DIGITAL SELECTIVE CALLING (DSC) & AUTOMATIC IDENTIFICATION SYSTEM (AIS) STANDARDS

Outcome: To demonstrate an understanding of the principles and operation of DSC and AIS for recreational boating.

Recommended Equipment: DSC may be taught in a classroom, or on a boat (or both), and tested utilizing at least two DSC-enabled VHF radios. AIS may be taught in a classroom, or on a boat (or both), and tested in a classroom utilizing an internet enabled device, or on a boat equipped with an AIS receiver.

Knowledge

1.0 Maritime Mobile Service Identity (MMSI)

1.1 Understand what a Maritime Mobile Service Identity (MMSI) is.
   1.1.1 Understand the different types of MMSI (domestic and international) and where to obtain them (e.g., BoatUS, US Power Squadrons, Shine Micro, and the FCC).
   1.1.2 Understand the use of an MMSI number as a unique identifier across different transmitting installations: fixed mount/handheld VHF, SSB, Aids to Navigation (AtoNs), AIS transmitting vessels, AIS base stations.

1.2 Understand what is needed to make a DSC-enabled call.
   1.2.1 Understand the benefits and mechanics of using the distress button on a DSC-enabled marine radio.
   1.2.2 Understand the different uses of DSC calling such as: distress, position polling & reporting, individual calls, group calls, all ship calls.

1.3 Understand the VHF data exchange system (VDES)

2.0 Automatic Identification System (AIS)

2.1 Understand what AIS is and the available sources of this information.
2.2 Understand the different uses for AIS, including collision avoidance, AtoNs, and personal beacons for Search and Rescue (SAR) use.
2.3 Understand the difference between receive only, and transmit and receive (transceiver).
2.4 Understand the different applications for commercial and recreational vessels.
2.5 Understand the actions to be taken to avoid collision utilizing AIS input, based on the relative positions and leader lines of the vessels.

Practical Skills

1.0 Communication

1.1 Identify the MMSI number of a VHF radio.
1.2 Make a DSC-enabled two-way call.
1.3 Determine the position of another DSC enabled VHF radio.
1.4 Demonstrate how to check the DSC call log: Review entries, missed calls, delete log.
2.0 Navigation
2.1 Identify the closest AIS-enabled AtoN to your position and describe its characteristics.

3.0 Collision Avoidance
3.1 Using AIS, identify vessel type, name, MMSI number, course, and speed of a vessel closest to your location.