

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

**OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL
SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL
TOOLS LISTS (INCLUDING DEPOT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS);
LOUDSPEAKER, PERMANENT MAGNET LS-454/U
(FSN 5965-876-2375)**

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* This manual supersedes TM 11-5965-255-15P, 20 July 1962.

SECTION 1 INTRODUCTION

1-1. Scope

This manual lists basic issue items, items troop installed or authorized, repair parts, and special tools required by the crew/operator for operation and required for the performance of organizational, direct support, general support, and depot maintenance of the LS-454/U. The PCCN for the LS-454/U is GCWAJX for all models.

1-2. General

This basic issue items, items troop installed or Authorized, repair parts, and special tools list is divided into the following sections —

a. *Basic Issue Items List - Section II.* Not applicable.

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

c. *Prescribed Load Allowance (PLA) - Section IV.* Not applicable.

d. *Repair Parts List - Section V.* A list of repair parts authorized for the performance of maintenance at the organizational level This repair parts list is arranged in alphabetical order.

e. *Special Tool, Test and Support Equipment - Section VI.* Not applicable.

f. *Repair Parts List - Section VII.* A list of repair parts authorized for the performance of maintenance at the direct support, general support, and depot level.

g. *Special Tools, Test and Support Equipment - Section VIII.* Not applicable.

h. *Index - Federal Stock Number and Reference Number Cross-Reference to Figure and Item Number - Section IX.* A list, in ascending numerical sequence, of all Federal stock numbers appearing in the listings, followed by a list, in alphanumeric sequence, of all reference numbers appearing in the listings. Federal stock number and reference numbers are cross-referenced to each illustration figure and item number or reference designation appearance.

1-3. Explanation of Columns

The following provides an explanation of columns found in the tabular list.

a. *Source, Maintenance, and Recoverability Codes (SMR).*

(1) *Source code.* Indicates the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are —

<i>Code</i>	<i>Explanation</i>
PA —	Item procured and stocked for anticipated or known usage.
PB —	Item procured and stocked for insurance purposes because essentiality dictates that a minimum quantity be available in the supply systems.
PC —	Item procured and stocked and which otherwise would be coded PA except that it is deteriorative in nature.
PD -	Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or outfitting. Not subject to automatic replenishment.
PE —	Support equipment procured and stocked for initial issue or outfitting to specified maintenance repair activities.
PF --	Support equipment which will not be stocked but which will be centrally procured on demand.
PG —	Item procured and stocked to provide for sustained support for the life of the equipment. It is applied to an item peculiar to the equipment which because of probable discontinuance or shutdown of production facilities would prove uneconomical to reproduce at a later time.
KD —	An item of depot overhaul/repair kit and not purchased separately. Depot kit defined as a kit that provides items required at the time of overhaul or repair.
KF —	An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational or direct support or general support levels of maintenance.
KB —	Item included in both a depot overhaul/repair kit and a maintenance kit.
MO —	Item to be manufactured or fabricated at organizational level.
MF —	Item to be manufactured or fabricated at direct support maintenance level.
MH —	Item to be manufactured or fabricated at general support maintenance level.
MD —	Item to be manufactured or fabricated at depot maintenance level.
AO —	Item to be assembled at organizational level.

<i>Code</i>	<i>Explanation</i>
AF —	Item to be assembled at direct support maintenance level.
AH —	Item to be assembled at general support maintenance level.
AD —	Item to be assembled at depot maintenance level.
XA —	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
XB —	Item is not procured or stocked. If not available through salvage, requisition.
XC —	Installation drawing, diagram instruction sheet, field service drawing, that is identified by manufacturers' part number.
XD —	Support items can be requisitioned with justification.

NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above except those coded XA and aircraft support items as restricted by AR 700-42.

(2) *Maintenance code.* Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code Format as follows —

(a) *Use (third position).* The maintenance code entered in the third position indicates the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position indicates one of the following levels of maintenance.

<i>Code</i>	<i>Application/Explanation</i>
O —	Support item is removed, replaced, used at the organizational level of maintenance.

NOTE

A code "C" may be used in this position to denote crew or operator maintenance performed within organizational maintenance.

F —	Support item is removed, replaced, used at the direct support maintenance level.
H —	Support item is removed, replaced, used at the general support maintenance.
D —	Support items that are removed, replaced, used at depot only.

(b) *Repair (fourth position).* The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance

functions). When a maintenance code is not used a dash (-) sign is entered. For multi-service equipment/systems or when a code is entered, this position will contain one of the following maintenance codes as assigned by the service(s) that require the code —

<i>Code</i>	<i>Application/Explanation</i>
O —	The lowest maintenance level capable of complete repair of the support item is the organizational level.
F —	The lowest maintenance level capable of complete repair of the support item is direct support.
H —	The lowest maintenance level capable of complete repair of the support item is general support.
D —	The lowest maintenance level capable of complete repair of the support item is the depot level.
L —	Repair restricted to designated Specialized Repair Activity.
Z —	Non-repairable. No repair is authorized.
B —	No repair is authorized. The item may be reconditioned by adjusting, lubricating, etc., at the user level. No parts or special tools are procured for the maintenance of this item.

(3) *Recoverability code.* Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the uniform SMR Code Format as follows —

<i>Code</i>	<i>Explanation</i>
Z —	Nonrepairable item. When unserviceable, condemn and dispose at the level indicated in the first digit of the Maintenance code.
O —	Repairable item. When uneconomically repairable, condemn and dispose at organizational level.
F —	Repairable item. When uneconomically repairable, condemn and dispose at the direct support level.
H —	Repairable item. When uneconomically repairable, condemn and dispose at the general support level.
D —	Repairable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.
L —	Repairable item. Repair, condemnation, and disposal not authorized below depot/Specialized Repair Activity level.
A —	Item requires special handling or condemnation procedures because of specific

<i>Code</i>	<i>Explanation</i>
	reasons (i.e., precious metal content, high dollar value, critical material or hazardous material).

b. Federal Stock Number. Indicates the Federal stock number assigned to the item.

NOTE

For requisitioning purposes, the Federal stock number must be converted to the National stock number by adding “-00-” after the Federal stock classification (FSC) code (first four digits). For example, FSN 6625-553-0142 converts to NSN 6625-00-553-0142.

c. Description. Indicates the Federal item name and a minimum description required to identify the item. The last line indicates the reference number followed by the applicable Federal Supply Code for Manufacturer (FSCM) in parentheses. The FSCM is used as an element in item identification to designate manufacturer or distributor or Government agency, etc., and is identified in SB 708-42.

d. Unit of Measure (U/M). Indicates the standard or basic quantity by which the listed item is used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation, e.g., ea, in, pr, etc., and is the basis used to indicate quantities and allowances in subsequent columns. 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.

e. Quantity Furnished with Equipment (Basic Issue Items Only). Not applicable.

f. Quantity Authorized (Items Troop Installed or Authorized Only). Not applicable.

g. Quantity Incorporated in Unit. This column indicates the quantity of the item used in the equipment.

h. 15-Day Organizational Maintenance Allowances.

(1) The repair parts indicated by an asterisk in the allowance column represent those authorized for use at the organizational category, and will be requisitioned on an “as required” basis, until stockage is based on demand in accordance with AR 710-2.

(2) Major Army commanders are authorized to approve reduction in the range of support items authorized for use in units within their commands. Recommendations for increase in range of items authorized for use will be forwarded to the Commander, US Army Electronics Command, ATTN: AMSEL-MA-CW, Fort Monmouth, N.J., 07703.

(3) Allowance quantities are indicated in the special tools list section for special tools, TMDE, and other support equipment.

i. 30-Day DS/GS Maintenance Allowances.

NOTE

Allowances in GS column are for GS maintenance only.

(1) The repair parts indicated by asterisk entries in separate allowance columns for DS and GS represent those authorized for use at that category of maintenance to be requisitioned on an “as required” basis, until stockage is based on demand in accordance with AR 710-2.

(2) Allowance quantities are indicated in the special tool lists section for special tools, TMDE, and other support equipment.

j. 1-Year Allowances Per 100 Equipments/Contingency Planning Purposes. Column intentionally left blank

k. Depot Maintenance Allowance Per 100 Equipments. This column indicates opposite the first appearance of each item the total quantity authorized for depot maintenance of 100 equipments.

l. Illustration. Not applicable.

1-4. Special Information

Usable on codes are included in column 3. Uncoded items are applicable to all models. Identification of the usable on codes used in this publication are —

<i>Code</i>	<i>Used on</i>
BRJ	LS-454/U

1-5. Location of Repair Parts

a. This manual contains one cross reference index (see IX) to be used to locate a repair part when either the Federal stock number or reference number (manufacturer’s part number) is known. The first column in the index is prepared in numerical or alphanumeric sequence in ascending order. The reference numbers (manufacturer’s part numbers) are listed immediately following the last listed Federal stock number in the index of Federal stock numbers.

b. When the Federal stock number or reference number is known, follow the procedures given in (1) and (2) below.

(1) Refer to the index of Federal stock numbers (see IX), and locate the Federal stock number or reference number. The FSN and reference number are cross-referenced to the applicable figure and item number or reference designation.

(2) Refer to the repair parts list (see V and VII) and locate the figure number (col 7a — 20P,

10a — 34P) and item number or reference designation (col 7b— 20P, 10b — 34P) as noted in the FSN index.

c. When the figure and item number or reference designation are known, scrutinize columns 7a and 7b — 20P and 10a and 10b — 35P, of the repair parts list (see V and VII), until the item is located.

d. When the FSN, reference number, figure number, and item number are not known, scrutinize column 3 of the repair parts list (see V and VII), which is arranged in alphabetical order.

1-6. Abbreviation

Not applicable.

1-7. Reporting of Equipment Manual 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 Blank Forms) and forwarded direct to Commander, US Army Electronics Command, ATTN: AMSEL-MA-CW, Fort Monmouth, NJ 07703.

1-8. Items Comprising An Operable Equipment

Loudspeaker, Permanent Magnet LS-454/
U — FSN 5965-892-3538.

SECTION V

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR CODE USABLE ON CODE		(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALV				(7) ILLUSTRATION	
						(*)	(*)	(*)	(*)	(a)	(b)
						1-5	6-20	21-50	51-100	FIGURE NO.	ITEM NO.
PAQZZ		BRACKET NO-REF-DESIG W/6, T SHAPE STERL. 1-...		EA	1	*	*	*	*		
		1/16 IN LG X 5/8 IN WD X 1/2 THK SCB5680 (80063)									
XD022		NUT PLAIN WING NO-REF-DESIG 3/8 IN (0.375) IN-		EA	1	*	*	*	*		
		24 QQP41611C (81348)									
XD022		WASHER, LOCK NO-REF-DESIG 0.692 IN OD X 3/8 IN		EA	1	*	*	*	*		
		ID X 0.035 IN THK AN9306010A (81349)									

SECTION VII

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REFERENCE NUMBER & MFR. CODE USABLE ON CODE		(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE			(7) 30-DAY GS MAINT ALLOWANCE			(8) 1-YR ALW PER 100 EQUIP CNTGCTY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION	
						(a)	(b)	(c)	(a)	(b)	(c)			(a)	(b)
						1-20	21-50	51-100	1-20	21-50	51-100			FIGURE NO.	ITEM NO.
PAQZZ	5965-378-5475	BRACKET NO-REF-DESIG MTG, T SHAPE STEEL, 1-9/16 IN LG X 5/8 IN WD X 1/2 THK SCB5680 (80063)		EA	1	*	*	*	*	*	*		2		
PAFZZ	5995-815-4682	CABLE ASSEMBLY, SPECIAL PURPGE NO-REF-.. DESIG 5 FT 6 IN LG C/A, 24 AWG, 2 STRANDED, RUBBER INSULATED SMC436330 (80063)		EA	1	*	*	*	*	*	*		5		
XDOZZ		NUT PLAIN WING NO-REF-DESIG 3/8 IN..... (0.375) IN-24 QWP41611C (81348)		EA	1	*	*	*	*	*	*				
XDOZZ		WASHER, LOCK NO-REF-DESIG 0.692 IN OD X. 3/8 IN ID X 0.035 IN THK AN936A616A (81349)		EA	1	*	*	*	*	*	*				

SECTION IX

INDEX - FEDERAL STOCK NUMBER AND REFERENCE NUMBER
CROSS-REFERENCE TO FIGURE AND ITEM NUMBER

STOCK NUMBER	FIGURE NO.	ITEM NO.	STOCK NUMBER	FIGURE NO.	ITEM NO.
			5965-178-5475		
			5995-815-4682		

By Order of the Secretary of the Army:

FRED C. WEYAND
General, *United States Army*
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

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To be distributed in accordance with DA Form 12-51, organizational maintenance requirements for AN/VRC-12, AN/VRC-43, AN/VRC-44, AN/VRC-45, AN/VRC-46, AN/VRC-47, AN/VRC-48, & AN/VRC-49.

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NO.

TABLE
NO.

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AND WHAT SHOULD BE DONE ABOUT IT.

TEAR ALONG PERFORATED LINE

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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 dekagram = 10 grams = .35 ounce
 1 hectogram = 10 dekagrams = 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

To change	To	Multiply by	To change	To	Multiply by
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

PIN: 014501-000