Navy Advancement Center
Web site: http://www.advancement.cnet.navy.mil

Advancement Handbook for Electronics Technician (Navigation)(Submarine)

(For advancement exams designated as ETV)

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PREFACE

The purpose of this Advancement Handbook is to help you focus your preparation for Navywide advancement-in-rating examinations. The exam-specific bibliographies (BIBs) and this handbook form a comprehensive examination study package. Since this handbook provides skill and knowledge components for each paygrade of the ET (Navigation)(Submarine) rating, it helps you concentrate your study on all areas that may be tested. This feature will help you get the most out of your study time.

Each page in Parts 1 through 4 of this Advancement Handbook presents general skill areas, specific skill areas, the knowledge factors associated with each skill area, the pertinent references that address each skill, and the subject areas that may be covered on the examination. The skill statements describe the skills you are expected to perform for each paygrade. The skill statements are cumulative; that is, you are responsible for the skills for the paygrade you are competing for, your present paygrade, and all paygrades below.

Although this handbook is very comprehensive, it cannot cover all the tasks performed in the rating. As a result, the advancement examinations may contain questions more detailed than described in the *"Exam Expectations"* section of the skill areas.

Remember that advancement competition is keen, so your keys to advancement include not only comprehensive advancement examination study but also sustained superior performance.

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Part 1

Advancement Handbook for ETV3

General ET(V) *Skill Area*	**Radar**
A *skill* you are expected to perform from the General Skill Area above:	**Demonstrate an understanding of the skills and knowledges prescribed by the Radar Operator Qualification Card**
Knowledge you should have to perform this skill:	• An understanding of radar theory of operation, system and equipment operating instructions and procedures, and operating parameters • Radar principles, including microwave electronics • Equipment component terminology • Radar navigation and plotting techniques

References you should study to gain the knowledge you need to perform this skill:	• Radar equipment technical manuals applicable to your class of submarine (BPS 15 (series), BPS 16, etc.). • Ship's service manuals (SSMs), general information, and operating instructions (OIs) applicable to your class of submarine. • *Maneuvering Board Manual,* Pub 217 • *Radar Navigation,* Pub. 1310 • *Navigation/Operations Department Organization and Regulations Manual,* COMSUBLANT/COMSUBPAC Instruction 5400.29 • *Standard Submarine Organization and Regulations Manual (SSORM),* COMSUBLANT/ COMSUBPAC 5400.38 (SSBN) 5400.39 (SSN) • NEETS Module 18 • The following submarine onboard training (SOBT) materials: – *Maneuvering Board,* SCP-N-004 – *Maneuvering Board Operation,* CBI-N-9757 – *Basic Submarine Navigation,* SVT-N-9312 – *Submarine Radar Navigation,* SVT-N-001
Exam Expectations. These are subject areas you should know to help you answer exam questions correctly:	You can expect questions on the following areas: – System start up and shut down procedures – Radar mast operation – Ring time adjustment procedures – Operating procedures and instructions – Radar navigation watchstanding requirements and procedures – Equipment functional description – Theory of radar principles – Safety precautions – Security precautions