

Radar Best Practice

Radar Usage – Part 2

When using the radar for navigation, position fixing and collision avoidance the following points should be considered:

- ✓ Check the alignment of the heading marker with the master gyro periodically, applying any gyro compass error to determine the true heading
- ✓ Ensure that the heading marker is aligned with the vessel's fore and aft line by comparing the visual and radar relative bearings of a small but distinct target at the edge of the range scale in use. Do not attempt to align the heading marker with the berth while alongside
- ✓ Check the accuracy of the Electronic Bearing Line (EBL), Variable Range Marker (VRM) and the bearing cursor at frequent intervals
- ✓ Turn off the heading marker and range rings regularly to ensure that they are not obscuring small targets
- ✓ Use parallel indexing techniques whenever possible to continuously monitor the vessel's position relative to the pre-planned track in conjunction with other position fixing methods
- ✓ Practice parallel indexing techniques when safe to do so to improve familiarity with this function regarding the specific radar sets on board
- ✓ When using parallel indexes on reflection plotters, remember that the parallel index will apply only to the radar range on which it is set and will need to be redrawn if the range scale is changed
- ✓ Where possible set, verify and use electronic bearing clearing lines and range ring clearing distances to help monitor the vessel's progress along the pre-planned course
- ✓ When fixing the vessel's position, remember that radar ranges are far more accurate than radar bearings. For accurate position fixing radar ranges should be coupled with visual bearings whenever possible
- ✓ Bear in mind that beamwidth distortion may stretch the ends of headlands and similar features causing errors in radar bearings. The effect of beamwidth distortion may be reduced by turning down the gain temporarily
- ✓ All radar targets must be positively identified prior to use for position fixing. Ideally buoys should not be used for this purpose. However, if unavoidable, their charted positions should be verified prior to use
- ✓ Be aware of any radar blind or shadow sectors caused by masts or other obstructions. Plan views showing these sectors should be posted near the radars concerned and should be updated following any structural changes
- ✓ When taking over the watch, remember to check and familiarise yourself with the settings of all radars in use as they may have been changed by other operators in the meantime

