



## ADMIRAL JEAN CRAS® PLOTTER

Used by the French Navy and the Air Forces

### NOTICE

**PURPOSE OF THE PLOTTER.**—This plotter has been designed and developed by a Naval Officer, a specialist in Navigation problems. It is convenient in plotting bearings and courses on the map.

**DESCRIPTION.**—It is a rectangular transparent rule (see overleaf figure), dimensioned 380 × 94 mm and 730 × 94 mm carrying engraved: in its center two opposite half-circumferences, engraved in degrees and with a double serie of numbers of the tens; the outside numbers are set "normally" to the radius, the inside numbers are set "radial"; on the rule edges: a millimetric division and a nautical miles division.

In a parallel and in the same direction, a central arrow indicates: "Towards the route or the bearing".

**HOW TO USE THE PLOTTER.**—Stand in front of the chart, facing the South-North direction.

Main remark: Place the rule in any position but with the most southern center of the half-circumferences on a meridian or a parallel, the angle that make this meridian or this parallel with the arrow (clockwise calculated angle from 0° to 360°) is read at the chosen meridian or parallel intersection, and the half circumference at South center, but always taking the number which appear "right for the eye", leaving aside the lying one.

This comment is the conditions for a good use of the rule.

To mark a route, at 13° for instance, rotate the plotter around the point (b) till reading 13° on the nearest parallel re-cut by the instrument (fig. II on back). The arrow indicates the route. The rule edge being hold on the bearing (a).

To mark a bearing (in the 247, fig. I overleaf), place the plotter so as to meet successively with the following conditions:

- 1° Arrow directed towards the bearing;
- 2° One of the two rule edges on the bearing (a);
- 3° The most Southern center on a meridian or on a parallel (b);
- 4° Bearing angle read on a chosen meridian or parallel (c), using the number appearing right for the eye.

**REMARKS:** 1° The advantage of using the easiest edge of the rule still increases the possibilities of services of the plotter.

- 2° If, mistaking, the North center is used instead of the South center, this is immediately seen because the numbers that may be read on the meridian or on the parallel appear reversed.

The Topoplastic Company has the exclusivity of the Licences and Trade-Marks of the Jean CRAS® Plotter.

REQUIRE JEAN CRAS® ON YOUR NAVIGATION RULE.

**BUT DE L'APPAREIL.** — La navigation, permet le tracé de degrés sont comptés de 0 à 360. Avant son apparition, Mais leur mode de gr certaines erreurs.

De plus, si le rapporte fois inutilisable au bord de

La REGLE-RAPPORTIE DESCRIPTION. — Elle se pr gravées, en son centre; deux sont placés « normalement » a une division en milles marins. Parallèlement et dans

MODE D'EMPLOI. — Se plac Observation fondamen sur un parallèle, l'angle que l à l'intersection du méridien o pour l'œil », laissant de côté Cette observation con Pour tracer une route, recoupé par l'appareil (figure Pour tracer un relevem

- 1° Flèche dirigi
- 2° Un des deu
- 3° Centre le p
- 4° Angle du r

REMARQUES : 1° L'avantage 2° Si par erre le méridien La Société Topoplastic EXIGEZ LE NOM JEAN CRAS