

TECHNICAL MANUAL

ORGANIZATIONAL, DIRECT SUPPORT, GENERAL SUPPORT,
AND DEPOT MAINTENANCE MANUAL

TEST SET,
GYRO MAGNETIC COMPASS
AN/ASM-61

(NSN 6625-00-885-5869)

This copy is a reprint which includes current
pages from Changes 2 through 4.

TECHNICAL MANUAL }
No. 11-6625-247-15

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 21 April 1965

TEST SET, GYRO MAGNETIC COMPASS AN/ASM-61

Section	I.	INTRODUCTION		
		Indexes of publications.....	1-1	5
		Forms and records	1-1.1	5
		Reporting of error	1-2	5
		Items comprising an operable equipment	1-2.1	5
		Purpose	1-3, 1-4	7
		Major components.....	1-5	7
		Frequency meter	1-6	7
		A-c milliammeter	1-7	7
		Phase rotation light circuit	1-8	7
		Installation components.....	1-9, 1-10	7
	II.	SPECIAL SERVICE TOOLS		
		Special service tools	2-1, 2-2	9
	III.	PREPARATION FOR USE, STORAGE OR SHIPMENT		
		Preparation for use.....	3-1	9
		Storage	3-2	9
		Shipment	3-3, 3-4	9
		Markings	3-5	9

*This manual supersedes TM 11-6625-247-15 dated 15 January 1959, including C1, 12 September 1962 and C2, 24 October 1963.

		Paragraph	Page
SECTION	IV. OPERATION INSTRUCTIONS		
	General.....	4-1, 4-2	9
	Installation procedure.....	4-3, 4-4	9
	Test procedures	4-5	11
	Field checking the slaved gyro magnetic compass Type J-1	4-6	11
	Field checking the slaved gyro magnetic compass Type J-2	4-7	12
	Field checking the universal attitude gyro indicator Type J-1	4-8	14
	Field checking the electric gyro indicators Type C-1, J-3, A-1, E-1, J-7, J-8, and C-5.....	4-9	14
	V. OPERATOR AND ORGANIZATIONAL MAINTENANCE		
	Preventive maintenance	5-1	15
	Preventive maintenance checks and services periods.....	5-2	15
	Daily preventive maintenance checks and services chart	5-3	16
	Weekly preventive maintenance checks and services chart	5-4	17
	Quarterly preventive maintenance checks and services chart	5-5	17
	Cleaning	5-6	18
	Touchup painting instruction	5-7	18
	VI. MAINTENANCE		
	Purpose	6-1	19
	General troubleshooting techniques	6-1.1	19
	General.....	6-2	21
	Repair or replacement	6-3	21
	Removal of tester panel assembly	6-4	21

		Paragraph	Page
Section	VI.	Maintenance -Continued	
		Replacement of voltmeter.....	6-5 21
		Replacement of frequency meter.....	6-6 21
		Removal of switch panel assembly	6-7 23
		Replacement of switch No. 1.....	6-8 23
		Replacement of switch No. 3.....	6-9 23
		Replacement of rheostat.....	6-10 24
		Replacement of switch No. 2.....	6-11 24
		Replacement of switch No. 5.....	6-12 24
		Replacement of indicator lamps.....	6-13 24
SECTION	VII.	CALIBRATION	
		Milliammeter.....	7-1 25
		Alternating current voltage	7-2 25
		Direct current voltage.....	7-3 25
		Milliammeter adjustment.....	7-4 25
		Frequency meter.....	7-5, 7-6 25
		Phase rotation.....	7-7, 7-8 25
		Ground check	7-9 25
	VIII.	SHIPMENT, LIMITED STORAGE, AND DEMOLITION TO PREVENT ENEMY USE	
		Shipment and limited storage.....	8-1 27
		Demolition of materiel to prevent enemy use	8-2 27
APPENDIX	I.	REFERENCES	31
	II.	BASIC ISSUE ITEMS LIST (BIIL) AND ITEMS TROOP INSTALLED OR AUTHORIZED (ITIAL) (Not Applicable)	
	III.	MAINTENANCE ALLOCATION	32
Section	I.	Maintenance Allocation.....	32
	II.	Maintenance allocation chart.....	37

SECTION I INTRODUCTION

1-1. Indexes of Publications

a. *DA Pam 310-4.* Refer to the latest issue of DA Pam 3104 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.

1-1.1. 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 (Report of Packaging and Handling Deficiencies) as prescribed in AR 700-58/NAVSUP PUB 378/AFR 714/MCO P4030.29, 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 4610.33/AFM 7518/MCO P4610.19A, and DSAR 4500.15.

1-2. 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: AMSEL-MA-A Fort Monmouth, NJ 07703.

1-2.1. Items Comprising an Operable Equipment (fig. 1-1)

FSN Qty Nomenclature, part No., and mfr code

followed by the applicable 5-digit Federal supply code for manufacturers (FSCM) identified in SB 708-42 and used to identify manufacture, distributor, or Government agency, etc.

6625885-5869		Test Set, Gyro Magnetic Compass AN/ASM-61 which includes:
5995-808-8979 1		Cable Assembly, Special Purpose, Electrical: 10 cond; approx 5 ft 2 in. Ig o/a; 349-25; 66150
5995-808-8978 1		Cable Assembly, Special Purpose, Electrical: 4 cond; approx 5 ft 2 in. Ig o/a; :349-27; 66150
5995-857-9953 1		Cable Assembly, Special Purpose Electrical, Branched: 24 con(l; approx 9-12 in. Ig o/a; 349-29; 66150.
5995-857-9950 1		Cable Assembly, Special Purpose, Electrical, Branched: 6 cond; approx 10-3/4 in. Ig o/a; :349-39; 66150
5995-821-2591 1		Cable Assembly, Special Purpose. Electrical, Branched: 9 cond; approx 11-1/4 in. Ig o/a; :349-33; 66150
5995-821-2592 1		Cable Assembly), Special Purpose. Electrical, Branched: 10 con(l; approx 11-1,2 in. Ig o/a; :149 37; 66150
5995-821-2593 1		Cable Assembly, Special Purpose. Electrical, Branched: 10 cond; approx 12 in. Ig o/a; :349-31; 66150
5995-821-2594 1		Cable Assembly, Special Purpose, Electrical, Branched: 15 cond; approx 11-1/2 in Ig o/a; 349-:35; 66150
5995-857-9954 1		Cable Assembly, Special Purpose, Electrical, Branched: 16 cond(; approx 11 in. Ig o/a; 349-41; 66150
5995-855-7594 1		Lead Electrical: No. 18 AWG; approx .50 in. Ig o/a; 349-43; 66150

FSN Qty Nomenclature, part No., and mfr code

NOTE

The part number is

1-3. PURPOSE.

1-4. The type P-1 tester is designed to make flux valve, slaving, power supply, and ground checks of various slaved gyro magnetic compasses. Power supply tests include the checking of the frequency and voltage of single-phase 120-volt, 400 cycle alternating current; the voltage of 28-volt direct current; and the phase rotation of three phase, 115-volt 400 cycle alternating current.

1-5. MAJOR COMPONENTS. (See figure 1-2.)

1-6. FREQUENCY METER. The frequency meter M-1 is a vibrating reed type instrument designed to read the frequency of the input voltage. Tests set with serial numbers 170 and above are furnished with an instrument which will indicate the frequency spectrum from 380 to 420 Hz in 4 Hz intervals. Earlier units with serial numbers up to 169 were supplied with an instrument with a range of 360 to 440 Hz with scale calibrations in steps of 8 HZ. The frequency meter is hooked directly across the power source to be checked when switch No. 1 is at position 1.

1-7. A-C MILLIAMMETER. The a-c milliammeter M-2 is a rectifier type instrument with a basic movement of 0 to 1.0 milliamperes and a scale specifically calibrated for this equipment.

1-8. PHASE ROTATION LIGHT CIRCUIT. The pilot lights (marked ABC and CBA), indicating phase rotation, are connected in combination with the condenser, which shifts the phase at pin C of the four pin panel receptacle P-1 to cancel the voltage at pin A or B, depending upon the phase rotation of the three phase supply. This cancellation removes the voltage

from one light or the other, allowing determination of phase rotation from the illuminated light.

1-9. INSTALLATION COMPONENTS.

1-10. Three extension lead assemblies, and seven adapter assemblies, consisting of male and female electrical connectors are supplied with the P-1 tester. Each lead and adapter assembly is designed to accommodate a specific slaved gyro magnetic compass for testing. (See table 4-1.)

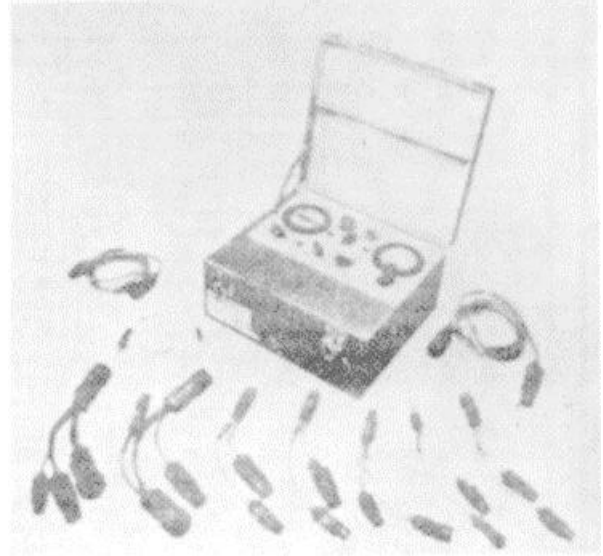


Figure 1-1. Slaved Gyro Magnetic Compass Field Tester. Type P-1.