

# Compass Deviation

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## Compass Deviation

The second of the two errors which affect the magnetic compass, deviation, is caused by the magnetic influence of anything near the compass needle. Someone placing a metal knife alongside the binnacle, for example, will cause a deflection of the compass needle and result in deviation error. Steel in the construction of the ship, electric circuits, motors, and so on, can all affect the compass and create a deviation error. It would be safe to describe this error as follows:

Deviation is the error in the compass caused by the ship's magnetism. It is always named E or W according to the direction the card is deflected from true north.

## To Find Deviation Error

This is not so easy. To begin with, new fittings, new stores or new equipment placed on the ship can add to the error of deviation. Providing the new products are not too magnetic and they are kept at least 1 meter away from the compass binnacle, they should not have too much effect, and this is worth remembering when fitting out a ship. The deviation can be affected with each change in the ship's direction, which creates another problem. Finally, the ship itself, particularly if it is of steel construction, will have become a magnet in its own right during its building period and, as can well be imagined, this will play havoc with the accuracy of the compass in the binnacle. The best way to find the deviation error is to engage a professional compass adjuster (Certified Compass Engineer) and have them attempt to eliminate the error or, if it cannot be eliminated, tabulate it on what is known as a deviation card.

## The Deviation Card

When a ship is checked for deviation it must be checked on all headings since, as mentioned, deviation varies according to the course being steered. The Compass Engineer will swing the ship through the major compass points and determine the deviation on each point. The Compass Engineer will then list the deviation error on each heading on a deviation card. Thus the navigator can, by referring to this card, determine the deviation error on whatever course is being planned.