

VHF DSC Refresher Training

Session Topics

- DSC
- MMSI
- Radio Setup
- DSC Routing Call
- DSC Safety Call & Sécurité voice
- DSC Urgency Alert & PanPan voice
- DSC Distress Alert & Mayday voice
- Distress Relay
- Cancel Distress Alert
- EPIRB
- AIS PLB

DSC

- Digital Selective Calling
- Ch 70
- No requirement to listen on Ch16
- Only way of reliability contacting another vessel
- Use for collision avoidance
- Put TX/RX instructions beside the VHF

VHF DSC ROUTINE OPERATION

RECEIVE DSC CALL

1. The alarm will sound for 2 minutes.
2. Press [**ALARM OFF**] to silence the alert
3. Press [**ACK**]
4. Use up/down arrows to select desired reply:
 - a. Able to Comply
 - b. Unable to Comply
 - c. Propose New Channel ⇒ select new channel
5. Press [**ENT**]
6. Press [**CALL**] to reply
7. Use the microphone to voice reply
8. Press [**EXIT**] to return to standby

SEND DSC CALL

1. Select [**MENU**] ⇒ [**DSC CALLS**] ⇒ [**INDIVIDUAL**]
2. Select the station or [**MANUAL INPUT**] and enter the **MMSI** number
3. Choose the working channel using up/down keys then press [**ENT**]
4. Confirm the screen and push [**CALL**]
5. When acknowledged, press [**ALARM OFF**] and select the **Channel** in **Step 3**

MMSI (Maritime Mobile Service Identity)

- Unique 9 digit number
- First 3 figures national identity e.g. 477 Hong Kong, 412/413 PRC
- Coastguard starts 00477xxxx
- Handheld 8477xxxxx
- AIS 972xxxxxx

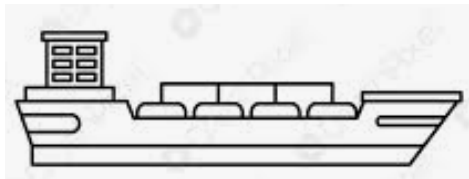
RADIO SETUP

- Ensure MMSI number programmed into radio
- Ensure position and time displayed
- Enter fleet MMSI number and vessel names
- Enter AIS MOB devices and crew names
- Do a TEST CALL
 - Select **TEST CALL**
 - Select pre-programmed vessel or enter MMSI (from AIS)
 - Select **CALL**
 - Depending if the receiving radio is set to auto reply will get instant confirmation

ROUTINE


- Select **DSC CALLS > INDIVIDUAL CALL**
- Select pre-programmed vessel or enter MMSI (from AIS)
- Select working channel e.g. inter-ship 6, 8, 72, 77
- Select **CALL**
- Will transmit call to vessel and “chirp” will be heard
- Called vessel will select **ABLE** to accept the call
- Calling station will hear “chirp” and can silence the noise and speak
- When finished select **STBY > OK**

ROUTINE PRACTICE



MMSI 477998002

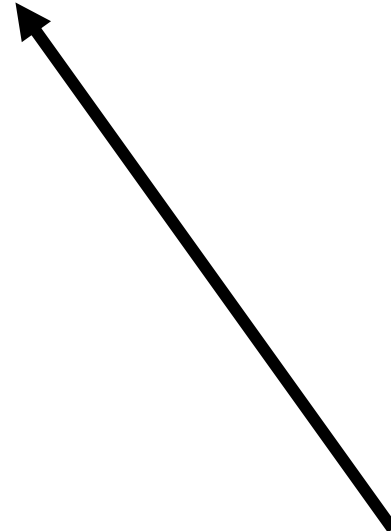



Scale = 1NM

Scenario.

You are on a collision course with a large vessel about 8NM away.

Action: Make a routine DSC Call and Message to confirm the commercial ship has seen you.



SAFETY & SECURITÉ

Weather warnings or urgent navigational warnings

- Select **All Ships Call > SAFETY**
- Select a working channel for Sécurité voice message e.g. 62, 63, 64
- Select **CALL**

VOICE MESSAGE FORMAT

Securité, Securité, Securité

All stations, All stations, All stations

This is Spy, Spy, Spy

Floating container sighted at 22°11'.08N 114°19'.29E

Considered to be danger to surface navigation

Time of origin 1230 UTC

Out

SAFETY PRACTICE

- **Scenario.** You are crossing a busy ocean shipping lane in poor visibility
- **Action.** Send an all stations DSC Safety call and Sécurité message to give your location

URGENCY & PAN-PAN

Used for urgent messages but not in Grave and Imminent Danger

- Address to Coastguard or All Stations
- Request for Urgent Medical, Advice or Assistance
- Select **All Ships Call > Urgency**
- Select **CALL**

VOICE MESSAGE FORMAT

Pan-pan, Pan-pan, Pan-pan

MARDEP, MARDEP, MARDEP

This is Spy, Spy, Spy

Call sign 2NJY8 MMSI 847899987

My position

Issue ...

Request ...

Over

DISTRESS CALL & MESSAGE

Only “Grave and Imminent Danger”

Undesignated. Distress Call via **Red Button** (hold 5s)

Designated. Use the menu to select designation then **Red Button** (h

Wait 15s

Send voice Distress message...

CALL

Mayday, Mayday, Mayday
This is M/V Flam, Flam, Flam
Callsign 2CGE4 MMSI 477899982

MESSAGE

M Mayday
I Flam 2CGE4 MMSI 477899982
P In position 22°11'.08N 114°19'.29E or (approx 1 mile east of Waglan)
D Fire on board
A I require immediate assistance
N Eight persons on board
I Abandoning to life-raft
O Over

APPENDIX 7: RADIO EMERGENCY & STANDARD PROCEDURES

MAYDAY

Where in the opinion of the Person-in-Charge the vessel or crew is in grave and imminent danger and requires immediate assistance.

1. On VHF, lift **red cover** and **press the DSC button for 5 seconds**.
2. Once data call is complete send a voice call by picking up the VHF microphone and pressing the transmit button saying:

“MAYDAY, MAYDAY, MAYDAY”

“THIS IS YACHT SIROCCO, SIROCCO, SIROCCO”

“VRS8125, MMSI 477991411”

“MAYDAY, SIROCCO, VRS8125, MMSI 477991411”

**“MY POSITION IS __ DEGREES __ DECIMAL __ MINUTES NORTH
__ DEGREES __ DECIMAL __ MINUTES EAST)”** *Read from VHF screen*

Nature of distress e.g. SINKING, FIRE, INJURED CREW

“REQUIRE IMMEDIATE ASSISTANCE”

“WE HAVE __ PERSONS BOARD” *(this number includes any MOB)*

Any other information _____

“OVER”

3. Release the transmit button and wait for a response. If no response after 1 minute, repeat the MAYDAY message.

PAN-PAN

Where immediate assistance is **NOT** required but a very urgent message concerning the safety of the vessel or crew. On the VHF:

1. MENU → DSC Calls → All Ships Call → Push ENT → Select URGENCY
2. Push ENT → Select CH → Push ENT → Push CALL
3. Wait 15s then send on Ch16 high power

“PAN-PAN, PAN-PAN, PAN-PAN”

“ALL STATIONS, ALL STATIONS, ALL STATIONS” or **“MARDEP x3”**

Follow MAYDAY procedure after 1st line substituting PAN-PAN

ROUTINE CALL

1. Select Channel 16 *(* Working channels 68, 69, 72, 77)*
2. **“called station, called station, THIS IS SIROCCO, SIROCCO OVER”**
3. Called station **“SIROCCO THIS IS called station OVER”**
4. **“called station THIS IS SIROCCO, CHANNEL 72* OVER”**
5. Called station **“SIROCCO THIS IS called station, CHANNEL 72* OVER”**
6. On Ch72, **“called station THIS IS SIROCCO OVER”**
7. On Ch72, called station **“SIROCCO THIS IS called station OVER”**
8. On Ch72, **“called station THIS IS SIROCCO, give message OVER/OUT”**

A = Alpha
B = Bravo
C = Charlie
D = Delta
E = Echo
F = Fox-trot
G = Golf
H = Hotel
I = India
J = Juliet
K = Kilo
L = Lima
M = Mike
N = November
O = Oscar
P = Papa
Q = Quebec
R = Romeo
S = Sierra
T = Tango
U = Uniform
V = Victor
W = Whiskey
X = X-ray
Y = Yankee
Z = Zulu

ALL BEFORE/AFTER
AFFIRMATIVE
CHANNEL
CORRECT/CORRECTION
I SAY AGAIN
I SPELL
I READ BACK
IN FIGURES
IN LETTERS
MAYDAY
MAYDAY RELAY
NEGATIVE
OVER/OUT
PAN-PAN
RECEIVED *(Roger/Copy)*
REPEAT
RECEIVED SO FAR
SAY AGAIN
SECURITÉ
SEND
STATION CALLING
THIS IS
UNKNOWN STATION
WAIT OVER/OUT
WRONG

DISTRESS PRACTICE

Scenario

- You have hit a submerged object and are sinking.
- There is a total crew of 4.
- You are wearing lifejackets and are standing by to launch your liferaft.
- Your position is: 22°15.23N, 114°22.09E.
- Current time: 2015hrs HK time.

Action

- Send a DSC Distress Alert (Designated) and Mayday message.

CANCEL DISTRESS ALERT

If situation now under control or accidental distress alert

- Select **CANCEL**
- Select **CONTINUE**
- If no cancel function, turn set off then on again to prevent resending

VOICE MESSAGE FORMAT

ALL STATIONS, ALL STATIONS, ALL STATIONS

This is TURTLE, TURTLE, TURTLE

VRS8801, MMSI 477998001

PLEASE CANCEL MY DISTRESS ALERT OF xxxxUTC

OUT

- Select **FINISH**

CANCEL DISTRESS PRACTICE

Scenario. You have got the situation under control.

Action. Cancel you DSC Distress Alert and inform all stations.

DISTRESS RELAY

- No DSC, all voice (changed a few years back)
- Send the MAYDAY message onwards
- Use if no vessel responds to DSC Distress Alert after 5 min

VOICE MESSAGE FORMAT

Mayday Relay, Mayday Relay, Mayday Relay

All Stations, All Stations, All Stations

This is Spy, Spy, Spy

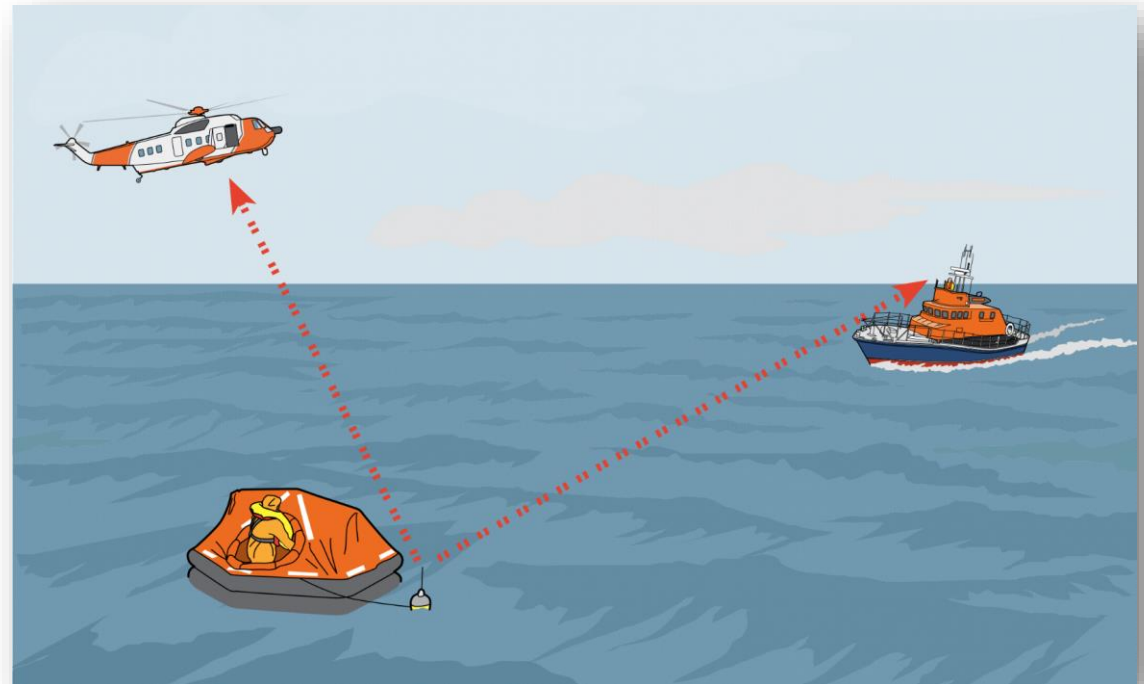
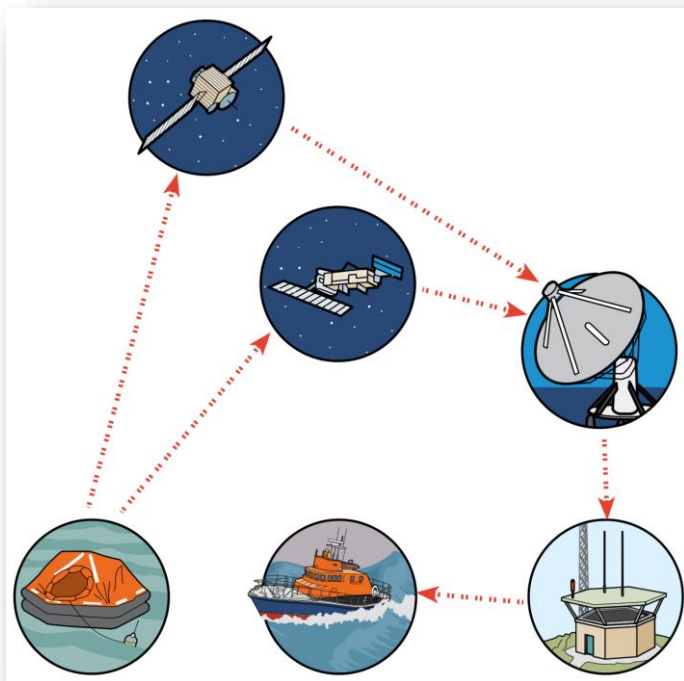
Call sign 2NJY8 MMSI 847899987

Then send MAYDAY message ...

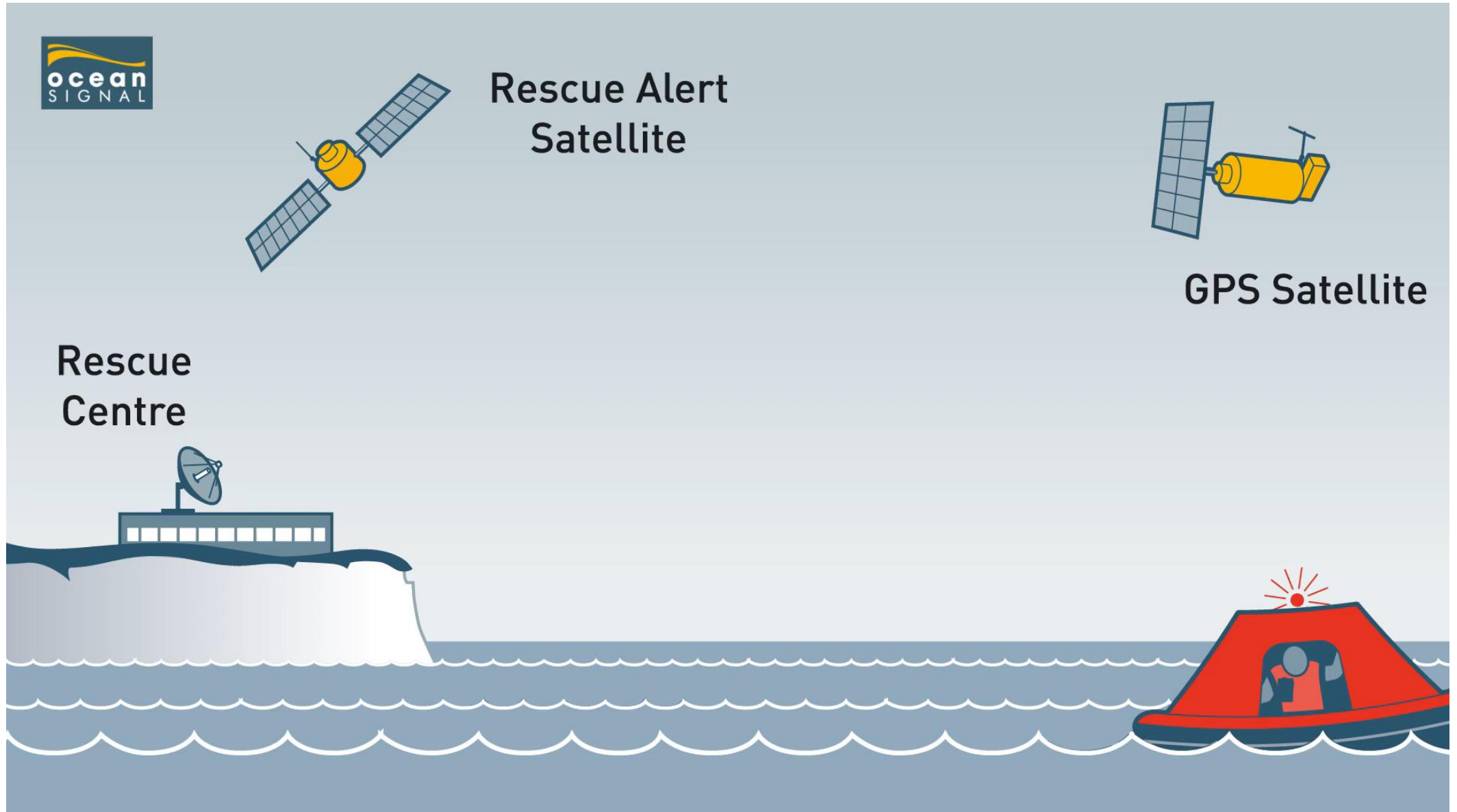
Over

Communication Equipment - EPIRB

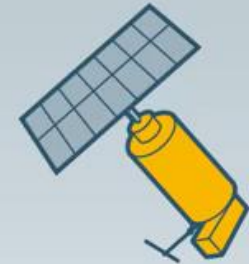
- Operation
 - EPIRB gets GPS position and sends data to satellite (406MHz)
 - Satellite → Ground Station → MRCC → Confirm distress (registration data)
 - MRCC coordinates rescue assets
 - Rescue assets locates EPIRB using 121.5 MHz (homing signal)



Distress Communications – EPIRB



Distress Communications – AIS/DSC



GPS Satellite

