

KS-19796 HEAD TELEPHONE SETS PIECE-PART AND REPLACEMENT PROCEDURES

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1. GENERAL

1.01 This section covers the maintenance of the KS-19796, L1 through L15 and L1A through L15A head telephone sets, all Mfr Disc. and replaced by KS-20778, L101B, L103B through L115B and L117B in Section 028-351-501. These headsets are intended for use by PBX attendants, PBX supervisors, FAA personnel in 4-wire circuits, and FAA personnel in 6-wire circuits. They may also be used with

jack equipped telephone sets, CALL DIRECTOR® telephones, and consoles.

1.02 The reasons for reissuing this section are indicated below. Revision arrows are used to indicate major changes. The Equipment Test List is not affected.

(1) To rate the KS-19796 head telephone sets Mfr Disc. and to show in paragraph 1.01 the continuation of coverage of these sets. Since all KS-19796 head telephone sets are Mfr Disc., no further reference of Mfr Disc. will be made to this section

(2) To add KS-19796, L54 through L58, to the piece part data

(3) To warn against parallel operation of KS-19796 and KS-19796 Series A Head Telephone Sets

(4) To include KS-19796, Series A information in Fig. 2 and 3 and Table A.

1.03 The KS-19796, L1A through L15A, head telephone sets use silicone semiconductor amplifiers while the L1 through L15 sets used germanium semiconductors. The L1A through L15A head telephone sets are identified by the grey plastic plug housing and the stamping "KS-19796 A-Series" on the amplifier housing cover. The L1 through L15 sets have a black plug housing.

Warning 1: The L1A through L15A head telephone sets are not compatible with the L1 through L15 sets for parallel operation. Only connect in parallel sets having the same color plug housings. Avoid parallel use of sets having different color plug housings.

Warning 2: The L1 through L15 head telephone sets manufactured between

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August 1976 and June 1977 have silicone semiconductor amplifiers. They are identified by the date stamp on the amplifier housing. These should be modified as follows: Replace the amplifier case L37, L38, or L39 with L37A, L38A, or L39A, respectively, per paragraph 3.10. For L1 through L9 head telephone sets, replace plug housing 396A with 464A-61 per paragraph 3.09. For L10 through L15 sets, replace plug 425A with 425A-61 per paragraph 3.09.♦

1.04 Part 2 of this section covers the piece-part numbers and the corresponding names of the parts for which it is practical to replace in the maintenance of KS-19796 head telephone sets. No attempt should be made to replace parts not designated. This part also contains explanatory figures illustrating the different parts.

1.05 Part 4 of this section covers the approved replacement procedures for those parts covered in Part 2.

1.06 ♦The KS-19796, L25, and KS-19796, L28, black pouches and the 840360242 blue pouch are rated Mfr Disc. Replacement pouches and their applications are listed in paragraph 2.04. The 10423-00 pouch is non-gusseted while the 06677-00 is a gusseted pouch.♦

2. PIECE-PART DATA

2.01 The acoustic coupler (Fig. 1) is a small spoon-shaped rubber device which interposes in the transmission path a small piece of polyurethane foam and two sintered-metal acoustic resistance discs. This device, fitted on the speaking end of the acoustical tube, places the resistance discs into the transmission path improving the transmission in the presence of noise, provided the headset is properly worn.

2.02 Figure 2 and 3 show the relationship of the various parts of the KS-19796, L2A and L13A, head telephone sets. The piece-part numbers of these parts are given together with the names as listed by the Western Electric Company Merchandise Department. Replacement parts will be available until present stocks are depleted.

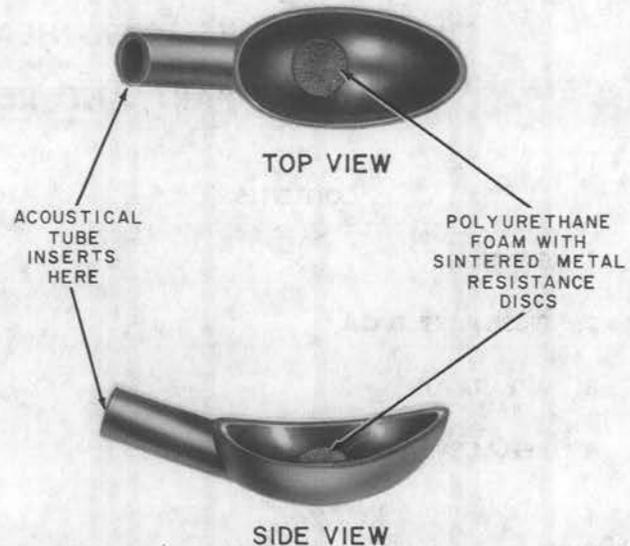


Fig. 1—Acoustic Coupler, KS-19796, L52 (PAC1)

2.03 When ordering replacement parts, give both the piece-part number and the name; for example: Tube, Acoustical Assembly, KS-19796, L36. Do not refer to the BSP number.

2.04 Table A lists the principal uses, cords, and associated parts for the KS-19796 head telephone sets. In addition to those items listed in Table A, the following replaceable parts may also be ordered by list numbers or part numbers:

KS-19796, L26	Clip, Capsule
KS-19796, L29	Clip, Belt
KS-19796, L30	Pad
KS-19796, L35A	Ear Piece Assembly Kit
KS-19796, L36	Tube, Acoustical Assembly
KS-19796, L52	(PAC1), Coupler, Acoustic
KS-19796, L54A	♦Earpiece, Size 1, Pkg of 12
KS-19796, L54A	Earpiece, Size 1, Pkg of 25
KS-19796, L55A	Earpiece, Size 2, Pkg of 12
KS-19796, L55A	Earpiece, Size 2, Pkg of 25

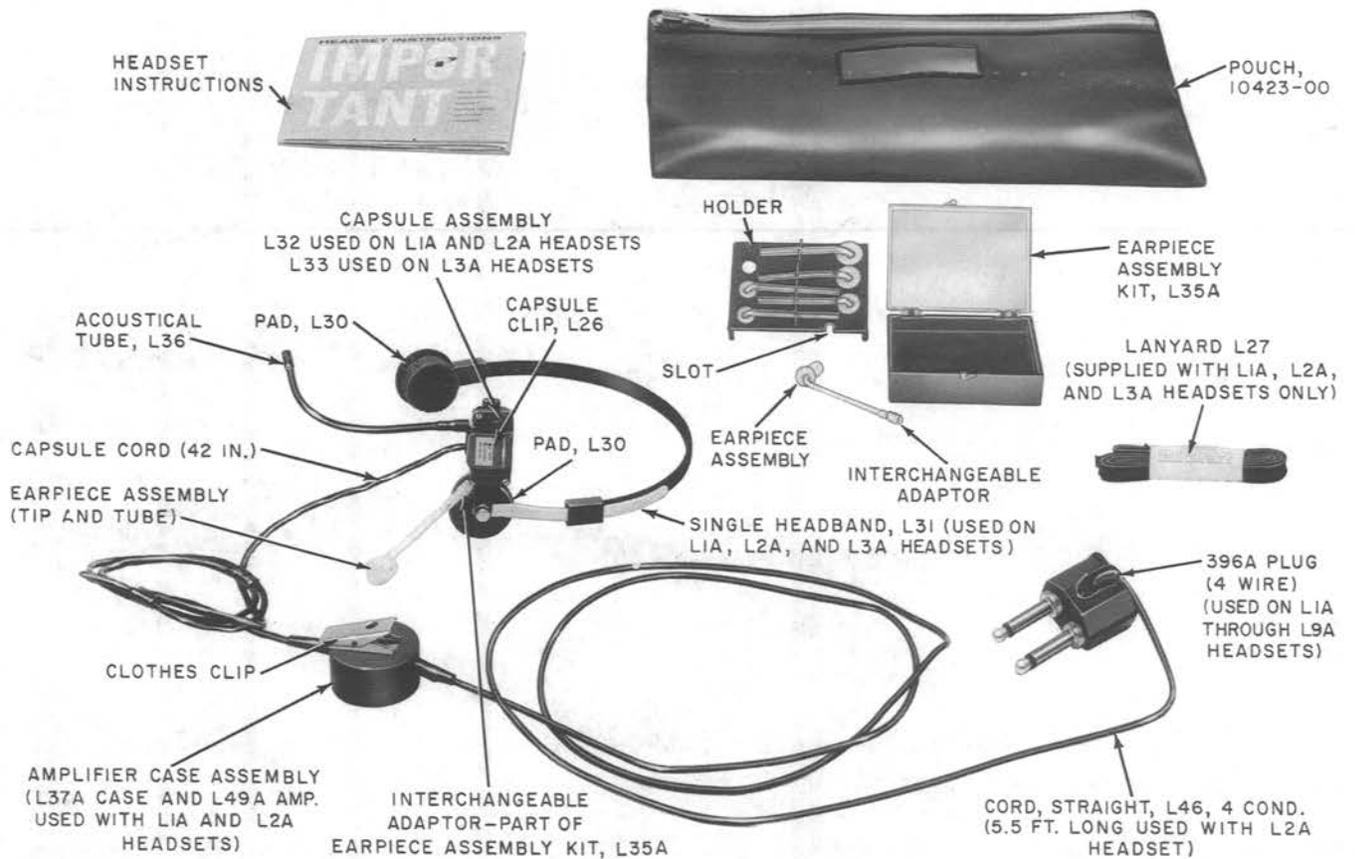


Fig. 2—KS-19796, L2A, Head Telephone Set

KS-19796, L56A	Earpiece, Size 3, Pkg of 12	KS-19796, L58A	Earpiece, Size 5, Pkg of 25
KS-19796, L56A	Earpiece, Size 3, Pkg of 25	KS-19796, L59A	Earpiece, Size 6, Pkg of 12
KS-19796, L57A	Earpiece, Size 4, Pkg of 12	KS-19796, L59A	Earpiece, Size 6, Pkg of 25
KS-19796, L57A	Earpiece, Size 4, Pkg of 25	10423-00	Pouch for L1A and L2A Head Telephone Sets
KS-19796, L58A	Earpiece, Size 5, Pkg of 12	06677-00	Pouch for L3A through L15A Head Telephone Sets

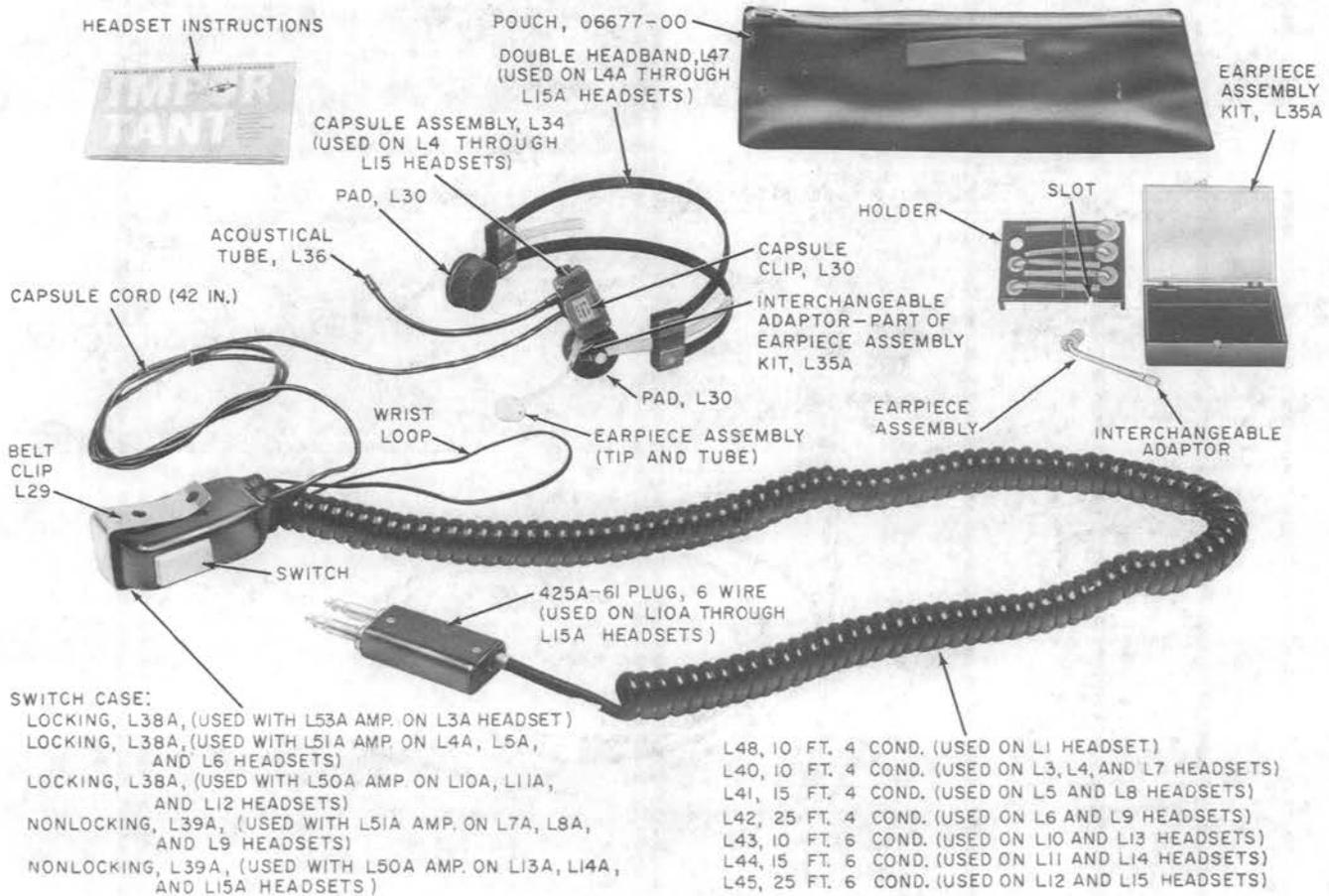


Fig. 3—KS-19796, L13A, Head Telephone Set

TABLE A - PRINCIPAL USES, CORDS, AND ASSOCIATED PARTS FOR KS-19796 HEAD TELEPHONE SETS

HEAD TELEPHONE SET*	FOR USE BY	CORD		PLUG	HEAD-BAND	LAN-YARD	CAPSULE ASSEMBLY		CASE ASSEMBLY		AMPLIFIER ASSEMBLY		
		TYPE	LENGTH (FEET)				RCVR (OHMS)	CORD (IN.)	AMP.	CASE	AMP	NON-LOCK SWITCH CASE	LOCKING SWITCH CASE
L1A	PBX Attendant	L48 Spring, 4 Cond.	10	464A-61	L31 Single	L27	L32 300	36	L49A	L37A			
L2A	PBX Attendant	L46 Non-Spring 4 Cond.	5.5	464A-61	L31 Single	L27	L32 300	36	L49A	L37A			
L3A	PBX Supervisor	L40 Spring, 4 Cond.	10	464A-61	L31 Single	L27	L33 300	36			L53A		L38A
L4A	FAA Personnel 4-Wire Ckt.	L40 Spring, 4 Cond.	10	464A-61	L47 Double		L34 600	36			L51A		L38A
L5A	FAA Personnel 4-Wire Ckt.	L41 Spring, 4 Cond.	15	464A-61	L47 Double		L34 600	36			L51A		L38A
L6A	FAA Personnel 4-Wire Ckt.	L42 Spring, 4 Cond.	25	464A-61	L47 Double		L34 600	36			L51A		L38A
L7A	FAA Personnel 4-Wire Ckt.	L40 Spring, 4 Cond.	10	464A-61	L47 Double		L34 600	36			L51A	L39A	
L8A	FAA Personnel 4-Wire Ckt.	L41 Spring, 4 Cond.	15	464A-61	L47 Double		L34 600	36			L51A	L39A	
L9A	FAA Personnel 4-Wire Ckt.	L42 Spring, 4 Cond.	25	464A-61	L47 Double		L34 600	36			L51A	L39A	
L10A	FAA Personnel 6-Wire Ckt.	L43 Spring, 6 Cond.	10	425A-61	L47 Double		L34 600	36			L50A		L38A
L11A	FAA Personnel 6-Wire Ckt.	L44 Spring, 6 Cond.	15	425A-61	L47 Double		L34 600	36			L50A		L38A
L12A	FAA Personnel 6-Wire Ckt.	L45 Spring, 6 Cond.	25	425A-61	L47 Double		L34 600	36			L50A		L38A
L13A	FAA Personnel 6-Wire Ckt.	L43 Spring, 6 Cond.	10	425A-61	L47 Double		L34 600	36			L50A	L39A	
L14A	FAA Personnel 6-Wire Ckt.	L44 Spring, 6 Cond.	15	425A-61	L47 Double		L34 600	36			L50A	L39A	
L15A	FAA Personnel 6-Wire Ckt.	L45 Spring, 6 Cond.	25	425A-61	L47 Double		L34 600	36			L50A	L39A	

Note: All list numbers are prefixed by KS-19796.

* L1 through L15 are Mfr Disc. replaced by L1A through L15A.

3. APPARATUS

3.01 List of Tools and Materials

CODE OR SPEC NO.	DESCRIPTION
TOOLS	
KS-6854	3-1/2 Inch Screwdriver
—	3/16-Inch Wrench
AT-7739	3-Inch B Screwdriver
AT-7825	3-Inch C Screwdriver
AT-7860	B Long-Nose Pliers
MATERIALS	
—	3M Insulation Adhesive No. 35

4. REPLACEMENT PROCEDURES

4.01 No attempt shall be made to repair either the capsule, headbands, amplifier, acoustical tube, or the acoustic coupler. These items shall be returned in accordance with local instructions to the Western Electric Company for exchange or repair by the manufacturer.

4.02 After making replacement of parts which affect transmission, check the headset to see that it meets the tests specified in Section 028-350-501.

4.03 Acoustical Tube: To remove the acoustical tube for replacement, grasp the tube at the end nearest the capsule with the thumb and forefinger and turn in a counterclockwise direction until the tube is removed. Reverse this procedure for installing the new tube and finger tighten.

Caution: Do not bend the acoustical tube since it has been shaped by the manufacturer for best results.

4.04 Acoustic Coupler: To remove the acoustic coupler, grasp the acoustical tube adjacent to the coupler with one hand and with the other hand carefully slip the coupler off the end of the tube. To install a new coupler, slip the end of the acoustical tube into the end of the coupler until the end of the tube is against the inside

shoulder of the coupler. Make sure the coupler is mounted with the spoon-shaped side toward the lips of the user.

4.05 Headband Pads: When either or both of the headband pads require replacement, both pads should be replaced at the same time. The pad should be cemented to headband, using 3M Insulation Adhesive, No. 35.

4.06 Interchangeable Adaptor: To remove the adaptor from the earpiece assembly, wedge the adaptor in the slot of the holder with the slot edges between the adaptor shoulder and the end of the tube (Fig. 4). Work the tubing off the adaptor shaft with the fingers. It may also be removed by inserting the finger nails between the adaptor shoulder and the end of the tubing. **Do not elongate the tubing.** Work the tubing of the replacement earpiece assembly onto the adaptor shaft with the fingers until the end of the tubing is tight against the adaptor shoulder.

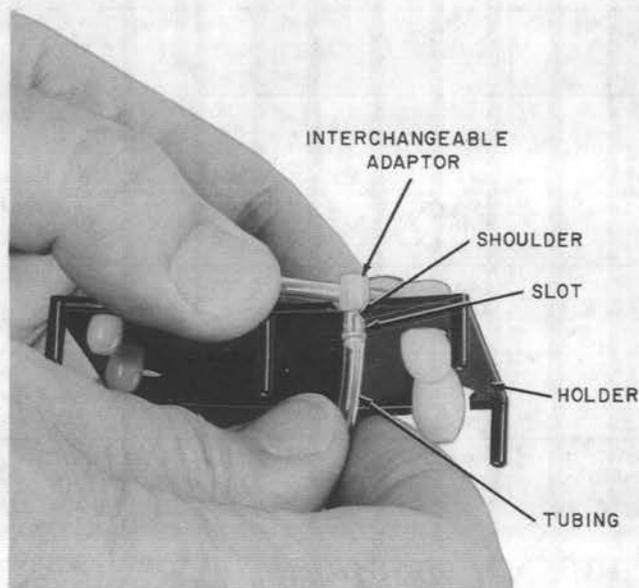


Fig. 4—Adaptor in Holder Slot for Removal of Earpiece Assembly

4.07 Earpiece Assembly: Earpiece assembly is removed and replaced in the manner as covered in paragraph 4.06.

4.08 425A or 464A Plug: Remove the plug shell assembly screws, remove the cord

terminal screws, and remove the cord from the plug shell. Replace new parts as required. Insert the cord into the plug shell, securing the cord tips to the plug fingers with the terminal screws and tighten screws securely. Reassemble the plug shell.

4.09 To remove the plug cord or capsule cord from either type of amplifier case, proceed as follows:

L37A Assembly Case

Remove the single screw in the center of the top of the case (side away from clothing clip). Lift off top of case to expose wire terminals. To remove wire terminals from terminal posts, grasp terminal with B long-nose pliers and withdraw straight up and out. Reverse procedure for installing new cord. See Fig. 5 for exploded view of L37A assembly case.

L38A and L39A Switch Cases

Remove the two Phillips head screws (bright screws) which hold the belt clip to the switch case. Slide the belt clip away and lift off the top of the case. This will expose the cord ends. To remove the wire terminals from the terminal posts, grasp the wire terminal with B long-nose pliers and withdraw straight up and out. Reverse procedure for installing new cord. See Fig. 6 for exploded view of L38A and L39A switch cases.

4.10 To replace the amplifier assembly in the L37A assembly case, proceed as in paragraph 4.09. After all the wires have been

disconnected, lift the amplifier assembly out with the fingers. Install new assembly, replace wires on terminals paying attention to color coding, and replace cover. See Fig. 7 for wiring diagram.

4.11 To replace the amplifier assembly in the L38A and L39A switch cases, proceed as in paragraph 4.09. After all the wires have been disconnected, remove the two hexagon stand-offs which secure the assembly to the case, and lift the assembly out with the fingers. Install new assembly, replace the stand-offs and tighten firmly. Replace wires, paying attention to color coding, and replace cover and belt clip. See Fig. 8 for wiring diagram.

4.12 To change a pushbutton in the L38A or L39A switch case, remove the belt clip and one-half of the case as outlined in paragraph 4.09. Remove the stand-off nuts which secure the amplifier assembly and with the fingers carefully lift the assembly from the case. ***Avoid the use of any tool as the amplifier assembly can be easily damaged.*** Loosen the two nylon hex nuts, which were under the amplifier, about three turns. Pull the pushbutton upwards and rock until it slips free. To insert a new button, center the spring on the spring hold projection and then reverse the foregoing procedure.

4.13 To change the bottom half of an L38A or L39A switch case, remove belt clip, upper half of case and amplifier assembly. Remove the two nylon hex nuts and lift out switch bracket assembly. Using the new half of the switch case, assemble in the reverse of the foregoing procedure.

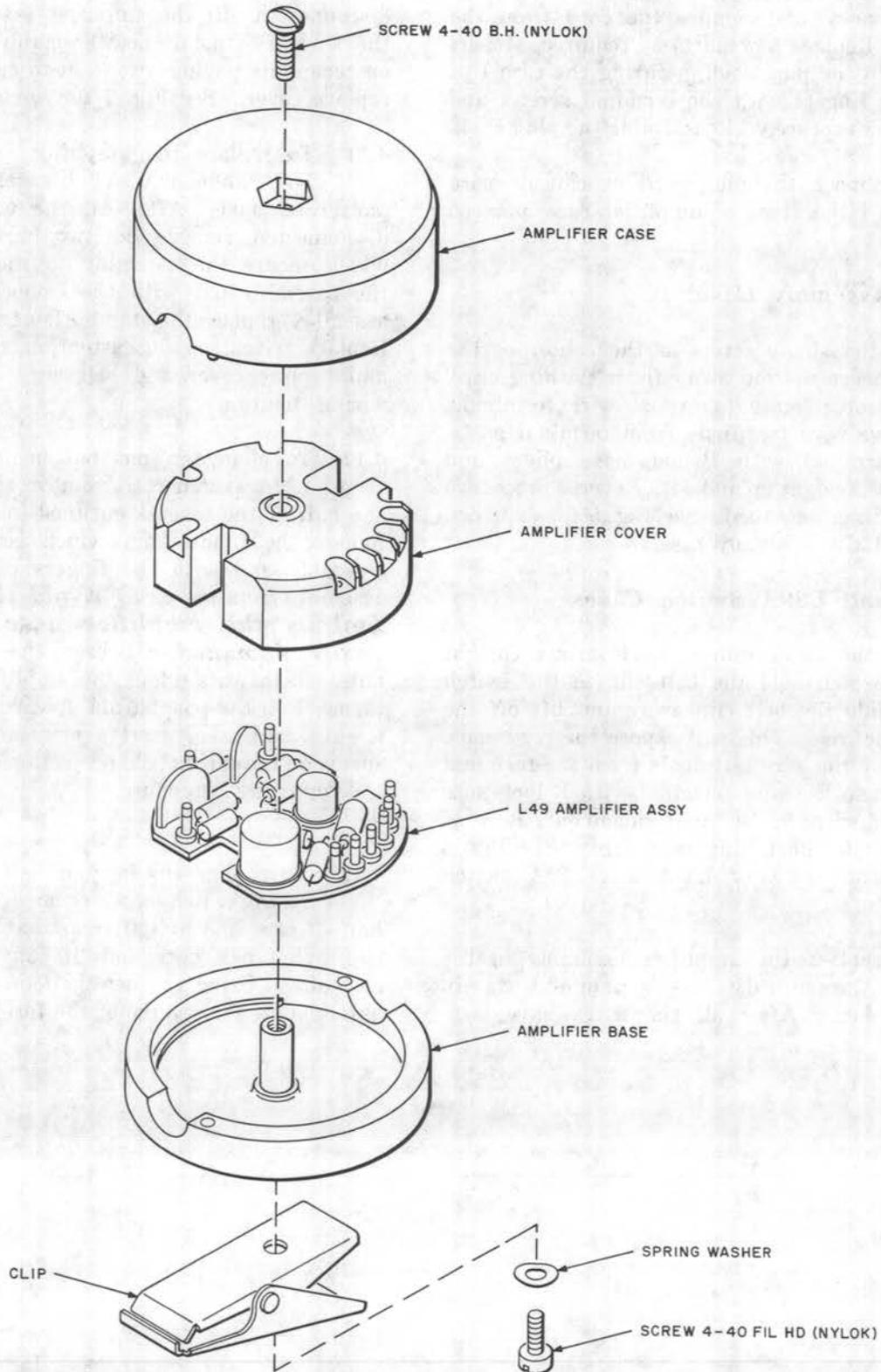


Fig. 5—L37A Assembly Case, Exploded View

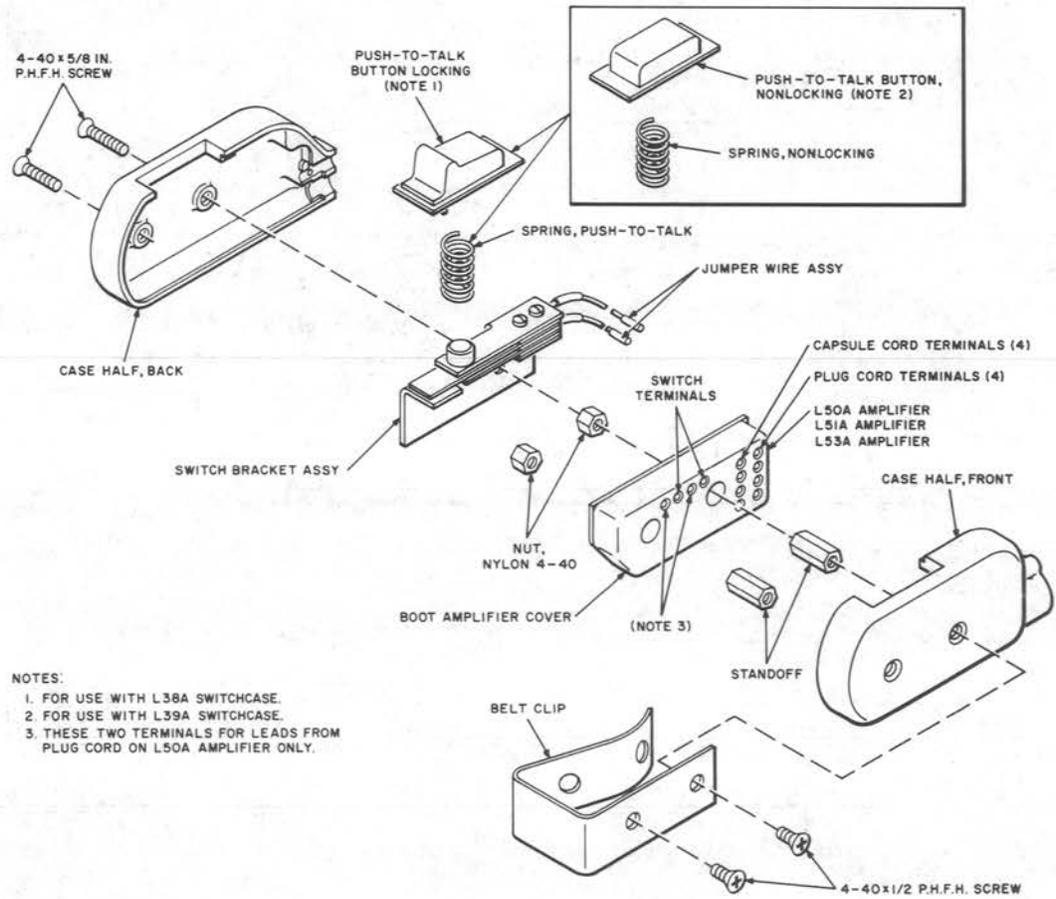


Fig. 6—L38A and L39A Switch Cases, Exploded View

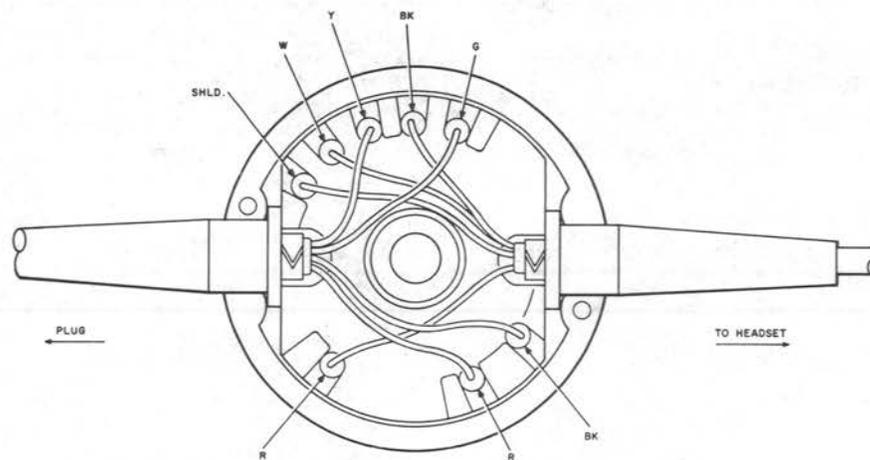
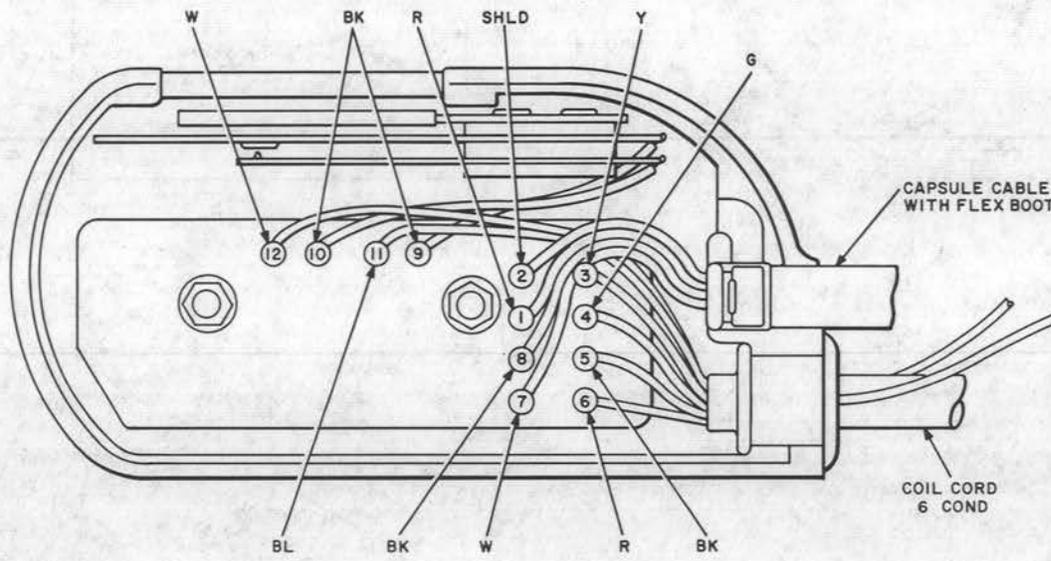
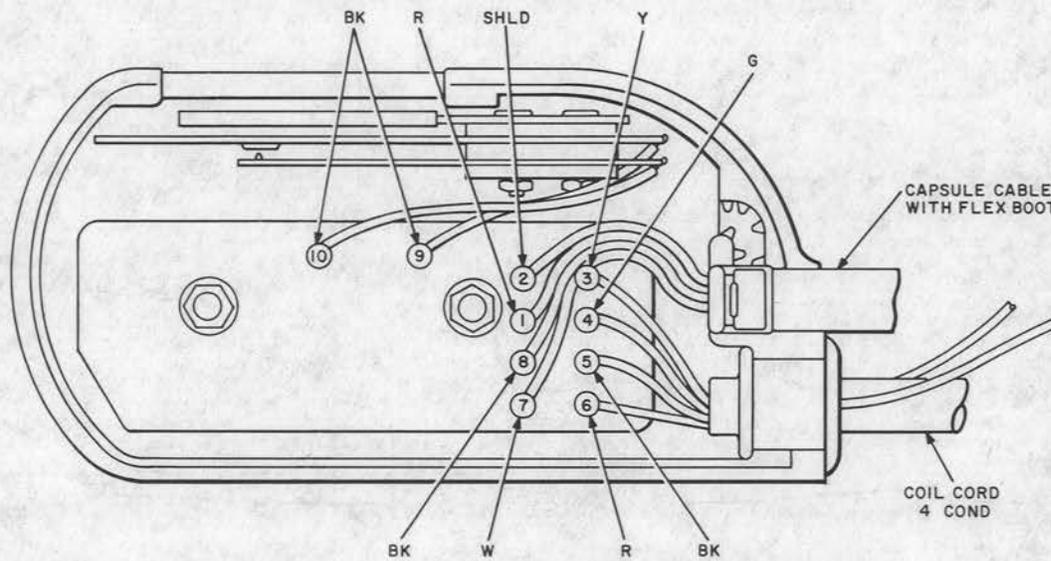


Fig. 7—Wiring Diagram for L49A Amplifier



L50A



L51A AND L53A

Fig. 8—Wiring Diagram for L51A, L52A, and L53A Amplifiers