



NONRESIDENT TRAINING COURSE

October 1997



Information Systems Technician Training Series

Module 5—Communications Center Operations

NAVEDTRA 14226

NOTICE

Any reference within this module to "Radioman" or the former "Radioman rating" should be changed to "Information Systems Technician" and the "Information Systems Technician (IT) rating". The subject matter presented relates to the occupational standards for the IT rating.

Although the words “he,” “him,” and “his” are used sparingly in this course to enhance communication, they are not intended to be gender driven or to affront or discriminate against anyone.

PREFACE

By enrolling in this self-study course, you have demonstrated a desire to improve yourself and the Navy. Remember, however, this self-study course is only one part of the total Navy training program. Practical experience, schools, selected reading, and your desire to succeed are also necessary to successfully round out a fully meaningful training program.

COURSE OVERVIEW: In completing this nonresident training course, you will demonstrate a knowledge of the subject matter by correctly answering questions on the following subjects: Center Operations, Voice Communications, Emission Control, and Cryptosecurity.

THE COURSE: This self-study course is organized into subject matter areas, each containing learning objectives to help you determine what you should learn along with text and illustrations to help you understand the information. The subject matter reflects day-to-day requirements and experiences of personnel in the rating or skill area. It also reflects guidance provided by Enlisted Community Managers (ECMs) and other senior personnel, technical references, instructions, etc., and either the occupational or naval standards, which are listed in the *Manual of Navy Enlisted Manpower Personnel Classifications and Occupational Standards*, NAVPERS 18068.

THE QUESTIONS: The questions that appear in this course are designed to help you understand the material in the text.

VALUE: In completing this course, you will improve your military and professional knowledge. Importantly, it can also help you study for the Navy-wide advancement in rate examination. If you are studying and discover a reference in the text to another publication for further information, look it up.

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Sailor's Creed

"I am a United States Sailor.

I will support and defend the
Constitution of the United States of
America and I will obey the orders
of those appointed over me.

I represent the fighting spirit of the
Navy and those who have gone
before me to defend freedom and
democracy around the world.

I proudly serve my country's Navy
combat team with honor, courage
and commitment.

I am committed to excellence and
the fair treatment of all."

CONTENTS

CHAPTER	PAGE
1. Center Operations.	1-1
2. Voice Communications	2-1
3. Emission Control	3-1
4. Cryptosecurity	4-1
APPENDIX	
I. Glossary	AI-1
II. Glossary of Acronyms and Abbreviations	AII-1
III. References Used to Develop the TRAMAN.	AIII-1
INDEX.. . . .	INDEX-1

NONRESIDENT TRAINING COURSE follows the index

SUMMARY OF THE RADIOMAN TRAINING SERIES

MODULE 1

Administration and Security—This module covers Radioman duties relating to administering AIS and communication systems. Procedures and guidance for handling of classified information, messages, COMSEC material and equipment, and AIS requirements are discussed.

MODULE 2

Computer Systems—This module covers computer hardware startup, including peripheral operations and system modification. Other topics discussed include computer center operations, media library functions, system operations, and troubleshooting techniques. Data file processes, memory requirements, and database management are also covered.

MODULE 3

Network Communications—This module covers network administration, LAN hardware, and network troubleshooting. Related areas discussed are network configuration and operations, components and connections, and communication lines and nodes.

MODULE 4

Communications Hardware—This module covers various types of communications equipment, including satellites and antennas. Subjects discussed include hardware setup procedures, COMSEC equipment requirements, distress communications equipment, troubleshooting equipment, satellite theory, and antenna selection and positioning.

MODULE 5

Communications Center Operations—This module covers center operations, including transmit message systems, voice communications, center administration, quality control, and circuit setup/restorations. Guidelines for setting EMCON and HERO conditions and cryptosecurity requirements are also discussed.

CREDITS

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INSTRUCTIONS FOR TAKING THE COURSE

ASSIGNMENTS

The text pages that you are to study are listed at the beginning of each assignment. Study these pages carefully before attempting to answer the questions. Pay close attention to tables and illustrations and read the learning objectives. The learning objectives state what you should be able to do after studying the material. Answering the questions correctly helps you accomplish the objectives.

SELECTING YOUR ANSWERS

Read each question carefully, then select the BEST answer. You may refer freely to the text. The answers must be the result of your own work and decisions. You are prohibited from referring to or copying the answers of others and from giving answers to anyone else taking the course.

SUBMITTING YOUR ASSIGNMENTS

To have your assignments graded, you must be enrolled in the course with the Nonresident Training Course Administration Branch at the Naval Education and Training Professional Development and Technology Center (NETPDTC). Following enrollment, there are two ways of having your assignments graded: (1) use the Internet to submit your assignments as you complete them, or (2) send all the assignments at one time by mail to NETPDTC.

Grading on the Internet: Advantages to Internet grading are:

- you may submit your answers as soon as you complete an assignment, and
- you get your results faster; usually by the next working day (approximately 24 hours).

In addition to receiving grade results for each assignment, you will receive course completion confirmation once you have completed all the

assignments. To submit your assignment answers via the Internet, go to:

<http://courses.cnet.navy.mil>

Grading by Mail: When you submit answer sheets by mail, send all of your assignments at one time. Do NOT submit individual answer sheets for grading. Mail all of your assignments in an envelope, which you either provide yourself or obtain from your nearest Educational Services Officer (ESO). Submit answer sheets to:

COMMANDING OFFICER
NETPDTC N331
6490 SAUFLEY FIELD ROAD
PENSACOLA FL 32559-5000

Answer Sheets: All courses include one “scannable” answer sheet for each assignment. These answer sheets are preprinted with your SSN, name, assignment number, and course number. Explanations for completing the answer sheets are on the answer sheet.

Do not use answer sheet reproductions: Use only the original answer sheets that we provide—reproductions will not work with our scanning equipment and cannot be processed.

Follow the instructions for marking your answers on the answer sheet. Be sure that blocks 1, 2, and 3 are filled in correctly. This information is necessary for your course to be properly processed and for you to receive credit for your work.

COMPLETION TIME

Courses must be completed within 12 months from the date of enrollment. This includes time required to resubmit failed assignments.

PASS/FAIL ASSIGNMENT PROCEDURES

If your overall course score is 3.2 or higher, you will pass the course and will not be required to resubmit assignments. Once your assignments have been graded you will receive course completion confirmation.

If you receive less than a 3.2 on any assignment and your overall course score is below 3.2, you will be given the opportunity to resubmit failed assignments. **You may resubmit failed assignments only once.** Internet students will receive notification when they have failed an assignment--they may then resubmit failed assignments on the web site. Internet students may view and print results for failed assignments from the web site. Students who submit by mail will receive a failing result letter and a new answer sheet for resubmission of each failed assignment.

COMPLETION CONFIRMATION

After successfully completing this course, you will receive a letter of completion.

ERRATA

Errata are used to correct minor errors or delete obsolete information in a course. Errata may also be used to provide instructions to the student. If a course has an errata, it will be included as the first page(s) after the front cover. Errata for all courses can be accessed and viewed/downloaded at:

<http://www.advancement.cnet.navy.mil>

STUDENT FEEDBACK QUESTIONS

We value your suggestions, questions, and criticisms on our courses. If you would like to communicate with us regarding this course, we encourage you, if possible, to use e-mail. If you write or fax, please use a copy of the Student Comment form that follows this page.

For subject matter questions:

E-mail: n311.products@cnet.navy.mil
Phone: Comm: (850) 452-1501
DSN: 922-1501
FAX: (850) 452-1370
(Do not fax answer sheets.)
Address: COMMANDING OFFICER
NETPDTC N311
6490 SAUFLEY FIELD ROAD
PENSACOLA FL 32509-5237

For enrollment, shipping, grading, or completion letter questions

E-mail: fleetservices@cnet.navy.mil
Phone: Toll Free: 877-264-8583
Comm: (850) 452-1511/1181/1859
DSN: 922-1511/1181/1859
FAX: (850) 452-1370
(Do not fax answer sheets.)
Address: COMMANDING OFFICER
NETPDTC N331
6490 SAUFLEY FIELD ROAD
PENSACOLA FL 32559-5000

NAVAL RESERVE RETIREMENT CREDIT

If you are a member of the Naval Reserve, you may earn retirement points for successfully completing this course, if authorized under current directives governing retirement of Naval Reserve personnel. For Naval Reserve retirement, this course is evaluated at 3 points. (Refer to *Administrative Procedures for Naval Reservists on Inactive Duty*, BUPERSINST 1001.39, for more information about retirement points.)

Student Comments

Course Title: Information Systems Technician Training Series
Module 5—Communications Center Operations

NAVEDTRA: 14226 **Date:** _____

We need some information about you:

Rate/Rank and Name: _____ SSN: _____ Command/Unit _____

Street Address: _____ City: _____ State/FPO: _____ Zip _____

Your comments, suggestions, etc.:

Privacy Act Statement: Under authority of Title 5, USC 301, information regarding your military status is requested in processing your comments and in preparing a reply. This information will not be divulged without written authorization to anyone other than those within DOD for official use in determining performance.
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NETPDTC 1550/41 (Rev 4-00)

CHAPTER 1

CENTER OPERATIONS

Upon completing this chapter, you should be able to do the following:

- *Identify the procedures for transmitting messages via automated systems and manual circuits.*
 - *Identify the procedures for monitoring and reporting of circuit backlogs.*
 - *Identify the steps to verify broadcast number continuity.*
 - *Determine the procedures for preparing, updating, and verifying the command guard list (CGL) and the master station log (MSL).*
 - *Identify the procedures to verify STU-III systems parameters for remote/dial-in users and explain the need to set up and operate the STU-III terminals with remote/dial-in users.*
 - *Determine the procedures for the preparation of the communications plan.*
 - *Identify the steps to reset communications systems to RADAY.*
 - *Determine communications protocols applied to circuit set up/restorations.*
 - *List the steps to activate, deactivate, and place communications circuits in standby, set up, or restoration.*
 - *Identify the procedures to transmit or receive cryptographic keying material via OTAT/OTAR.*
 - *Define the steps to analyze network capacity and reliability.*
-

Telecommunications capabilities are continually advancing as technology improves. Because of advances in technology, we are seeing great improvements in the quality and speed of communications, and an increase in our information transfer capabilities. The Navy's modern automated systems greatly reduce writer-to-reader times in message handling, and the volume of messages that can be processed is steadily increasing.

ASHORE AUTOMATED TELECOMMUNICATIONS SYSTEMS

Two new shore command systems that are coming on-line in the 1990s are the Navy Standard Teleprinter Ashore (NSTA) and the Manual Relay Center

Modernization Program (MARCEMP). We will discuss these two new systems as well as the other in-place automated shore systems and their interface components.

NAVY STANDARD TELEPRINTER ASHORE

With the introduction of the Navy Standard Teleprinter (NST) at afloat commands, there was a need to replace antiquated communications systems ashore with a system compatible with the NSTs. To meet this need, the Navy has developed the Navy Standard Teleprinter Ashore (NSTA) program.

The heart of the NSTA program is the Personal Computer Message Terminal (PCMT) and its