

HANDSETS (AMPLIFIER) G6, G7, AND G8 TYPES IDENTIFICATION, MAINTENANCE, CONNECTIONS, AND SCHEMATICS

1. GENERAL

1.01 This section incorporates information on amplifier-type handsets formerly found in Sections 501-210-100 and 501-210-300.

1.02 Amplifier-type handsets are available in standard telephone colors for use as replacement handsets on 500, 600, and 700 series telephone sets, and their TOUCH-TONE® equivalents, used by persons with impaired hearing (G6-type), weak speech (G7-type), or persons in noisy locations (G8-type).

2. IDENTIFICATION

2.01 These handsets consist of P-80G700 handles into which are assembled U1 receiver units, T1 transmitter units, transistorized amplifier units, volume control potentiometer assemblies, and retractile (spring) cords. The P-80A100 transmitter caps and P-80A200 receiver caps complete the assembly.

G6-TYPE (IMPAIRED HEARING)

2.02 The G6-type handset is equipped with a receiver amplifier unit and is intended for use by persons with impaired hearing. The volume control potentiometer in the center of the handle adjusts the loudness setting of the receiver so that the handset may be used by persons with normal hearing as well as persons with impaired hearing.

2.03 The G6AR handset, rated Manufacture Discontinued (MD), consists of a printed circuit receiver board, transmitter board, and a potentiometer assembly mounted in the handle. Internal connections are made by a flexible circuit strip and plug-in connectors (Fig. 1).

2.04 A single stage transistorized amplifier is located on the receiver board and amplifies the received signal. A polarity guard circuit, mounted on the transmitter board, assures proper polarity of the dc voltage supplied to the amplifier.

2.05 An H4CT cord is used to provide connections between the handset and the associated telephone set. The cord is connected to screw-type terminals on the transmitter board.

2.06 The G6B handset (Fig. 2) replaces the G6AR. The transistorized amplifier and polarity guard units are located on a printed circuit board in the receiver end of the handle. The amplifier, potentiometer assembly, and H4CT cord connect to a terminal board located in the transmitter cavity.

2.07 Maintenance of G6-type handsets is limited to replacement of cracked or broken receiver and transmitter caps, replacement of T1 transmitter units, and replacement of handset cord. See 3.05 for cord replacement procedures.

G7-TYPE (WEAK SPEECH)

2.08 The G7AR handset (Fig. 3) is equipped with a transistorized transmitter amplifier intended for use by persons with weak speech. The potentiometer in the handle controls the level of the transmitter output.

2.09 Internal connections are made by a flexible circuit strip and plug-in connectors. The H4CT cord connects to a terminal board located in the transmitter cavity.

2.10 Maintenance of G7AR handsets is limited to replacement of cracked or broken receiver and transmitter caps, replacing defective T1 transmitter units, and replacement of the handset cord. See 3.05 for cord replacement procedures.

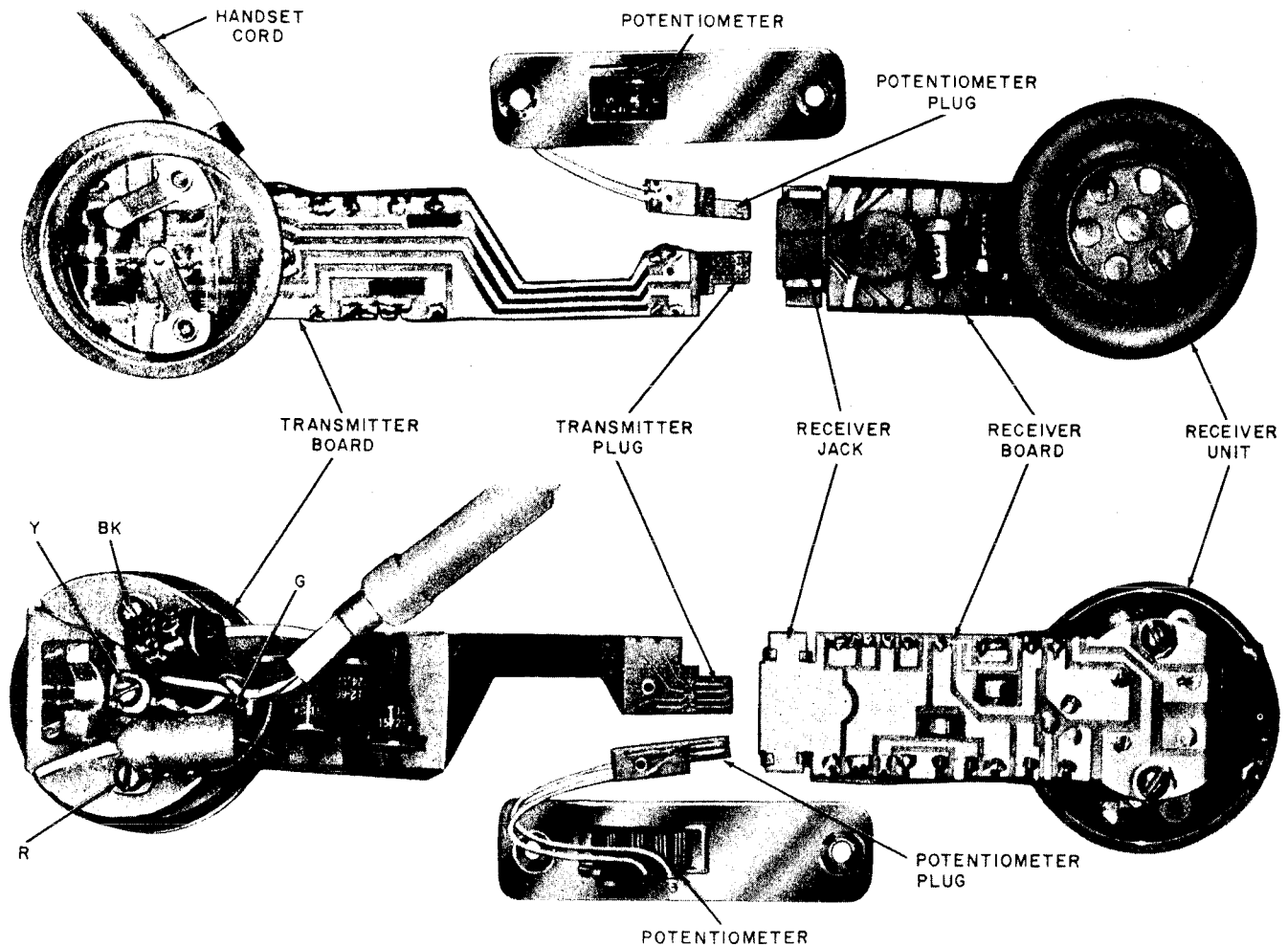


Fig. 1 — G6AR Handset (MD), Internal Assembly

G8-TYPE (NOISY LOCATIONS)

2.11 The G8-type handset is equipped with a transistorized receiver amplifier and a push-to-listen switch and is intended for use in noisy locations. The push-to-listen switch, when operated, decreases the transmitter output and increases the gain of the receiver amplifier.

2.12 The G8A handset, rated (MD), consists of the amplifier assembly mounted on the receiver board, a polarity guard and terminal board mounted on the transmitter cup, and a volume

control potentiometer and push-to-listen switch assembly mounted in the handle (Fig. 4).

2.13 Internal connections are made by a flexible circuit strip and plug-in connectors. The H4CT cord connects to the terminal board in the transmitter cavity.

2.14 The G8B handset replaces the G8A. The transistorized amplifier and polarity guard units are mounted on a printed circuit board located in the receiver end of the handle.

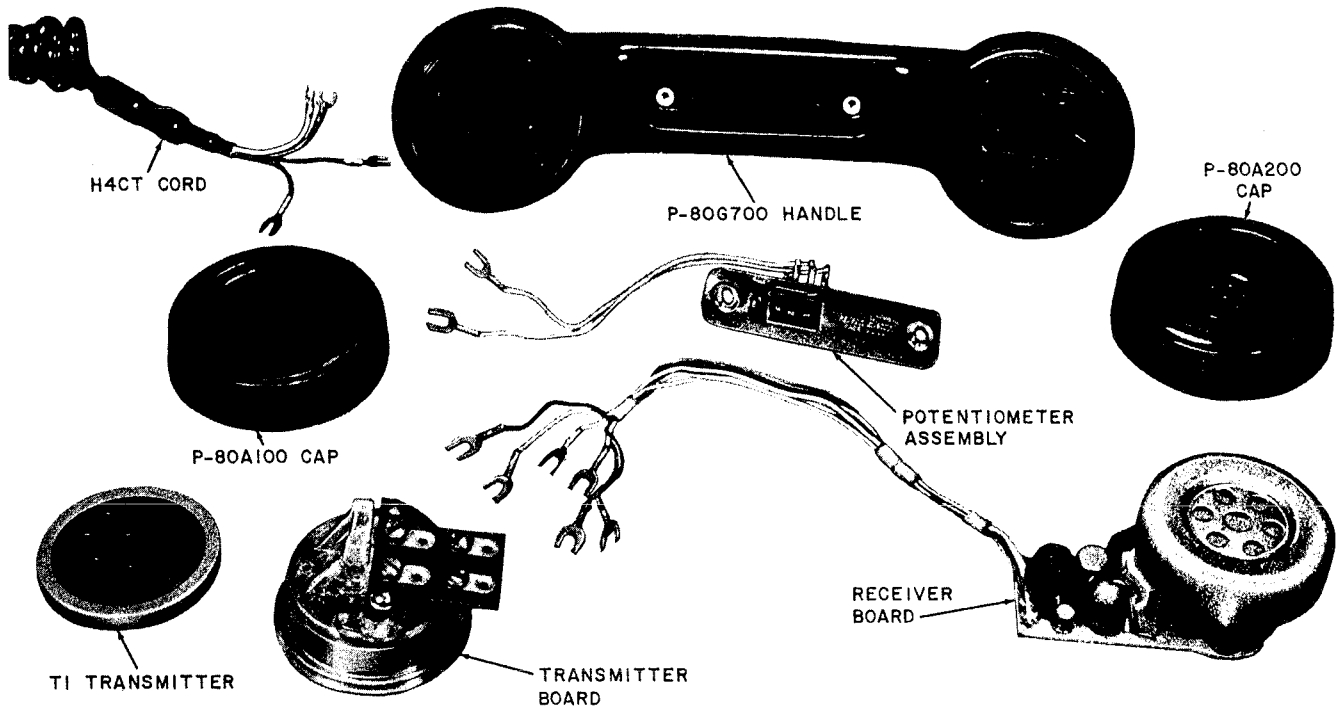


Fig. 2 — G6B Handset, Assembly

2.15 The printed circuit board, push-to-listen switch—potentiometer assembly, and the H4CT cord connect by spade-tipped leads to a terminal board located in the transmitter end of the handle.

2.16 Maintenance of G8-type handsets is limited to replacement of cracked or broken receiver and transmitter caps, replacing defective T1 transmitter units and replacement of handset cord. See 3.05 for cord replacement procedures.

3. MAINTENANCE

3.01 Field maintenance of amplifier-type handsets is limited to replacement of transmitter units, caps, and handset cords. Do not attempt field maintenance of printed circuit components.

3.02 Handles, caps, and grids may be cleaned by wiping with a clean cloth moistened with water.



Do not use cleaning fluids or antirust compounds on transmitter or receiver units or other component parts of handset. Discoloration or tarnish on the silverplated contact surfaces is not objectionable and no attempt should be made to remove it.

3.03 Use care when cleaning handsets to avoid marring the finish. Replace handset if cleaning does not result in a satisfactory appearance.

3.04 Replace cut, cracked, worn, or badly frayed cords. Connections should be checked for tightness.

3.05 The H4CT handset cord furnished with G6-, G7-, and G8-type handsets is not available for field use. If the original cord requires replacement, modify and install an H4CJ cord as follows:

- (1) Carefully remove outer plastic covering on two white conductors with diagonal pliers.

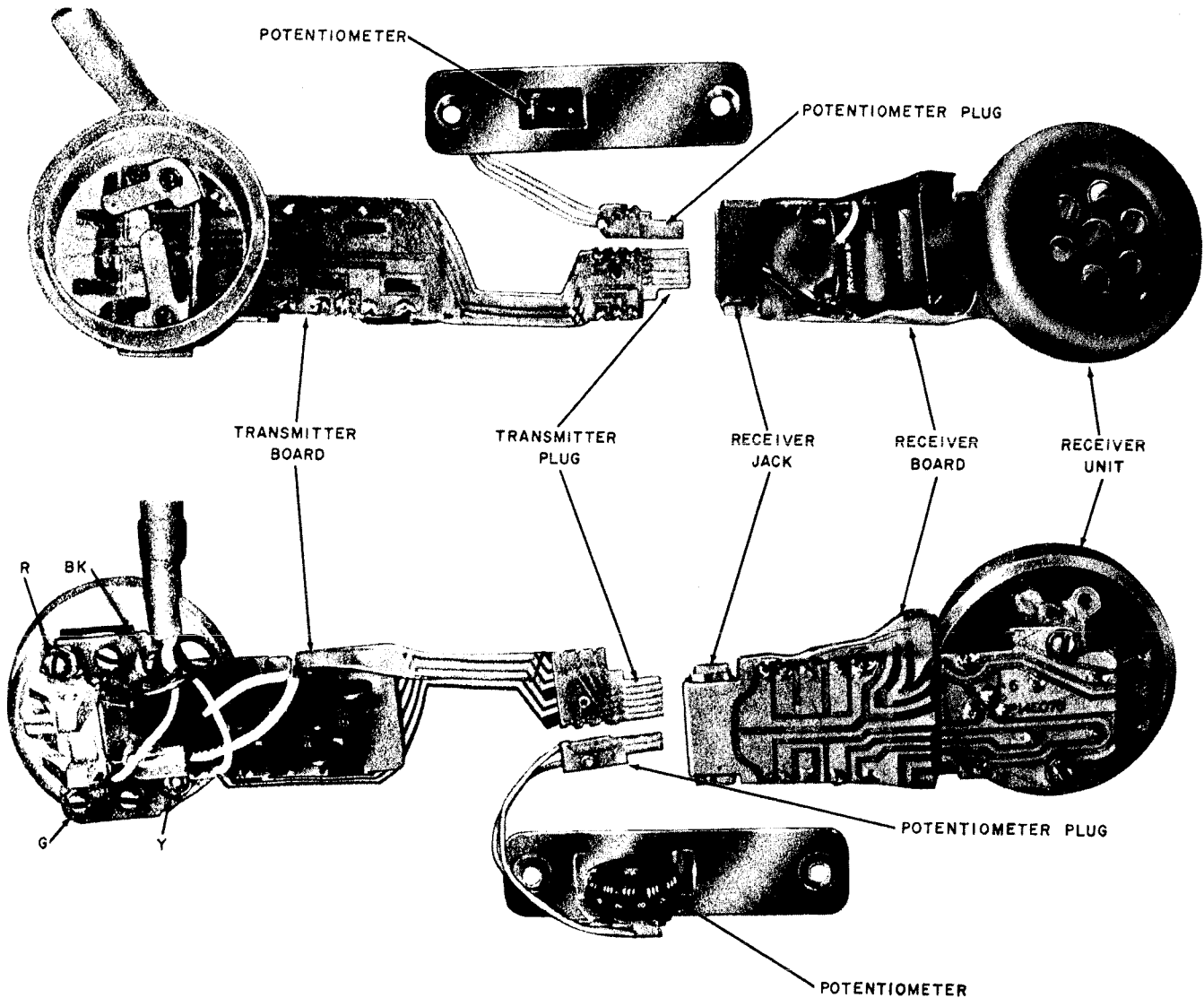


Fig. 3 — G7AR Handset, Internal Assembly

(2) Tone out and identify one white conductor. For identifying purposes, loose knots may be tied in each end of this conductor, designating it green. The other white conductor then becomes yellow.

(3) Loop and tie or tape the excess length of white conductors to approximate length of red and black conductors (Fig. 5).

(4) Insert conductors in transmitter bowl carefully so as not to disrupt the printed board circuit.

3.06 Amplified rotary dial clicks in the receiver of G6- or G8-type handsets may be eliminated by replacing the dial with one having an extra set of off-normal contacts. Use the spare contacts on the dial to short-circuit (during dialing) the handset cord leads terminated to the B and GN punchings of the telephone set network.

4. CONNECTIONS

4.01 When connecting amplifier-type handsets to rotary dial equipped telephone sets, connect the red and black leads to the terminals

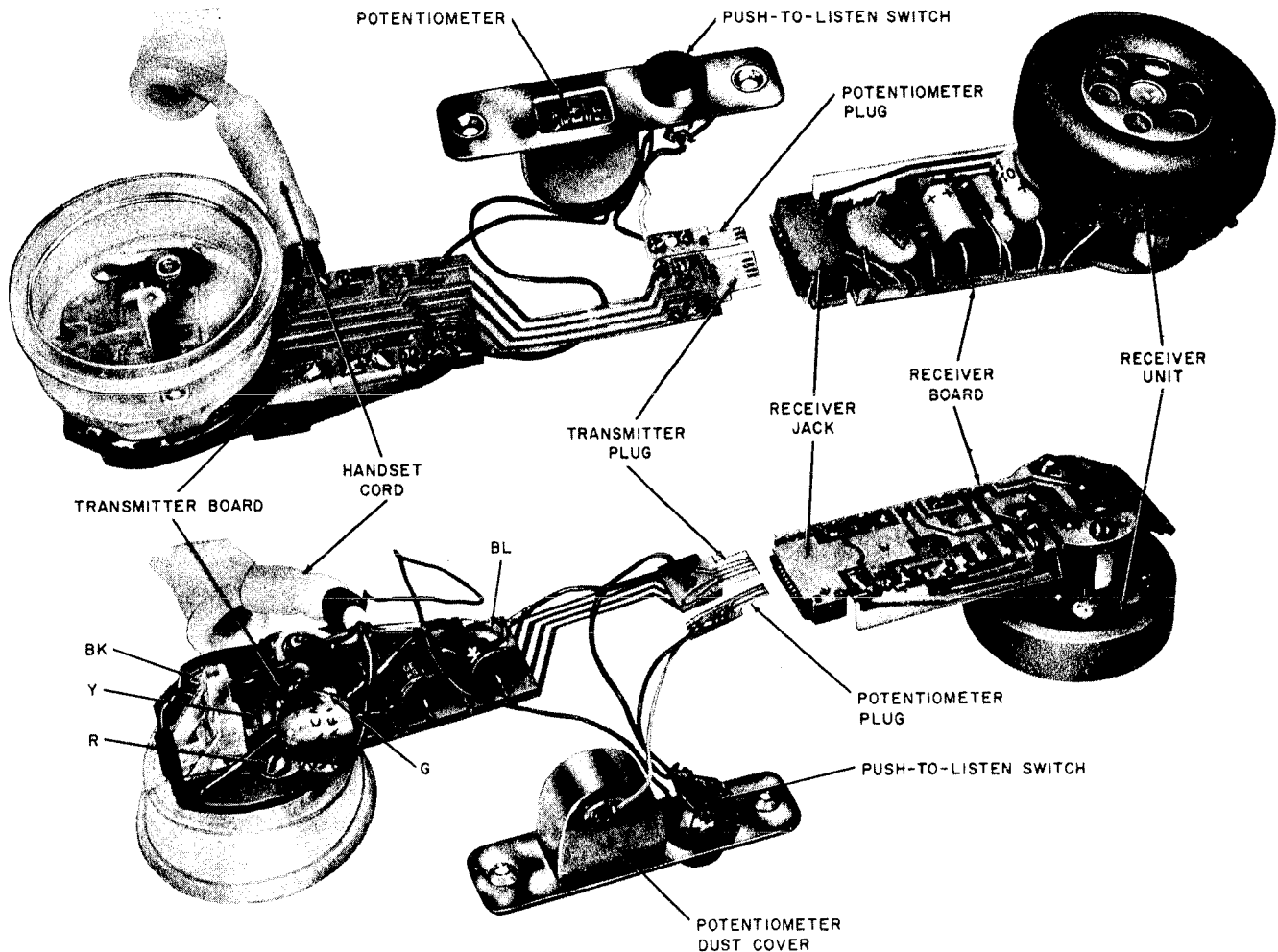


Fig. 4 — G8A Handset (MD), Internal Assembly

from which the red and black leads of the replaced handset were removed. Connect the yellow and green leads to the terminals from which the white leads were removed. See section covering connections of the particular telephone set being modified.

Note: The yellow and green leads connect directly or indirectly to the R and GN punchings, respectively, of the network.

4.02 Test the handset through the full range of volume control. Reverse the yellow and green leads and retest. Connect the leads in the manner that results in normal amplification.

4.03 When connecting G6- and G8-type handsets to telephone sets equipped with TOUCH-TONE dials, the dial must provide common switch contact arrangements which will prevent dial sidetone amplification by the handset amplifier. If the set contains a 25A3, 25B3, or 25H4 dial, install a 25W3, 25Y3, or 25P4, respectively, and connect dial and handset as shown in Table A.

4.04 When connecting G6- or G8-type handsets to 1660-series telephone sets equipped with 26B or 26D card dialers, install a 26F card dialer and connect dialer and handset as shown in Table A.

TABLE A
TOUCH-TONE DIAL AND HANDSET CONNECTIONS

| COMPONENT | LEAD | CONNECT TO |
|--|---------------------------------|--------------------------------|
| 25W3, 25Y3, 25P4 Dial or 26F Card Dialer | G | Tip side of line (Note 1) |
| | BK | RR terminal of network |
| | R-G | R terminal of network |
| | W-BL | Green handset lead (Note 1) |
| | W | GN terminal of network |
| | R | Red handset lead (Note 1) |
| | BL | B terminal of network |
| | O-BK | C terminal of network |
| | V | IR speakerphone lead (Note 1) |
| | O | T1 speakerphone lead (Note 1) |
| | G-W | C terminal of network (Note 2) |
| S-BK | RR terminal of network (Note 2) | |
| G6- or G8-Type Handset | Y | R terminal of network |
| | G | White dial lead (Note 1) |
| | R | Red dial lead (Note 1) |
| | BK | B terminal of network |
| Line Switch | R | R terminal of network |
| | BK | Green handset lead (Note 1) |

Note 1: Connect these leads to spare terminals on network, terminal board, or key terminal as required.

Note 2: These leads are from card dialer rotary exciter switch.

5. SCHEMATICS

5.01 Fig. 6 through 10 show schematic diagrams of the amplifier type handsets.

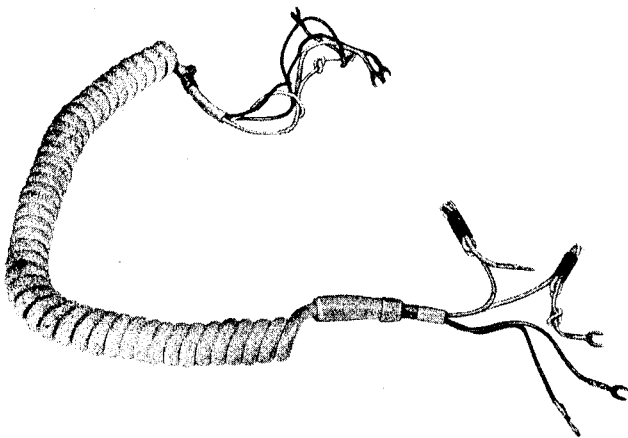


Fig. 5 — H4CJ Cord, Modified

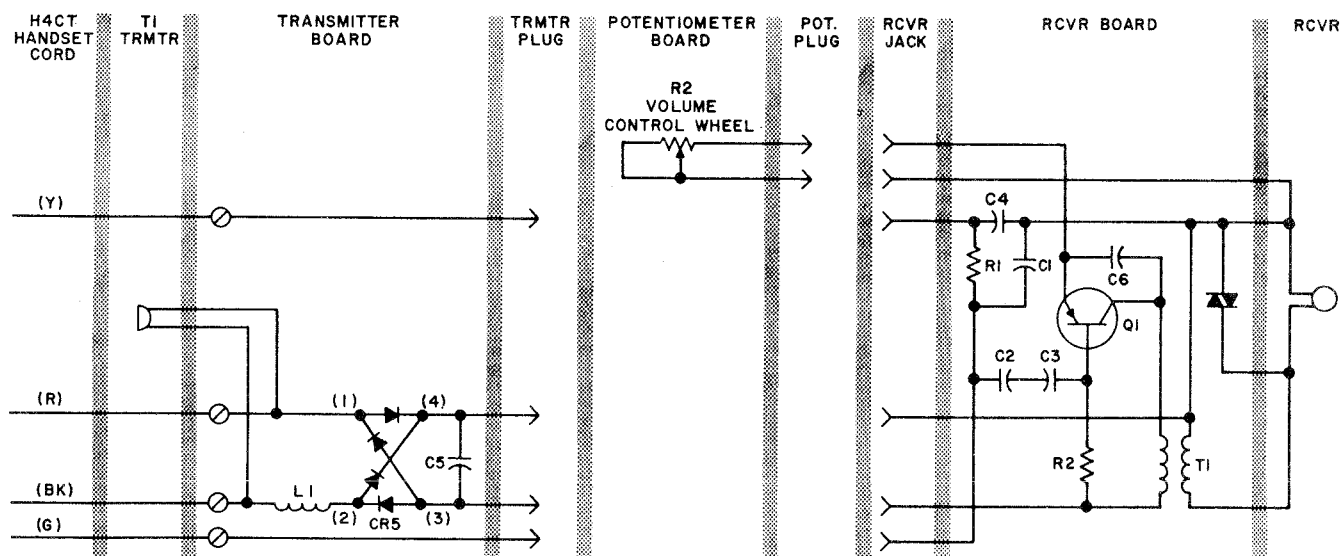


Fig. 6 — G6AR Handset (MD), Schematic

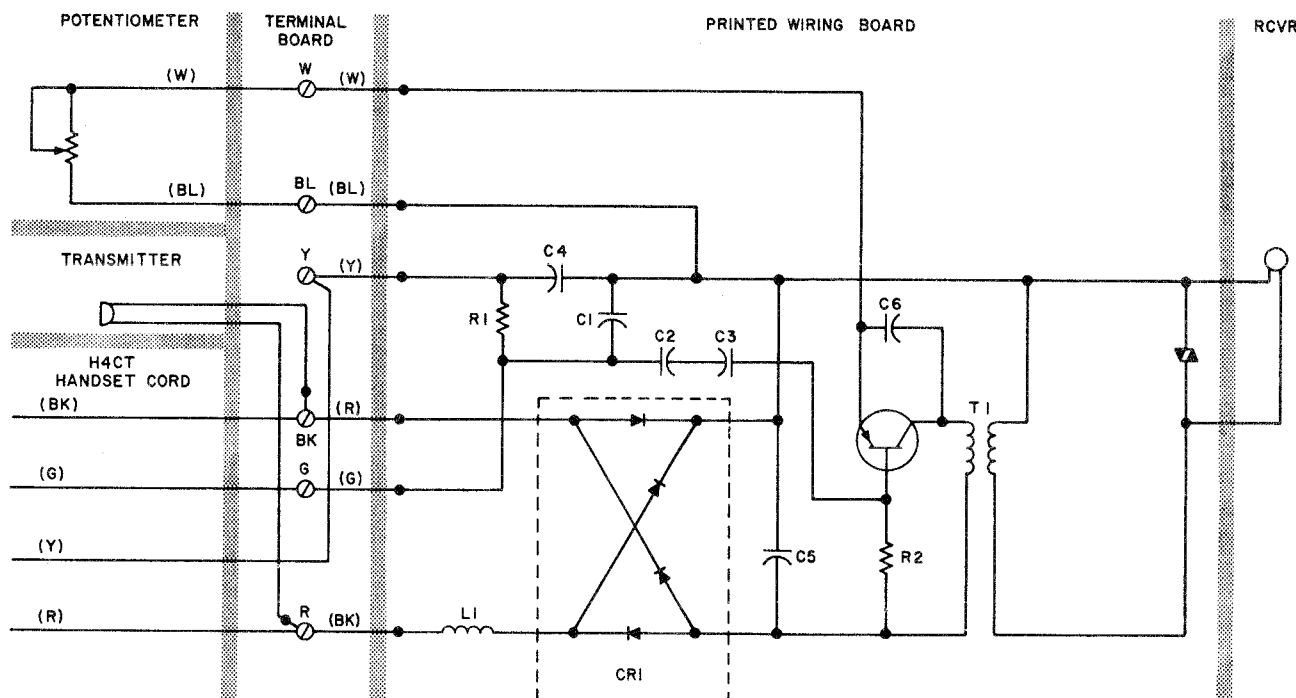


Fig. 7 — G6B Handset, Schematic

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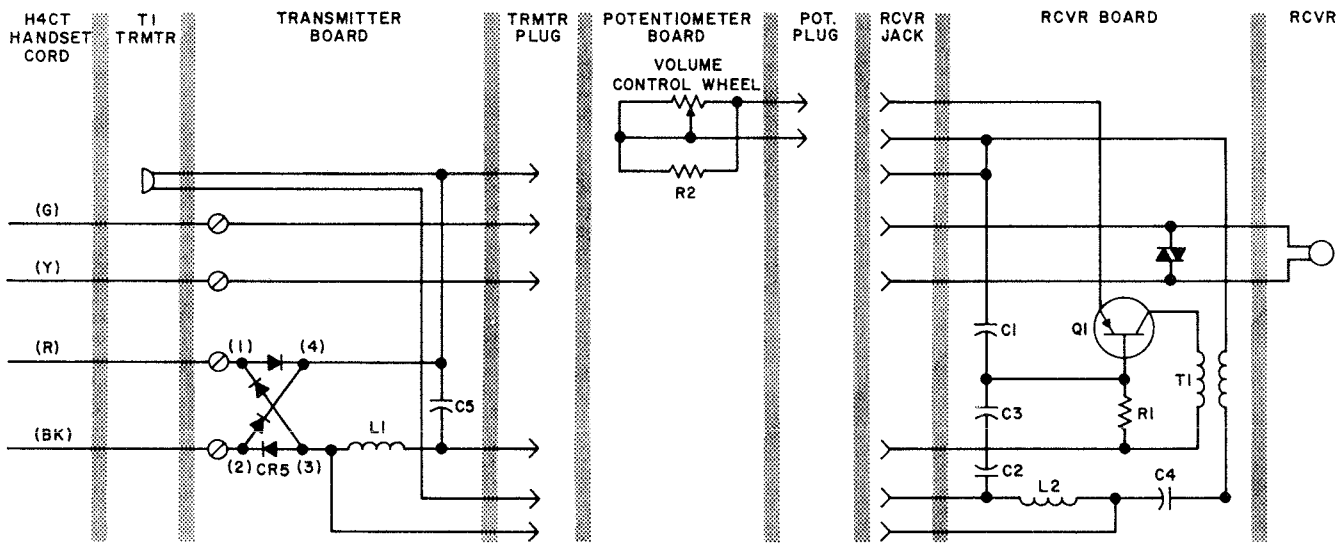


Fig. 8 — G7AR Handset, Schematic

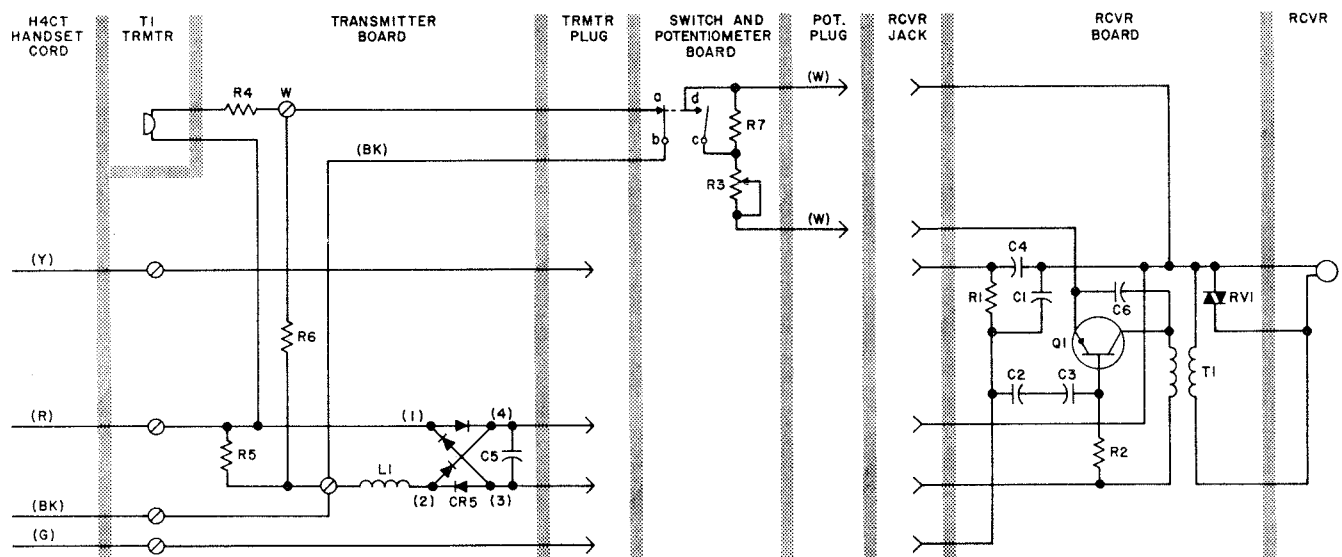


Fig. 9 — G8A Handset (MD), Schematic

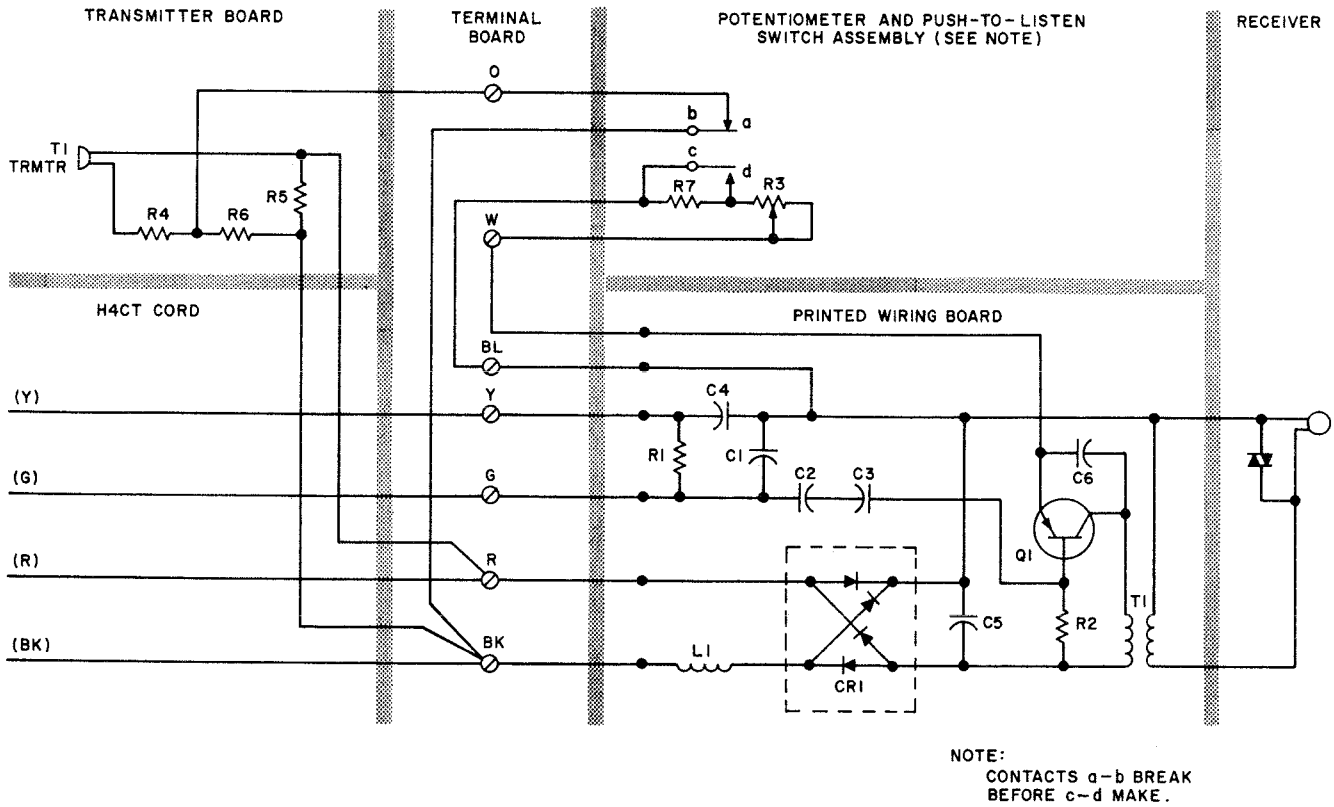


Fig. 10— G8B Handset, Schematic