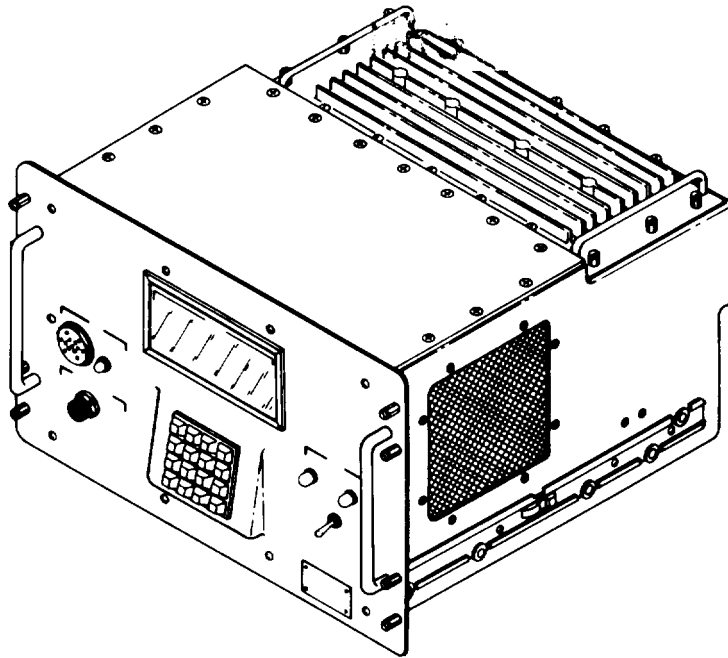


ARMY TM 11-7025-221-20
AIR FORCE T.O. 31S5-2G-252
MARINE CORPS TM-08467A-2012

ORGANIZATIONAL MAINTENANCE MANUAL



MULTIPLEXER, DIGITAL TD-1337(V)1/G

(NSN 7025-01-1 12-6311)

MULTIPLEXER, DIGITAL TD-1337(V)2/G

(NSN 7025-01-112-6310)

MULTIPLEXER, DIGITAL TD-1337(V)3/G

(NSN 7025-01-1 12-6312)

MULTIPLEXER, DIGITAL TD-1337(V)4/G

(NSN 7025-01-127-7020)

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DEPARTMENTS OF THE ARMY, THE AIR FORCE, AND
THE MARINE CORPS

NOVEMBER 1982

TECHNICAL MANUAL

DEPARTMENTS OF THE ARMY,
THE AIR FORCE, AND THE MARINE CORPS
Washington, DC, 1 November 1982

Organizational Maintenance Manual
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(NSN 7025-01-1 12-6311)
MULTIPLEXER, DIGITAL TD-1337(V)2/G
(NSN 7025-01-1 12-6310)
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(NSN 7025 -01-1 12-6312)
MULTIPLEXER, DIGITAL TD-1337(V)4/G
(NSN 7025-01-1 27-7020)

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, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in back of this manual direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703.

For Air Force, submit AFTO Form 22 (Technical Order System publication Improvement Report and Reply) in accordance with paragraph 6-5, Section VI, T.O. 00-5-1. Forward direct to prime ALC/MST.

Marine Corps Units should submit NAVMC10772.

In either case, a reply will be furnished direct to you.

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HOW TO USE THIS MANUAL

You can maintain Digital Multiplexer TD-1337(V)/G more efficiently if you become familiar with the contents of this manual.

The table of contents, preceding this page, lists 011 the sections, chapters, and appendixes in the manual. There is an alphabetical index at the back of the manual. This index lists all the types of information in the manual in alphabetical order. For example, look under "P" if you want to locate which pages in the manual contain "Plug-in card replacement instructions".

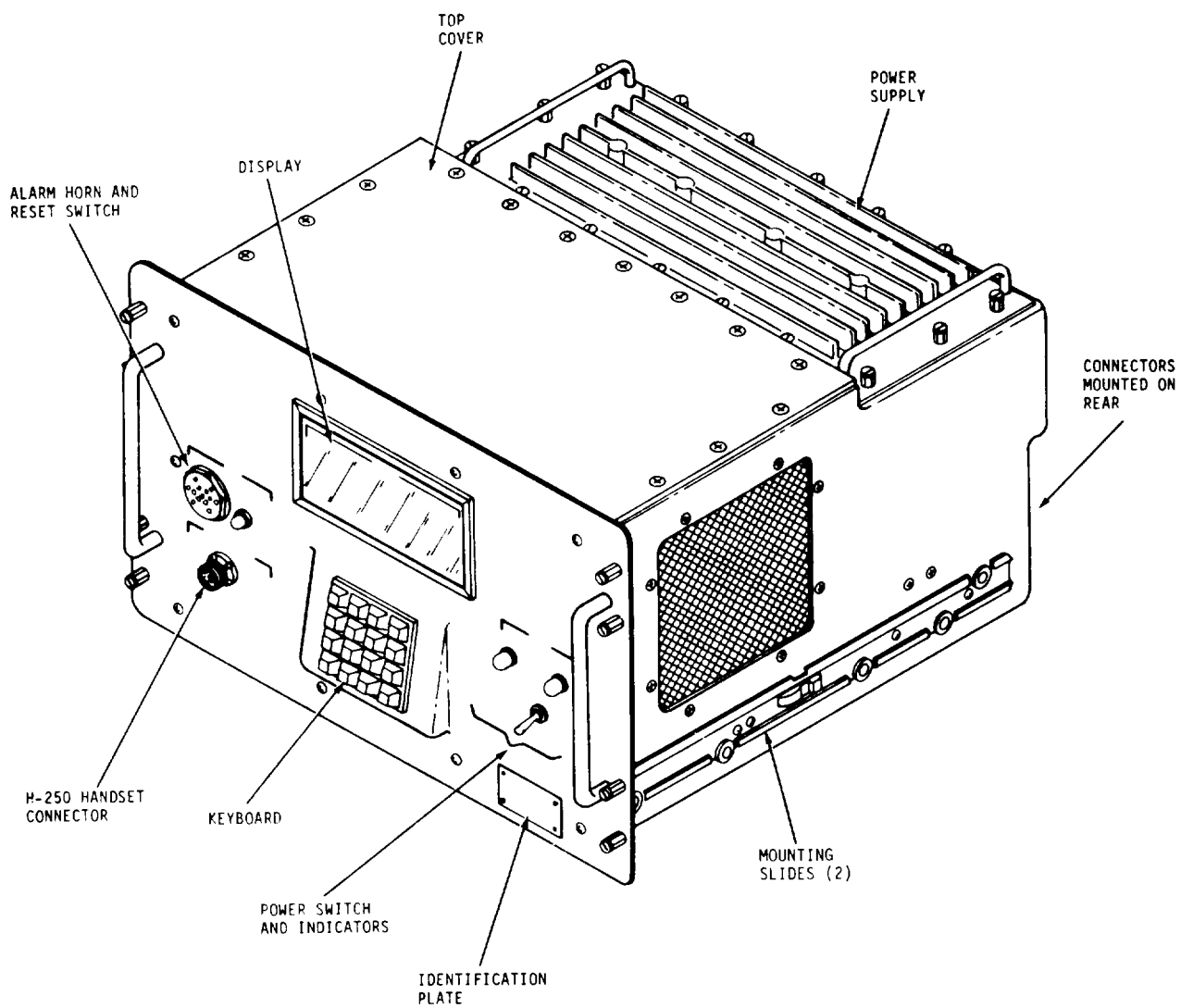
There is a quick-locate index on the front cover that shows the most used information in the manual. Each index entry shows the first page number of a section or chapter. In turn, there is an index of all the paragraphs in the section or chapter on the page listed. This type of indexing helps you to quickly locate troubleshooting or maintenance information, or other types of information described below.

- *Equipment Description* (page 1-5). Descriptions of the TD-1337(V)/G physical and electrical characteristics are in this section. Identification plates and stenciling on the TD-1337(V)/G are also described in this section.
- *Principles of Operation* (page 1-15). This section contains card-level block diagram discussions for the multiplexer and demultiplexer sections of the TD-1337(V)/G. There are separate discussions for the sections in V1/V2 models and the sections in V3/V4 models.
- *Service Upon Receipt* (page 2-1). Normally, the TD-1337(V)/G is installed as part of a shelter configuration. If you have to plan a TD-1337(V)/G installation, the physical and electrical interface requirements are described in this section. Unpacking instructions for a TD-1337(V)/G are in this section.

NOTE

There are no preventive maintenance checks and services authorized for organizational maintenance.

- *Troubleshooting* (page 2-1 1), This section contains troubleshooting procedures that will isolate a problem to an assembly or item that you are authorized to replace. The troubleshooting procedures are presented on easy-to-follow flowcharts that you can use without having a detailed understanding of the electrical circuits in the TD-1337(V)/G. You always start with the flowchart in paragraph 2-9. This flowchart will isolate the problem or direct you to use one of the other troubleshooting procedures in the section.
- *Maintenance* (page 2-3 1). Replacement procedures for the assemblies and indicators that you are authorized to replace are in this section. You will use one or more of these instructions when you are directed by troubleshooting. Installation and removal procedures for the front panel and the complete TD-1337(V)/G are also in this section.
- *Storage and Shipment* (page 2-52), Requirements for preparing red CESE assembly, power supply, plug-in cards, and complete TD-1337(V)/G for storage and shipment are in this section.
- *Maintenance Allocation Chart (MAC)* (page B-1). The MAC lists and explains the maintenance and repair functions authorized for each level of maintenance. In addition to the maintenance functions, a list of the tools and test equipment required for the functions are also in this appendix.



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Multiplexer, Digital TD-1337(V)/G.

CHAPTER 1

INTRODUCTION

Section 1. GENERAL INFORMATION

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1-1. scope.

a. *Type of Manual.* This manual contains organizational maintenance instructions for the Digital Multiplexer TD-1337(V)/G family.

b. *Model Numbers and Equipment Name.* Digital Multiplexer TD-1337(V)/G (hereafter referred to as the TD-1337(V)/G) is the military nomenclature assigned to a family of digital multiplexer. There are four models in the TD-1337(V)/G family. Each model is assigned its own military nomenclature as listed below.

Digital Multiplexer TD-1337(V)1/G

Digital Multiplexer TD-1337(V)2/G

Digital Multiplexer TD-1337(V)3/G

Digital Multiplexer TD-1337(V)4/G

This manual covers all four models. Differences between models are denoted throughout this manual by notes, exceptions, or other appropriate means. When the term TD-1337(V)/G is used in this manual, it means all four models,

c. *Purpose of Equipment.* The TD-1337(V)/G is a synchronous time division multiplexer-demultiplexer used in a satellite earth terminal. The TD-1337(V)/G provides a full duplex capability in interfacing the modem in the terminal radio equipment with ground equipments. Inputs from synchronous data users are multiplexed (combined) into a single output supergroup (SG) and supplied to the modem in the terminal radio equipment for transmission. Similarly, received SG(s) are demultiplexed (recombined) into their composite parts and supplied to the respective data users.

1-2. Repair Parts, Special Tools, TMDE, and Support Equipment.

a. *Common Tools and Equipment.* For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

b. *Special Tools, TMDE, and Support Equipment.* No special tools, TMDE, or support equipment are required to carry out the maintenance instructions in this manual.

c. *Repair Parts.* Repair parts are listed and illustrated in the repair parts and special tools list (TM 11-7025-221-20P) covering organizational maintenance for this 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 TM 38-750, The Army Maintenance Management System (Army). Air Force personnel will use AFR 66-1 for maintenance reporting and TO-00-35D54 for unsatisfactory equipment reporting. Marine Corps personnel will use forms and procedures prescribed by TM 4700-15-1/D.
- b. Report of Packaging and Handling Deficiencies Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.55 /NAVMATINST 4355.73/AFR 400-54/MCO 4430.3E.
- c. Discrepancy in Shipment Report (DISREP) (SF 36 I). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33B/AFR 75-18/MCO P4610.19C/DLAR 4500.15.

1-4. Destruction of Army Electronics Materiel

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

1-5. Preparation for Storage or Shipment.

Special instructions for preparing the TD-1337(V)/G for storage or shipment are in paragraph 2-26. Storage requirements for the TD-1337(V)/G, including administrative storage, are in paragraph 2-27. These paragraphs also contain special instructions for packaging and storing spare parts used by organizational maintenance.

1-6. Official Nomenclature, Names, and Designations.

Shortened nomenclature (common names) are used in this manual to make procedures easier for you to read.

- a. Nomenclature Cross-Reference fist. A cross-reference between the common name and the official nomenclature for each TD-1337(V)/G model is listed below.

Nomenclature Cross-Reference List	
Common name	Official nomenclature
TD-1337(V)1/G or V1	Multiplexer, Digital TD-1337(V)1/G
TD-1337(V)2/G or V2	Multiplexer, Digital TD-1337(V)2/G
TD-1337(V)3/G or V3	Multiplexer, Digital TD-1337(V)3/G
TD-1337(V)4/G or V4	Multiplexer, Digital TD-1337(V)4/G

- b. Reference Designations. Each major component of the TD-1337(V)/G is assigned a reference designation. Reference designations are combinations of letters and numbers used to identify these major components. The following chart lists the reference designations applicable to the equipment covered in this manual and indicates, by a X, in which models each is used. The chart also lists the part No., item name, and common name for each major component. The common names are the abbreviated names used throughout this manual.