

Navy Advancement Center

**Advancement
Handbook
for Fire Controlman**

This Advancement Handbook was reviewed March 2002. This review resulted in changes to the technical content.

PREFACE

The purpose of the Advancement Handbook is to help you focus your preparation for Navywide advancement-in-rating examinations. The bibliographies (BIBs) together with this handbook form a comprehensive examination study package. Since this handbook provides skill and knowledge components for each paygrade of the FC rating, it helps you concentrate your study on those 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 FC3

Advancement Handbook for FC3

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| <p>General FC <i>Skill Area</i></p> | <p>Electrical/Electronic Maintenance</p> |
| <p>A <i>skill</i> you are expected to perform from the General Skill Area above:</p> | <p>Inspect equipment shielding and rubber matting</p> |
| <p><i>Knowledge</i> you should have to perform this skill:</p> | <ul style="list-style-type: none"> • Acceptable and unacceptable physical characteristics of equipment shielding and rubber matting • How to inspect equipment shielding and rubber matting |
| <p><i>References</i> you should study to gain the knowledge you need to perform this skill:</p> | <ul style="list-style-type: none"> • <i>Shipboard Bonding, Grounding, and Other Techniques for Electromagnetic Compatibility and Safety</i>, MIL-STD 1310G • <i>Navy Installation and Maintenance Book (NIMB) Installation Standards</i>, NAVSEA SE000-01-IMB-010 • <i>The Technician's Handbook</i>, NAVEDTRA 14191 (NEETS MOD 19) • NSTM CHAP 090; <i>Inspections, Tests, Records, and Reports</i>, NAVSEA S9086-CZ-STM-000 |
| <p><i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:</p> | <p>You can expect questions on the physical characteristics of equipment shielding and rubber matting and inspections to determine their serviceability.</p> |

Advancement Handbook for FC3

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| <p>General FC <i>Skill Area</i></p> | <p>Electrical/Electronic Maintenance</p> |
| <p>A <i>skill</i> you are expected to perform from the General Skill Area above:</p> | <p>Measure circuit characteristics (AC & DC voltages & current, circuit resistance, capacitance, etc.)</p> |
| <p><i>Knowledge</i> you should have to perform this skill:</p> | <p>How to:</p> <ul style="list-style-type: none"> • Use test equipment • Measure AC, DC, AC voltages, DC voltages, circuit resistance, capacitance, inductance, frequency, and power • Perform appropriate electrical/electronic testing procedures |
| <p><i>References</i> you should study to gain the knowledge you need to perform this skill:</p> | <ul style="list-style-type: none"> • <i>Introduction to Matter, Energy, and Direct Current</i>, NAVEDTRA 14173 (NEETS MOD 1 Ch 3) • <i>Introduction to Alternating Current and Transformers</i>, NAVEDTRA 14174 (NEETS MOD 2) • <i>Introduction to Generators and Motors</i>, NAVEDTRA 14177 (NEETS MOD 5) • <i>Introduction to Wave-Propagation, Transmission Lines, and Antennas</i>, NAVEDTRA 14182 (NEETS MOD 10) • <i>Introduction to Circuit Protection, Control, and Measurement</i>, NAVEDTRA 14175 (NEETS MOD 3) |
| <p><i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly:</p> | <p>You can expect questions on measuring AC, DC, AC & DC voltages & current, circuit resistance, capacitance, inductance, frequency, and power.</p> |