

Radar Best Practice

ARPA Usage – Part 1

WEST.

When using the ARPA the following points should be considered:

- ✓ Review the operating manuals for all of the different makes and models of ARPA on board and be familiar with their capabilities and limitations
- ✓ For collision avoidance purposes an ARPA should be sea stabilised with a log input delivering the vessel's speed through the water. The resulting true vectors will provide a more accurate indication of the aspects of tracked targets. If speed through the water is set manually, the details should be checked regularly and updated as necessary. Remember that GPS speed is the vessel's speed over the ground
- ✓ If two or more ARPAs are in operation, it is recommended that these be set with different vector and trail types so that a comprehensive display of all information regarding traffic in the vicinity is readily available
- ✓ When sea stabilisation is selected and considerable set and drift exist, land and other fixed objects will have true motion trails, possibly causing screen clutter. In such circumstances consideration should be given to selecting ground stabilisation to differentiate more easily between fixed and moving targets. However, for collision avoidance purposes sea stabilisation is preferable
- ✓ It should be borne in mind that the relative motion of a target, and therefore its Closest Point of Approach (CPA), Time to Closest Point of Approach (TCPA), Bow Crossing Range (BCR) and Bow Crossing Time (BCT) should remain the same regardless of radar set-up, provided the vessel and the target maintain their course and speed
- ✓ Compass heading and speed errors will produce inaccurate target true vector data, particularly when another vessel is on a reciprocal or near reciprocal course. This may lead to an incorrect interpretation of the other vessel's true heading and the necessary collision avoidance action
- ✓ When using a transmitting magnetic compass to provide radar heading data, be aware that rolling may cause the magnetic compass to oscillate resulting in inaccurate ARPA information
- ✓ Ensure visual and audible alarms are switched on when required
- ✓ The CPA and TCPA alarms should be switched on and adjusted as necessary according to the prevailing navigational situation
- ✓ The BCR and BCT alarms should be switched on and adjusted as necessary according to the prevailing navigational situation, remembering that the distance from the radar scanner to the bow may be considerable
- ✓ If guard zones or target acquisition areas are used, bear in mind that these features are no substitute for maintaining a proper lookout by sight, hearing and all other available means to ensure the early detection of other vessels
- ✓ In order for accurate target information to be displayed, an ARPA will need to track a target for at least 3 minutes. Should either vessel change course or speed it will take time for the target data to reflect such details
- ✓ Although ARPA target data may appear to be accurate, always treat such information with caution
- ✓ When selecting a vector length, ensure that it is appropriate to the prevailing circumstances and conditions

Important: In order to determine whether a close quarters situation is developing, or risk of collision exists, use all available means appropriate to the prevailing circumstances and conditions

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Important: The above points are listed for guidance only. It is essential that you read the operating manuals for the ARPAs aboard your vessel and they are used in accordance with the manufacturers' instructions

