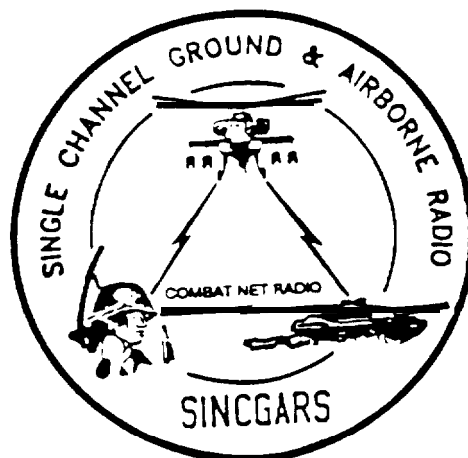

TECHNICAL MANUAL
OPERATOR'S MANUAL



**SINGARS GROUND COMBAT
NET RADIO, ICOM**

MANPACK RADIO

AN/PRC-119A/D/F (NSN 5820-01-267-9482) (EIC: L2Q)

SHORT RANGE VEHICULAR RADIO

AN/VRC-87A/D/F (NSN 5820-01-267-9480) (EIC: L22)

SHORT RANGE VEHICULAR RADIO WITH SINGLE RADIO MOUNT

AN/VRC-87C (NSN 5820-01-304-2045) (EIC: GDC)

SHORT RANGE VEHICULAR RADIO WITH DISMOUNT

AN/VRC-88A/D/F (NSN 5820-01-267-9481) (EIC: L23)

SHORT RANGE/LONG RANGE VEHICULAR RADIO

AN/VRC-89A/D/F (NSN 5820-01-267-9479) (EIC: L24)

LONG RANGE VEHICULAR RADIO

AN/VRC-90A/D/F (NSN 5820-01-268-5105) (EIC: L25)

SHORT RANGE/LONG RANGE VEHICULAR RADIO WITH DISMOUNT

AN/VRC-91A/D/F (NSN 5820-01-267-9478) (EIC: L26)

SHORT RANGE/LONG RANGE VEHICULAR RADIO

AN/VRC-92A/D/F (NSN 5820-01-267-9477) (EIC: L27)

USED WITH

AUTOMATED NET CONTROL DEVICE (ANCD) (AN/CYZ-10)
PRECISION LIGHTWEIGHT GPS RECEIVER (PLGR) (AN/PSN-11)
SECURE TELEPHONE UNIT (STU)
FREQUENCY HOPPING MULTIPLEXER (FHMUX)

Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

1 DECEMBER 1998

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No. 11-5820-890-10-8

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 1 DECEMBER 1998

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* This manual supersedes TM 11-5820-890-10-8, dated 28 February 1995.

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HOW TO USE YOUR MANUAL

COVER

Information that you will use most often is boxed on the rear cover as well as in the Table of Contents. The boxed information found on the rear cover is thumb-indexed with edge marks so you can quickly refer to that information.

TABLE OF CONTENTS

Refer to the Table of Contents to find out where information can be found. The Table of Contents lists each chapter and major paragraph, showing subject, paragraph, and page numbers.

CHAPTER CONTENTS

For ease of reference, each chapter begins with a chapter table of contents showing the major paragraphs and sub-paragraphs contained in that chapter. Paragraph and page numbers are also provided.

SUBJECT INDEX

A subject matter index may be found at the rear of the manual. Subjects are listed alphabetically by page number. The index is a good place to start if you are looking for a specific item of information.

ABBREVIATIONS

For sake of brevity, this manual makes generous use of abbreviations. Abbreviations are identified with their complete meaning at first use and frequently thereafter. If you need the meaning of an abbreviation, it may be found in the alphabetical listing of abbreviations found in Appendix E at the rear of the manual.

GLOSSARY

You may refer to the Glossary, also found in Appendix E, to find the meaning of unfamiliar terms.

NOMENCLATURE CROSS- REFERENCE LIST

Although you will most frequently use common names for items of SINCGARS equipment, if you need to know the official nomenclature for an item it may be found in the Nomenclature Cross-Reference List, in Appendix E.

POCKET GUIDES

Operator's and NCS Pocket Guides supplement this manual with information you can carry in your pocket. Use your pocket guide as a handy reference that prevents you from having to memorize task performance procedures.

CHAPTER 1

INTRODUCTION

IN THIS CHAPTER:

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1.1. PURPOSE

READY REFERENCE

Provide you with a ready reference when you need information regarding SINCGARS (Single Channel Ground & Airborne Radios) radios, their components, and associated equipment which is frequently employed in conjunction with SINCGARS radios. For example, this Manual contains official nomenclatures, common names, National Stock Numbers, part numbers, and unit authorizations.

EASE OF USE

Offer essential guidance regarding the employment and operation of SINCGARS that is easy to locate and readily understandable.

BACK-UP

Augment the operator and net control station (NCS) pocket guides with additional guidance and information as appropriate.

1.2. SCOPE

EQUIPMENT

This SINCGARS Operator's Manual cover capabilities and general specifications of SINCGARS Ground ICOM Radios using receiver-transmitter (RT) versions RT-1523, RT-1523A, RT-1523B, RT-1523C, RT-1523D, and RT-1523E. It covers both Manpack and Vehicular Radios, their principal components, Single Radio Mounts, Control Monitors, and remote control units (RCU). SINCGARS associated items of equipment addressed in this manual include the Automated Net Control Device (ANCD), Precision Lightweight GPS Receiver (PLGR), Frequency Hopping Multiplexer (FHMUX), Vehicular Intercommunications Set (VIC-1), and Secure Telephone Unit (STU) when used to transmit classified data from one location to another.

OPERATIONS	The Principles of Operation chapter covers how SINCGARS radios and associated equipment are employed to accomplish various communications requirements during unit mission operations. Some specific subjects addressed are single channel communications, frequency hopping nets, use of Julian Date and GPS Zulu time, net openings and late net entry methods, updating procedures, retransmission operations, use of antennas, remote control operations, and frequency management.
TASKS	Specific tasks covered in terms of sequential procedures are Operator Primary and Special, NCS Primary and Special, plus PLGR, FHMUX, and STU Transfer tasks. ANCD tasks are addressed as integral parts of Operator and NCS tasks.
MAINTENANCE	Operator level maintenance pertaining to SINCGARS radios is treated in the form of Preventive Maintenance Checks and Services (PMCS). Essential operator maintenance requirements for associated equipment is covered briefly and references are cited for each.
BATTERIES	Because of the critical Importance of batteries to the operation of SINCGARS radios and associated equipment, a Battery Requirements section provides general guidance regarding the number of hours of service that may be expected of various types of batteries under differing operational conditions.

1.3. GENERAL INFORMATION

1.3a. Maintenance Forms, Records And Reports

DA Pam 738-750	Reports of Maintenance and Unsatisfactory Equipment. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, as contained in Maintenance Management Update.
SF 364 (ROD)	Reporting of Item and Packaging Discrepancies. Fill out and forward SF 364 (Report of Discrepancy (ROD) as prescribed in AR 735-11-2/DLAR 4140.55/SECNAVINST 4355.18/AFR 400-54/MCO 4430.3J.
SF 361 (TDR)	Transportation Discrepancy Report (TDR) (SF 361). Fill out and forward Transportation Discrepancy Report (TDR) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610. 19D/DLAR 4500.15.