

TECHNICAL MANUAL

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL

MODEM, DIGITAL DATA MD-921/G

(NSN 5820-00-155-8581)

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pages from Change 1



Operator's and Organizational Maintenance Manual

 MODEM, DIGITAL DATA MD-921/G
 (NSN 5820-00-155-8581)

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: AMSEL-ME-MP, Fort Monmouth, New Jersey 07703-5007.

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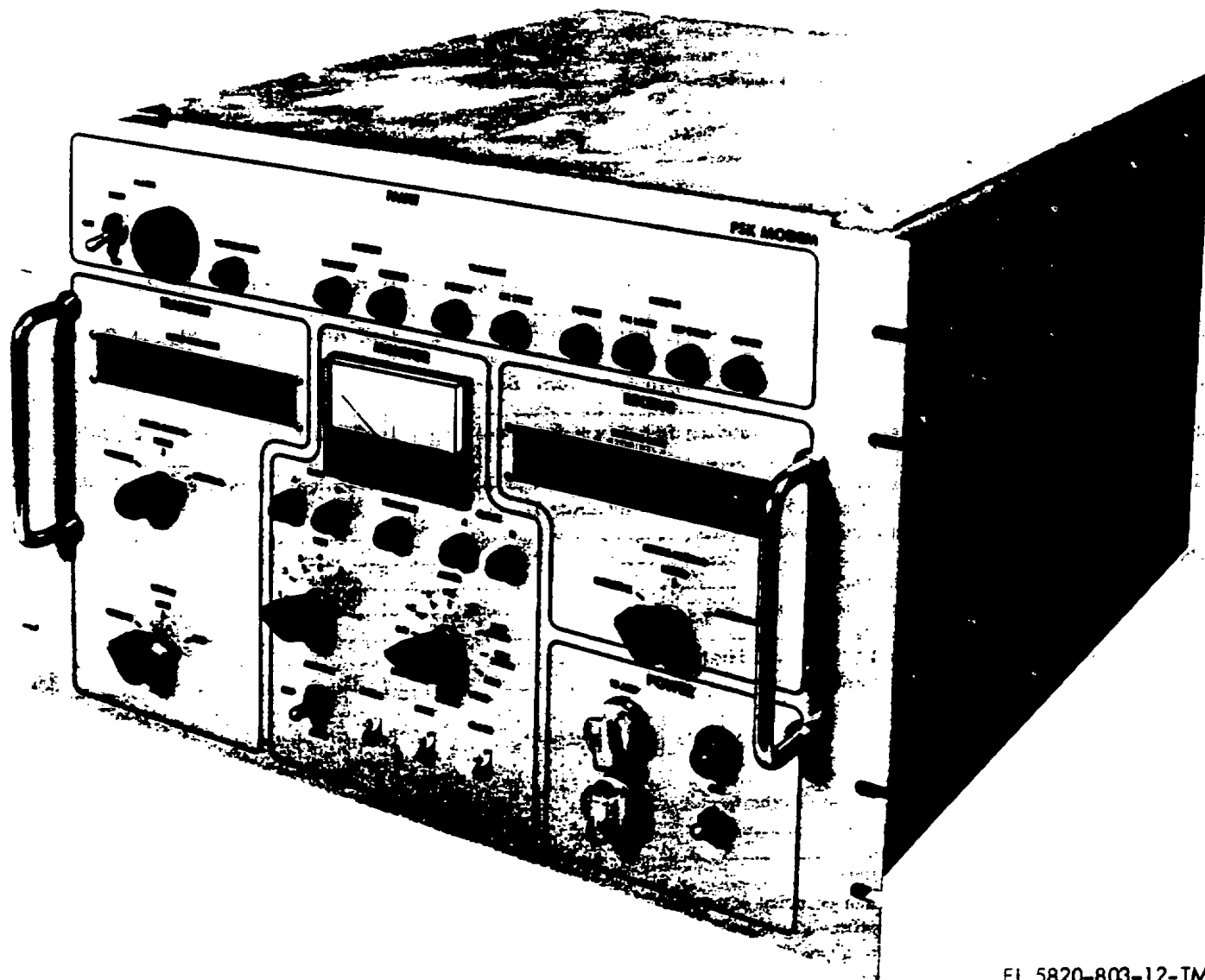
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Figure 1-1. Modem, Digital Data MD-921/G (PSK modem).

CHAPTER 1 INTRODUCTION

Section I. GENERAL

1-1. Scope.

This manual describes Modem, Digital Data MD-921/G, hereinafter referred to as the PSK modem (fig. 1-1). It includes installation, operation, maintenance, and troubleshooting for operator/ organizational maintenance. Appendix A contains references and appendix C contains the maintenance allocation chart.

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

Refer to the latest issue of DA Pam 310-1 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 the Maintenance Management Update. Air Force personnel will use AFR 66-1 for maintenance reporting and TO-00-35D54 for unsatisfactory equipment reporting. Navy personnel will report maintenance performed utilizing the Maintenance Data Collection Subsystem a (MDCS) IAW OPNAVINST 4790.2 Vol 3 and unsatisfactory material/conditions (UR submissions) IAW OPNAVINST 4790.2 Vol 2, chapter 17. s

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 4355.73A AFR 400-54/ MCO 4430.3F.

c. Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment

Report (DISREP) (SF 361) as prescribed in AR 5538/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

1-4. Reporting Equipment Improvement Recommendation (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. 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-Electronics Command and Fort Monmouth, ATTN: AMSEL-ME-MP, Fort Monmouth, New Jersey 07703-5007. We'll send you a reply.

1-5. Administrative Storage

a. Administrative storage of equipment issued to and used by Army activities will have preventive maintenance performed in accordance with the PMCS charts before storing. When removing the equipment from administrative storage, the PMCS should be performed to assure operational readiness. Disassembly and repacking equipment for shipment or limited storage is covered in SB 38-100.

b. COMSEC equipment must be removed before storage, and turned in to the COMSEC account custodian.

1-5.1. Destruction of Army Electronics Materiel

Destruction of Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2. COMSEC equipment and keying information have first priority.

Section II. DESCRIPTION AND DATA

1-6. Purpose and Use

The PSK modem provides a means of interfacing digital data over the Defense Satellite Communications System (DSCS). The modem converts between the baseband data signals required by a digital user and the modulated 70 MHz signals required by a satellite ground terminal (fig. 1-2). The modem has independent transmit and receive sections which provide the user with the capability of full duplex digital communication. The modem will process data at any rate between 19.200 kb/s and 9.9999 Mb/s. Self-test, link test, and on-line fault monitoring functions are built into the modem. Internal or external error-correcting coders/decoders can be employed if required to improve the quality of the communications.

1-7. Description

The PSK modem (figs. 1-3 and 1-4) is designed for rack mounting in a standard 19-inch equipment rack. It is 12 1/4 inches high and 22 inches deep. Operating controls are located on the front panel and under the top cover behind the front panel. Indicators and test jacks are also located on the front panel. Two fans and the external interface connectors are located on the rear of the chassis. The chassis contains two card file assemblies, each of which has two files capable of accepting 24 cards. One assembly is accessible through the top cover and the other through the bottom cover. The top assembly, A2A1, contains 17 printed circuit cards in the A1 file, 19 cards in the A2 file. The bottom assembly, A2A2, contains 20 cards in the A1 file and 9 cards in the A2 file. Located on