

1022A-, 1023A-, 1024A-, 1024B-, 1026A-, 1027A-, AND 1028A-TYPE HEADSETS PIECE-PART DATA AND REPLACEMENT PROCEDURES

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6. 1028A-Type Headset	12	1. GENERAL	
7. 280A-50 Amplifier	13	1.01 This section covers information necessary for ordering parts to be used in the repair of 1022A-, 1023A-, 1024A-, 1024B-, 1026A-, 1027A-, and 1028A-type headsets. It also covers approved pro- cedures for repairing and cleaning these sets.	
8. Capacitor, Housing Assembly, and Cover (Part of 1024A and 1024B Headset)	14	1.02 The reasons for reissue are to add the 1028A- type headset and to revise the List of Tools	
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NOTICE

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and Materials. Revision arrows are used to emphasize significant changes.

1.03 Part 3 of this section covers piece parts which are practicable to replace in the field. Part 3 also contains explanatory figures showing the different parts.

1.04 Part 4 covers approved replacement procedures. Replace only those items that are identified by piece part numbers. No attempt should be made in the field to replace parts not so designated.

2. APPARATUS

2.01 *List of Tools and Materials:* The following is a list of tools and materials that should be available for use in making the repairs and adjustments described in this section.

TOOLS	DESCRIPTION
◆1253	Screw-Starter (quick wedge or equivalent)◆
R-8950	Syringe
AT-7825	3-inch C Screwdriver
AT-7860	B Long-Nose Pliers
KS-2348	Cord Repair Screwdriver (equipped with P-484700 bit)
KS-6584	3-1/2 Inch Screwdriver
◆KS-21233,L1	Test Fixture (for convenient servicing of 280A amplifier)
—	Wire Stripper◆

MATERIALS

KS-2423	Cloth
—	Mild Powdered Soap
—	Mild Detergent

3. PIECE-PART DATA

3.01 Figures 1 through 13 show the relationship of the various parts of the head telephone sets.

The piece-part numbers of these parts are given together with the names as listed by the Western Electric Merchandise Department.

3.02 When ordering replacement parts, give both the piece-part number and the name; for example: P-48V110 screw. Do not refer to the section number.

3.03 Information enclosed by parentheses () is not ordering information. This information may be references to notes, parts referred to in other portions of the section and not considered replaceable, or part names in general use in the field if these names differ from those assigned by the manufacturer.

3.04 The 1022A-type headsets are available in black (-3) only. The 1023A-, 1024A-, 1024B-, 1026A-, 1027A-, and ◆1028A-type◆ headsets are available in ivory (-50) color only.

4. REPLACEMENT PROCEDURES

4.01 ◆On the 1028A-type headset, no attempt shall be made to repair either the printed wiring board, speech tube assembly, or transmitter and boot assembly since these components are replaceable as complete units. These items should be returned in accordance with local instructions to the Western Electric Company.◆

4.02 After making replacement of parts, check the headset to see that it meets the tests specified in Section 028-371-501.

4.03 ◆**280A-50 Amplifier (Fig. 7):** To replace the amplifier, proceed as follows:

Note: Assembly fixture KS-21233, L1, is available to assist in the disassembly and assembly of the 280A-50 amplifier. The fixture traps all loose parts. The 1253 screw starter is useful for starting the terminal board screws.

- (1) With the 3-inch C screwdriver, remove the two housing screws; lift off cover assembly.
- (2) Using the KS-2348 and KS-6854 screwdrivers, remove terminal screw and remove the LACJ cord from the amplifier.
- (3) With the new amplifier, connect the cord as shown in Fig. 14 and assemble the parts in reverse order of disassembly.

- (4) Dress the leads as originally positioned.

4.04 Profiling Assembly Associated With 280-A-50 Amplifier (Fig. 7): Remove the profiling assembly as follows:

- (1) With the 3-inch C screwdriver, remove the two housing screws and lift off cover assembly.
- (2) Using the KS-2348 and KS-6854 screwdrivers, remove the lead and cord terminals connected to the profiling assembly.
- (3) Remove profiling assembly.
- (4) Position the new profiling assembly in the shell half and reassemble the parts in reverse order of disassembly, connecting the lead and cord terminals as shown in Fig. 14.
- (5) Dress leads as originally positioned.

4.05 Printed Wiring Board Associated With 280A-50 Amplifier (Fig. 7): Remove the printed wiring boards as follows:

- (1) With the 3-inch C screwdriver, remove the two housing screws; lift off cover assembly. Note dress of leads.
- (2) Using the KS-2348 and KS-6854 screwdrivers, remove the four screws securing the printed wiring board leads.
- (3) Remove the terminal board assembly and the printed wiring board.
- (4) Position the new printed wiring board and the terminal board assembly.
- (5) Connect the lead as shown in Fig. 14.
- (6) Assemble parts in reverse order of disassembly.
- (7) Dress leads as originally positioned.†

4.06 596C Capacitor (Fig. 8): To replace the capacitor, proceed as follows:

- (1) Using the 3-inch C screwdriver, remove the housing screws and the cover.
- (2) Using the KS-2348 screwdriver, remove the terminal screws and the capacitor.

- (3) Substitute the new capacitor and connect the leads as shown in Fig. 15.

- (4) Reassemble the parts in the reverse order of removal.

- (5) Dress the leads as originally positioned.

4.07 L2AA Cord Assembly: To replace the L2AA cord assembly shown in Fig. 1, proceed as follows:

- (1) Using the KS-2348 screwdriver, remove the three cord clamping screws.
- (2) Disconnect the cord from the 10A receiver holder (Fig. 11).
- (3) Remove the cord stay and the plastic guard.
- (4) With the new cord, insert the cord terminals shown in Fig. 16, so that the smooth surface of the metal tip is in contact with the screw; then tighten the screw.
- (5) Tighten the stayband and the guard assembly screw.

4.08 L2AE Cord Assembly: To replace the L2AE cord assembly shown in Fig. 1, proceed as follows:

- (1) Disconnect the cord at the transformer end as covered in paragraph 4.19.
- (2) Substitute the new cord and connect as shown in Fig. 17.
- (3) Reassemble the parts in the reverse order of removal.
- (4) Dress the leads as originally positioned.

4.09 L2AF or L2AG Cord Assembly: To replace the L2AF or L2AG cord assembly as shown in Fig. 3, proceed as follows:

- (1) Disconnect the cord at the capacitor end as covered in paragraph 4.06.
- (2) Substitute the new cord assembly and connect as shown in Fig. 17.
- (3) Reassemble parts in reverse order of removal.

- (4) Dress the leads as originally positioned.

4.10 L2AJ Cord Assembly: To replace the L2AJ cord assembly as shown in Fig. 2 or 3, proceed as follows:

- (1) Disconnect the cord at the receiver unit end as covered in paragraph 4.17.
- (2) Disconnect the cord at the transformer or capacitor end as covered in paragraphs 4.06 and 4.19.
- (3) Substitute the new cord assembly and connect as shown in Fig. 15 or 17.
- (4) Reassemble the parts in reverse order of removal.
- (5) Dress the leads as originally positioned.

4.11 L2AL Cord Assembly: To replace the L2AL cord assembly as shown in Fig. 5, proceed as follows:

- (1) At the receiver end, unscrew the cap from the housing assembly.
- (2) Using the KS-2348 cord repair screwdriver, disconnect the cord terminal screws.
- (3) At the plug end using the KS-6854 screwdriver, remove the plug clamp screws.
- (4) Using the KS-2348 cord repair screwdriver, disconnect the cord terminals from the plug.
- (5) Substitute new cord and connect as shown in Fig. 18.
- (6) Reassemble the parts in the reverse order of removal.
- (7) Dress the leads as originally positioned.

4.12 L2AM Cord: To replace the L2AM cord as shown in Fig. 6, proceed as follows:

- (1) At the receiver end (Fig. 11), unscrew the cap from the housing assembly.
- (2) Using the KS-2348 screwdriver, disconnect the cord terminal screws.
- (3) Substitute the new cord and connect as shown in Fig. 19.

- (4) Reassemble the parts in the reverse order of removal.

- (5) Dress the leads as originally positioned.♦

4.13 L4CJ Cord ♦(1026A-Type)♦: To replace the L4CJ (Fig. 20) cord as shown in Fig. 2, proceed as follows:

- (1) At the receiver end (Fig. 10), unscrew the cap from the housing assembly.
- (2) Using the KS-2348 screwdriver, disconnect the cord terminal screws.
- (3) At the plug end using the KS-6854 screwdriver, remove the plug clamp screws.
- (4) Using the KS-2348 screwdriver, disconnect the cord terminals from the plug. (See paragraph 4.16.)
- (5) Prepare L4CJ (Fig. 20) cord as follows:

- (a) Remove shielded conductor by cutting flush with jacket.
- (b) At the plug end, clinch on P-16E891 cord tip on each conductor with an RS-16468 cord tip tool. Use the old cord as a guide.

Note: If this procedure is inconvenient, a new cord and plug may be ordered under COMCODE No. 840402382.

- (6) Substitute the new cord and connect as shown in Fig. 21.
- (7) Reassemble the parts in the reverse order of removal.
- (8) Dress the leads as originally positioned.

4.14 L4CJ Cord (1028A-Type): Replace the L4CJ cord as follows:

- (1) At the transmitter-receiver unit, unscrew the cap from the housing assembly and remove wave washer and ring.
- (2) With the KS-6854 screwdriver, remove the screws holding the cord terminals and remove cord retainer and cord.
- (3) Position new cord in housing assembly, replace cord retainer, and connect terminals as shown in Fig. 3.

- (4) Replace ring, wave washer, and cap.
- (5) At the 280A-50 amplifier, remove the housing screws using the 3-inch C screwdriver; lift off cover assembly.
- (6) With the KS-2348 and KS-6854 screwdrivers, remove the terminal screws and remove the L4CJ cord from the amplifier.
- (7) Position new L4CJ cord in amplifier and connect terminals as shown in Fig. 14.
- (8) Dress leads as originally positioned.
- (9) Reassemble parts in reverse order of disassembly.♦

4.15 Headband Pads: To remove the P-21F279 (15F headband) and the P-23F177 (19A-50 headband) headband pads, proceed as follows:

- (a) **P-21F279 Headband Pad:** To replace the P-21F279 headband pad, proceed as follows:

- (1) Remove the old pad from the headband.
- (2) Substitute the new pad and pass the free end of the headband through the slot of the pad, making sure the thicker side of the pad is on the inner side of the headband as shown in Fig. 22.

- (b) **P-23F177 Headband Pad:** To replace the P-23F177 headband pad, proceed as follows:

- (1) Remove the old pad from the headband.
- (2) Remove the paper from the sensitive backing of the new pad, and substitute the old pad.

4.16 464A-50 Plug (Fig. 23): To replace the 464A-50 plug, proceed as follows:

- (1) With the KS-6854 screwdriver, remove the three 900094020 plug clamp screws.
- (2) Lift shell half (P-43X326) and note the color of the cord conductor connections to the terminals.
- (3) With the KS-2348 screwdriver, remove the four P-484150 cord terminal screws.

- (4) Remove the cord from the profiling assembly and shell half (P-43X312).

- (5) For reassembly, position the profiling assembly and cord in the P-43X312 shell half and connect terminals as noted in (2).

- (6) Position the P-43X326 shell half and replace the 900094020 screws.

4.17 Receiver Unit (Fig. 9): To replace the receiver unit, proceed as follows:

- (1) Unscrew the cap from the housing assembly (Fig. 10 or 11) ♦and remove ring and wave washer.♦

- (2) Using the KS-6854 screwdriver, remove the receiver terminal screws.

- (3) Remove the old unit.

- (4) Substitute the new unit and connect the lead terminals.

- (5) ♦Dress leads to ensure that they will not pinch; then replace the ring and wave washer.♦

- (6) Replace the receiver cap.

4.18 ♦Speech Tube Assembly: Warning: For best results, do not bend the speech tube assembly since it has been shaped by the manufacturer. The speech tube assembly consists of two assemblies, the P-48V575 tube assembly, and the P-22F906 ball assembly as shown in Fig. 12. To replace the P-48V575 tube assembly, hold the ball assembly with one hand and pull the tube assembly off, then slide new tube assembly on. To replace speech tube assembly or ball assembly, proceed as follows:

- (1) Unscrew the receiver cap from the housing assembly and remove wave washer, ring, and transmitter cover.

- (2) Remove the tube retainer and lift the speech tube assembly out.

- (3) Position the new speech tube assembly and replace the tube retainer.

- (4) Replace the transmitter cover, ring, wave washer, and receiver cap.♦

4.19 Transformer and Terminal Board Assembly (Fig. 13): To replace the assembly, proceed as follows:

- (1) Using the 3-inch C screwdriver, remove the housing screws and the cover.
- (2) Using the KS-2348 screwdriver, remove the terminal screws, the transformer, and the terminal board assembly.
- (3) Substitute the new transformer and terminal board assembly, and connect the leads as shown in Fig. 17.
- (4) Assemble the parts in reverse order of removal.
- (5) Dress the leads as originally positioned.

4.20 Transmitter Unit (Fig. 12): To replace the transmitter unit, proceed as follows:

- (1) Unscrew the receiver cap from the housing assembly and remove the wave washer, ring, and transmitter covers.
- (2) Remove the tube retainer and lift the speech tube assembly out.
- (3) Using the KS-2348 screwdriver, remove the transmitter terminal screws, transmitter, and boot assembly.
- (4) Place the new transmitter and boot assembly in position and connect the transmitter lead terminals.
- (5) Dress leads away from housing walls.

Note: Transmitter and boot assembly shall be positioned in a floating manner not bearing on housing wall.

- (6) Replace speech tube assembly and make sure the assembly is sealed to transmitter boot.
- (7) Replace tube retainer.
- (8) Replace the transmitter cover, ring, wave washer, and receiver cap.♦

5. CLEANING PROCEDURES

PLUGS

- 5.01** Clean plugs in accordance with Section 069-380-811, 069-380-812, or 069-380-813.

HOUSING ASSEMBLIES AND RECEIVER CAPS

5.02 **Warning:** *Do not use alcohol base cleaner as this will attack the case and cap material and may render the set flammable.* Shake or blow dirt and dust out of the amplifier and transmitter-receiver cases with the R-8950 syringe and wipe the exteriors with a cloth slightly dampened with water.

5.03 Remove caps which are dirty and wash in a solution of soap and lukewarm water. If the caps cannot be released for washing, wipe them with a clean, dry KS-2423 cloth.

5.04 **Headband:** **Warning:** *Do not use alcohol or chloride base cleaner as these will attack the handle and cap material and may render the set flammable.* To clean the 15F (P-21F279 headband pad) and the 19A-50 (P-23F177 headband pad) headband, proceed as follows:

(a) **15F Headband (P-21F279 Headband Pad):** To clean the 15F headband, proceed as follows:

- (1) Remove the pad from the headband.
- (2) Wipe with a clean KS-2423 cloth slightly dampened with a solution of mild detergent and water. Care should be exercised when wiping the pad so water will not get into the slots of the pad.
- (3) After wiping the foam rubber pad, allow it to dry with the slot down.
- (4) Remount the pad on the headband.

(b) **19A Headband (P-23F177 Headband Pad):** To clean the 19A headband, proceed as follows:

- (1) Wipe with a clean KS-2423 cloth slightly dampened with a solution of mild detergent and water. Care should be exercised when wiping the pad so water will not get on the inside surface of the pad at the end.
- (2) Allow to dry before using.

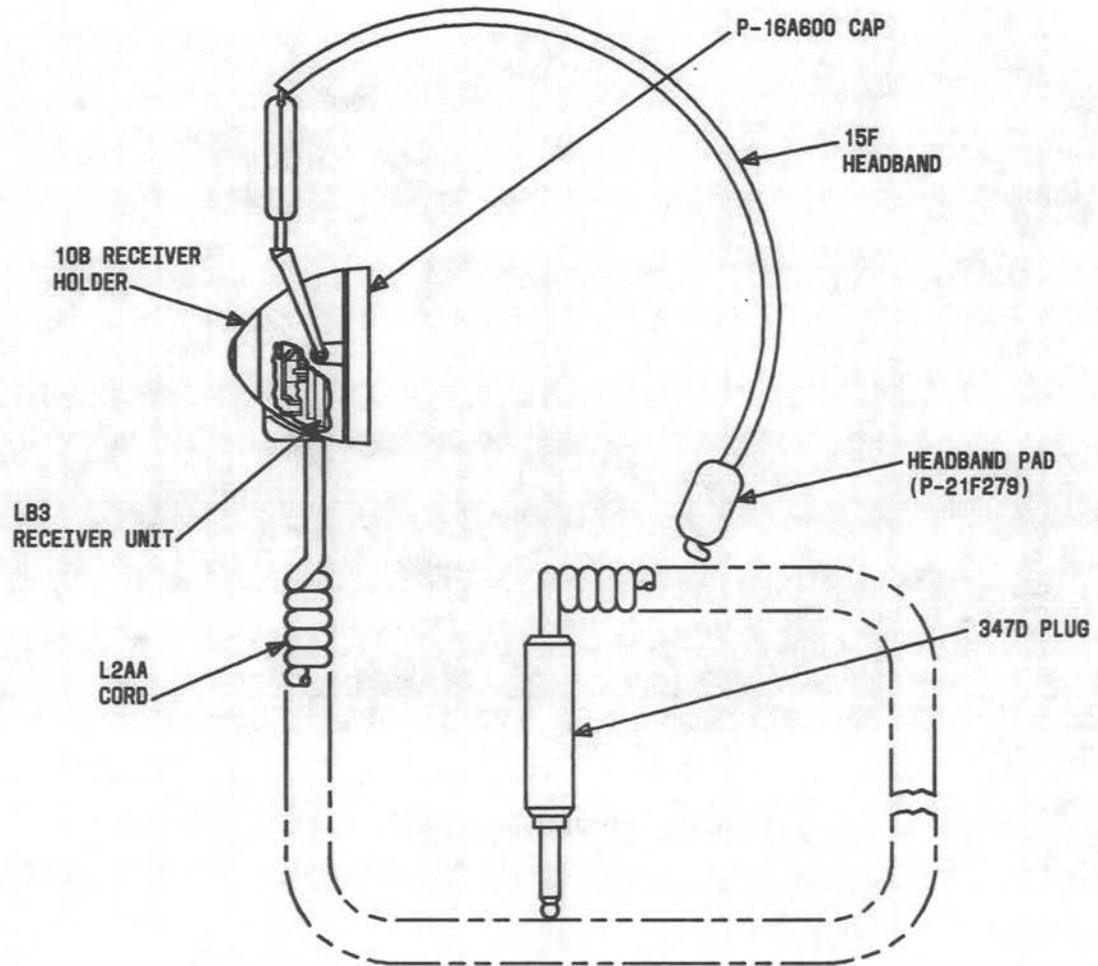


Fig. 1—1022A-Type Headset

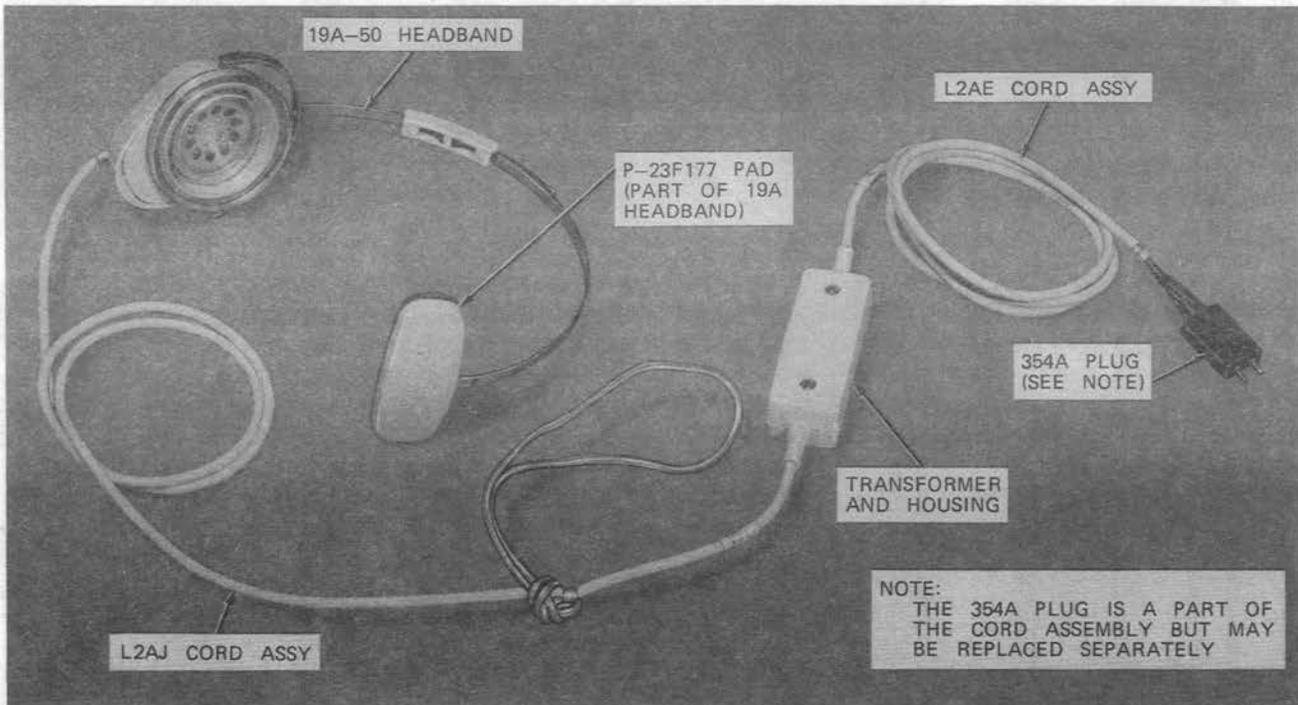


Fig. 2— 1023A-Type Headset

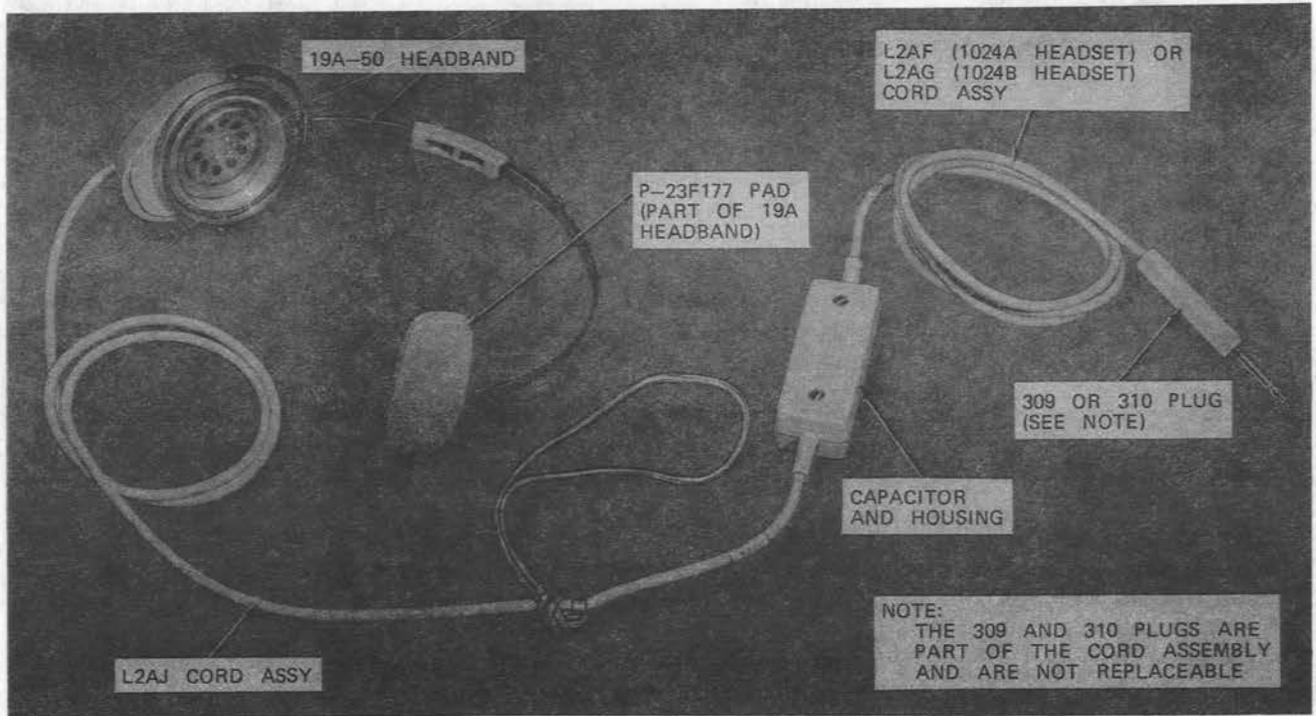


Fig. 3—1024A- And 1024B-Type Headset

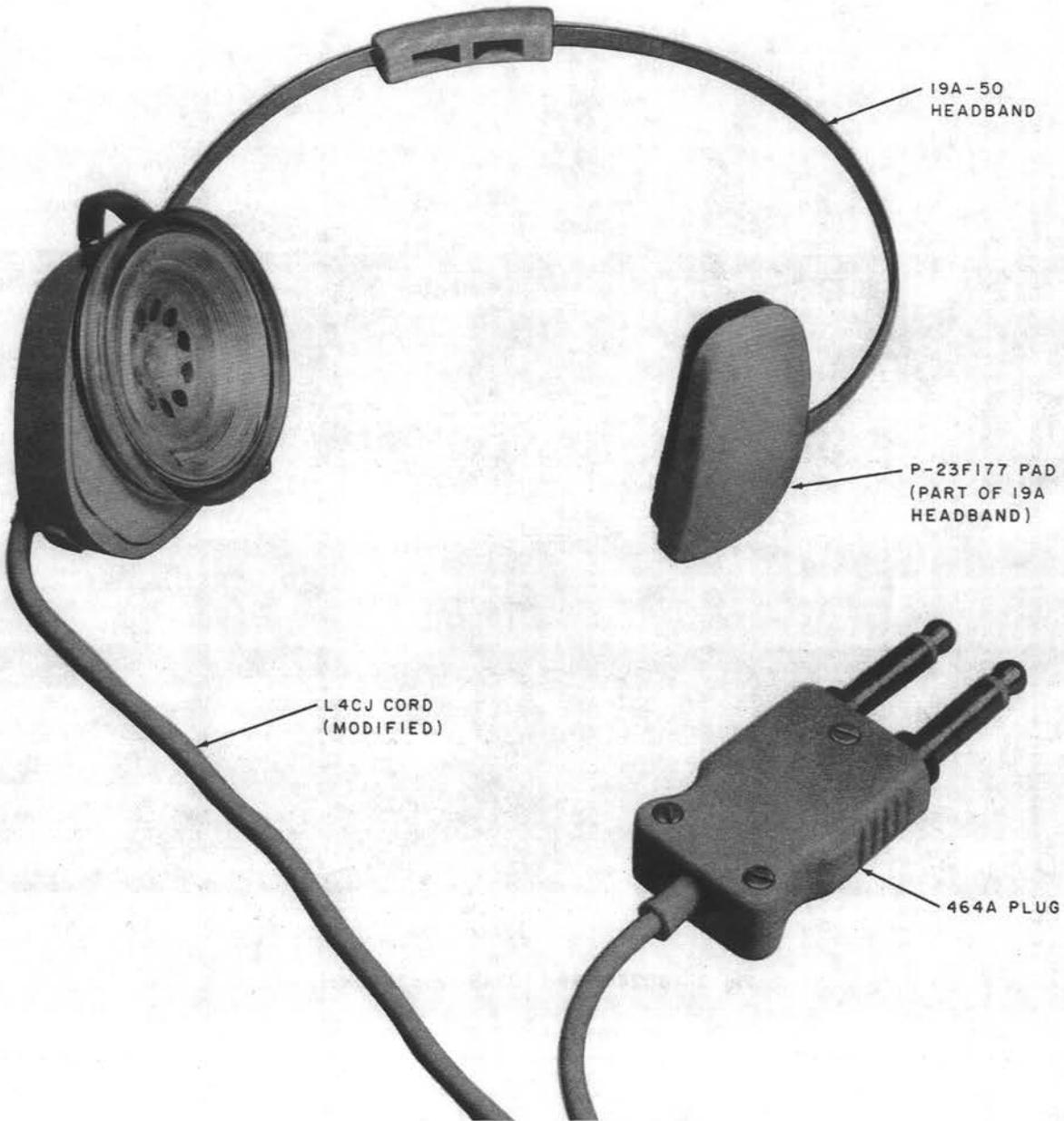


Fig. 4—1026A-Type Headset

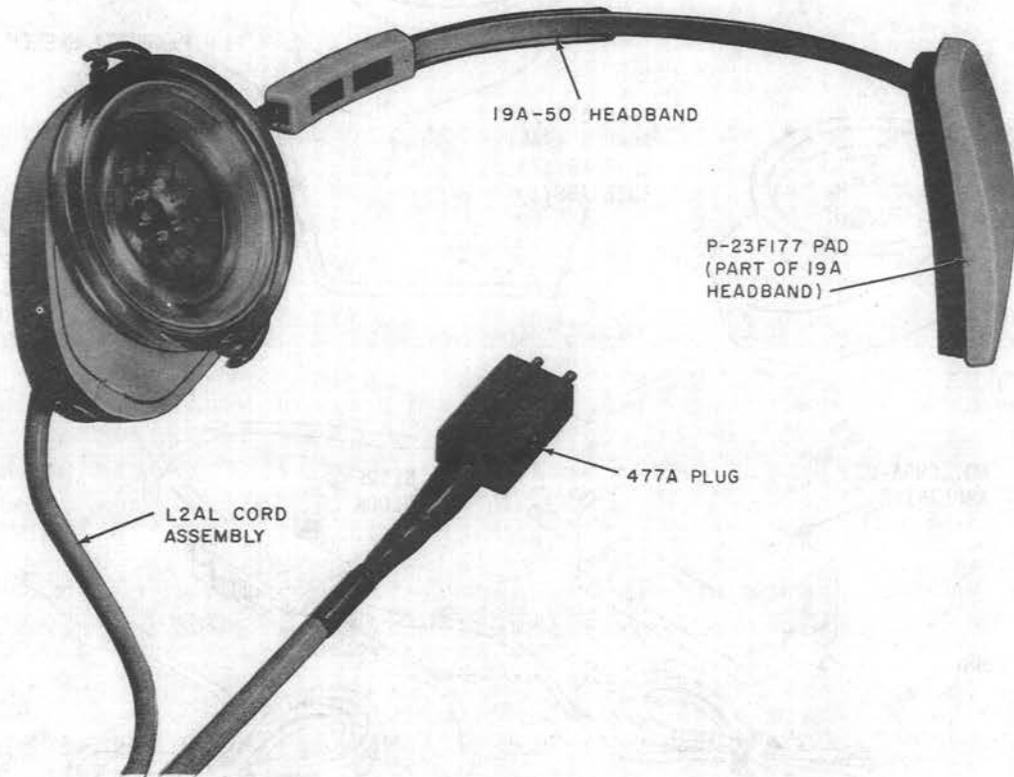


Fig. 5—1027A-Type Headset

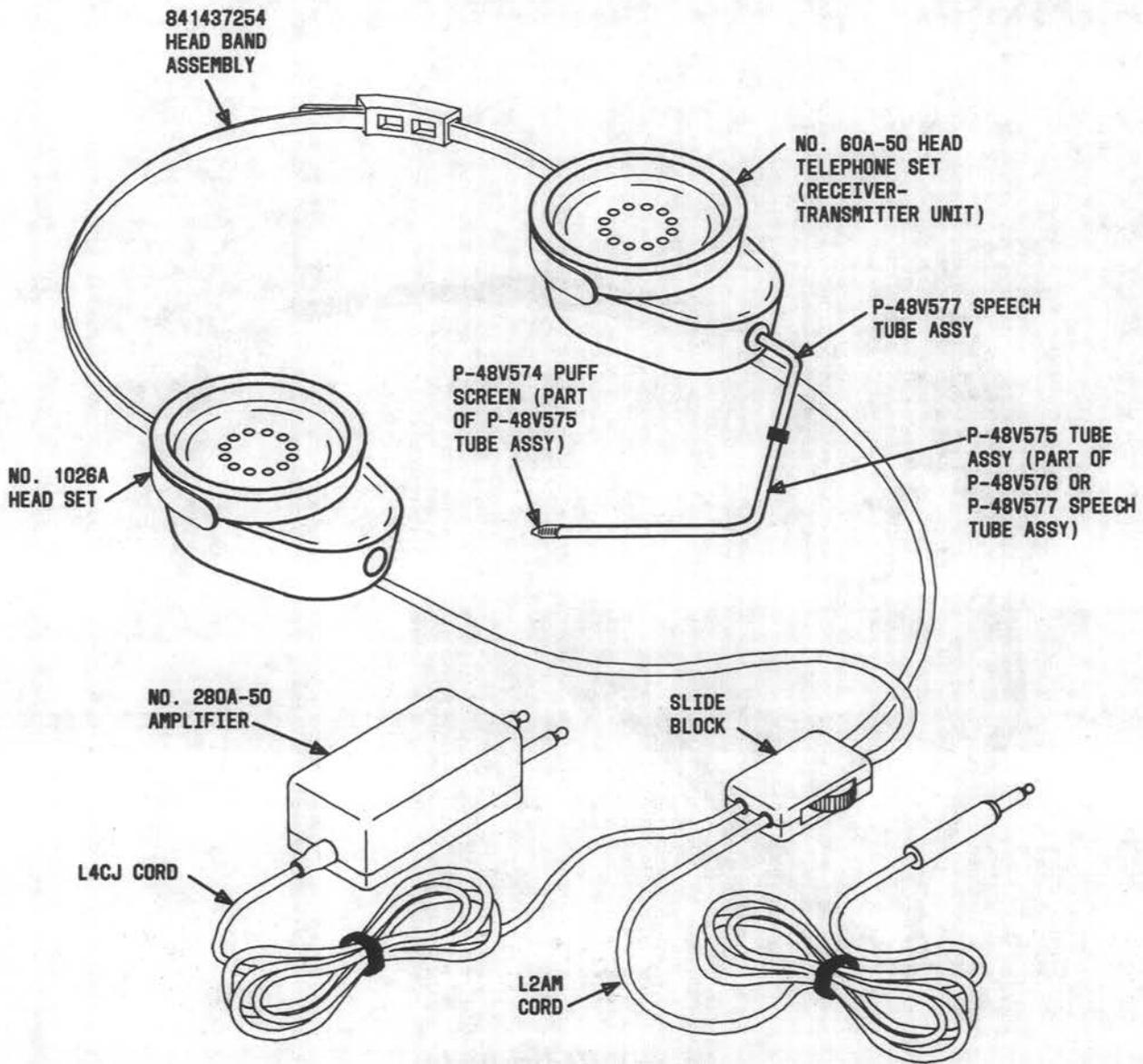


Fig. 6—1028A-Type Headset

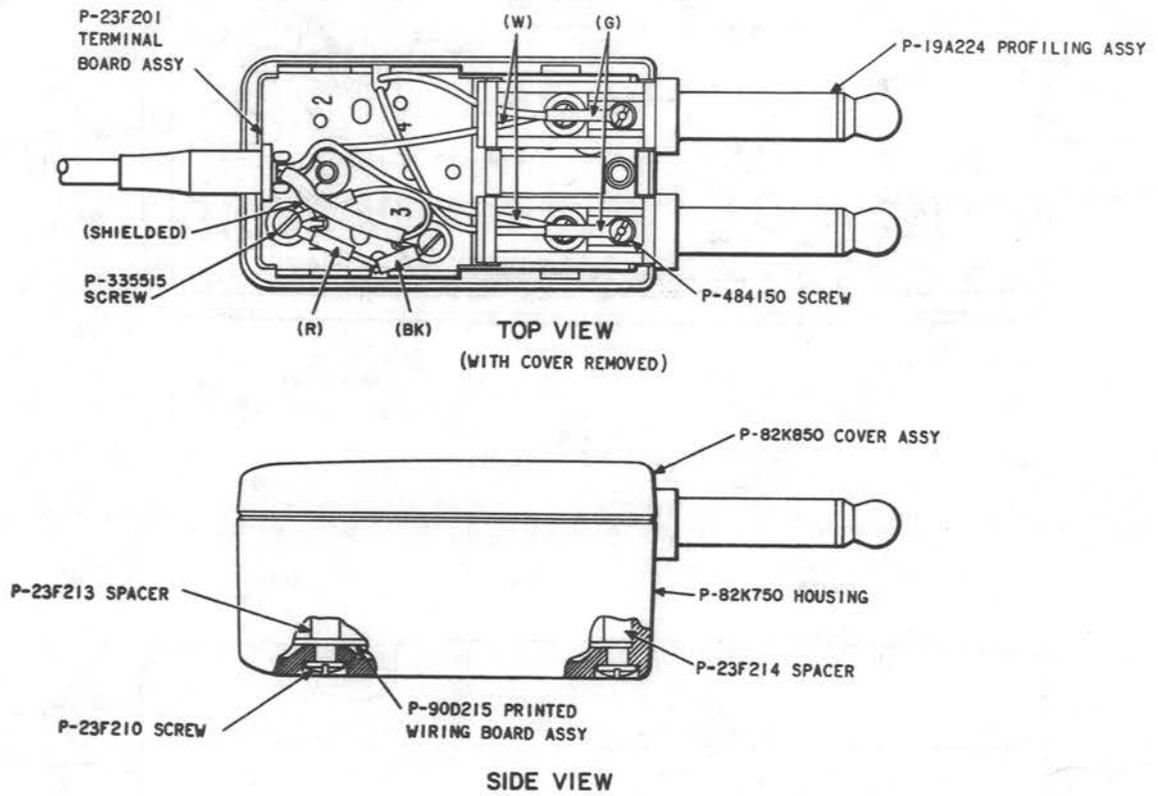
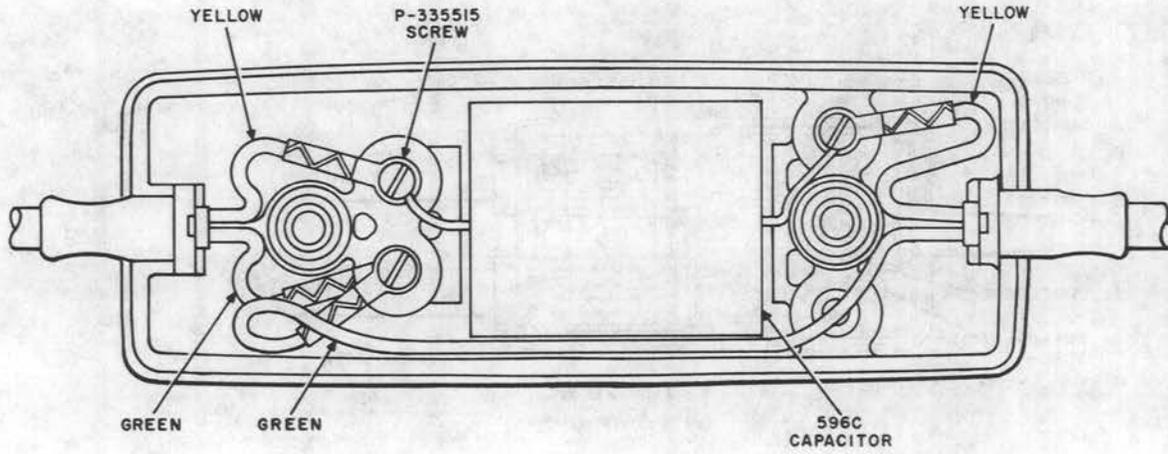
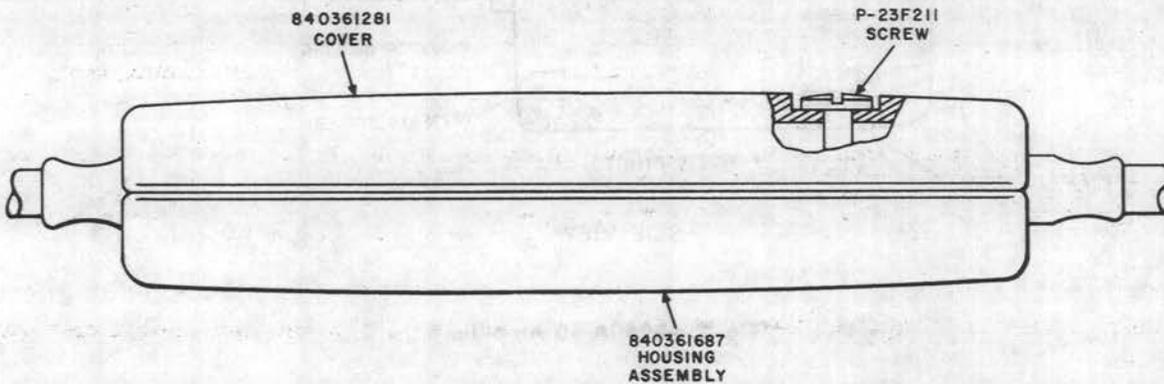


Fig. 7—280A-50 Amplifier



TOP VIEW
(COVER REMOVED)



SIDE VIEW

Fig. 8—Capacitor, Housing Assembly, and Cover (Part of 1024A and 1024B Headset)

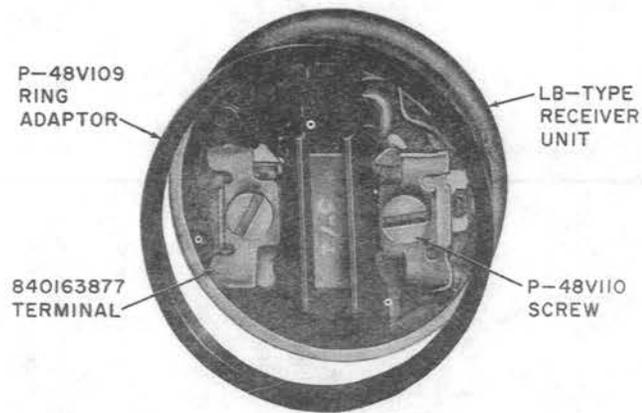


Fig. 9—LB-Type Receiver Unit

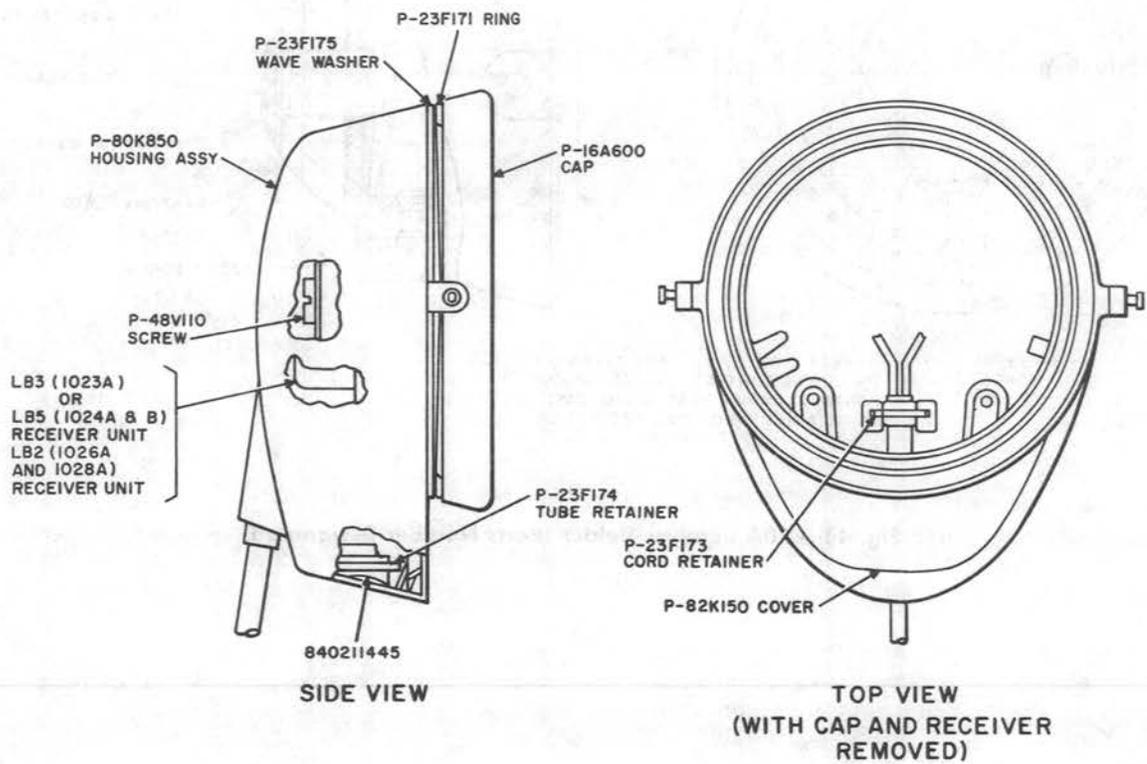


Fig. 10—Housing Assembly, Cap, and Receiver Unit

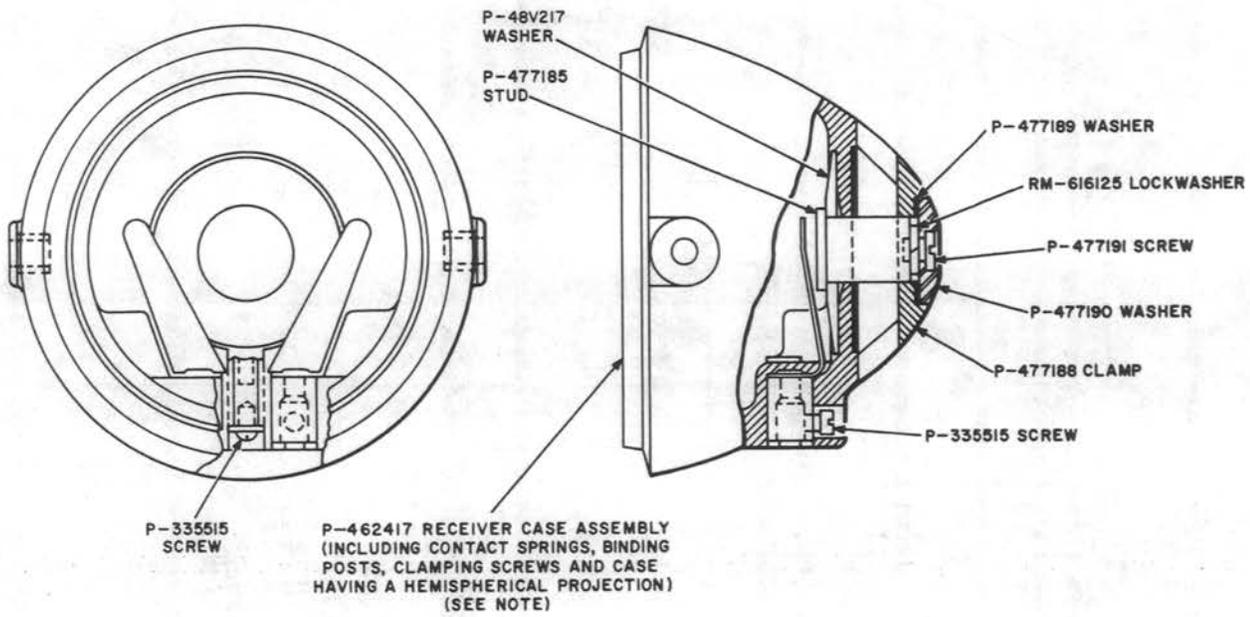


Fig. 11—10A Receiver Holder (Parts Number Designated)

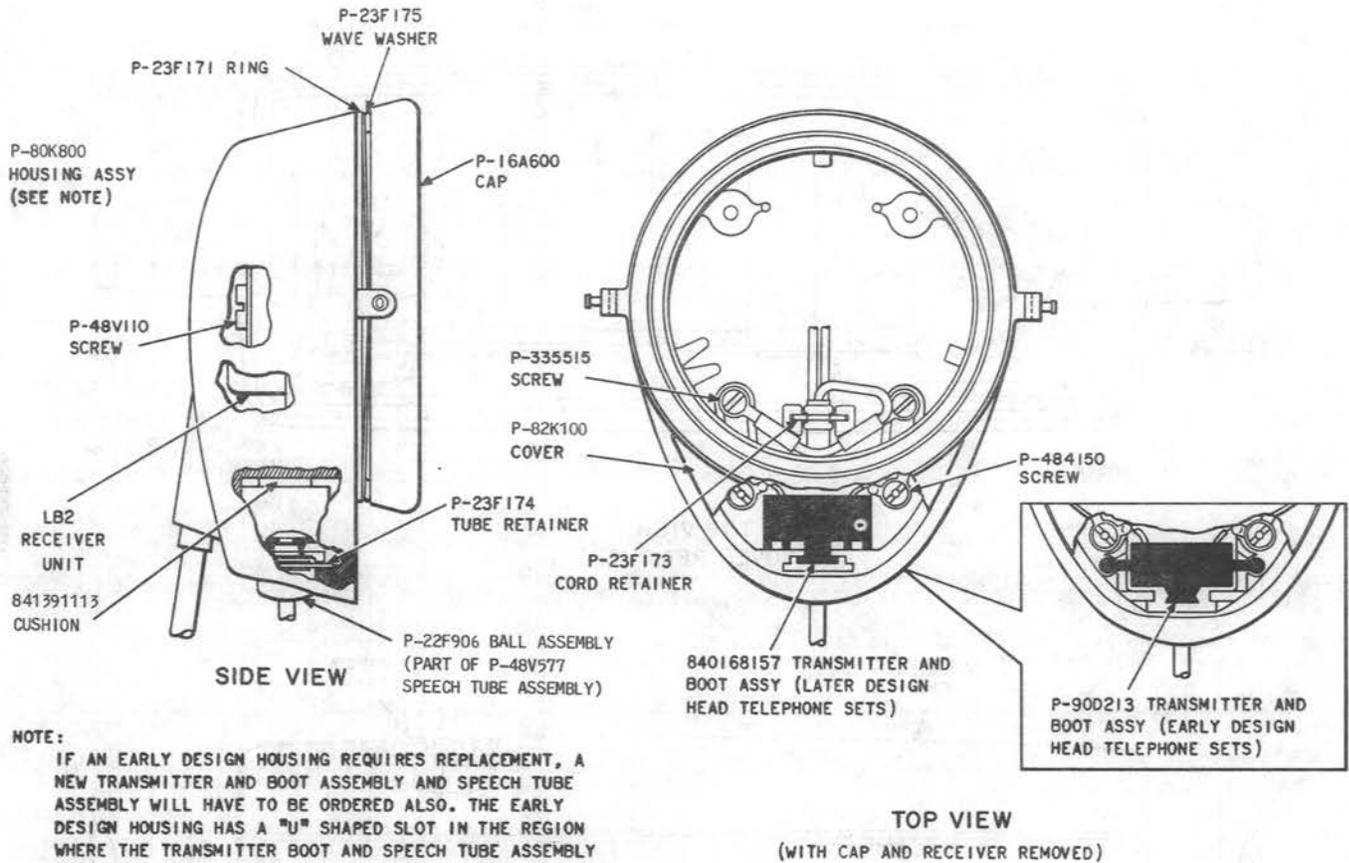
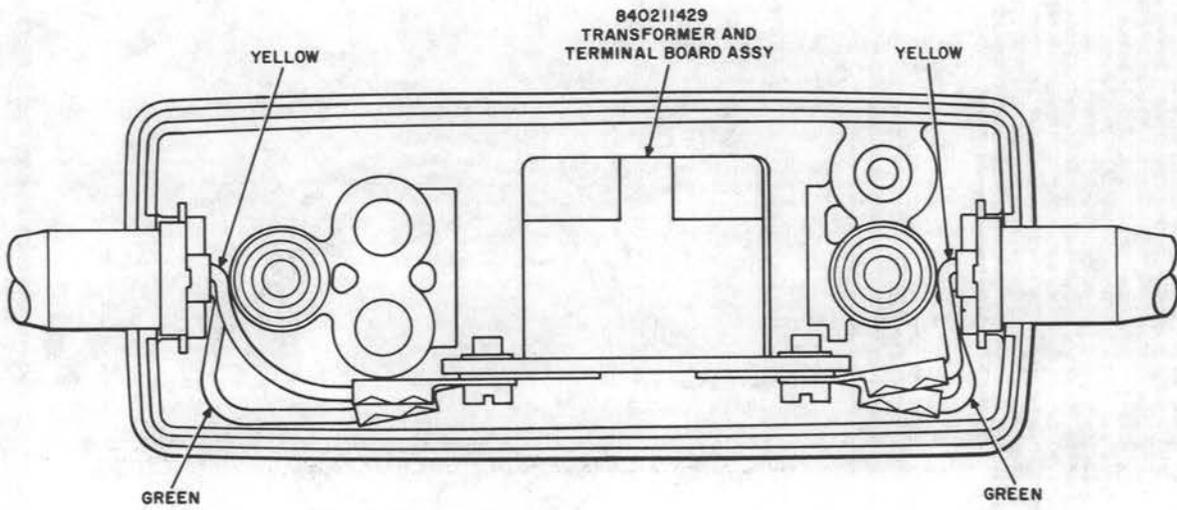
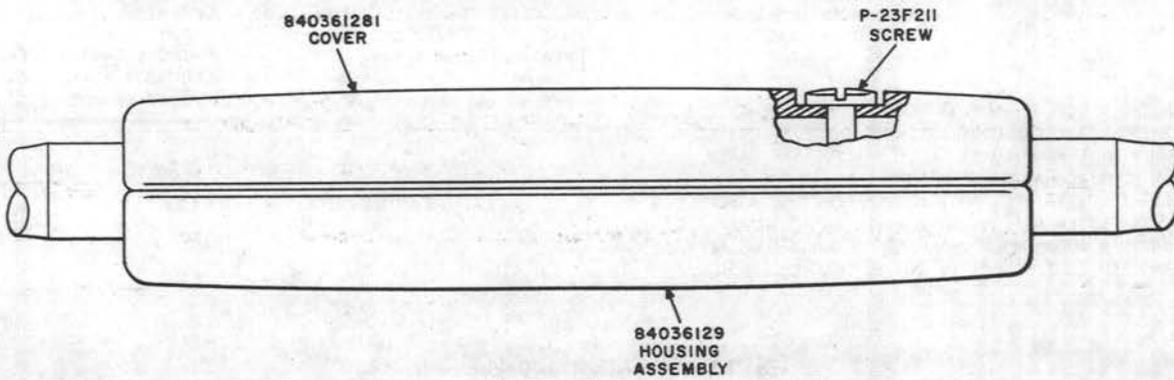


Fig. 12—Transmitter-Receiver Unit



TOP VIEW
(COVER REMOVED)



SIDE VIEW

Fig. 13—Transformer Housing Assembly and Cover Part of the 1023A Headset)

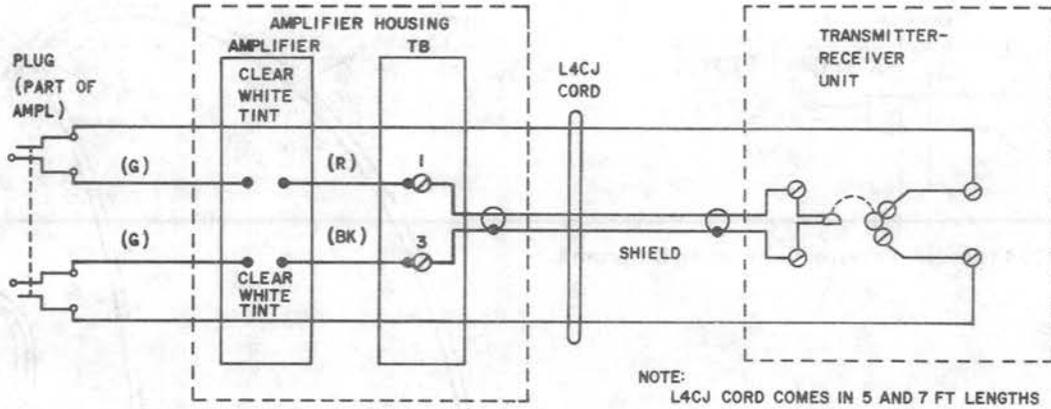


Fig. 14—280A-50 Amplifier Connecting Diagram

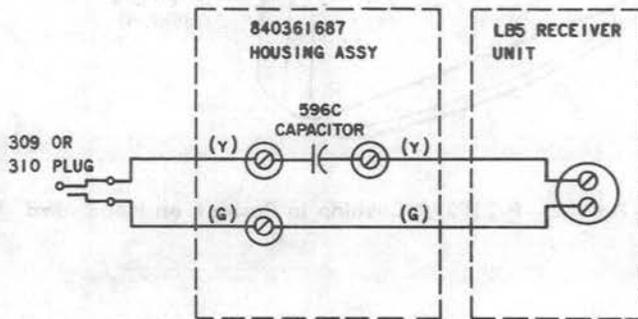


Fig. 15—1024A and 1024B Headset Connecting Diagram

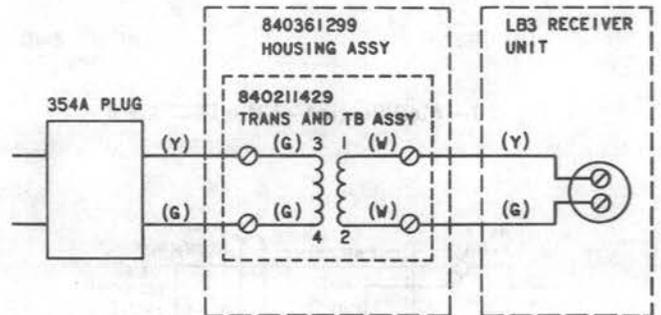


Fig. 17—1023A Headset Connecting Diagram

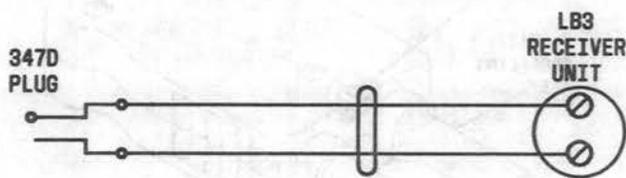


Fig. 16—1022A-Type Headset Connecting Diagram

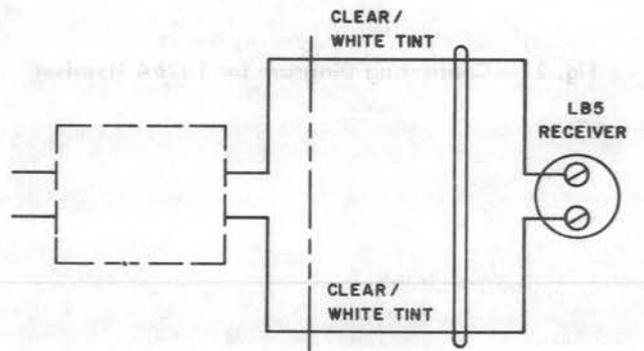


Fig. 18—1027A Headset Connecting Diagram

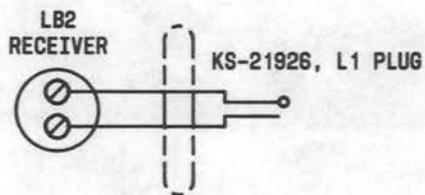


Fig. 19—1028A Headset Receiver Connecting Diagram

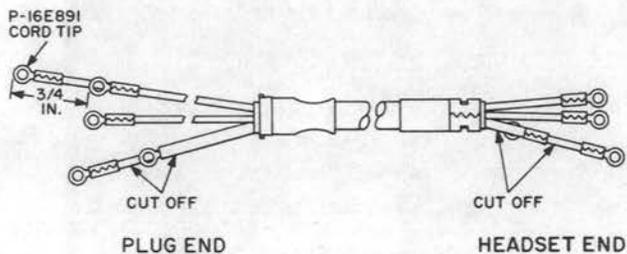


Fig. 20—Modification of the L4CJ Cord

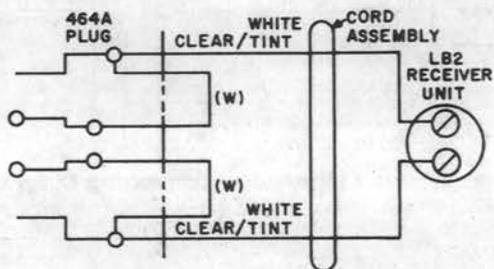


Fig. 21—Connecting Diagram for 1026A Headset

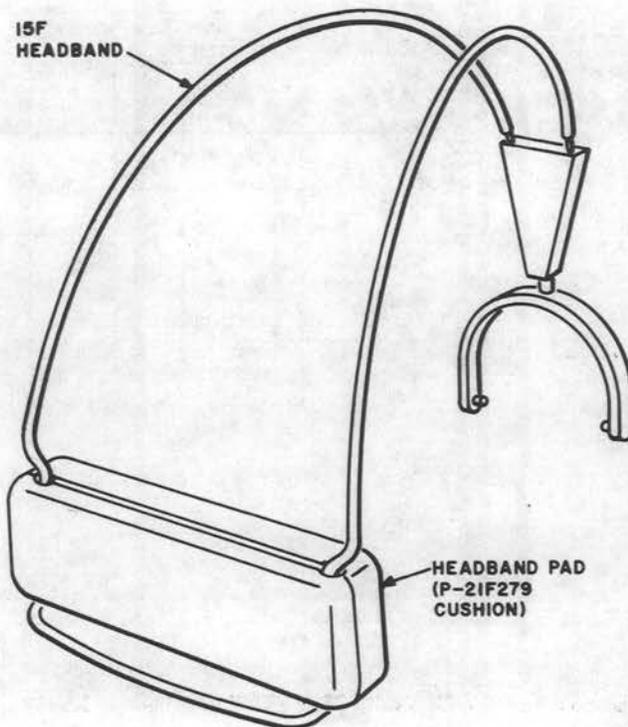


Fig. 22—P-21F279 Cushion in Position on Headband

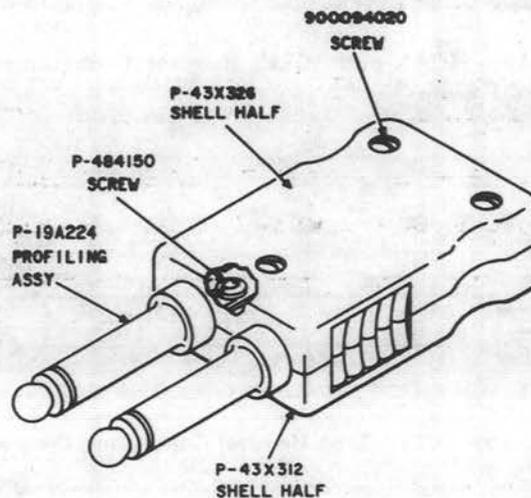


Fig. 23—464A-50 Plug