

53- TYPE HEAD TELEPHONE SETS PIECE PART DATA AND REPLACEMENT PROCEDURES

1. GENERAL

1.01 This section covers information necessary for ordering parts to be used in the repair of 53-type head telephone sets used at PBXs and at other locations, such as teletype-writer switchboards and key equipments. The 53-type head telephone set is provided with a handle so that the set can be used as a handset.

1.02 The section is reissued to include the No. 53GR head telephone set and the P-10E121 headband pad.

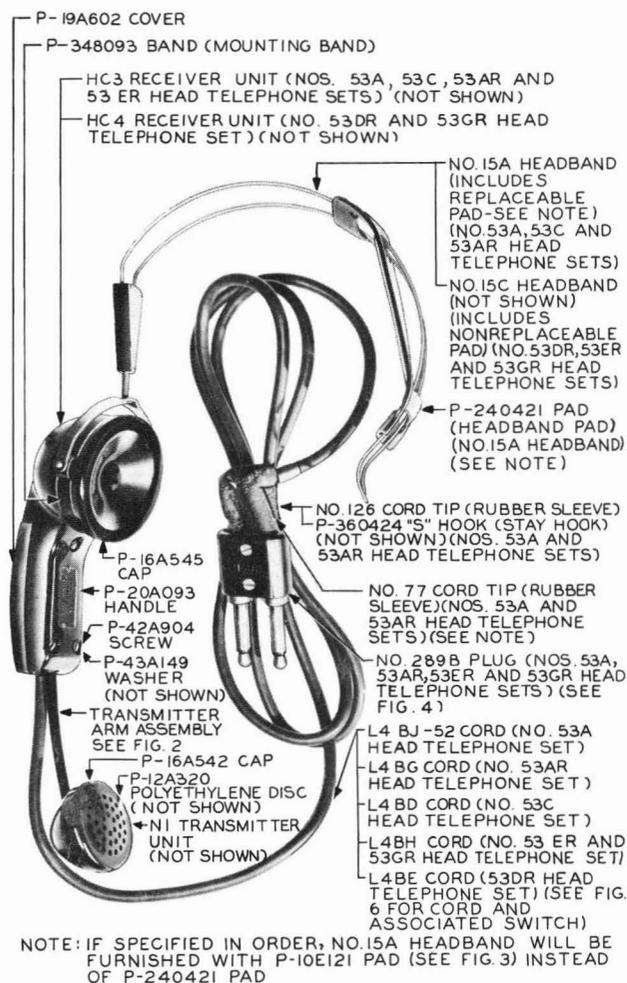
1.03 Part 2 of this section covers part numbers and the corresponding names of the parts which it is practicable to replace in the field in the maintenance of these sets. No attempt should be made to replace parts not designated. Part 2 also contains explanatory figures showing the different parts. This information is called Replacement Parts.

1.04 Part 3 of this section covers the approved procedures for the replacement of parts covered in Part 2. This information is called Replacement Procedures.

2. REPLACEMENT PARTS

2.01 The figures included in this part show the various parts in relation to other parts of the telephone set. The part numbers of the various parts are given together with the names of the parts as listed by the Western Electric Merchandise Department. Where these names differ from those in general use in the field, the latter names in some cases are shown in parentheses.

2.02 When ordering parts for replacement purposes, give both the part number and name of the part. Example: No. 15A Headband. Do not refer to the BSP number or to any information shown in parentheses following the part number.



NOTE: IF SPECIFIED IN ORDER, NO. 15A HEADBAND WILL BE FURNISHED WITH P-10E121 PAD (SEE FIG. 3) INSTEAD OF P-240421 PAD

Fig. 1—53-type Head Telephone Sets — No. 53A Head Telephone Set Illustrated

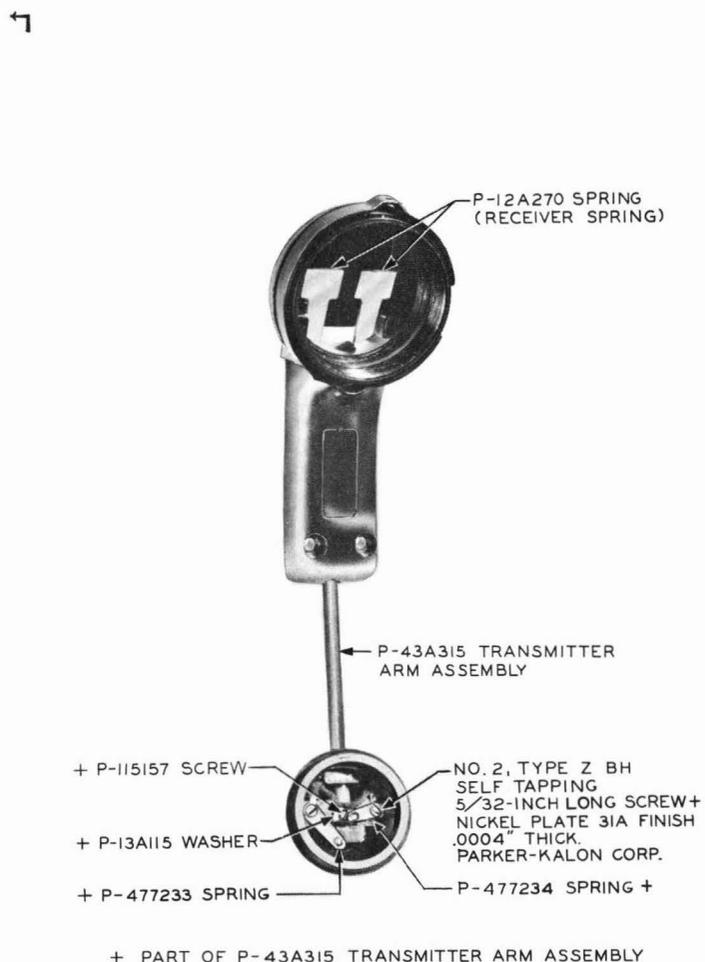
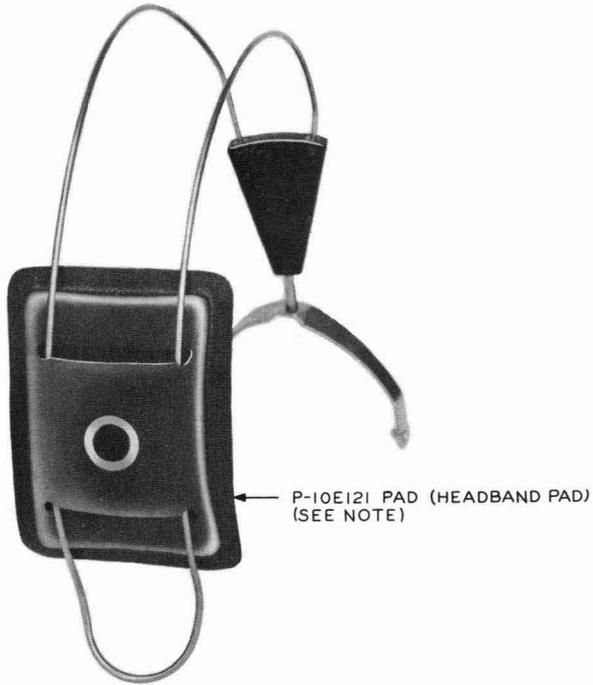


Fig. 2—Handle and Transmitter Arm Assembly With Receiver and Transmitter Units Removed—No. 53A, 53C, 53AR, 53DR, 53ER, and 53GR Head Telephone Sets



NOTE: NO.15A HEADBAND FURNISHED WITH P-10E121 PAD ONLY IF SPECIFIED IN ORDER (SEE FIG.1)

Fig. 3—No. 15A Headband Equipped With P-10E121 Pad

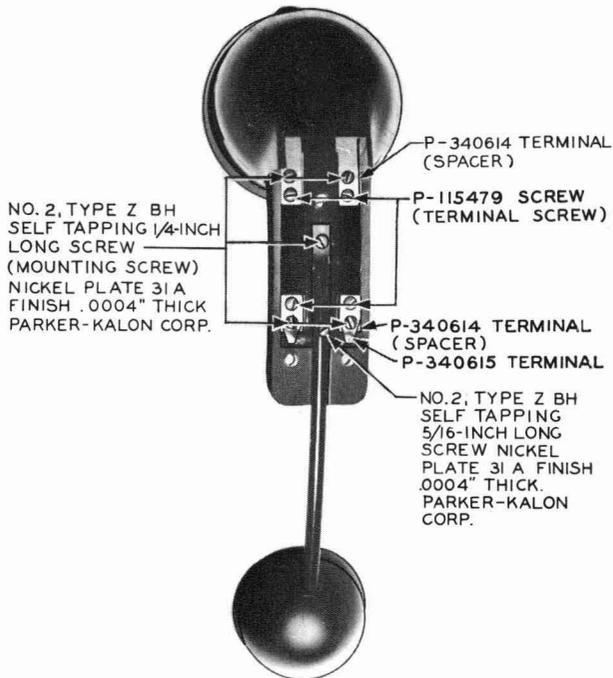


Fig. 5—Handle and Transmitter Arm Assembly With Handle Cover Removed—No. 53A, 53C, 53AR, 53DR, 53ER, and 53GR Head Telephone Sets

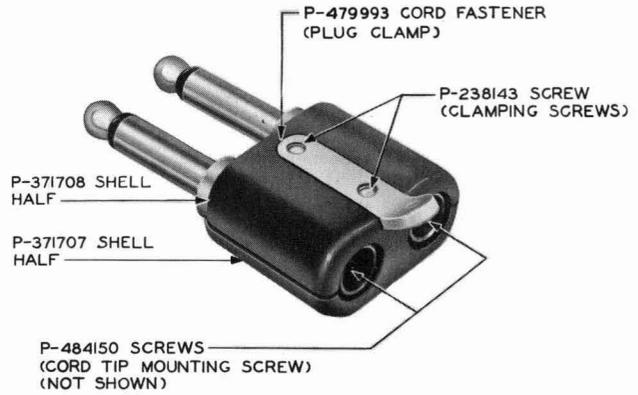


Fig. 4—No. 289B Plug

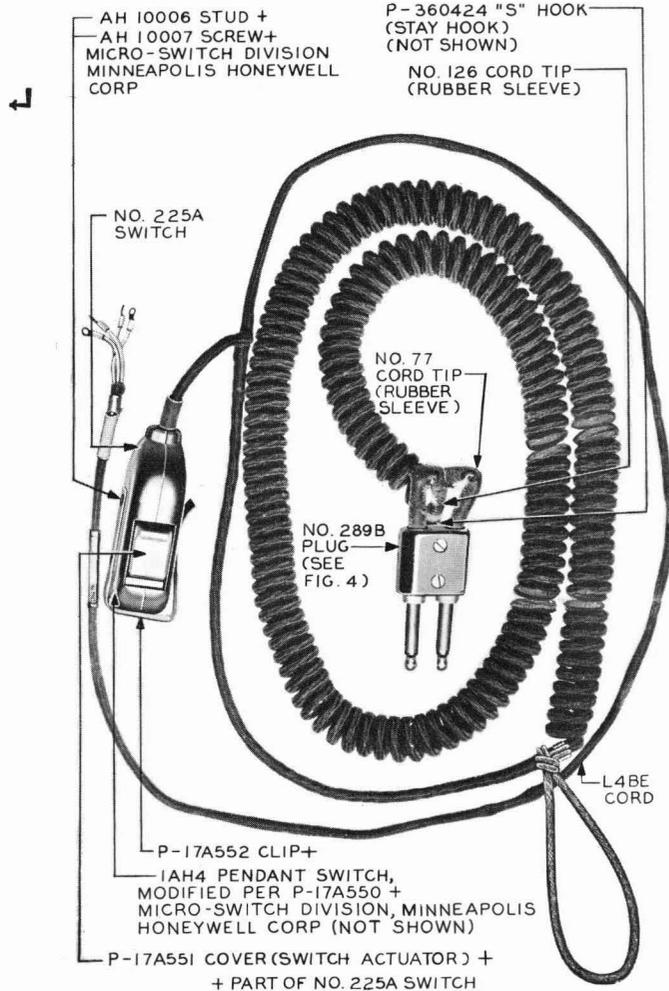


Fig. 6—Cord, Plug, and Switch Used With No. 53DR Head Telephone Set

3. REPLACEMENT PROCEDURES

3.01 List of Tools

| Code or Spec No. | Description |
|------------------|---------------------------------|
| KS-2348 | Cord Repair Tool |
| KS-6854 | 3-1/2-inch Screwdriver |
| KS-8511 | Tweezers |
| — | 6-1/2-inch P-long-nose Pliers |
| — | Phillips Type No. 1 Screwdriver |

3.02 After making replacement of parts, except those that do not affect transmission, such as headbands, check the head telephone set to see that it is in a satisfactory operating condition.

3.03 No replacement procedures are specified for screws or other parts if the replacement consists of a simple operation.

3.04 **Receiver Unit:** Fig. 7—To replace the receiver unit, unscrew the cap from the handle and remove the unit. Mount the new unit so that the code designation on the unit is toward the transmitter. Screw the cap on the handle fingertight. When properly tightened, there will be a slight gap between the rims of the cap and case.

3.05 **Handle and Associated Parts:** Using the KS-6854 screwdriver, remove the screws holding the cord terminals, the receiver springs, the transmitter terminals and their associated spacers. Remove the cord conductors, the receiver springs, and associated spacers. Remove the transmitter terminals and associated spacers taking care not to damage the flexible leads and the soldered connections in the transmitter arm. Remove the transmitter arm screws and the arm. Substitute the new handle and other new parts, as required, and mount the parts in the handle in the reverse order of removal, taking care to mount the spacers in the handle with the threaded holes for the cord terminal screws toward the center of the handle. Connect the leads to the terminals in accordance with Fig. 8. Mount the receiver unit and cap in the handle as described in 3.04.

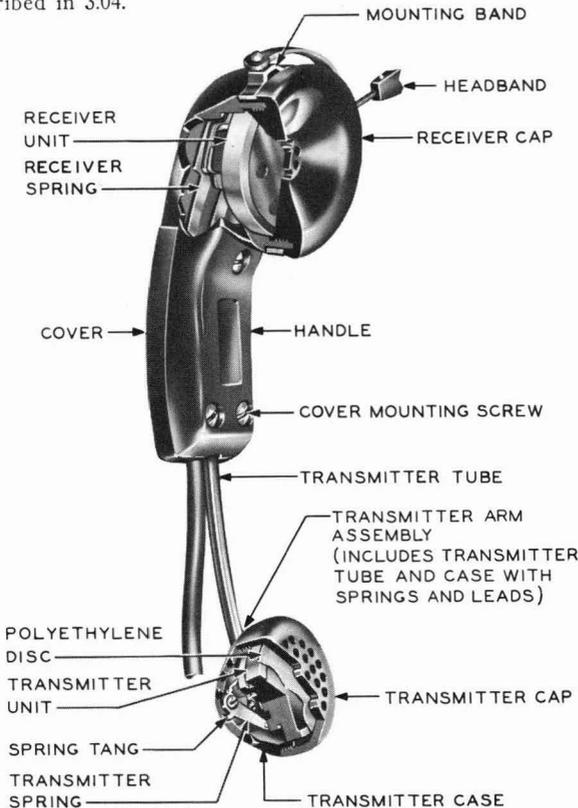


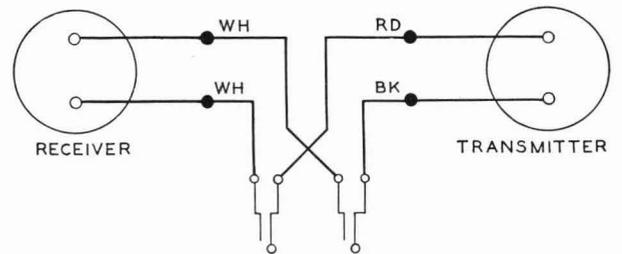
Fig. 7—53-type Head Telephone Set

3.06 **Transmitter Unit:** Fig. 7—Unscrew the cap from the transmitter case and remove the transmitter unit and the polyethylene disc. If the polyethylene disc is torn, dirty, wrinkled, or otherwise damaged, replace it. If the disc is missing, place a new disc in the cap. Hold the transmitter cap with the threaded side up and place the polyethylene disc in it so that it is centrally located in the cap. Place the new transmitter unit, membrane side down, on top of the disc in the cap. Place the transmitter case, threaded side down, over the cap. While maintaining the cap and case in this position, screw the cap on the case fingertight. When properly tightened there will be a slight gap between the rims of the cap and case.

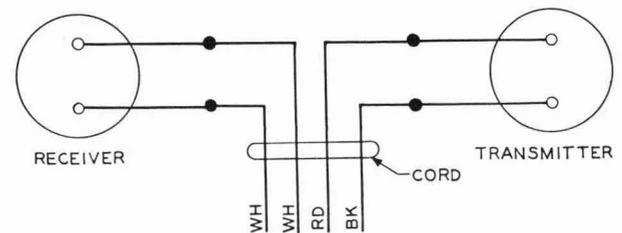
Caution: In removing or replacing the transmitter unit, hold it between the thumb and one or two fingers on the outer edge of the unit. Do not press against the moisture-resistant membrane because this might result in excessive sag of the membrane thereby impairing the transmission characteristics of the unit. This precaution applies to both the replacing unit and the unit removed for repair. In packing the unit to be returned for repair, use the box in which the unit was received. Take care that no packing material presses against the membrane.

3.07 **Polyethylene Disc:** Remove the cap from the transmitter case and replace the polyethylene disc as described in 3.06.

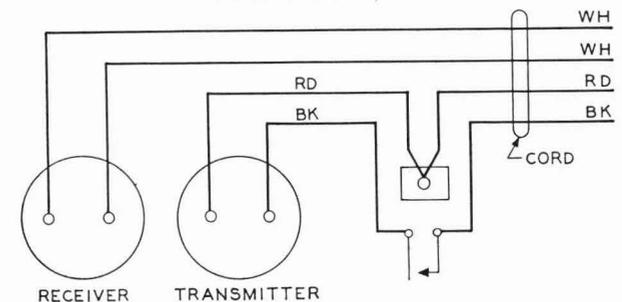
3.08 **Transmitter Arm Assembly:** Fig. 7—Unscrew the cap from the transmitter case and remove the transmitter unit and the polyethylene disc as described in 3.06. Loosen the cover screws in the handle with the KS-6854 screwdriver and remove the cover. With the KS-6854 screwdriver, remove the screws from the transmitter terminals in the handle and the screws securing the transmitter tube in the handle. Substitute the new transmitter arm assembly and reassemble in the reverse order of removal, connecting the leads in accordance with Fig. 8.



53A, 53AR, 53ER & 53GR HEAD TEL SETS



53C HEAD TEL SET



53DR HEAD TEL SET

Fig. 8—53-type Head Telephone Sets—Wiring Diagrams

3.09 Transmitter Spring: To replace a spring, remove the transmitter unit as described in 3.06. Note whether the transmitter case is held in position on the tube by a strip extending across the case or by a rectangular washer. If the strip is used, replace the transmitter arm assembly as described in 3.08. If the rectangular washer is used, proceed with replacing the contact spring as follows. Using the KS-6854 screwdriver, remove the spring mounting screw. Lift the spring from the case. Push the insulation back from the spring terminal and unsolder the lead from the spring. Solder the lead to the new spring and push the insulation over the terminal. Place the spring in position in the case taking care that the prong on the spring enters the associated hole in the case in order to properly position the spring. Insert and tighten the spring mounting screw using the KS-8511 tweezers and KS-6854 screwdriver. Place the transmitter unit in the case as described in 3.06.

3.10 Plug Clamp, Stay Hook, and No. 126 Cord Tip: To replace the plug clamp, stay hook, or cord tip, proceed as follows. Remove the clamp screws using the KS-6854 screwdriver. Remove the No. 126 cord tip (rubber sleeve). Open the loops of the stay hook with the P-long-nose pliers. Substitute new parts as required. Make sure that the small loop of the hook is connected to the cord. In closing the loops of the hook take care that the ends do not overlap the straight portions of the hook. Place the rubber sleeve (cord tip) in position over the plug clamp and stay hook. Reassemble the parts in the reverse order of removal.

3.11 Plug and No. 77 Cord Tips: Remove the plug clamp screws with the KS-6854 screwdriver. Note the color of the cord conductor connections to the terminals. Remove the cord terminal screws using the KS-2348 cord repair tool and pull the cord from the plug. Substitute new cord tips (rubber

sleeves), if required. Insert the cord terminals into the plug fingers of the new plug, taking care not to twist the cords more than 180 degrees. Connect the conductors to the plug terminals as shown in Fig. 8. Insert and securely tighten the cord terminal screws and reassemble the plug in the reverse order of removal.

3.12 Cord: To replace the cord, disconnect the cord at the plug end as described in 3.11. Loosen the cover screws in the handle with the KS-6854 screwdriver and remove the cover. Note the color of the cord conductor connections to the terminals and then, using the KS-6854 screwdriver, remove the screws holding the cord terminals and remove the cord. Substitute the new cord and connect it to the plug and handle making sure that the conductors are connected to the terminals in the plug and handle as shown in Fig. 8. Reassemble the parts in the reverse order of removal. If the L4BE cord used with the No. 53DR head telephone set is being replaced, disconnect the switch from the replaced cord and connect it to the new cord as described in 3.13.

3.13 Switch: Using the Phillips type No. 1 screwdriver, remove the screws from the switch housing and clip. Remove the clip and open the housing. Using the KS-6854 screwdriver, loosen the terminal and cord fastening screws and remove the cord from the switch. Substitute the new switch, connect and fasten the cord to the switch as shown in Fig. 8 and assemble the parts in the reverse order of removal.

3.14 Headband Pad: Remove the pad from the headband. If the P-240421 pad is to be used, place the pad on the headband by passing the free end of the headband through slots, A, B, C, and D in the pad as shown in Fig. 9. If the P-10E121 pad is to be used, place it on the headband as shown in Fig. 10 and fasten the snap by pressing against it from both sides of the pad.

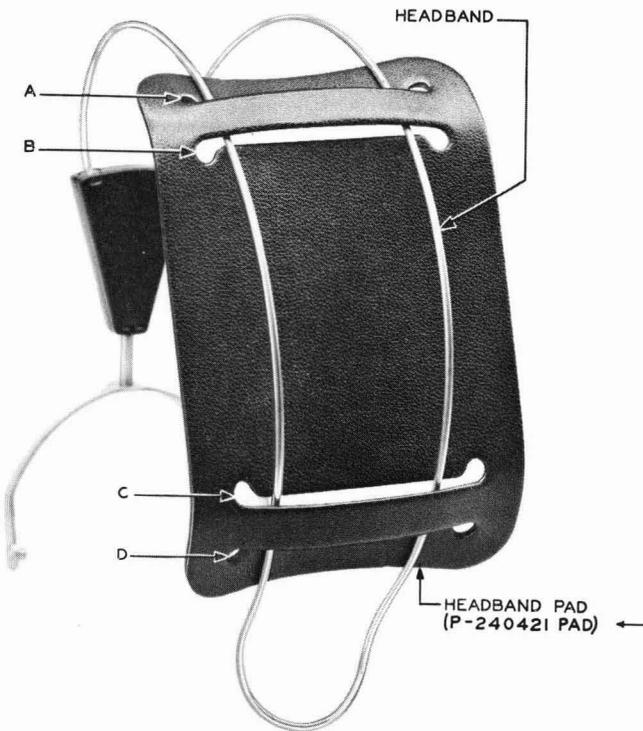


Fig. 9—Headband Pad in Position on Headband

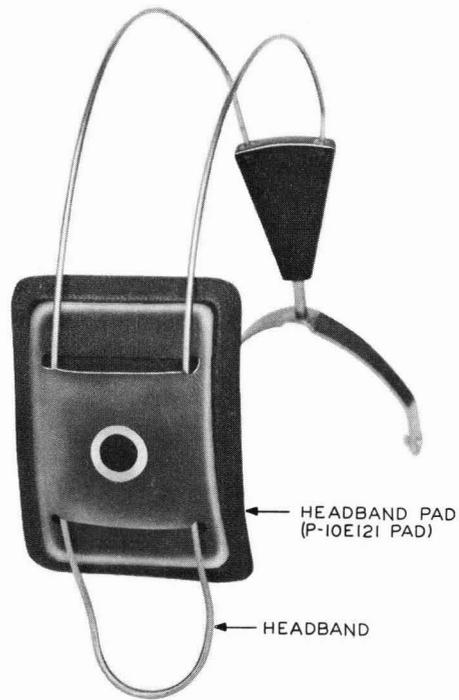


Fig. 10—No. 15A Headband Equipped With P-10E121 Pad