VHF-DSC
Marine Radio's

VHF-DSC Radio

- Is your Marine VHF a DSC Radio
- Why have a VHF-DSC Radio
- VHF-DSC Radio Requirements
  - MMSI
  - GPS
- Using a Marine VHF Radio
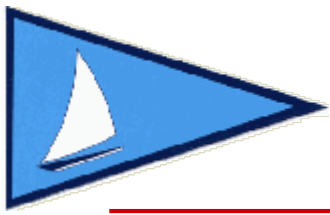- What is Digital Selective Calling

VHF-DSC Radio

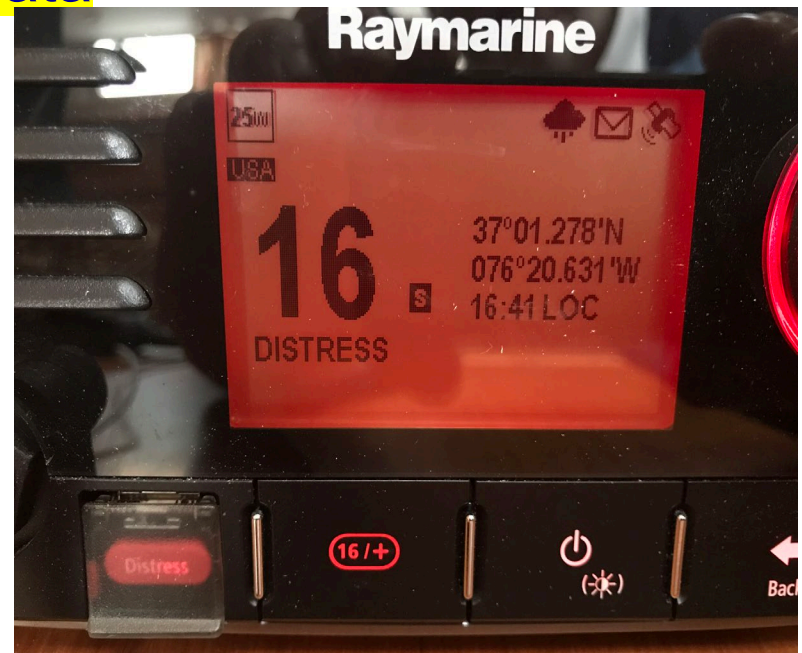- Recognized By Distinctive Red Distress Button

Why have a VHF-DSC Radio

- DSC is the "new", "not so new" System for Digital Calling and Distress Messaging
- USCG Rescue 21 Program
- Automated" Distress Calling
- Routine Communication

GPS Interface

- To Utilize the capabilities of Digital Selective Calling and to get the optimum performance it is essential that you obtain an MMSI # and connect your GPS to the radio

  - Provides Coast Guard & Other Rescue Agencies Accurate Vessel Positional Data

  - Easily connects to most Chart Plotters via NMEA 0183, NMEA 2000, Raymarine Seatalk or other Standard Interfaces

    - Provides for Immediate Display on Receiving Chart Plotters

MMSI

- DSC Radios Need a Maritime Mobile Service Identity (MMSI) for Full Functionality
  - Online record provides ID information to Search and Rescue authorities
  - Unique nine digit identifier
    - Modus Vivendi MMSI: 367763140
  - One MMSI per vessel
- Take Extreme Care When Setting up Your Radio with an MMSI#. Typically this Can Only be Done Once. Changes will Normally Require Returning the Radio to the Dealer.

MMSI

- Where do I Obtain a MMSI #
- Vessels Operating within US Waters
  - Obtain MMSI from a Registered Agent
    - e.g. Boat US, US Power Squadrons
    - Free
- Vessel's Operating Outside the US (Includes Bahamas & Canada)
  - Must Obtain an MMSI from the FCC
    - Valid for 10 Years
    - Licensing Fees Apply

FCC License

- Ship Station
  - Obtained from the FCC
  - Required if operating in foreign waters
    - This includes Canada and Bahamas!

- Operator
  - Required for each operator when operating in foreign waters
    - This includes Canada and Bahamas!

- *Use FCC Form 605 for Both Applications (Both are Required)*
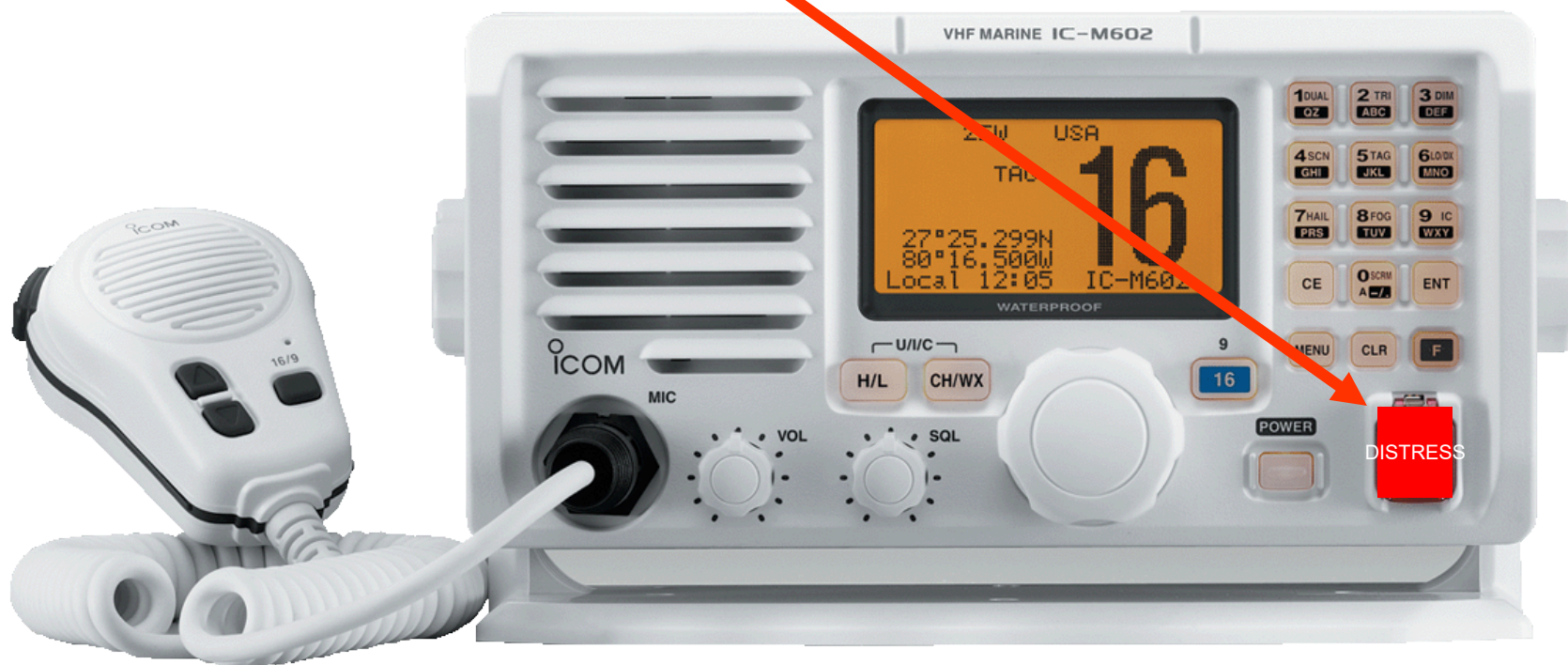
Distress Calls

- Automated Distress and Safety Calling
  - One button operation
  - Fully automated
  - Types of distress can be pre-selected
    - Default is "Undesignated" and Suggests a more Dire Emergency
    - Designations will be covered on a later slide
  - Call is Automatically Repeated at approximately 4 minute intervals until it is acknowledged.
  - Should be Interfaced with GPS
    - Provides automatically updated position and time
    - Becomes part of the Distress message

Undesignated Distress Calls

Quick Approach (no time to enter type of distress)

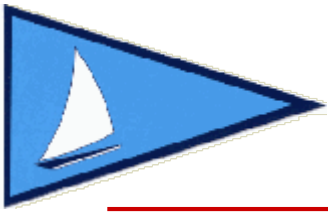- <u>Press and hold</u> Red button for <u>5 seconds</u>

- *This will issue a digital MAYDAY*

Undesignated Distress Calls

➢ Provides an Automated Digital Message to the USCG and all DSC Equipped Radios within Range:

- ➢ Station Identity (MMSI Number)
- ➢ Your GPS Position

➢ Once the Message is Transmitted

- ➢ Radio awaits USCG Acknowledgement.
- ➢ Your radio will continue to transmit until it is acknowledged.

➢ USCG will initiate Comms on Ch 16

➢ Any DSC Radio Receiving the Distress Call will Automatically Shift to Ch. 16

➢ Once you hear the Beep from the Radio, transmit a Standard Mayday on Ch. 16. (Not Everyone has DSC Radios Installed)

Designated Distress Calls

To Designate the Type of Distress

Lift Cover over Red Distress Button

Press Red Button *Once* (don't hold)

Options are Different for Different Manufacturers, Check you Operators Manual

Designated Distress Calls

- You have the Option to Designate the Type of Distress
  - Abandoning Ship
  - Fire
  - Flooding
  - Collision
  - Grounding
  - Listing
  - Sinking
  - Adrift
  - Abandoning
  - Piracy
  - Man Overboard

Options are different for each radio on the market. Take a moment to review your Radio's Operating Manual for any additional or different requirements
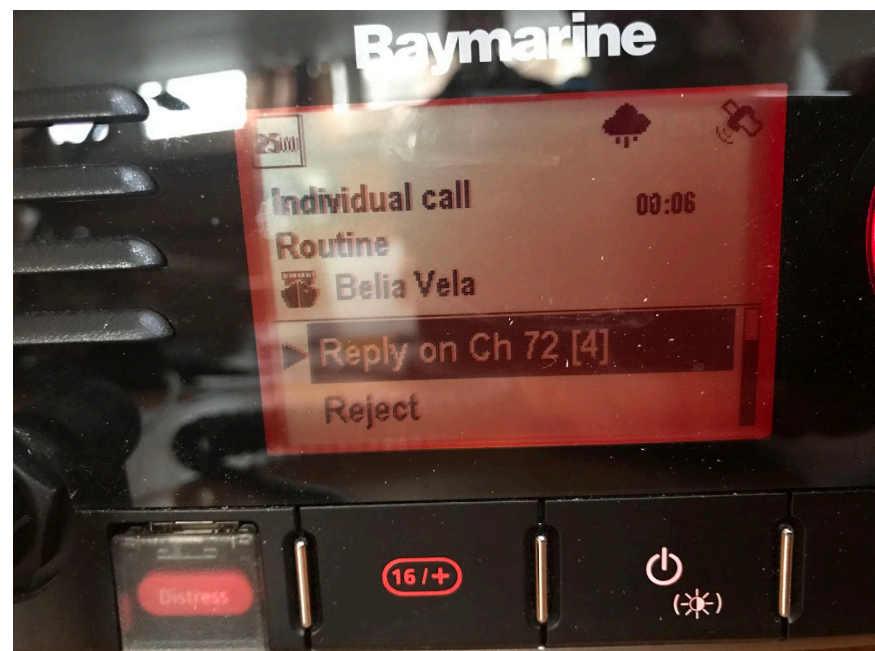
Urgency/Safety Calls

- Various Models of VHF-DSC Radios allow for these type (Pan Pan & Securite) calls to be made automatically

- Options are different for each radio on the market. Take a moment to review your Radio's Operating Manual for any additional or different requirements

Routine VHF-DSC Calls

- Select Working Channel

- Press "Call" Button Once

- Select Type of Call from Pull-Down Menu (Usually "Routine")

- Select MMSI of Person You Wish to Call

  - Phone Book

  - Individual Entry

- Press "Enter" Button Once

- Receiving Station is Alerted to the Call

Routine VHF-DSC Calls

- Group Calls

  - Basically the same as the individual call, but a Group is Identified

- Positional Data

  - Requests & Transmissions

DSC Test Calls

- Testing your VHF-DSC
  - Majority of Radios have a Test Call Capability
  - Test Call to US Coast Guard
    - MMSI# 003669999
    - If Received by USCG, you will receive an automated reply

Questions ? … Comments?