

# **BAHAMAS MARITIME AUTHORITY**

## **BMA INFORMATION BULLETIN No. 14**

### **USE OF ARPA RADAR FOR COLLISION AVOIDANCE**

1. It was noted during the investigation of a recent collision that the ARPA radars were not used to best advantage for the avoidance of collision. The failure to use the ARPA radar correctly is considered to have been a contributory cause of the collision.
2. Two ARPA radars were in use at the time of the incident, one 10 cm and one 3 cm. The shipping traffic was very heavy, requiring the close concentration of the officer of the watch. Both radars were in true north-up relative motion mode and both ARPA displays were being used to determine if a close quarters situation was developing with any of the vessels in the area as they approached. The use of more than one ARPA display for anti-collision purposes by one officer is likely to lead to increased scope for error. It is accordingly recommended that only one display should be used for collision avoidance at any one time.
3. Where the automatic plotting function is being used for anti-collision purposes the risk of error will be reduced if Relative vectors are used to determine the risk of a close quarters situation developing. True vectors should be used mainly to determine the aspect of other ships, particularly in a multi-ship situation. The use of True vectors to determine risk of collision is likely to lead to error, especially when traffic is heavy. Using one display for True vectors and another for Relative vectors is also likely to lead to errors being made when traffic is heavy.
4. It was noted in the investigation that speed over the ground was used for the anti-collision plot. It is important that the speed input for all anti-collision plots on radar or ARPA should be speed through the water and not speed over the ground. The use of speed

over the ground can lead to errors especially when predicting the effect of intended manoeuvres.

5. It is strongly recommended that:

- (a) only one radar should be used at any one time for anti-collision plotting; and
- (b) Relative vectors should be used to determine the risk of collision and True vectors to determine aspect.

6. Owners and managers of Bahamian vessels are requested to bring this bulletin and the above recommendations to the attention of masters and navigating officers on their vessels, and to remind them that course and speed through the water and not over the ground should be used for all anti-collision plotting.