

TM 11-6625-622-40

TECHNICAL MANUAL

GENERAL SUPPORT MAINTENANCE MANUAL

**TEST HARNESS, RADIO SET
AN/URM-157 AND AN/URM-157A**

**HEADQUARTERS, DEPARTMENT OF THE ARMY
JULY 1973**

TECHNICAL MANUAL
No. 11-6625-622-40

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 2 July 1979

GENERAL SUPPORT MAINTENANCE MANUAL
TEST HARNESS, RADIO SET AN/URM-157 AND AN/URM-157A

| | Paragraph | Page |
|--|-----------|------|
| CHAPTER 1. INTRODUCTION | | |
| Section I. General | | |
| Scope ----- | 1-1 | 1-1 |
| Maintenance forms and records ----- | 1-2 | 1-1 |
| Destruction of equipment prevent enemy use ----- | 1-3 | 1-1 |
| Administrative storage ----- | 1-4 | 1-1 |
| Reporting of errors ----- | 1-5 | 1-1 |
| II. Description and data | | |
| Description ----- | 1-6 | 1-1 |
| Tabulated data ----- | 1-7 | 1-1 |
| CHAPTER 2. FUNCTIONING OF EQUIPMENT | | |
| General ----- | 2-1 | 2-1 |
| Ac distribution circuit ----- | 2-2 | 2-1 |
| Dc distribution circuit ----- | 2-8 | 2-1 |
| Rf load ----- | 2-4 | 2-1 |
| Resistive-capacitive load ----- | 2-5 | 2-1 |
| Audio circuits ----- | 2-6 | 2-2 |
| TUNE POWER switch ----- | 2-7 | 2-2 |
| Control, Radio Set C-3940/ARC-94 ----- | 2-8 | 2-2 |
| Directional wattmeter ----- | 2-9 | 2-3 |
| 3. GENERAL SUPPORT MAINTENANCE INSTRUCTIONS | | |
| Section I. General | | |
| General instructions ----- | 3-1 | 3-1 |
| Organization of troubleshooting procedures ----- | 3-2 | 3-1 |
| Tools and test equipment required ----- | 3-3 | 3-1 |
| II. Troubleshooting | | |
| Localizing troubles ----- | 3-4 | 3-1 |
| Troubleshooting directional wattmeter ----- | 3-6 | 9-6 |
| III. Maintenance of AN/URM-157 | | |
| General parts replacement techniques ----- | 3-6 | 3-8 |
| Replacement data ----- | 3-7 | 3-8 |
| IV. General support testing procedures | | |
| General ----- | 3-8 | 3-8 |
| Test equipment and materials required ----- | 3-9 | 3-8 |
| Modification work orders ----- | 3-10 | 3-8 |
| Physical tests and inspections ----- | 3-11 | 3-8 |
| Test Harness, Radio Set AN/URM-157 continuity and short-circuit tests ----- | 3-12 | 3-9 |
| Test Harness, Radio Set AN/URM-167A continuity and short-circuit tests ----- | 3-13 | 3-11 |
| Directional wattmeter calibration test ----- | 3-14 | 3-13 |
| Test data summary ----- | 3-15 | 3-13 |
| APPENDIX A. REFERENCES ----- | | A-1 |

LIST OF ILLUSTRATIONS

| Figure No. | Title | Page |
|---------------|--|---------|
| 2-1 | Dummy antenna, schematic diagram | 2-2 |
| 2-2 | Directional wattmeter schematic diagram | 2-4 |
| 3-1 | Test unit chassis, less dummy antenna, parts location | 3-4 |
| 3-2 | Test unit chassis, including dummy antenna, parts location | 3-6 |
| 3-3 | Directional wattmeter, parts locations and wiring diagram | 3-7 |
| 3-4 | Directional wattmeter test connection | 3-7 |
| 3-5 | Test Harness, Radio Set AN/URM-157 continuity and short-circuit test connections | 3-15 |
| 3-6 | Test Harness, Radio Set AN/URM-157A continuity and short-circuit test connections | 3-16 |
| 3-7 | Test Harness, Radio Set AN/URM-157 directional wattmeter, calibration test connection | 3-17 |
| 3-8 | Test Harness, RadioSetAN/URM-157A directional wattmeter, calibration test connection | 3-18 |
| 3-9 | Resistors, inductors, and capacitors color code marking for MIL-STD resistors, inductors and capacitors | Fold-In |
| 3-10 | Control, Radio Set C-8940/ARC-94, schematic diagram | Fold-In |
| 3-11 | Test Harness, Subassembly, TS-1949/URM-157, schematic diagram | Fold-In |
| 3-12 | Test Mat Harness Subassembly TS-1949A/URM-157, schematic diagram | Fold-In |
| 3-18 | Cables W1 through W13, power cables, and rf cable, schematic diagram | Fold-In |
| 3-14 | Control, RadioSetC-8940/ARC-94, wiring diagram | Fold-In |
| 3-15 | Test Harness Subassembly, TS-1949/URM-157, wiring diagram | Fold-In |
| 3-16 | Test Harness Subassembly, TS-1949A/URM-157, wiring diagram | Fold-In |

CHAPTER 1 INTRODUCTION

Section 1. GENERAL

1-1. Scope

a. This manual covers general support maintenance for Test Harness, Radio Set AN/URM-157 and AN/URM-157A. It includes instructions appropriate to general support maintenance for troubleshooting, testing, aligning, and replacing maintenance parts. It also lists tools, materials, and test equipment for general support maintenance.

b. The purpose, operation, and interoperation of the various circuits (electrical and electromechanical) in the AN/URM-157 and AN/URM-157A are explained in paragraphs 2-1 through 2-9. Familiarity with the equipment, how it works, and why it works the way it does are valuable tools in troubleshooting the equipment rapidly and effectively.

1-2. Maintenance Forms and Records

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM

38-750.

1-3. Destruction of Equipment to Prevent Enemy Use

Refer to TM 750-2442 for proper procedures for destruction of this equipment to prevent enemy use.

1-4. Administrative Storage

Refer to TM 740-90-1 for administrative storage requirements.

1-5. Reporting of Errors

The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded direct to Commander, US Army Electronics Command, ATTN: DRSEL-MA-Q, Fort Monmouth, NJ 07703.

Section II. DESCRIPTION AND DATA

1-6. Description

Refer to TM 11-6625-622-12 for description of the AN/URM-157 and AN/URM-157A.

1-7. Tabulated Data

Refer to TM 11-6625-622-12 for operator and organizational maintenance of the AN/URM-157 and AN/URM-157A.