

Chapter 1. Dead Reckoning and the Log

Dead Reckoning

(De'ed = deduced, logical thinking based on facts)

Dead Reckoning means to calculate the boat's position in the present or at a future time based only on course, distance and time

not a completely accurate indication of a boat's position

but must be maintained until another fix which is based on two or more LOP (lines of position)

Dead Reckoning Plot; Complete, Neat, Accurate

always maintained so that another person can read

must follow conventions in plotting and labelling that are in use around the world

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always begins from a known position such as a fix

can be close aboard a charted aid or from two or more bearings or other LOP's

The Course Line

All lines plotted on a chart should be shown in true.

A new course line should always start from a new fix

DR Positions

Basic calculations using the formula $60D = ST$ or *Sixty Dee Street*

D is Distance

S is Speed

T is Time

60 is for working in minutes

$$D = ST/60$$

$$T = 60D/S$$

$$S = 60D/T$$

In this course on all exercises and exams DR's are plotted every hour on the hour starting with the first hour after the departure fix.

In reality the DR plot will be determined by the actual conditions with regard to boat speed and location of the shoreline and known hazards or weather conditions.

DR plots should be done in multiples of 5 which divide equally into 60 (5, 10, 15, 20, 30) depending on the speed of a vessel.

Must be coordinated with the positioning schedule

The DR is only as good as your last fix.

Must be re-established after every fix

DR marks should be easily erased.

DR must be plotted

At each change of course

At each change of speed

At the time a single LOP is obtained

At the time of a fix