

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

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OPERATOR'S MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST  
FOR OHMMETER ZM-21/U AND ZM-21A/U  
(INCLUDES TEST SET I-48-A AND I-48-B)

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Headquarters, Department of the Army, Washington 25, D.C.  
1 October 1959

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This copy is a reprint which includes current pages from Change 1.

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This manual supersedes the first echelon portion of DA Supply Manual SIG 7 & 8 ZM-21/U, 3 October 1944, including C 1, 12 March 1949.

CHANGE

**HEADQUARTERS**

DEPARTMENT OF THE ARMY.

Washington, DC, 19 July 1984

No. 1

**OPERATOR'S MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST  
FOR OHMMETER ZM-21/U AND ZM-21A/U  
(INCLUDES TEST SET I-48-A AND I-48-B)  
(6625-00-643-1030)**

TM 11-6625-298-10P, 1 October 1959, is changed as follows:

Page 3, Section III is, added after Section II.

By Order of the Secretary of the Army:

**JOHN A. WICKHAM JR.**  
*General, United States Army*  
*Chief of Staff*

Official:

**ROBERT M. JOYCE**  
*Major General, United States Army*  
*The Adjutant General*

DISTRIBUTION :

To be distributed in accordance with DA Fom 12-36B,  
Operator/Crew Maintenance requirements for ZM-21A and B/U.

## SECTION I INTRODUCTION

### 1. Scope

a. This manual lists items supplied for initial operation and for running spares. The list includes tools, accessories, parts, and material issued as part of the major end item. The list includes all items authorized for basic operator maintenance of the equipment. End items of equipment are issued on the basis of allowances prescribed in equipment authorization tables and other documents that are a basis for requisitioning.

b. Columns are as follows:

- (1) *Source, maintenance, and recoverability code.* (Not used.)
- (2) *Federal stock number.* The Federal stock number column lists the 11-digit Federal stock number.
- (3) *Designation by model.* A dagger (†) indicates the model in which the part is used.
- (4) *Description.* Nomenclature or the standard item name and brief identifying data for each item is listed in this column. When requisitioning, enter the nomenclature and description on the requisition.
- (5) *Unit of issue.* The unit of issue is the supply medium by which the individual item is counted for procurement, storage, requisitioning, allowances, and issue purposes.
- (6) *Expendability.* Expendable items are indicated by the letter X; nonexpendable items are indicated by NX.
- (7) *Quantity authorized.* Under "Items Comprising an Operable Equipment" the column lists the quantity of items supplied for the initial operation of the equipment. Under "Running Spares and Accessories" the quantities listed are those issued initially

with the equipment as spare parts. The quantities are authorized to be kept on hand by the operator for maintenance of the equipment.

(8) *Illustration.* Not used.

### 2. References

A Maintenance Allocation Chart showing all repair operations authorized to be performed by the respective echelons of maintenance is contained in TM 11-6625-298-20P, Ohmmeter M-21/U; ZM-21A/U (Includes Test Set I-48-A; I-48-B) Organizational Maintenance Repair Parts and Special Tools List and Maintenance Allocation Chart.

### 3. Comments and Suggestions

Any comments concerning omissions and discrepancies in this manual will be prepared on DA Form 2028 and forwarded direct to Commanding Officer, U. S. Army Signal Equipment Support Agency, Fort Monmouth N. J., ATTN: SIGFM/ES-ML.

## SECTION II. FUNCTIONAL PARTS LIST

(1) SOURCE MAINTENANCE AND RECOVERABILITY CODE	(2) FEDERAL STOCK NUMBER	(3) DESIGNATION BY MODEL	(4) DESCRIPTION	(5) UNIT OF ISSUE	(6)	(7) QUANTITY AUTHORIZED	(8) FIGURE NO	(9) ITEM NO
1	2	3	4					
ITEMS COMPRISING AN OPERABLE EQUIPMENT								
OHMMETER 2M-21/U: 2M-21A/U (INCLUDES TEST SET I-48-A; I-48-B)								
NOTE: MODEL CLUMN 1 REFERS TO I-48-A; COLUMN 2 REFERS TO I-48-B; COLUMN 3 REFERS TO 2M-21/U; COLUMN 4 REFERS TO 2M-21A/U								
6625-246-5880			OHMMETER 2M-21/U	EA		NX		
6625-246-5880			OHMMETER 2M-21A/U	EA		NX		
6625-648-9456			TEST SET I-48-A	EA		NX		†
6625-246-5880			TEST SET I-48-B	EA		NX		
		†	BARE UNIT :FOR OHMMETER 2M-21/U	EA		NK	1	
		†	BARE UNIT: FOR OHMMETER 2M-21A/U	EA		NX	1	†
		†	BARE UNIT: FOR TEST SET I-48-A	EA		NX	1	
		†	BARE UNIT: FOR TEST SET I-48-B	EA		NX	1	
ORDER THRU ACC		† †	TECHNICAL MANUAL TM 11-2050	EA		X	2	
ORDER THRU AGC		†	TECHNICAL MANUAL TM 11-2050A	EA		X	2	
ORDER THRU AGC		† † †	TECHNICAL MANUAL TM 11-6628-298-10P	EA		X	2	
6625-248-3904		† †	CASE, CARRYING: WINSLOW NO. 1000-89 AND 100-90	EA		NX	1	
6625-537-7881		†	CASE, CARRYING: COLUMBUS ELECTRONICS NO. CSA-I-48	EA		NX	1	
6625-569-0337		†	CASE, CARRYING: WINSLOW NO. 1000-99	EA		NX	1	
6625-496-3300		† † †	LEAD SET, TEST: WINSLOW NO. 1000-90 AND 1000-91	EA		X	1	
RUNNING SPARES AND ACCESSORY ITEMS								
OHMMETER 2M-21/U: 2M-21A/U (INCLUDES TEST SET I-48-A: I-48-B) NO PARTS AUTHORIZED FOR STOCKAGE AT FIRST ECHELON								

### SECTION III

CROSS REFERENCE INDEX. The Cross-Reference Index is a cross-reference listing of part number to National Stock Number.

a. Use of Cross-Reference Index. To order a part listed in the Cross-Reference Index, note part number and then cross-reference that part number to the National Stock Number in the cross-reference index. Then order through normal ordering channels.

b. Ordering Pad Numbers Without National Stock Number. If the part number does not have a National Stock Number, then order the part through normal ordering channels using the part number and the FSCM.

#### CROSS REFERENCE INDEX FORMAT

##### Parts With AN FSN

FSN	NEW NSN	FSCM	N U M B E R
66252465880	662500643130	80058	ZM-21/U,ZM-21A/U
66252483904	NONE	89020	1000-89 AND 100-90
66254983303	6625004983303	<b>80063</b>	SCC53552GP1 and 2
66255377881	NONE	31922	C2A-I-48
66255690337	NONE	89020	1000-99
66256689456	6625006689456	80058	I-48-A

By Order of *Wilber M. Brucker*, Secretary of the Army:

**L. L. LEMNITZER,**  
*General, United States Army,*  
*Chief of Staff.*

**Official:**

**R. V. LEE,**  
*Major General, United States Army,*  
*The Adjutant General.*

**DISTRIBUTION:**

*Active Army:*

USASA (2)  
CNGB (1)  
Tech Stf, DA (1) except  
  CSigO (18)  
Tech Sct Bd (1)  
USCONARC (5)  
USA Arty Bd (1)  
USA Armor Bd (1)  
USA Armor Bd Test Sec (1)  
USA Inf Bd (1)  
USA AD Bd (1)  
USA AD Bd Test Sec (1)  
US. Abn & Elct Bd (1)  
USA Avn Bd (1)  
USA Arctic Test Bd (1)  
US ARADCOM (2)  
US ARADCOM Rgn (2)  
OS Maj Comd (5)  
OS Base Comd (5)  
Log Comd (5)  
MDW (1)  
Armies (5) except  
  First US Army (7)  
Corps (2)  
Div (2)  
USATC (2)  
Pine Bluff Arsenal (5)  
Raritan Arsenal (5)  
Frankford Arsenal (10)  
Redstone Arsenal (5)  
White House Sig Agcy (2)  
Def Atomic Spt Agcy (5)  
Yuma Test Sta (2)  
USA Elct PG (1)  
Dugway PG (5)  
Svc Colleges (5)  
Br Svc Sch (5) except  
  USASCS (25)  
Gen Depot (2) except  
  Atlanta Gen Depot (25)  
Sig Sec, GENDEP (12)

Granite City Engr Depot (5)  
Erie Ord Depot (5)  
Letterkenny Ord Depot (5)  
Sig Depots (19)  
AFIP (1)  
WRAMC (1)  
AMS (1)  
Engr Maint Cen (1)  
USA Comm Agcy (2)  
USA Sig Comm Engr Agcy (1)  
USA Sig Eqp Spt Agcy (7)  
USA Sig Mal Spt Agcy (13)  
Trans Terminal Comd (1)  
Army Terminals (1)  
Ports of Emb (US) (2)  
OS Sup Agcy (2)  
Sig Fld Maint Shops (3)  
Sig Lab (5)  
Mil Dist (1)  
USA Corps (Res) (1)  
Sectors, USA Corps (Res) (1)  
USASSA (15)  
Midwestern Rgn Ofc (USASSA) (1)  
JBUSMC (2)  
USA Sig Pub Agcy (8)  
Army Pictorial Cen (2)  
USA Ord Mal Comd (3)

**Units org under fol TOE:**

7-52 (2)	11-587 (2)
9-217 (2)	11-592 (2)
11-5 (2)	11-597 (2)
11-6 (2)	39-61 (2)
11-7 (2)	44-435 (2)
11-16 (2)	44-437 (2)
11-55 (2)	44-445 (2)
11-56 (2)	44-447 (2)
11-57 (2)	44-448 (2)
11-99 (2)	44-535 (2)
11-117 (2)	44-537 (2)
11-155 (2)	44-545 (2)
11-158 (2)	44-547 (2)
11-500 AA-AE (2)	44-549 (2)
11-557 (2)	55-217 (2)

**NG:** State AG (3).

**USAR:** None.

For explanation of abbreviations used, see AR 320-50.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



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# THE METRIC SYSTEM AND EQUIVALENTS

## WEIGHT MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches  
 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches  
 1 Kilometer = 1000 Meters = 0.621 Miles

## WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces  
 1 Kilogram = 1000 Grams = 2.2 lb.  
 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

## LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces  
 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

## SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches  
 1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet  
 1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

## CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches  
 1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

## TEMPERATURE

$5/9(^{\circ}\text{F} - 32) = ^{\circ}\text{C}$   
 212° Fahrenheit is equivalent to 100° Celsius  
 90° Fahrenheit is equivalent to 32.2° Celsius  
 32° Fahrenheit is equivalent to 0° Celsius  
 $9/5^{\circ}\text{C} + 32 = ^{\circ}\text{F}$

## APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
its	Liters	0.473
arts	Liters	0.946
allons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
ers	Gallons	0.264
ms	Ounces	0.035
ograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pounds-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
ometers per Liter	Miles per Gallon	2.354
ometers per Hour	Miles per Hour	0.621





**PIN: 023195-001**