

TM 11-6625-1795-45

TECHNICAL MANUAL

GENERAL SUPPORT AND DEPOT MAINTENANCE MANUAL

**TEST SET,
RADAR ALTIMETER MODULE
AN/APM-322**

**HEADQUARTERS, DEPARTMENT OF THE ARMY
DECEMBER 1971**

TECHNICAL MANUAL }
 No. 11-6625-1795-45 }

HEADQUARTERS
 DEPARTMENT OF THE ARMY
 WASHINGTON, DC, 7 December 1971

General Support and Depot Maintenance Manual

TEST SET RADAR, ALTIMETER MODULE AN/APM-322

	Paragraph	Page
CHAPTER 1. INTRODUCTION		
Scope	1-1	1-1
Indexes of publication	1-2	1-1
Reporting of equipment publication improvements	1-3	1-1
2. PRINCIPLES OF OPERATION		
Section I. Block diagram analysis		
General	2-1	2-1
Test Set Radar Altimeter Module TS-2932 APM-322	2-2	2-1
Module test set operating modes	2-3	2-1
II. Circuit analysis		
General	2-4	2-4
Power distribution for module tests	2-5	2-5
Power distribution for power supply module tests	2-6	2-6
CHAPTER 3. GENERAL SUPPORT MAINTENANCE		
Section I. General		
Scope of general support maintenance	3-1	3-1
Test equipment, tools, and materials required	3-2	3-1
II. Troubleshooting		
General	3-3	3-1
Voltage measurements	3-4	3-1
Resistance measurements	3-5	3-4
Continuity tests	3-6	3-5
Trouble analysis	3-7	3-5
III. Adjustments and alignment		
Power supply voltage adjustment	3-8	3-6
IV. Repair		
General	3-9	3-6
Solder technique	3-10	3-7
V. Removal and replacement		
General	3-11	3-7
Removing module test set panel assembly 2A1	3-12	3-7
Replacement	3-13	3-7
VI. Assembly and disassembly		
General	3-14	3-10
Testing and replacing i-f amplifier assembly 2A1A3	3-15	3-12
Testing and replacing parts of power supply assembly 2-A1A2	3-16	3-15
VII. Testing procedures		
General	3-17	3-18
Special requirements	3-18	3-18
Physical tests and inspections	3-19	3-18
Functional tests	3-20	3-19
Cable assemblies and card assembly extender	3-21	3-19
CHAPTER 4. DEPOT MAINTENANCE		
Section I. Overhaul instructions		
Scope of depot maintenance	4-1	4-1
Tools, test equipment, and materials required	4-2	4-1
Troubleshooting	4-3	4-1
Removal	4-4	4-1
Disassembly	4-5	4-2

	Paragraph	Page
Repair	4-6	4-3
I-F amplifier assembly repair	4-7	4-3
Power supply assembly repair	4-8	4-5
Reassembly	4-9	4-14
Replacement	4-10	4-14
Adjustments and alignment	4-11	4-14
Bench checkout	4-12	4-14
II. Overhaul standards		
Applicability of depot overhaul standards	4-13	4-14
Applicable references	4 - 1 4	4-14
Test facilities required	4 - 1 6	4-16
Test procedures	4 - 1 6	4-15
APPENDIX A. REFERENCES		A-1

LIST OF ILLUSTRATIONS

Number	TITLE	Page
2 - 1	Test Set, Radar Altimeter Module AN/APM-322 operating modes-block diagrams	2-2
2-2	Test Set, Radar Altimeter Module AN/APM-322 operating modes-block diagrams	2-3
2-3	Power supply assembly 2A1A2-block diagram	2-5
2-4	Power distribution—functional schematic diagram	2-6
2-5	Power supply module te functional schematic diagram	2-7
3-1	Test Set, Radar Altimeter Module AN/APM-322-basic test setup	3-2
3-2	Test point locations	3-3
3-3	Test Set Radar Altimeter Module AN/APM-322-exploded view	3-9
3-4	Module test set panel assembly-exploded view	3-11
3-5	I-F amplifier assembly test setup	3-12
3-6	Power supply assembly test setup	3-13
3-7	Power supply assembly-test points	3-14
3-8	Power supply assembly-exploded view	3-17
3-9	Power supply assembly-adjustments	3-18
3-10	Test Set, Radar Altimeter Module AN/APM-322-card assembly extender and cable schematic diagrams	3-20
4-1	I-F amplifier assembly-exploded view	4-2
4-2	I-F amplifier assembly-test points	4-3
4 - 3	I-F amplifier and detector assembly-parts location view	4-6
4 - 4	Power supply subassembly no. I-parts location view	4-11
4-5	Power supply subassembly no. Z-parts location view	4-12
4 - 6	Power supply subassembly no. S-parts location view	4-13
4-7	Step attenuator test setup	4-16
FO-1	Color code marking for MIL-STD resistors, inductors, and capacitors	FO-1
FO-2	Test, set, Radar Altimeter Module AN/APM-322-schematic diagram	FO-2
FO-3	I-F amplifier assembly-schematic diagram	FO-3
FO-4	Power supply assembly-schematic diagram	FO-4

CHAPTER 1

INTRODUCTION

1-1. Scope

a. This manual contains general support and radar maintenance instructions for Test Set, Radar Altimeter Module AN/APM-322 (module test set). It includes instructions appropriate for troubleshooting, testing, and repairing the equipment. It also lists tools, materials, and test equipment required for general support and depot maintenance. Equipment function is covered in chapter 2.

b. The module test set is always used with Test Set, Radar Altimeter System AN/APM-323 (system test set). The technical manuals for both test sets include three other publications: TM 11-6625-1795-12, TM 11-6625-1746-12, and TM 11-6625-1746-45.

1-2. Indexes of Publications

a. **DA Pam** 310-4. Refer to the latest issue of DA Pam 310-4 to determine whether there are

new additions, changes, or additional publications pertaining to the equipment.

b. **DA Pam** 310-7. Refer to DA Pam 310-7 to determine if there are modification work orders (MWO's) pertaining to the equipment.

NOTE

For applicable forms and records, see paragraph l-3, TM 11-6625-1795-12.

1-3. Reporting of Equipment Publications Improvements

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 forwarded direct to Commanding General, US Army Electronics Command, ATTN: AMSEL-ME-NMP-EM, Fort Monmouth, N.J., 07703.