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DEPARTMENT OF THE ARMY TECHNICAL MANUAL

GENERAL SUPPORT AND DEPOT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST TEST SET, RADAR AN/APM-246 AND TEST SET, RADAR AN/APM-246

HEADQUARTERS, DEPARTMENT OF THE ARMY

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GS AND DEPOT MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

TEST SET, RADAR AN/APM-246 AND TEST SET, RADAR AN/APM-247

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CHAPTER 1
FUNCTIONING

Section I. GENERAL

1-1. Scope

a. This manual contains general support and depot maintenance instructions for Test Sets, Radar AN/APM-246 and AN/APM-247. It includes instructions appropriate for troubleshooting, testing, alignment, tools, materials, and test equipment required for general support and depot maintenance. Functional analysis and circuit theory for the equipment are covered in this chapter.

b. The complete manual for this equipment includes TM 11-6625-664-12.

c. Reporting of Equipment Manual Improvements. Reporting of errors, omissions, and recommendations for improving this manual by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to Commanding General, U. S. Army Electronics Command, ATTN: AMSELMR-NMP-AD, Fort Monmouth, N.J. 07703.

Note. For applicable forms and records, see paragraph 1-3, TM 11-6625-664-12.

1-2. Index of Equipment Publications

Refer to the latest issue of DA Pam 310-4 to determine if there are new editions, changes, or additional publications pertaining to the equipment. DA Pam 310-4 is an index of current technical manuals, technical bulletins, supply manuals (types 7, 8, and 9), supply bulletins, lubrication orders, and modification work orders that are available through publications supply channels. The index lists the individual parts (-10, -20, -35P, etc.) and the latest changes to and revisions of each equipment publication.

Section II. FUNCTIONING

1-3. Functioning of Test Set, Radar AN/APM-246

Test Set, Radar AN/APM-246 consists of a case (CY-475/APM-246) and a cable harness tester (TS-2154/APM-246). The TS-2154/APM-246 tests the aircraft cable harness that is associated with the installation of an AN/APN-158 radar set. The equipment checks the cable harness for continuity, shorts, and grounds. Paragraphs a through c below discuss each of the harness tester functions. Figure 5-3 is the AN/APM-246 overall schematic diagram.

a. Testing for Continuity. (fig. 1-1). The continuity testing portion of the TS-2154/ APM-246 consists of three parts; wire selector switches, a test selector switch, and an indicator. The wires in the aircraft wiring harness connect to switches S1 through S4. Wires having continuity through the wiring harness connect to corresponding contacts on different wafers on the same switch. For example, one end of a continuous harness wire connects to the first contact on switch S1A rear and the other end of the wire connects to the first contact of S1C rear. Switch S5C, in the second position, connects the wiper arms of switches S1A and S1C to the indicator circuit. When the TEST switch is pushed, there is a complete circuit from battery negative through the CONTINUITY indicator, S5C rear, S1A rear, the wiring harness, S1C rear, S5C rear, the TEST switch, and back to battery positive.