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Operations Memorandum

Date: September 28, 2002

To: Unit Leaders

CC: Board of Directors

From: Allan Hughes, Deputy Director of SAR/Operations

Subject: Digital Selective Calling (DSC) Radios and MMSI Numbers

Background

Digital Selective Calling is part of the Global Maritime Distress and Safety System (GMDSS). This system has been implemented to assist mariners in alerting for Distress, Urgency and Safety Communications. The International Maritime Organization (IMO) has made carriage of new equipment including DSC Radio's on Convention Ships effective Feb 1999.

The International Maritime Organization had adopted a resolution to move the cessation of the channel 16 monitoring from 2005 and have placed it on a review at that time by a recommendation from the International Lifeboat Federation. This is in consideration of non-compulsory fitted vessels (pleasure craft / small commercial vessels) that do not carry VHF DSC.

Installation

A VHF DSC Radio installed in a SAR vessel is beneficial in respects to being able to monitor for alerts sent to all stations by MCTS and vessels and for ship to ship contact with other vessels fitted with a DSC radio.

A VHF DSC Radio once a DSC call is received will automatically be turned to channel 16 or the channel which is specified by the calling station. This can be problematic when a SAR vessel is already engaged on communications on another frequency and an alert is received, their transmission will be terminated and the radio switched to 16 or the requested channel. It has the advantage however of eliminating congestion on channel 16 of vessels calling each other.

Canadian Carriage Requirements

In Canada under the Canada Shipping Act (CSA) there are radio carriage requirements for commercial vessels and carriage requirements that may impact our vessels and the equipment they must carry.

Commercial vessels over 8 metres of closed construction will be required by August 2003 to carry an approved Class D DSC Radio. Not every DSC radio meets the class D DSC standard and an attached list gives an approved list of class D equipment as of this date.

Operation

When a VHF DSC Radio receives a Distress, Urgency, Safety alert on channel 70 it will be immediately be switched to channel 16. MCTS Stations will normally announce Distress Urgency and Safety communications on channel 16 within one minute of sending the DSC notification.

In the case of vessel that has transmitted a DSC distress, safety or urgency alert addressed to all stations your radio will be switched to the working channel specified by the calling station. A ship station shall **NOT** acknowledge a distress or urgency call on DSC. Acknowledging distress and urgency calls is left to MCTS. However in the case where a distress or urgency alert is received and MCTS does not respond within a reasonable time frame 1-2 minutes, they should be alerted on normal SAR working frequency of the call information.

Canceling False Alerts

Operators should only use the distress button in an emergency; the distress button should never be pushed just to test it. In the event that a distress call is inadvertently or accidentally transmitted on VHF-DSC, it must be cancelled immediately.

This is done by:

1. Switching off the transmitter immediately, if detected during transmission;
2. Switching equipment on and set to Channel 16; and
3. Making a broadcast to "All Stations" giving the ship's name, call sign and DSC number, and cancel the false distress alert.

Intentionally sending a false distress alert carries penalties under the Canada Shipping Act, the Radiocommunications Act, and the Criminal Code.

Also, ensure MCTS is advised on a working channel to confirm your alert was in fact sent in error.

Application for a DSC Maritime Mobile Service Identity

Application can be made for an MMSI to Industry Canada. The MMSI will identify your vessel in cases of distress situation should you activate the distress alert function. It is similar to an EPIRB registration in that a shore side contact information is available to SAR, to confirm the vessel's safety, location and POB.

How to Register your Radio MMSI

If you have a DSC Radio you will need to obtain a Maritime Mobile Service Identity (MMSI). The MMSI is basically a DSC Radio callsign. The main difference is that the MMSI is programmed into your radio, so it can receive calls by other DSC Radio's and when using the Distress Alert function. MMSI's are issued free of charge from Industry Canada.

Refer to your Radio's Operation Manual for programming instruction. Some radio's are field programmable others require the MMSI be input by a radio dealer or repair facility. There is normally a maximum number of reprogramming attempts allowed for each radio.

MMSI's are composed of 9 digits. The first of nine digits specifies a vessel's country of registry. In the case of Canadian vessels those digits are 316. In the case of a coast station the MMSI will begin with two leading zeros. EG Victoria Coast Guard Radio MMSI is 003160011. US registered vessels with MMSI's will be prefixed with 366. It is anticipated that the US and Canada will run out of MMSI's and it may be required to issue additional series of numbers.

Installation

For maximum benefit DSC radios should be connected to a NMEA GPS output. This will then transmit with a distress alert the position of the vessel. For best results, a professional marine radio installer should be consulted or employed to make this connection.

Please direct any comments, concerns or questions to the Deputy Director of SAR/Operations Allan Hughes at 250-703-6401 or by email at allan.hughes@ccga-p.ca

Class D DSC Radios:

Class D approved radios as of October 1, 2002. As the deadline for Compulsory fitting nears, it is expected more Class D radios will be approved.

Class D VHF DSC (EN301 025) (See Note below)

Manufacturer	Model	RSS TAC
Sailor/Radio Holland	RT4801	1974822214AD
Skanti	VHF1000P	1335822210AD
Simrad-Kongsberg	RD68	2791823223AD
Raymarine Inc	RAY230	149823227AD
Raymarine Inc	RAY215E with DSC handset	4069823229AVD

***Note- VHF-DSC equipment constructed to the RTCM SC-101 standard does not comply with the VHF-DSC requirements of the Ship Station (Radio) Technical Regulations, 1999.**

The following links will be of assistance for more background information:

CCG National Office of Boating Safety MMSI Information including applications

http://www.ccg-gcc.gc.ca/obs-bsn/mmsi/main_e.htm

Transport Canada Ship Safety Bulletin regarding VHF DSC Carriage Requirements

http://www.tc.gc.ca/MarineSafety/bulletins/2002/04_e.htm

Marine Communications and Traffic Services – Pacific

<http://www.pacific.ccg-gcc.gc.ca/mcts/mmsi.htm>

Transport Canada – Class D Approved Radio Apparatus

<http://www.tc.gc.ca/MarineSafety/Ships-and-operations-standards/nav-saf-rad-com/gmdss-equipment.htm>

Canadian MMSI Database

<http://apollo.ic.gc.ca/english/mmsi.html>