D E P A R T M E N T O F T H E A R M Y T E C H N I C A L M A N U A L

OPERATOR AND ORGANIZATION MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS

RECEIVING SET,

RADIO

AN/FRR-79

(NSN 5820-00-937-2887)

This copy is a reprint which includes current pages from Changes 1 through 4. The title was changed by Change 4.

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Operator's and Organizational Maintenance Manual

RECEIVING SET, RADIO AN/FRR-79

(NSN 5820-00-937-2887)

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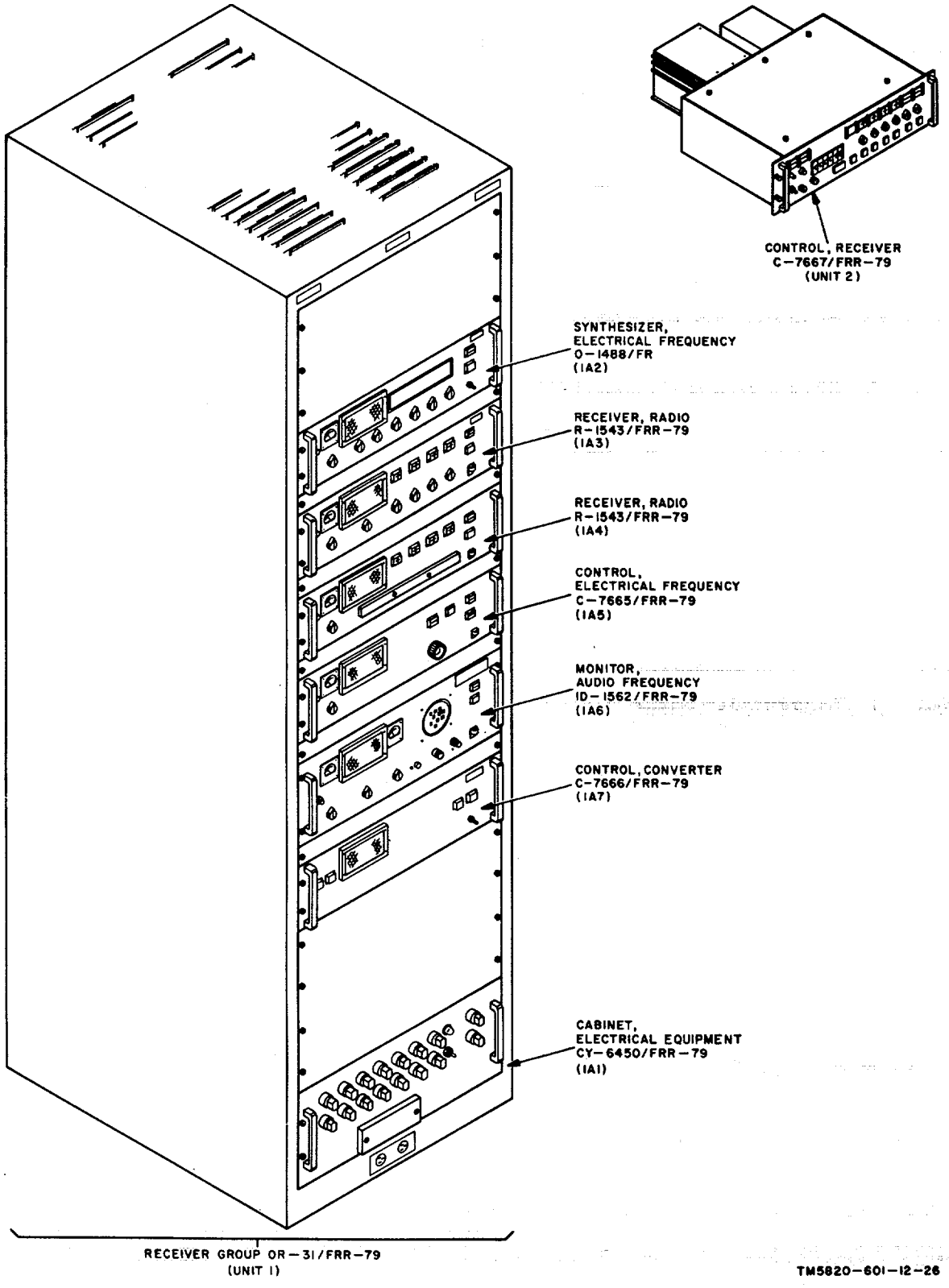

Figure 1-1. Receiving Set, Radio AN/FRR-79.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

This manual describes Receiving Set, Radio AN/FRR-79 (fig. 1-1), and covers its installation, operation, and operator and organizational maintenance for the equipment. It includes cleaning and inspection of the equipment and replacement of running spares available to operator and organizational maintenance personnel.

1-2. Indexes of Publications

a. DA Pam 310-4. Refer to the latest issure of 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 the latest issue of DA Pam 310-7 to determine if there are modification work orders (MWO's) 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 described by TM 38-750, The Army Maintenance Management System.

b. Report of Packaging and Handling Deficiencies. Fill out and forward DD Form 6 (Packaging Improvement Report) as prescribed in AR 700-58/NAVSUPINST 4030.29/AFR 71-13/MCO P4030.29A and DLAR 4145.8.

c. Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 351) as prescribed in AR 55-38/NAVSUPINST 4610.33B/AFR 75-18/MCO P4610..19C and 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), to Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-ME-MQ, Fort Monmouth, NJ 07703.

1-3.2. Reporting Equipment Improvement Recommendations (EIR)

If your AN/FRR-79 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. Tell us why a procedure is hard to perform. Put it on an SF 368 (Quality Deficiency Report). Mail it to Commander, US Army Communications and Electronics Materiel Readiness Command, AT-TN: DRSEL-ME-MQ, Fort Monmouth, NJ 07703. We'll send you a reply.

1-3.3 Administrative Storage

Before and after administrative storage (1 to 45days), perform the procedures in paragraph 6-2.

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use

a. Purpose. Receiving Set, Radio AN/FRR-79 (receiving set) is a self-contained, high frequency, remote or local controlled, independent sideband receiving system. It is intended for general purpose, fixed ground station operation. The receiving set is used in conjunction with other communications equipment (telephone, teletypewriter, facsimile, and data) normally provided at a communications or signal center, and receives transmissions in the frequency range from 2 to 29.9999 Megahertz (MHz) containing up to four separate intelligence channels, or up to 64 separate data channels. Space diversity operation, utilizing two antennas, is used.

b. Use (fig. 1-2). Receiving Set, Radio AN/FRR-79 is used as the link between a distant compatible transmitter and station communications equipment.

(1) Transmitting station. Four independent 3-kilohertz (KHz) wide audio channels containing voice or data signals are converted to a frequency-multiplexed, amplitude-modulated RF signal in the

frequency range from 2 to 29.9999 MHz. The modulated radio frequency (RF) signal is amplified and applied to a transmitting antenna. The antenna radiates the RF signal to the receiving station.

(2) Receiving station. A typical receiving station which uses Receiving Set, Radio AN/FRR-79 consists of Receiver Group OR-31/FRR-79, unit 1, being fed by two separate high frequency (HF) broadband rhombic antennas spaced a minimum of two wavelengths apart. Control, Receiver C-7667/FRR-79, unit 2, located at a remote site, is connected to the OR-31/FRR-79 through a full duplex control data circuit. The received RF signals are fed to the OR-31/FRR-79 from the station antennas, and simultaneously applied to Receiver, Radio R-