

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

---

OPERATOR'S MANUAL  
PUBLIC ADDRESS  
SET AN/UIH-1

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This reprint includes all changes in effect at the time of publication; changes 4, 6, and 7.

HEADQUARTERS, DEPARTMENT OF THE ARMY  
FEBRUARY 1959

Changes in force: C 4, C 6, and C 7

Change }  
No. 7 }

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, D.C., 21 December 1973

**Operator's Manual  
PUBLIC ADDRESS SET AN/UIH-1**

TM 11-5830-202-10, 13 February 1959, is changed as follows:

Page 3. Paragraph 1.1 is superseded as follows:

**1.1. 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. Paragraph 2 is superseded as follows:

**2. 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

(Army)/NAVSUP PUB 378 (Navy)/AFR 71-4 (Air Force)/and MCO P4030.29 (Marine Corps).

c. *Discrepancy in Shipment Report (DISREP) (SF361).* Fill out and forward Discrepancy, in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38 (Army)/NAVSUP PUB 459 (Navy)/AFM 75-34 (Air Force)/and MCO P4610.19 (Marine Corps). Paragraph 2.1 is added as follows:

**2.1. Reporting of Equipment Publication-Improvements**

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 forwarded direct to Commander, US Army Electronics Command, ATTN: AMSEL-MA-C, Fort Monmouth, NJ 07703.

Page 3;. After paragraph 4, paragraph 4.1 is added as follows:

**4.1. Items Comprising an Operable Public Address Set AN/UIH-1**

FSN QTY Nomenclature, part No., and mfr code

**NOTE**

The part number is followed by the applicable 5-digit Federal supply code for manufacturers (FSCM) identified in SB 70842 and used to identify manufacturer, distributor, or Government agency; etc.

**NOTE**

Dry batteries shown are used with the equipment but are not considered part of the equipment. They %will not be preshipped automatically but are to be requisitioned in quantities necessary for the particular organization in accordance with SB 11-6.

5830-543-1846		Public Address Set AN/UIH-1 Consisting of:
5830-543-1844	1	Amplifier, Audio Frequency, AM-1830/UIH including:
6135-100-0455		Battery, Dry, BA-234/U, 45 v, MIL-B-18, 81349.
6135-577-8292	2	Battery Box, CY-2301/UIH including.
6140-284-0190	14	Battery, Storage, 2 volt, 24 amp hr cap., MIL-B-15072A, type BB-241/U, 81349.
5940-177-1719	28	Clip, batt f/connecting batt in batt box, No. 45 "PeeWee", 76545
6145-669-6746	6	Wire, Electrical, for interconnection of wet cell batt, HW-C-10(37)50, 81349 (Authorized quantity will be a minimum or a multiple of 6 ft.)
5995-577-8435	1	Cable Assembly, Power, Electrical, dc. power cable, CX4649/U.
5995-577-8437	1	Cable Assembly, Power, Electrical, interconnects battery boxes, CX4650/U.
5995-577-8436	1	Cable Assembly, Electrical, vehicular power cable, CX4651/U.
5995-577-8425	1	Cable Assembly, Special Purpose, Electrical, Microphone extension: CX4645/U.
5995-577-8424	1	Cable Assembly, Special Purpose, Electrical, connects control unit to amplifier, CX-4646/U.
5995-577-8426	1	Cable Assembly, Special Purpose, Electrical, connects control unit to amplifier, CX-4647/U.
5995-577-8427	1	Cable Assembly, Special Purpose, Electrical, connects amplifier to loudspeaker, CX-4648/U.
5995-577-8428	1	Cable Assembly, Special Purpose, Electrical, connects telephone to amplifier, CX-4652/U.
5995-577-8403	1	Cable Assembly, Special Purpose, Electrical, bridge to additional amplifier, CX4653/U.
5830-543-1845	1	Control, Public Address Set C-2356 UIH-1
5965-543-1830	1	Loudspeaker, Permanent Magnet LS437/U
5965-543-1831	2	Microphone, Magnetic M-86/U (1 of 2 included as spare).

Page 15. Appendix II is superseded as follows:

**APPENDIX II  
BASIC ISSUE ITEMS LIST (BIIL) AND ITEMS TROOP  
INSTALLED OR AUTHORIZED LIST (ITIAL)**

**Section I. INTRODUCTION**

**1. Scope.**

This appendix lists only basic issue items required by the crew/operator for installation, operation and maintenance of Public Address Set AN/UIH-1.

**2. General.**

This basic issue items and items troop installed or authorized list is divided into the following sections:

a. *Basic Issue Items List-Section II.* A list, in alphabetical sequence, of items which are furnished with, and which must be turned in with the end item.

b. *Items Troop Installed or Authorized List-Section III.* Not applicable.

**3. Explanation of Columns.**

The following provides an explanation of columns found in the tabular listings:

a. *Illustration.* Not applicable.

b. *Federal Stock Number.* This column indicates the Federal stock number assigned to the item which will be used for requisitioning purposes.

c. *Part Number.* This column indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements, to identify an item or range of items.

d. *Federal Supply Code for Manufacturer (FSCM).* The FSCM is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency; etc., and is identified in SB 708-42.

e. *Description.* This column indicates the Federal item name and a minimum description required to identify the item.

f. *Unit of Measure (U/M).* This column indicates the standard or basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two character alphabetical abbreviation, (e.g., ea, in., pr; etc.). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

g. *Quantity Furnished with Equipment.* This column indicates the quantity of the basic issue item furnished with the equipment.

**Section II. BASIC ISSUE ITEMS LIST**

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)
(A) FIG. NO.	(B) ITEM NO.	FEDERAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION  USABLE ON CODE	UNIT OF MEAS	QTY FURN WITH EQUIP
			5830-679-3589		CASE, ELECTRICAL EQUIPMENT, CY/2550/ UIH-1	EA	1

By Order of the Secretary of the Army:

**CREIGHTON W. ABRAMS**  
*General, United States Army*  
*Chief of Staff*

Official:

**VERNE L. BOWERS**  
*Major General, United States Army*  
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USACDCEC (10)  
ATS (1)  
Instl (2) except:  
Fort Gordon (10)  
Fort Huachuca (10)  
Fort Carson (5)  
Ft Richardson (ECOM Ofc) (2)  
WSMR(1)  
Army Dep (2) except:  
LBAD (14)  
SAAD (30)  
TOAD (14)  
ATAD (10)  
USA Dep (2)  
Sig Sec ; SA Dep (2)  
Sig FLDMS (1)  
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11-96  
11-117  
11-158  
11-500 AA-AC  
19-256  
19-316  
29-134  
29-136  
Sig Dep (2)

NG: None

USAR: None

For explanation of abbreviations used, see AR 310-50.

Changes in force: C 4 and C 6

**TECHNICAL MANUAL  
Operator's Manual  
PUBLIC ADDRESS SET AN/UIH-1**

TM 11-5830-202-10

CHANGES No. 6

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HEADQUARTERS,  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 16 September 1963

TM 11-5830-202-10, 13 February 1959, is changed as follows:

**Note**

The parenthetical reference to previous changes (example; page 1 of C 4) indicate that pertinent material was published in that change.

Page 3. After paragraph 1 add paragraph 1.1.

**1.1 Index of Publications**

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. DA Pam 310-4 is an index of current technical manuals, technical bulletins, supply bulletins, lubrication orders, and modification work orders which 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. Delete paragraph 2 (page 1 of C 4) and substitute:

**2. Forms and Records**

*a. Reports of Maintenance and Unsatisfactory Equipment.* Use equipment forms and records in accordance with instructions in TM 38-750.

*b. Report of Damaged or Improper Shipment.*

Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), NAVSANDA Publication 378 (Navy), and AFR 71-4 (Air Force).

*c. Reporting of Equipment Manual Improvements.* The direct reporting by the individual user of errors, omissions, and recommendations for improving this manual is authorized and encouraged. DA Form 2028 (Recommended changes to DA technical manual parts lists or supply manual 7, 8, or 9) will be used for

reporting these improvements. This form will be completed in triplicate using pencil, pen, or typewriter. The original and one copy will be forwarded direct to Commanding Officer, U.S. Army Electronics Materiel Support Agency, ATTN: SELMS-MP, Fort Monmouth, N. J., 07703. One information copy will be furnished to the individual's immediate supervisor (e.g., officer, noncommissioned officer, supervisor, etc.).

Page 11. Delete paragraph 19 and 20, and substitute:

**19. Scope of Operator's Maintenance**

The maintenance duties assigned to the operator of the public address set are listed below together with a reference to the paragraphs covering the specific maintenance functions.

- a. Daily preventive maintenance checks and services (par. 20.2).
- b. Weekly preventive maintenance checks and services (par. 20.3).
- c. Cleaning (par. 20.4).
- d. Equipment operation (par. 21).
- e. Repairs.
  - (1) Replacement of meter lamp (par. 22a).
  - (2) Replacement of defective tubes (par. 22b).

**20. Preventive Maintenance**

Preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent the occurrence of trouble, to reduce downtime, and to assure that the equipment is serviceable.

*a. Systematic Care.* The procedures given in paragraphs 20.2 through 20.4 cover routine systematic care and cleaning essential to proper upkeep and operation of the equipment.

*b. Preventive Maintenance Checks and Services.*

**\*This change supersedes C5, 13 July 1962.**

TAGO 685A--Sept. 700-467°--63

The preventive maintenance checks and services chart (pars. 20.2 and 20.3) outlines functions to be performed at specific intervals. These checks and services are to maintain Army electronic equipment in a combat serviceable condition; that is, in good general (physical) condition and in good operating condition. To assist operators in maintaining combat serviceability, the chart indicates what to check, how to check, and what the normal conditions are. The *references* column lists the illustrations, paragraphs, or manuals that contain detailed repair or replacement procedures. If the defect cannot be remedied by performing the corrective action listed, higher echelon maintenance or repair is required. Records and reports of these checks and services must

be made in accordance with the requirements set forth in TM 38-750.

**20.1 Preventive Maintenance Checks and Services Periods**

Preventive maintenance checks and services of the public address set are required daily and weekly.

a. Paragraph 20.2 specifies the checks and services that must be accomplished daily (or at least once each week if the equipment is maintained in standby condition).

b. Paragraph 20.3 specifies *additional* checks and services that must be performed weekly.

**20.2. Daily Preventive Maintenance Checks and Services Chart**

Sequence No.	Item to be inspected	Procedure	References
1 2	Completeness Exterior surfaces	See that the equipment is complete (appx II). Clean the exterior surface, including the panel and meter glasses (par. 20.4). Check all meter glasses and indicator lenses for cracks. During cleaning operations, inspect for damaged, missing, or loose hardware or meter.	Par. 21.
3	Control and Indicators	While making the operating checks (item 4), observe that the mechanical action of each knob, dial, and switch is smooth and free of external or internal binding, and that there is no excessive looseness. Also, check the meter for sticking or bent pointer.	
4	Operation	Operate the equipment according to paragraph 21	

**20.3. Weekly Preventive Maintenance Checks and Services Chart**

Sequence No.	Item to be inspected	Procedure	References
1	Exposed surfaces	Inspect all exposed surfaces for chips, cracks, rust, corrosion, or mildew; check batteries for bulging or breaks.	
2	Cables	Check cables and cords for frays, loose connections, deterioration, and breaks.	

**20.4. Cleaning**

Inspect the exterior of the equipment. The exterior surfaces should be clean, and free of dust, dirt, grease, and fungus.

a. Remove dust and loose dirt with a clean soft cloth.

**Warning**

**Cleaning compound is flammable and its fumes are toxic. Provide adequate ventilation. Do not use near a flame.**

b. Remove grease, fungus, and ground-in dirt from the cases; use a cloth dampened (not wet) with Cleaning Compound (Federal Stock No. 7930-395-9542). After cleaning, wipe dry with a cloth.

c. Remove dust or dirt from plugs and jacks with a brush.

**Caution**

**Do not press on the meter face (glass) when cleaning; the meter may become damaged.**

d. Clean the front panels, meters, and control knobs; use a soft clean cloth. If necessary, dampen the cloth with water; mild soap may be used for more effective cleaning. Wipe dry with a cloth.

*Pages 12 and 13.* Delete figures 7 and 8.

*Page 15.* Change appendix I (page 1 of C 4) to appendix II.

Before appendix II add appendix I.

**APPENDIX I**

**REFERENCES**

DA Pam 310-4 Index of Technical Manuals, Technical Bulletins, Supply Bulletins, Lubrication Orders, and Modification Work Orders.	TM 9-213 TM 38-750	Painting Instructions for Field Use. The Army Equipment Record System and Procedures.
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Appendix II (page 4 of C 4, as added by C 5, 13 July 1962). Add the following:

Federal stock No.	Description	Unit of issue	Expend-ability	Quantity authorized
5940-177-1719	BATTERY BOX CY-2301/UIH CLIP: batt f/connecting batt in batt box; Mueller Elec Part No. 45 "Pee Wee"			28
6145-669-6746	WIRE ELECTRICAL: f/interconnection of wet cell batt; MIL type HW-C-10(37)JO "Authorized quantity will be minimum or a multiple of 6 ft."	ft		6

**TAGO 685A**



By Order of the Secretary of the Army:

Official:

**J. C. LAMBERT,**  
*Major General, United States Army,*  
*The Adjutant General.*

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

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USA Corps (3)  
USATC AD (2)  
USATC Engr (2)  
USATC Inf (2)

USATC Armor (2)  
USASTC (5)  
Instl (2) except  
Ft Monmouth (65)  
Svc Colleges (2)  
Br Svc Sch (2)  
GENDEP (OS) (2)  
Sig Dep (OS) (12)  
Sig Sec., GENDEP (5)  
Army Dep (2) except  
Ft Worth (8)  
Lexington (12)  
Sacramento (28)  
Tobyhanna (12)  
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(13)  
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11-587  
11-592  
11-597  
19-256  
19-316

NG: State AG (3)

USAR: None.

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

**TAGO 685A**

## TECHNICAL MANUAL

### Operator's Manual

#### PUBLIC ADDRESS SET AN/UIH-1

TM 11-5830-202-10 1

CHANGES No. 4

TM 11-5830-202-10, 13 February 1959, is changed as follows:

Page 3, paragraph 2. Add the following after subparagraph d:

e. *Comments or Suggestions.* Any comments concerning omissions and discrepancies in appendix I will be prepared on DA Form 2028 and forwarded direct to Commanding Officer, U.S. Army Signal Materiel Support Agency, ATTN: SIGMS-ML, Fort Monmouth, N.J.

Page 9, paragraph 11.

HEADQUARTERS,  
DEPARTMENT OF THE ARMY  
WASHINGTON 25, D.C., 20 December 1961

e. (As added by C 2, 24 Sep 59) Remove the cover from the battery box.

**Warning: Keep all flames and lighted objects away from battery boxes containing charged batteries.**

Page 10, paragraph 15.

e. (As added by C 2, 24 Sep 59) Replace the cover on the battery box.

Page 15. Delete appendix I (C 1, 29 Jun 59) and substitute the following:

#### APPENDIX I BASIC ISSUE ITEMS LIST PUBLIC ADDRESS SET AN/UIH-1

##### Section I. INTRODUCTION

###### 1. Scope

a. This appendix 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.* This column lists the 11-digit Federal stock number.

(3) *Designation by model.* Not 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, \*These changes supersede C 1, 29 June 1959, and C 3, 27 June 1960.

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\*These changes supersede C1, 29 June 1959, and C 3, 27 June 1960.

storage, requisitioning, allowances, and issue purposes.

- (6) *Expendability*. Nonexpendable items are indicated by NX. Expendable items are not annotated.
- (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 Accessory Items", 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*. The "Item No." column lists the reference symbols used for identification of the items in the illustration or text of the manual.

## **2. Batteries**

Dry batteries shown are used with the equipment but are not considered part of the equipment. They will not be preshipped automatically but are to be requisitioned in quantities necessary for the particular organization, in accordance with SB 11-6.

## **3. References**

A maintenance allocation chart is contained in TM 11-830-202-20.

SECTION II. FUNCTIONAL PARTS LIST

(1)				(2)	(3)				(4)	(5)	(6)	(7)	(8)	(9)
SOURCE MAINTENANCE AND RECOVERABILITY CODE				FEDERAL STOCK NUMBER		DESIGNATION BY MODEL			DESCRIPTION	UNIT SOURCE	EXPEND ABILITY	AUTHORITY	ILLUSTRATIONS	
													FIGURE NO.	ITEM NO.
				5830-543-1846					PUBLIC ADDRESS SET AN/UIH-1: provides mobile or, stationary facilities for audio amplification: can be operated from aircraft, tanks, vehicles, or ground positions; 100 w output; 28 v dc operating power; MIL-P-55003		NX			
				Ord thru AGC					ITEMS CCOMPRISING AN OPERABLE EQUIPMENT					
				5830-543-1844					TECHINICAL MANUAL TM 11-5830-202-10			2		
				6135-577-8292					AMPLIFIER, AUDIO FREQUENCY AM-1830/UIH:		NX	1		
				5995-577-8435					BATTERY BOX CY-2301/UIH:			2		
				5995-577-8437					CABLE ASSEMBLY, POWER, ELECTRICAL: dc power cable; type No. CX-4649/U			1		W506
				5995-577-8437					CABLE ASSEMBLY, POWER, ELECTRICAL: interconnects battery boxes; type NO. CX-4650/U			1		W507
				5995-577-8436					CABLE ASSEMBLY, POWER ELECTRICAL: vehicular power cable; type No. CX-4651/U			1		W508
				5995-577-8425					CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL: Microphone extension; type No. CX-4645/U			1		W501
				5995-577-8424					CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL: connects control unit to amplifier; type No. CX-4646/U			1		W502
				5995-577-8426					CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL: connects control unit to amplifier type No. CX-4617/U			1		W503
				5995-577-8427					CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL: connects amplifier to loudspeaker; type No. CX-4648/U			2		W504
				5995-577-8428					CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL: connects telephone to amplifier; type No. CX-4652/U			1		W509

SECTION II. FUNCTIONAL PARTS LIST

(1) SOURCE MAINTENANCE AND RECOVERABILITY CODE	(2) FEDERAL STOCK NUMBER	(3) DESIGNATION BY MODEL	(4) DESCRIPTION	(5) U N I T S O U R C E	(6) E X P E N D A B L I T Y	(7) A U T H O R I T I Z E D	(8) (9) ILLUSTRATIONS	
							FIGURE NO.	ITEM NO.
								5995-577-8403
	5830-679-3589		CASE, ELECTRICAL EQUIPMENT, CY-2550/UTH-1		NX	1		
	5830-543-1845		CONTROL, PUBLIC ADDRESS SET C-2356/UTH-1		NX	1		
	5965-543-1830		LOUDSPEAKER, PERMANENT MAGNET LS-47 'U		NX	1		
	5965-543-1831		MICROPHONE, MAGNETIC M-86/U		NX	1		
			AMPLIFIER, AUDIO FREQUENCY AM-1830/UIH					
	6135-100-0455		BATTERY, DRY: Jeens Battery BA-234/U; 45 v; MIL-B-18			1		BT1
			BATTERY BOX CY-2301/UIH					
	6140-284-0190		BATTERY, STORAGE: 2 v; 24 amp hr cap; MIL-B-15072A, type BB-241/U		NX	14		
			RUNNING SPARES AND ACCESSORY TEST					
			PUBLIC ADDRESS SET AN/UTH-1					
	5965-543-1831		MICROPHONE, MAGNETIC M-86/U		NX	1		
			AMPLIFIER, AUDIO FREQUENCY AM-1830/UIH					
	5960-188-8627		ELECTRON TUBE: MIL type 3A5			1		V1
	5960-237-0087		ELECTRON TUBE: CBS Hytron; type No. 5516			2		2, V3, V4 V5, V6

By Order of the Secretary of the Army:

**G. H. DECKER,**  
*General, United States Army,*  
*Chief of Staff.*

Official:

**J. C. LAMBERT,**  
*Major General, United States Army,*  
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USATC FA (2)	11-57	11-587
USATC Inf (2)	11-97	11-592
USAOMC (3)	11-117	11-597
Svc Colleges (2)	11-155	33-77
Br Svc Sch (2)	11-157	
GENDEP (2) except		

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

USAR: None.

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

**PUBLIC ADDRESS SET AN/UIH-1**

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**CHAPTER 1**  
**INTRODUCTION**

---

**Section I. GENERAL**

**1. Scope**

This manual describes Public Address Set AN/UIH-1 and covers its operation and operator's maintenance. It includes instructions on operation under usual and unusual conditions, on cleaning, inspection, and operator's repairs of the equipment.

**2. Forms and Records**

*a. Unsatisfactory Equipment Reports.*

- (1) Fill out and forward DA Form 468 (Unsatisfactory Equipment Report) to the Commanding Officer, U.S. Army Signal Equipment Support Agency, Fort Monmouth, N.J., as prescribed in AR 700-38.
- (2) Fill out and forward AF TO Form 29 (Unsatisfactory Report) to the Commander, Air Materiel Command,

Wright-Patterson Air Force Base, Ohio, as prescribed in AF TO 00-35D-54.

*b. Report of Damaged or Improper Shipment.*

Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), Navy Shipping Guide, Article 1850-4 (Navy), and AFR 71-4 (Air Force).

*c. Preventive Maintenance Forms.* Prepare DA Form 11-238 (figs. 7 and 8) (Maintenance Check List for Signal Equipment (Sound Equipment, Radio, Direction Finding, Radar, Carrier, Radiosonde and Television)) in accordance with instructions on the form.

***d. Comments on Manual.* Forward all comments on this manual direct to the Commanding Officer, U.S. Army Signal Publications Agency, Fort Monmouth, N. J.**

**Section II. DESCRIPTION AND DATA**

**3. Purpose and Use**

*a. Purpose.* Public Address Set AN/UIH-1 (figs. 1 and 2) provides mobile or stationary facilities for audio amplification. The audio inputs may originate locally or remotely from a microphone or reproducer and be applied directly or over telephone lines.

*b. Use.* The equipment is used to address groups of persons under training or tactical conditions.

**4. Technical Characteristics**

*a. Audio Frequency Amplifier AM-1830/UIH.*

Number of tubes .....6.  
Circuit breaker capacity.....15 amperes.  
Frequency range .....300 to 7,000 cycles per second.  
Types of input .....Microphone, telephone, reproducer, or from another AM-1830/UIH.

Input impedances:

Microphone ..... 150 ohms.  
Telephone or repro.... 600 ohms.  
ducer.

Bridging ..... 20,000 ohms.  
Output power ..... 100 watts maximum at 1,000 cycles per second.  
Output Impedance ..... 500 ohms.  
Power requirements .... 350 watts, 12.6 amperes at 28 volts dc.  
Power source ..... Two battery boxes (28 volts) or vehicular battery (24 volts).  
Bias battery (BA-234/U) One (45 volts).

*b. Permanent Magnet Loudspeaker LS-487/U.*

Frequency range ..... 300 to 5,000 cycles per second.  
Input impedance-. ..... 500 ohms.  
Output power ..... 50 watts normal, 100 watts peak.

*c. Magnetic Microphone M-86/U.*

Frequency range ..... 100 to 4,000 cycles per second.  
Impedance ..... 50 ohms.



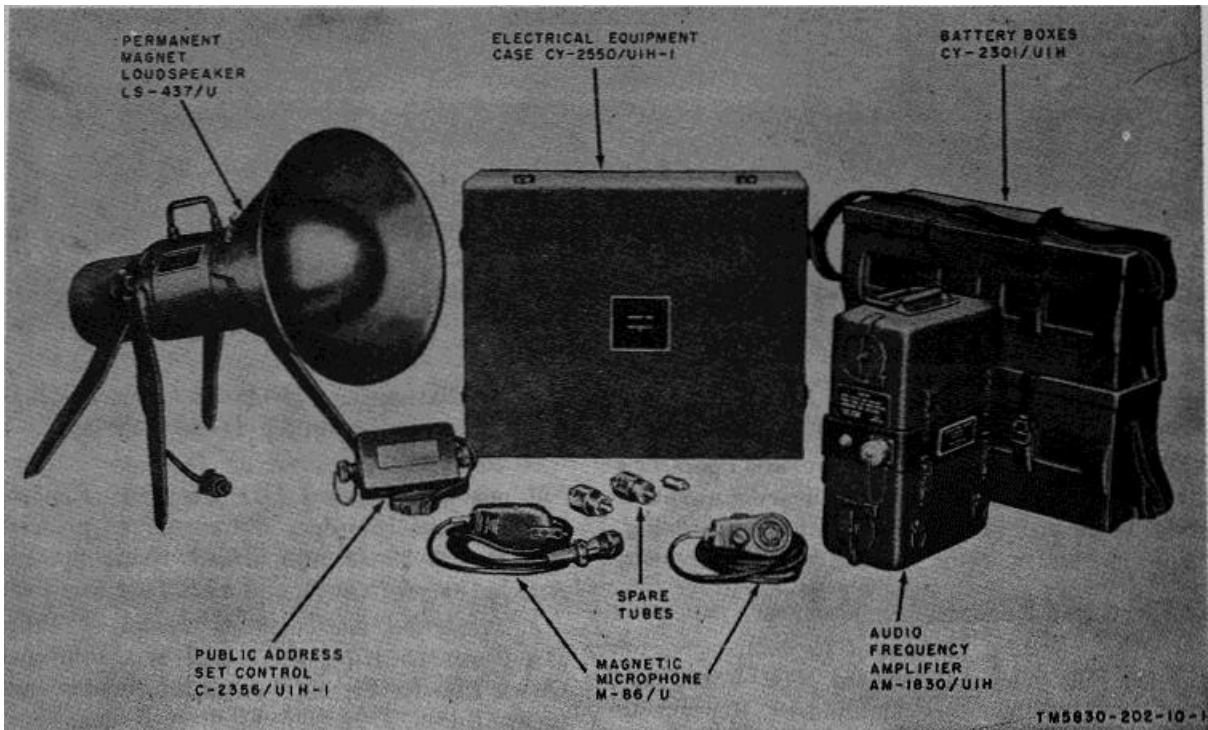


Figure 1. Public Address Set AN/UIH-1, less cables.

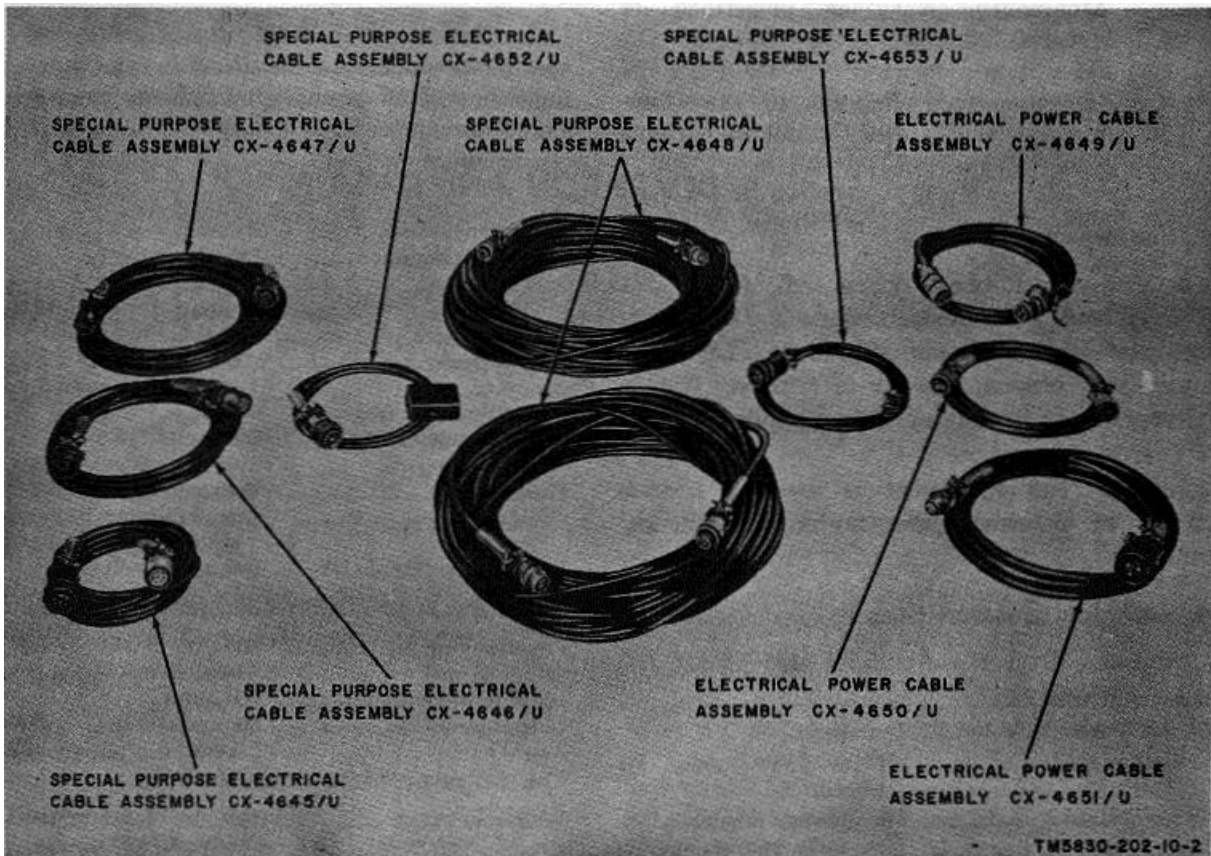


Figure 2. Public Address Set AN/UIH-1, cables.

**5. Table of Components (figs. 1 and 2)**

Quantity	Item	Dimensions (in.)	Volume (cu ft)	Unit Weight (lb)
1.....	Audio Frequency Amplifier AM-1830/UIH (containing Battery BA-234/U).	13 x 11 3/4 x 6.....	0.53.	25.
1.....	Permanent Magnet Loudspeaker LS-437/U.....	23 11/16 x 13 3/4 x 13 3/4	2.59.	15 1/2
1.....	Magnetic Microphone M-86/U .....	5 1/4 x 2 5/8 x 1 5/8.....	.012	1 3/4.
2.....	Battery Box CY-2301/UIH .....	18 5/16 x 7 7/8 x 4 21/32...	.39.	6 1/2.
1.....	Electrical Equipment Case CY-2550/UIH-1 .....	20 3/8 x 16 1/2 x 9 1/8.....	1.77.	13 (empty).
1.....	Public Address Set Control C-2356/UIH-1 .....	5 3/8 x 3 1/4 x 2 3/4.....	.027	1 1/2.
1.....	Special Purpose Electrical Cable Assembly CX-4645/U ....	50 ft long.....	.....	.....
2 .....	Special Purpose Electrical Cable Assembly CX-4648/U ....	125 ft long.....	.....	.....
1.....	Special Purpose Electrical Cable Assembly CX-4646/U.....	6 ft long.....	.....	.....
1 .....	Special Purpose Electrical Cable Assembly CX-4647/U ....	50 ft long.....	.....	.....
1.....	Electrical Power Cable Assembly CX-4649/U .....	6 ft long.....	.....	.....
1.....	Electrical Power Cable Assembly CX-4651/U.....	10 ft long.....	.....	.....
1.....	Electrical Power Cable Assembly CX-4650/U.....	3 ft long.....	.....	.....
1.....	Special Purpose Electrical Cable Assembly CX-4652/U.....	3 ft long .....	.....	.....
1.....	Special Purpose Electrical Cable Assembly CX-4653/U.....	10 ft long.....	.....	.....
1 set.....	Spare Parts consisting of:			
	1 Magnetic Microphone M-86/U .....	5 1/4 x 2 5/8 x 1 5/8.....	.....	1 3/4.
	2 electron tubes, type 5516- .....	.....	.....	.....
	1 electron tube, type 3A5.....	.....	.....	.....

**6. Nomenclature and Common Names**

A list of the nomenclature assignments for Public Address Set AN/UIH-1 and its components is given below. A common name is indicated after each item.

Nomenclature	Common name
Public Address Set AN/UIH-1.	Public address set.
Audio Frequency Amplifier AM-1830/UIH.	Audio amplifier.
Permanent Magnet Loudspeaker L-437/U.	Loudspeaker.
Magnetic Microphone M-86/U.	Microphone.
Battery Box CY-2301/UIH	Battery box.
Public Address Set Control C-2356/UIH-1.	Control unit.
Electrical Equipment Case CY-2550/UIH-1.	Accessory case.
Special Purpose Electrical Cable Assembly CX-4645/U.	Microphone extension cable.
Special Purpose Electrical Cable Assembly CX-4648/U.	Loudspeaker extension cable.
Special Purpose Electrical Cable Assembly CX-4646/U.	Control unit cable.
Special Purpose Electrical Cable Assembly CX-4647/U.	Control unit extension cable.
Electrical Power Cable Assembly CX-4649/U.	Dc power cable.

Nomenclature	Common name
Electrical Power Cable Assembly CX-4651/U.	Vehicular power cable.
Electrical Power Cable Assembly CX-4650/U.	Battery interconnection cable.
Special Purpose Electrical Cable Assembly CX-4652/U.	Telephone input cable.
Special Purpose Electrical Cable Assembly CX-4653/U.	Bridging cable.

**7. Description of Public Address Set**

The components of the public address set, including the spare parts, are shown in figure 1, and the interconnecting cables are shown in figure 2. The spare parts and the interconnecting cables are stored in the accessory case.

*a. Audio Amplifier (fig. 3).*

- (1) The audio amplifier operates from a 28-volt direct current (dc) power source.

The audio inputs to this unit may be connected from either local or remote stations. The local inputs are applied from either a microphone, reproducer, or another audio amplifier (bridging).

The remote station input to the audio amplifier is applied over telephone lines, through a telephone switchboard.

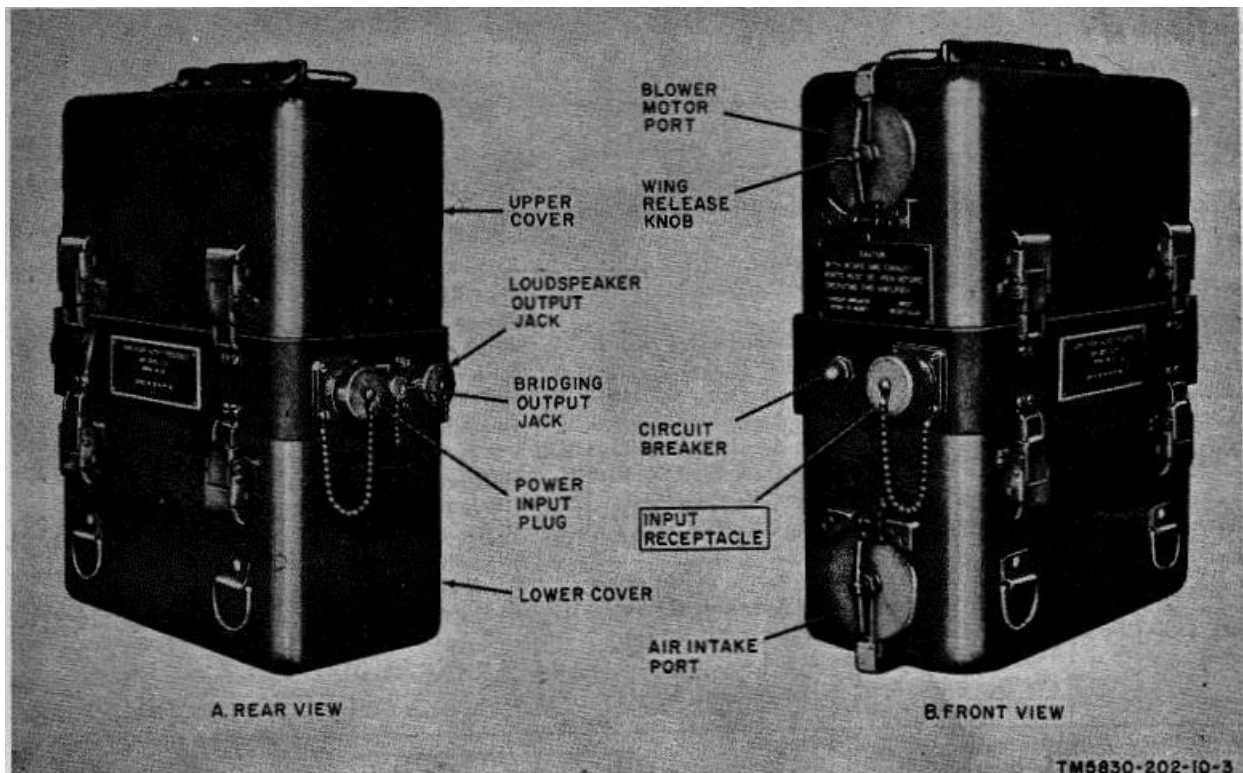


Figure 3. Audio Frequency Amplifier AM-1830/UIH.

- (2) A blower motor port on the upper cover and an air intake port on the lower cover permit air intake and exhaust for cooling the internal parts.
- (3) A circuit breaker is mounted on the side of the audio amplifier case and protects the audio amplifier against power overloads.
- (4) The loudspeaker output jack, bridging output jack, power input plug, and INPUT RECEPTACLE are used for interconnecting the equipment.

*b. Loudspeaker* (fig. 4). The loudspeaker is mounted on two sets of collapsible bayonet legs. Each set of legs is pivoted on opposite sides of the horn. The legs may be folded together and secured to the sides of the horn. The loudspeaker is fitted with an attached cable and plug for connection to the audio amplifier, either directly or through extension cables.

*c. Microphone* (fig. 5). The microphone contains a cushion-mounted cartridge and volume control. It is fitted with an attached 6-foot cable for connection to the control unit, either directly or through an extension cable.

*d. Battery Box* (fig. 1). Transparent windows on the side of the battery box permit inspection of the level of the electrolyte and the charge of the batteries without removing the batteries. During operation, each battery box contains seven storage cells BB-241/U (not supplied with the equipment) that must be installed by second echelon personnel.

*e. Control Unit* (fig. 6). The control unit connects, through the cables (f below), the microphone, telephone, or reproducer inputs to the audio amplifier. It contains a variable intensity meter lamp to permit viewing the built-in meter during blackout operations. A strap is attached for carrying or securing the control unit.

*f. Cables* (fig. 2). Nine cables are provided for interconnection of the equipment and for power connection to either the battery boxes or to a vehicular battery. By using the various extension cables the audio amplifier can be located approximately 50 feet from the microphone and 250 feet from the loudspeaker.

*g. Accessory Case* (fig. 1). Handles are secured to the sides of the accessory case for convenience in carrying the case.

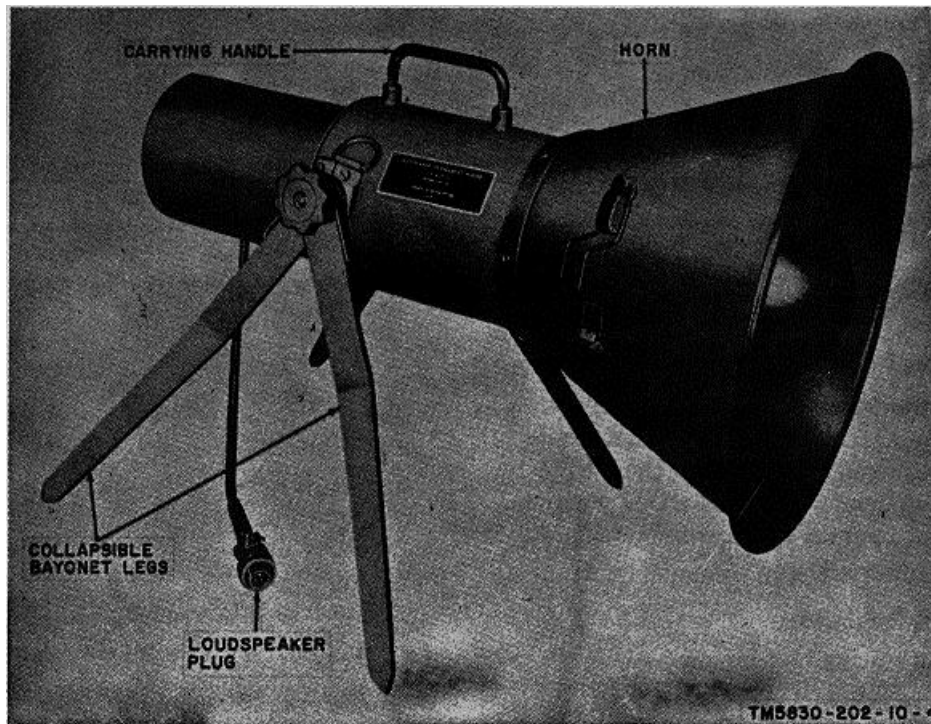


Figure 4. Permanent Magnet Loudspeaker LS-457/U.

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CHAPTER 2

OPERATING INSTRUCTIONS

Section I. OPERATION UNDER USUAL CONDITIONS

**Note**

Installation of the public address set should be performed by second echelon personnel.

**8. Damage from Improper Settings**

When the equipment is connected for use with a microphone, see that the AMPLIFIER switch (fig. 6) on the control unit is set to the OFF position. If this switch is left in the ON position, the amplifier will operate continuously and drain the batteries.

**9. Controls and Indicators**

a. *Microphone* (fig. 5).

Control	Function
Press-to-talk switch ....	Turns audio amplifier on and off.
Volume control .....	Adjusts volume of audio amplifier output.

b. *Control Unit* (fig. 6).

Control or indicator	Function						
AMPLIFIER ON-OFF switch.	Turns audio amplifier on or off.						
LIGHT ON-OFF switch.	Turns meter lamp on or off.						
PRESS FOR BATT VOLTS switch.	<table border="0"> <thead> <tr> <th>Sw Pos</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>Depressed</td> <td>Connects meter to indicate battery supply voltage on VOLTS DC range.</td> </tr> <tr> <td>Normal</td> <td>Connects meter to indicate output level of audio amplifier on DECIBELS range.</td> </tr> </tbody> </table>	Sw Pos	Function	Depressed	Connects meter to indicate battery supply voltage on VOLTS DC range.	Normal	Connects meter to indicate output level of audio amplifier on DECIBELS range.
Sw Pos	Function						
Depressed	Connects meter to indicate battery supply voltage on VOLTS DC range.						
Normal	Connects meter to indicate output level of audio amplifier on DECIBELS range.						
Meter .....	Indicates output level of audio amplifier or battery supply voltage, as selected by PRESS FOR BATT VOLTS switch.						
Meter lamp .....	Provides light for viewing meter during blackout operation.						

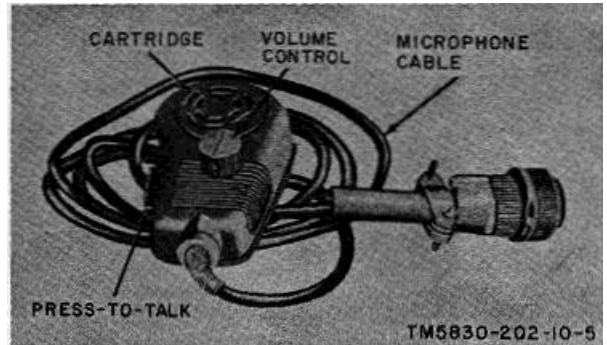


Figure 5. Magnetic Microphone M-88/U.

c. *Audio Amplifier* (fig. 3). The circuit breaker is depressed to reconnect the audio amplifier to the power source after the circuit breaker has been opened by a temporary overload.

**10. Operation, General**

a. To operate the equipment, perform the preliminary starting procedure (par. 11) and the applicable procedure listed below.

- (1) Microphone input operation (par. 12).
- (2) Reproducer input operation (par. 13).
- (3) Telephone input operation (par. 14).

b. When the equipment is installed so that a part of the output of the audio amplifier is fed to the input of another audio amplifier (bridging), the operational procedure is determined by the source of signal input (a(1) through (3) above) to the primary audio amplifier.

**11. Preliminary Starting Procedure**

Before operating the equipment, proceed as follows:

- a. Open the blower motor port (fig. 3) of the audio amplifier by twisting the wing release knob counterclockwise. The blower motor port is spring-loaded and will remain open when unlocked.
- b. Remove any foreign matter from the screen over the blower motor port.
- c. Open the air intake port of the audio amplifier by twisting the wing release knob counter-clockwise. The air intake port is spring-loaded and will remain open when unlocked.

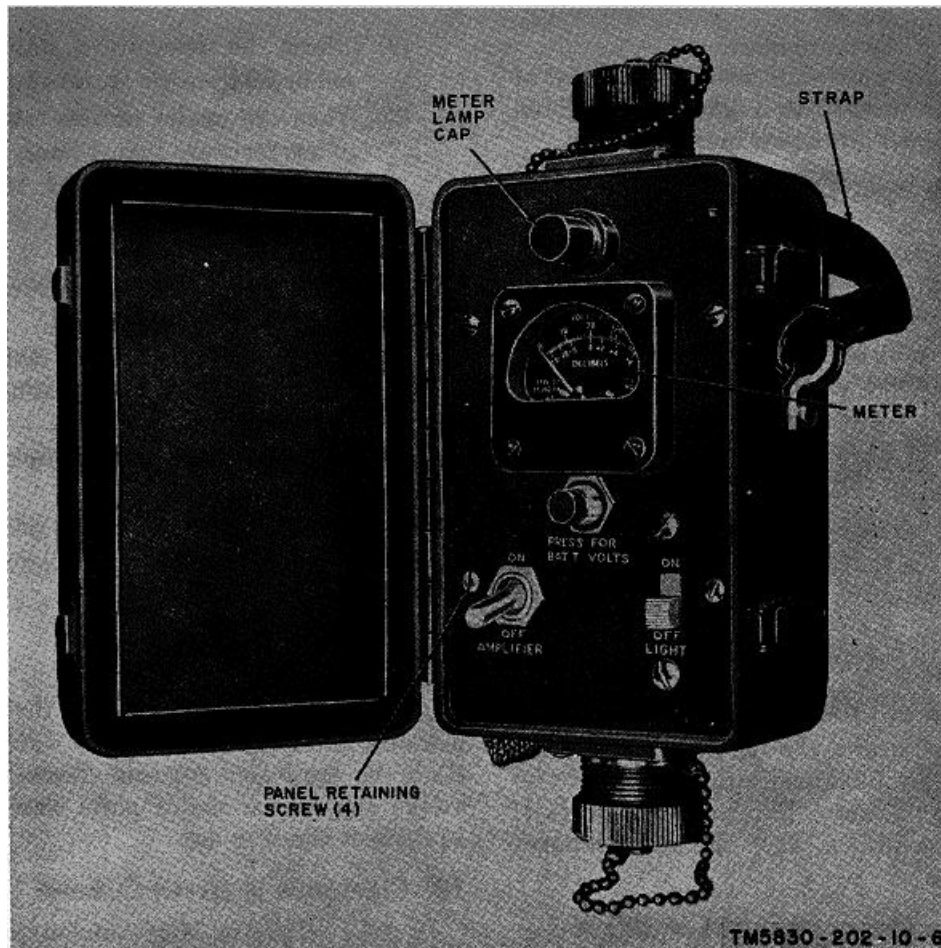


Figure 6. Public Address Set Control C-2566/UIH-1.

d. Remove any foreign matter from the screen over the air intake port.

## 12. Microphone Input Operation (fig. 5)

### a. Operating Procedure.

- (1) Set the volume control on the microphone to approximately midrange.

#### Note

**Be sure the AMPLIFIER switch on the control unit is set to OFF.**

- (2) Press in on the press-to-talk switch.
- (3) Commence speaking.

#### Note

**Keep the switch pressed in while the microphone is being used.**

- (4) Adjust the volume control for the desired loudspeaker output.

#### Note

**The amount of output will be determined by the size of the group being addressed and the area to be covered.**

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### b. Stopping Procedure.

- (1) Release the press-to-talk switch.
- (2) When the public address set will be out of use for more than 1 hour, perform the shut-down procedure (par. 15).

## 13. Reproducer Input Operation

### a. Operating Procedure.

- (1) Turn on the reproducer.
- (2) Adjust the reproducer output control to approximately midrange.
- (3) Set the AMPLIFIER switch (fig. 6) to the ON position.
- (4) Adjust the reproducer output level control for the desired loudspeaker output.

#### Note

**The amount of output will be determined by the size of the group being addressed and the area to be covered.**

### b. Stopping Procedure.

- (1) Set the AMPLIFIER switch to the OFF position.

- (2) Turn off the reproducer.
- (3) When the public address set will be out of use for more than 1 hour, perform the shut-down procedure (par. 15).

- (2) Inform the transmitting station that the public address set is turned off.
- (3) When the public address set will be out of use for more than 1 hour, perform the shut-down procedure (par. 15).

**14. Telephone Input Operation (fig. 6)**

*a. Operating Procedure.*

- (1) Set the AMPLIFIER switch to ON.
- (2) Advise the transmitting station that the public address set is in operation, and of the required volume control information.

**Note**

**It will be necessary for the operator of the public address set to maintain contact with the transmitting station during this type of operation.**

*b. Stopping Procedure.*

- (1) Set the AMPLIFIER switch to the OFF position.

**15. Shut-Down Procedure**

- a.* Remove any foreign matter from the screen over the blower motor port (fig. 3).
- b.* Close and lock the blower motor port by raising it into position and twisting the wing release clockwise.
- c.* Remove any foreign matter from the screen over the air intake port.
- d.* Close and lock the air intake port by raising it into position and twisting the wing release knob clockwise.

**Section II. OPERATION UNDER UNUSUAL CONDITIONS**

**16. Operation at Low Temperatures**

At low temperatures, the batteries used in the public address set have poor efficiency, and this may reduce the efficiency of the public address set. To avoid this condition, keep the battery boxes in a heated area.

**17. Operation Under Tropical Conditions**

In tropical climates, the equipment may be operated in swampy areas where extreme moisture conditions exist. The high relative humidity causes condensation of moisture on the equipment whenever the temperature of

the equipment becomes lower than that of the surrounding air. Keep the equipment dry and always keep the air intake and blower motor ports closed when the equipment is not in use.

**18. Operation in Desert**

Climates In desert climates, large amounts of sand may enter the moving parts of the public address set. Keep the equipment as free from sand as possible. Always keep the air intake and blower motor ports closed when the equipment is not in use.

## CHAPTER 3

### MAINTENANCE INSTRUCTIONS

#### 19. Scope of Operator's Maintenance

The following is a list of the maintenance duties normally performed by the operator of the public address set. These procedures do not require special tools or test equipment.

- a. Preventive maintenance (par. 20).
- b. Replacement of defective meter lamp and tubes (par. 22).
- c. Checking circuit breaker.
- d. Checking cable connections.

#### 20. Preventive Maintenance

a. *DA Form 11-288.* DA Form 11-238 (figs. 7 and 8) is a preventive maintenance checklist to be used by the operator. Items not applicable to the public address set are lined out in the figures. References in the ITEM( block in the figures are to paragraphs that contain additional maintenance information pertinent to the particular item. Instructions for the use of the form appear on the form.

b. *Items.* The information shown in this subparagraph is supplementary to DA Form 11-238.

The item numbers correspond to the ITEM numbers on the form.

Item	Maintenance procedures
2	Use a clean cloth to remove dust, dirt, moisture, and grease from the cases, the microphone, and the front-panel controls.
3	The control knob should work smoothly; it should be tight on the shaft, and should not bind. Be sure that it does not rub against the panel.
11	Clean the air intake and blower motor ports.

#### 21. Operational Checklist

a. *General.* The operational checklist will help the operator locate the trouble quickly. The corrective measures are used to repair this trouble.

If the measures suggested do not restore normal equipment performance, troubleshooting is required at a higher echelon. Note on the repair tag what corrective measures were taken and how the equipment performed at the time of failure.

b. *Procedure.* Follow the procedures below to check the equipment.

Item No.	Action	Normal Indication	Corrective measure
1	Set AMPLIFIER switch (fig. 6) to OFF position (microphone input only).		
2	Perform preliminary starting procedure (par. 11).	Blower motor port and air intake port open.	Turn in equipment for higher echelon repair.
3	Push LIGHT switch (fig. 6) to ON position and then to OFF position.	Meter lamp goes on and then off.	Replace meter lamp (par. 22a). Check circuit breaker (fig. 3).
4	Press the PRESS FOR BATT VOLTS switch (fig. 6).	Control unit meter (fig. 6) indicates battery voltage to be between 24 and 28 volts.	Check connections of battery cables. Check electrolyte level of batteries. If electrolyte falls below line add distilled water.
5	a. With microphone input set volume control (fig. 5) to midrange, depress the press-to-talk switch, and speak into microphone.  or b. Operate the public address set with reproducer input (par. 13) or telephone input (par. 14).	Audio level indicated on control unit meter (fig. 6) and voice output heard from loud-speaker.	Turn in equipment for higher echelon repair. Check all cable connections. Check for defective tube or tubes (par. 22b). With microphone input, replace microphone. Turn in equipment for higher echelon repair.



ADDITIONAL ITEMS FOR 2D AND 3D ECHELON INSPECTIONS		CONDITION	MAINTENANCE CHECK LIST FOR SIGNAL EQUIPMENT SOUND EQUIPMENT, RADIO, DIRECTION FINDING RADAR, CARRIER, RADIOSONDE AND TELEVISION (AR 750-625)																									
26. INSPECT ANTENNA FOR ECCENTRICITIES, CORROSION, LOOSE FIT, DAMAGED INSULATORS AND REFLECTORS.			EQUIPMENT NOMENCLATURE <b>PUBLIC ADDRESS SET AN/KUH-1</b>																									
27. CHECK FOR NORMAL OPERATION--																												
28. BEFORE SHIPPING OR STORING, REMOVE BATTERIES--																												
IF DEFICIENCIES NOTED ARE NOT CORRECTED DURING THE INSPECTION, INDICATE ACTION TAKEN FOR CORRECTION.			EQUIPMENT SERIAL NUMBER	<b>102</b>																								
<b>ITEM 11. METER WINDOW BROKEN ON CONTROL UNIT. REFERRED TO HIGHER ECHELON MAINTENANCE FOR REPAIR.</b>			<b>INSTRUCTIONS</b>																									
			This form may be used for a period of one month by using the correct dates and weeks of the month. It is to be used as a Preventive Maintenance check list for Signal equipment in actual use, or for a check on equipment prior to issue.																									
			<ol style="list-style-type: none"> <li>1. For detailed Preventive Maintenance instructions see:               <ol style="list-style-type: none"> <li>a. The Technical Manual (in TM 11 series) for the equipment. (See DA Pamphlet Number 310-4)</li> <li>b. The Supply Bulletin (SB 11-100 series) for the equipment. (See DA Pamphlet Number 310-4)</li> <li>c. The Department of the Army Lubrication Order. (See DA Pamphlet Number 310-4)</li> </ol> </li> <li>2. The following action will be taken by either the Communications Officer/Chief for 1st echelon, or the Inspector for higher echelon:               <ol style="list-style-type: none"> <li>a. Enter Equipment Nomenclature and Serial Number.</li> <li>b. Strike out items that do not apply to the equipment.</li> </ol> </li> <li>3. Operator/Inspector will enter in the columns entitled CONDITION, on the proper line, a notation regarding the condition, using symbols specified under LEGEND.</li> <li>4. After operator completes each daily inspection he will initial over the appropriate dates under "Daily Condition for Month", then return form to his supervisor.</li> </ol>																									
			TYPE OF INSPECTION																									
		<table border="1"> <thead> <tr> <th>OPERATOR</th> <th>2/3 ECHELON</th> <th>DATE</th> <th>SIGNATURE</th> </tr> </thead> <tbody> <tr> <td>✓</td> <td></td> <td>7 FEB 59</td> <td>John Jackson</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			OPERATOR	2/3 ECHELON	DATE	SIGNATURE	✓		7 FEB 59	John Jackson																
OPERATOR	2/3 ECHELON	DATE	SIGNATURE																									
✓		7 FEB 59	John Jackson																									

DA FORM 11-238  
MAY 51

REPLACES DA FORMS 11-238, 1 NOV 55; 11-239,  
11-244, 11-245, 11-248, 11-249, 11-250, AND 11-251;  
WHICH ARE OBSOLETE.

TN5630-202-10-9

Figure 7. DA Form 11-238, pages 1 and 4.

LEGEND for marking conditions: Satisfactory, Y. Adjustment, Repair or Replacement required, X. Defect corrected, (X).							DAILY CONDITION FOR MONTH OF																															
DAILY							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	2D 3D ECH- ELON
NO.	ITEM																																					
1.	COMPLETENESS AND GENERAL CONDITION OF EQUIPMENT (Antennas, masts, carrying cases, wires, cables, microphones, tubes, spare parts, technical manuals).						/																															
2.	CLEAN DIRT AND MOISTURE FROM ANTENNA, MICRO-PHONES, HEADSETS, KEYS, JACKS, PLUGS, COMPONENT PANELS. PAR. 21b						/																															
3.	INSPECT CONTROLS FOR NORMAL OPERATION. TAP CONTROLS LIGHTLY FOR EVIDENCE OF CUT-OUT FROM LOOSE CONTACTS. PAR. 21b						/																															
4.	CHECK FOR NORMAL OPERATION OF EQUIPMENT. BE ALERT FOR UNUSUAL OPERATION OR CONDITION. PAR. 11 AND 12 13, 14, OR 15						/																															
WEEKLY							CONDITION EACH WEEK					2D 3D ECH	ADDITIONAL ITEMS FOR 2D AND 3D ECHELON INSPECTIONS																		CONDITION							
5.	CLEAN AND TIGHTEN EXTERIORS OF CASES, BASKS, MOUNTS, TRANSMISSION LINES.						✓							16.	INSPECT SEALS OF READILY ACCESSIBLE PLUG-OUT ITEMS, TUBES, LAMPS, FUSES, CRYSALS, CONNECTORS, WAGERS, PLUG-IN SOLE.																							
6.	INSPECT CASES, MOUNTS, ANTENNA TOWERS AND EXPOSED METAL SURFACES FOR RUST, CORROSION.						✓							17.	INSPECT RELAYS AND CIRCUIT BREAKERS FOR LOOSE MOUNTING, BAD CONTACTS, MIS-ALIGNMENT OF CONTACTS AND SPRINGS, PROPER SPRING TENSION.																							
7.	INSPECT CORDS, CABLE, WIRE, SHOCK MOUNTS FOR CUTS, KINKS, BREAKS, FRAYING, UNDUE STRAIN.						✓							18.	INSPECT VARIABLE CAPACITORS FOR DIRT, MIS-ALIGNMENT OF PLATES, LOOSE MOUNTING, MOISTURE.																							
8.	CHECK ANTENNA GUY WIRING FOR PROPER TENSION OR DAMAGE.													19.	INSPECT RESISTORS, CUSHINGS AND INSULATORS FOR CRACKS, CHIPPING, DISCOLORING, MOISTURE, DISCOLORATION.																							
9.	INSPECT CANVAS AND LEATHER ITEMS FOR MILDEW, TEARS, FRAYING.						✓							20.	CLEAN AND TIGHTEN SWITCHES, TERMINAL BLOCKS, BLOWERS, RELAY CASES AND INTERIORS OF CHASSIS AND CASINGS NOT READILY ACCESSIBLE.																							
10.	INSPECT ACCESSIBLE ITEMS FOR LOOSENESS SWITCHES, KNOBS, JACKS, CONNECTORS, RELAYS, TRANSFORMERS, Meters, PILOT LIGHTS, BLOWERS, ETC.						✓							21.	INSPECT TERMINAL BLOCKS FOR LOOSE CONNECTIONS, CRACKS AND BREAKS.																							
11.	CLEAN AND/OR INSPECT AIR FILTERS, BRASS NAME PLATES, DIAL AND METER WINDOWS.						X							22.	INSPECT TERMINALS OF LARGE-FIXED CAPACITORS AND RESISTORS FOR DIRT, CORROSION, LOOSE CONTACTS.																							
12.	INSPECT STORAGE BATTERIES FOR DIRT, LOOSE TERMINALS, SPECIFIC GRAVITY, DAMAGED CASES. INSPECT DRY BATTERIES FOR LEAKAGE. PAR. 21b						✓							23.	INSPECT TRANSFORMERS, SHOCKS, POTENTIOMETERS AND RESISTORS FOR OVERHEATING AND OIL LEAKAGE.																							
ADDITIONAL ITEMS FOR 2D AND 3D ECHELON INSPECTIONS												CONDITION																										
13.	INSPECT SHELTERS AND COVERS FOR ADEQUACY OF WEATHER PROOFING, TEARS, FRAYING.													24.	INSPECT GENERATORS, AMPLIFIERS, SHOCK MOTORS FOR BRUSH WEAR, SPRING TENSION, ARMS AND FITTING OF COMMUTATOR.																							
14.	CHECK TERMINAL BOX COVERS FOR CRACKS, DIRT, LEAKS, DAMAGED CASINGS, CRACKS.													25.	INSPECT CATHODE RAY TUBES FOR BURN-IN SCREEN SPOTS.																							
														26.	INSPECT WATERPROOF CASINGS FOR LEAKS, GROMMETS OR LOOSE PARTS.																							

2

3

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Figure 8. DA Form 11-138, pages 2 and 3.

## 22. Repairs

The only repairs that the operator may perform are the replacement of the meter lamp and defective tubes.

- a. To replace the meter lamp, proceed as follows:
  - (1) Unscrew the meter lamp cap (fig. 6).
  - (2) Lift out the defective lamp.
  - (3) Insert the new lamp.
  - (4) Replace the meter lamp cap by screwing it down.

b. If a tube is obviously defective (cracked or broken), or if a tube is suspected of being defective (par. 21), proceed as follows:

### Note

**Be sure that the AMPLIFIER switch (fig. 6) is in the OFF position when a tube is being changed.**

- (1) Release the luggage catches and remove the upper cover (fig. 3) to expose the tubes (fig. 9).
- (2) Replace the defective tube, or the tube suspected of being defective, with a new tube.

### Note

**Before removing the driver tube or any one of the output amplifier tubes, disconnect the plate cap and then release and lift off the tube clamp.**

- (3) If the equipment remains inoperative, remove the new tube and put back the original tube.
- (4) Repeat the procedures given in (2) and (3) above until the defective tube is located.
- (5) Secure the tube clamps, replace the upper cover (fig. 3), and secure the luggage catches.

### Note

**If the equipment is not operative after checking the tubes, turn in the equipment for higher echelon maintenance.**

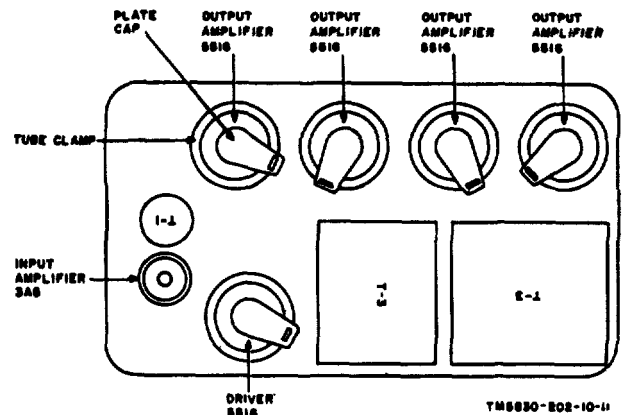


Figure 9. Tube location diagram.

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## CHAPTER 4

### DEMOLITION OF MATERIEL TO PREVENT ENEMY USE

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#### 23. Authority for Demolition

Demolition of the equipment will be accomplished only upon the order of the commander. The destruction procedures outlined in paragraph 24 will be used to prevent further use of the equipment.

#### 24. Methods of Destruction

Use any of the following methods to destroy the equipment:

*a. Smash.* Smash the controls, tubes, switches, capacitors, transformers, and meter; use sledges, axes, handaxes pickaxes, hammers, or crowbars.

*b. Cut.* Cut all cables and slash the shields; use axes, handaxes, or machetes.

*c. Burn.* Burn cords and technical manuals; use gasoline, kerosene, oil, flamethrowers, or incendiary grenades.

*d. Bend.* Bend panel and cases.

*e. Explode.* *If explosives are necessary, use firearms, grenades, or TNT.*

*f. Dispose.* Bury or scatter the destroyed parts in slit trenches, foxholes, or throw them into streams.

[AG 413.47 (5 Feb 59)]

**TAGO 4210A**

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

MAXWELL D. TAYLOR,  
*General, United States Army,*  
*Chief of Staff.*

Official:

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

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NG: State AG (3); unit same as Active Army except allowance is one copy to each unit.


USAR: None.

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

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## 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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