

TECHNICAL MANUAL

OPERATOR'S ORGANIZATIONAL DIRECT SUPPORT

AND GENERAL SUPPORT MAINTENANCE MANUAL

METER TEST SETS

TS-682/GSM-1 AND TS-682A/GSM-1

(NSN 6625-00-669-0747)

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			Paragraph	Page
CHAPTER	1.	INTRODUCTION		
Section	I.	General	1-1	1-1
	II.	Description and data.....	1-7	1-1
CHAPTER	2.	SERVICE UPON RECEIPT AND INSTALLATION		
Section	I.	Service upon receipt.....	2-1	2-1
	II.	Installation	2-4	2-3
CHAPTER	3.	OPERATING INSTRUCTIONS		
Section	I.	Controls and instruments	3-1	3-1
	II.	Operation under usual conditions.....	3-3	3-4
	III.	Operation under unusual conditions.....	3-8	3-8
CHAPTER	4.	OPERATOR AND ORGANIZATIONAL MAINTENANCE INSTRUCTIONS		
Section	I.	Tools and equipment	4-1	4-1
	II.	Preventive maintenance checks and services.....	4-3	4-1
	III.	Organizational troubleshooting	4-7	4-4
CHAPTER	5.	FUNCTIONING OF EQUIPMENT.....	5-1	
CHAPTER	6.	GENERAL SUPPORT MAINTENANCE INSTRUCTIONS		
Section	I.	General	6-1	6-1
	II.	Troubleshooting.....	6-4	6-2
	III.	Maintenance of the meter test set.....	6-8	6-29
	IV.	General support testing procedures	6-11	6-30
APPENDIX	A.	REFERENCES.....		A-1
	B.	BASIC ISSUE ITEMS LIST (BILL) AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST (ITIAL) (NOT APPLICABLE)		
APPENDIX	C.	MAINTENANCE ALLOCATION		
Section	I.	Introduction.....		C-1
	II.	Maintenance allocation chart		C-3
INDEX				Index 1

*This manual supersedes TM 11-2535A, 13 February 1952, and TM 11-2535B, 6 July 1955, including all changes.

LIST OF ILLUSTRATIONS

<i>Number</i>	<i>Title</i>	<i>Page</i>
1-1.	Meter Test Set TS-682/GSM-1.....	1-0
1-2.	Meter Test Set TS-682A/GSM-1	1-0
1-3.	Meter Test Set TS-682/GSM-1, front view.....	1-2
1-4.	Meter Test Set TS-682A/GSM-1, front view.....	1-3
1-5.	Mounting MT-135A/GSM-1, front view	1-3
1-6.	Mounting MT-135A/GSM-1, rear view	1-4
2-1.	Packaging details for Meter Test Set TS-682(*)/GSM-1.....	2-2
2-2.	Battery and ac power supply connections, TS-682/GSM-1	2-3
2-3.	Battery and ac power supply connections, TS-682A/GSM-1	2-4
3-1.	Meter Test Set TS-682/GSM-1, front panel	3-3
3-2.	Meter Test Set TS-682A/GSM-1, front panel	3-3
3-3.	Mounting MT-135A/GSM-1, with meter in test position.....	3-5
3-4.	Sample meter calibration chart for meter test set	3-8
5-1.	Meter Test Set TS-682A/GSM-1, block diagram.....	5-1
5-2.	Ac meter amplifier circuit, block diagram	5-2
5-3.	Ac meter amplifier circuit, simplified schematic diagram.....	5-3
5-4.	Ac meter amplifier and test warning circuit, simplified schematic diagram.....	5-5
5-5.	Relays K1 K2, K3 and K5	5-7
5-6.	Low dc test circuit, 100 uA to 400 uA, simplified schematic diagram.....	5-8
5-7.	One and two ampere dc test circuit, simplified schematic diagram.....	5-8
5-8.	Four ampere dc test test circuit, simplified schematic diagram.....	5-9
5-9.	Ten ampere dc test circuit, simplified schematic diagram.....	5-9
5-10.	Twenty ampere dc test circuit, simplified schematic diagram	5-10
5-11.	Forty ampere dc test circuit, simplified schematic diagram	5-10
5-12.	One hundred ampere dc test circuit, simplified schematic diagram	5-11
5-13.	Switching relay circuit, simplified, schematic diagram	5-12
5-14.	Low dc test circuit, simplified schematic diagram.....	5-13
5-15.	One ampere dc test circuit, simplified schematic diagram.....	5-14
5-16.	Two ampere dc test circuit, simplified schematic diagram.....	5-15
5-17.	Five ampere dc test circuit, simplified schematic diagram.....	5-15
5-18.	Ten ampere dc test circuit, simplified schematic diagram.....	5-16
5-19.	Twenty ampere dc test circuit, simplified schematic diagram	5-17
5-20.	Fifty ampere dc test circuit, simplified schematic diagram.....	5-18
5-21.	One hundred ampere dc test circuit, simplified schematic diagram	5-19
5-22.	Dc voltage test circuit, simplified schematic diagram	5-21
5-23.	Dc voltage test circuit, simplified schematic diagram	5-22
5-24.	Ac ammeter test circuit, simplified schematic diagram (TS-682/GSM-1)	5-23
5-25.	Ac ammeter test circuit, simplified schematic diagram (TS-682A/GSM-1)	5-24
5-26.	Ac milliammeter test circuit, simplified schematic diagram.....	5-25
5-27.	Ac voltmeter test circuit (except Order No. 6876 Phila-51), simplified schematic diagram.....	5-26
5-28.	Ac voltmeter test circuit (Order No. 6876-Phila-51), simplified schematic diagram	5-27
5-29.	Ac voltmeter test circuit, simplified circuit	5-28
5-30.	Ac meter amplifier rectifier, power circuit, simplified schematic diagram	5-29
5-31.	Meter illumination circuit, simplified schematic diagram	5-30
5-32.	Meter dial illumination circuit, schematic diagram	5-30
6-1.	Meter Test Set TS-682/GSM-1, rear view, case removed	6-10
6-2.	Meter Test Set TS-682/GSM-1, bottom view, case removed.....	6-11
6-3.	Meter Test Set TS-682/GSM-1, rear view of front panel.....	6-12
6-4.	Meter Test Set TS-682/GSM-1, rear view of dc and voltage jack panel	6-13
6-5.	Meter Test Set TS-682/GSM-1, dc limiting resistors.....	6-13
6-6.	Meter Test Set TS-682/GSM-1, dc control unit	6-14
6-7.	Meter Test Set TS-682/GSM-1, rear view of ac and voltage jack panel	6-14
6-8.	Meter Test Set TS-682/GSM-1, relay unit.....	6-15
6-9.	Meters used in Meter Test Set TS-682/GSM-1 .d	6-16
6-10.	Meter M1, cover removed	6-16
6-11.	Meter M2, cover removed	6-17
6-12.	Meter Test Set TS-682/GSM-1, tube socket resistance diagram.....	6-17
6-13.	Meter Test Set TS-682A/GSM-1, rear view, rear panel removed.....	6-18
6-14.	Meter Test Set TS-682A/GSM-1, rear view, relay panel removed	6-19
6-15.	Meter Test Set TS-682A/GSM-1, bottom view, bottom plate removed	6-20
6-16.	Meter Test Set TS-682A/GSM-1, top view, top and rear panels removed.....	6-21
6-17.	Meter Test Set TS-682A/GSM-1, resistor mounting boards	6-22
6-18.	Meter Test Set TS-682A/GSM-1, jack and binding post panel	6-23
6-19.	Meters used in Meter Test Set TS-682A/GSM-1	6-24

LIST OF ILLUSTRATIONS-Continued

<i>Number</i>	<i>Title</i>	<i>Page</i>
6-20.	Meter Test Set TS-682A/GSM-1, voltage power supply chassis, bottom view	6-25
6-21.	Meter Test Set TS-682A/GSM-1, ac meter amplifier chassis, bottom view.....	6-26
6-22.	Meter Test Set TS-682A/GSM-1, power supply chassis, tube socket and resistance diagram	6-27
6-23.	Meter Test Set TS-682A/GSM-1, amplifier chassis, tube socket voltage and resistance diagram	6-28
6-24.	Direct current accuracy test setup (20A to 100 uA range).....	6-32
6-25.	Dc voltage accuracy test setup	6-35
6-26.	Ac voltage accuracy test setup	6-38
6-27.	Alternating current accuracy test setup	6-40
FO-1.	Color code marking for MIL-STD resistors, capacitors, and Inductors	
FO-2.	Meter Test Set TS-682/GSM-1, overall schematic diagram	
FO-3.	Meter Test Set TS-682A/GSM-1, overall schematic diagram	

LIST OF TABLES

<i>Number</i>	<i>Title</i>	<i>Page</i>
1-1	Differences Between Models.....	1-4
1-2	Items Comprising an Operable TS-682(*)/GSM-1	1-6
3-1	Operator Controls and Indicators.....	3-1
4-1	Operator/Preventive Maintenance Checks and Services.....	4-2
4-2	Organizational Preventive Maintenance Checks and Services-Monthly.....	4-3
4-3	Organizational Preventive Maintenance Checks and Services-Quarterly.....	4-3
4-4	Organizational Troubleshooting	4-5
6-1	Dc Resistance of Transformers and Coils	6-1
6-2	Troubleshooting Dc Ammeter Test Circuits, TS-682/GSM-1.....	6-3
6-3	Troubleshooting Dc Ammeter Test Circuits, TS-682A/GSM-1.....	6-4
6-4	Troubleshooting Dc Voltmeter Test Circuits, TS-682/GSM-1	6-4
6-5	Troubleshooting Dc Voltmeter Test Circuits, TS-682A/GSM-1.....	6-5
6-6	Troubleshooting Ac Ammeter Test Circuits, TS-682/GSM-1	6-6
6-7	Troubleshooting Ac Ammeter Test Circuits, TS-682A/GSM-1.....	6-7
6-8	Troubleshooting Ac Voltmeter Test Circuits, TS-682/GSM-1	6-8
6-9	Troubleshooting Ac Voltmeter Test Circuits, TS-682A/GSM-1	6-8
6-10	Troubleshooting Ac Meter Amplifier Circuits, TS-682A/GSM-1	6-9
6-11	Physical Tests and Inspections.....	6-30
6-12	Direct Current Accuracy Test (20A to 100 uA Range).....	6-33
6-13	Dc Voltage Accuracy Test.....	6-36

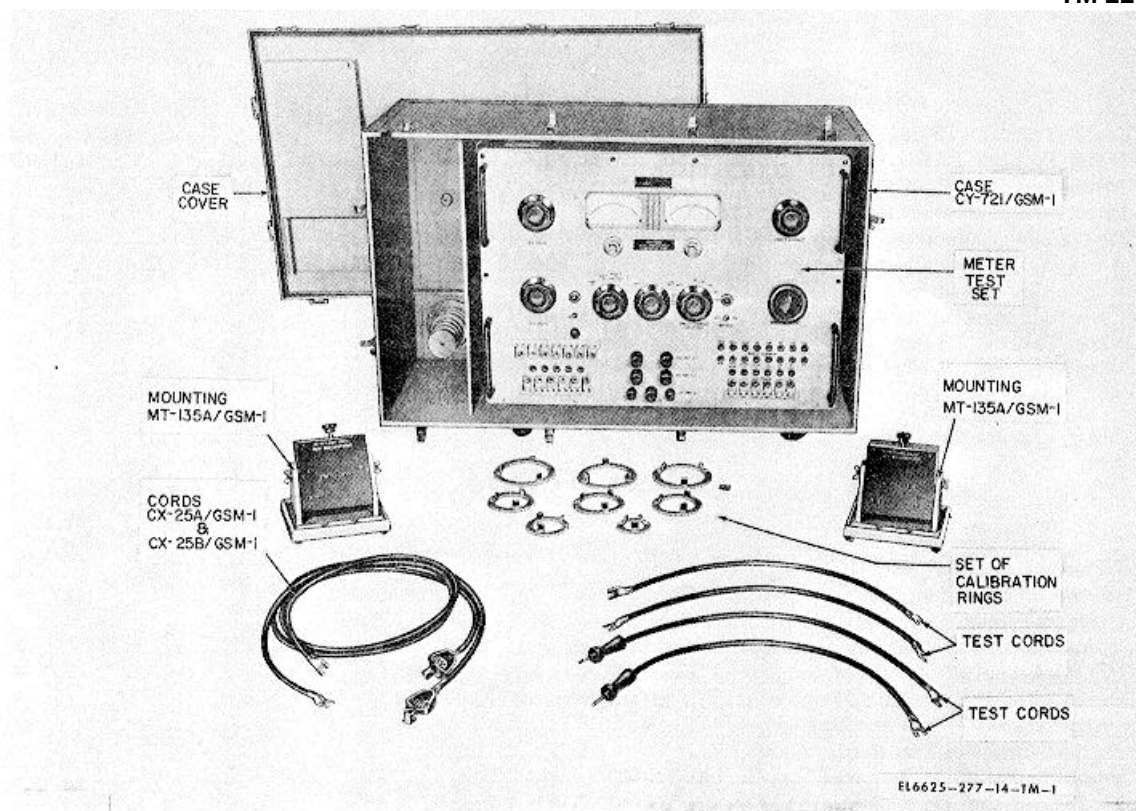


Figure 1-1. Meter Test Set TS-682/GSM-1

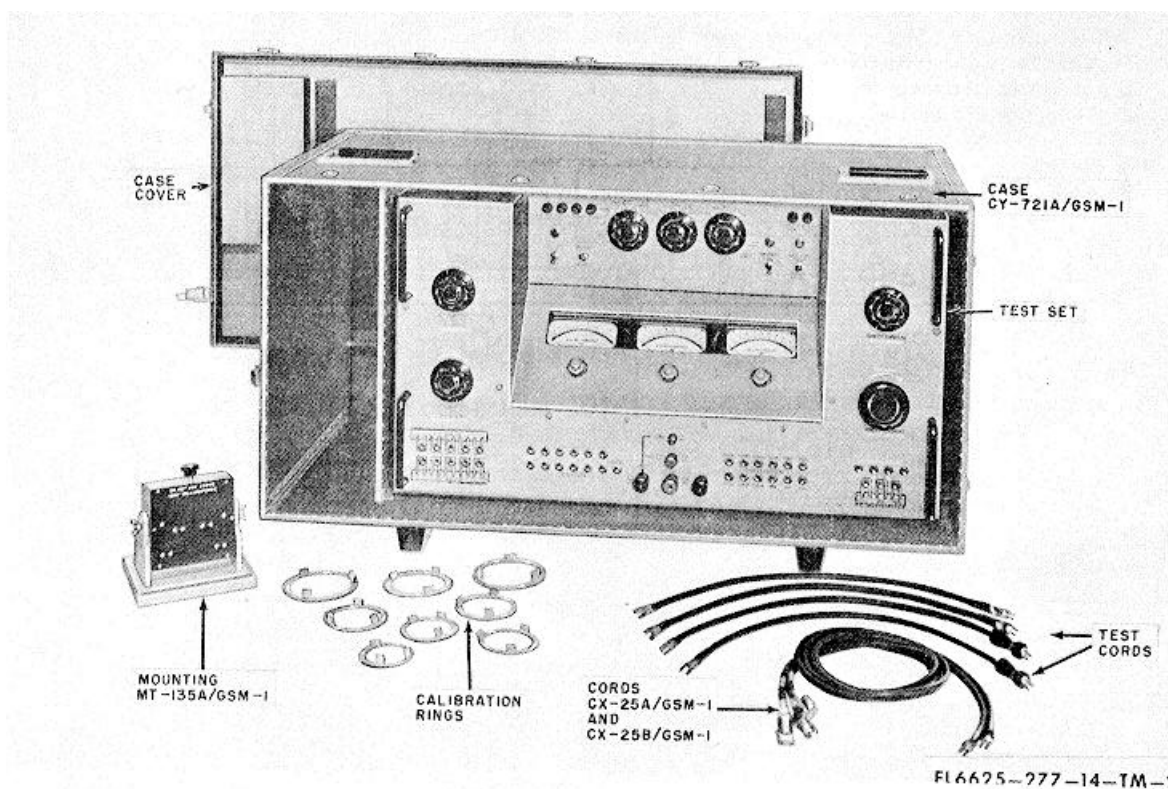


Figure 1-2. Meter Test Set TS-682A/GSM-1

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

a. This manual describes Meter Test Sets TS682/GSM-1 and TS-682A/GSM-1 (fig. 1-1 and 1-2), and provides instructions for operating, cleaning, troubleshooting, testing, aligning, and repairing the equipment. It also lists tools, materials, and test equipment required for organizational and general support maintenance. No direct support maintenance is authorized for the equipment.

b. Official nomenclature followed by (*) is used to indicate all models of the equipment covered in this manual. Thus, Meter Test Set TS-682(*)/GSM-1 refers to both the TS-682/GSM-1 and the TS682A/GSM-1.

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 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 7113/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 7518/MCO P4610.19B, and DSAR 4500.15.

1-4. Reporting of Equipment Publication Improve-ments

The Report of errors, omissions, and recommendations for improving this publication is authorized and encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to Commander, US Army Electronics Command, ATTN: AMSEL-MA-Q, Fort Monmouth, NJ 07703.

1-5. Administrative Storage

For procedures, forms, and records, and inspections required during administrative storage of this equipment, refer to TM 740-90-1.

1-6. Destruction of Army Materiel

Demolition and destruction of electronic equipment will be under the direction of the commander and in accordance with TM 750-244-2.

Section II. DESCRIPTION AND DATA

1-7. Purpose and Use

Meter Test Set TS-682(*)/GSM-1 provides repair personnel with a means of checking alternating current and direct-current voltmeters and ammeters for accuracy of operation. The meter test set functions as an accurately metered power supply, furnishing all ac and dc power to the meters under test. The standard meters on the front panel measure the power supplied to the meters under test in a wide selection of voltage and current ranges.

1-8. Description

The following is a description of TS-682(*)/GSM-1 and its component parts.

a. *Meter Test Set TS-682/GSM-1 (fig. 1-3)*.

(1) The meter test set contains two indicating meters: one for ac voltage and current measurements and one for dc voltage and current measurements. These meters are mounted adjacent to each other on the upper portion of the front panel. Three rotary switches, mounted below the meters on the panel, permit the selection of the appropriate meter ranges for both ac and dc measurements. All ac designations, including the meter markings, are in purple-blue.

(2) Four variable output controls are located on the front panel: a fine and a coarse control for dc adjustments, and a fine and a coarse control for ac adjustments. In addition, the front panel contains sufficient binding posts and jacks for all current and voltage ranges.

(3) Two primary power switches, one for ac and one for dc, are located on the front panel. Two pilot lamps indicate when primary power is applied, and

four lamps supply illumination for the meter dials. The ac circuit, which is fused, is connected to the external source of power by an attached power cord.

(4) An accuracy of $\pm .25$ percent may be obtained by using calibration data charts covering all the ac and dc and voltage ranges. These charts are supplied with the equipment and are located in the pocket on the rear cover of the meter test set.

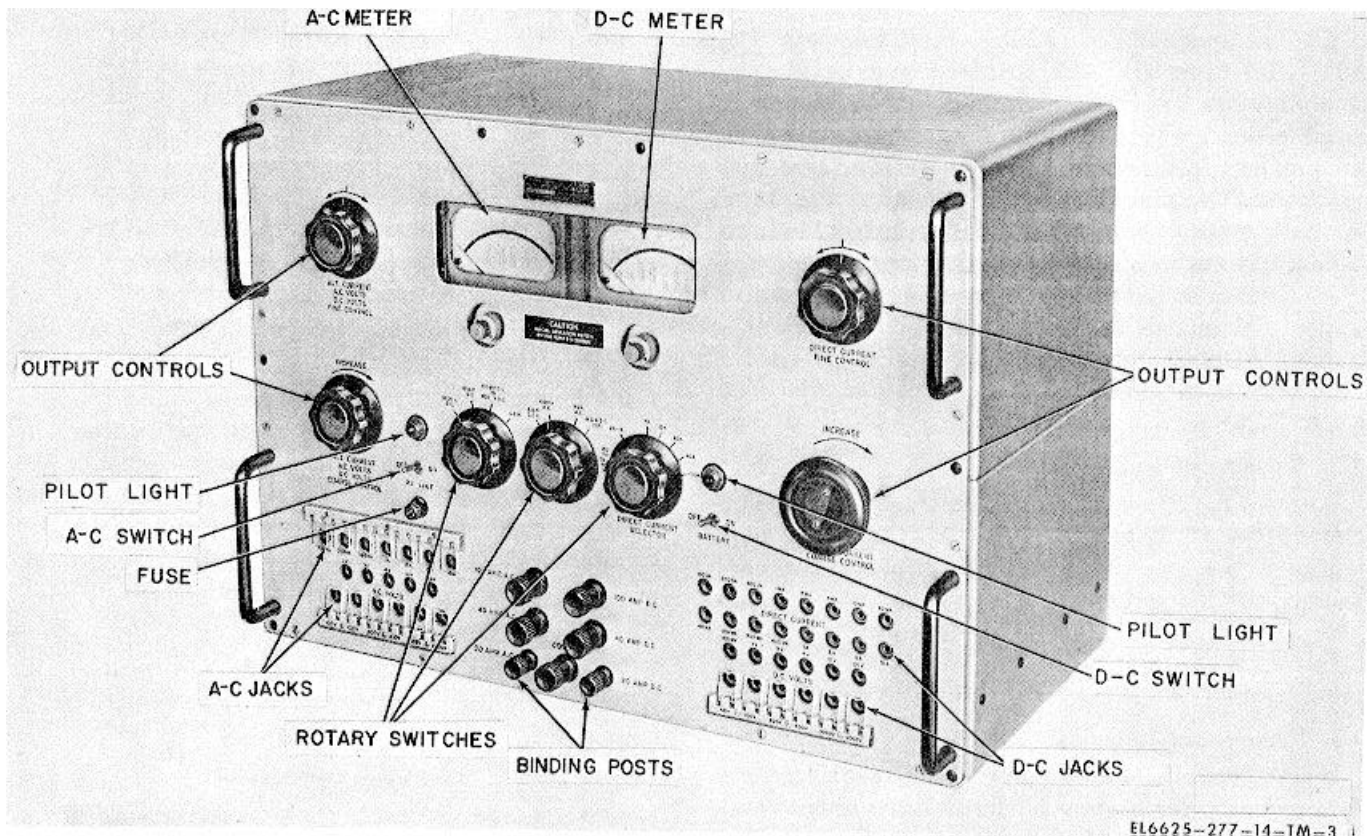


Figure 1-3. Meter Test Set TS-682/GSM-1, front view.

b. Meter Test Set TS-682A/GSM-1 (fig. 1-4).

(1) The meter test set is enclosed in a heavy aluminum frame-work on which all parts and the enclosing panels are mounted. Three standard meters are mounted in a shock-mounted case. The meters are mounted at a 45° angle on the front of the test set. The meter panel, the U-shaped panel on which the output controls, jacks, and binding posts are mounted, and the offset switch panel are faced with insulating phenolic sheets. The entire test set has a light gray enamel finish.

(2) The ac power cord is located at the rear of the test set. Binding posts for connection to an external 12-volt storage battery can be reached through a door in the rear panel. A pocket mounted on this panel holds a set of calibration data charts.

(3) All parts and assemblies are mounted on and insulated from the aluminum framework, or are mounted on separate phenolic panels suspended from the framework. The top, bottom, side, front, and rear panels can be removed.