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No. 1

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, DC, 19 July 1984

**ORGANIZATIONAL, FIELD AND DEPOT  
MAINTENANCE REPAIR PARTS AND SPECIAL TOOL LISTS,  
LIGHT SETS, GROUND OBSTRUCTION MARKER  
MK-221/G AND MK-221A/G  
(6210-00-345-9212)**

TM 11-6230-202-25P, 19 August 1963, is changed as follows:

Page 8, Section IV is added after Section III.

## SECTION IV.1

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 Part 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	PART NUMBER
59101126890	5910001126890	81349	CP53B1EC205K1
59101126890	5910001126890	81349	CP53B1EC205K1
59101127158	5910001127158	81349	CP53B4EF254V
59101127158	5910001127158	81349	CP53B4EF254V
61451610768	6145001610768	81349	CO-03HGF-(3/10)0675
61451610768	6145001610768	81349	CO-03HGF-(3/10)0675
59351618699	NONE	02660	7858T
59251618699	NONE	02660	78S8T
59051858490	5905001858490	81349	RC20GF475J
59051858490	5905001858490	81349	RC20GF475J
59601896511	5960001896511	49675	1P39
59601896511	5960001896511	49675	1P39
59051917698	NONE	81349	RW56G502
59051917698	NONE	81349	RW56G502
59602359136	NONE	49675	2050
59602359136	NONE	49075	2050
59052560390	5905002560390	81349	RC42GF681K
59052560390	5905002560390	81349	RC42GF681J
59052568355	5905002568355	81349	RC42GF202J
59052568355	5905002568355	81349	RC42GF202K
62402671164	NONE	24455	A21-OBSTR
62402671164	NONE	24455	A21-OBSTR
59052792519	5905002792519	81349	RC20GF334J
59052792519	5905002792519	81349	RC20GF334K
59052793414	5905002793414	81349	RC42GF220J
59052793414	5905002793414	81349	RC42GF220J
53302929883	NONE	16444	664-1040
53302929883	NONE	16444	664-1040
59052992003	5905002992003	81349	RC32GF104J
59052992003	5905002992003	81349	RC32GF104J
59052992010	5905002992010	81349	RC32GF683K
59052992010	5905002478737	81349	RCR32G683JS
62103414196	NONE	00489	19235
62103414196	NONE	00489	19235
59253417663	5925003417663	81487	SK5409
59253417663	5925003417663	81487	SK5409
62303459212	6210003459212	80058	MK-221G,MK-221A/G
62303459212	6230003459212	80058	MK-221/G,MK-221A/
54503465342	NONE	80058	MX-1402A/U
54503465342	NONE	80058	MX-1402A/U
59055392567	5905005392567	81349	RV4LAYS252A
59055392567	5905005392567	81349	RV4LAYS252A
62105497394	NONE	32537	ERSL
62105497394	NONE	32537	ERSL
59106675613	NONE	81349	CM15E501J

CROSS REFERENCE INDEX FORMAT

Parts With AN FSN

FSN	NEW NSN	FSCM	PART NUMBER
59106675613	NONE	81349	CM15E501J
59756871845	NONE	15235	4319A
59756871845	NONE	15235	4319A
62106980440	NONE	81349	AP3522-2-R
62406980440	NONE	81349	AP3522-2-R
59507855149	NONE	94295	TM 3093
59507855149	NONE	94295	TM 3093
59258102105	NONE	74193	AM12-5
59258102105	NONE	74193	AM12-5
59458107535	NONE	18835	119XBX,115 VAC
59458107535	NONE	18835	119XBX,115 VAC
53308924308	NONE	81349	PK1095
53308924308	NONE	81349	PK-1095
59609846183	NONE	81349	1N1490
59609846183	NONE	81349	1N1490

CROSS REFERENCE INDEX FORMAT

Parts With NO FSN

OLD PART NUMBER	NEW NSN	FSCM	NEW PART NUMBER
AU3091 AU3091		94295 94295	

By Order of the Secretary of the Army:

Official:

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

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

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DEPARTMENT OF THE ARMY TECHNICAL MANUAL

ORGANIZATIONAL, FIELD AND DEPOT  
MAINTENANCE REPAIR PARTS AND SPECIAL TOOL LISTS,  
LIGHT SETS, GROUND OBSTRUCTION MARKER  
MK-221/G AND MK-221A/G

Headquarters, Department of the Army, Washington 25, D.C.  
19 August 1963

	Paragraph	Page
SECTION I. INTRODUCTION		
Scope .....	1	1
Parts for maintenance.....	2	2
Additional repair parts authorization.....	3	2
Electron tube .....	4	2
Requisitioning information .....	5	3
References .....	6	3
Comments on parts lists .....	7	3
II. SECOND ECHELON FUNCTIONAL PARTS LIST.....		4
III. THIRD, FOURTH AND FIFTH ECHELON FUNCTIONAL PARTS LIST .....		6

**SECTION I  
INTRODUCTION**

**1. Scope**

a. This manual includes an organizational, field and depot special tools list.

- (1) The organizational maintenance repair parts and special tools list lists the repair parts authorized for organizational maintenance and is a basis for requisitioning by organizations which are authorized the major item of equipment. End items of equipments are issued on the basis of allowances prescribed in equipment authorization tables and other documents that are a basis for requisitioning.

- (2) The field and depot maintenance repair parts and special tools list lists the quantities of repair parts authorized for third and fourth echelon field maintenance and is a basis for requisitioning authorized parts. It is also a guide for fifth echelon in establishing initial levels of spare parts.

b. Columns are as follows:

- (1) *Source, maintenance, and recoverability code.* Source, maintenance, and recoverability codes indicate the technical service responsible for supply, the

\*This manual supersedes TM 11-6230-202-25P, 10 November 1960.

echelons where an item is stocked, echelons where an item is installed or repaired, and whether an item is repairable or salvageable. The source code column is divided into four parts.

- (a) *Column A.* This column indicates the technical service responsible for supply, AR 310-1 defines the basic numbers used to identify the technical services. If the part is supplied by the Signal Corps, the column is blank.
  - (b) *Column B.* Not used.
  - (c) *Column C.* This column indicates the lowest maintenance echelon authorized to install the part.  
"O" ---Organizational maintenance (1st and 2d echelon).  
"F" ---Field maintenance (3d echelon).
  - (d) *Column D.* Not used.
- (2) *Federal stock number.* This column lists the 11-digit Federal stock number.
  - (3) *Designation by model.* The dagger (†) indicates model in which the part is used.
  - (4) *Description.* Nomenclature or the standard item name and brief identifying data for each item are listed in this column. When requisitioning, enter the nomenclature and description.
  - (5) *Unit of issue.* The unit of issue is each unless otherwise indicated and is the supply term by which the individual item is counted for procurement, storage, requisitioning, allowances, and issue purposes.
  - (6) *Expendability.* Nonexpendable items are indicated by NX. Expendable items are not annotated.
  - (7) *Quantity incorporated in unit.* This column lists the quantity of each part found in a given assembly, component, or equipment.
  - (8) *Organizational.* See paragraph 3.

- (9) *Field (third echelon).* This column indicates quantities of repair parts authorized for initial stockage for use in the third echelon maintenance and in supply support to second echelon. The quantities are based on 100 equipments to be maintained for a 15-day period.
- (10) *Field (fourth echelon).* The numbers in this column indicate quantities of repair parts authorized for initial stockage for use in fourth echelon maintenance. The quantities are based on 100 equipments to be maintained for a 15-day period.
- (11) *Depot (fifth echelon).* The numbers in this column indicate quantities of repair parts authorized for depot maintenance and for initial stockage for maintenance, and for supply support to lower echelons. The entries are based on the quantity required for rebuild of 100 equipments.
- (12) *Illustration.* The "Item No," column lists the reference symbols used for identification of the items in the illustration or text of the manual.

## **2. Parts for Maintenance**

When this equipment is used by signal service organizations organic to the theater headquarters or communication zones to provide theater communications, those repair parts authorized up to and including fourth echelon are authorized for stockage by the organization operating this equipment.

## **3. Additional Repair Parts**

Authorization An asterisk (\*) in the column titled "15 Day Maintenance Allowance per 100 Equipments" indicates that an item is not authorized for stockage but if required, may be requisitioned for immediate use only.

## **4. Electron Tubes**

The consumption rates given for tubes are conservative theoretical estimates and are provided for use only when more complete information, such as data based on operating experience, is not available, These figures are based on levels and requirements for equipment



actually in use, not on authorizations or equipment stored in depots.

### 5. Requisitioning Information

a. The allowance factors are based on 100 equipments. In order to determine the number of parts authorized for initial stockage for the specific number of equipments supported, the following formula will be used and carried out to two decimal places.

Specific number of equipment supported

$$\times \frac{\text{allowance factor}}{100} =$$

Number of parts authorized for initial stockage.

b. Fractional values obtained from above computation will be rounded to whole numbers as follows:

- (1) When the total number of parts authorized is less than 0.5, the quantity authorized will be zero.
- (2) When the total number of parts authorized is between 0.5 and 1.0, the quantity authorized will be one.
- (3) For all values above one, fractional

values below 0.5 will revert to the next lower whole number and fractional value 0.5 and above will advance to the next higher whole number.

- (4) When the allowance factor listed in the third echelon column is in parentheses ( ), a quantity of one is authorized for initial stockage even though the computed quantity is less than 0.5.

c. The quantities determined in accordance with the above computation represent the initial stockage for a 15-day period.

### 6. References

A maintenance allocation chart and basic issue items list are contained in TM 11-6230-202-15.

### 7. Comments on Parts Lists

Fill out and forward DA Form 2028 (Recommended Changes to DA Technical Manual Parts Lists or Supply Manual 7, 8, or 9), direct to: Commanding Officer, U. S. Army Electronics Materiel Support Agency, ATTN: SELMS-ML, Fort Monmouth, New Jersey.

**SECTION II. SECOND ECHELON FUNCTIONAL PARTS LIST**

FEDERAL STOCK NO.	DESIGNATION BY MODEL				DESCRIPTION	UNIT OF ISSUE	EXP	QTY IN UNIT	2d ORGANIZATIONAL	ILLUSTRATION	
	1	2								FIG. NO.	ITEM NO.
6230-345-9212					LIGHT SET, GROUND OBSTRUCTION MARKER MK-221/G, MK-221A/G  Note: Model Column 1 refers to MK-221/G, Column 2 refers to MK-221A/G		NX				
6210-549-7394	†	†			CABLE ASSEMBLY POWER ELECTRICAL: Joy Mfg Co type ERSL			2	*		W2
6145-161-0768	†	†			CABLE, POWER, ELECTRICAL: Mil type CO-03HGF(3/10)0675: (Note: To be ordered in increments of 175 ft each only)	ft		175	*		W1
5925-341-7663	†	†			CIRCUIT BREAKER: Square D SK5409			1	*		CB2
					CIRCUIT BREAKER: Hughy & Phillips part # AU3091, (L3Rbl8-1)			1	*		
6210-341-4196	†	†			CLAMP, CABLE: Kearny Corp "Lay-Cit" type 19235			15	*		E1
5450-346-5342	†	†			CLAMP, ELECTRICAL MX-1402A/U			7	*		E2
5330-292-9883	†	†			GASKET: Rubber, Specialty Engr and Elec part #2 664-1040			2	*		H5
6240-267-1164	†	†			LAMP INCANDESCENT: 111 watts GE type A21-OBSTR			2	*		I1, I2
6240-698-0440	†	†			LENS, DOME LIGHT: Mil type AP3522-2-R			2	*		MP17
5330-892-4308		†			PACKING PREFORMED: Mil type PK1095			2	*		
5975-687-1845	†				STUFFING TUBE: Crouse Hinds part # 4319A			2	*		MP10
					OPTIONAL EQUIPMENT						
					Note: May be requisitioned when required by using organization having Automatic Control						
					OBSTRUCTION CONTROL MK-705/G						
5925-810-2105					CIRCUIT BREAKER: Heineman Elec Co part # AM12-5			1	*		
5910-667-5613					CAPACITOR, FIXED MICA DIELECTRIC: 500 mmf ±5% Mil type CM15E501J			1	*		C2
5910-112-6890					CAPACITOR, FIXED, PAPER DIELECTRIC: 2 mfd Mil type CP53B1EC205K			1	*		C3

MK-221/G, MK-221A/G 3

FEDERAL STOCK NO.	DESIGNATION BY MODEL	DESCRIPTION	UNIT OF ISSUE	EXP	QTY IN UNIT	2d ORGANIZATIONAL	ILLUSTRATION	
							FIG. NO.	ITEM NO.
		MK-221/G, MK-221A/G (continued)						
5910-112-7158		CAPACITOR FIXED PAPER DIELECTRIC: 0.25 mfd Mil type CP53B4EF254V			2	*		C1A, C1B
5960-235-9136		ELECTRON TUBE: RCA part type 2050			1	*		
5960-189-6511		PHOTOELECTRIC CELL: RCA part # 1P39			1	*		V1
5945-810-7535		RELAY, ARMATURE: Struthers-Dunn part 119XBX, 115 vac			1	*		K1
5905-256-0390		RESISTOR, FIXED, COMPOSITION: 680 ohms, $\pm 10\%$ , 2w Mil type RC42GF681J			1	*		R9
5905-299-2003		RESISTOR, FIXED, COMPOSITION: 500 mmf $\pm 5\%$ Mil type RC32GF104K			2	*		R1, R2
5905-299-2010		RESISTOR, FIXED, COMPOSITION: 68,000 ohms, $\pm 10\%$ , 1w Mil type RC32GF683J			1	*		R3
5905-279-2519		RESISTOR, FIXED, COMPOSITION: 330,000 ohms $\pm 10\%$ ; 1/2 w Mil type RC20GF334J			1	*		R4
5905-279-3414		RESISTOR, FIXED, COMPOSITION: 22 ohm, $\pm 10\%$ , 2 w Mil type RC42GF220J			1	*		R7
5905-256-8355		RESISTOR, FIXED, COMPOSITION: 2,000 ohms $\pm 10\%$ , 2 w Mil type RC42GF202J			1	*		R10
5905-185-8490		RESISTOR, FIXED, COMPOSITION: 4.7 megohms $\pm 10\%$ , 1/2 w Mil type RC20GF475J			1	*		R5
5905-539-2567		RESISTOR VARIABLE: 2500 ohms $\pm 10\%$ , 2 w Mil type RV4LAYS252A			1	*		RC
5905-191-7698		RESISTOR, FIXED WIREWOUND: 5.000 ohm Mil type RW56G502			1	*		R8
5960-984-6183		SEMICONDUCTOR DEVICE DIODE: Mil type IN1490			1	*		
5925-161-8699		SOCKET ELECTRON TUBE: Amphenol part # 78S8T			2	*		X1, X2
5950-785-5149		TRANSFORMER, POWER, STEP-DOWN: Hugh & Philips part # TM 3093			1	*		

MK-221/G, MK-221A/G

**SECTION III. THIRD, FOURTH, AND FIFTH ECHELON FUNCTIONAL PARTS LIST**

SOURCE CODE				FEDERAL STOCK NO.	DESIGNATION BY MODEL				DESCRIPTION	UNIT OF ISSUE	EXP	QTY IN UNIT	3RD FIELD	4TH FIELD	5TH DEPOT	ILLUS-TRATION	
					A	B	C	D								1	2
				6230-345-9212					LIGHT SET, GROUND MARKER MK-221/G, MK-221A/G Note: Model column 1 refers to MK-221/G, column 2 refers to MK-221A/G		NX						
				6210-549-7394	†	†			CABLE, ASSEMBLY POWER ELECTRICAL: Joy Mfg Co. type ERSL			2	(2.0)	1.2	10		W2
		0		6145-161-0768	†	†			CABLE, POWER, ELECTRICAL: Mil type CO-O3HGF(3/10)0675 (Note: To be ordered in increments of 175 ft only)	ft		175	*	*	1750		W1
			0	5925-341-7663	†	†			CIRCUIT BREAKER: Square D part # SK5409			1	(1.0)	0.5	5.0		CB2
			0					†	CIRCUIT BREAKER: Hughy & Philips part # AU3091 (L3Rb18-1)			1	(1.0)	0.5	5.0		
			0	6210-341-4196	†	†			CLAMP, CABLE: Kearny Corp "Lay-Cit" type 19235			15	4.2	2.7	45		E1
			0	5450-346-5342	†	†			CLAMP ELECTRICAL MX-1402A/U			7	2.5	1.0	21.0		
			0	5330-292-9883	†	†			GASKET: rubber; Specialty Engrg and Elec # 664-1040			2	1.1	0.4	10		H5
			0	6240-267-1164	†	†			LAMP, INCANDESCENT: 111 watts GE type A21-OBSTR			2	2.6)	1.6	100.0		I1, I2
			0	6210-698-0440	†	†			LENS, DOME LIGHT: Mil type AP3522-2-R			2	(1.5)	0.8	10		MP-17
			0	5330-892-4308				†	PACKING, PREFORMED: Mil type PK1015			2	1.1	0.6	10		
			0	5975-687-1845	†				STUFFING TUBE: Crouse Hinds part # 4319A			2	1.1	0.4	10		
OPTIONAL EQUIPMENT																	
Note: May be requisitioned when required by using organization having Automatic Control																	

MK-221/G, MK-221A/G

SOURCE CODE				FEDERAL STOCK NO.	DESIGNATION BY MODEL	DESCRIPTION	UNIT OF ISSUE	EXP	QTY IN UNIT	3RD FIELD	4TH FIELD	5TH DEPOT	ILLUS-TRATION	
A	B	C	D										FIG. NO.	ITEM NO.
		0		5910-667-5613		MK-221/G, MK-221A/G (continued) OBSTRUCTION CONTROL MK-705/G CAPACITOR, FIXED, MICA: 500 mmf ±5% Mil type CM15E501J			1	(0.8)	0.4	3.0		C2
		0		5910-112-6890		CAPACITOR, FIXED, PAPER: 2 mfd Mil type CP53B1EC205K			1	(0.8)	0.4	3.0		C3
		0		5910-112-7158		CAPACITOR, FIXED PAPER: 0.25 mfd Mil type CP53B4EF254V			2	(1.1)	0.6	6.0		C1A, C1B
		0		5925-810-2105		CIRCUIT BREAKER: Heineman Elec part # AM12-5			1	(1.0)	0.5	5.0		
		0		5960-235-9136		ELECTRON TUBE: RCA part # 2050			1	7.3	3.7	100.0		V2
		0		5960-189-6511		PHOTOELECTRIC CELL: RCA part # 1P39			1	14.6	7.3	100.0		V1
		0		5945-810-7535		RELAY, ARMATURE:Struthers-Dunn part # 119XBX, 115 vac			1	(1.0)	0.5	3.0		
		0		5905-256-0390		RESISTOR, FIXED, COMPOSITION: 680 ohms, ±10%, 2w Mil type RC42GF681K			1	(0.8)	0.4	3.0		R9
		0		5905-299-2003		RESISTOR, FIXED, COMPOSITION: 500 mmf ±5%; Mil type RC32GF104K			2	(1.1)	0.6	6.0		R1, R2
		0		5905-299-2010		RESISTOR, FIXED, COMPOSITION: 68,000 ohm, ±10%, 1w Mil type RC32GF683K			1	(0.8)	0.4	3.0		R3
		0		5905-279-2519		RESISTOR, FIXED, COMPOSITION: 330,000 ohms ±10%, 1/2 w Mil type RC20GF334K			1	(0.8)	0.4	3.0		R4
		0		5905-279-3414		RESISTOR, FIXED, COMPOSITION: 22 ohm, ±10%, 2w Mil type RC42GF220J			1	(0.8)	0.4	3.0		R7
		0		5905-256-8355		RESISTOR, FIXED, COMPOSITION: 2,000 ohms, ±10%, 2 w Mil type RC42GF202K			1	0.8	0.4	3.0		R10
		0		5905-185-8490		RESISTOR, FIXED, COMPOSITION: 4.7 megohm ±10%, 1/2 w Mil type RC20GF475K			1	(0.8)	0.4	3.0		R5

MK-221/G, MK-221A/G

SOURCE CODE				FEDERAL STOCK NO.	DESIGNATION BY MODEL	DESCRIPTION	UNIT OF ISSUE	EXP	QTY IN UNIT	3RD FIELD	4TH FIELD	5TH DEPOT	ILLUS-TRATION	
A	B	C	D										FIG. NO.	ITEM NO.
		0		5905-539-2567		MK-221/G, MK-221A/G (continued) RESISTOR, VARIABLE: 2500 ohms $\pm$ 10% , 2w Mil type RV4LAYS252A			1	(1.0)	0.5	5.0		R6
		0		5905-191-7698		RESISTOR, FIXED, WIREWOUND: 5,000 ohm Mil type RW560502			1	(0.8)	0.4	3.0		R8
		0		5960-984-6183		SEMICONDUCTOR, DEVICE DIODE: Mil type 1N1490			1	(0.8)	0.4	3.0		
		0		5935-161-8699		SOCKET, ELECTRON TUBE: Amphenol part # 7858T			2	(1.1)	0.6	6.0		
		0		5950-785-5149		TRANSFORMER, POWER STEP DOWN: Hugh & Philips part # TM 3093			1	(1.0)	0.5	5.0		

MK-221/G, MK-221A/G

By Order of Secretary of the Army:

EARLE G. WHEELER,  
General, United States Army,  
Chief of Staff.

Official:

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USATC AD (2)	(2 cy ea UNOINDC)
USATC Engr (2)	11-7
USATC Inf (2)	11-16
USATC Armor (2)	11-57
USASTC (5)	11-97
Instl (2) except	11-98
Ft Monmouth (63)	11-117
Svc Colleges (2)	11-155
Br Svc Sch (2) except	11-157
GENDEP (OS) (2)	11-500 (AA-AC) (4)
Sig Dep (OS) (12)	11-557
Sig Sec, GENDEP (5)	11-587
Army Dep (2) except	11-592
	11-597

NG: State AG (3); Units - Same as Active Army except allowance is one copy for each unit.

USAR: None.

For explanation of abbreviations used see AR 320-50.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



*THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.*

**SOMETHING WRONG WITH PUBLICATION**

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER

PUBLICATION DATE

PUBLICATION TITLE

**BE EXACT PIN-POINT WHERE IT IS**

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

**IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT.**

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE



## The Metric System and Equivalents

### *Linear Measure*

1 centimeter = 10 millimeters = .39 inch  
 1 decimeter = 10 centimeters = 3.94 inches  
 1 meter = 10 decimeters = 39.37 inches  
 1 dekameter = 10 meters = 32.8 feet  
 1 hectometer = 10 dekameters = 328.08 feet  
 1 kilometer = 10 hectometers = 3,280.8 feet

### *Weights*

1 centigram = 10 milligrams = .15 grain  
 1 decigram = 10 centigrams = 1.54 grains  
 1 gram = 10 decigrams = .035 ounce  
 1 decagram = 10 grams = .35 ounce  
 1 hectogram = 10 decagrams = 3.52 ounces  
 1 kilogram = 10 hectograms = 2.2 pounds  
 1 quintal = 100 kilograms = 220.46 pounds  
 1 metric ton = 10 quintals = 1.1 short tons

### *Liquid Measure*

1 centiliter = 10 milliliters = .34 fl. ounce  
 1 deciliter = 10 centiliters = 3.38 fl. ounces  
 1 liter = 10 deciliters = 33.81 fl. ounces  
 1 dekaliter = 10 liters = 2.64 gallons  
 1 hectoliter = 10 dekaliters = 26.42 gallons  
 1 kiloliter = 10 hectoliters = 264.18 gallons

### *Square Measure*

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch  
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches  
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet  
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet  
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres  
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

### *Cubic Measure*

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch  
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches  
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

## Approximate Conversion Factors

<i>To change</i>	<i>To</i>	<i>Multiply by</i>	<i>To change</i>	<i>To</i>	<i>Multiply by</i>
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

## Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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**PIN: 020737-000**