

247B KEY TELEPHONE UNIT "TOUCH-TONE" ADAPTER IDENTIFICATION, INSTALLATION, AND CONNECTIONS

1. GENERAL

1.01 The 247B KTU is used in combination with other key telephone system apparatus to permit use of TOUCH-TONE (T-T) dial equipped telephone sets as well as rotary dial units in the 1A2 and 6A key telephone systems and the communications system No. 2A.

1.02 The 247B KTU may be used with the selector only, single-talking-link, or two-talking-link arrangements.

2. IDENTIFICATION

2.01 The 247B TOUCH-TONE adapter (Fig. 1) is a plug-in unit approximately 7 inches high, 7-1/2 inches wide, and 7-3/4 inches deep. The adapter consists of four plug-in printed circuit units mounted in a metal case with space for mounting a fifth printed circuit unit which must be ordered separately.

2.02 The four printed circuit units, designated Y1 through Y4 and shown in schematics (Fig. 2 through 5) provide the following functions:

- Y1 — Input Amplifier and Filter — Fig 2
- Y2 — Limiter and Bias Circuit — Fig. 3
- Y3 — Low Channel Circuits — Fig. 4
- Y4 — High Channel Circuits — Fig. 5

2.03 Circuit packs Y5 and Y6, which must be ordered separately, provide the following circuits:

- Y5 — Adapter for 207C Selector in 2A Communications System or 6A KTS
- Y6 — Adapter for 407A Selector in 1A2 KTS

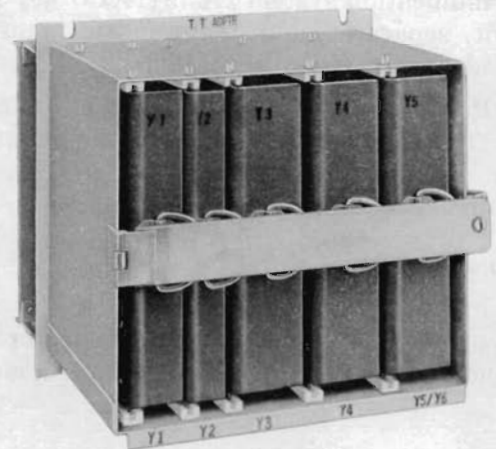


Fig. 1 — 247B TOUCH-TONE Adapter, Front View

2.04 Fig. 6 shows the schematic of the adapter for 207C selector circuit CP-Y5.

2.05 Fig. 7 shows the schematic of the adapter for the 407A selector circuit CP-Y6.

2.06 See CD-69529-01 and SD-69529-01 for detailed description of circuit pack operation.

2.07 External connections to the 247B KTU are made to two twenty-terminal screw type terminal boards (Fig. 8).

3. INSTALLATION

3.01 The 247B TOUCH-TONE adapter should be installed adjacent to the 207C or 407A KTU with which it will be used. The adapter may be mounted in any apparatus cabinet or panel used for 200-type KTUs.

3.02 Connecting the adapter to a 207C KTU requires the following additional components which must be provided during installation.

- A 400J diode for each A lead.
- One 228A KTU terminal field to mount and wire in the diodes.

3.03 When installing the 247B KTU to a communication system 2A (311A15) key service unit, separate mounting facilities must be provided due to space limitations.

3.04 Power for the adapter must be obtained from the key telephone system battery supply and must maintain a voltage between -26 volts (min) and -20 volts (max).

4. CONNECTIONS

4.01 Fig. 9 shows connections to the 247B adapter when used with the 207C selector. Relay functions and contact numbers are included

for CP-Y3, CP-Y4, and CP-Y5 to aid in tracing circuit paths.

4.02 Fig. 10 shows connections to the 247B adapter when used with the 407A selector.

5. MAINTENANCE

5.01 Field maintenance of the 247B TOUCH-TONE adapter is limited to replacement of the plug-in circuit packs.

5.02 To replace a circuit pack (Fig. 11) loosen and swing open retaining strap on the front of adapter. Grasp D-ring on front of circuit pack and pull straight out of the case. Align the replacement pack within top and bottom slides and push forward. Replace retaining strap.



When replacing retaining strap, be sure all circuit pack terminals are fully seated in the mating connectors on the frame.

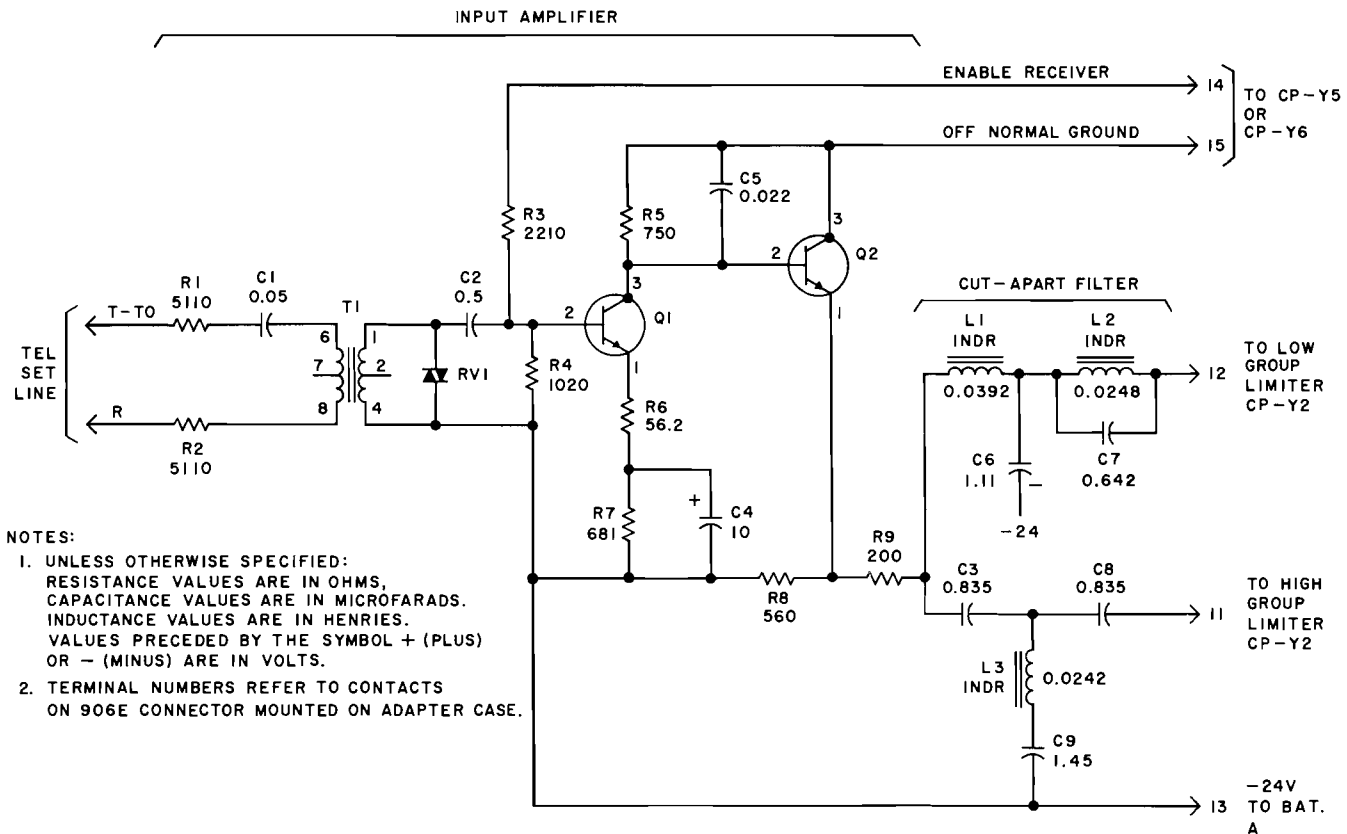
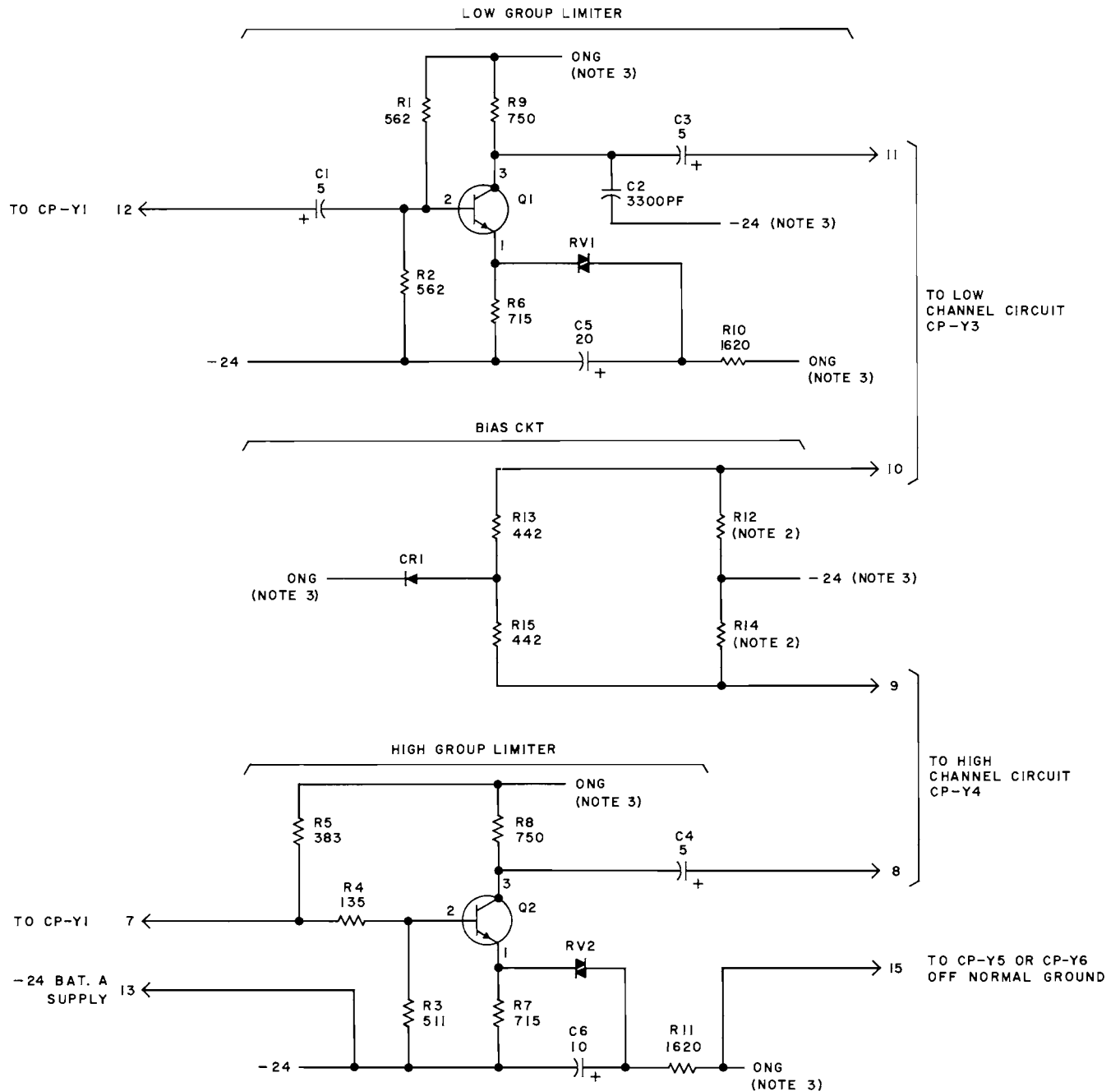


Fig. 2 — Input Amplifier and Filter, Schematic



NOTES:

1. UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS, VALUES PRECEDED BY THE SYMBOL + (PLUS) OR - (MINUS) ARE IN VOLTS.
2. THE VALUES OF RESISTORS R12 AND R14 ARE SELECTED AT ASSEMBLY.

3. LEADS DESIGNATED ONG TERMINATE AT PIN 15 OF THE 906E CONNECTOR ON ADAPTER CASE. LEADS DESIGNATED -24 TERMINATE AT PIN 13.
4. TERMINAL NUMBERS REFER TO CONTACTS ON 906E CONNECTOR.

Fig. 3 — Limiter and Bias Circuit, Schematic

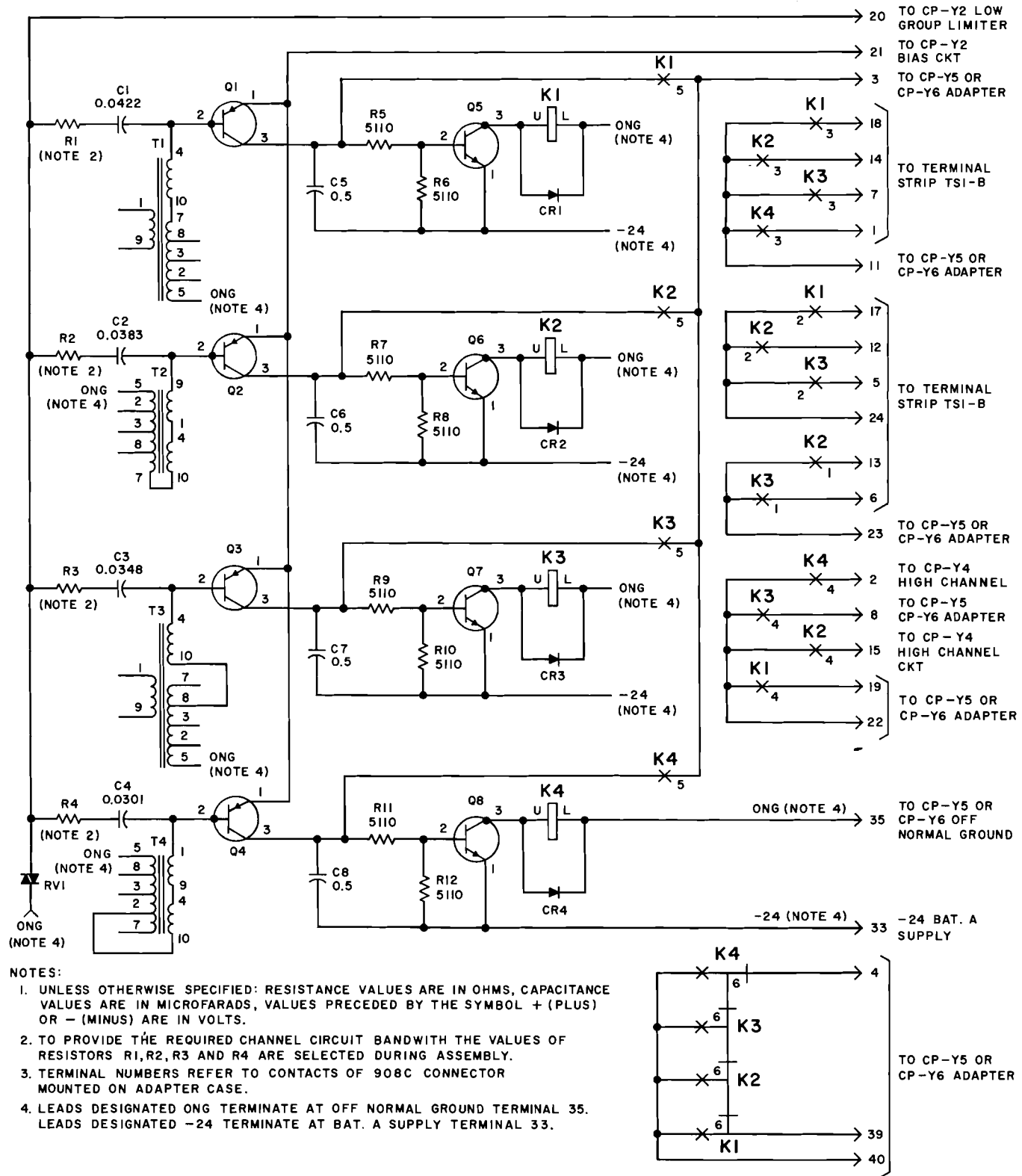


Fig. 4 - Low Channel Circuits, Schematic

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NOTES:

- 1. UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS. VALUES PRECEDED BY THE SYMBOL +(PLUS) OR -(MINUS) ARE IN VOLTS.
- 2. TERMINAL NUMBERS REFER TO CONTACTS OF 908C CONNECTOR MOUNTED ON ADAPTER CASE.

- 3. LEADS DESIGNATED ONG TERMINATE AT OFF NORMAL GROUND TERMINAL 35. LEADS DESIGNATED -24 TERMINATE AT BAT. A SUPPLY TERMINAL.

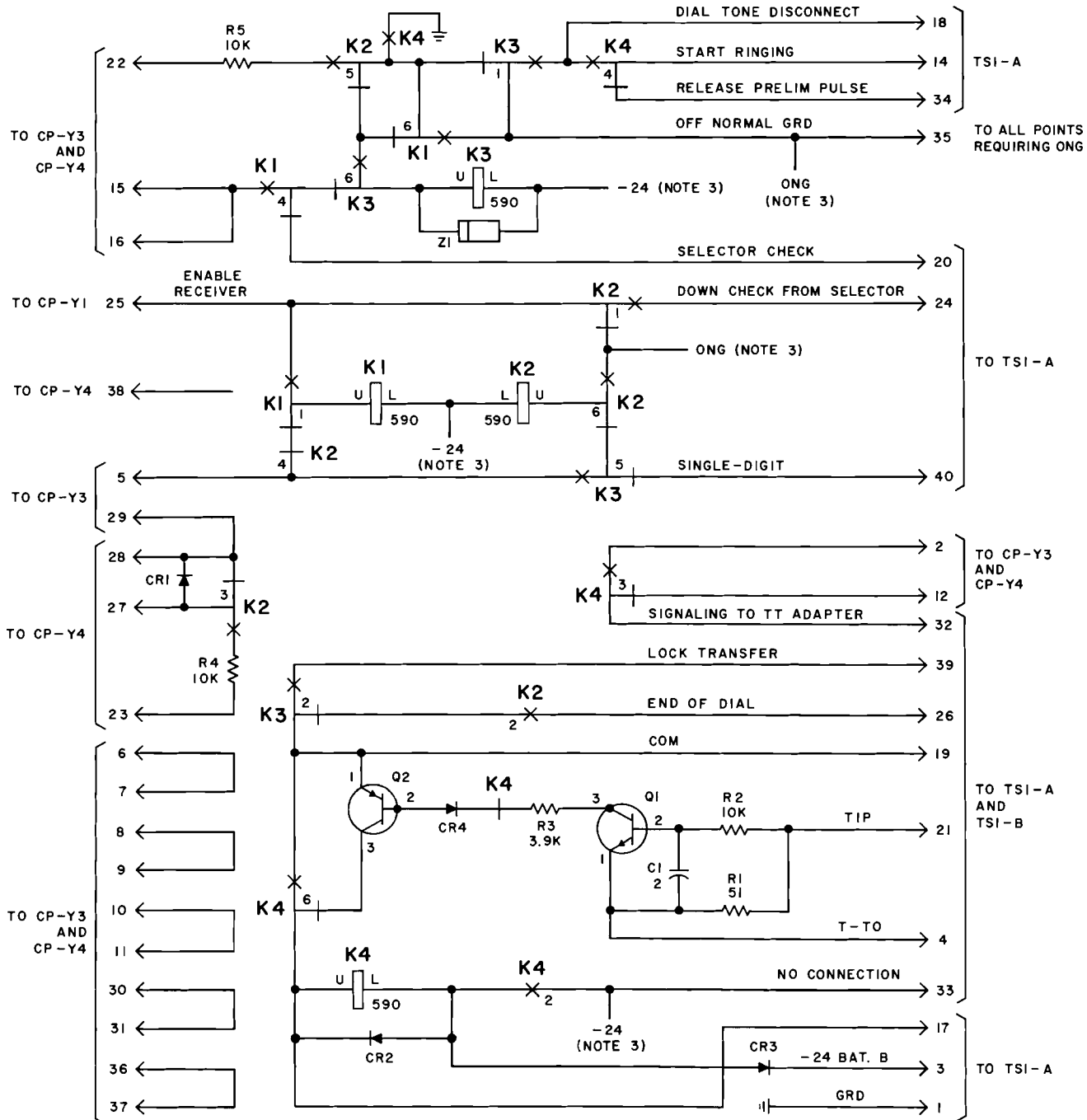


Fig. 6 — Adapter for 207C Selector, Schematic

NOTE:
 TERMINAL NUMBERS REFER TO CONTACTS OF
 908C CONNECTOR MOUNTED ON ADAPTER CASE.

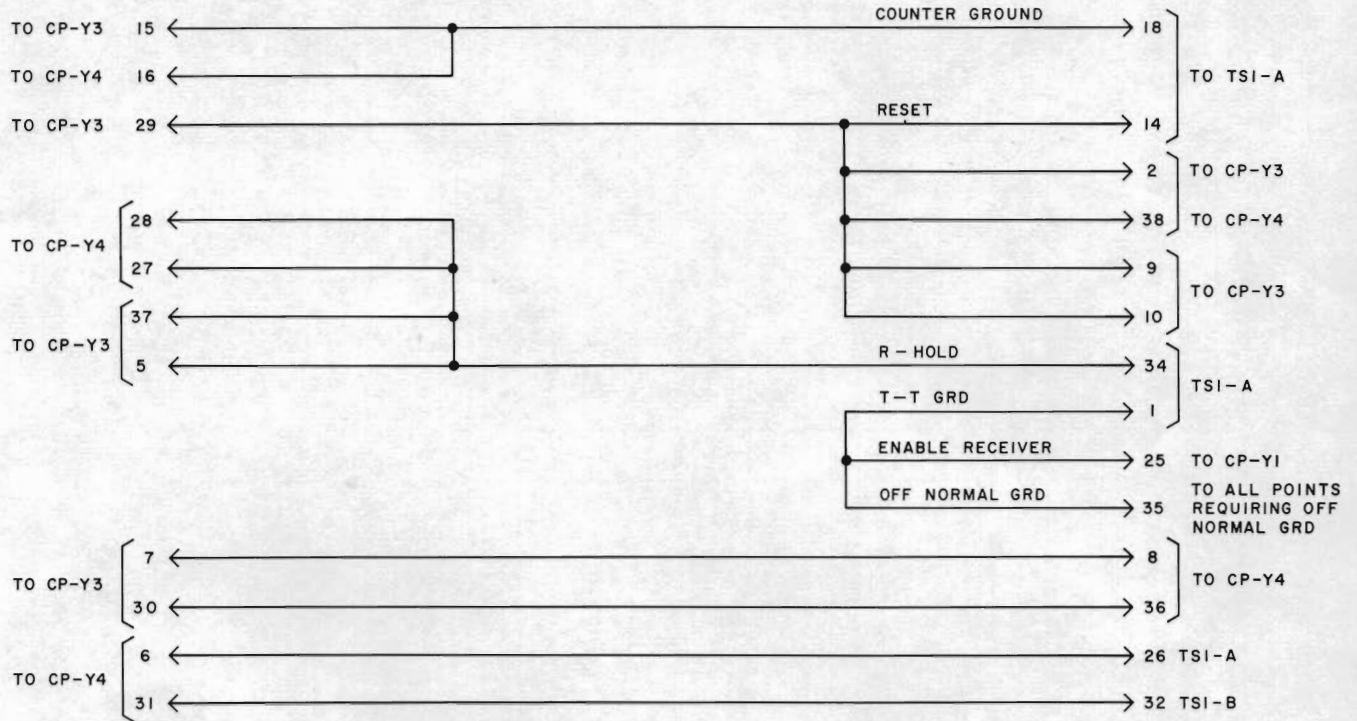


Fig. 7 — Adapter for 407A Selector, Schematic

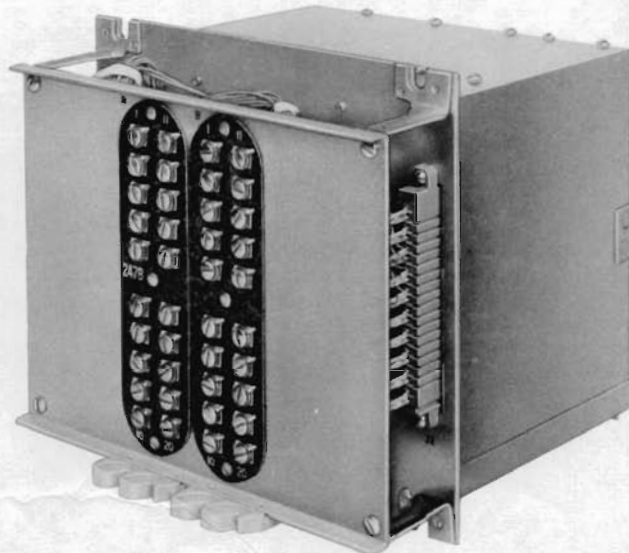


Fig. 8 — 247B TOUCH-TONE Adapter, Rear View

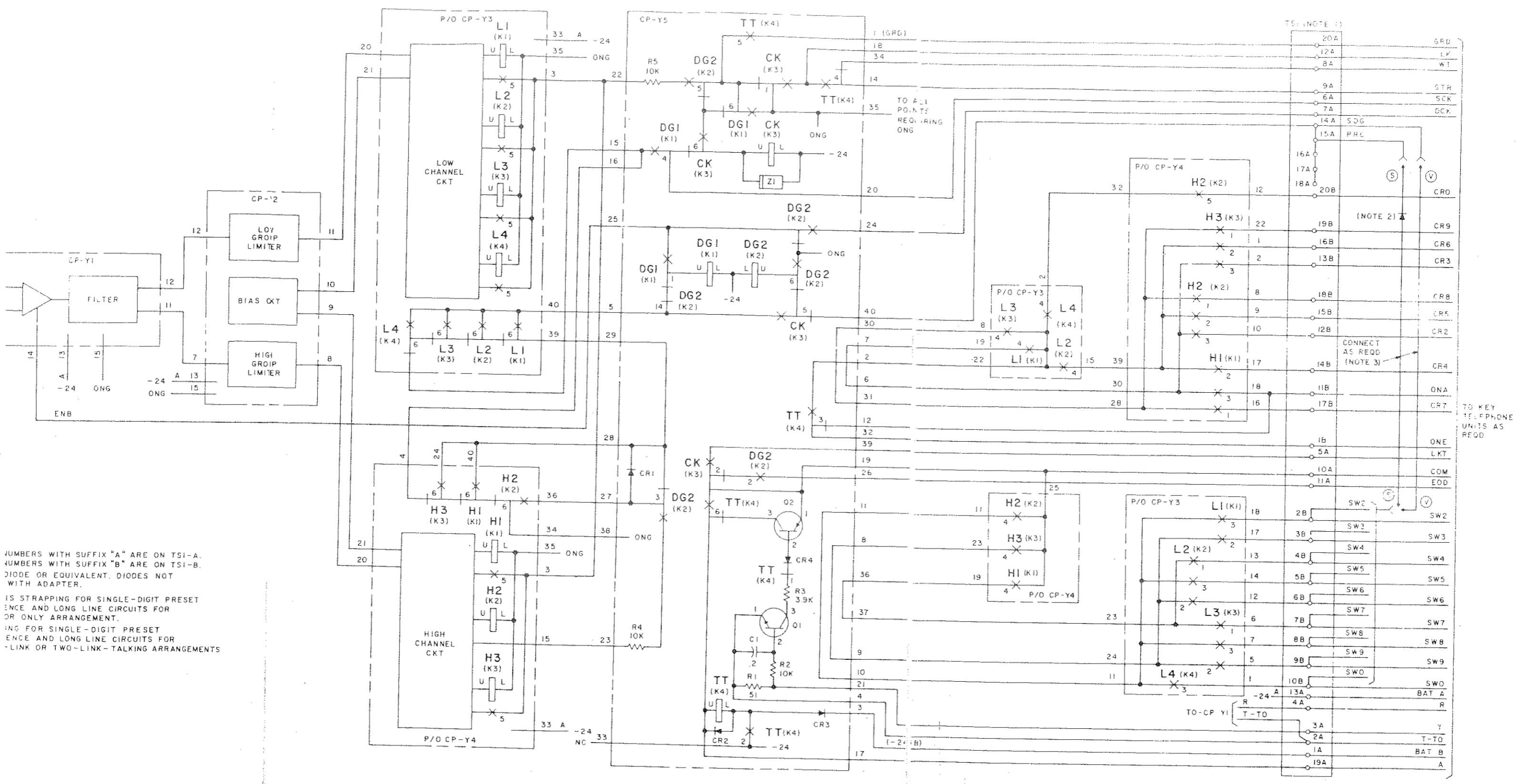


Fig. 9 - Circuit for Use With 207C Selector

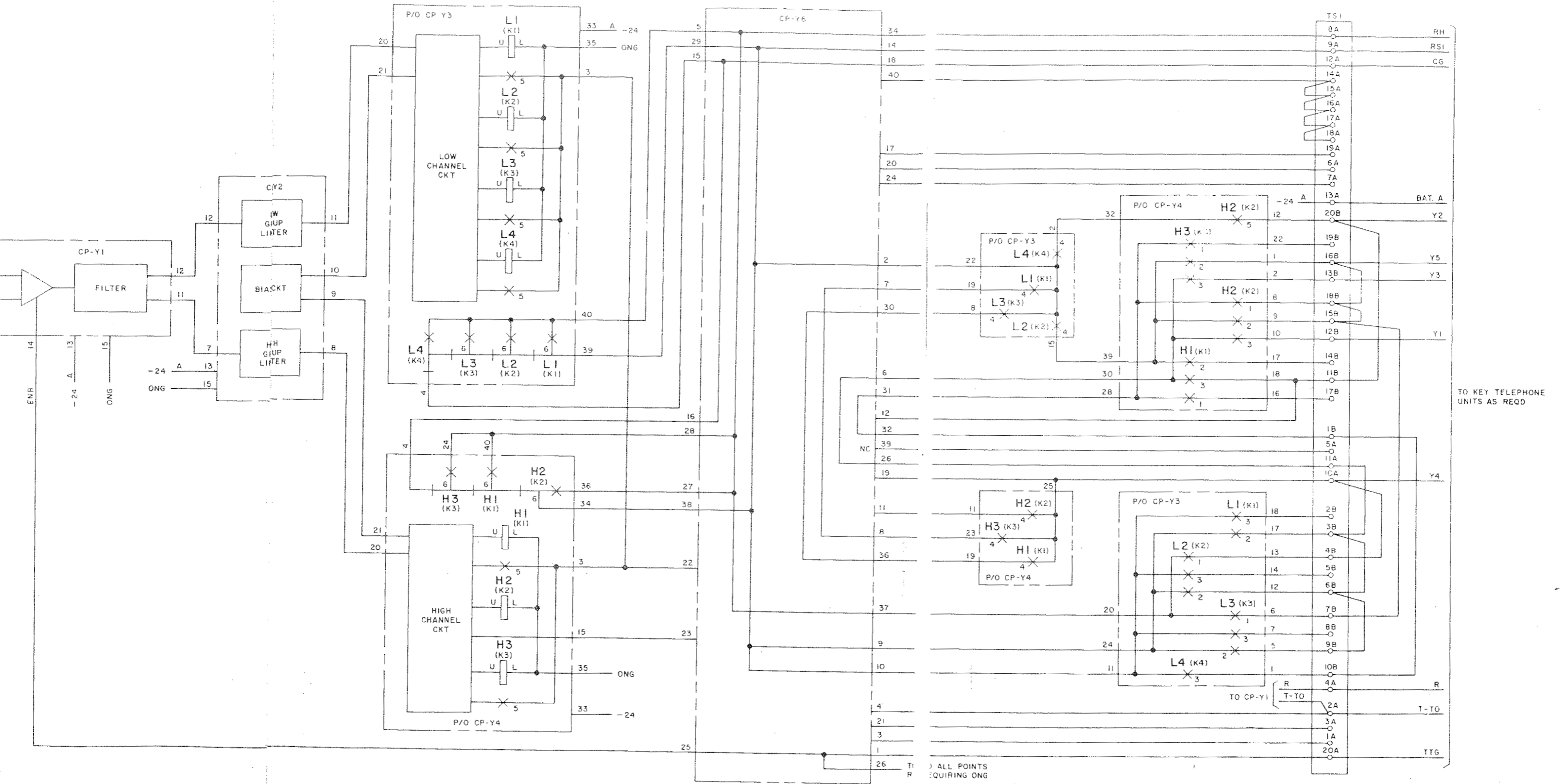


Fig. 10 - Circuit for Use With 407A Selector

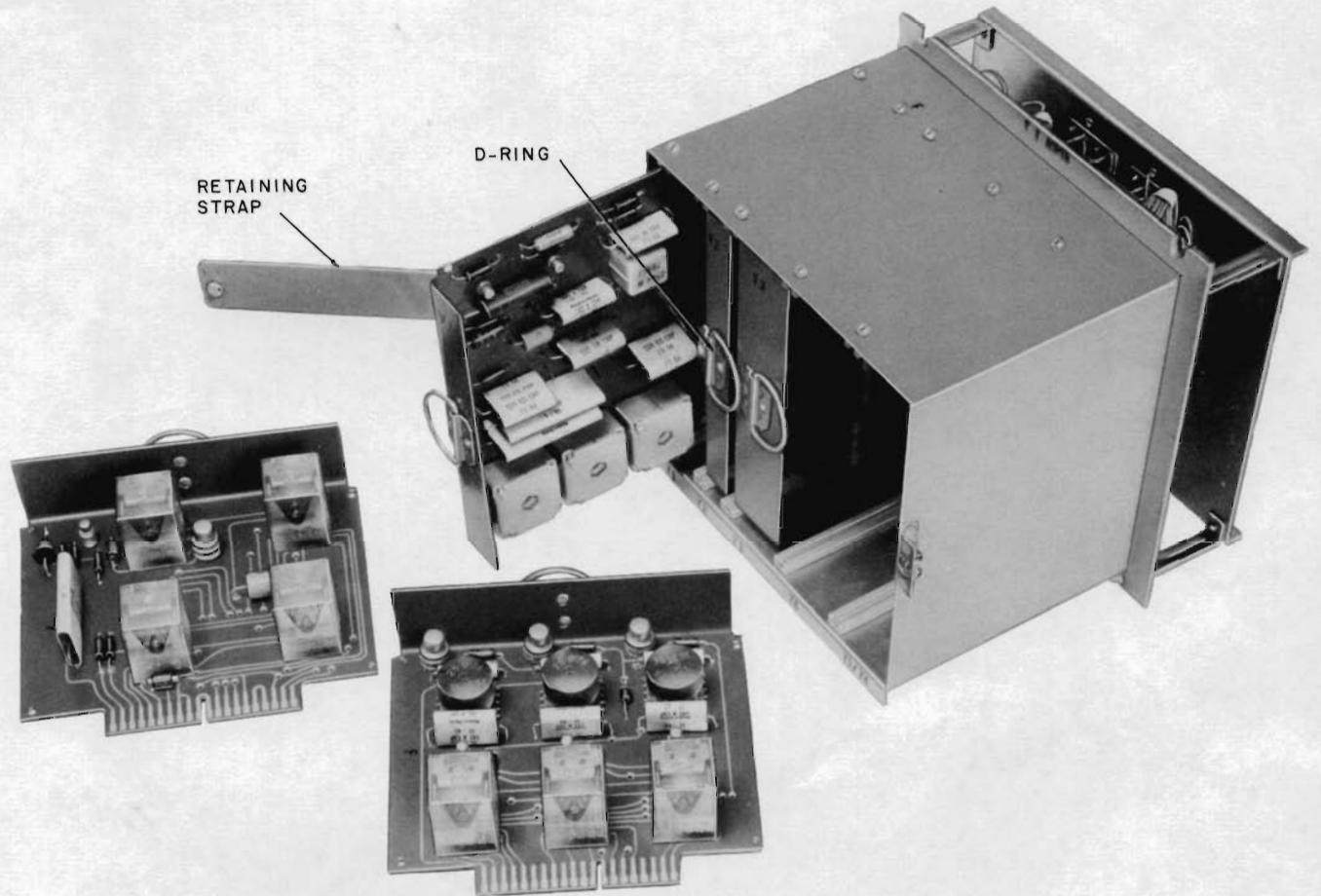


Fig. 11 — Circuit Pack Removal