

# TM 11-5820-498-12

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

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**Operator's and Organizational Maintenance Manual**

**RADIO SETS AN/VRC-53 (NSN 5820-00-223-7467),  
AN/VRC-64 (NSN 5820-00-223-7475), AN/GRC-125  
(NSN 5820-00-223-7411), AND AN/GRC-160  
(NSN 5820-00-223-7473), AND AMPLIFIER-POWER  
SUPPLY GROUPS OA-3633/GRC AND OA-3633A/GRC  
(NSN 5820-00-973-3383)**

This copy is a reprint which includes current  
pages from Changes 1 through 10.

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**OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL  
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(NSN 5820-00-223-7467), AN/VRC-64  
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\* This manual supersedes TM 11-5820-498-10, 5 November 1962; C 1, 29 March 1963; and C 2, 3 July 1963; and TM 11-5820-4920, 5 November 1962; and C 1, 14 December 1964.



*Figure 1-1. Radio Set AN/VRC-53 or AN/VRC-64 installed in vehicle.*

1-0 Change 7

## Section I. GENERAL

### 1-1. Scope

a. This manual describes Radio Sets AN/VRC-53, AN/VRC-64, AN/GRC-125, and AN/GRC-160, and Amplifier-Power Supply Groups OA-3633/GRC and OA-3633A/GRC and covers their operation and organizational maintenance.

b. Publications covering operation, maintenance, and repair parts listing for components of, and equipment used with above equipment are listed in appendix A, and paragraph 1-4b).

c. Unless otherwise indicated in this manual:

(1) Receiver-transmitter refers to Receiver-Transmitters, Radio RT-505/PRC-25 and RT-841/PRC-77.

(2) Amplifier power supply refers to Amplifier-Power Supply Groups OA-3633/GRC and OA-3633A/GRC, and Amplifier-Power Supplies AM-2060/GRC and AM-2060A/GRC. OA-3633(\*)/GRC refers to OA-3633/GRC and OA-3633A/GRC; AM-2060(\*)/GRC refers to AM-2060/GRC and AM-2060A/GRC.

(3) Handset refers to Handsets H-138(\*)/U, H-189/GR, and H-250/U. ((\*) indicates H-138/U and H-138A/U.)

(4) Antenna refers to Antennas AT912/VRC and AS-1729/VRC.

(5) Vehicular radio sets refer to Radio Sets AN/VRC-53, AN/VRC-64, AN/GRC-125, and AN/GRC-160.

(6) Man-pack radio refers to the use of the receiver-transmitter of the AN/GRC-125 and AN/GRC-160 man-pack components (Handset, whip antenna, Harness, Electrical Equipment ST-138/PRC-25).

d. Refer to paragraph 1-9 a for differences between the OA-3633/GRC and OA-3633A/GRC and to paragraph 1-9c for differences between the AM-2060/GRC and AM-2060A/GRC.

### 1-2. Consolidated Index of Army Publications and Blank Forms

Refer to the latest issue of DA Pam 25-30 to determine whether there are new editions, changes or additional publications pertaining to the equipment.

### 1-3. Maintenance Forms, Records and Reports

a. *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.

b. *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

c. *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.

### 1-3.1 Reporting Errors and Recommending Improvements

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-ME-PS, Fort Monmouth, New Jersey 07703-5000.

### 1-3.2. Reporting Equipment Improvement Recommendations (EIR)

If your equipment needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Product Quality Deficiency Report). Mail it to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-PA-MA-D, Fort Monmouth, New Jersey 07703-5000. We'll send you a reply.

### 1-3.3. Administrative Storage

Administrative storage of the equipment will be handled as follows. The requirements apply whether the equipment is stored as part of the vehicle or stored without the vehicle.

a. Check and remove the battery from the receiver-transmitter (para 2-6a). Clean the battery box.

b. Before and after storage, perform the following:

(1) Inventory the equipment (app B).

(2) Clean the equipment.

(3) Perform operator's and organizational PMCS (table 4-1 and para 5-5). Correct all deficiencies. For uncorrected deficiencies, tag and date the deficiencies.

c. During storage, inventory the equipment.

d. Store the equipment in a dry and moisture-free area with safeguards against pilfering.

#### **1-3.4. Destruction of Army Electronics Materiel**

Destruction of Army electronics materiel to prevent enemy use shall be prescribed in TM 750-244-2.

#### **1-3.5. Hand Receipt Technical Manual**

A Hand Receipt Technical Manual, TM 11-5820-498-12-HR, is available. It contains preprinted DA Form 2062 (Hand Receipt/Annex No.) listing the components of each of the radio sets and also the components of the radio installation kits of wheeled vehicles and the components of the harnesses and accessory kits of tracked vehicles in which these radio sets are installed.

The Hand Receipt manual is published to aid property accountability and is available through: Commander, US Army Adjutant General Publications Center, ATTN: AGDL-OD, 1655 Woodson Road, St. Louis, Missouri 63114 or through The Adjutant General publications channels. The Hand Receipt publication is entitled: Hand Receipt Technical Manual Covering End Item/Components of End Item (COEI), Basic Issue Items (BII), and Additional Authorization List (AAL), Related to Radio Sets AN/VRC-53 (NSN 5820-00-223-7467), AN/VRC-64 (NSN 5820-00-223-7475), AN/GRC-125 (NSN 5820-00-223-7411), and AN/GRC-160 (NSN 5820-00-223-7473).

## **Section II. DESCRIPTION AND DATA**

### **1-4. Purpose and Use**

*a.* The radio sets provide short-range, two-way, frequency-modulated (fm) radiotelephone communication between vehicles and crew-served weapons (such as tanks, armored personnel carriers, etc.). The radio sets are compatible with other fm radio sets in 30.00- to 75.95 megacycle (mc) range (fig. 1-5).

*b.* Radio Sets AN/VRC-53 and AN/VRC-64 are vehicular radio sets (fig. 1-10). Radio Sets AN/GRC-125 and AN/GRC-160 have the components for vehicular (fig. 1-1) and man-pack operation (fig. 1-2). The following chart provides comments on the radio sets and some of their components: