

# USING THE PORTLAND NAVIGATIONAL PROTRACTOR

## 1. For measuring the direction of a line on a chart:

Align a grid line on the Portland Navigational Protractor or the edge with the line to be measured (the North arrow must point in the direction of travel).

Check that the centre hole is on a meridian or line of LONG. Read off the bearing using the inner ring of numbers.

## 2. To draw a line at a given bearing:

Align the centre hole with a meridian or LONG and rotate the Protractor until the bearing is indicated on the inner ring of numbers.

Draw a line along the edge of the Protractor. The North arrow indicates the direction of travel.

## 3. As a Parallel Rule:

a) Draw a pencil line at two edges and move the Protractor, re-aligning it in its new position using the pencilled lines.

b) Place a rule or other straight edge against one edge of the Protractor and, holding it firmly on the chart, slide the Protractor to the required position, taking care that the rule does not slip.

## 4. As a Station Pointer:

Draw the horizontal angles (A-B-C) in pencil on the matt top surface of the Protractor. Angle A-B to the left of the North line using the inner ring of figures, and angle B-C to the right of the North line using the outer ring of figures.

Place the Protractor on the chart so that the North arrow points at object B and move it until the lines drawn on the Protractor coincide with, or point to, the chosen objects, then mark the position through the centre hole.

## OTHER USES

The top surface can be used to note the bearings plotted.

The long scale (0-20) can be used in conjunction with the LAT and LONG scales to mark a position on the chart.

