

TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, DS, GS, AND DEPOT MAINTENANCE MANUAL

INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS

RADIO

TEST SET

AN/URM-101B

**This copy is a reprint which includes
current pages from Changes 1 and 2.**

HEADQUARTERS, DEPARTMENT OF THE ARMY

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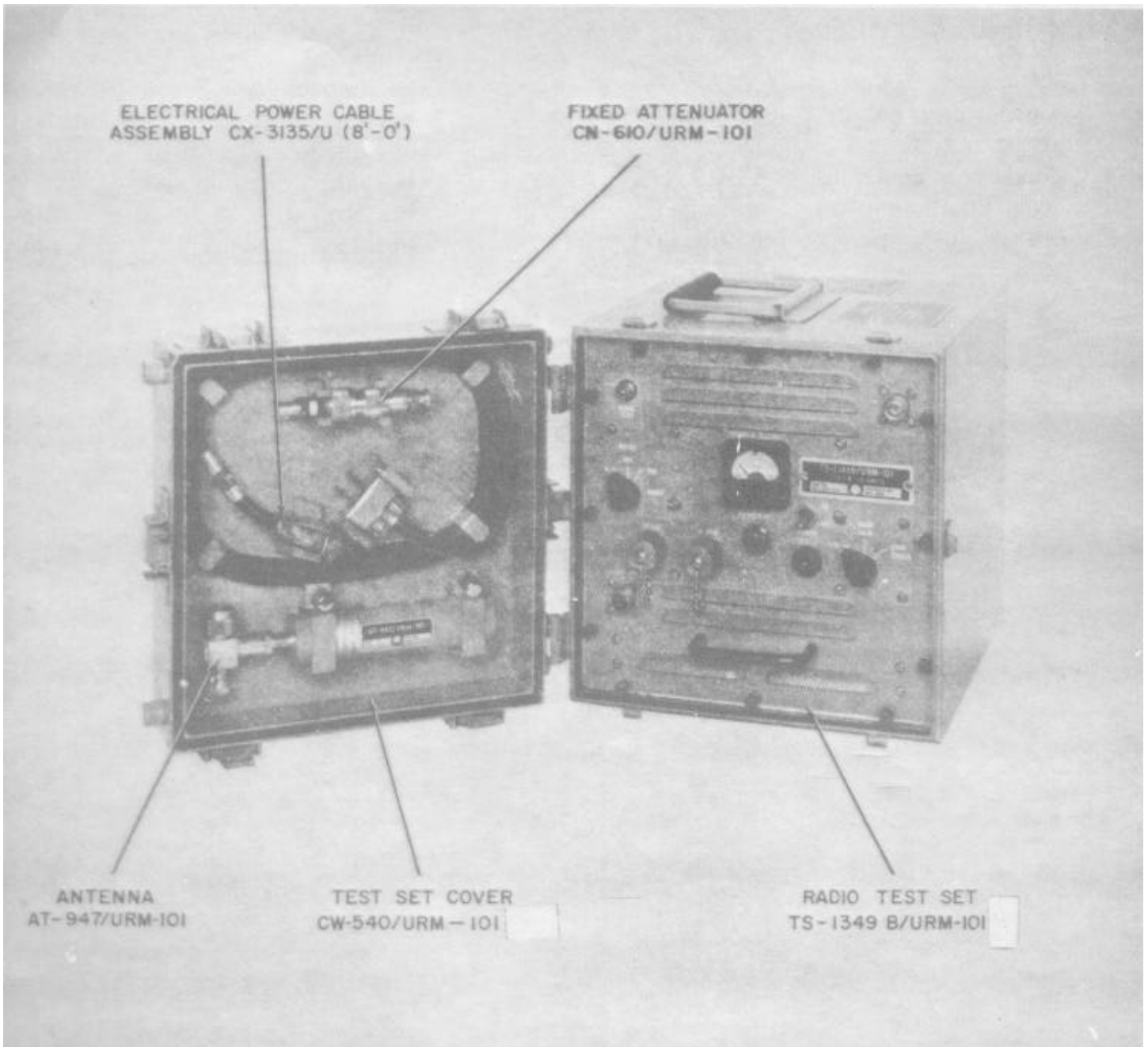


Figure 1-1. Radio Test Set AN/URM-101B.

SECTION A

PRELIMINARY

A-1. Indexes of Publications

a. *DA Pam 310-4.* Refer to DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

b. *DA Pam 310-7.* Refer to DA Pam 310-7 to determine whether there are Modification Work Orders (MWO's) pertaining to the equipment.

AR 700-58/NAVSUP PUB 378/AFR 71-4/MCO P4030.29, and DSAR 4145.8.

c. *Discrepancy in Shipment Report (DISREP) (SF 361).* Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33/AFM 75-18/MCO P4610.19A, and DSAR 4500.15.

A-2. Forms and Records

a. *Reports of Maintenance and Unsatisfactory Equipment.* Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750.

b. *Report of Packaging and Handling Deficiencies.* Fill out and forward DD Form 6 (Report of Packaging and Handling Deficiencies) as prescribed in

A-3. Reporting of Errors

Report 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: AMSEL-MA-AN, Fort Monmouth, NJ 07703.

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SECTION I

INTRODUCTION AND DESCRIPTION

1-1. GENERAL.

1-2. a. This manual covers the description, general principles of operation, the operation, and maintenance of Radio Test Set AN/URM-101B (see figure 1-1). A Repair Parts and Special Tools List is also included (Appendix D) to aid in identifying and replacing parts. Throughout this manual the common usage name "test set" refers to Radio Test Set AN/URM-101B. Radio Test Set AN/URM101B combines Radio Test Set AN/URM101, Radio Test Set AN/URM-101A, and modification of Radio Test Set TS-1349/URM-101 to TS-1349B/URM-101.

b. Appendix D is current as of 5 May 1972.

1-3. PROSE OF EQUIPMENT

1-4. The test set is a lightweight, easy to-use unit developed to provide preflight check of the normal operation of airborne TACAN Radio Set AN/ARN-21 or similar radio sets. The test set may be hand-carried to the vicinity of the aircraft equipped with the radio set and placed on the ground, or any other suitable support. During operation of the test set, visual and aural indications at the radio set will enable an observer to determine whether the radio set is operating properly. The test set simulates a TACAN ground beacon or air-to-air (A/A) interrogation and both receives from and transmits to the AN/ARN-21 radio set, either by radiation from the antenna or by direct connection with

coaxial cable. The test set will operate with up to four AN/ ARN-21 radio sets simultaneously.

1-5. DESCRIPTION OF EQUIPMENT.

1-6. PHYSICAL CHARACTERISTICS. The test set is a portable, self-contained unit enclosed in a metal case. (See figure 1-1.) Table 1-1 lists the equipment supplied as part of the test set. The cover portion houses the antenna, fixed attenuator, and electrical power cable assembly. The test set is held within the case by 12 captive knurled screws, located on the front panel. A handle on the test set is provided for carrying the equipment, and six latches to secure the cover of the case. An additional handle is provided on the front panel for easy removal of the test set chassis.

1-7. All operating controls, receptacles, protective and spare fuses are located on the front panel and are clearly identified as to function and value on the gray finish background. Also located on the front panel are the power output monitoring meter and indicator lamp.

1-8. The main assembly of the test set is divided into the following major subassemblies: the receiver-transmitter chassis, which contains a portion of the video section, the entire transmitting section, and the power supply; printed circuit board assembly A101, which comprises the multivibrator and countdown section; printed circuit board assembly A101, which