HYDROGRAPHIC APPLICATIONS OF RAYDIST

IHB Note. — *The Raydist system has received hydrographic applications in several countries :*

- *— in the United States by the U.S. Coast and Geodetic Survey, by the U.S. Navy Hydrographic Office, by the U.S. Army Corps of Engineers in various U.S. Army Engineer districts (Charleston, Norfolk, Detroit);*
- *— in Denmark (and Greenland);*
- *— in Portugal (in Portuguese Guinea and Mozambique);*
- *— in Brazil;*
- *— in Argentina;*
- *— in Venezuela.*

In reference to Raydist Type DM, an operational report of its use in Greeland has been reproduced elsewhere. Additional data supplied in November 1959 by Colonel W.W. Wilson, U.S. Army Engineer District, Detroit, appear below :

USE OF TRANSISTOR RAYDIST TYPE DM BY U.S. ARMY ENGINEER DISTRICT, DETROIT

The equipment was used on a rental basis for a three-month period near the close of the hydrographic survey season, and was a 10-watt Type DM system. Two shore relay stations and one mobile unit aboard a vessel were used. The 24-volt power source was provided by batteries. The system operated under frequencies 2 457.71 kc and 4 915.82 kc at type A0 emission and 2 560 kc and 2 600 kc at A3 emission. These frequencies provided a lane width of 100 feet, which was highly desirable since most of the soundings were taken at this interval and perpendicularly to the channel. The Range-Range system of configuration was utilized, composed of intersecting concentric circles originating from each shore station, to simplify computations for the preparation of the basic field sheets.

The equipment was mainly used on a lake where the great expanse of water always posed a problem as to the extension of adequate horizontal control, due to the location of the work at great distances from the shore stations and to the frequent lack of visibility. The range obtained with Raydist in this area was about 17 miles.

Since the equipment had possible adaptations in the Detroit District, it was procured on a rental basis to familiarize the survey personnel with its operation and enable the extent of utilization to be investigated.

The results obtained so far indicate that the equipment may be rented again next season not only to complete the study, but to accomplish additional surveying projects for added experience.

The field data on the results and the problems encountered to date have not yet been evaluated in report form. Additional information will be required before the Raydist Type DM System can be properly evaluated in regard to working conditions in the area and accuracy requirements.