

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, FIELD AND DEPOT
 MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LISTS
 AND MAINTENANCE ALLOCATION CHART
 DYNAMIC LOUDSPEAKER LS-166/ U

Headquarters, Department of the Army, Washington 25, D. C.
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SECTION I
 INTRODUCTION

I. Scope

a. *General.* This manual contains operator, organizational, field and depot maintenance repair parts and special tools lists arranged as follows:

- (1) Section II lists items supplied for initial operation. End items of equipment are issued on the basis

of allowances prescribed in equipment authorization tables and other documents which are a basis for requisitioning.

- (2) Section III lists repair parts authorized for organizational maintenance and is a basis for requisitioning by organizations which are

*This manual supersedes TM 11-5965-222-15P, 6 July 1959.

authorized the major item of equipment.

- (3) Section IV lists the quantities of repair parts for third echelon field maintenance and is a basis for requisitioning parts.

b. Columns.

- (1) *Source, maintenance, and recoverability code.* Source, maintenance, and recoverability codes indicate the technical service responsible for supply, the 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 310-2 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.* This column indicates the point within the maintenance system where the part is available. "P" indicates that the repair part is a high mortality part; procured by technical services, stocked in and supplied from the technical service depot system, and authorized for use at indicated maintenance echelons. "P1" indicates that the repair part is a low mortality part; procured by technical services, stocked only in and supplied from technical service key depots, and authorized for installation at indicated maintenance echelons.

(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). "H" — Field maintenance (4th echelon). "D" — Depot maintenance (5th echelon).

(d) *Column D.* Not used.

(2) *Federal stock number.* This column lists the 11-digit Federal stock number. In the absence of a Federal stock number, an interim number, for example ††L8Ra41C-12 in the description column, indicates that a Federal stock number is being processed for assignment. The L number may be used in emergencies to identify items.

(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 the supply term 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; non-expendable 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.

(8) *Quantity incorporated in unit.* This column lists the quantity of each part found in a given assembly, component, or equipment.

(9) *Organizational.* See paragraph 6.

(10) *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.

(11) *Field (fourth echelon).* See paragraph 5.

(12) *Depot (fifth echelon).* See paragraph 5.

(13) *Illustrations.* Not used.

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. 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.

$$\begin{array}{r} \text{Specific number of equipment supported} \\ \times \frac{\text{allowance factor}}{100} = \end{array}$$

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.

4. Maintenance of Equipment

This equipment shall not be maintained above third echelon. When unrepairable at third echelon, the equipment shall be salvaged.

5. Stockage

No parts authorized for stockage at fourth and fifth echelon.

6. 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.

7. Comments or 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 Materiel Support Agency, ATTN: SIGMS-ML, Fort Monmouth, N. J.

SECTION II. FIRST ECHELON FUNCTIONAL PARTS LIST

(1) SOURCE MAINTENANCE AND RECOVERABILITY CODE	(2) FEDERAL STOCK NUMBER	(3) DESIGNATION BY MODEL	(4) DESCRIPTION	(5) UNIT OF ISSUE	(6) EXPENDABILITY	(7) QUANTITY AUTHORIZED	(8) (9) ILLUSTRATIONS	
							FIGURE NO.	ITEM NO.
			ITEMS COMPRISING AN OPERABLE EQUIPMENT					
			DYNAMIC LOUDSPEAKER LS-166/U					
	5965-248-6420		DYNAMIC LOUDSPEAKER LS-166/U: 8 ohm voice coil impedance; 2 w normal, 3 w peak input; 4 in cone; incl transf; SigC dwg No. SC-DL-9677	ea	NX			
			DYNAMIC LOUDSPEAKER LS-166/U (Basic Component)	ea	NX	1		
			RUNNING SPARES AND ACCESSORY ITEMS					
			DYNAMIC LOUDSPEAKER LS-166/U					
			NO PARTS AUTHORIZED FOR STOCKAGE AT FIRST ECHELON.					

SECTION III. SECOND ECHELON FUNCTIONAL PARTS LIST

(1) SOURCE MAINTENANCE AND RECOVERABILITY CODE	(2) FEDERAL STOCK NUMBER	(3) DESIGNATION BY MODEL	(4) DESCRIPTION	(5) UNIT OF ISSUE	(6) EXPENDIBILITY	(7) QUANTITY INCORPORATED IN UNIT	(8) ORGANI- ZATIONAL 15 DAYS MAINTENANCE ALLOWANCE PER 100 EQUIPMENTS	(9) ILLUSTRATIONS		(10)
								FIGURE NO.	ITEM NO.	
			DYNAMIC LOUDSPEAKER LS-166/U				2ND			
	5965-243-6420		DYNAMIC LOUDSPEAKER LS-166/U: 8 ohm voice coil impedance; 2 w normal, 3 w peak input; SigC dwg No. SC-DL-2677	ea	NX					
	5306-753-4294		BOLT, MACHINE: sq head; No. 3/8 -24; 2-5/16 in lg; SigC dwg No. SC-B-53361	ea	X	1	*			
	5965-378-5475		BRACKET: mtg; T-shape; SigC dwg No. SC-B-5680	ea	X	1	*			
	5355-404-9699		KNOB: bar type; accom rd double flattened shaft	ea	X	1	*			
	5310-753-4295		NUT, PLAIN, ROUND: No. 3/8 -24; 3/4 in od x 1/8 in thk; SigC dwg No. SC-B-3360-C	ea	X	1	*			
	5310-595-9676		NUT, PLAIN, WING: No. 3/8 -24; approx 1.5/32 in body dim; Parker-Kalon dwg No. S19-21476, size D	ea	X	1	*			
			SCREW, ASSEMBLED WASHER: slot drive; bind h; 0.138 in -32; 1/2 in lg; ++ L9W23-5	ea	X	4	*			

SECTION IV. THIRD, FOURTH AND FIFTH ECHELON FUNCTIONAL PARTS LIST

SOURCE MAINTENANCE AND RECOVERABILITY CODE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			(10)	(11)		(12)						
								FEDERAL STOCK NUMBER	DESIGNATION BY MODEL	DESCRIPTION		UNIT OF ISSUE	EXPENDABILITY		QUANTITY INCORPORATED IN UNIT	FIELD			FIGURE NO	ITEM NO
																15 DAYS MAINTENANCE ALLOWANCE PER 100 EQUIPS	3RD	4TH		
		5965-243-6420																		
P1 O		5306-753-4294																		
P1 O		5965-378-5475																		
P1 F		5975-351-6114																		
P1 F		5965-092-1475																		
P1 F		6145-220-9395																		
P1 F		5830-351-8167																		
P1 F		5965-702-7257																		
P1 F		5380-292-2156																		
P1 F		5330-351-4192																		
P1 O		5355-404-9699																		
P1 F		5830-351-8167																		
P1 F		5965-280-3801																		
P1 O		5310-753-4295																		
P1 O		5310-595-9676																		
P1 O																				
P1 F		5930-399-7765																		
P1 F		5930-645-6382																		

SECTION V

MAINTENANCE ALLOCATION

8. General

a. This section assigns maintenance functions and repair operations to be performed by the lowest appropriate maintenance echelon.

b. Columns in the maintenance allocation chart are as follows:

- (1) *Part or component.* This column shows only the nomenclature or standard item name. Additional descriptive data is included only where clarification is necessary to identify the part. Components and parts comprising a major end item are listed alphabetically. Assemblies and subassemblies are in alphabetical sequence with their components listed alphabetically immediately below the assembly listing.
- (2) *Maintenance function.* This column indicates the various maintenance functions allocated to the echelon capable of performing the operations.
 - (a) *Service.* To clean, to preserve, and to replenish fuel and lubricants.
 - (b) *Adjust.* To regulate periodically to prevent malfunction.
 - (c) *Inspect.* To verify serviceability and to detect incipient electrical or mechanical failure by scrutiny.
 - (d) *Test.* To verify serviceability and to detect incipient electrical or mechanical failure by use of special equipment such as gages, meters, etc.
 - (e) *Replace.* To substitute service assemblies, subassemblies, and parts for unserviceable components.
 - (f) *Repair.* To restore an item to serviceable condition through correction of a specific failure or unserviceable condition. This function includes but is not

limited to, inspecting, cleaning, preserving, adjusting, replacing, welding, riveting, and straightening.

- (g) *Align.* To adjust two or more components of an electrical system so that their functions are properly synchronized.
 - (h) *Calibrate.* To determine, check, or rectify the graduation of an instrument, weapon, or weapons system, or components of a weapons system.
 - (i) *Rebuild.* To restore an item to a standard as near as possible to original or new condition in appearance, performance, and life expectancy. This is accomplished through the maintenance technique of complete disassembly of the item, inspection of all parts or components, repair or replacement of worn or unserviceable elements using original manufacturing tolerances and/or specifications and subsequent reassembly of the item.
 - (j) *Overhaul.* To restore an item to completely serviceable condition as prescribed by serviceability standards developed and published by heads of technical services. This is accomplished through employment of the technique of "Inspect and Repair Only as Necessary" (IROAN). Maximum utilization of diagnostic and test equipment is combined with minimum disassembly of the item during the overhaul process.
- (3) *1st, 2d, 3d, 4th, 5th echelon.* The symbol X indicates the echelon responsible for performing that particular maintenance operation, but does not necessarily indicate that repair parts will be stocked at that level. Echelons higher than

the echelon marked by X are authorized to perform the indicated operation.

- (4) *Tools required.* This column indicates codes assigned to each individual tool equipment, test equipment, and maintenance equipment referenced. The grouping of codes in this column of the maintenance allocation chart indicates the tool, test, and maintenance equipment required to perform the maintenance function.
- (5) *Remarks.* Entries in this column will be utilized when necessary to clarify any of the data cited in the preceding columns.

c. Columns in the allocation of tools for maintenance functions are as follows:

- (1) *Tools required for maintenance functions.* This column lists tools, test, and maintenance equipment

required to perform the maintenance functions.

- (2) *1st, 2d, 3d, 4th, 5th echelon.* The dagger (†) symbol indicates the echelons allocated the facility.
- (3) *Tool code.* This column lists the tool code assigned.

9. Mounting Hardware

The basic entries of the maintenance allocation chart do not include mounting hardware such as screws, nuts, bolts, washers, brackets, clamps, etc.

10. Maintenance by Using Organizations

When this equipment is used by signal services organizations organic to theater headquarters or communication zones to provide theater communications, those maintenance functions allocated up to and including fourth echelon are authorized to the organization operating this equipment.

SECTION VI. MAINTENANCE ALLOCATION CHART

(1) PART OR COMPONENT	(2) MAINTENANCE FUNCTION	(3) 1ST ECH.	(4) 2ND ECH.	(5) 3RD ECH.	(6) 4TH ECH.	(7) 5TH ECH.	(8) TOOLS REQUIRED	(9) REMARKS
LOUDSPEAKER, DYNAMIC LS-166/U	service		X				5	
	inspect	X					3	
	test		X		X		1, 2, 4 6	
	repair			X			6	
	rebuild					X	6	
	replace		X				5	
	replace			X				
	replace			X				
	replace			X				
	replace			X				
BRACKET CABINET, LOUDSPEAKER	replace			X				
	replace			X				
	replace			X				
	replace			X				
	replace			X				
	replace			X				
	replace			X				
	replace			X				
	replace			X				
	replace			X				
CABLE CONNECTOR, PLUG	replace			X				
	replace			X				
	replace			X				
	replace			X				
	replace			X				
	replace			X				
	replace			X				
	replace			X				
	replace			X				
	replace			X				
GASKETS	replace		X				5	
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
KNDS	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
LABEL	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
LOUDSPEAKER	replace							
	replace							
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	replace							
	replace							
	replace							
	replace							
	replace							
NUT, PLAIN, WING	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
SWITCH, ROTARY	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
	replace							
TRANSFORMER	replace							
	replace							
	replace							
	replace							
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	replace							
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	replace							
	replace							
	replace							

SECTION VII. ALLOCATION OF TOOLS FOR MAINTENANCE FUNCTIONS

(1) TOOLS REQUIRED FOR MAINTENANCE FUNCTIONS	(2) 1ST ECH.	(3) 2ND ECH.	(4) 3RD ECH.	(5) 4TH ECH.	(6) 5TH ECH.	(7) TOOL CODE	(8) REMARKS
LS-116/U (continued)							
AMPLIFIER AM-93/T1					+	1	
AUDIO OSCILLATOR TS-382/U					+	2	
MULTIMETER AM/IRM-105		+			+	3	To be standardized. Use Multimeter ME-77/U as an interim item
OUTPUT METER TS-585/U					+	4	
TOOL EQUIPMENT TE-41		+				5	
TOOL EQUIPMENT TE-113					+	6	

By Order of Secretary of the Army:

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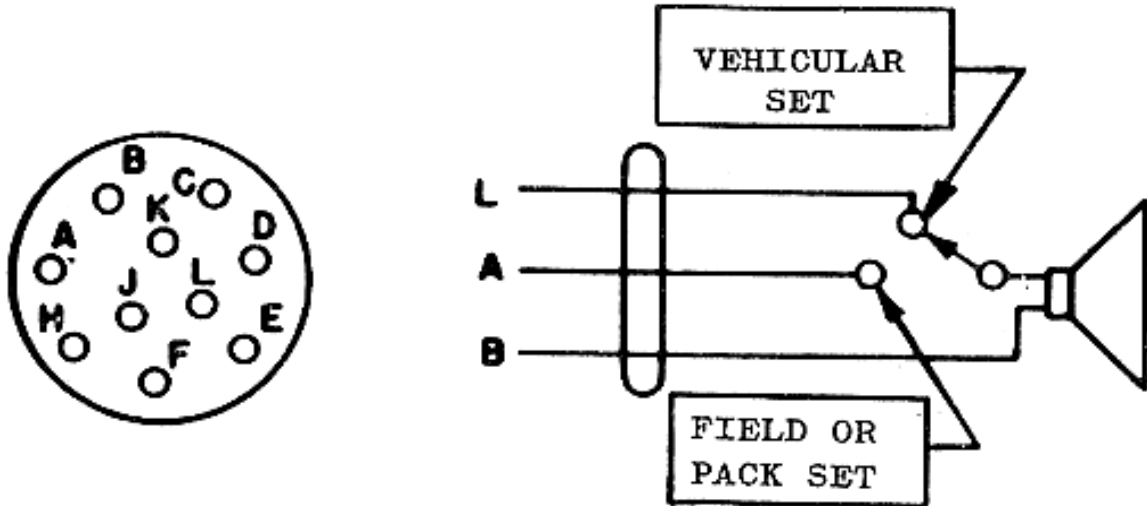
Active Army:

DASA (6)	USA Caribbean Sig Agcy (1)	7-25	17-27
USASA (2)	USA Sig Msl Spt Agcy (12)	7-26	17-45
CNGB (1)	USASSA (20)	7-27	17-46
Tech Stf, DA (1) except	USASSAMRP (1)	8-15	17-51
CSigO (15)	Army Pictorial Cen (2)	8-16	17-52
USCONARC (4)	USAOMC (3)	8-75	17-55
USAARTYBD (1)	USA Trans Tml Comd (1)	8-77	17-56
USAARMBD (2)	Army Tml (1)	8-78	17-57
USAIB (1)	POE (1)	9-47	17-65
USARADB (2)	OSA (1)	9-87	17-66
USAABELCTBD (1)	AMS (1)	9-227	17-85
USAAVNBD (1)	Sig Fld Maint Shops (2)	9-377	17-86
USAATBD (1)	JBUSMC (2)	9-500 (AA-AC)	19-29
ARADCOM (2)	Units org under fol TOE:	9-510	29-51
ARADCOM Rgn (2)	(1 copies each UNOINDC)	11-5	29-55
OS Maj Comd (2)	1-7	11-6	29-56
OS Base Comd (2)	1-17	11-7	32-57
LOGCOMD (2)	1-37	11-8	32-67
MDW (1)	1-67	11-15	39-61
Armies (2)	5-5	11-16	44-12
Corps (5)	5-6	11-32	44-235
USATC AD (2)	5-7	11-55	44-236
USATC Armor (2)	5-8	11-57	44-237
USATC Engr (2)	5-15	11-85	44-435
USATC FA (2)	5-16	11-86	44-436
USATC Inf (2)	5-17	11-96	44-437
Svc Colleges (2)	5-115	11-97	44-445
Br Svc Sch (2)	5-116	11-117	44-446
GENDEP (2) except	5-117	11-155	54-447
Atlanta GENDEP (None)	5-118	11-165	44-448
Sig Sec, GENDEP (5)	6-37	11-166	44-535
Sig Dep (12)	6-100	11-167	44-536
Ft Monmouth (63)	6-101	11-500 (AA-AE, RA-RT) (4)	44-537
Pueblo Ord Dep (5)	6-300	11-555	44-544
AFIP (1)	6-310	11-557	44-545
WRAMC (1)	6-565	11-587	44-546
AFSSC (1)	6-575	11-592	44-547
USAEPG (2)	6-576	11-597	44-548
EMC (1)	7-	17-	55-11
USACA (2)	7-2	17-2	55-500
USASEA (1)	7-11	17-25	(AA-AE)
	7-12	17-26	57-

NG: None.

USAR: None.

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



Dynamic Speaker LS-166/U Schematic