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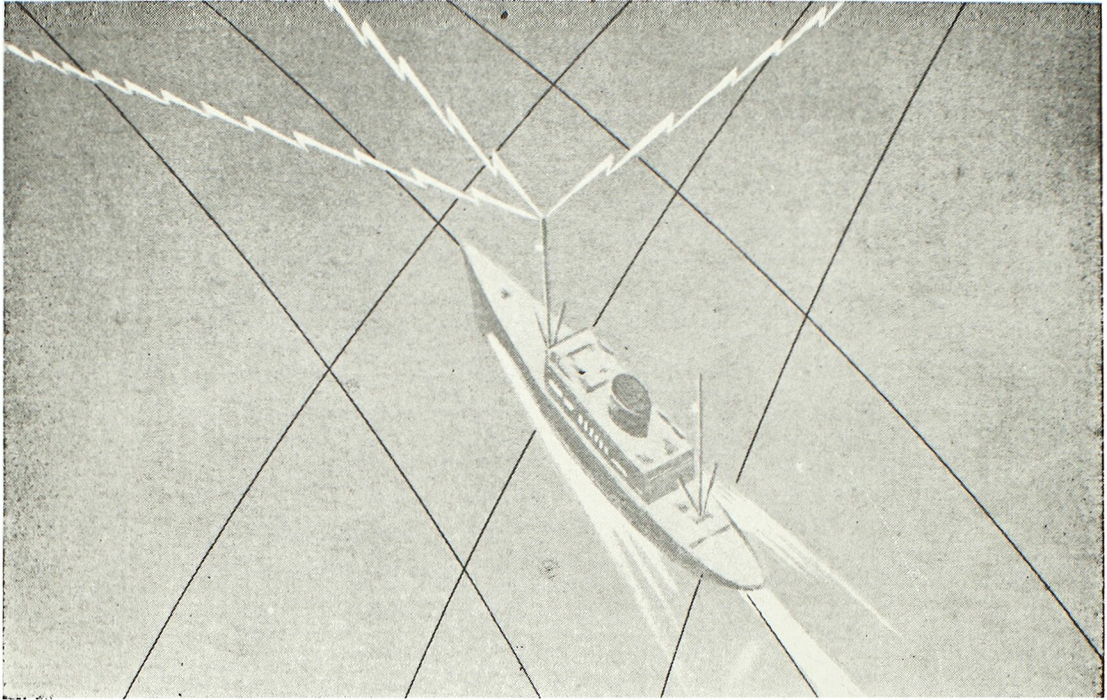
THE INTERNATIONAL HYDROGRAPHIC REVIEW



**INTERNATIONAL HYDROGRAPHIC BUREAU
MONACO**

Vol. XLI N° 1
(No 74 OF THE SERIES)

JANUARY 1964



INTERNATIONAL HYDROGRAPHIC BUREAU SPECIAL PUBLICATION 39

RADIO AIDS

TO MARITIME NAVIGATION AND HYDROGRAPHY

Supplementary Papers to S. P. 39
and
International Hydrographic Review Supplements

In 1956 the International Hydrographic Bureau issued Special Publication 39 entitled **Radio Aids to Maritime Navigation and Hydrography**. This volume described radio systems and instruments used in navigation and hydrographic surveying, and contained the following chapters and sections :

CHAPTER I. — Spectrum and Propagation of Radio Waves :

1. Frequency Spectrum of Electromagnetic and Radio Waves;
2. Propagation of Radio Waves.

CHAPTER II. — Radio Systems used in Maritime Navigation :

1. Radio Direction-finding;
2. Loran;
3. Decca;
4. Consol.

CHAPTER III. — Radio Systems used in Hydrographic Surveying :

1. Decca in Hydrographic Surveying;
2. Shoran;
3. Electronic Position Indicator (EPI);
4. Shoran and EPI in Offshore Hydrographic Surveying;
5. Raydist;
6. Lorac;
7. Rana;
8. Computation and Plotting of Hyperbolic Lattices on Survey Plotting Sheets.

CHAPTER IV. — Radar Technique :

1. Radar Technique in Navigation;
2. Use of Marine Radar in Surveying.

CHAPTER V. — Radio Systems in Geodetic Surveying :

1. Outline of Present Situation;
2. Operational Reports.

CHAPTER VI. — Reports on Use of Radio Systems in Hydrography :

1. Decca;
2. Shoran;
3. EPI;
4. Raydist;
5. Lorac;
6. Rana.

The French edition contains VIII + 481 pages, and includes 223 figures of which 50 are full-page illustrations; this volume is available at \$ 8.00 per copy. The English edition is out of print.

*
*

Owing to rapid technical developments in this field, the Bureau is revising SP 39, dividing it into two publications entitled: **Supplementary Papers to SP 39**, and **Supplements to the International Hydrographic Review**.

SUPPLEMENTARY PAPERS TO SP 39

The first papers, already published, and those in preparation contain new sections concerning recent instruments and revised sections resulting from current improvements; the last papers to be published will reproduce the sections which do not require amendment. Together the papers will make up the new edition of SP 39. A loose-leaf binding will enable future ready revision.

Already published :

PAPER 1: Tellurometer and Micro-Dist (about 40 pages), price \$ 1.00.

PAPER 2: Raydist, Hydrodist, M. P. F. S. (Microwave Position-fixing System) and Der-veaux (about 70 pages), price \$ 2.00.

PAPER 3: Decca in Hydrographic Surveys, Lorac, Rana and Hi-Fix (about 90 pages), price \$ 2.50.

PAPER 4: Decca in Navigation. (about 30 pages), price \$ 1.00.

PAPER 5: Loran (about 60 pages), price \$ 2.00.

PAPER 6: AGA Geodimeter (about 25 pages), price \$ 0.70.

PAPER 7: Shoran and EPI (about 45 pages), price \$ 1.20.

The publication of later papers will be announced in the *International Hydrographic Review* and the *International Hydrographic Bulletin*.

SUPPLEMENTS TO THE INTERNATIONAL HYDROGRAPHIC REVIEW

These Review Supplements contain reports from hydrographic and other organizations on instrument applications. They are intended to complete and later replace similar material in Chapter VI and a section of Chapter V of SP 39. Also included is a bibliography of reports reproduced elsewhere and of literature.

This series of Supplements to the Review may be considered as a supplement to the basic special publication.

The Supplements appear once or twice a year at unspecified dates, usually between issues of the *International Hydrographic Review*. The price varies according to the size of the volume.

Already published :

VOLUME 1, October 1960 (about 150 pages), price, \$ 5.00.

VOLUME 2, October 1961 (about 150 pages), price \$ 5.00.

VOLUME 3, November 1962 (about 100 pages), price \$ 3.00.

Later Volumes will be announced in the *International Hydrographic Review* and the *International Hydrographic Bulletin*.

Conditions of sale of International Hydrographic Bureau publications are as follows:

Orders may be sent either to a bookseller or direct to the International Hydrographic Bureau, Quai des Etats-Unis, Monte-Carlo (Principauté de Monaco). Owing to exchange fluctuations, prices are quoted in U. S. dollars. Packing and shipping expenses are extra.

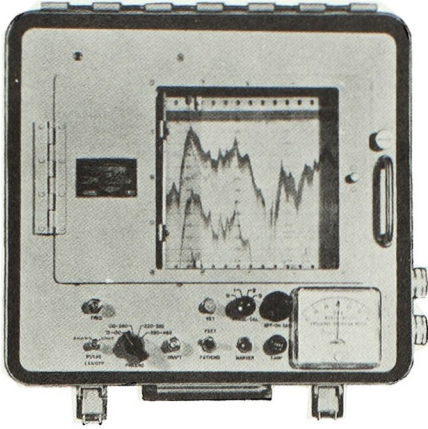
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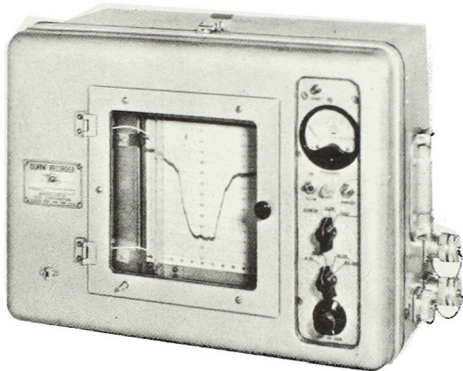
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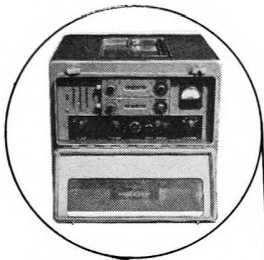
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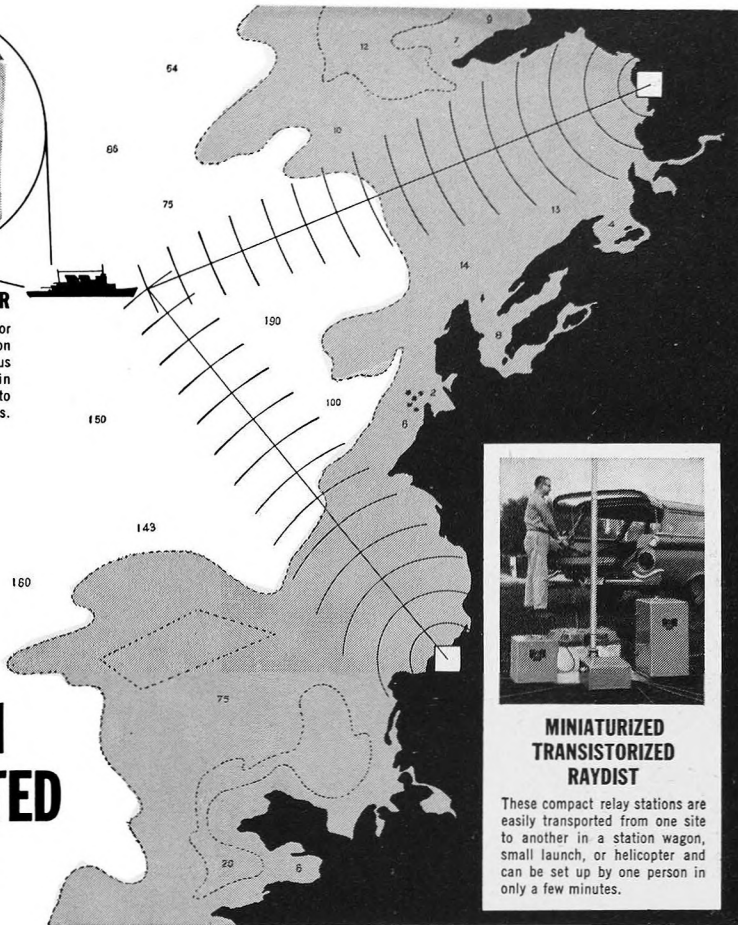


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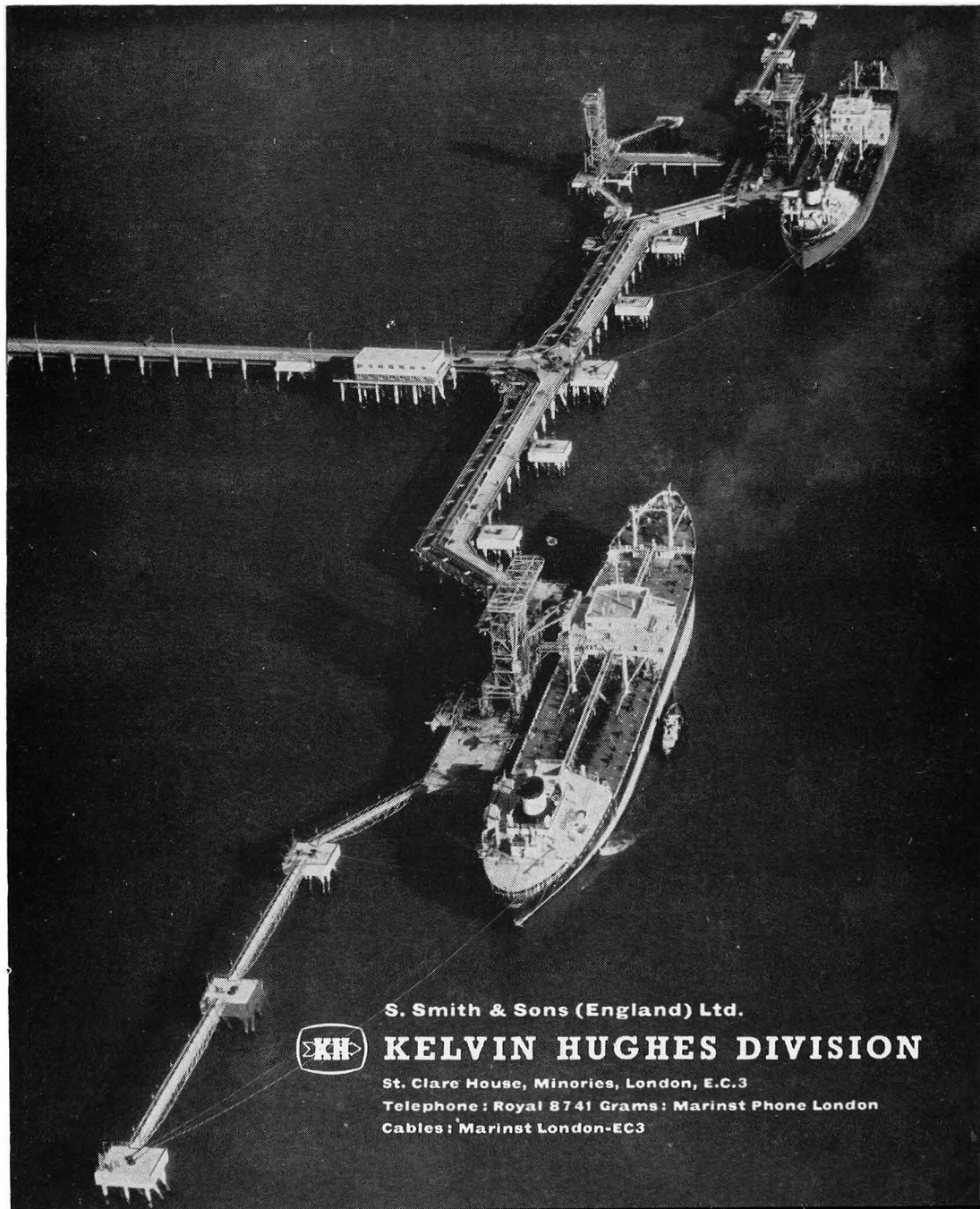


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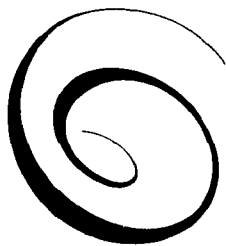
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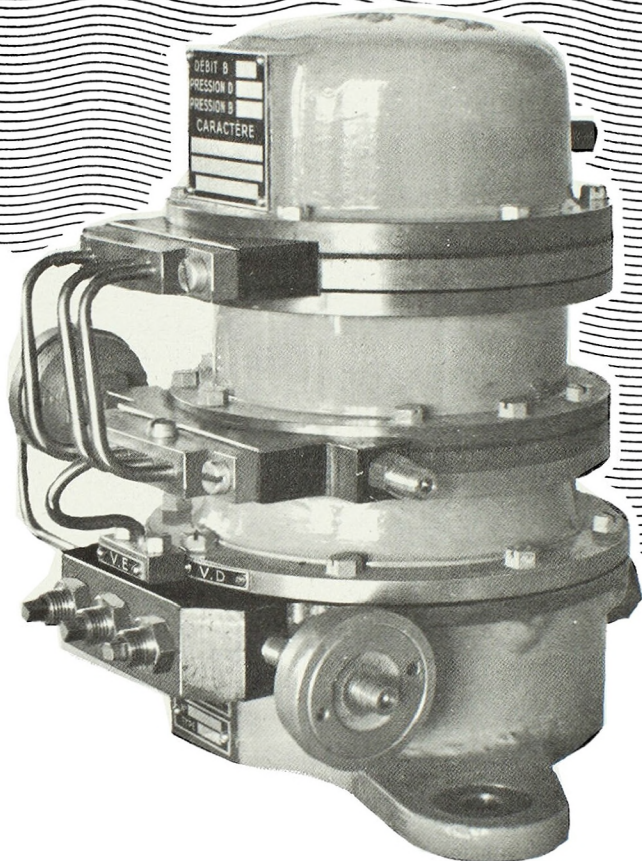
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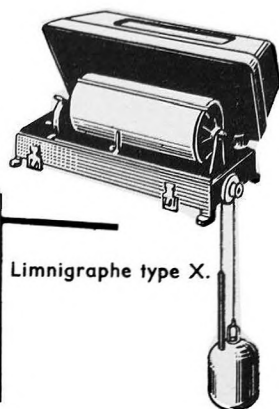
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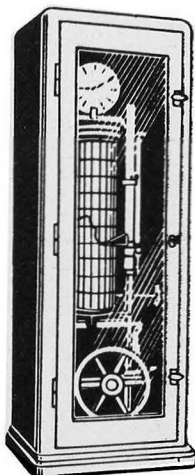
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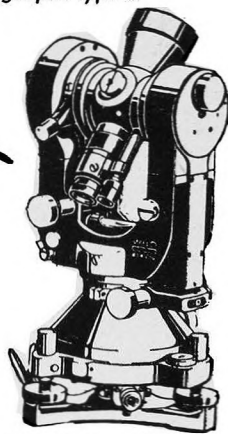
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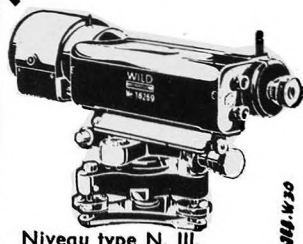
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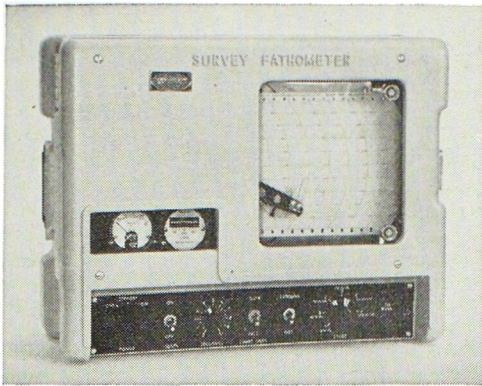
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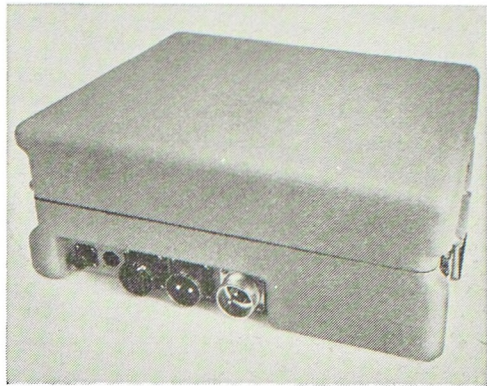
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**THE
INTERNATIONAL HYDROGRAPHIC REVIEW**

FOREWORD

The International Hydrographic Bureau was founded in 1921 with the objective of maritime security to be achieved through the standardization of the nautical chart and related publications, the improvement of hydrographic survey practices, and in general the establishment of a close and permanent association among all hydrographic services.

The International Hydrographic Review is published in January and July of each year in both English and French editions. The Bureau welcomes articles on hydrographic, topographic and photogrammetric surveying, radio aids, navigation and allied subjects, new instruments and equipment, new hydrographic ships and boats as well as articles on the history and organization of hydrographic offices.

An honorarium of 15 gold francs (about 5 U.S. dollars) per printed page of 600 words will be paid for all original articles accepted, including tables and diagrams but excluding photographs. In addition the Bureau will, upon request, supply each author free of charge with a total of 50 reprints of his article in one of the two official languages of the Bureau (or with 25 in English and 25 in French).

Articles should be in English or French, typewritten, double spaced, and if possible in duplicate. However, in order to achieve a well-balanced distribution of subject matter in the various issues of the Review the Directing Committee reserves the right to print articles in an appropriate issue.

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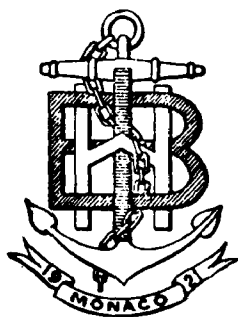
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