

TM 11-6625-2611-40

TECHNICAL MANUAL

DIRECT AND GENERAL SUPPORT
MAINTENANCE MANUAL
FOR

TEST SET TRANSPONDER SET
AN/APM - 305A
(NSN 6625-01-052-3881)

HEADQUARTERS, DEPARTMENT OF THE ARMY

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GENERAL SUPPORT MAINTENANCE MANUAL
TEST SET, TRANSPONDER SET AN/APM-305A
(NSN 6625-01-052-3881)

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		Paragraphs	Page
CHAPTER	1. INTRODUCTION		
SECTION	I. General	1-1-1-3	1-1
	II. Description and Data	1-4-1-5	1-1
CHAPTER	2. FUNCTIONING OF EQUIPMENT		
SECTION	I. Block Diagram Description	2-1-2-3	2-1
	II. Functional Description	2-4-2-9	2-10
CHAPTER	3. GENERAL SUPPORT MAINTENANCE		
SECTION	I. General	3-1-3-4	3-1
	II. Troubleshooting	3-5-3-7	3-2
	III. Removal and Replacement	3-8-3-9	3-26
	IV. Adjustment and Alignment	3-10-3-11	3-38
	V. Repair	3-12-3-13	3-45
	VI. Function Test Procedures	3-14-3-15	3-46
APPENDIX	REFERENCES		A-1
INDEX		Index 1

LIST OF ILLUSTRATIONS

Fig. No.	Title	Page
2-1	Fixed frequency (SIF) operation simplified block diagram	2-2
2-2	Fixed frequency (mode 4) operation simplified block diagram	2-4
2-3	Swept frequency operation, simplified block diagram	2-5
2-4	Transmitter frequency measurement oscilloscope display	2-6
2-5	Receiver bandwidth testing oscilloscope display	2-7
2-6	Test set cable connection diagram	2-9
2-7	SIF fixed frequency clock and trigger logic timing diagram	2-11
2-8	Mode 1 substitute pulse operation timing diagram	2-15
2-9	Mode 4 three-pulse reply timing diagram	2-16
3-1	Test set location of test points	3-3
3-2	Test set and cover assembly	3-27
3-3	Test set location of adjustments	3-28
3-4	Test set power supply and card rack assembly exploded view	3-29
3-5	Test set RF Bit/Mixer assembly exploded view	3-30
3-6	Test set chassis exploded view	3-31
3-7	Test set control panel and circuit cards	3-32
3-8	Disassembly of individual parts	3-33
3-9	Test set control panel (rear view)	3-35
3-10	Test set control panel assembly	3-37
3-11	Adjustments of power supply PS1A1	3-40
3-12	Power measurement adjustment test setup	3-44

LIST OF ILLUSTRATIONS—Continued

<i>Fig. No.</i>	<i>Title</i>	<i>Page</i>
3-13	Power supply test setup	3-48
3-14	Prf frequency test setup	3-49
3-15	Scope output trigger test setup	3-51
3-16	Auxiliary trigger test setup	3-52
3-17	Challenge code test setup	3-54
3-18	ISLS test setup	3-58
3-19	Suppression pulse test setup	3-60
3-20	Mode 4 reply test setup	3-61
3-21	Mode 4 disparity test setup	3-63
3-22	SIF reply marker test setup	3-64
3-23	RF output frequency test setup	3-65
3-24	RF power test setup	3-68
3-25	Modulator and demodulator test setup	3-70
3-26	Input power test setup	3-72
3-27	Frequency measurement test setup	3-74
3-28	Timing marker test setup	3-77
3-29	Meter circuit board M1A1 schematic and parts location diagram	3-78
FO-1 ①	Color code for military standard resistors, inductors, and capacitors (sheet 1 of 2)	
FO-1 ②	Color code for military standard resistors, inductors, and capacitors (sheet 2 of 2)	
FO-2	Test set block diagram	
FO-3	Prf and delay generator, fixed frequency operation logic diagram	
FO-4	Prf and delay generator, swept frequency operation logic diagram	
FO-5 ①	Video generator logic diagram (sheet 1 of 3)	
FO-5 ②	Video generator logic diagram (sheet 2 of 3)	
FO-5 ③	Video generator logic diagram (sheet 3 of 3)	
FO-6	Video generator timing diagram	
FO-7 ①	Rf signal generator data flow diagram (sheet 1 of 2)	
FO-7 ②	Rf signal generator data flow diagram (sheet 2 of 2)	
FO-8	Receiver block diagram	
FO-9	Measurement section block diagram	
FO-10	Power supply block diagram	
FO-11 ①	Test set schematic diagram (sheet 1 of 4)	
FO-11 ②	Test set schematic diagram (sheet 2 of 4)	
FO-11 ③	Test set schematic diagram (sheet 3 of 4)	
FO-11 ④	Test set schematic diagram (sheet 4 of 4)	
FO-12 ①	Troubleshooting logic diagram (sheet 1 of 8)	
FO-12 ②	Troubleshooting logic diagram (sheet 2 of 8)	
FO-12 ③	Troubleshooting logic diagram (sheet 3 of 8)	
FO-12 ④	Troubleshooting logic diagram (sheet 4 of 8)	
FO-12 ⑤	Troubleshooting logic diagram (sheet 5 of 8)	
FO-12 ⑥	Troubleshooting logic diagram (sheet 6 of 8)	
FO-12 ⑦	Troubleshooting logic diagram (sheet 7 of 8)	
FO-12 ⑧	Troubleshooting logic diagram (sheet 8 of 8)	
FO-13 ①	Test set wiring diagram (sheet 1 of 4)	
FO-13 ②	Test set wiring diagram (sheet 2 of 4)	
FO-13 ③	Test set wiring diagram (sheet 3 of 4)	
FO-13 ④	Test set wiring diagram (sheet 4 of 4)	
FO-14	Power supply schematic diagram	

LIST OF TABLES

<i>Table</i>	<i>Title</i>	<i>Page</i>
3-1	Test Set, Control Settings	3-1
3-2	Performance Test Procedure	3-4
3-3	Troubleshooting Procedure	3-15
3-4	List of Function Test Procedure	3-46
3-5	Power Supply and Overall Test Procedure	3-47
3-6	Internal Prf Frequency Function Test Procedure	3-49
3-7	Prf Measurement Accuracy Function Test Procedure	3-50
3-8	Output Trigger Function Test Procedure	3-50
3-9	Challenge Code Function Test Procedure	3-53

LIST OF TABLES - Continued

<i>Table</i>	<i>Title</i>	<i>Page</i>
3-10	ISLS Function Test Procedure	3-57
3-11	Suppressor Pulse Function Test Procedure	3-58
3-12	Mode 4 Interface Input and Output Function Test Procedure	3-60
3-13	Mode 4 Disparity Function Test Procedure.....	3-62
3-14	SIF Reply Marker Function Test Procedure.....	3-62
3-15	Rf Output Frequency Function Test Procedure.....	3-64
3-16	Rf Power Output Function Test Procedure	3-64
3-17	Modulator and Demodulator Function Test Procedure	3-69
3-18	Input Power Measurement Function Test Procedure	3-71
3-19	Frequency Measurement Function Test Procedure	3-73
3-20	Timing Marker Function Test Procedure.....	3-76

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope.

a. This manual provides general support maintenance instructions for Test Set, Transponder Set AN/APM-305 (test set). It includes an introduction, a description of the functioning of equipment, general support maintenance instructions, and diagrams. The maintenance instructions cover troubleshooting, removal and replacement instructions, adjustment and alignment procedures, repair instructions, and testing procedures.

b. operational and organizational maintenance instructions are contained in TM 11-6625-2611-12. Repair parts and special tools list are contained in TM 11-6625-2611-24P.

NOTE

For other applicable forms and records see paragraph 1-3 of TM 11-6625-2611-12.

1-2. Indexes of Publications.

a. DA PAM 310-4. Refer to 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 (MWOs) pertaining to the equipment.

1-3. Reporting Equipment Improvement Recommendations (EIR).

EIR's will be prepared using SF 368 (Quality Deficiency Report). Instructions for preparing EIRs are provided in TM 38-750, the Army Maintenance Management System. EIR's should be mailed direct to Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-ME-MQ, Fort Monmouth, New Jersey 07703. A reply will be furnished direct to you.

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use.

The test set is a bench test set which when used with an Oscilloscope, and Test Set, Transponder Set AN/APM-239, provides field personnel with the capability to check, maintain, align and calibrate the AN/APX-72 Transponder Set and other IFF transponders which meet the requirements of DOD-AIMS 65-1000. The test set generates IFF interrogations and transmits these signals at adjustable RF power levels and adjustable PRF's to the transponder under test. Two separately variable RF outputs are provided to test diversity type transponders, or the two RF paths can be combined to test transponder ISLS characteristics over the complete dynamic range of the transponder. The RF reply from the transponder is demodulated and can be analyzed for proper frequency, power level, coding, pulse shape and pulse train spacing. Mode 4 opera-

tion, including disparity conditions, can be simulated. Facilities are also included to test the selectivity of the transponder receiver; test the rate limiting, auxiliary trigger, receiver dead time, and suppression pulse circuits; and supply crystal controlled markers to the oscilloscope. A self test feature permits isolation of failures to a printed circuit card and/or module level using only the test set indicators and test points.

Description of Test Set, Transponder Set AN/APM-305A is covered in TM 11-6625-2611-12 along with unit operation and organizational maintenance. It includes instructions for installation, operation, inspection, self-testing, and preventive maintenance of the equipment.

1-5. Tabulated Data.

Refer to TM 11-6625-2611-12.