

# Seamanship Notes

Working out where we are



## How can we find out where we are exactly?

1. By taking compass bearings, or other position lines, of three fixed objects, and seeing where these bearing lines cross on the chart. This is called a 'three point fix'.

2. If there is only one known object visible, we can take two compass bearings of this object with a time interval between them; called a 'running fix'. To do this you take two bearings of one object, an hour apart, and draw them on the chart. Then starting from any point on the first bearing line, work out your EP (estimated position) by plotting your course for the past hour, allowing for leeway (the effect of the wind on the direction of travel) and tidal stream. Now draw a parallel line to the first bearing line so that it passes through your EP and cuts the second bearing line. Where it cuts through is your approximate position.

3. If we can't see anything at all we could work out our position by using the course steered and the distance travelled through the water to work out a dead reckoning position (DR). A more accurate version of this is if you take the effect of leeway into account as this will show the boat's actual 'track' through the water.

If you can take the effect of the tidal stream into account, then the accuracy is better still and it becomes an 'estimated position' (EP).

## How could we use all these landmarks marked on the chart to help us if we had no compass?

When two landmarks are seen to come into line with one another they give us a very accurate transit bearing to help us pinpoint where we are. Transits can be found by lining up towers, spires, masts etc., or even a landmark with a buoy. All you need to do is draw a line on the chart that passes through both objects. Your position will be somewhere along that line.

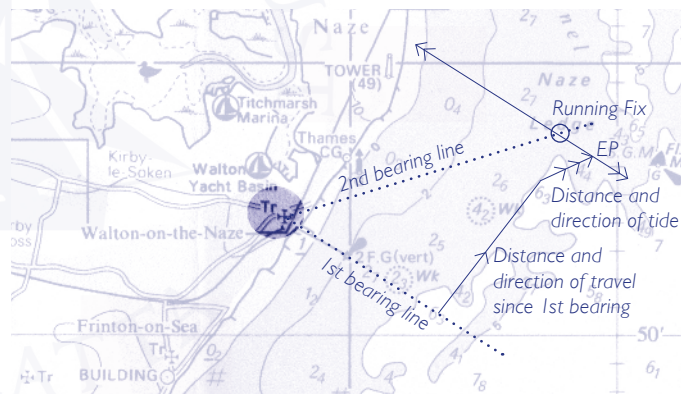
If you were able to take compass bearing of some other fixed object and combine it with your transit, you'd have a very reliable position.

### 1. A Three Point Fix



Take a bearing of three fixed objects and draw the appropriate bearing to seaward on the chart. Where the lines cross is your position.

### 2. A Running Fix



When only one object is visible, you can use a procedure called a 'running fix' or 'transferred position' line to work out your approximate position.

### Transits

