Local Coast Guard locations, call signs, and phone numbers
  - (g) List of Coast Guard frequencies
  - (h) List of District Auxiliary communications units
  - (i) District, division, and flotilla facility rosters.
  - (j) List of state, county, and city patrol vessels
  - (k) Information list in order, as requested of distressed vessels
  - (l) SAR Incident Report (CG4612)
  - (m) Coast Guard Accident Report form
  - (n) State Accident Report form
  - (o) District communications, SAR, and regatta patrol instructions
  - (p) Local ambulance unit locations and phone numbers
  - (q) Sample message forms
  - (r) Local weather information broadcast schedules
- c) The use of the Operator's Notes (OP) in a log is very helpful when referring to past log entries. OP Notes such as "Safety Patrol", "Comms Drill ", "Weather Alert ", etc. will remind an operator of the situation which required the communications activity.

## B. CHAPTER SEVEN STUDY QUESTIONS

1. When operating as a government station, what is the minimum log requirement? (*page 1*)
  - a) Start time and end time.
  - b) Call sign and date.

- c) A written record of all communications with all messages recorded that another communicator can interpret.
  - d) Operator's name.
2. What are the three sections of a log? (*page 1*)
- a) Start, middle, and end
  - b) Log, Message File, and Reference
  - c) Log, Middle, and Reference
  - d) None of the above.
3. What are some of the suggested items to be kept in the reference file section? (*page 4*)
- a) Rosters
  - b) SAR Report Forms
  - c) Telephone numbers
  - d) All of the above.
4. When is an Auxiliary mobile facility required to maintain a radio log? (*page 1*)
- a) When in communication with a Coast Guard land station.
  - b) When in communication with an Auxiliary land station.
  - c) When not in communication with a fixed Coast Guard or Auxiliary land station.
  - d) None of the above.
5. What are OP notes? (*page 4*)
- a) Operational
  - b) Notes to remind the operator of the current situation for future reference.
  - c) Operational priority.
  - d) All of the above.

## CHAPTER EIGHT - COAST GUARD COMMUNICATIONS

### A. INTRODUCTION

1. Coast Guard communication is a wide-ranging topic from an organizational, an operational, and an administrative standpoint. Reliable communications are essential to the Coast Guard's extensive operations from search and rescue to port security. Auxiliary communications involves the use of the Coast Guard radio-telephone procedures. These procedures are designed for simplicity and clarity in voice communications. Uniformity is important, and Auxiliarists should be familiar with and adhere to the common procedures in this test.

### B. FREQUENCY ALLOCATION

1. Frequency Management.
  - a) Radio frequencies are allocated internationally to the various radio services (fixed, commercial broadcasting, radio navigation, marine mobile, etc.) through radio regulations that are part of the International Telecommunication Union Convention that is currently in force.
  - b) Based on these allocations, frequencies are assigned to U.S. government agencies by the National Telecommunications and Information Administration (NTIA) through the Inter-department Radio Advisory Committee (IRAC), acting for the President, and to all civil and non-federal government activities by the Federal Communications Commission (FCC). The Commandant (CG-62) coordinates, procures, assigns, and protects the frequency assignments for all the surface agencies within the Department of Homeland Security.
2. Coast Guard Voice Frequencies.
  - a) COMDTINST M2400.1F is the basic U.S. Coast Guard Frequency Plan which contains all the frequencies for U.S. Coast Guard and Auxiliary use. This publication contains information concerning frequency use, a frequency index, and lists of circuits.

### C. COAST GUARD ALL STATION BROADCASTS

1. Introduction.
  - a) The Coast Guard makes urgency, safety, and scheduled marine information broadcasts by various radio stations in each District. The broadcasts include information vital to the maritime interests in the vicinity of U.S. waters (including the Caribbean). Only voice broadcasts are considered here.
2. Urgency Broadcasts (PAN PAN).

- a) Urgency broadcasts are transmitted on 2.182 MHz and on Channel 16 (156.8 MHz) plus, if required, the District working frequency. Such broadcasts are preceded by the urgency signal. The Coast Guard broadcasts urgent information upon receipt, repeats it 15 minutes later, and repeats it during the scheduled broadcasts. These messages are relative to the safety of ships, aircraft, persons, etc.
3. Safety Broadcasts (SECURITE).
- a) Safety broadcasts are transmitted on 2.670 MHz and on Channel 22A (157.1 MHz). Such broadcasts are preceded by the Safety Signal. The times of the broadcast are the same as for the Urgency broadcasts. These messages are relative to the safety of navigation or are important meteorological warnings. The call announcing the broadcast is made on the calling channels in the area concerned.
4. Scheduled Broadcasts.
- a) The scheduled marine information broadcasts are transmitted on 2.670 MHz and on Channel 22A (157.1 MHz). These messages are relative to important notices to mariners, oceanographic information, storm warnings, and all urgent and safety broadcasts in which the information has remained unchanged (Urgency and Safety signals are not re-broadcast in the later use). The times of the broadcast are different among the various Districts.

#### D. COAST GUARD COMMUNICATIONS ORGANIZATION - DISTRICT

1. General.
- a) All District-wide communications instructions and procedures are published by the District Commander (d) in the District Operations Plan (OPLAN). In each Coast Guard District, the Chief, Telecommunications Branch (dt), under the District Commander, is responsible for the proper planning, organization, inspection, supervision, and coordination of all the communication activities within the District.
  - b) The primary communications facilities are the Communication Area Master Stations (CAMS). Below this level are the Sector commands and the individual radio-equipped units. The commanding officers and the Officers-in-Charge of the individual units are responsible for maintaining a reliable communications capability. Any radio equipped unit, ashore or afloat, speaks with the authority of its commanding officer or Officer-in-Charge.
  - c) The Group/Activity offices maintain discipline on the radiotelephone circuits in their areas of responsibility and speak with the authority of the commander.
  - d) The communications stations have overall control of all the radio circuits and speak for and with the authority of the commander. They maintain overall responsibility for circuit discipline on these circuits.

- e) Controls may also be delegated by the proper authority, as in the case of the on-scene-commander in a search and rescue (SAR) operation.
  - f) Auxiliarists should be familiar with any applicable additional information published in the District Operations Plan (OPLAN).
2. The communications equipment varies from facility to facility based on its specific mission and the type of vessels it must support. Most have VHF-FM equipment and may also have HF SSB equipment. Additionally, local landline data circuits are usually located in the telecommunication center and are operated by the personnel standing watch. VHF-FM is carried by all Coast Guard small boats. The communications equipment increases as the vessels get bigger. The buoy tenders usually carry HF SSB. The larger cutters may also carry satellite terminals, VHF and UHF equipment, and terminal equipment for the reception of data and facsimile information pertaining to weather and navigation.
3. The Coast Guard voice call signs (COMDINST M2300.7A) are used to address the Coast Guard units while communicating. First, identify the Coast Guard unit you are trying to call, or is calling you.
- a) If it is a land based unit, insert "Coast Guard" followed by a brief description of the type of unit.

**"COAST GUARD SECTOR HONOLULU"**  
**"COAST GUARD AIRSTATION BARBERS POINT"**

- b) If it is a vessel, insert "Coast Guard Cutter" followed by the name of the vessel.

**"COAST GUARD CUTTER JARVIS"**

- c) If it is an aircraft or a small boat, use their numbers as part of their call sign.

**"COAST GUARD 41203"**  
**"COAST GUARD 1500"**

- d) Aircraft and small boats engaged in search and rescue (SAR), insert "RESCUE" as part of their call sign.

**"COAST GUARD RESCUE 1500"**

- e) The phrase "COAST GUARD" may be dropped once communications has been established.

**"SECTOR HONOLULU"**  
**"CUTTER JARVIS"**  
**"RESCUE 1500" OR "1500"**

## E. COAST GUARD COMMUNICATIONS AND WATCHSTANDING

1. All Coast Guard sectors and many stations maintain a 24/7 communications watch on the local distress and calling frequencies. Auxilliary communicators are needed at many of these facilities to augment the assigned Coast Guard radio operators. Auxiliarists interested in becoming a communications watch stander should contact their Auxiliary Sector Commander (ASC) to learn how they can become qualified. Usually qualification will be completing the Group and Stations Communications Watchstander Qualification Guide, COMDTINST M16120.7A (Series). This is the same criteria the Coast Guard uses to qualify their watchstanders. There may be additional qualifications required as well as local area knowledge.

## F. CHAPTER EIGHT STUDY QUESTIONS

1. Since the Coast Guard is a government agency, the frequencies it uses are assigned by?  
(page 1)
  - a) FCC
  - b) DHS
  - c) NTIA
  - d) Any of the above.
2. The Coast Guard makes three types of all station broadcasts. What are they?  
(page 1) (page 2)
  - a) Urgency, scheduled marine information, and weather
  - b) Urgency, safety, and scheduled marine information
  - c) Urgency, safety, and news
  - d) Urgency, safety, and weather
3. Who is responsible for the coordination of the District's communications?  
(page 2)
  - a) Chief, Telecommunications Branch (dt)
  - b) District Commander (d)
  - c) District Staff Officer for Communications (DSO-CM)
  - d) District Commodore (DCO)
4. A radio operator speaks with whose authority? (page 2)
  - a) Auxiliary commander
  - b) DIRAUX
  - c) Their commanding officer or Officer-in-Charge.
  - d) None of the above.
5. Watchstander qualification by an Auxiliary Communications Specialist at a station will usually require completing what criteria? (page 4)
  - a) only AUXCOM

- b) only TCO PQS
- c) Communications Watchstanders Qualification Guide, COMDTINST M16120.7A (Series).
- d) Only A and B.

## CHAPTER NINE - RADIO DIRECTION FINDING

### A. INTRODUCTION

#### 1. General.

- a) Radio direction finding (RDF) is a valuable adjunct to the Auxiliary telecommunications. Members who are interested in establishing a RDF capability must first complete this course and have a working knowledge of piloting, navigation fundamentals, and related subjects. This knowledge may be obtained from specialty courses or acquired during military or commercial operations. Those members who own radio facilities will have a practical appreciation of VHF RDF operations and may have some of the equipment required. Members who are also Amateur Radio operators or Military Auxiliary Radio Service (MARS) members can usually provide technical guidance to assist in establishing a RDF capability.
- b) Many Auxiliarists express an interest in establishing a RDF capability without appreciating the constraints imposed on its operation by both technical and legal considerations. There two basic types of RDF units are manual and automatic. Both can be operated as fixed or mobile, including hand carried. While there is some "off the shelf" equipment available for automatic direction finding, it is expensive. The cheaper manual alternatives require a modest technical ability to assemble and operate. The casually interested member may be better off limiting their effort to a portable homing capability. This is not meant to discourage committed Auxiliarists, but rather to assure those interested are aware of, and willing to expend, the necessary funds, effort, and time to provide a RDF capability.

### B. APPLICATIONS

#### 1. VHF RDF has Five Applications.

- a) The location of distressed vessels equipped with operating VHF-FM marine radios. Typically, a vessel needing assistance with no accurate knowledge of its position.
- b) The location of the distress beacons. Many vessels now carry Emergency Position Indicating Radio Beacons (EPIRBs) which can be activated in a distress situation and transmit a distress signal on 406 MHz. After 2/1/2009, the USCG and other rescue personnel will only receive distress broadcasts alerts on digital 406 MHz. Aircraft carry a similar unit called an Emergency Locator Transmitter (ELT). While this frequency is not in the marine band, it can usually be received by commercially available scanners, especially 121.5 MHz or 406 MHz.



- c) The vectoring of SAR units. If a SAR unit does not have an operational RDF or radar capability, several RDF stations coordinating bearings to obtain a fix can direct the SAR resources to merge with a distressed vessel.
- d) Hoax investigation and localization. More and more hoax situations are occurring. The Coast Guard gets about 700 hoax MAYDAY calls each year, costing the Coast Guard about \$6 million to look for people who are not in distress. RDF is one way to locate these illegal transmitters. The Auxiliary can assist the Coast Guard in these efforts but must not be involved in any actual law enforcement operations.
- e) The locating of interfering signals. Open mikes, especially on a distress frequency, can render a channel useless in a local area. The mobile or portable RDF units are required to locate these, usually unintentional, transmissions. When pursuing and localizing these cases the Auxiliarist should use discretion, as with the hoax situations, and take no action of questionable liability.

### C. PRECAUTIONS

- 1. When engaged in RDF operations, an Auxiliarist must always remember that the mission is in support of a Coast Guard operation. The bearing information is only given to Coast Guard approved recipients and no one else. The bearing information should not be exchanged on the marine channels, as they are open and easily monitored by the public. Landline communication is the most secure means available to the Auxiliarists.
- 2. When using mobile or portable RDF equipment to locate a transmitter, an Auxiliarist is not allowed to enter or pass through private property without the express permission of the owner. An Auxiliarist has no law enforcement authority. Discretion must be used when engaging with the public during RDF. A boater must be informed that their radio has an "open mike", but cannot be ordered to correct the problem.
- 3. An Auxiliarist learning of a situation where RDF assistance may be required should always contact the Coast Guard authority coordinating the mission usually the SAR Mission Coordinator (SMC) prior to taking any action.

### D. THE THEORY OF OPERATION

- 1. Looking down at the earth's surface, radio waves spread outward from the transmitter like the ripples produced when a stone is thrown into a pond. As the distance from the antenna increases, the wave fronts become nearly flat. There are many receiving antenna systems, which can determine the orientation of these wave fronts. If a line is drawn perpendicular to these waves, it will point at the transmitting antenna. This is known as a single Line of Position (LOP). The operator knows the transmitter is located along this line but not where.

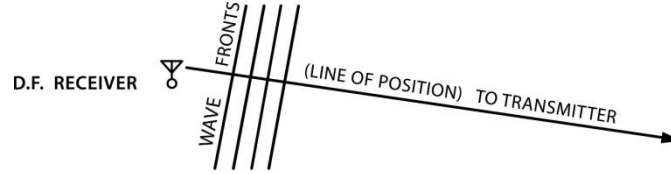


Fig. 9-1 Single Line of Position

2. If the RDF unit is mobile, it can be moved back and forth along the wave front and the multiple LOPs taken which should show a convergence of bearings, called a fix, at the transmitter location. If the unit is stationary, other RDF units in the area, either fixed or mobile, could take the required cross bearings to obtain a fix. The greater the number and angle of the LOPs, the more accurate the fix.
3. Determining the orientation of the wave front is usually accomplished by two or more antennas located near each other and properly connected (phased) with a display unit. They are rotated until they both receive the same wave front at the same time with the display unit indicating when the wave front is phased. This indication is usually visual or audible. When the RDF unit is in phase, the transmitting station is at right angles to the RDF antennas.

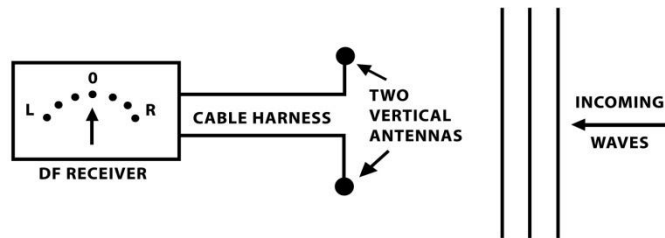


Fig. 9-2 RDF Unit with a Visual Display

4. Simple RDF units using only two antennas may give bi-directional bearings, that is, the operator will not know if the transmitter is ahead or 180 degrees behind the RDF unit. Additional bearings, either along the wave front or by other RDF units are required to determine the true direction of the bearing. Automatic RDF units, which use multiple antennas, do not have the bidirectional characteristic.
5. Bearings should be reported either as True or Magnetic bearings. Usually an RDF problem involving only small mobile or portable units is worked in Magnetic for convenience in navigational operations, while fixed stations are normally calibrated in True for direct plotting of the bearings. It is also equally important to know exactly where the RDF unit was located at the time the LOP was taken.

## E. EQUIPMENT

1. Most RDF antennas are different from communication antennas because an Automatic Directional Finder (ADF) antenna does not have gain capability. Therefore, many of the RDF units, especially automatic units have a switch built in that allows the operator to switch from RDF to communication capability. A typical installation is shown in Fig. 9-3.

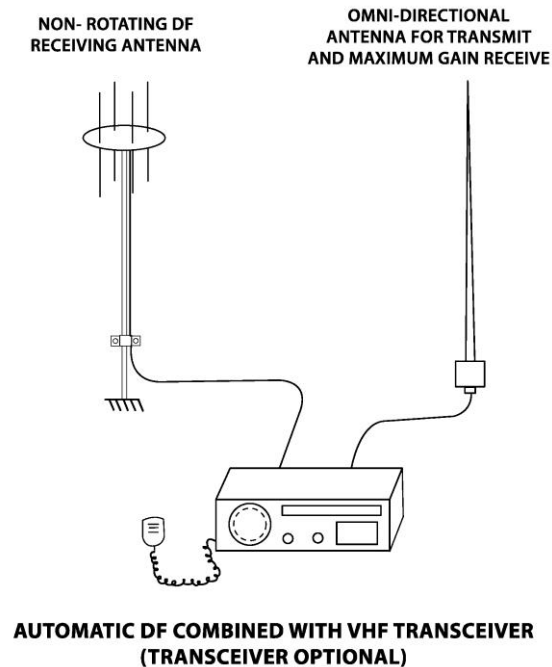


Fig 9-3 Automatic RDF

2. Once an RDF unit has been selected and installed, the antenna system must be calibrated. In vessels and in mobile units this is usually done by rotating the antenna so that zero degree LOPs are directly ahead thereby making all the RDF bearings to the vessel or mobile heading. At fixed stations, the zero degree LOP is oriented to True North, thereby making all the bearings True bearings.

## F. OPERATOR TRAINING

1. The reliability of RDF operations is only as good as the skill of the operator. VHF RDF is frequently subject to false readings from reflected and weak signals. RDF operators should periodically check the condition of their units on known signals. They should also frequently test their own capabilities by taking LOPs on mobile and weak to see just how well both they and the equipment are performing.

## G. CHAPTER NINE STUDY QUESTIONS

1. What type of bearing is usually taken by a mobile and a fixed RDF unit? *(page 3)*
  - a) Mobile units, including vessels, are usually taking relative bearings converting them into magnetic bearings while fixed units usually take True bearings.
  - b) Magnetic.
  - c) True.
  - d) None of the above.
2. What are the two basic types of RDF units? *(page 1)*
  - a) Automatic, electronic
  - b) Automatic, manual
  - c) Fixed, handheld
  - d) All of the above.
3. How does a RDF unit determine the LOP? *(page 2)*
  - a) By measuring the strength of the signal.
  - b) By measuring the strength of the wave front.
  - c) By drawing a line perpendicular to the wave fronts.
  - d) By measuring the phase relationship on the omni-directional antenna.
4. What law enforcement powers does an Auxiliarist have when locating an illegal transmitter? *(page 2)*
  - a) Citizens
  - b) Maritime
  - c) None
  - d) A and B.
5. Do automatic RDF units give bi-directional LOPs? *(page 3)*
  - a) Yes
  - b) No
  - c) Depends on the conditions.
  - d) Only give an omni-directional LOP.
6. What are some of the uses for RDF units? *(page 1) (page 2)*
  - a) Location of distressed vessel.
  - b) Location of distressed beacon.
  - c) Location of an interfering signal.
  - d) All of the above.

7. Several LOPs intersecting at a point is called? (*page 3*)
- a) An intersection
  - b) A fix.
  - c) A point.
  - d) None of the above.
8. The bearing information should only be given to? (*page 2*)
- a) Any requesting parties.
  - b) Coast Guard authorized recipients.
  - c) Boaters.
  - d) All of the above.

## CHAPTER TEN - RESCUE 21

### A. INTRODUCTION

1. Each year the Coast Guard responds to over 60,000 emergency calls and save approximately 5,000 people. In August, 2005, during Hurricane Katrina, the Coast Guard saved over 33,000 lives in 2 weeks.
2. Maritime activity continues to grow with time causing greater congestion in the nation's waterways.
  - a) Both the size and the numbers of ships using the inland, coastal, and international waterways keep increasing.
  - b) The fishing vessels travel farther offshore.
  - c) The oil platforms are greater distances from the shore.
  - d) The number of personal watercraft and the time spent in recreational boating continues to grow yearly.

### B. RESCUE 21

1. The U.S. Coast Guard has implemented Rescue 21 to meet growing challenges. When completed, the system will cover more than 95,000 miles of coastline, navigable rivers, and waterways in the continental United States, Alaska, Guam, Hawaii, and Puerto Rico.
2. Rescue 21 provides the communications infrastructure for:
  - a) Search and Rescue.
  - b) Marine Safety and Security.
  - c) Maritime Law Enforcement.
  - d) Maritime Environmental Protection and Response.
  - e) Homeland Security.
3. Search and Rescue.
  - a) Rescue 21 reduces the amount of time between a call for help and the actual rescue.

- (1) Through the direction-finding capability and the Digital Selective Calling (DSC).
  - (2) A one watt transmission for about two seconds can be received by the Rescue 21 system.
  - (3) The location can be pinpointed by +/-2 degrees for the SAR teams cutting the response time to a minimum.
- b) Using digital information to increase the range of the maritime communications.
- (1) In some areas, the Coast Guard has been able to receive calls from 25 watts radios well over 100 miles out to sea.
  - (2) The Rescue 21 system can zero in on a 1-watt radio, 2 feet above the water, 20 miles offshore.
  - (3) The clarity of distress calls is improved.
  - (4) Enables the simultaneous monitoring of 6 channels.
  - (5) The distress calls can be heard clearer through the improved recording and playback features.
- c) By improving the data accuracy and routing the information to the appropriate responding units.
- (1) Improves interoperability between federal, state, and local agencies.
- d) Rescue 21 can determine if MAYDAY calls are false.
- (1) The direction finding system can display if the call is coming from on the water or from on the land. The advances in tracing calls should immediately reveal most hoaxes. If a hoax call is made from on the water, a line of bearing (LOB) will be obtained. If two LOBs can be obtained, then the location of the false call can be determined. The hoax calls cost money, put the Coast Guard personnel at risk, and divert the limited resources.
- e) Supports the Digital Selective Calling (DSC) for the registered boaters.
- (1) The Digital Selective Calling enables a mariner to press a panic button on a VHF-FM marine radio with DSC and automatically send a distress message along with a position of where they are to the Coast Guard.

- (2) When registered with a Mobile Maritime Service Identity (MMSI) number and interfaced with GPS, a DSC radio signals vital vessel information, position, and the nature of the distress at the push of a button.
- f) EPIRB frequency.
  - (1) An EPIRB communicates via satellite.
  - (2) Aircraft equipped with sensors can pick up a homing signal from the EPIRB.
  - (3) Enables the aircraft to home in directly on a mariners in distress even if the mariner didn't make a VHF call.

C. The Rescue 21 Disaster Recovery System (DRS).

- 1. With as little as 24 hours notice, a fully autonomous, rapidly deployable emergency communications package can be deployed.
  - a) Can restore lost communications man-made or natural disasters.
  - b) Provides voice and data connectivity caller position location (i.e., lines of bearing), communications recording, archiving, and retrieval.
  - c) Connects to the Coast Guard Data Network (CGDN+) via satellite.

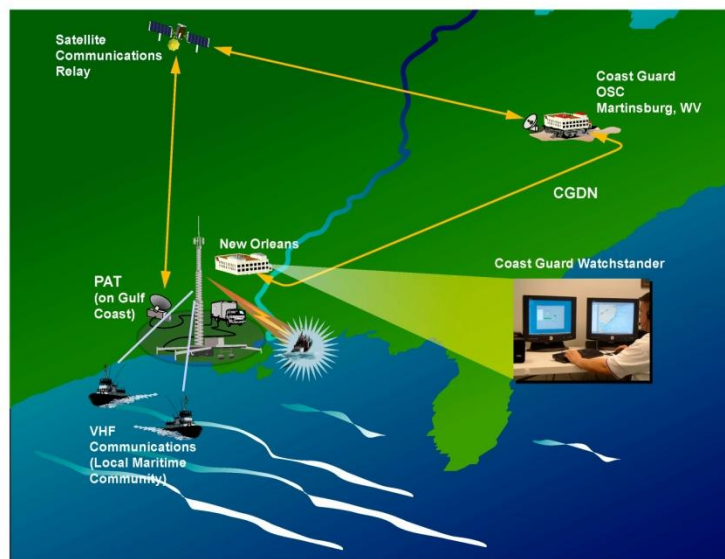


Fig 10-1 Rescue 21 Disaster Recovery System (DRS)



2. Following Katrina, DRS provided one way communications with mariners in the southeastern portion of the Mississippi River and the Gulf Coast Region.
3. The Coast Guard has four sets of DRS. Three are stored in Chesapeake, Virginia and one is stored in Pointe Reyes, California. Each consists of a truck with transmitting equipment, a portable telescoping antenna tower, two satellite dishes, and auxiliary generators.

#### D. Rescue 21 Success Stories.

1. A couple had fallen off their boat with their four children still on board. One of the children had called for help but was unaware of their location. The Rescue 21 direction finding system used the radio signal to find the boat. The children and parents were rescued.
2. Two teenagers were 30 miles offshore when their boat started to take on water. Rescue 21 aided the searchers by providing a single line of bearing from where a MAYDAY call had originated. A Coast Guard helicopter quickly located the boys and hoisted them from the water. The Rescue 21 direction finding capability was pertinent to the rescue of the two teenagers.
3. A MAYDAY call was made eight miles offshore involving a boat taking on water with a family of four on board. Later a MAYDAY call was heard twice. Communications were lost. Two Rescue 21 towers received the calls and gave the rescuers two lines of bearings which crossed about eight miles out. Rescue 21 clarified the family's location. The rescuers arrived and pulled the family from the water.
4. Six men had gone fishing in an 18 foot outboard. Shortly after leaving the marina, the wind was whipping up high seas which pounded their boat. Soon, they were shin deep in water and the motor died. Shortly after calling MAYDAY, the boat flipped. Their weak radio call was captured by Rescue 21 equipment providing two accurate lines of bearing. The six men were rescued. Without Rescue 21, the outcome would have been different.
5. A MAYDAY call to the Coast Guard involved a person who had lost consciousness while at sea. The person calling had mistakenly given a location 24 miles from where they actually were. Rescue 21 identified the location of the boat, not the MAYDAY call, and a Coast Guard helicopter rescued the ailing man.
6. "Coast Guard, Coast Guard, MAYDAY, MAYDAY!" A person had only enough time to shout those six quick words before the vessel he was on, along with five persons, capsized approximately two miles offshore. Only the approximate bearing of the call was known. Within minutes, the men were rescued. Rescue 21 is extremely valuable in an emergency when a position is not known.

## E. HOW DOES RESCUE 21 WORK

1. A standard VHF-FM marine radio is all that is needed to be part of Rescue 21. If it has Digital Selective Calling (DSC), that will help.
2. This is what happens.
  - a) A distress/MAYDAY call is sent. The station receiving it will automatically record and digitize it. One or more Rescue 21 towers with Direction Finding (DF) equipment will compute the direction, or the Line of Bearing (LOB) from where a MAYDAY signal originated. The digital technology has an accuracy of  $\pm 2$  degrees. MAYDAY audio and the LOB are sent to the closest Ground Center(s). Planes, helicopters, and boats are immediately dispatched, even across regional boundaries. The resources will fly down the LOB and find the person(s) in distress. Rescue 21 takes the search out of search and rescue.

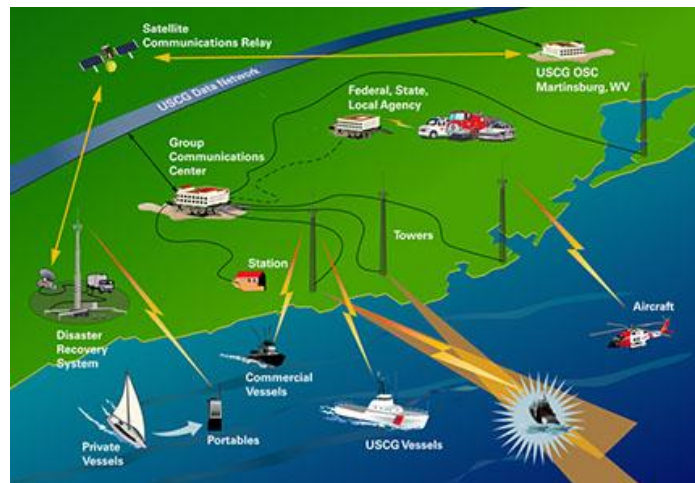


Fig. 10-2 How Rescue 21 Works

3. Watch standers use radio monitors and two monitor displays.
  - a) One monitor display shows the location of mariners based on their lines of bearing from the Remote Fixed Facility (RFF). The calls on Channel 16 appear red on the screen. The normal mariner calls are in blue.
4. Rescue 21 consists of:
  - a) 46 Coast Guard region/sector command centers.
  - b) 220 stations/field offices equipped with:

- (1) Rescue 21 hardware.
- (2) Rescue 21 software.
- (3) supporting communications equipment.
- c) About 3,000 handheld communication devices.
- d) 350 communication towers.



Fig. 10-3 Rescue 21 Consoles

#### F. DO I NEED RESCUE 21

1. Safety is a top priority for recreational and professional mariners. Sometimes, safety may not be a top priority. People want to do their thing or get involved in the task at hand. Disaster can occur at any time and become a tragedy if not quickly dealt with. The situation may not allow time to call for help.
2. Rescue 21 is the 9-1-1 the recreational boater and the professional mariner.

## G. CHAPTER TEN STUDY QUESTIONS

1. What is causing greater congestion in the nation's waterways? *(page 1)*
  - a) Both the size and the number of ships using inland, coastal, and international waterways keep on increasing.
  - b) The fishing vessels are travelling farther offshore.
  - c) The number of personal watercraft and the time spent in recreational boating continues to grow yearly.
  - d) All of the above.
2. How many miles of coastline, navigable rivers, and waterways in the continental United States, Alaska, Guam, Hawaii, and Puerto Rico will Rescue 21 cover when completed? *(page 1)*
  - a) 50,000
  - b) 75,000
  - c) 110,000
  - d) 95,000
3. How does the Rescue 21 system reduce the amount of time between a call for help and the actual rescue? *(page 1) (page 2)*
  - a) Through the direction-finding capability and the Digital Selective Calling (DSC).
  - b) By using the digital information to increase the range of the maritime communications.
  - c) By improving the data accuracy and routing the information to the appropriate responding units.
  - d) All of the above.
4. A \_\_\_\_ watt transmission for about \_\_\_\_ seconds can be received by the Rescue 21 system. *(page 2)*
  - a) 1,2
  - b) 2,1
  - c) 2,4
  - d) 3,4
5. Can Rescue 21 determine if MAYDAY calls are false? *(page 2)*
  - a) Usually
  - b) No
  - c) Not part of the system.
  - d) None of the above.

6. What is DSC? (*page 2*)
- a) Digital Source Code.
  - b) Digital Selective Communication.
  - c) Digital Selective Code.
  - d) Digital Selective Calling.
7. What is MMSI? (*page 3*)
- a) Maritime Mobile Service Identity.
  - b) Mobile Maritime Service Identity.
  - c) Mobile Maritime Service Information.
  - d) Maritime Modular Service Identifier.
8. What is DRS? (*page 3*)
- a) Digital Recovery System.
  - b) Disaster Reporting System.
  - c) Disaster Recovery System.
  - d) None of the above.
9. How is a mariner in distress found when Rescue 21 has only one line of bearing? (*page 5*)
- a) Narrows the search area.
  - b) Follow the line of bearing.
  - c) Cannot, needs two lines of bearing.
  - d) None of the above.
10. Rescue 21 is the \_\_\_\_ for the recreational boater and the professional mariner. (*page 6*)
- a) 4-1-1
  - b) 9-1-1
  - c) 1-2-3
  - d) None of the above.

#### H. MMSI WEBSITES

<http://www.navcen.uscg.gov/MARCOMMS/GMDSS/mmsi.htm>  
<http://www.boatus.com/mmsi/>

I. BY THE NUMBERS

- A. The first life is saved using the Rescue 21 system in November, 2005.
- B. The first Rescue 21 system was commissioned in Atlantic City, N.J., December, 2005.
- C. The two initial operating capacity regions, Atlantic City, N.J. and Eastern Shore Maryland (Maryland, Delaware, and Virginia) accepted Rescue 21 in 2005.
- D. The First Low Rate Initial Production (LRIP) regions accepted the system on May 19, 006.
- E. Sector St. Petersburg, FL., was the second of four LRIP regions, accepting the system on June 29, 2006.
- F. Nationwide rollout to about 40 additional regions is slated for completion by 2011.

## CHAPTER ELEVEN - COMMUNICATIONS STAFF OFFICER RESPONSIBILITIES



### A. FLOTILLA STAFF OFFICER FOR COMMUNICATIONS (FSO-CM)

1. The FSO-CM is appointed by the Flotilla Commander (FC). The FSO-CM is primarily concerned with the Auxiliary fixed land and the land mobile radio facilities. The FSO-CM works with the Flotilla Staff Officer for Member Training (FSO-MT) to have communication training available for the members desiring to participate in the Auxiliary communications operations. The FSO-CM reports to the Vice Flotilla Commander (VFC).
  - a) The FSO-CM shall:
    - (1) initiate and maintain contact with the Division Staff Officer for Communications (SO-CM).
    - (2) assist the SO-CM as required.
    - (3) maintain a list of the flotilla communication facilities (fixed, mobile, and portable).
    - (4) assist the SO-CM in scheduling the flotilla communication drills.
    - (5) ensure the radio facility inspections conducted within the flotilla are by a qualified inspector.
    - (6) attend the flotilla meetings and give a communications report.
    - (7) if unable to attend the flotilla meeting, give the VFC prior notice.
    - (8) complete the communications specialist training.
    - (9) inform the members of all the communication developments.
    - (10) be the flotilla's source of accurate, complete information, and expertise in the procedures, the programs, and the equipment.
    - (11) ensure the proper operation of the flotilla's radio facilities.
    - (12) verify the radio facility owners are qualified as Telecommunications Operators (TCO) unless rated as AUXCOM prior to 1 August 2008.
    - (13) schedule the qualified Auxiliarists to perform the communications activities within the flotilla's Area of Responsibility (AOR).

- (14) ensure every activation of an Auxiliary Radio Facility is under Coast Guard orders.
- b) Other FSO-CM duties.
  - (1) Maintain an updated list of the flotilla Telecommunication Operators (TCO) and Communication Specialists.
  - (2) Maintain and publish a flotilla calling tree for member alerting.
  - (3) Submit communications articles to keep the flotilla members updated.
  - (4) Participate in the Auxiliary Operations seminars.
  - (5) Schedule communication refreshers for the flotilla members.
  - (6) Develop different communication scenarios (SAR, medical emergency, marine safety, MAYDAY, etc.).
  - (7) Encourage qualified member's participation in the communication drills.
  - (8) Organize a monthly flotilla Auxiliary Radio Facility Drill Network.
    - (a) VHF-FM Channel 83A.
    - (b) AUXNET if available.
    - (c) HF if available.
  - (9) Encourage the obtaining of additional radio facilities.
  - (10) Establish the communication goals and the objectives for the flotilla.
  - (11) Perform other assigned duties as required.

#### B. DIVISION STAFF OFFICER FOR COMMUNICATIONS (SO-CM)



- 1. The SO-CM is appointed by the Division Commander (DCDR). The SO-CM shall exercise staff responsibility and supervision over the Division's communications. The SO-CM will inform the Division Staff of the communication developments. The SO-CM reports to the Vice Division Commander (VDCDR).
- 2. The SO-CM shall:
  - a) schedule the qualified Auxiliarists in the Division's AOR to perform specific communication activities.



- b) initiate and maintain contact with the Division Staff Officer for Communications (DSO-CM).
  - c) plan, organize, and implement the Division's communications activities.
  - d) be the liaison between the Division and the Flotilla Communication Staff Officers.
  - e) encourage the obtaining of additional radio facilities.
  - f) channel concerns and accomplishments from the members to the DSO-CM and the District Bridge.
  - g) provide the link between the membership and the Division.
  - h) encourage increased participation in communications training and qualification as TCO or Communications Specialist.
  - i) maintain a current list of the TCOs and the Communication Specialists in the Division.
  - j) work with the DVCDR to ensure the Division's communications program is effectively managed.
  - k) direct and oversee the implementation of the local radio networks.
  - l) attend the Division Meetings.
  - m) give the VDCDR prior notice when unable to attend the Division meeting.
  - n) if not qualified as a Communications Specialist, become qualified.
  - o) take the necessary steps to ensure the FSO-CMs are well qualified.
3. Other SO-CM duties.
- a) Assist the flotillas with any training, workshops, or seminars.
  - b) Prepare regular mailings to the FSOs containing communication information from the DSO-CM and any other pertinent source.
  - c) Prepare an article for each publication of the Division's newsletter.
  - d) Regularly review the AUXDATA communications data to track the status of the Division's radio facilities.
  - e) Manage the Division's radio facilities.
  - f) If required, assist the FSO-CMs in performing the radio facility inspections.
  - g) Regularly attend the flotilla meetings.



C. ASSISTANT DISTRICT STAFF OFFICER for COMMUNICATIONS (ADSO-CM)

1. The ADSO-CM is appointed by the District Commodore. The ADSO-CM represents the District Staff Officer for Communications (DSO-CM) in the District. The ADSO-CM reports to the DSO-CM.
2. The duties of the ADSO-CM can vary based on the District's size, resources, and communication requirements. The ADSO-CM can be assigned to develop and implement specific District communication programs. The ADSO-CM can lead the development of multi-level communication networks in the District. Districts can have an ADSO-CM for different communication programs.
  - a) ADSO-CM/IT – Internet Technology/ARMS (Auxiliary Resource Management System)
  - b) ADSO-CM/HF – High Frequency
  - c) ADSO-CM/CC – Contingency Communications/Repeaters
  - d) ADSO-CM/MT – Member Training
  - e) ADSO-CM/I – Inland
  - f) ADSO-CM/TECH – Technical
  - g) ADSO-CM/ADMIN - Administration



D. DISTRICT STAFF OFFICER FOR COMMUNICATIONS (DSO-CM)

1. The District Staff Officer for Communications (DSO-CM) is appointed by the District Commodore. The DSO-CM reports the District Chief of Staff (DCOS).
2. The DSO-CM shall:
  - a) attend the District meetings.
  - b) if unable to attend, an ADSO-CM will attend the meeting as a representative of the DSO-CM.
  - c) attend National Training Seminars as a representative of the District.
  - d) if unable to attend, an ADSO-CM will be sent to represent the District.

- e) pass communications information between the District and the National Staff.
  - f) meet regularly with the District Chief of Telecommunications (dt).
3. The DSO-CM is responsible for:
- a) Providing Auxiliary communications to the Coast Guard, other agencies, and organizations devoted to life saving, boating safety, disaster response, and protection of the environment.
  - b) Promote and facilitate the development of radio communication assets within the District in support of Coast Guard, federal, state, and local agencies.
  - c) Ensure there is an on-going training program directed towards all communication needs, surface patrols, air patrols, mobile patrols, and watch standing at Coast Guard and Auxiliary stations.
  - d) Establish annual communication goals to insure total coverage for the Coast Guard and other agency needs.
  - e) Develop Division/District Emergency Integrated communication plans for the VHF and HF spectrums.
  - f) Provide the necessary support to the Division Staff Officers to insure they are well trained and the District and the National communication policies are being followed.
  - g) Ensure only communications staff officers or AUXOP qualified members perform radio facility checks.
  - h) Provide regular communication activity reports to the DCOS and the District Board.
  - i) Respond to the National Communications Staff for any requests for communications information.
  - j) Establish liaison and good relationships with the Coast Guard units in the District.
  - k) Ensure accurate and up-to-date information regarding radio communications, rules, equipment, and related topics are available for all members.
  - l) Establish liaison and good relationships with the Civil Air Patrol (CAP), Radio Amateur Civil Emergency Services (RACES), Amateur Radio Emergency Services (ARES), and amateur radio clubs.
  - m) Perform other duties as requested/assigned.

## E. CHAPTER ELEVEN STUDY QUESTIONS

1. The FSO-CM is appointed by the \_\_\_\_\_. (*page 1*)

- a) District Commodore
  - b) Flotilla Commander
  - c) Division Commander
  - d) DIRAUX
2. The SO-CM is appointed by the \_\_\_\_\_. (*page 2*)
- a) District Commodore
  - b) Flotilla Commander
  - c) Division Commander
  - d) DIRAUX
3. The ADSO-CM and the DSO-CM are appointed by the \_\_\_\_\_. (*page 4*)
- a) District Commodore
  - b) Flotilla Commander
  - c) Division Commander
  - d) DIRAUX
4. The FSO-CM is primarily concerned with the \_\_\_\_\_ and the \_\_\_\_\_. (*page 1*)
- a) auxiliary fixed land
  - b) land mobile radio facilities
  - c) passing info to National
  - d) a and b
5. All communication staff officers should have completed \_\_\_\_\_ training. (*page 3*)
- a) new member
  - b) Communications Specialist
  - c) staff officer
  - d) boating safely
6. The FSO-CM should maintain updated lists of \_\_\_\_, \_\_\_\_, and \_\_\_\_\_. (*page 1*) (*page 2*)
- a) CAP, RACES, ham clubs.
  - b) Emergency ham clubs, RACES, ARES
  - c) Flotilla communication specialists, Telecommunication Operators (TCO), radio facilities.
  - d) VHF marine frequencies, AUXNET frequencies, HF frequencies
7. \_\_\_\_, \_\_\_\_, and \_\_\_\_ types of radio facilities should be on the list of communication facilities. (*page 1*)
- a) Boat, auto, aircraft
  - b) Fixed, mobile, portable

- c) Amateur, personal, scanner
  - d) Home, auto, handheld
8. \_\_\_\_ or \_\_\_\_ can perform a radio facility inspection. (*page 5*)
- a) FC, FSO-CM
  - b) DCDR, SO-CM
  - c) FSO-CM, FSO-MT
  - d) A communications staff officer, someone who is AUXOP qualified.
9. The \_\_\_\_\_ can be assigned to develop and implement specific District communication programs. (*page 4*)
- a) DSO-CM
  - b) FSO-CM
  - c) SO-CM
  - d) ADSO-CM

## ABANDONED, ADRIFT VESSEL

<u>PROCEDURES</u>	<b>ADDITIONAL INFORMATION</b>				
<p><b>A. AWARENESS</b></p> <p>____ 1. Fill out the INITIAL SAR Check-sheet.</p> <p>____ 2. Fill out the ABANDONED, ADRIFT Check-sheet.</p> <p>____ 3. Assume or designate SMC.</p> <p><b>B. INITIAL ACTION</b></p> <p>____ 1. Evaluate emergency phase based on the information gathered using the ABANDONED, ADRIFT Check-sheet.</p> <p>____ 2. Ask reporting source to stay on scene to vector SRUs to the correct location.</p> <p>____ 3. Issue UMIB.</p> <p>____ 4. Dispatch SRUs.</p> <p>____ 5. Attempt to determine ownership by: (a) using vessel numbers, name, etc., (b) contacting local marina operators or other people familiar with the waterfront in the vicinity where the boat was located, (c) examining the items found onboard for items of personal identification.</p> <p>____ 6. Unless established that a distress does not exist, proceed utilizing procedures established for PIW or CAPSIZED VESSEL cases.</p> <p>____ 7. Brief SC.</p> <p><b>C. PLANNING/OPERATIONS</b></p> <p>____ 1. If the vessel poses a hazard to navigation, issue a local Notice to Mariners Broadcast.</p> <p>____ 2. Tow the vessel to a safe location if it can be done without hazarding the vessel or C.G. crew.</p> <p><b>D. MISSION CONCLUSION</b></p> <p>____ 1. Close the case or request ACTSUS.</p> <p>____ 2. Dealert SRUs and all individuals or offices notified of the case.</p> <p>____ 3. CX UMIB.</p> <p>____ 4. Debrief.</p> <p>____ 5. Case administration.</p>	<p>Did anyone see the vessel operating in the area? Y / N _____</p> <p>Was it occupied? Y / N _____</p> <p>How much and what type marine growth is on the hull? _____</p> <p>_____</p> <p>Is there a motor or means of propulsion? _____</p> <p>Were the keys in the ignition? Y / N _____</p> <p>Is there fishing or camping gear onboard which could have been carried or used on a recent trip? Y / N _____</p> <p>_____</p> <p>Is there emergency equipment (PFDs, flares, radio, EPIRB) on board? Y / N _____</p> <p>Does the vessel have parted or cut lines attached? Y / N _____</p> <p>_____</p> <p>Are fenders rigged? Y / N _____</p> <p>Is the anchor set or is there evidence that the anchor line was cut or parted? Y / N _____</p> <p>Is there debris in the area? Y / N _____</p> <p>How far offshore is the boat? _____</p> <p>Other damage? _____</p> <p>Reports of overdue or unreported vessels in the same area? Y / N _____</p>				
	<b>VESSEL/EQUIPMENT</b>				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; padding: 2px;">[ ] Document/Official # _____</td> <td style="width: 40%; padding: 2px;">Homeport: _____</td> </tr> <tr> <td style="padding: 2px;">[ ] State Reg. # _____</td> <td style="padding: 2px;">Flag: _____</td> </tr> </table>	[ ] Document/Official # _____	Homeport: _____	[ ] State Reg. # _____	Flag: _____
[ ] Document/Official # _____	Homeport: _____				
[ ] State Reg. # _____	Flag: _____				
	<b>OWNER</b>				
	<p>Name: _____</p> <p>Address: _____</p> <p>Phone: _____</p>				
	<b>ADDITIONAL COMMENTS</b>				

### ACTION TAKEN BY COAST GUARD

**Distance** Distance from reporting source determined to be:  
Minimum: \_\_\_\_\_ nm Maximum: \_\_\_\_\_ nm Uncertainty: +/- \_\_\_\_\_ nm  
Bearing: \_\_\_\_\_ Uncertainty: +/- \_\_\_\_\_ deg

**SAR Phase** Evaluate emergency SAR phase: DISTRESS ALERT UNCERTAINTY

**UMIB** Issue UMIB: yes / no Time issued: \_\_\_\_\_ Time cancelled: \_\_\_\_\_

**Launch Sorties**

UNIT	STATION	ETA	ACTION

**Other Assistance** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Intentions** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**First Light Search** First light search planned: yes / no (Required for RED/ORANGE flares if there is insufficient information to either close or suspend).

Additional information: \_\_\_\_\_  
\_\_\_\_\_

**ACTSUS** ACTSUS approved: yes / no

## AIRCRAFT EMERGENCIES

PROCEDURES	NATURE OF DISTRESS
<b>A. AWARENESS</b>	<b>INFLIGHT EMERGENCY / DITCHED / OVERDUE</b>
____ 1. Fill out the INITIAL SAR checklist.	<b>AIRCRAFT DATA</b> (AFRCC/FAA can provide cross reference via tail number or name.)
____ 2. Fill out the AIRCRAFT EMERG. checklist.	Tail Number: _____ Nationality: _____ <u>MILITARY</u> / <u>CIVILIAN</u>
____ 3. Assume or designate SMC.	Type: _____ Description: _____ (Wing configuration, # engines, etc.)
	Color: _____ No. of POB: _____
<b>B. INITIAL ACTION</b>	Flight Plan Filed: Y / N    Type: VFR / IFR    None Required: Y / N
____ 1. Evaluate emergency phase.	Last Known Comms Frequencies: _____
____ 2. Dispatch SRUs.	Fuel Remaining: _____ Altitude: _____
____ 3. Issue UMIB.	Survival Equipment: RAFT / LIFEJACKET(S) / EPIRB/ELT (Type: _____) / FLARES / MIRROR / DYE / SPOTLIGHT / FLASHLIGHT / OTHER: _____
____ 4. Confirm departure/non-arrival	Parachutes: Y / N
____ 5. Provide escort aircraft if distress phase.	<b>POSITION</b>
____ 6. Establish comms schedule.	Latitude/Longitude: _____ N _____ W
____ 7. Brief SC.	Bearing/Range: _____ / _____ T / M From: _____ (nav. aid)
____ 8. Check SARSAT hits in area.	Geographic Position: _____
<b>C. PLANNING/ OPERATIONS</b>	Speed: _____ Course: _____ T / M    Altitude: _____ FT / M
____ 1. If a/c ditches in water, treat as a PIW case.	O/S Weather: Winds: _____ / _____ Seas: _____ / _____ Vis: _____
____ 2. Ensure that the ARTCC/FSS is conducting Pre/ExComms. Assist as capable.	<b>ROUTE INFORMATION</b>
____ 3. Evaluate weather along flight track.	Departure from: _____ ETD: _____
____ 4. Confirm aircraft registration data through FAA.	Via: _____ ETA: _____
____ 5. Obtain assistance from ARTCC (if a/c using IFR) or FSS (if a/c using VFR).	Via: _____ ETA: _____
____ 6. Req NTAP from AFRCC.	Via: _____ ETA: _____
____ 7. Formulate search plan.	Destination: _____ ETA: _____
____ 8. Dispatch SRUs.	Alternate Destination: _____
<b>D. MISSION CONCLUSION</b>	<b>PILOT/OWNER/PASSENGER INFORMATION</b>
____ 1. Close the case or request ACTSUS.	Pilot Name: _____
____ 2. Dealert SRUs.	Address: _____
____ 3. CX UMIB.	Phone: _____
____ 4. Debrief.	Owner's Name: _____
____ 5. Case administration.	Address: _____
	Phone: _____
	Passenger Name: _____
	Address: _____
	Phone: _____
	Passenger Name: _____
	Address: _____
	Phone: _____



## BRIDGE ALLISION/ CASUALTY

<u>PROCEDURES</u>	<u>INITIAL ALLISION INFORMATION</u>
<p><b>A. AWARENESS</b></p> <p>___ 1. Obtain initial information.</p> <p>___ 2. Evaluate the incident.</p> <p>___ a. If SAR exists, assign emergency phase. Complete the INITIAL SAR CHECK-SHEET and the appropriate incident-specific checksheet, in addition to completing the following procedures.</p> <p>___ b. If there has been damage to the bridge structure, notify the police or railway immediately to secure the bridge until a safety determination can be made.</p> <p>___ c. Determine if there are any hazards to navigation.</p> <p><b>B. INITIAL ACTION</b></p> <p>___ 1. Issue a Notice to Mariners if vsl is blocking the channel.</p> <p>___ 2. Brief SC who will notify CAA and C.G. Command Center and D1(m), (obr) as appropriate.</p> <p>___ 3. Notify the appropriate MSO..</p> <p><b>C. PLANNING/ OPERATIONS</b></p> <p>___ 1. Notify the following non-C.G. resources:</p> <p>___ Governing Agency.</p> <p>___ Railroad Company.</p> <p>___ State Emergency Services.</p> <p>___ State/Local Police.</p> <p>___ Federal Railroad Authority.</p> <p>___ State Highway Department.</p> <p>___ 2. Ensure marine inspectors direct drug/ alcohol testing.</p> <p>___ 3. If major case, monitor progress of commercial salvage.</p> <p>___ 4. Monitor pollution response, if applicable.</p> <p>___ 5. Ensure ATON check conducted</p> <p><b>D. MISSION CONCLUSION</b></p> <p>___ 1. Close the case or request ACTSUS.</p> <p>___ 2. Dealert SRUs and all individuals or offices notified of the case.</p> <p>___ 3. CX UMIB/BNM.</p> <p>___ 4. Debrief.</p> <p>___ 5. Case administration.</p>	<p>Name of Vessel: _____</p> <p>Name of Bridge: _____</p> <p>Location: _____</p> <p>Are there any people missing (PIW case)? _____</p> <p>Are there any injured persons (MEDEVAC case)? _____</p> <p>Condition of the vessel involved (Vsl T.O.W., DISABLED, Aground case)? _____</p> <p style="text-align: center;"><b>SUPPLEMENTAL VESSEL INFORMATION FOR ALLISIONS</b></p> <p>[ ] Document/Official # _____</p> <p>[ ] State Reg. # _____</p> <p>Homeport: _____</p> <p>Commercial Vessel? Y / N    Flag: _____</p> <p>Amount of fuel on board: _____</p> <p>Master hold a C.G. License? Y / N</p> <p>Reported cause of the allision: _____</p> <p>Pollution threat? Y / N</p> <p>Vsl cargo: _____</p> <p>Vsl owner: _____ IPN: _____</p> <p>Agent: _____ IPN: _____</p> <p>Operator: _____ IPN: _____</p> <p>Class Society: _____ IPN: _____</p> <p>O/S WX: VIS: _____ WIND: _____ / _____</p> <p>PRECIP: _____</p> <p style="text-align: center;"><b>BRIDGE INFORMATION</b></p> <p>Damage to bridge or nature of casualty: _____</p> <p>_____</p> <p>Waterway: _____ Mile marker: _____</p> <p>Waterway usage: _____</p> <p>Responsible agency: _____</p> <p>Bridge position: Stuck Open / Stuck Closed _____</p> <p>Is any maritime traffic delayed as a result? Y / N    If yes, record details: _____</p> <p>_____</p> <p>If a scheduled outage, reason for outage: _____</p> <p>_____</p> <p>Was scheduled outage previously authorized by D1(obr)? Y / N    If yes, record the details: _____</p> <p>_____</p>

## CAPSIZED VESSEL

PROCEDURES	ADDITIONAL INFORMATION																																														
<p><b>A. AWARENESS</b></p> <p>___ 1. Fill out INITIAL SAR Check-sheet</p> <p>___ 2. Fill out the CAPSIZED VESSEL checksheet.</p> <p>___ 3. Assume or designate SMC.</p> <p>___ 4. If possibility of PIW, or survivors trapped in the hull, continue. If not, treat as a PIW and/or pollution/ salvage case.</p> <p><b>B. INITIAL ACTION</b></p> <p>___ 1. Evaluate emergency phase.</p> <p>___ 2. Issue UMIB.</p> <p>___ 3. Dispatch SRU(s).</p> <p>___ 4. Arrange for rescue divers.</p> <p>___ 5. Brief SC.</p> <p><b>C. PLANNING/ OPERATIONS</b></p> <p>___ 1. SRU shall:</p> <p>a. Obtain vessel's name/Doc/Reg number.</p> <p>b. Interview survivors to determine where trapped persons might be in the hull.</p> <p>c. Stabilize the vessel.</p> <p>d. Attempt to communicate through hull.</p> <p>e. Estimate the minutes of air remaining.</p> <p>f. If appropriate equipment on scene, inject air under the vsl so it bubbles up inside. Do not put the hose into the air pocket unless it has a check valve or is connected to a source of air pressure.</p> <p>g. Attach a line w/ a marker buoy and strobe light to the hull in case it sinks.</p> <p>h. Keep survivors in the capsized hull aware of intentions.</p> <p>___ 2. If divers cannot respond or do not locate survivors:</p> <p>a. Tow the vsl carefully to shore, keeping the craft stabilized in the inverted position. Once the vessel is on the beach, right it, or cut holes in the hull to free the survivors. Do not cut into the hull of a powered vessel with a gas cutting torch; you could ignite fuel fumes. Before doing any cutting, locate the fuel tanks; do not cut into them.</p> <p>b. Only as a last resort, attempt to right the vessel in deep water. If it is necessary, tell the survivors in the capsized hull what will take place and advise them to try and escape as the vessel rights.</p> <p>___ 3 Notify appropriate MSO/ COTP.</p> <p>___ 4. Issue BNM if vsl blocking channel.</p> <p><b>MISSION CONCLUSION</b></p> <p>___ 1. Close the case or request ACTSUS.</p> <p>___ 2. Dealt SRUs.</p> <p>___ 3. CX UMIB.</p> <p>___ 4. Debrief.</p> <p>___ 5. Case administration</p>	<p>Are there any People In the Water? _____</p> <p>Any possibility that there are survivors trapped in the hull? _____</p> <p style="text-align: center;"><b>VESSEL/EQUIPMENT</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Document/Official #</td> <td style="width: 50%;">Homeport:</td> </tr> <tr> <td><input type="checkbox"/> State Reg. #</td> <td>Flag:</td> </tr> <tr> <td>Communications Equipment: <input type="checkbox"/> VHF-FM      <input type="checkbox"/> HF <input type="checkbox"/> Other: _____ <input type="checkbox"/> Cellular #: _____</td> <td>Navigation Equipment: <input type="checkbox"/> LORAN      <input type="checkbox"/> GPS <input type="checkbox"/> Radar      <input type="checkbox"/> Fathometer <input type="checkbox"/> Other: _____</td> </tr> <tr> <td>Usage:</td> <td>Survival Equipment:</td> </tr> <tr> <td>Prominent Features:</td> <td><input type="checkbox"/> EPIRB Class/Type: _____</td> </tr> <tr> <td>Hull Material:</td> <td><input type="checkbox"/> VDS/Flares      <input type="checkbox"/> Flashlight</td> </tr> <tr> <td>Cause of incident:</td> <td><input type="checkbox"/> Raft/Lifeboat      <input type="checkbox"/> Dinghy/Skiff</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Food/Water      <input type="checkbox"/> Foul Wx Gear</td> </tr> </table> <p style="text-align: center;"><b>PEOPLE</b></p> <table border="1" style="width: 100%; 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## CIVILIAN SUBMERSIBLE INCIDENTS

PROCEDURES	ADDITIONAL INFORMATION																										
<b>A. AWARENESS</b> ____ 1. Fill out the INITIAL SAR CHECKSHEET. ____ 2. Fill out the CIVILIAN SUBMERSIBLE CHECKSHEET. ____ 3. Assume or designate SMC.																											
<b>B. INITIAL ACTION</b> ____ 1. Evaluate the emergency phase. ____ 2. Issue UMIB. ____ 3. Dispatch SRU(s). Consider Atlantic Strike Team, WMEC, WLBB, WPB, small boats. These units may fulfill roles as OSC, rescue platform, traffic control, aircraft guard, communications, logistics. ____ 4. Brief SC. ____ 5. Notify the Navy Command Center Duty Captain at the Pentagon: (703) 695-0231, via the LANTAREA command center. ____ If the incident involves a civilian submersible, request implementation of SUBMISS/SUBSUNK per the NAVSEA SUBMISS/SUBSUNK Bill for Submarines and Manned Noncombatant Submersibles, NAVSEAINST 4740.1 series. ____ 6. Keep CAA and Headquarters command centers updated on case.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;"><b>VESSEL/EQUIPMENT</b></th></tr> <tr> <td style="padding: 2px;"><input type="checkbox"/> Document/Official #</td><td style="padding: 2px;">Homeport:</td></tr> <tr> <td style="padding: 2px;"><input type="checkbox"/> State Reg. #</td><td style="padding: 2px;">Flag:</td></tr> <tr> <td style="padding: 2px;">Communications Equipment: <input type="checkbox"/> VHF-FM      <input type="checkbox"/> HF <input type="checkbox"/> Other: _____ <input type="checkbox"/> Cellular #: _____</td><td style="padding: 2px;">Navigation Equipment: <input type="checkbox"/> LORAN    <input type="checkbox"/> GPS <input type="checkbox"/> Radar     <input type="checkbox"/> Fathometer <input type="checkbox"/> Other: _____</td></tr> <tr> <td style="padding: 2px;">Frequencies:</td><td style="padding: 2px;">Survival Equipment:</td></tr> <tr> <td style="padding: 2px;">Usage:</td><td style="padding: 2px;"><input type="checkbox"/> EPIRB Class/Type: _____</td></tr> <tr> <td style="padding: 2px;">Prominent Features:</td><td style="padding: 2px;"><input type="checkbox"/> VDS/Flares    <input type="checkbox"/> Flashlight</td></tr> <tr> <td style="padding: 2px;">Hull Material:</td><td style="padding: 2px;"><input type="checkbox"/> Raft/Lifeboat   <input type="checkbox"/> Dinghy/Skiff</td></tr> <tr> <td style="padding: 2px;">Cause of incident:</td><td style="padding: 2px;"><input type="checkbox"/> Food/Water    <input type="checkbox"/> Foul Wx Gear</td></tr> </table>	<b>VESSEL/EQUIPMENT</b>		<input type="checkbox"/> Document/Official #	Homeport:	<input type="checkbox"/> State Reg. #	Flag:	Communications Equipment: <input type="checkbox"/> VHF-FM <input type="checkbox"/> HF <input type="checkbox"/> Other: _____ <input type="checkbox"/> Cellular #: _____	Navigation Equipment: <input type="checkbox"/> LORAN <input type="checkbox"/> GPS <input type="checkbox"/> Radar <input type="checkbox"/> Fathometer <input type="checkbox"/> Other: _____	Frequencies:	Survival Equipment:	Usage:	<input type="checkbox"/> EPIRB Class/Type: _____	Prominent Features:	<input type="checkbox"/> VDS/Flares <input type="checkbox"/> Flashlight	Hull Material:	<input type="checkbox"/> Raft/Lifeboat <input type="checkbox"/> Dinghy/Skiff	Cause of incident:	<input type="checkbox"/> Food/Water <input type="checkbox"/> Foul Wx Gear								
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<b>C. PLANNING/ OPERATIONS</b> ____ 1. Determine if there are any other civilian submersibles available by contacting the National Undersea Research Program; Groton CT: (860) 405-9121, Silver Spring MD: (301) 713-2427. ____ 2. Develop SAP. ____ 3. Notify the appropriate MSO to establish a safety zone and dispatch personnel to scene. ____ 4. Notify the owner of the involved craft. ____ 5. Arrange commercial tug assistance.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;"><b>PEOPLE</b></th></tr> <tr> <td style="padding: 2px;"><input type="checkbox"/> Owner   <input type="checkbox"/> Operator   <input type="checkbox"/> POB</td><td style="padding: 2px;"><input type="checkbox"/> Owner   <input type="checkbox"/> Operator   <input type="checkbox"/> POB</td></tr> <tr> <td style="padding: 2px;">Name: _____</td><td style="padding: 2px;">Name: _____</td></tr> <tr> <td style="padding: 2px;">Address: _____</td><td style="padding: 2px;">Address: _____</td></tr> <tr> <td style="padding: 2px;">Phone: _____</td><td style="padding: 2px;">Phone: _____</td></tr> <tr> <td style="padding: 2px;">Age: _____ DOB: _____</td><td style="padding: 2px;">Age: _____ DOB: _____</td></tr> <tr> <td style="padding: 2px;">Male / Female</td><td style="padding: 2px;">Male / Female</td></tr> <tr> <td style="padding: 2px;"><input type="checkbox"/> Owner   <input type="checkbox"/> Operator   <input type="checkbox"/> POB</td><td style="padding: 2px;"><input type="checkbox"/> Owner   <input type="checkbox"/> Operator   <input type="checkbox"/> POB</td></tr> <tr> <td style="padding: 2px;">Name: _____</td><td style="padding: 2px;">Name: _____</td></tr> <tr> <td style="padding: 2px;">Address: _____</td><td style="padding: 2px;">Address: _____</td></tr> <tr> <td style="padding: 2px;">Phone: _____</td><td style="padding: 2px;">Phone: _____</td></tr> <tr> <td style="padding: 2px;">Age: _____ DOB: _____</td><td style="padding: 2px;">Age: _____ DOB: _____</td></tr> <tr> <td style="padding: 2px;">Male / Female</td><td style="padding: 2px;">Male / Female</td></tr> </table>	<b>PEOPLE</b>		<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB	Name: _____	Name: _____	Address: _____	Address: _____	Phone: _____	Phone: _____	Age: _____ DOB: _____	Age: _____ DOB: _____	Male / Female	Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB	Name: _____	Name: _____	Address: _____	Address: _____	Phone: _____	Phone: _____	Age: _____ DOB: _____	Age: _____ DOB: _____	Male / Female	Male / Female
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## Digital Selective Calling (DSC)

Radio Call	Frequency:	Type of Comms:	Original	Relay
Time:	Date:	UCN:	Initials:	

**PROCEDURES**

**A. AWARENESS**  
 \_\_\_\_ 1. Fill out the DSC checksheet.

**B. INITIAL ACTION**  
 \_\_\_\_ 1. Acknowledge the call within 2.75 minutes.  
 \_\_\_\_ 2. Monitor the corresponding voice frequency.  
 \_\_\_\_ 3. Establish voice comms.  
 \_\_\_\_ 4. Notify the default SMC.  
 \_\_\_\_ 5. D1 may delegate SMC to a Group or Activity when position is known and comms are established.  
 \_\_\_\_ 6. Forward to appropriate RCC.  
 \_\_\_\_ 7. Determine which Group will handle voice communications.

**C. PLANNING/OPERATIONS**  
 \_\_\_\_ 1. Research available databases to determine identity of the vessel.  
 \_\_\_\_ 2. Establish comms to verify distress. Send TELEX or EASYLINK message to the vsl for amplifying info.  
 \_\_\_\_ 3. If comms not established, contact vsl owner. If unable to reach owner, continue to step c.(4).  
     \_b. If vsl cannot be identified, continue to step c.(4)..  
 \_\_\_\_ 4. If distress alert does not have a position or has an invalid position, contact the vessel, owner, or agent.  
 \_\_\_\_ 5. If distress exists, or may exist, launch SRU(s) to assist (a/c, cutter, AMVER).  
     \_a. Complete the appropriate incident-specific checksheet and follow associated procedures once the type of distress is determined.  
 \_\_\_\_ 6. Issue a SafetyNet UMIB (all psns) or NAVTEX UMIB (psn within 200 nm only).  
 \_\_\_\_ 7. Record on scene weather.  
 \_\_\_\_ 8. If false alert, send False Alert Feedback Rpt msg to the vessel.  
 \_\_\_\_ 9. If false alert, req vsl sends a cx msg for their DSC distress alert.  
     \_a. If revd, fax it to CAMSLANT.  
     \_b. If vsl refuses, ntly LANTAREA.

**D. MISSION CONCLUSION**  
 \_\_\_\_ 1. Close the case or request ACTSUS.  
 \_\_\_\_ 2. Dealert SRUs.  
 \_\_\_\_ 3. CX UMIB.  
 \_\_\_\_ 4. Debrief.  
 \_\_\_\_ 5. Case administration.

**1. Position:**

---

**2. Description of Vessel**

Name of Vessel: \_\_\_\_\_

MMSI: \_\_\_\_\_ Call Sign: \_\_\_\_\_

Type: \_\_\_\_\_

Length: \_\_\_\_\_ Color: \_\_\_\_\_

Contact Number: \_\_\_\_\_

**Flag:** \_\_\_\_\_ **At anchor?: Y / N**

Medical Personnel on board:

<b>Doctor</b>	<b>Nurse</b>	<b>Paramedic</b>	<b>EMT</b>
---------------	--------------	------------------	------------

*Have all persons aboard the vessel put on Personal Flotation Devices*

**3. Nature of Distress (if PIW complete additional PIW box below)**

Date/Time Distress Message Sent: \_\_\_\_\_

Means of Communication: RADIO VOX \_\_\_\_\_ SITOR \_\_\_\_\_

INMARSAT \_\_\_\_\_ TELEX \_\_\_\_\_

**4. Number of Persons Aboard:**

ADULTS: \_\_\_\_\_ CHILDREN: \_\_\_\_\_ TOTAL: \_\_\_\_\_

*Health or medical concerns?*

**\*\* NOTIFY VESSEL OF COAST GUARD ACTIONS AT THIS TIME \*\***

Persons in the Water			
NUMBER:	Confirmed?	Description:	PFD? Exp Suit? Light?
Time:			

Complete all of the above before shifting frequency; complete below before hanging up the phone

**Additional Vessel Information**

Last Port of Call: \_\_\_\_\_

Next Port of Call: \_\_\_\_\_

Shipping Agent: \_\_\_\_\_

Shipping Agent contact number: \_\_\_\_\_

**About the Reporting Source**

Name of Reporting Source: \_\_\_\_\_

Name of Reporting Source Vessel: \_\_\_\_\_

Call back number (with area code): \_\_\_\_\_

Is this a cellphone number? Y / N

**About the On Scene Weather**

Wind:	Seas:	Swell:	Visibility:	Ceiling:

## DISABLED VESSEL

PROCEDURES	ADDITIONAL INFORMATION												
<b>A. AWARENESS</b> ____ 1. Fill out the INITIAL SAR Check-sheet. ____ 2. Fill out the DISABLED VSL Check-sheet. ____ 3. Assume or designate SMC.	Are there any other vessels in the area? _____ _____ Is the vessel experiencing any icing conditions? _____												
<b>B. INITIAL ACTION</b> ____ 1. Instruct persons to don PFDs. ____ 2. Evaluate emergency phase. ____ 3. If Non-Emergency SAR, follow Maritime SAR Assistance Policy, General Salvage Policy. ____ 4. If vessel accepts commercial assistance, monitor until assistance arrives; if the vessel accepts Good Samaritan assistance, monitor until the vessel is safely moored or anchored. Otherwise, continue with these procedures. ____ 5. Issue UMIB if appropriate for the situation. ____ 6. Dispatch SRU(s). ____ 7. Consider instructing vessel to anchor. If unable to anchor, compute drift of the vessel. ____ 8. If necessary, notify relatives the vessel has been delayed (use caution when doing this so as not to cause undue alarm). ____ 9. Establish Comms schedule. ____ 10. Instruct vsl to activate EPIRB if comms are lost. Record hexadecimal code of 406 EPIRB. ____ 11. Brief SC.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">VESSEL/EQUIPMENT</th> </tr> </thead> <tbody> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Document/Official # _____  <input type="checkbox"/> State Reg. # _____            Communications Equipment:  <input type="checkbox"/> VHF-FM      <input type="checkbox"/> HF  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Cellular #: _____            Frequencies: _____            Usage: _____            Prominent Features: _____            Hull Material: _____            Cause of incident: _____         </td> <td style="width: 50%; vertical-align: top;">           Homeport: _____            Flag: _____            Navigation Equipment:  <input type="checkbox"/> LORAN      <input type="checkbox"/> GPS  <input type="checkbox"/> Radar      <input type="checkbox"/> Fathometer  <input type="checkbox"/> Other: _____            Survival Equipment:  <input type="checkbox"/> EPIRB Class/Type: _____  <input type="checkbox"/> VDS/Flares      <input type="checkbox"/> Flashlight  <input type="checkbox"/> Raft/Lifeboat      <input type="checkbox"/> Dinghy/Skiff  <input type="checkbox"/> Food/Water      <input type="checkbox"/> Foul Wx Gear         </td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">PEOPLE</th> </tr> </thead> <tbody> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____            _____            Phone: _____            Age:      DOB: _____            Male / Female         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____            _____            Phone: _____            Age:      DOB: _____            Male / Female         </td> </tr> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____            _____            Phone: _____            Age:      DOB: _____            Male / Female         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____            _____            Phone: _____            Age:      DOB: _____            Male / Female         </td> </tr> </tbody> </table>	VESSEL/EQUIPMENT		<input type="checkbox"/> Document/Official # _____ <input type="checkbox"/> State Reg. # _____ Communications Equipment: <input type="checkbox"/> VHF-FM <input type="checkbox"/> HF <input type="checkbox"/> Other: _____ <input type="checkbox"/> Cellular #: _____ Frequencies: _____ Usage: _____ Prominent Features: _____ Hull Material: _____ Cause of incident: _____	Homeport: _____ Flag: _____ Navigation Equipment: <input type="checkbox"/> LORAN <input type="checkbox"/> GPS <input type="checkbox"/> Radar <input type="checkbox"/> Fathometer <input type="checkbox"/> Other: _____ Survival Equipment: <input type="checkbox"/> EPIRB Class/Type: _____ <input type="checkbox"/> VDS/Flares <input type="checkbox"/> Flashlight <input type="checkbox"/> Raft/Lifeboat <input type="checkbox"/> Dinghy/Skiff <input type="checkbox"/> Food/Water <input type="checkbox"/> Foul Wx Gear	PEOPLE		<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ _____ Phone: _____ Age:      DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ _____ Phone: _____ Age:      DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ _____ Phone: _____ Age:      DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ _____ Phone: _____ Age:      DOB: _____ Male / Female		
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<b>C. PLANNING/ OPERATIONS</b> ____ 1. Formulate search plan. ____ 2. First SRU on scene deploy a DMB. Record DMB information on this checksheet. ____ 3. If vsl not located: ____ Double-check validity of initial position. ____ Commence PRECOMS. ____ Evaluate case and analyze all possible scenarios. ____ 4. Dispatch additional SRUs. ____ 5. Develop future searches. ____ 6. Notify MSO if appropriate.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">ADDITIONAL COMMENTS</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="height: 100px;"></td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">ACTIONS</th> </tr> </thead> <tbody> <tr> <td style="width: 50%; vertical-align: top;"> <b>Communications Schedule:</b>            Start Time: _____ Freq: _____            Time Interval: _____  <input type="checkbox"/> 15 Min    <input type="checkbox"/> 30 Min    <input type="checkbox"/> 60 Min  <input type="checkbox"/> Other _____            Remarks: _____         </td> <td style="width: 50%; vertical-align: top;"> <b>Set and Drift:</b>    <input type="checkbox"/> Not a Factor            Set: _____ <input type="checkbox"/> True <input type="checkbox"/> Mag            Drift: _____ <input type="checkbox"/> Kts <input type="checkbox"/> Mph         </td> </tr> <tr> <td colspan="2" style="vertical-align: top;"> <b>DMB Type:</b> _____ <b>Freq:</b> _____  <table style="width: 100%;"> <tr> <td style="width: 50%; text-align: center;"> <b>Inserted</b>            Time: _____            Position: _____ N               W         </td> <td style="width: 50%; text-align: center;"> <b>Relocated</b>            _____ N            _____ W         </td> </tr> </table> </td> </tr> </tbody> </table>	ADDITIONAL COMMENTS				ACTIONS		<b>Communications Schedule:</b> Start Time: _____ Freq: _____ Time Interval: _____ <input type="checkbox"/> 15 Min <input type="checkbox"/> 30 Min <input type="checkbox"/> 60 Min <input type="checkbox"/> Other _____ Remarks: _____	<b>Set and Drift:</b> <input type="checkbox"/> Not a Factor Set: _____ <input type="checkbox"/> True <input type="checkbox"/> Mag Drift: _____ <input type="checkbox"/> Kts <input type="checkbox"/> Mph	<b>DMB Type:</b> _____ <b>Freq:</b> _____ <table style="width: 100%;"> <tr> <td style="width: 50%; text-align: center;"> <b>Inserted</b>            Time: _____            Position: _____ N               W         </td> <td style="width: 50%; text-align: center;"> <b>Relocated</b>            _____ N            _____ W         </td> </tr> </table>		<b>Inserted</b> Time: _____ Position: _____ N W	<b>Relocated</b> _____ N _____ W
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## DISORIENTED VESSEL

<u><b>PROCEDURES</b></u>		<b>ADDITIONAL INFORMATION</b>									
<b>A. AWARENESS</b> ____ 1. Fill out the INITIAL SAR Check-sheet. ____ 2. Fill out the DISORIENTED VSL Check-sheet. ____ 3. Assume or designate SMC.		Are there any other vessels in the area? _____ Is the vessel experiencing any Icing Conditions? _____ Landmarks and ATON the vessel can see: _____  Depth of water at the vessel: _____ Trackline of the vessel since time of departure: _____									
<b>B. INITIAL ACTION</b> ____ 1. Instruct persons to don PFDs. ____ 2. Evaluate emergency phase. ____ 3. Attempt to determine possible locations of the vessel. Consider departure and destination information, courses and speeds steered, landmarks, buoys, and vessels presently observed, as well as those observed during the voyage. Also consider any sounds (vessels, landmarks, nav aids, etc.) heard. ____ 4. Advise the vessel of your plans. ____ 5. If vsl reqsts a course to steer, light characteristics, or the I.D. of a light based on their evaluation, refer to responses in the detailed procedures on p.XX. ____ 6. Issue UMIB or MARB if warranted.		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center; padding: 5px;"><b>VESSEL/EQUIPMENT</b></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;"> <input type="checkbox"/> Document/Official #   <input type="checkbox"/> State Reg. #            Communications Equipment:  <input type="checkbox"/> VHF-FM      <input type="checkbox"/> HF  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Cellular #: _____            Frequencies: _____            Usage: _____            Prominent Features: _____            Hull Material: _____            Cause of incident: _____         </td> <td style="padding: 5px;">           Homeport: _____             Flag: _____            Navigation Equipment:  <input type="checkbox"/> LORAN      <input type="checkbox"/> GPS  <input type="checkbox"/> Radar      <input type="checkbox"/> Fathometer  <input type="checkbox"/> Other: _____            Survival Equipment:  <input type="checkbox"/> EPIRB Class/Type: _____  <input type="checkbox"/> VDS/Flares    <input type="checkbox"/> Flashlight  <input type="checkbox"/> Raft/Lifeboat   <input type="checkbox"/> Dinghy/Skiff  <input type="checkbox"/> Food/Water     <input type="checkbox"/> Foul Wx Gear         </td> </tr> </tbody> </table>		<b>VESSEL/EQUIPMENT</b>		<input type="checkbox"/> Document/Official #  <input type="checkbox"/> State Reg. # Communications Equipment: <input type="checkbox"/> VHF-FM <input type="checkbox"/> HF <input type="checkbox"/> Other: _____ <input type="checkbox"/> Cellular #: _____ Frequencies: _____ Usage: _____ Prominent Features: _____ Hull Material: _____ Cause of incident: _____	Homeport: _____  Flag: _____ Navigation Equipment: <input type="checkbox"/> LORAN <input type="checkbox"/> GPS <input type="checkbox"/> Radar <input type="checkbox"/> Fathometer <input type="checkbox"/> Other: _____ Survival Equipment: <input type="checkbox"/> EPIRB Class/Type: _____ <input type="checkbox"/> VDS/Flares <input type="checkbox"/> Flashlight <input type="checkbox"/> Raft/Lifeboat <input type="checkbox"/> Dinghy/Skiff <input type="checkbox"/> Food/Water <input type="checkbox"/> Foul Wx Gear				
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<b>C. PLANNING/OPERATIONS</b> ____ 1. Dispatch a SRU to DF on and locate the vessel.. ____ 2. Initiate a search for the vessel. ____ 3. Instruct the vsl to activate EPIRB to provide position information, after discussing this option with SC. ____ 4. Consider advising the vsl to anchor to prevent them from going aground ____ 5. Establish a commsched. ____ 6. Instruct the vessel to activate the EPIRB if comms are lost. Record the hexadecimal code if a 406 MHZ EPIRB.		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center; padding: 5px;"><b>PEOPLE</b></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____             Phone: _____            Age:        DOB: _____            Male / Female         </td> <td style="padding: 5px;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____             Phone: _____            Age:        DOB: _____            Male / Female         </td> </tr> <tr> <td style="padding: 5px;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____             Phone: _____            Age:        DOB: _____            Male / Female         </td> <td style="padding: 5px;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____             Phone: _____            Age:        DOB: _____            Male / Female         </td> </tr> </tbody> </table>		<b>PEOPLE</b>		<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____  Phone: _____ Age:        DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____  Phone: _____ Age:        DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____  Phone: _____ Age:        DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____  Phone: _____ Age:        DOB: _____ Male / Female		
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## FLARE SIGHTING

PROCEDURES	OBTAIN A CLEAR MENTAL PICTURE OF WHAT THE R/S OBSERVED
<b>A. AWARENESS</b> ____ 1. Fill out the INITIAL SAR CHECKSHEET. ____ 2. Fill out the FLARE SIGHTING checksheet. ____ 3. Assume or designate SMC.	DTG of Report: _____ Reporting Source Name: _____  Address: _____ Phone: _____  Flare color: RED AMBER WHITE GREEN OTHER: _____ # Observed: _____ Type of flares: PARACHUTE HANDHELD METEOR OTHER: _____ Time interval between flares: _____ Duration of burn: _____ Trajectory: RISE FALL ARC STEADY OTHER: _____ Additional Information: _____  R/S Position: _____  Position Uncertainty: _____
<b>B. INITIAL ACTION</b> ____ 1. Attempt to correlate w/ other SAR incidents. ____ 2. Brief SC. ____ 3. If other than red, orange, or white, and no correlating incidents exist, retain report for future reference. ____ 4. Evaluate emergency phase. ____ 5. Issue UMIB.	<b>DETERMINE THE ANGLE OF ELEVATION</b> To determine the angle of elevation, particularly from the inexperienced R/S, ask the R/S to hold his/her arm at arm's length, make a fist, and place the bottom of the fist on the horizon. If the elevation of the flare is ABOVE the fist, the angle is greater than 8 degrees. Any elevation above 8 degrees can be approximated as the distance to the flare is within 1 NM. If the elevation is BELOW the top of the fist, ascertain how high up the fist, i.e. 1/4, 1/2, 3/4 or number of fingers. The distance to the source of the flare is much greater for any angle below 8 Degrees. The conversion tables from the CG Addendum to NSM (pg 2-45) are reproduced on the back of this checksheet for convenience.
<b>C. PLANNING/ OPERATIONS</b> ____ 1. Dispatch SRU. ____ 2. Develop SAP. ____ 3. Contact local agencies/ DOD units; check for pyro exercises in area. ____ 4. Have R/S vector SRU to scene. ____ 5. Conduct PRECOMS/solicit info from local contacts. ____ 6. SRU question all vsls/people in area for further info. ____ 7. If origin located, confirm that the subj fired a flare. ____ 8. Prep for next/first light search.	Angle of Elevation: _____ deg NLT: _____ deg NMT: _____ deg How Determined: _____ Distance from R/S based on angle of elevation (as per NSM): NLT: _____ nm   + / - _____ nm NMT: _____ nm   + / - _____ nm Bearing from R/S: _____ deg T / M   + / - _____ deg
<b>D. MISSION CONCLUSION</b> ____ 1. Close the case or request ACTSUS. ____ 2. Debrief SRU. ____ 3. CX UMIB. ____ 4. Debrief. ____ 5. Case administration.	Apparent origin of flare: SURFACE AIR OTHER: _____ Relation to the horizon: ABOVE BELOW ON OTHER: _____ R/S height of eye: _____ Any vsls or aircraft sighted in vic: _____ Obstruction in line of sight: TREES BLDGS OTHER: _____ O/S Weather: Wind: ____/____ Seas: ____/____ Vis: ____ Sea temp: ____ Additional notes: _____  If R/S is on a vessel, will R/S respond to sighting: Y / N ETA O/S: _____ Intended action by R/S: _____ If R/S is on land, will R/S remain by the phone to vector SRU: Y / N  Advise R/S of Coast Guard intentions: _____



## FLARE SIGHTING

TYPE	TRAJECTORY	AVERAGE HEIGHT	CANDLEPOWER NOMINAL RANGE****
METEOR*	RAPID RISE AND FALL	200 -675 FT	10,000-30,000 15 – 17 NM
PARACHUTE**	RAPID RISE/ SLOW DESCENT	200 – 1200 FT	20,000 – 40,000 14 – 20 NM
HANDHELD***	STEADY	ASSUME 10 FT	500 – 15,000 8 – 16 NM

\*Meteor flares have no minimum altitude requirements.

\*\*Parachute flare requirements by SOLAS: 300 Meter (990') height, 30K candlepower

\*\*\*Handheld candlepower requirements: USCG – 500; SOLAS – 15,000

\*\*\*\*Nominal Range: Allard's Law Nomogram for 10nm visibility & no moon.

CONVERT ESTIMATED "NOT MORE THAN" VERTICAL ANGLE TO ESTIMATED MINIMUM DISTANCE OF FLARE FROM OBSERVER				
ESTIMATED "NMT" VERTICAL ANGLE		TYPE OF FLARE		
DEGREES	HANDS (FIST)	HANDHELD	METEOR	PARACHUTE
On the horizon or too small to estimate		0.1	1.0	4.0
2	¼	0.05	0.5	2.0
4	½	0.00	0.25	1.00
8	1	0.00	0.1	0.5
16	2	0.00	0.05	0.2
24	3	0.00	0.00	0.15
32	4	0.00	0.00	0.1
DISTANCE IN NAUTICAL MILES				
<b>NOTES:</b> (1) If estimated "NMT" value is not listed, use the next greater entering value to yield the least minimum distance. (2) This table for observers at or less than 20' elevation.				

CONVERT ESTIMATED "NOT LESS THAN" VERTICAL ANGLE TO ESTIMATED MINIMUM DISTANCE OF FLARE FROM OBSERVER				
ESTIMATED "NLT" VERTICAL ANGLE		TYPE OF FLARE		
DEGREES	HANDS (FIST)	HANDHELD	METEOR	PARACHUTE
On the horizon or too small to estimate		6.0	28.0	30.0
2	¼	4.0	24.0	26.0
4	½	2.0	6.0	8.0
8	1	1.0	3.0	4.0
16	2	0.5	1.0	1.5
24	3	0.25	0.5	0.75
32	4	0.1	0.25	0.5
Distance in Nautical Miles				
<b>NOTES:</b> (1) If estimated "NLT" value is not listed, use the next lesser entering value to yield the greatest maximum distance. (2) This table for observers at or less than 20' elevation.				
ADDITIONAL INFORMATION:				



## DETERMINE ANGLE OF OBSERVATION AND POSITION

**Angle of  
Observation**

How determined: \_\_\_\_\_

If determined by Fist Method: Fractions of a fist(s): \_\_\_\_\_

Check one:

\_\_\_\_ Angle below the horizon

\_\_\_\_ Angle above horizon

\_\_\_\_ Angle measured from flare origin to apex

\_\_\_\_ Steady, no angle of elevation observed

Degrees: \_\_\_\_\_

Not more than: \_\_\_\_\_

deg

Not less than: \_\_\_\_\_

deg

**Bearing from**

How determined: \_\_\_\_\_

**Observer**

If determined by clock method: Bearing at \_\_\_\_\_ o'clock

Is the reporting source (or building that the reporting source is located in) perpendicular to the shoreline? yes / no

If no, what is the orientation of the location to the shore line? \_\_\_\_\_ deg.

Direction by: prominent landmark, street direction, moon, other

Degrees: \_\_\_\_\_

Uncertainty: + / - \_\_\_\_\_

degrees

**Obstruction**

List any obstructions in the line of sight of the reporting source.

Obstruction \_\_\_\_\_ in front of \_\_\_\_\_ behind flare ?

Obstruction height: \_\_\_\_\_ ft

**On-Scene  
weather**

Wind: \_\_\_\_\_ / \_\_\_\_\_

Seas: \_\_\_\_\_ / \_\_\_\_\_

Visibility: \_\_\_\_\_ / \_\_\_\_\_

**Vessels/  
Aircraft**

Were any vessels or aircraft observed in the area? yes / no

If yes, description: \_\_\_\_\_

Radio Call	Frequency:	High Site:	DF Bearing:
Time:	Date:	UCN:	Initials:

**-- Initial SAR Check-sheet --**

About the Distressed Vessel			
1. Position		Type of Position	Lat/Long Loran Lines Geographic Location
How determined?			
2. Number of Persons Aboard		ADULTS:	CHILDREN: TOTAL:
Health or medical concerns?			
3. Nature of Distress (if PIW complete additional PIW box below)			
4. Description of Vessel			
Including...			
Length	Color	Type	Name of Vessel
			at anchor? Y N
5. Have all persons aboard the vessel put on Personal Flotation Devices.			
***** ADVISE VESSEL OF INTENDED ACTIONS AT THIS TIME *****			

6. Determine Initial Severity/Emergency Phase (done by Watch Supervisor)	
<input type="checkbox"/> Distress <input type="checkbox"/> Dispatch Resources/Activate SAR Alarm. <input type="checkbox"/> Advise vessel of Coast Guard's Actions. <input type="checkbox"/> Brief Group/District <input type="checkbox"/> Provide Emergency Instructions to Vessel in Distress. <input type="checkbox"/> Issue UMIB. <input type="checkbox"/> Complete additional Check-Sheets as Situation Dictates. <input type="checkbox"/> Refer to D1 SARPLAN.	<input type="checkbox"/> Uncertainty <input type="checkbox"/> Alert Additional Information is needed. Complete one or more of the following: <input type="checkbox"/> Supplemental Check-sheet <input type="checkbox"/> Overdue Check-sheet <input type="checkbox"/> Flare Sighting Check-sheet <input type="checkbox"/> MEDEVAC/MEDICO Check-sheet <input type="checkbox"/> Grounding Check-sheet

About any People in the Water			
Number:	Confirmed?	Description	PFD?
Time:			Exp suit?      Light?

*Complete all of the above before shifting frequency; Complete below before hanging up phone.*

About the Reporting Source	
Name of Reporting Source	
Name of Reporting Source Vessel	
Call back number (with area code)	Is this a cell phone number?
Address of Reporting Source	

About the On Scene Weather			
Wind	Seas	Swells	Visibility

# INITIAL SAR CHECKSHEET

\*Complete blocks 1 to 3 before shifting frequency\*

Time:		Date:	UCN:	Unit:
1. NAME OF VESSEL		REPORTING SOURCE		
OR				
Radio Callsign: _____		Telephone: _____		
Frequency: _____ DF Bearing _____				
High Site Location: _____		<input type="checkbox"/> Confirmed <input type="checkbox"/> Cellular		

2. POSITION	Latitude: _____ N
	Longitude: _____ W
	TD1: _____
	TD2: _____
<input type="checkbox"/> Anchored	

3. NATURE OF DISTRESS	POB: _____ Total
	_____ Adult
	_____ Children
	<input type="checkbox"/> Put on PFD's!
	<input type="checkbox"/> Health/Medical Problems?
Vessel Description:	<input type="checkbox"/> PIW
	Number: _____
	<input type="checkbox"/> Confirmed    PFD <input type="checkbox"/> EXP SUIT <input type="checkbox"/> Time:                    LIGHT <input type="checkbox"/>
	Description: _____
On Scene Weather:	
Wind: _____ Seas: _____ Vis: _____	

EMERGENCY PHASE (Initial Severity)	
<input type="checkbox"/> UNCERTAINTY <input type="checkbox"/> ALERT Additional information needed. Complete one or more of the following:	<input type="checkbox"/> DISTRESS <input type="checkbox"/> Contact SMC/OOD <input type="checkbox"/> Issue UMIB <input type="checkbox"/> Dispatch resources <input type="checkbox"/> Provide Emergency Instructions to vessel <input type="checkbox"/> Advise vessel of Coast Guard actions <input type="checkbox"/> Refer to SARPLAN
<input type="checkbox"/> Supplement Checksheet (Reverse) <input type="checkbox"/> Overdue Checksheet <input type="checkbox"/> Flare Sighting Checksheet <input type="checkbox"/> MEDEVAC/MEDICO Checksheet <input type="checkbox"/> Grounding Checksheet	

## MEDICO/MEDDEVAC AND DIVE INCIDENTS

PROCEDURES	PATIENT INFORMATION
<b>A. AWARENESS</b> ____ 1. Fill out the INITIAL SAR CHECK SHEET ____ 2. Fill out the MEDICO/MEDDEVAC CHECK SHEET. ____ 3. Assume or designate SMC.	Name _____ Age _____ Sex _____ Nationality _____ Type of injury (symptoms and location): _____ When/how injury occurred: _____ _____ Medications administered (amount and type): _____ _____ Previous medical history (including medications): _____
<b>B. INITIAL ACTION</b> ____ 1. Evaluate emergency phase. ____ 2. Issue UMIB. ____ 3. Dispatch SRU(s). ____ 4. Brief SC/Flight Surgeon. ____ 5. Alert local authorities.	<div style="text-align: center;"><b>PATIENT VITAL SIGNS</b></div> Temp: _____ <b>Airway:</b> OBSTRUCTED      GURGLING      OPEN B/P (Wrist/Neck): _____ <b>Resp:</b> SHALLOW      NORMAL      DEEP      NONE* <b>Pulse:</b> NORMAL      WEAK      POUNDING      NONE* * IF NO PULSE/RESP, IS CPR BEING CONDUCTED? Y / N HOW LONG? _____ Conscious: Y N      Ambulatory: Y N      Eyes: Dilated Y N Convulsions: Y N      Signs of shock: Y N      Reactive Y N Vomiting: Y N      Bleeding: Y N      Equal Y N Tingling Limbs: Y N      Paralysis: Y N Skin cond: DRY NML CLAMMY      Skin color: BLANCHED YLW NML BLUE RED First aid kit: Y N      Treatment given: _____ Medical personnel: DR RN EMT OTHER _____
<b>C. PLANNING/ OPERATIONS</b> ____ 1. If dive emergency, obtain recommendation and location of hyperbaric chamber from D.A.N. via SC. ____ 2. Brief Flt Surgeon on D.A.N.'s recommendation ____ 3. Pass Flt Surgeon/ DAN treatment recommendation to persons attending the patient. ____ 4. Notify hospital or recompression chamber. ____ 5. Direct vessel to head towards rendezvous point or nearest port. ____ 6. Run AMVER SURPIC to locate assistance if necessary. ____ 7. Notify vessel's agent/ owner, U.S. Customs, INS. ____ 8. Ntfy MSO/COTP.	<div style="text-align: center;"><b>ADDITIONAL INFORMATION FOR DIVING ACCIDENTS</b></div> Time of accident: _____ Patient's Height: _____ Weight: _____ Total dives today: _____ Interval between dives: _____ Dive depth: _____ FT/M      Dive duration: _____      Decompression: _____ Dives in last 24 HRS? Y / N      If YES, when? _____ Dive depth: _____ FT/M      Dive duration: _____      Decompression: _____ <b>If diver trapped</b> Amount of air left in diver's tank? _____ Depth: _____ Experience of the trapped diver: _____ Equipment available: _____ Nature of object trapping diver: _____ Actions being taken to free diver: _____ Any divers and equipment in area to rescue diver: _____
<b>D. MISSION CONCLUSION</b> ____ 1. Close the case or request ACTSUS. ____ 2. Debrief SRUs. ____ 3. CX UMIB. ____ 4. Debrief. ____ 5. Case administration.	<div style="text-align: center;"><b>MISC INFORMATION</b></div> VSI LPOC/Date: _____      VSI NPOC/ETA: _____ Communications: VHF-FM MF/HF CELLULAR      Freq/Number: _____ O/S WX – Wind: _____ / _____      Seas: _____ / _____      Vis: _____      Sea temp: _____ <div style="text-align: center;"><b>ADDITIONAL INFORMATION</b></div>

FREQ _____ MSG FILE NR _____	STATION CALLSIGN _____
<div>Station (s) called: _____</div> <div><b><u>THIS IS</u></b></div> <div>Station calling: _____</div> <div><b><u>MESSAGE FOLLOWS</u></b></div> <div>Precedence: ↑ROUTINE</div> <div style="margin-left: 100px;">↑PRIORITY     Date-Time-Group _____ Z _____</div> <div style="margin-left: 100px;">↑IMMEDIATE</div> <div>FROM _____</div> <div>TO _____</div> <div>INFO _____</div> <div>ACCT _____</div> <div>BREAK</div> <div>UNCLAS *SAR Phase:     ↑UNCERTAINTY     ↑ALERT ↑DISTRESS</div> <div style="margin-left: 100px;">*SITREP NR. _____     * AND FINAL</div>	
<div>Subj or *case ident _____</div> <div>Ref:     A. _____</div> <div style="margin-left: 100px;">B. _____</div> <div>Body:    1. _____</div> <div>_____</div> <div>_____</div> <div>_____</div> <div>_____</div> <div>_____</div> <div>BREAK</div> <div>Final instrn:     ↑WAIT     ↑CORRECTION     ↑DISGREARD THIS TRANSMISSION</div> <div>Ending sign:     ↑OVER     ↑OUT</div>	
<div>TOR/TOD _____ BY _____</div> <div style="height: 300px; border: 1px solid black; margin-top: 10px;"></div>	

**P.I.W.**

PROCEDURES	PIW INFORMATION												
<b>A. AWARENESS</b> ____ 1. Fill out the INITIAL SAR Check-sheet. ____ 2. Fill out the PIW Checksheet. ____ 3. Req R/S remain o/s to vector SRUs. ____ 4. Assume or designate SMC.	What were the circumstances? _____  Is there any question that it was a person in the water? Describe what was sighted. _____  PIW name: _____ Age: _____ Sex: M / F Weight: _____ PIW health: _____ Nationality: _____  Determine water temperature: _____												
<b>B. INITIAL ACTION</b> ____ 1. Evaluate emergency phase. ____ 2. Issue UMIB. ____ 3. Dispatch quickest SRU(s). ____ 4. Brief SC. ____ 5. Alert local authorities.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center; padding: 5px;">VESSEL/EQUIPMENT</th> </tr> </thead> <tbody> <tr> <td style="width: 50%; padding: 5px;"> <input type="checkbox"/> Document/Official # _____                         </td> <td style="width: 50%; padding: 5px;">                           Homeport: _____                         </td> </tr> <tr> <td style="padding: 5px;"> <input type="checkbox"/> State Reg. # _____                         </td> <td style="padding: 5px;">                           Flag: _____                         </td> </tr> <tr> <td style="padding: 5px;"> <b>Communications Equipment:</b>  <input type="checkbox"/> VHF-FM      <input type="checkbox"/> HF  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Cellular #: _____                         </td> <td style="padding: 5px;"> <b>Navigation Equipment:</b>  <input type="checkbox"/> LORAN      <input type="checkbox"/> GPS  <input type="checkbox"/> Radar      <input type="checkbox"/> Fathometer  <input type="checkbox"/> Other: _____                         </td> </tr> <tr> <td style="padding: 5px;"> <b>Usage:</b>   <b>Prominent Features:</b>   <b>Hull Material:</b> </td> <td style="padding: 5px;"> <b>Survival Equipment:</b>  <input type="checkbox"/> EPIRB Class/Type: _____  <input type="checkbox"/> VDS/Flares      <input type="checkbox"/> Flashlight  <input type="checkbox"/> Raft/Lifeboat      <input type="checkbox"/> Dinghy/Skiff  <input type="checkbox"/> Food/Water      <input type="checkbox"/> Foul Wx Gear                         </td> </tr> <tr> <td style="padding: 5px;"> <b>Cause of incident:</b> </td> <td></td> </tr> </tbody> </table>	VESSEL/EQUIPMENT		<input type="checkbox"/> Document/Official # _____	Homeport: _____	<input type="checkbox"/> State Reg. # _____	Flag: _____	<b>Communications Equipment:</b> <input type="checkbox"/> VHF-FM <input type="checkbox"/> HF <input type="checkbox"/> Other: _____ <input type="checkbox"/> Cellular #: _____	<b>Navigation Equipment:</b> <input type="checkbox"/> LORAN <input type="checkbox"/> GPS <input type="checkbox"/> Radar <input type="checkbox"/> Fathometer <input type="checkbox"/> Other: _____	<b>Usage:</b>  <b>Prominent Features:</b>  <b>Hull Material:</b>	<b>Survival Equipment:</b> <input type="checkbox"/> EPIRB Class/Type: _____ <input type="checkbox"/> VDS/Flares <input type="checkbox"/> Flashlight <input type="checkbox"/> Raft/Lifeboat <input type="checkbox"/> Dinghy/Skiff <input type="checkbox"/> Food/Water <input type="checkbox"/> Foul Wx Gear	<b>Cause of incident:</b>	
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<b>Cause of incident:</b>													
<b>C. PLANNING/ OPERATIONS</b> ____ 1. Formulate search plan. ____ 2. First SRU on scene deploy a DMB. ____ 3. Dispatch additional SRUs. ____ 4. Establish communications w/ family/NOK. ____ 5. Develop future searches. ____ Alert SRUs for next search. ____ Have local authorities do land search. ____ Consult survival table information. ____ Analyze all possible scenarios. ____ 6. If PIW is located: ____ If alive, conduct MEDEVAC. ____ Notify next of kin. ____ If deceased, arrange recovery and turn body over to local authorities. ____ Arrange for notification of next of kin IAW paragraph XXX. ____ If there is any doubt, ensure that first aid and revival attempts continue until delivery to the nearest medical facility.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center; padding: 5px;">PEOPLE</th> </tr> </thead> <tbody> <tr> <td style="width: 50%; padding: 5px;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB  <b>Name:</b> _____  <b>Address:</b> _____   <b>Phone:</b> _____  <b>Age:</b>      <b>DOB:</b> _____  <b>Male / Female</b> </td> <td style="width: 50%; padding: 5px;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB  <b>Name:</b> _____  <b>Address:</b> _____   <b>Phone:</b> _____  <b>Age:</b>      <b>DOB:</b> _____  <b>Male / Female</b> </td> </tr> <tr> <td style="padding: 5px;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB  <b>Name:</b> _____  <b>Address:</b> _____   <b>Phone:</b> _____  <b>Age:</b>      <b>DOB:</b> _____  <b>Male / Female</b> </td> <td style="padding: 5px;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB  <b>Name:</b> _____  <b>Address:</b> _____   <b>Phone:</b> _____  <b>Age:</b>      <b>DOB:</b> _____  <b>Male / Female</b> </td> </tr> </tbody> </table>	PEOPLE		<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB <b>Name:</b> _____ <b>Address:</b> _____  <b>Phone:</b> _____ <b>Age:</b> <b>DOB:</b> _____ <b>Male / Female</b>	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB <b>Name:</b> _____ <b>Address:</b> _____  <b>Phone:</b> _____ <b>Age:</b> <b>DOB:</b> _____ <b>Male / Female</b>	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB <b>Name:</b> _____ <b>Address:</b> _____  <b>Phone:</b> _____ <b>Age:</b> <b>DOB:</b> _____ <b>Male / Female</b>	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB <b>Name:</b> _____ <b>Address:</b> _____  <b>Phone:</b> _____ <b>Age:</b> <b>DOB:</b> _____ <b>Male / Female</b>						
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<b>D. MISSION CONCLUSION</b> ____ 1. Close the case or request ACTSUS. ____ 2. Debrief SRUs and all individuals or offices notified of the case. ____ 3. CX UMIB. ____ 4. Debrief. ____ 5. Case administration.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center; padding: 5px;">ADDITIONAL COMMENTS</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="height: 40px;"></td> </tr> <tr> <th colspan="2" style="text-align: center; padding: 5px;">ACTIONS</th> </tr> <tr> <td style="width: 50%; padding: 5px;"> <b>Communications Schedule:</b>  <b>Start Time:</b> _____ <b>Freq:</b> _____  <b>Time Interval:</b>  <input type="checkbox"/> 15 Min    <input type="checkbox"/> 30 Min    <input type="checkbox"/> 60 Min  <input type="checkbox"/> Other _____  <b>Remarks:</b> </td> <td style="width: 50%; padding: 5px;"> <b>Set and Drift:</b>    <input type="checkbox"/> Not a Factor   <b>Set:</b> _____ <input type="checkbox"/> True <input type="checkbox"/> Mag  <b>Drift:</b> _____ <input type="checkbox"/> Kts <input type="checkbox"/> Mph                         </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> <b>DMB Type:</b> _____ <b>Freq:</b> _____                         </td> </tr> <tr> <td style="padding: 5px;"> <div style="text-align: center; margin-bottom: 5px;">Inserted</div> <b>Time:</b> _____  <b>Position:</b> _____ N  <div style="text-align: center;">W</div> </td> <td style="padding: 5px;"> <div style="text-align: center; margin-bottom: 5px;">Relocated</div> <b>Time:</b> _____  <b>Position:</b> _____ N  <div style="text-align: center;">W</div> </td> </tr> </tbody> </table>	ADDITIONAL COMMENTS				ACTIONS		<b>Communications Schedule:</b> <b>Start Time:</b> _____ <b>Freq:</b> _____ <b>Time Interval:</b> <input type="checkbox"/> 15 Min <input type="checkbox"/> 30 Min <input type="checkbox"/> 60 Min <input type="checkbox"/> Other _____ <b>Remarks:</b>	<b>Set and Drift:</b> <input type="checkbox"/> Not a Factor  <b>Set:</b> _____ <input type="checkbox"/> True <input type="checkbox"/> Mag <b>Drift:</b> _____ <input type="checkbox"/> Kts <input type="checkbox"/> Mph	<b>DMB Type:</b> _____ <b>Freq:</b> _____		<div style="text-align: center; margin-bottom: 5px;">Inserted</div> <b>Time:</b> _____ <b>Position:</b> _____ N <div style="text-align: center;">W</div>	<div style="text-align: center; margin-bottom: 5px;">Relocated</div> <b>Time:</b> _____ <b>Position:</b> _____ N <div style="text-align: center;">W</div>
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## RADIOTELEPHONE STATION LOG

[illegible]

### SUPPLEMENTAL SAR CHECKSHEET

<b>VESSEL</b>				
<input type="checkbox"/> Document/Official <input type="checkbox"/> State Reg.		Communications Equipment <input type="checkbox"/> VHF-FM <input type="checkbox"/> HF <input type="checkbox"/> Other: _____ <input type="checkbox"/> Cellular #: _____ Frequencies: _____		
Homeport:	Flag:	Navigation Equipment: <input type="checkbox"/> LORAN <input type="checkbox"/> GPS <input type="checkbox"/> Radar <input type="checkbox"/> Fathometer <input type="checkbox"/> Other: _____		
Usage	Cause of incident:	Survival Equipment: <input type="checkbox"/> EPIRB Class/Type: _____ <input type="checkbox"/> VDS/Flares <input type="checkbox"/> Flashlight <input type="checkbox"/> Raft/Lifeboat <input type="checkbox"/> Dinghy/Skiff <input type="checkbox"/> Food/Water <input type="checkbox"/> Foul Wx Gear		
Prominent Features				
Hull Material				
<b>PEOPLE</b>				
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ Phone: _____ Age:    DOB:    Male / Female		<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ Phone: _____ Age:    DOB:    Male / Female		
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<b>ADDITIONAL COMMENTS:</b>				
<b>ACTIONS</b>				
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<b>PEOPLE</b>				
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ Phone: _____ Age:    DOB:    Male / Female		<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ Phone: _____ Age:    DOB:    Male / Female		
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<b>ACTIONS</b>				
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DMB                      Inserted Time: _____ Position: _____ N W	Relocated _____ N _____ W			

# S U P P L E M E N T A L   S A R   C H E C K S H E E T

V E S S E L	<input type="checkbox"/> Document/Official <input type="checkbox"/> State Reg.		Communications Equipment <input type="checkbox"/> VHF-FM <input type="checkbox"/> HF <input type="checkbox"/> Other _____ <input type="checkbox"/> Cellular: # _____ Frequencies: _____
	Homeport	Flag	Navigation Equipment <input type="checkbox"/> LORAN <input type="checkbox"/> GPS <input type="checkbox"/> OMEGA <input type="checkbox"/> Radar <input type="checkbox"/> Fathometer <input type="checkbox"/> Other _____
	Usage	Hull Material	
	Prominent Features		Survival Equipment <input type="checkbox"/> EPIRB Class/Type: _____ <input type="checkbox"/> VDS/Flares <input type="checkbox"/> Flashlight <input type="checkbox"/> Raft/Lifeboat <input type="checkbox"/> Dinghy/Skiff <input type="checkbox"/> Food/Water <input type="checkbox"/> Foul Wx Gear
	Cause of Incident		

P E R S O N S	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB NAME			<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB NAME		
	Address			Address		
	Phone			Phone		
	Age:	DOB:	MALE/FEMALE	Age:	DOB:	MALE/FEMALE
	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB NAME			<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB NAME		
	Address			Address		
	Phone			Phone		
	Age:	DOB:	MALE/FEMALE	Age:	DOB:	MALE/FEMALE

Additional Comments	
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A C T I O N	Communications Schedule		Set and Drift <input type="checkbox"/> Not a factor	
	Start Time	Frequency	Set <input type="checkbox"/> T <input type="checkbox"/> M	Drift <input type="checkbox"/> kts <input type="checkbox"/> MPH
	Time Interval <input type="checkbox"/> 15 min <input type="checkbox"/> 30 min <input type="checkbox"/> 60 min <input type="checkbox"/> Other _____		<input type="checkbox"/> DMB Type Freq	
	Remarks		DMB	Inserted Relocated
			Time	
			Position	N W

# UNCORRELATED MAYDAY, PROBABLE HOAX CALLS, AUTOMATED S.O.S, and MAYDAY

PROCEDURES	PRIMARY INFORMATION		
<b>A. AWARENESS</b> ____ 1. Fill out the INITIAL SAR Check-sheet. ____ 2. Fill out the UNCORRELATED MAYDAY AND PROBABLE HOAX CALLS Check-sheet. ____ 3. Assume/designate SMC.	<b>Exact wording of radio call:</b> _____ _____ _____		
	<b>Possible correlating incidents:</b> _____ _____		
	<b>DFs OBTAINED</b>		
	<b>SITE/LOCATION</b> _____ _____ _____	<b>BEARING (T / M)</b> _____ _____ _____	
<b>B. INITIAL ACTION</b> ____ 1. Attempt to correlate w/ other SAR incidents. ____ 2. For all uncorrelated mayday cases, immediately review recorded transmissions. ____ 3. Evaluate emergency phase. ____ 4. Plot and evaluate any DFs obtained by CG units or other vessels. ____ 5. Determine which hi-sites and local antennas picked up the distress in order to isolate the signal. ____ 6. If the call is suspected to be a hoax, replay the call to each level up the SAR chain of command. The final level of review is SC. If the general consensus remains that the call is in fact a probable hoax, no further action is required. ____ 7. Issue UMIB. ____ 8. Brief SC. ____ 9. Alert local authorities.	<b>HI SITES, LOCAL ANTENNA, AND OTHER UNITS RECEIVING THE TRANSMISSION</b>		
	<b>SITE/LOCATION</b> _____ _____ _____	<b>STRENGTH (strong, medium, weak)</b> _____ _____ _____	
	<b>VESSEL/EQUIPMENT</b>		
	<input type="checkbox"/> Document/Official # <input type="checkbox"/> State Reg. # Communications Equipment: <input type="checkbox"/> VHF-FM <input type="checkbox"/> HF <input type="checkbox"/> Other: _____ <input type="checkbox"/> Cellular #: _____ Frequencies: _____ Usage: _____ Prominent Features: _____ Hull Material: _____ Cause of incident: _____	Homeport: _____ Flag: _____ Navigation Equipment: <input type="checkbox"/> LORAN <input type="checkbox"/> GPS <input type="checkbox"/> Radar <input type="checkbox"/> Fathometer <input type="checkbox"/> Other: _____ Survival Equipment: <input type="checkbox"/> EPIRB Class/Type: _____ <input type="checkbox"/> VDS/Flares <input type="checkbox"/> Flashlight <input type="checkbox"/> Raft/Lifeboat <input type="checkbox"/> Dinghy/Skiff <input type="checkbox"/> Food/Water <input type="checkbox"/> Foul Wx Gear	
<b>C. PLANNING/ OPERATIONS</b> ____ 1. Launch appropriate resources when there is sufficient info to establish a reasonable search area. ____ 2. Formulate search plan.	<b>PEOPLE</b>		
	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ _____ Phone: _____ Age:      DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ _____ Phone: _____ Age:      DOB: _____ Male / Female	
	<b>ACTIONS</b>		
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<b>D. MISSION CONCLUSION</b> ____ 1. Close the case upon confirmed mission outcome, or request ACTSUS after appropriate action. ____ 2. Req ACTSUS if additional info indicating a prob hoax becomes available. ____ 3. Dealert SRUs. ____ 4. CX UMIB. ____ 5. Debrief. ____ 6. Case administration.	<b>DMB Type:</b> _____ <b>Freq:</b> _____		
	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <b>Inserted</b>            Time: _____            Position: _____ N               W         </div> <div style="text-align: center;"> <b>Relocated</b>            _____            _____ N            _____ W         </div> </div>		

## UNEXPLODED ORDNANCE

PROCEDURES	ADDITIONAL INFORMATION												
<b>A. AWARENESS</b> ____ 1. Fill out the INITIAL SAR Checksheet ____ 2. Assume or designate SMC.	Any other vessels in the area? _____  Description of item (shape, diameter, length, weight, damage, color, markings): _____ _____ Depth of water: _____ Nearest populated area: _____ Person in charge at scene: _____												
<b>B. INITIAL ACTION</b> ____ 1. Instruct persons to don PFDs. ____ 2. Evaluate emergency phase. ____ 3. Advise R/S not to touch, move, or take any actions that might cause the ordnance to detonate. ____ 4. Order vsl to remain at sea (fair WX) or proceed to safe lee where other vsls/people won't be threatened (heavy WX). If the ordnance is recovered in nets or dredges, advise vsl to: a. Not allow the item to remain alongside the vessel where wave action may cause contact with the hull. b. If the item is on board and suspended, and can continue to be safely suspended, stabilize the net with the guy lines to prevent movement. Keep the crew away from the area. c. If the item is not onboard and can be safely lowered into the water, do so. d. Depending on circumstances, including weather or nearby vessels, the crew can consider abandoning their vessel, until the ordnance is disposed of. ____ 5. Issue UMIB. ____ 6. Fill out the UNEXPLODED ORDNANCE checksheet. ____ 7. Brief SC who will brief an EOD. ____ 8. Notify appropriate MSO/COTP to establish a safety zone. ____ 9. Establish communication sched. ____ 10. Instruct vsl to activate EPIRB if comms are lost. Record the hexadecimal code.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">VESSEL/EQUIPMENT</th> </tr> </thead> <tbody> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Document/Official # _____  <input type="checkbox"/> State Reg. # _____            Communications Equipment:  <input type="checkbox"/> VHF-FM      <input type="checkbox"/> HF  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Cellular #: _____            Frequencies: _____            Usage: _____            Prominent Features: _____            Hull Material: _____            Cause of incident: _____         </td> <td style="width: 50%; vertical-align: top;">           Homeport: _____            Flag: _____            Navigation Equipment:  <input type="checkbox"/> LORAN      <input type="checkbox"/> GPS  <input type="checkbox"/> Radar      <input type="checkbox"/> Fathometer  <input type="checkbox"/> Other: _____            Survival Equipment:  <input type="checkbox"/> EPIRB Class/Type: _____  <input type="checkbox"/> VDS/Flares      <input type="checkbox"/> Flashlight  <input type="checkbox"/> Raft/Lifeboat      <input type="checkbox"/> Dinghy/Skiff  <input type="checkbox"/> Food/Water      <input type="checkbox"/> Foul Wx Gear         </td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">PEOPLE</th> </tr> </thead> <tbody> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____            Phone: _____            Age:      DOB: _____            Male / Female         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____            Phone: _____            Age:      DOB: _____            Male / Female         </td> </tr> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____            Phone: _____            Age:      DOB: _____            Male / Female         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____            Phone: _____            Age:      DOB: _____            Male / Female         </td> </tr> </tbody> </table>	VESSEL/EQUIPMENT		<input type="checkbox"/> Document/Official # _____ <input type="checkbox"/> State Reg. # _____ Communications Equipment: <input type="checkbox"/> VHF-FM <input type="checkbox"/> HF <input type="checkbox"/> Other: _____ <input type="checkbox"/> Cellular #: _____ Frequencies: _____ Usage: _____ Prominent Features: _____ Hull Material: _____ Cause of incident: _____	Homeport: _____ Flag: _____ Navigation Equipment: <input type="checkbox"/> LORAN <input type="checkbox"/> GPS <input type="checkbox"/> Radar <input type="checkbox"/> Fathometer <input type="checkbox"/> Other: _____ Survival Equipment: <input type="checkbox"/> EPIRB Class/Type: _____ <input type="checkbox"/> VDS/Flares <input type="checkbox"/> Flashlight <input type="checkbox"/> Raft/Lifeboat <input type="checkbox"/> Dinghy/Skiff <input type="checkbox"/> Food/Water <input type="checkbox"/> Foul Wx Gear	PEOPLE		<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ Phone: _____ Age:      DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ Phone: _____ Age:      DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ Phone: _____ Age:      DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ Phone: _____ Age:      DOB: _____ Male / Female		
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<b>C. PLANNING/ OPERATIONS</b> ____ 1. Notify the local fire and police departments. ____ 2. Dispatch SRUs to enforce safety zone. ____ 3. Provide transportation for EOD team to scene.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">ADDITIONAL COMMENTS</th> </tr> </thead> <tbody> <tr> <td colspan="2"> <b>EOD Unit</b>            Transported by: _____            ETA: _____         </td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">ACTIONS</th> </tr> </thead> <tbody> <tr> <td style="width: 50%; vertical-align: top;"> <b>Communications Schedule:</b>            Start Time: _____ Freq: _____            Time Interval:  <input type="checkbox"/> 15 Min    <input type="checkbox"/> 30 Min    <input type="checkbox"/> 60 Min  <input type="checkbox"/> Other            Remarks: _____         </td> <td style="width: 50%; vertical-align: top;"> <b>Set and Drift:</b>    <input type="checkbox"/> Not a Factor            Set: _____    <input type="checkbox"/> True    <input type="checkbox"/> Mag            Drift: _____    <input type="checkbox"/> Kts    <input type="checkbox"/> Mph         </td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;"> <b>DMB Type:</b> _____ <b>Freq:</b> _____         </td> </tr> <tr> <td style="width: 50%; vertical-align: top;"> <div style="text-align: center;">Inserted</div>           Time: _____            Position: _____ N               W         </td> <td style="width: 50%; vertical-align: top;"> <div style="text-align: center;">Relocated</div>           _____            _____ N            _____ W         </td> </tr> </table>	ADDITIONAL COMMENTS		<b>EOD Unit</b> Transported by: _____ ETA: _____		ACTIONS		<b>Communications Schedule:</b> Start Time: _____ Freq: _____ Time Interval: <input type="checkbox"/> 15 Min <input type="checkbox"/> 30 Min <input type="checkbox"/> 60 Min <input type="checkbox"/> Other Remarks: _____	<b>Set and Drift:</b> <input type="checkbox"/> Not a Factor Set: _____ <input type="checkbox"/> True <input type="checkbox"/> Mag Drift: _____ <input type="checkbox"/> Kts <input type="checkbox"/> Mph	<b>DMB Type:</b> _____ <b>Freq:</b> _____		<div style="text-align: center;">Inserted</div> Time: _____ Position: _____ N W	<div style="text-align: center;">Relocated</div> _____ _____ N _____ W
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<b>D. MISSION CONCLUSION</b> ____ 1. Close the case or request ACTSUS. ____ 2. Dealert SRUs. ____ 3. CX UMIB/safety zone. ____ 4. Debrief. ____ 5. Case administration.													

## UNREPORTED AND OVERDUE VESSEL

<p><b>PROCEDURES</b></p> <p><b>A. AWARENESS</b>          ____ 1. Fill out the INITIAL SAR CHECKSHEET.          ____ 2. Fill out the Overdue Vessel CHECKSHEET.          ____ 3. Assume or designate SMC.</p> <p><b>B. INITIAL ACTION</b>          ____ 1. Evaluate the emergency phase.          Consider:          ____ Wx (past, present, predicted).          ____ POB's health, age.          ____ Commitments of POB.          ____ Number of hours overdue.          ____ Size, type of vessel.          ____ Size of area involved.          ____ Comms capability.          ____ Expertise level of operator/crew.          ____ 2. Issue UMIB.          ____ 3. Brief SC.          ____ 4. Commence Pre/ExComms.</p> <p><b>C. PLANNING/ OPERATIONS</b>          ____ 1. Dispatch SRUs if appropriate.          ____ 2. Develop SAP.          ____ 3. Seek additional information from persons who may be aware of vessel's situation.          ____ 4. Designate one POC for the NOK. Keep NOK informed of progress.          ____ 5. Continue to analyze all possible scenarios.</p> <p><b>D. MISSION CONCLUSION</b>          ____ 1. Close the case or request ACTSUS.          ____ 2. Dealert SRUs.          ____ 3. CX UMIB.          ____ 4. Debrief.          ____ 5. Case administration.</p>	<p>Complete both sides of this checksheet.          One of the following might be reason to immediately launch an asset:          Sig Hrs Overdue, Medical Concerns, Commitments, WX History, Age of POB</p> <hr/> <p>VSL LPOC: _____ Date / Time: _____          Did R/S confirm departure: Y / N</p> <p>VSL NPOC: _____ Date / Time: _____          Did R/S confirm non-arrival: Y / N</p> <p>Intended Route: _____</p> <p>POB: Adults: _____ Children: _____ HRS OVERDUE: _____</p> <p>Have they taken this trip before: Y / N UNK          Do they usually stop over anywhere: Y / N UNK          Do they have a habit of being late: Y / N UNK</p> <p>Last comms DTG: _____ Method: (VHF, L/L, etc.): _____</p> <p>Intentions at last comms: _____</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 50%; vertical-align: top; padding: 5px;"> <p><b>Vessel Description:</b></p> <p>Name: _____            Homeport: _____            Type Vsl: PWR / Speed / Row / Sail            Reg/Doc #: _____            Length: _____ Ft / M            Make: _____ Draft: _____ Ft / M            Hull Clr: _____ Hull Mat: _____            S/S Clr: _____ Trim Clr: _____            Sail Clr: _____ Fuel O/B _____            Propulsion: I/B O/B I/O Single Twin            Prominent Features: _____</p> </td> <td style="width: 50%; vertical-align: top; padding: 5px;"> <p><b>Owner:</b>            Address: _____            Phone: _____            Is he/she on board? Y / N            **Contact Owner if not on Board**</p> </td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 50%; vertical-align: top; padding: 5px;"> <p><b>Electronics Equipment:</b></p> <p>Radar Fath GPS LORAN SATNAV            EPIRB Type: _____            Radios: VHF / HF / SSB / CB            Call sign: _____ Freqs: _____            Celular Phone: _____            Pager/Beeper: _____</p> </td> <td style="width: 50%;"></td> </tr> </table>	<p><b>Vessel Description:</b></p> <p>Name: _____            Homeport: _____            Type Vsl: PWR / Speed / Row / Sail            Reg/Doc #: _____            Length: _____ Ft / M            Make: _____ Draft: _____ Ft / M            Hull Clr: _____ Hull Mat: _____            S/S Clr: _____ Trim Clr: _____            Sail Clr: _____ Fuel O/B _____            Propulsion: I/B O/B I/O Single Twin            Prominent Features: _____</p>	<p><b>Owner:</b>            Address: _____            Phone: _____            Is he/she on board? Y / N            **Contact Owner if not on Board**</p>	<p><b>Electronics Equipment:</b></p> <p>Radar Fath GPS LORAN SATNAV            EPIRB Type: _____            Radios: VHF / HF / SSB / CB            Call sign: _____ Freqs: _____            Celular Phone: _____            Pager/Beeper: _____</p>	
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<p><b>ADDITIONAL INFORMATION</b></p>					

## UNREPORTED AND OVERDUE VESSEL

<b>SURVIVAL EQUIPMENT::</b> PFD's:           Y    N    UNK Flares:           Y    N    UNK Flashlight:       Y    N    UNK Dye:             Y    N    UNK Mirror:           Y    N    UNK Smoke Marker    Y    N    UNK Smoker           Y    N    UNK Spotlight:       Y    N    UNK AUX elec pwr:    Y    N    UNK Radar Reflector: Y    N    UNK Drogue:           Y    N    UNK Anchor:           Y    N    UNK Anchor Line:     Y    N    UNK Food:            Y    N    UNK Water:           Y    N    UNK Raft:             Y    N    UNK  Description: _____ Dinghy:           Y    N    UNK Description: _____	<b>OPERATOR:</b> Address: _____  Phone: _____ POC/NOK: _____ Phone: _____ Experience w/ boat: Y / N Experience in area: Y / N Swimmer: Good Fair Poor Non Clothing: _____ Desc: HT:   WT:   Eyes: _____ Hair:   Race:   Age: _____ Health: Good Fair Poor Unk Commitments: _____
<b>VEHICLE:</b>  Make: _____ Model: _____ Licence NR: _____ Color: _____ Trailer Lic: _____ Color: _____  Second Vehicle:  Licence NR: _____ Color: _____ Trailer Lic: _____ Color: _____	<b>PASSENGER:</b> Address: _____  Phone: _____ POC/NOK: _____ Phone: _____ Experience w/ boat: Y / N Experience in area: Y / N Swimmer: Good Fair Poor Non Clothing: _____ Desc: HT:   WT:   Eyes: _____ Hair:   Race:   Age: _____ Health: Good Fair Poor Unk Commitments: _____
Wind: _____ / _____ Seas: _____ / _____  Vis: _____ Sea Temp: _____	<b>PASSENGER:</b> Address: _____  Phone: _____ POC/NOK: _____ Phone: _____ Experience w/ boat: Y / N Experience in area: Y / N Swimmer: Good Fair Poor Non Clothing: _____ Desc: HT:   WT:   Eyes: _____ Hair:   Race:   Age: _____ Health: Good Fair Poor Unk Commitments: _____
<b>ADDITIONAL NOTES:</b>     	<b>PASSENGER:</b> Address: _____  Phone: _____ POC/NOK: _____ Phone: _____ Experience w/ boat: Y / N Experience in area: Y / N Swimmer: Good Fair Poor Non Clothing: _____ Desc: HT:   WT:   Eyes: _____ Hair:   Race:   Age: _____ Health: Good Fair Poor Unk Commitments: _____

## VESSEL BESET BY WEATHER

PROCEDURES	ADDITIONAL INFORMATION																										
<p><b>A. AWARENESS</b></p> <p>___ 1. Fill out the INITIAL SAR Checksheet</p> <p>___ 2. Fill out the VSL BESET BY WX checksheet.</p> <p>___ 3. Assume or designate SMC.</p> <p>___ 4. Determine assistance required. In some cases encouragement will help overcome a crisis of confidence. However, if the vessel requests assistance, proceed with SAR actions. The mariner may be too fatigued to help themselves.</p> <p><b>B. INITIAL ACTION</b></p> <p>___ 1. Check forecasted weather. If a front has a leading or trailing edge, maybe the vessel could steer out of the storm system.</p> <p>___ 2. Evaluate emergency phase.</p> <p>___ 3. Instruct persons to don PFDs.</p> <p>___ 4. Issue UMIB.</p> <p>___ 5. Establish comms sched. Inform the vessel that a missed commskmd will result in an immediate search.</p> <p>___ 6. Instruct vsl to activate EPIRB if comms are lost or situation turns into distress.</p> <p>___ 7. Record EPIRB type and hex code.</p> <p>___ 8. Brief SC.</p> <p><b>C. PLANNING/ OPERATIONS</b></p> <p>___ 1. Dispatch SRUs.</p> <p>___ 2. Develop SAP.</p> <p>___ 3. Deploy DMB if vsl not located.</p> <p>___ 4. If the vessel is not located:</p> <p style="padding-left: 20px;">___ Double-check validity of initial psn.</p> <p style="padding-left: 20px;">___ Commence PRECOMS.</p> <p style="padding-left: 20px;">___ Evaluate case and analyze all possible scenarios.</p> <p>___ 5. Dispatch additional SRUs.</p> <p>___ 6. Develop future searches.</p> <p style="padding-left: 20px;">___ Alert SRUs for next search.</p> <p style="padding-left: 20px;">___ Have local authorities do land search if any possibility that the persons could have gone ashore in a remote area.</p> <p style="padding-left: 20px;">___ Consult survival table information.</p> <p style="padding-left: 20px;">___ Analyze all possible scenarios.</p> <p>___ 7. On scene evaluation.</p> <p>___ 8. Notify the appropriate MSO/COTP.</p> <p><b>D. MISSION CONCLUSION</b></p> <p>___ 9. Close the case or request ACTSUS.</p> <p>___ 10. Dealert SRUs.</p> <p>___ 11. CX UMIB.</p> <p>___ 12. Debrief.</p> <p>___ 13. Case administration.</p>	<p>How long has the vessel been in the storm system? _____</p> <p>What storm tactics are being used by the vessel, and what storm tactics are available? _____</p> <p>Is the vessel experiencing icing conditions? _____</p> <hr/> <p style="text-align: center;"><b>VESSEL/EQUIPMENT</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Document/Official # _____</td> <td style="width: 50%;">Homeport: _____</td> </tr> <tr> <td><input type="checkbox"/> State Reg. # _____</td> <td>Flag: _____</td> </tr> <tr> <td>Communications Equipment:  <input type="checkbox"/> VHF-FM      <input type="checkbox"/> HF  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Cellular #: _____                      Frequencies: _____                 </td> <td>Navigation Equipment:  <input type="checkbox"/> LORAN      <input type="checkbox"/> GPS  <input type="checkbox"/> Radar      <input type="checkbox"/> Fathometer  <input type="checkbox"/> Other: _____                 </td> </tr> <tr> <td>Usage: _____</td> <td>Survival Equipment:</td> </tr> <tr> <td>Prominent Features: _____</td> <td><input type="checkbox"/> EPIRB Class/Type: _____</td> </tr> <tr> <td>Hull Material: _____</td> <td><input type="checkbox"/> VDS/Flares      <input type="checkbox"/> Flashlight</td> </tr> <tr> <td>Cause of incident: _____</td> <td><input type="checkbox"/> Raft/Lifeboat      <input type="checkbox"/> Dinghy/Skiff</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Food/Water      <input type="checkbox"/> Foul Wx Gear</td> </tr> </table> <hr/> <p style="text-align: center;"><b>PEOPLE</b></p> <table border="1" style="width: 100%; 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<b>DMB Type:</b> _____ <b>Freq:</b> _____																											
Inserted Time: _____ Position: _____ N W	Relocated Time: _____ Position: _____ N W																										

## VESSEL GROUNDING

PROCEDURES	PRIMARY INFORMATION		
<p><b>A. AWARENESS</b></p> <p>___ 1. Fill out the INITIAL SAR Checksheet.</p> <p>___ 2. Fill out the GROUNDING checksheet.</p> <p>___ 3. Assume or designate SMC.</p> <p>___ 4. Determine assistance required.</p> <p>___ MEDEVAC?</p> <p>___ PIW?</p> <p>___ T.O.W.?</p> <p>___ VSL Fire?</p> <p style="padding-left: 20px;">(refer to appropriate checksheet).</p> <p><b>B. INITIAL ACTION</b></p> <p>___ 1. Have all POB don PFDs.</p> <p>___ 2. Evaluate emergency phase.</p> <p>___ 3. Issue UMIB or MARB.</p> <p>___ 4. Dispatch SRU(s) if appropriate.</p> <p>___ 5. Establish a communications schedule.</p> <p>___ 6. Instruct vsl to activate EPIRB if comms are lost. Record the EPIRB's hex code if time permits.</p> <p>___ 7. If situation warrants, Instruct vsl to:</p> <p style="padding-left: 20px;">___ deploy liferaft,</p> <p style="padding-left: 20px;">___ break out flares,</p> <p style="padding-left: 20px;">___ plug fuel vents if it's possible there is a threat of the vessel breaking up or sinking.</p> <p style="padding-left: 20px;">___ Anchor to maintain position.</p> <p style="padding-left: 20px;">___ Take soundings.</p> <p>___ 8. Brief SC.</p> <p><b>C. PLANNING/ OPERATIONS</b></p> <p>___ 1. Notify local authorities to assist as needed.</p> <p>___ 2. Remove POB if necessary.</p> <p>___ 3. Have SRU evaluate situation; consider C.G. salvage policy. Refloat vsl only after considering specific factors listed in section xxx.</p> <p>___ 4. Monitor commercial salvage.</p> <p>___ 5. Notify appropriate MSO/ COTP.</p> <p>___ 6. Ensure ATON check conducted.</p> <p>___ 7. Issue BNM if vsl blocking channel.</p> <p>___ 8. Monitor pollution safeguards.</p> <p><b>D. MISSION CONCLUSION</b></p> <p>___ 1. Close the case or request ACTSUS.</p> <p>___ 2. Debrief SRUs.</p> <p>___ 3. CX UMIB or MARB.</p> <p>___ 4. Debrief.</p> <p>___ 5. Case administration.</p>	<p>Are you taking on water? Y / N</p> <p style="padding-left: 20px;">If YES: What part of vessel? _____ How fast? _____ GPM</p> <p>Are there any injuries or people in the water? Y / N</p> <p>Is there any pollution as a result of the grounding? Y / N</p> <p style="padding-left: 20px;">If YES: Type of material: _____ Estimated quantity: _____</p> <p>What type of bottom: MUD SAND ROCK OTHER: _____</p> <p>What is the state of the tidal current? Direction: _____ Rate: _____</p> <p>Type of fuel O/B: _____ Quantity of fuel: _____</p> <p>Type of cargo O/B: _____ Quantity of cargo: _____</p>		
	<b>OTHER INFORMATION</b>		
	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> Vessel Description:  Name: _____  Homeport: _____  Type: PWR SPEED SAIL MERCHANT  Reg/Doc #: _____  Length: _____ FT / M  Make: _____  Hull Color: _____  S/S Color: _____  Rudder movement: Y / N  Propulsion: I/B O/B I/O SINGLE TWIN </td> <td style="width: 50%; border: none; vertical-align: top;"> Owner:  Name: _____  Address: _____  Telephone: _____  Has owner been ntfd? Y / N  Type: _____  Draft: _____  Hull Material: _____  Trim Color: _____  Wheel movement: Y / N </td> </tr> </table>	Vessel Description: Name: _____ Homeport: _____ Type: PWR SPEED SAIL MERCHANT Reg/Doc #: _____ Length: _____ FT / M Make: _____ Hull Color: _____ S/S Color: _____ Rudder movement: Y / N Propulsion: I/B O/B I/O SINGLE TWIN	Owner: Name: _____ Address: _____ Telephone: _____ Has owner been ntfd? Y / N Type: _____ Draft: _____ Hull Material: _____ Trim Color: _____ Wheel movement: Y / N
Vessel Description: Name: _____ Homeport: _____ Type: PWR SPEED SAIL MERCHANT Reg/Doc #: _____ Length: _____ FT / M Make: _____ Hull Color: _____ S/S Color: _____ Rudder movement: Y / N Propulsion: I/B O/B I/O SINGLE TWIN	Owner: Name: _____ Address: _____ Telephone: _____ Has owner been ntfd? Y / N Type: _____ Draft: _____ Hull Material: _____ Trim Color: _____ Wheel movement: Y / N		
	<b>ADDITIONAL INFORMATION</b>		
	O/S Weather: Wind: _____ / _____ T/M Seas: _____ / _____ FT/M Vis: _____ NM Sea temp: _____ Weather forecast: _____ Next low tide: _____ Next high tide: _____		



## VESSEL COLLISION

PROCEDURES	ADDITIONAL INFORMATION								
<b>A. AWARENESS</b> ____ 1. Fill out the INITIAL SAR Checksheet. ____ 2. Fill out the VESSEL COLLISION checksheet. ____ 3. Assume or designate SMC.	Are there any people missing (PIW case)? _____ Condition of the vessel involved: _____ _____								
<b>B. INITIAL ACTION</b> ____ 1. Instruct persons to don PFDs. ____ 2. Evaluate emergency phase. ____ 3. Issue UMIB. ____ 4. Dispatch SRU(s). ____ 5. Contact local authorities. ____ 6. If injuries, people missing, fire, or flooding, refer to appropriate checksheet. ____ 7. Notify cognizant MSO. ____ 8. Establish communication sched. ____ 9. Brief SC.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">VESSEL/EQUIPMENT</th> </tr> </thead> <tbody> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Document/Official #   <input type="checkbox"/> State Reg. #            Communications Equipment:  <input type="checkbox"/> VHF-FM      <input type="checkbox"/> HF  <input type="checkbox"/> Other: _____  <input type="checkbox"/> Cellular #: _____            Frequencies: _____            Usage: _____            Prominent Features: _____            Hull Material: _____            Cause of incident: _____         </td> <td style="width: 50%; vertical-align: top;">           Homeport: _____             Flag: _____            Navigation Equipment:  <input type="checkbox"/> LORAN      <input type="checkbox"/> GPS  <input type="checkbox"/> Radar      <input type="checkbox"/> Fathometer  <input type="checkbox"/> Other: _____            Survival Equipment:  <input type="checkbox"/> EPIRB Class/Type: _____  <input type="checkbox"/> VDS/Flares      <input type="checkbox"/> Flashlight  <input type="checkbox"/> Raft/Lifeboat      <input type="checkbox"/> Dinghy/Skiff  <input type="checkbox"/> Food/Water      <input type="checkbox"/> Foul Wx Gear         </td> </tr> </tbody> </table>	VESSEL/EQUIPMENT		<input type="checkbox"/> Document/Official #  <input type="checkbox"/> State Reg. # Communications Equipment: <input type="checkbox"/> VHF-FM <input type="checkbox"/> HF <input type="checkbox"/> Other: _____ <input type="checkbox"/> Cellular #: _____ Frequencies: _____ Usage: _____ Prominent Features: _____ Hull Material: _____ Cause of incident: _____	Homeport: _____  Flag: _____ Navigation Equipment: <input type="checkbox"/> LORAN <input type="checkbox"/> GPS <input type="checkbox"/> Radar <input type="checkbox"/> Fathometer <input type="checkbox"/> Other: _____ Survival Equipment: <input type="checkbox"/> EPIRB Class/Type: _____ <input type="checkbox"/> VDS/Flares <input type="checkbox"/> Flashlight <input type="checkbox"/> Raft/Lifeboat <input type="checkbox"/> Dinghy/Skiff <input type="checkbox"/> Food/Water <input type="checkbox"/> Foul Wx Gear				
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<b>C. PLANNING/ OPERATIONS</b> ____ 1. The SRU shall: a. Obtain identification of all witnesses. b. Record on scene weather. c. If alcohol/drugs involved, treat as BWI situation. Coordinate with appropriate MSO if licensed operator or U.S. documented vessel involved. d. Determine pollution threat. ____ 2. Ensure ATON check conducted. ____ 3. Notify appropriate MSO/ COTP.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">PEOPLE</th> </tr> </thead> <tbody> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____            _____            Phone: _____            Age:      DOB: _____            Male / Female         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____            _____            Phone: _____            Age:      DOB: _____            Male / Female         </td> </tr> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____            _____            Phone: _____            Age:      DOB: _____            Male / Female         </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Owner    <input type="checkbox"/> Operator    <input type="checkbox"/> POB            Name: _____            Address: _____            _____            Phone: _____            Age:      DOB: _____            Male / Female         </td> </tr> </tbody> </table>	PEOPLE		<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ _____ Phone: _____ Age:      DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ _____ Phone: _____ Age:      DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ _____ Phone: _____ Age:      DOB: _____ Male / Female	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB Name: _____ Address: _____ _____ Phone: _____ Age:      DOB: _____ Male / Female		
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<b>D. MISSION CONCLUSION</b> ____ 1. Close the case or request ACTSUS. ____ 2. Dealert SRUs. ____ 3. CX UMIB. ____ 4. Debrief. ____ 5. Case administration.	<div style="border: 1px solid black; height: 100px; margin-bottom: 10px;"></div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">ACTIONS</th> </tr> </thead> <tbody> <tr> <td style="width: 50%; vertical-align: top;"> <b>Communications Schedule:</b>            Start Time: _____ Freq: _____            Time Interval:  <input type="checkbox"/> 15 Min    <input type="checkbox"/> 30 Min    <input type="checkbox"/> 60 Min  <input type="checkbox"/> Other            Remarks: _____         </td> <td style="width: 50%; vertical-align: top;"> <b>Set and Drift:</b>    <input type="checkbox"/> Not a Factor            Set: _____ <input type="checkbox"/> True <input type="checkbox"/> Mag            Drift: _____ <input type="checkbox"/> Kts <input type="checkbox"/> Mph         </td> </tr> <tr> <td colspan="2" style="vertical-align: top;"> <b>DMB Type:</b> _____ <b>Freq:</b> _____   <table style="width: 100%;"> <tr> <td style="width: 50%; text-align: center;"> <b>Inserted</b>            Time: _____            Position: _____ N               W         </td> <td style="width: 50%; text-align: center;"> <b>Relocated</b>            _____ N            _____ W         </td> </tr> </table> </td> </tr> </tbody> </table>	ACTIONS		<b>Communications Schedule:</b> Start Time: _____ Freq: _____ Time Interval: <input type="checkbox"/> 15 Min <input type="checkbox"/> 30 Min <input type="checkbox"/> 60 Min <input type="checkbox"/> Other Remarks: _____	<b>Set and Drift:</b> <input type="checkbox"/> Not a Factor Set: _____ <input type="checkbox"/> True <input type="checkbox"/> Mag Drift: _____ <input type="checkbox"/> Kts <input type="checkbox"/> Mph	<b>DMB Type:</b> _____ <b>Freq:</b> _____  <table style="width: 100%;"> <tr> <td style="width: 50%; text-align: center;"> <b>Inserted</b>            Time: _____            Position: _____ N               W         </td> <td style="width: 50%; text-align: center;"> <b>Relocated</b>            _____ N            _____ W         </td> </tr> </table>		<b>Inserted</b> Time: _____ Position: _____ N W	<b>Relocated</b> _____ N _____ W
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<b>Inserted</b> Time: _____ Position: _____ N W	<b>Relocated</b> _____ N _____ W								

## VESSEL TAKING ON WATER OR VESSEL FIRE

# **PROCEDURES**

## **A. AWARENESS**

1. Fill out the INITIAL SAR Check-sheet
2. Fill out the VSL TAKING ON WATER/FIRE checksheet.
3. Assume or designate SMC.

## **B. INITIAL ACTION**

1. Have persons don PFDs.
2. Evaluate emergency phase.
3. Issue UMIB.
4. Dispatch SRU(s).
5. Instruct vsl to activate EPIRB if comms are lost. Record the EPIRB's hex code if time permits.
6. Establish a comms schedule.
7. Brief SC.
8. Alert local authorities.

## **C. PLANNING/ OPERATIONS**

1. Formulate search plan.
2. First SRU on scene deploy a DMB. Record DMB information on this checksheet.
3. Debrief survivors.
4. If the vessel is not located:
  - Double-check validity of initial psn.
  - Commence PRECOMS.
  - Evaluate case and analyze all possible scenarios.
5. Dispatch additional SRUs.
6. Develop future searches.
  - Alert SRUs for next search.
  - Have local authorities do land search if any possibility that the persons could have gone ashore in a remote area.
  - Consult survival table info.
  - Analyze all possible scenarios.
7. If the vessel is located:
  - Provide immediate assistance.
  - Tow or escort vessel to nearest safe port if assistance is still necessary.
8. Mark wreck and issue NTM if vsl sinks.
9. Notify appropriate MSO/ COTP.

## **D. MISSION CONCLUSION**

1. Close the case or request ACTSUS.
2. Dealert SRUs.
3. CX UMIB.
4. Debrief.
5. Case administration.

# **ADDITIONAL INFORMATION**

Are there any other vessels in the area? \_\_\_\_\_

Rate of flooding: \_\_\_\_\_ Are there any pumps onboard? \_\_\_\_\_

Can they keep up with the flooding? \_\_\_\_\_

Where/Why is the vessel flooding? \_\_\_\_\_

If a commercial vsl, type/amount of cargo: \_\_\_\_\_

Is the vessel experiencing any Icing Conditions? \_\_\_\_\_

## **VESSEL/EQUIPMENT**

<input type="checkbox"/> Document/Official #	Homeport: _____
<input type="checkbox"/> State Reg. #	Flag: _____
Communications Equipment: <input type="checkbox"/> VHF-FM <input type="checkbox"/> HF <input type="checkbox"/> Other: _____ <input type="checkbox"/> Cellular #: _____ Frequencies: _____	Navigation Equipment: <input type="checkbox"/> LORAN <input type="checkbox"/> GPS <input type="checkbox"/> Radar <input type="checkbox"/> Fathometer <input type="checkbox"/> Other: _____
Usage: _____	Survival Equipment: <input type="checkbox"/> EPIRB Class/Type: _____ <input type="checkbox"/> VDS/Flares <input type="checkbox"/> Flashlight <input type="checkbox"/> Raft/Lifeboat <input type="checkbox"/> Dinghy/Skiff <input type="checkbox"/> Food/Water <input type="checkbox"/> Foul Wx Gear
Prominent Features: _____	
Hull Material: _____	
Cause of incident: _____	

## **PEOPLE**

<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB
Name: _____	Name: _____
Address: _____	Address: _____
Phone: _____	Phone: _____
Age:    DOB:    Male / Female	Age:    DOB:    Male / Female
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB	<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> POB
Name: _____	Name: _____
Address: _____	Address: _____
Phone: _____	Phone: _____
Age:    DOB:    Male / Female	Age:    DOB:    Male / Female

## **ADDITIONAL COMMENTS**

## **ACTIONS**

<b>Communications Schedule:</b> Start Time: _____ Freq: _____ Time Interval: _____ <input type="checkbox"/> 15 Min <input type="checkbox"/> 30 Min <input type="checkbox"/> 60 Min <input type="checkbox"/> Other _____ Remarks: _____	<b>Set and Drift:</b> <input type="checkbox"/> Not a Factor Set: _____ <input type="checkbox"/> True <input type="checkbox"/> Mag Drift: _____ <input type="checkbox"/> Kts <input type="checkbox"/> Mph
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**DMB Type:** \_\_\_\_\_ **Freq:** \_\_\_\_\_

<b>Inserted</b> Time: _____ Position: _____ N _____ W	<b>Relocated</b> Time: _____ Position: _____ N _____ W
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DEPARTMENT OF HOMELAND SECURITY U.S. COAST GUARD CG-4612 (REV 06 JUN 10)		<b>AUXILIARY SAR INCIDENT AND MISLE CASE DATA ENTRY REPORT</b> (See instructions and privacy act statement on CG-4612-A)	
MISLE CASE NUMBER:		ACTIVITY NUMBER (Optional):	
UNIT CASE NUMBER:		DATE:	TIME:
MEMBER NO:		MEMBER LAST NAME:	INITIAL:
<b>SECTION I - INITIAL NOTIFICATION DATA</b>			
TIME INCIDENT OCCURRED:		BODY OF WATER:	
TIME USCG NOTIFIED:		CAUSE OF DISTRESS:	
NATURE OF DISTRESS:		PERSONS ON BOARD: ADULT: CHILD:	
GENERAL NOTIFICATION METHOD (CHECK ONE): <input type="checkbox"/> DIRECT <input type="checkbox"/> 3 <sup>RD</sup> PARTY <input type="checkbox"/> HAPPENED UPON			
SPECIFIC NOTIFICATION METHOD (CHECK ONE): <input type="checkbox"/> PHONE <input type="checkbox"/> 911 DISPATCH <input type="checkbox"/> WALK-IN <input type="checkbox"/> VHF-FM CH [    ]			
GENERAL LOCATION:		LAT:	LONG:
<b>SECTION II - REPORTING SOURCE DATA</b>			
NAME:		REG/DOC NUMBER:	
ADDRESS:		PHONE: (    )    -	
<b>SECTION III - ON-SCENE WEATHER</b>			
SKY (CHECK ONE): <input type="checkbox"/> CLEAR <input type="checkbox"/> SCATTERED <input type="checkbox"/> BROKEN <input type="checkbox"/> OVERCAST <input type="checkbox"/> OTHER:			
VISIBILITY (NM):		PRECIPITATION (CHECK ONE): <input type="checkbox"/> RAIN <input type="checkbox"/> FOG <input type="checkbox"/> SNOW <input type="checkbox"/> SMOKE <input type="checkbox"/> HAZE	
WAVE HT:    FT	SWELL HT:    FT	WIND DIR:    ° TRUE	WIND SPD:    KTS
WATER TEMP:    °F		OTHER COMMENTS:	
<b>SECTION IV - SORTIE DATA</b>			
RESOURCE:	PILOT/CXSN:	GAR COLOR: GREEN AMBER RED	
CREW:			
<b>SECTION V - CASE INFORMATION DATA</b>			
UNDERWAY TIME:		LAT:	LONG:
ON-SCENE TIME:		LAT:	LONG:
DEPART SCENE TIME:		LAT:	LONG:
END SORTIE TIME:		LAT:	LONG:
OTHER COMMENTS:			
<b>SECTION VI - INVOLVED VESSEL DATA</b>			
VESSEL NAME:		REG/DOC NUMBER:	
USE: PLEASURE COMMERCIAL FISHING OTHER:	YEAR:	MAKE:	MODEL: LGTH:
<b>SECTION VII - OWNER</b>			
NAME:		SEX: <input type="checkbox"/> M <input type="checkbox"/> F	DOB:
ADDRESS:			
PHONE TYPE: HM <input type="checkbox"/> WK <input type="checkbox"/> CELL <input type="checkbox"/>	PH NO: (    )    -	TYPE ID: (OPTIONAL)	ID NO: (OPTIONAL)
<b>SECTION VIII - OPERATOR</b>			
NAME:		SEX: <input type="checkbox"/> M <input type="checkbox"/> F	DOB:
ADDRESS:			
PHONE TYPE: HM <input type="checkbox"/> WK <input type="checkbox"/> CELL <input type="checkbox"/>	PH NO: (    )    -	TYPE ID: (OPTIONAL)	ID NO: (OPTIONAL)
<b>SECTION IX - CASE OUTCOME</b>			
PROP VALUE: \$    , 000	ASSISTANCE: <input type="checkbox"/> TOW <input type="checkbox"/> DEWATER <input type="checkbox"/> STOOD-BY <input type="checkbox"/> ESCORT <input type="checkbox"/> COMMS		
LIVES SAVED: (    )	<input type="checkbox"/> REMOVED FROM DANGER <input type="checkbox"/> FIRST AID <input type="checkbox"/> NONE POSSIBLE <input type="checkbox"/> NONE REQUIRED		
LIVES ASSTD: (    )	<input type="checkbox"/> HOAX/FALSE ALARM <input type="checkbox"/> OTHER UNIT RESOLVED <input type="checkbox"/> OTHER:		
ADDITIONAL COMMENTS AND PASSENGERS on DISABLED (PROVIDE ON REVERSE OR ADDITIONAL SHEETS):			

**AUXILIARY SAR INCIDENT  
AND MISLE CASE DATA ENTRY  
INSTRUCTION FORM**

- \* MISLE CASE NUMBER: Enter the MISLE CASE Number here.
- \* ACTIVITY NUMBER: (This is optional and may not be used everywhere) Enter the Activity Number here.
- \* UNIT CASE NUMBER: (This is optional and may not be used everywhere) Enter the Unit Case Number assigned by the controlling unit.
- \* DATE: Enter the date of the MISLE data entry.
- \* TIME: Enter the time of the MISLE DATA entry.
- \* MEMBER NO. Enter the Auxiliary coxswain's or pilot's Member Number here.
- \* MEMBER LAST NAME: Enter the Auxiliary coxswain's or pilot's last Name here.
- \* MEMBER'S INITIALS: Enter the Auxiliary coxswain's or pilot's initials here.

**SECTION I – INITIAL NOTIFICATION DATA**

- \* TIME INCIDENT OCCURRED: Enter the time that the incident actually occurred.
- \* BODY OF WATER: Enter the name of the body of water where the incident occurred.
- \* TIME USCG NOTIFIED: Enter the time that the CG was first notified.
- \* CAUSE OF DISTRESS: Enter the cause of distress (Mechanical, Operator error, Electrical, etc).
- \* NATURE OF DISTRESS: Enter the reason that the involved vessel asked for assistance (Flooding, Engine Won't Start, Grounded, etc.)
- \* PERSONS ON BOARD: Enter the number of adults and children on board the distressed vessel.
- \* GENERAL NOTIFICATION METHOD: (Check one), Direct, Third Party or Happened Upon.
- \* SPECIFIC NOTIFICATION METHOD: (Check one): Phone, 911 Dispatcher, Walked in to unit, VHF-FM and VHF-FM channel number over which distressed vessel notified CG.
- \* GENERAL LOCATION: General geographic area (if provided.)
- \* LAT/LONG: Enter Lat/Long received from the vessel.

**SECTION II – REPORTING SOURCE DATA**

- \* NAME: Enter the name of the reporting party.
- \* REG/DOC NUMBER: Enter registration or documentation number of the reporting vessel.
- \* ADDRESS: Enter the address of the reporting party.
- \* PHONE: Enter the phone number of the reporting party.

**SECTION III – ON SCENE WEATHER**

- \* SKY: Check the type of sky conditions (Clear, Scattered, Broken, Overcast, or Other – specify other).
- \* VISIBILITY: Enter the visibility in Nautical Miles
- \* PRECIPITATION: Check one of the choices.
- \* WAVE HT: Enter the wave height in feet.
- \* SWELL HT: Enter the swell height in feet.
- \* WIND DIR: Enter the on-scene wind direction in degrees true.
- \* WIND SPEED: Enter the on-scene wind speed in knots.
- \* WATER TEMPERATURE: Enter the water temperature in degrees Fahrenheit.
- \* OTHER COMMENTS: Enter any other comments regarding the "On-scene" weather.

#### **SECTION IV – SORTIE DATA**

- \* RESOURCE: Enter the facility number of the Auxiliary Resource (example: AUX 241204)
- \* PILOT/CXSN: Enter the Last Name of the pilot or coxswain on the Auxiliary resource.
- \* GAR COLOR: Circle the GAR color for the responding Auxiliary resource at the time of response.
- \* CREW: List the last names of the crew on the responding Auxiliary resource.

#### **SECTION V – CASE INFORMATION DATA**

- \* UNDERWAY TIME: Enter the local time that the Auxiliary resource responded.
- \* LAT/LONG: Enter the Latitude and Longitude of the Auxiliary responding resource at the time of response.
- \* ON-SCENE TIME: Enter the “On-scene” local time of the Auxiliary responding resource.
- \* LAT/LONG: Enter the “On Scene” Latitude and Longitude
- \* DEPART SCENE TIME: Enter the local time the responding Auxiliary resource departed the scene.
- \* LAT/LONG: Enter the Latitude and Longitude if different from “On Scene”.
- \* END SORTIE TIME: Enter the local time the responding Auxiliary resource ended the sortie.
- \* LAT/LONG: Enter the Latitude and Longitude where sortie ended.
- \* OTHER COMMENTS: Enter any other information pertaining to times and locations.

#### **SECTION VI – INVOLVED VESSEL DATA**

**(NOTE: If more than one vessel is involved use additional CG-4612 forms)**

- \* VESSEL NAME: Enter the name of the involved vessel. (If more than one vessel, enter additional vessels on another DATA ENTRY REPORT (CG-4612).
- \* REG/DOC NUMBER: Enter the state registration or the documentation number of the involved vessel.
- \* USE: Check the use of the involved vessel (Pleasure, Commercial, Fishing, Other – spell out other).
- \* YEAR: Enter the year of manufacture of the involved vessel.
- \* MAKE: Enter the Manufacturer of the vessel involved.
- \* MODEL: Enter the Manufacturer’s model of the vessel involved.
- \* LENGTH: Enter the overall length of the vessel involved.

#### **SECTION VII – OWNER**

- \* NAME: Enter the name of the involved vessel’s owner (as shown on the registration or documentation).
- \* SEX: Indicate the sex of the owner of the involved vessel.
- \* DOB: Enter the date of birth of the involved owner.
- \* ADDRESS: Enter the address of the owner of the involved vessel.
- \* PHONE TYPE: Check the phone type for the owner’s provided phone number (Home, work, cell).
- \* PH NO: Enter the owner’s 10 digit phone number.
- \* TYPE ID: (Optional) Enter the type of identification used to Identify the owner (ex. registration, driver’s license, etc.).
- \* ID NO: (Optional) Enter the identification number for the document used to identify the owner.

## **SECTION VIII – OPERATOR**

- \* NAME: Enter the name of the person operating the involved vessel.
- \* SEX: Indicate the sex of the operator of the involved vessel.
- \* DOB: Enter the date of birth of the involved operator.
- \* ADDRESS: Enter the address of the operator of the involved vessel.
- \* PHONE TYPE: Check the phone type for the operator of the involved vessel provided phone number (Home, work, cell).
- \* PH NO: Enter the 10 digit phone number of the operator of the involved vessel.
- \* TYPE ID: (Optional) Enter the type of identification used to Identify the operator of the involved vessel (ex: driver's license, registration, etc.).
- \* ID NO: (Optional) Enter the identification number for the document used to identify the operator of the involved vessel.

## **SECTION IX – CASE OUTCOME**

- \* PROP VALUE: Enter the estimated value of the assisted vessel.
- \* ASSISTANCE: Check the type of assistance rendered by the responding Auxiliary resource (Tow, Dewater, Stood-by, Escort, Removed from Danger, First Aid, Comms. Assist., Other – (specify what other is)).
- \* LIVES SAVED: Enter the number of lives saved.
- \* PERSONS ASSISTED: Enter the number of persons assisted.
- \* ADDITIONAL COMMENTS: Enter the names and addresses of the passengers on the assisted vessel along with any additional comments regarding this case on the back of this page or on a separate sheet of paper.

### **NOTE: Lives Saved vs. Lives Assisted**

Any questions you may have with regards to definitions in the area of SAR or MISLE will be the definitions provided in COMDTINST 16130.2(series) USCG Addendum to US SAR Supplement to the IAMSAR Manual. In the manual Appendix B has descriptions/definitions for all the required data fields including property and position entries.

#### **Lives Saved-**

Appendix B.5.7.1(c)- Lives saved are those lives that would have been lost had the rescue action not been taken. This includes actually pulling a person from a position of distress or removing them from a situation that would likely have resulted in their death had the action not been taken.

#### **Lives Assisted-**

Appendix B.5.7.1(h)- Lives assisted are those persons who are provided assistance that did not meet the criteria for lives saved but did receive some assistance. An entry for type of assistance provided is required for every life entered under this category. Persons merely onboard a vessel that is provided assistance directed at the vessel (repairs, fuel, etc.) are not necessarily assisted.

It can sometimes be a judgment call but, as a general rule of thumb, if a person is removed from a sinking vessel, more than likely, you should claim a life saved. If a person is removed from a vessel aground it would generally be a life assisted.

## TABLE OF ABBREVIATIONS

Message Abbreviations.

Abbrev.	Full Name	Abbrev.	Full Name
ABS	Absent	HQ	Headquarters
ACFT	Aircraft	ICW	Inter-coastal Waterway
ACK	Acknowledge	IMMED	Immediate
ADD	Additional, Addition	INFO	Information
ADEE	Addressee	ISC	Integrated Support Command
ADMIN	Administration	KHZ	Kilohertz
A/N	Aids to Navigation	KT	Knot (s)
APPR	Approved	LL	Light List
APRX	Approximate	LTD	Lighted
ARR	Arrive	LTR	Letter
ASAP	As soon as Possible	LTSTA	Light Station
ASST	Assist	MAX	Maximum
ATTN	Attention	M/B	Motorboat
AUTH	Authorized, Authority	MEMO	Memorandum
AUTO	Automatic	MHZ	Megahertz
AUX	Auxiliary	MISC	Miscellaneous
AVAL	Available	MSG	Message
BAL	Balance	NEG	Negative
BLDG	Building	NR	Number
BT	Break	NTM	Notice to Mariners
CAMS	Comm. Area Master Station	O	Immediate
C/C	Cabin Cruiser	O/B	Outboard
CCGD	Commander Coast Guard District	OIC	Officer in Charge
CGACT	Coast Guard Activities	O/O	Owner/Operator
CGAS	Coast Guard Air Station	OPLAN	Operations Plan
CGBASE	Coast Guard Base	ORIG	Origin, Originator
CGC	Coast Guard Cutter	OSC	On Scene Commander
CGDIST	Coast Guard District	P	Priority
CGLASTA	Coast Guard Light Attendant Station	PARA	Paragraph
CGLORSTA	Coast Guard Loran Station	PAREN	Parenthesis
CGLTSTA	Coast Guard Light Station	POB	Persons on Board
CGSTA	Coast Guard Station	POSIT	Position
CGSUPCEN	Coast Guard Supply Center	PRI	Primary
CGYD	Coast Guard Yard	QTR	Quarter
CHAP	Chapter	QTY	Quantity

<b>Abbrev.</b>	<b>Full Name</b>	<b>Abbrev.</b>	<b>Full Name</b>
COGARD	Coast Guard	QUAL	Qualify
COMDT	Commandant	R	Routine
DEPT	Depart, Department	RCVD	Received
DESC	Description	SAR	Search and Rescue
DESTN	Destination	S/B	Sailboat
DET	Detachment, Detach	SEC	Secondary
DIST	District	SECT	Sector
DIV	Division	SITREP	Situation Report
DTG	Date-Time-Group	SPEC	Specify, Specification
EA	Each	STA	Station
EMERG	Emergency	SUBJ	Subject
ENCL	Enclosure, Enclose	TRASTA	Training Station
EST	Estimate	TRF	Transfer
ESTAB	Establish	TVL	Travel
ETA	Estimated Time of Arrival	UNAUTH	Unauthorized
ETD	Estimated Time of Departure	UNCLAS	Unclassified
ETR	Estimated Time of Return	UNK	Unknown
FM	From	USCG	United States Coast Guard
FOL	Follow	USCGA	U.S.C.G. Academy
F/V	Fishing Vessel	USCGAUX	U.S.C.G. Auxiliary
FWD	Forward	USCGC	U.S.C.G. Cutter
GOVT	Government	VIS	Visibility
GRUCOM	Group Commander	Z	Flash
HOSP	Hospital		

#### Month Abbreviations.

<b>Abbrev.</b>	<b>Month</b>	<b>Abbrev.</b>	<b>Month</b>
JAN	January	JUL	July
FEB	February	AUG	August
MAR	March	SEP	September
APR	April	OCT	October
MAY	May	NOV	November
JUN	June	DEC	December



## State Abbreviations.












Following are the authorized two letter abbreviations for the states, District of Columbia, Guam, Puerto Rico, and Virgin Islands which are to be used by all members in the handling of message traffic.

<b>Abbrev.</b>	<b>State</b>	<b>Abbrev.</b>	<b>State</b>
AL	Alabama	MT	Montana
AK	Alaska	NB	Nebraska
AZ	Arizona	NV	Nevada
AR	Arkansas	NH	New Hampshire
CA	California	NJ	New Jersey
CO	Colorado	NM	New Mexico
CT	Connecticut	NY	New York
DE	Delaware	NC	North Carolina
DC	District of Columbia	ND	North Dakota
FL	Florida	OH	Ohio
GA	Georgia	OK	Oklahoma
GU	Guam	OR	Oregon
HI	Hawaii	PA	Pennsylvania
ID	Idaho	PR	Puerto Rico
IL	Illinois	RI	Rhode Island
IN	Indiana	SC	South Carolina
IA	Iowa	SD	South Dakota
KS	Kansas	TN	Tennessee
KY	Kentucky	TX	Texas
LA	Louisiana	UT	Utah
ME	Maine	VT	Vermont
MD	Maryland	VA	Virginia
MA	Massachusetts	VI	Virgin Islands
MI	Michigan	WA	Washington
MN	Minnesota	WV	West Virginia
MS	Mississippi	WI	Wisconsin
MO	Missouri	WY	Wyoming





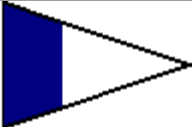





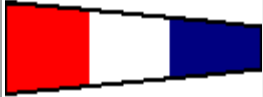

## Authorized punctuation written as Symbols.

<b>Name</b>	<b>Symbol</b>	<b>Name</b>	<b>Symbol</b>	<b>Name</b>	<b>Symbol</b>
Colon	:	Parenthesis	( )	Quotation	“ ”
Comma	,	Period	.	Slant	/
Hyphen	-	Question	?		

International Maritime Signals  
Letter Flags, Numeral Pennants, Nautical Meaning, and Morse Code

Flag	Name	Nautical Meaning	Morse
	Alfa	Diver Down; Keep Clear	• —
	Bravo	Dangerous Cargo	— • • •
	Charlie	Yes	— • — •
	Delta	Keep Clear	— • •
	Echo	Altering Course to Starboard	•
	Foxtrot	Disabled	• • — •
	Golf	Want a Pilot	— — •
	Hotel	Pilot on Board	• • • •
	India	Altering Course to Port	• •
	Juliett	On Fire; Keep Clear	• — — —
	Kilo	Desire to Communicate	— • —

	Lima	Stop Instantly	●-●●
	Mike	I Am Stopped	--
	November	No	-●
	Oscar	Man Overboard	---
	Papa	About to Sail	●--●
	Quebec	Request Pratique	--●-
	Romeo		●-●
	Sierra	Engines Going Astern	●●●
	Tango	Keep Clear of Me	-
	Uniform	Standing into Danger	●●-
	Victor	Require Assistance	●●●-
	Whiskey	Require Medical Assistance	●--

	X-ray	Stop Your Intention	—●●—
	Yankee	Am Dragging Anchor	—●—
	Zulu	Require a Tug	—●●
	1st Repeat	Repeat First Flag	
	2nd Repeat	Repeat Second Flag	
	3rd Repeat	Repeat Third Flag	
	Code	End of Message / Decimal	●—●—●
	Zero		-----
	One		●-----
	Two		●●-----
	Three		●●●---
	Four		●●●●—

	Five		●●●●●
	Six		—●●●●
	Seven		— —●●●
	Eight		— — —●●
	Niner		— — — —●