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OP 1895

CHARACTERISTICS OF NAVAL FIRE CONTROL RADAR



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DEPARTMENT OF THE NAVY
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ORDNANCE PAMPHLET 1895
CHARACTERISTICS OF NAVAL FIRE CONTROL RADAR

1. Ordnance Pamphlet 1895 describes both the fundamental principles of operation of radar equipment in general and the characteristics of specific United States Naval fire control radar equipment.
2. This publication is intended for use by all personnel concerned with radar operation in general, and with the application of basic radar principles to fire control radar.
3. This publication does not supersede any existing publication.
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A handwritten signature in cursive script, reading "M. F. Schoeffel".

M. F. SCHOEFFEL
Rear Admiral, U. S. Navy
Chief, Bureau of Ordnance

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FOREWORD

THE SHOOTING EYE OF THE FLEET

In the fire control world of today, radar has become the shooting eye of the fleet. This volume is for you who are responsible for keeping this shooting eye sharp.

The pressure of modern operations leaves a busy ship's officer little time to read and comprehend even some of the material on the general subject of radar, much less the mass of specific instructional material on individual radar equipment aboard.

Therefore, this manual was prepared to help you with this problem; it contains information on gun fire control radar—pertinent information that has been culled from thousands of pages of OP's and technical data on the subject. Familiarization with its contents can save the ship's officer the time and trouble of wading through a mass of written material. In brief, it is hoped that this manual will help to sharpen the shooting eye of the fleet—painlessly!

PLAN OF THE BOOK

This is no ordinary OP; it is not intended to be. This manual was planned and designed for a specific reader—those officers who are responsible for administration of all phases of the use of fire control radar.

Neither is this manual intended to be a "sugar coated" version of the comprehensive information to be found in the OP's on specific fire control radar equipments. Obviously, acquaintance with the details of those OP's is desirable and helpful, and reference to them is, at times, absolutely essential. However, in lieu of the opportunity to make greater use of the individual equipment OP's, this manual will serve as a refresher and as a reference to the significant points of fire control radar.

To attain this objective, the content has been organized into three major parts:

Part 1 includes two chapters, *Principles of the Radar Art* and *Practice of the Fire Control Radar Art*. Part 2 includes *Equipment Data* and Part 3 provides *Reference Data*.

Principles of the Radar Art, in the main, will serve as a refresher for most officers on the fundamentals of radar. It is important that the reader thoroughly comprehend these fundamentals for they provide the foundation on which the information in the succeeding topics is built.

Practice of the Fire Control Radar Art, is a resume of the salient factors of operation. This section discusses actual operational equipment, interpretation of the information presented by radar, and the functional or operational situations encountered.

Equipment Data supplies information condensed from the applicable OP's on specific fire control radar equipments. These data will usually suffice to give the officer what he needs to know about individual systems or equipment.

Reference Data is composed principally of performance characteristics tables providing a ready reference on the operational aspects of the various radar equipments.