

X.—REVIEW.

A Brief Description of the National Grid and Reference System. Ordnance Survey Office, January 1946. Published by His Majesty's Stationery Office. Price 4d.

In an era dominated by national reconstruction, and witnessing the first experiments in planning on a national scale, a wide range of national maps of the highest accuracy, reliability and completeness is an obvious necessity. The official maps of Britain published by the Ordnance Survey Office have long enjoyed a well-merited reputation in these respects; but for some years prior to the war it was becoming increasingly evident that the existing organization was inadequate to maintain them satisfactorily up to date. Certain defects in the basic survey work, the mathematical basis of the maps, and the relationships of the various series had also become apparent with the passage of the years. In particular, the adoption of a national viewpoint found the old series of maps inconvenient, as the larger scales were designed and published in separate county series. To remedy all these defects, a most far-reaching programme of improvements was authorized by Lord Davidson's Commission in 1938. Delayed by the war, the programme has since been put into effect with great vigour, and the re-designed maps are now appearing on the market.

The changes introduced are many, and cannot even be summarized in a limited space. Entirely new series of maps, for example, are being introduced, including one at the very large scale of 1/1,250 (about 50 inches to the mile) for towns, and a general-purpose map at 1/25,000 (about 2½ inches to the mile) for the whole country. The familiar "twenty-five inch" (1/2,500), "six-inch," "one-inch," and "quarter-inch" series remain, but the sheets will be

of new shapes (often square), and each series will be continuous for the whole country. Perhaps the most striking innovation to the ordinary user, however, is the addition of a printed "Grid" to all Ordnance Survey maps, and the adoption of the International Metre as its basic unit of measurement. Grids have long been found indispensable on military maps: now their many uses are being made available to the general public. In essence, a Grid is simply a system of squares printed on the map, the system being continuous over the whole series, and the squares being formed by the intersection of two series of equidistant, numbered, straight lines at right angles. Its purpose is primarily to facilitate the rapid and precise definition of position. It is with this feature of the new maps that the pamphlet under review deals particularly. Its purpose is to explain to the public what the Grid is, how it works, and what use can be made of it. The Grid adopted for the new Ordnance Survey maps is truly national, for it covers the whole country in one continuous system, and will appear on all scales of maps. To achieve accuracy and consistency, the maps themselves are being based on a completely new national survey, computed on a single system of projection. Superimposed on this single national projection is the National Grid. Its numerical origin lies off Land's End. All places in Great Britain lie north and east of this origin, and their positions can therefore be defined simply as so many units east, and so many north, of this unique reference point. These distances, measured in the new unit, the metre, along the rectangular grid axes, constitute the "coordinates" of any place; and they can be read off the printed maps by using the lines of the Grid printed on the maps themselves, the lines being marginally numbered according to their scale distances east and north of the numerical origin. On the smaller-scale maps, grid lines are printed at intervals of 10 kilometres; on the one-inch, 1/25,000, and six-inch maps at 1 kilometre intervals; and on the large-scale maps at intervals of 100 metres. By decimal sub-

division of the resultant squares, the co-ordinates of any point on the map can be read off to any desired degree of accuracy, and written by convention with the distance east first, the distance north second, they constitute the "Grid Reference" of the point in question. When given in full, such references are unique for the whole country; but for use within limited areas, simplified contractions are sufficient. The Grid thus provides a simple, precise, and fool-proof method of defining the location of any point in the country by a simple combination of numbers, while vice versa, any point defined in terms of the Grid can be located quickly and with certainty by reference to the appropriate map-sheet.

The pamphlet explains clearly the theory of the Grid, and proposes a simple and logical convention for its use. Applications of the system are obviously almost unlimited. Government offices can record all types of data having a distributional basis with brevity and precision with its aid. Map-users can record their movements in terms of it, and point out with certainty any desired object on the map. It has been suggested that if the Grid Co-ordinates of every signpost in the country were engraved upon the post, no one with an Ordnance Survey map to hand need ever be lost or in doubt of his whereabouts; while the difficulty of finding an unfamiliar house in a strange town could be obviated if its Grid Reference were included with the address in the letter-head of the invitation. The convenience and multiple uses of the Grid should rapidly overcome any possible initial prejudice against it based on unfamiliarity, and armed with this pamphlet no map-user should experience any difficulty. The text is clear and non-technical, and a panel of illustrative diagrams is included. It is to be hoped that the Ordnance Survey and H.M.S.O. will follow up this brochure with similar pamphlets on the remaining innovations of the new maps. They should find a ready market among a public map-conscious as never before.

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