

TM 11-6625-1832-12

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL

TEST SET GROUP, PROCESSOR RADAR, OQ-61 APS-94D



HEADQUARTERS, DEPARTMENT OF THE ARMY

NOVEMBER 1970

TECHNICAL MANUAL }
No. 11-6625-1832-12 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 25 November 1970

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL
FOR
TEST SET GROUP, PROCESSOR, RADAR OQ-61/APS-94D

	Paragraph	Page
CHAPTER 1. INTRODUCTION		
Section I. General		
S c o p e	1-1	1-1
Index of publications	1-2	1-1
Forms and records	1-3	1-1
II. Description and data	1-4	1-1
Purpose and use		
Technical characteristics, Interface Test, Processor, Radar TS-2973/APS-94D	1-6	1-8
Technical characteristics, Interface Test, Electronic Circuit Plug-in Unit TS-2972/APS-94D	1-6	1-11
Technical characteristics, Interface Test, Power Supply TS-2971/APS-94D	1-7	1-11
Technical characteristics, Interface Test Subassembly MX-8679/APS-94D	1-8	1-11
Components of Test Set Group, Processor, Radar OQ-61/APS-94D	1-9	1-11
Description of Interface Test, Processor, Radar TS-2973/APS-94D	1-10	1-11
Description of Interface Test, Electronic Circuit Plug-in Unit TS-2972/AP-94D	1-11	1-15
Description of Interface Test, Power Supply TS-2971/APS-94D	1-12	1-16
Description of Interface Test, Synchronizer, Radar TS-2970/APS-94D	1-13	1-17
Interface Test Subassembly MS-8680/APS-94D	1-14	1-18
Common names	1-15	1-18
CHAPTER 2. INSTALLATION AND OPERATING INSTRUCTIONS		
Section I. Service upon receipt of equipment		
Unpacking	2-1	2-1
Checking unpacked equipment	2-2	2-1
Installation of Interface Test, Processor, Radar TS-2973/APS-94D	2-3	2-2
Installation of Interface Test, Electronic Circuit Plug-in Unit TS-2972/APS-94D	2-4	2-2
Installation of Interface Test, Power Supply TS-2971/APS-94D	2-5	2-2
Installation of Interface Test Subassembly MX-8679/APS-94D	2-6	2-3
II. Operator's controls, indicators, and connectors		
Controls, indicators, and connectors for Interface Test, Processor, Radar TS-2973/APS-94D	2-7	2-7
Controls, indicators, and connectors for Interface Test, Electronic Circuit Plug-in Unit TS-2972/APS-94D	2-8	2-9
Controls, indicators, and connectors for Interface, Test Power Supply TS-2971/APS-94D	2-9	2-9
Controls, indicators, and connectors- for Interface Test Subassembly MX-8679/APS-94D	2-10	2-9
III. O p e r a t i o n		
Component test set operation	2-11	2-17
Filter test set operation	2-12	2-17
Power supply test set operation	2-13	2-17
Synchronizer test set operation	2-14	2-19
CHAPTER 3. OPERATOR'S MAINTENANCE		
Section I. Scope, tools, and equipment scope of maintenance	3-1	3-1
Tools, test equipment, and materials required for maintenance	3-2	3-1
Special tools and devices	3-3	3-1
II. Preventive maintenance		
Preventive maintenance checks and service periods	3-4	3-1
Cleaning	3-6	3-2
Removal and replacement of lamps	3-6	3-2
III. Operator's troubleshooting and repair		
General troubleshooting information	3-7	3-3
Troubleshooting charts	3-8	3-3

	Paragraph	Page
CHAPTER 4. ORGANIZATIONAL MAINTENANCE		
Section I. General		
Scope	4-1	4-1
Tools, test equipment, and materials required	4-2	4-1
II. Preventive maintenance		
Organizational preventive maintenance checks and service periods and charts	4-3	4-1
Cable continuity checks	4-4	4-1
Touchup painting	4-5	4-2
Adjustment of case latch tension	4-6	4-2
Organizational performance check	4-7	4-2
III. Organizational troubleshooting		
General troubleshooting information	4-8	4-3
Organizational troubleshooting charts	4-9	4-3
CHAPTER 5. SHIPMENT, LIMITED STORAGE AND DEMOLITION TO PREVENT ENEMY USE		
Section I. Shipment		
Disassembly of equipment	5-1	5-1
Repackaging the equipment	5-2	5-1
II. Demolition to prevent enemy use		
Authority for demolition	5-3	5-1
Methods of destruction	5-1	5-1
APPENDIX A. REFERENCES		A-1
B. MAINTENANCE ALLOCATION		B-1

LIST OF ILLUSTRATIONS

Figure No.	Title	Page
1-1(1).	Interface Test, Processor, Radar TS-2973/APS-94D	1-2
1-1(2).	Interface Test, Processor Radar TS-2973/APS-94D, minor components	1-4
1-2(1).	Interface Test, Electronic Plug-in Unit TS-2972/APS-94D	1-6
1-2(2).	Interface Test Electronic Plug-in Unit TS-2972/APS-94D, minor components	1-7
1-3.	Interface Test, Power Supply TS-2971/APS-94D	1-8
1-4(1).	Interface Test Subassembly MX-8679/APS-94D	1-9
1-4(2).	Interface Test Subassembly MX-8679/APS-94D, minor components	1-10
1-5.	Interface, Test Subassembly MX-8680/APS-94D	1-12
1-6.	Vacuum Soldering Equipment	1-16
2-1.	Packaging of typical unit of Test Set Group, Processor, Radar OQ-61/APS-94D	2-1
2-2.	Interface Test, Processor, Radar TS-2973/APS-94D, Controls, Indicators, and Connectors	2-3
2-3.	Interface Test, Electronic Circuit Plug-in Unit TS-2972/APS-94D, Controls, Indicators, and Connectors	2-4
2-4.	Interface Test, Power Supply TS-2971/APS-94D, Controls, Indicators, and Connectors on Lower Panel	2-5
2-5.	Interface Test, Power Supply TS-2971/APS-94D, Connectors on Upper Panel	2-6
2-6.	Interface Test Assembly MX-8679/APS-94D, Controls, Indicators, and Connectors	2-7
2-7.	Front Panel of Adapter Test MX-8615/APS-94D and MX-8629/APS-94D, Designated 4A1 and 4A3, Respectively	2-13
2-8.	Front Panel of Adapter, Test MX-1816/APS-94D, Designated 4A2	2-13
2-9.	Front Panel of Adapter, Test MX-8617/APS-94D and MX-8625/APS-94D, Designated 4A4 and 4A12, Respectively	2-13
2-10.	Front Panel of Adapter, Test MX-8618/APS-94D, Designated 4A5	2-13
2-11.	Front Panel of Adapter, Test MX-8619/APS-94D and MX-8627/APS-94D, Designated 4A6 and 4A14, Respectively	2-14
2-12.	Front Panel of Adapter, Test MX-8620/APS-94D, Designated A47	2-14
2-13.	Front Panel of Adapter, Test MX-8621/APS-94D, Designated 4A8	2-14
2-14.	Front Panel of Adapter, Test MX-8622/APS-94D, Designated 4A9	2-14
2-15.	Front Panel of Adapter, Test MX-8623/APS-94D, Designated 4A10	2-16
2-16.	Front Panel of Adapter, Test MX-8624/APS-94D, Designated 4A11	2-15
2-17.	Front Panel of Adapter, Test MX-8626/APS-94D, Designated 4A13	2-16
2-18.	Front Panel of Adapter, Test MX-8628/APS-94D, Designated 4A15	2-15
2-19.	Test Setup for Interface Test, Processor, Radar TS-2973/APS-94D	2-18
2-20.	Test Setup for Interface Test, Power Supply TS-2971/APS-94D	2-19

LIST OF TABLES

Table No.	Title	Page
1-1	Components of Test Set Group, Processor, Radar OQ-61/APS-94D	1-3
1-2.	Test Adapters Supplied With Interface Test, Synchronizer, Radar TS-2970/APS-94D	1-5
1-3.	Weights and Dimensions of Major Components	1-14
1-4.	Cables for Interface Test, Processor, Radar TS-2973/APS-94D	1-14
1-5.	Test Adapters Kept With Interface Test, Processor, Radar TS-2973/APS-94D	1-15
1-6.	Cables for Interface Test, Power Supply TS-2971/APS-94D	1-17
1-7.	Common Names	1-18
2-1.	Packaging Data	2-2
2-2.	Controls, Indicators, and Connectors for Interface Test, Processor, Radar TS-2973/APS-94D	2-8
2-3.	Controls, Indicators, and Connectors for Interface Test, Electronic Circuit Plug-in Unit TS-2972/ APS-94D	2-10
2-4.	Controls, Indicators, and Connectors for Interface Test, Power Supply TS-2971/APS-94D	2-11
2-5.	Controls, Indicators, and Connectors for Interface Test Subassembly MX-8679/APS-94D	2-12
2-6.	Controls, Indicators, and Connectors for Test Adapters	2-16
5-1.	Materials for Fabrication of Test Set Shipping Box	5-1
5-2.	Materials for Fabrication of Adapter Storage Case Shipping Box	5-1

CHAPTER 1 INTRODUCTION

Section I. GENERAL

1-1. Scope

a. General. This manual describes Test Set Group, Processor, Radar OQ-61/APS-94D and provides instructions for installation, operation, maintenance, and demolition. Also included are instructions for cleaning and inspection of the equipment and replacement of parts available to the operator and organizational repairman.

b. Maintenance Allocation Chart. The Maintenance Allocation Chart (MAC) appears in appendix B.

1-2. Index of Publications

a. DA PAM 310-4. Refer to the latest issue 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 DA PAM 310-7 to determine whether there are modification work orders (MWO's) pertaining to the equipment.

1-3. 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 (Packaging

Improvement Report) as prescribed in AR 700-58/NAVSUPINST 4030.29/AFR 71-13/MCO P4030.29A, 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 4610.33A/AFR 75-18/MCO P4610.19B and DSAR 4500.15.

1-3.1. Reporting of Errors

The reporting 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: DRSEL-MA-Q, Fort Monmouth, NJ 07703

1-3.2. Reporting Equipment Improvement Recommendations (EIR)

EIR's will be prepared using DA Form 2407 (Maintenance Request). Instructions for preparing EIR's are provided in TM 38-750, The Army Maintenance Management System. EIR's should be mailed directly to Commander, US Army Electronics Command, ATTN: DRSEL-MA-Q, Fort Monmouth, NJ 07703. A reply will be furnished directly to you.

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use

The Test Set Group, Processor, Radar OQ-61/APS-94D is comprised of four separate test sets housed in five combination cases that are identified in table 1-1. The test equipment listed in table 1-1 is for use in testing and maintenance of Processor, Radar Signal CM-374/APS-94D, a part of Radar Surveillance Set AN/APS-94D. Detailed procedures for the use of the test equipment are included in technical manuals TM 11-5895-578-34 and TM 11-5895-578-50. (When published)

a. Interface Test, Processor, Radar TS-2973/

APS-94D. This test set (fig. 1-1) enables direct and general support maintenance personnel to isolate faults to the subassembly (module) level, and to troubleshoot faults in the wiring harness or miscellaneous chassis-mounted components in a defective Processor, Radar Signal CM-374/APS-94D. The test set provides simulated receiver video and all other input signals and control voltages required to operate the unit under test. Provision is made to cycle the built-in test equipment (BITE) circuits and to monitor the interlock circuits of the unit under test.

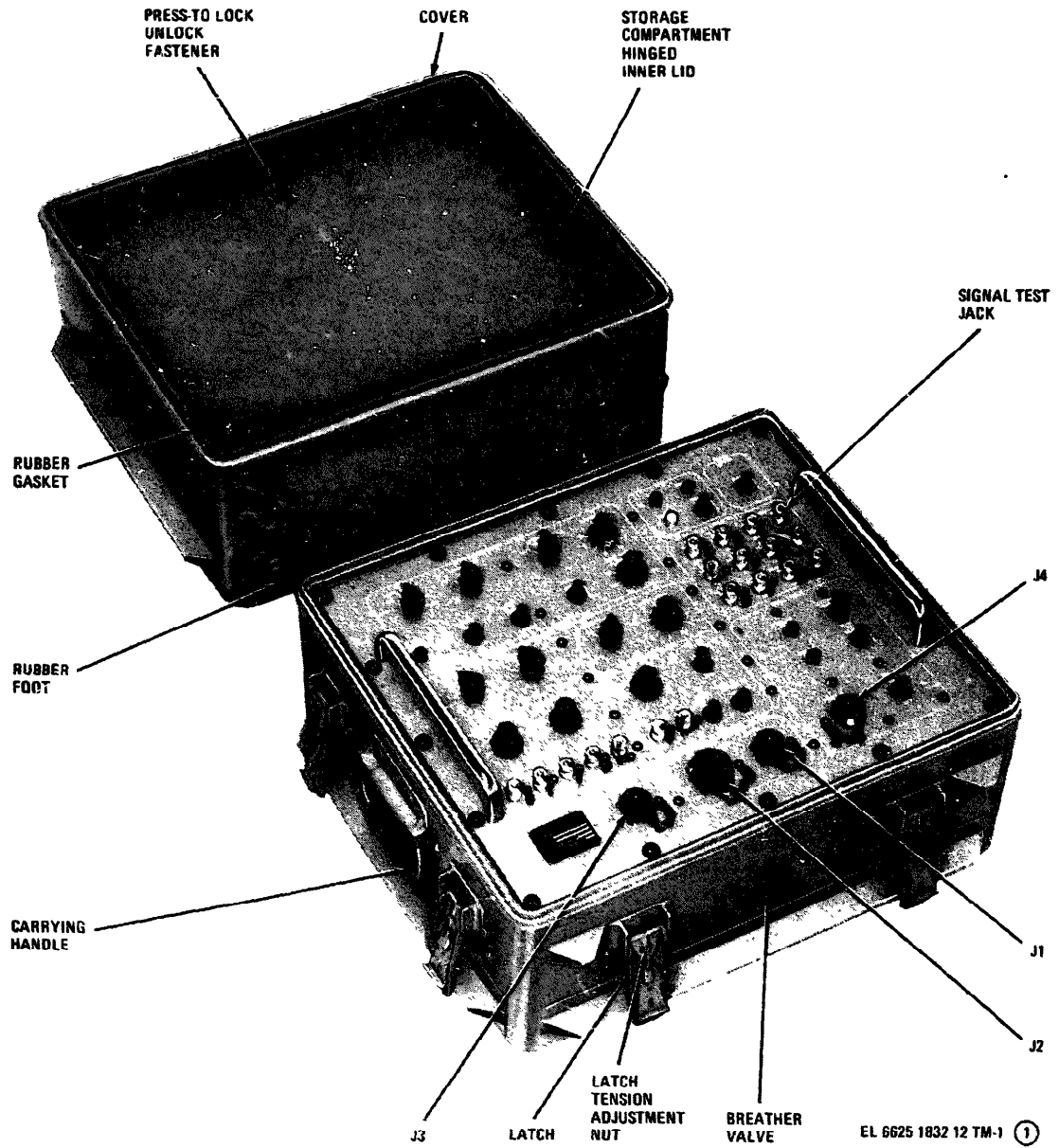


Figure 1-1(1). Interface Test, Processor Radar TS-2973/APS-94D