

NETWORKS

1. GENERAL

1.01 This section covers information on current 425-, 4010-, and 4228-type networks used in most rotary and TOUCH-TONE® dial equipped telephone sets. The 4228-Type network will be used to replace the 425- and 4010-type networks.

1.02 A typical example of each type network is shown in Fig. 1, 2, and 3, respectively.

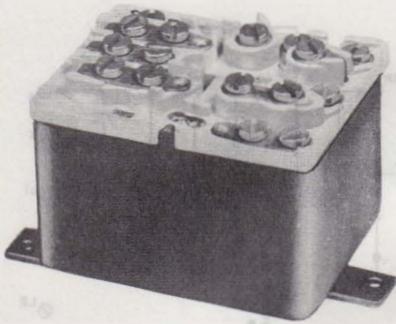


Fig. 1—Typical 425-Type Network

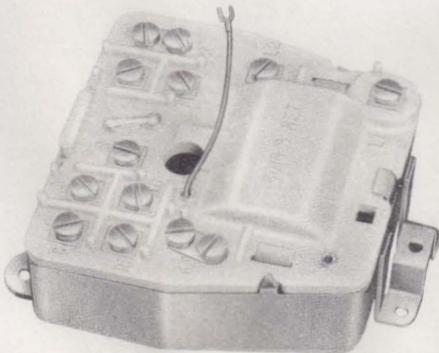


Fig. 2—Typical 4010-Type Network



Fig. 3—Typical 4228-Type Network

2. IDENTIFICATION

2.01 The networks covered in this section consist primarily of resistors, varistors, capacitors, and a transformer. The 425- and 4010-type networks are assembled in a metal case and wired to a terminal block which serves as the cover. The components are surrounded by a protection insulating compound. The components of the 4228-type network are assembled to a plastic terminal plate which also serves as the network framework.

2.02 These networks provide transmission circuit elements, balancing network for anti-sidetone telephone sets, ringing capacitor, and a radio interference-suppression filter for most telephone sets.

2.03 Table A lists the different codes and features.

3. 425-TYPE NETWORKS

3.01 The 425D network (Fig. 4):

- (a) Is intended for use in rotary dial equipped telephone sets.

- (b) Is intended for use in telephone sets equipped with an amplifier for use with 52- or 53-type operators head set.

3.02 The 425E network (Fig. 5):

- (a) Is intended for use in rotary dial equipped telephone sets.
- (b) Is equivalent to the 4228A network.
- (c) Replaces 425B network.

3.03 The 425F network (Fig. 6):

- (a) Is intended for use in special rotary dial equipped telephone sets.
- (b) Does not contain transmission circuit elements or antisidetone balancing network.

3.04 The 425J network (Fig. 7):

- (a) Is same as the 425E network, except that equalizing varistors are replaced with resistor strap options for speech equalization.

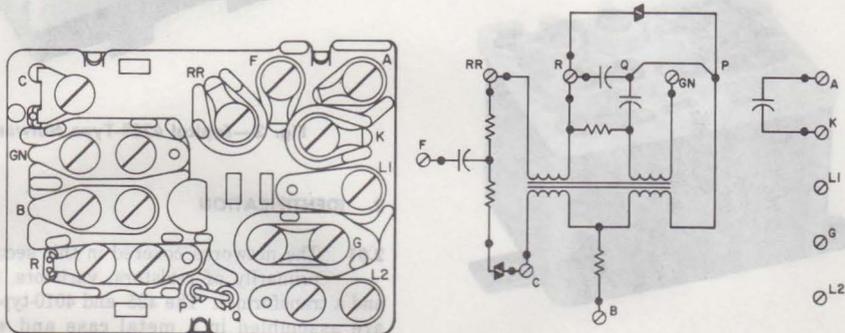


Fig. 4—425D Network, Terminal Layout and Schematic

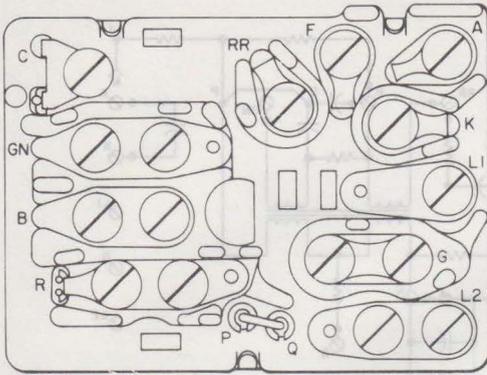


Fig. 5—425E Network, Terminal Layout and Schematic

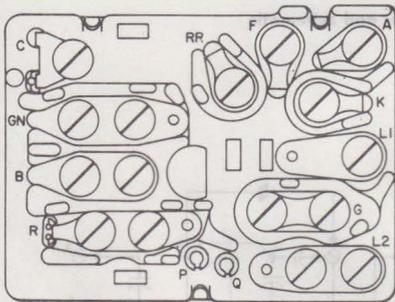
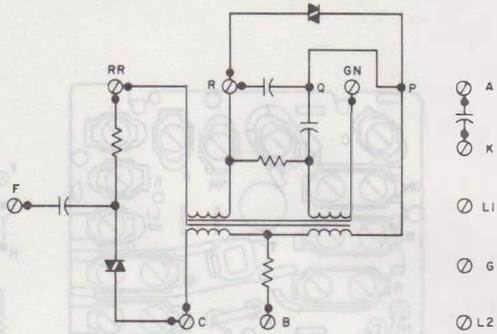
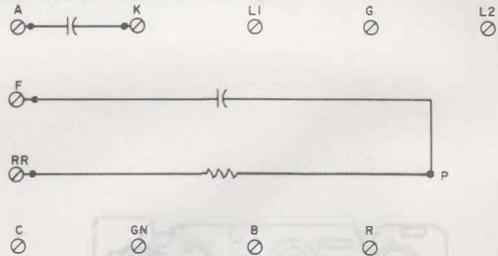


Fig. 6—425F Network, Terminal Layout and Schematic



(b) Is a distributing house substitution for the 425B, E, G, and K networks in high radio frequency interference locations.

(c) Requires a strapping option for use with LC-type TOUCH-TONE dials.

3.05 The 425K network (Fig. 8):

- (a) Has S and T terminals.
- (b) The dial pulse capacitor at terminal F is omitted.
- (c) Is intended for use in TOUCH-TONE dial equipped telephone sets.

(d) Is equivalent to the 4228B network.

(e) Replaces 425G network.

4. 4010-TYPE NETWORK

4.01 The 4010B network (Fig. 9):

- (a) Provides transmission equalization for varying loop lengths, ringing capacitor, balancing network for antisidetone telephone sets.
- (b) Intended for use in rotary dial equipped telephone sets.
- (c) Is equivalent to the 4228F network.

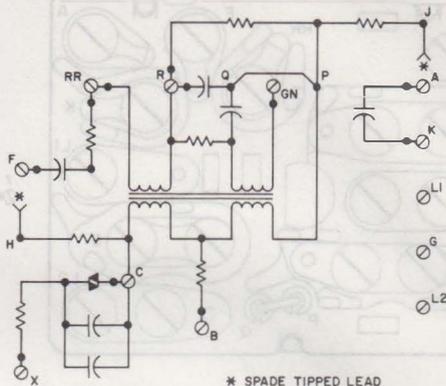
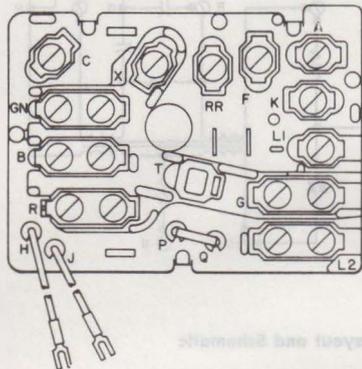


Fig. 7—425J Network, Terminal Layout and Schematic

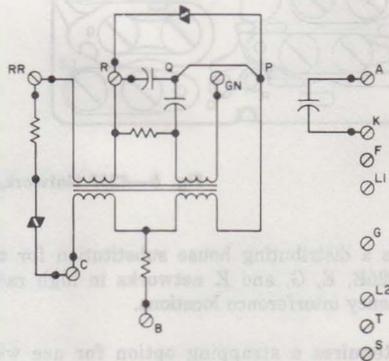
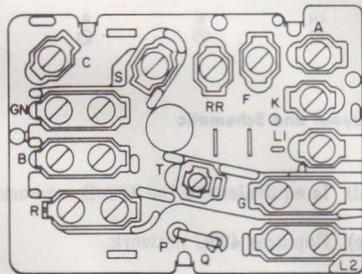


Fig. 8—425K Network, Terminal Layout and Schematic

(d) Replaces 4010A network.

4.02 The 4010C network (Fig. 10) is intended for use in 1A and 2A rotary or TOUCH-TONE dial equipped coin telephone sets.

4.03 The 4010D network (Fig. 11):

(a) Is same as the 4010B network, except the dial pulse capacitor at terminal F is omitted.

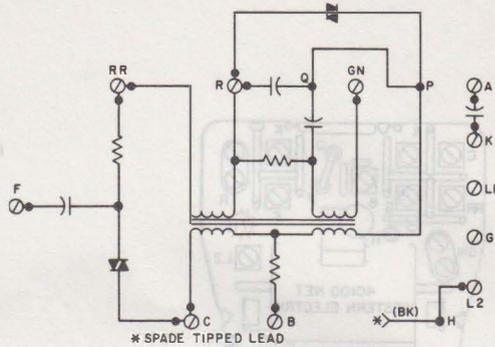
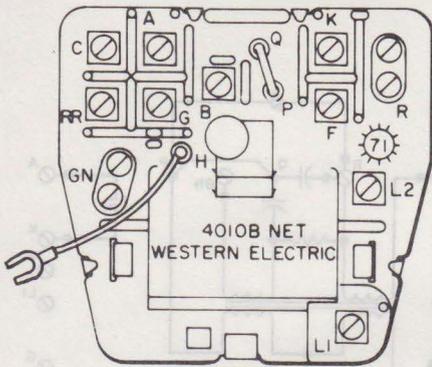


Fig. 9—4010B Network, Terminal Layout and Schematic

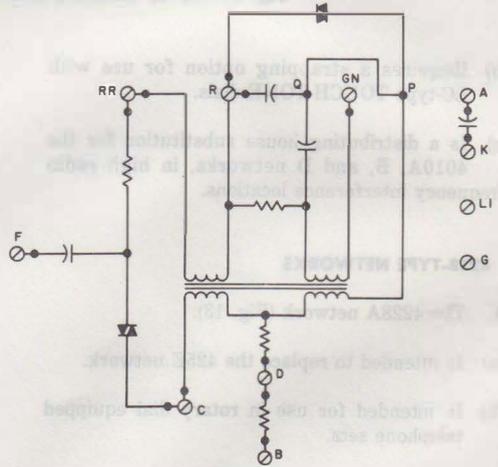
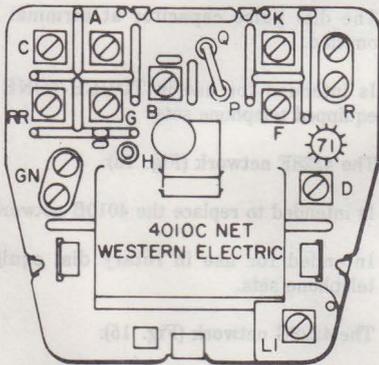


Fig. 10—4010C Network, Terminal Layout and Schematic

(b) Intended for use in TOUCH-TONE dial equipped telephone sets.

(c) Is equivalent to the 4228G network.

4.04 The 4010E network (Fig. 12):

(a) Is same as the 4010B network, except that equalizing varistors are replaced with strap options for speech equalization.

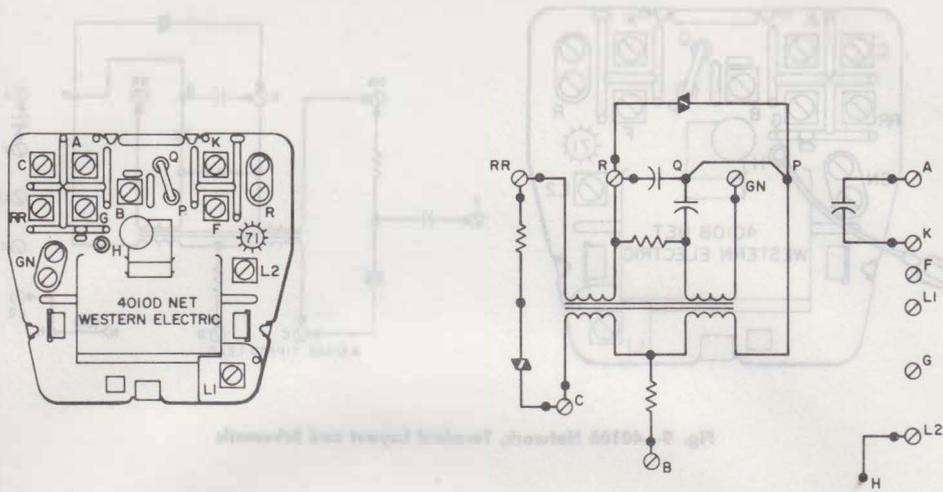


Fig. 11—4010D Network, Terminal Layout and Schematic

- (b) Requires a strapping option for use with LC-type TOUCH-TONE dials.
- (c) Is a distributing house substitution for the 4010A, B, and D networks, in high radio frequency interference locations.

5. 4228-TYPE NETWORKS

5.01 The 4228A network (Fig. 13):

- (a) Is intended to replace the 425E network.
- (b) Is intended for use in rotary dial equipped telephone sets.

5.02 The 4228B network (Fig. 14):

- (a) Is intended to replace the 425K network.
- (b) Has S and T terminals.

- (c) The dial pulse capacitor at terminal F is omitted.
- (d) Is intended for use in TOUCH-TONE dial equipped telephone sets.

5.03 The 4228F network (Fig. 13):

- (a) Is intended to replace the 4010B network.
- (b) Intended for use in rotary dial equipped telephone sets.

5.04 The 4228G network (Fig. 15):

- (a) Is intended to replace the 4010D network.
- (b) The dial pulsed capacitor at terminal F is omitted.
- (c) Intended for use in TOUCH-TONE dial equipped telephone sets

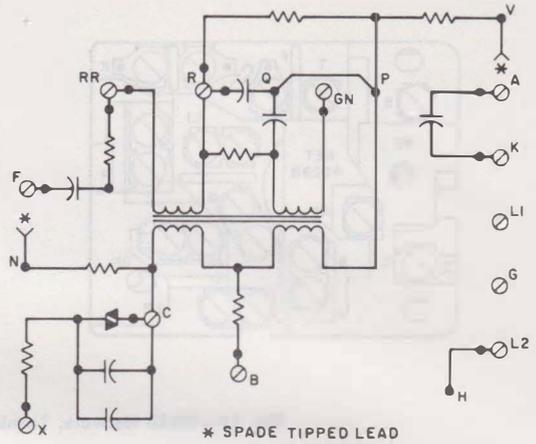
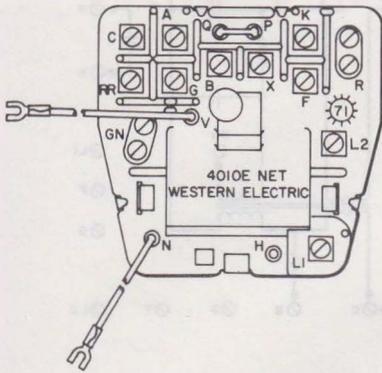


Fig. 12—4010E Network, Terminal Layout and Schematic

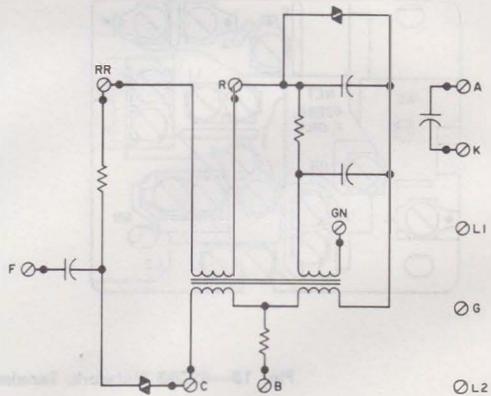
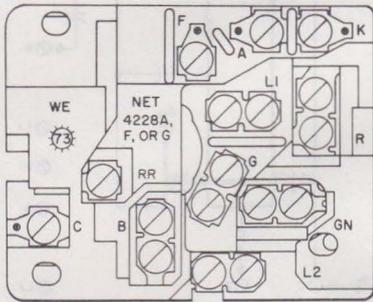


Fig. 13—4228A or F Network, Terminal Layout and Schematic

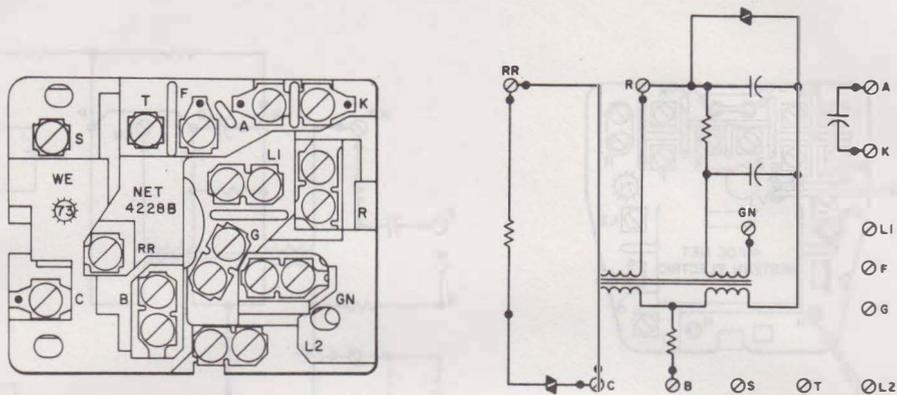


Fig. 14—4228B Network, Terminal Layout and Schematic

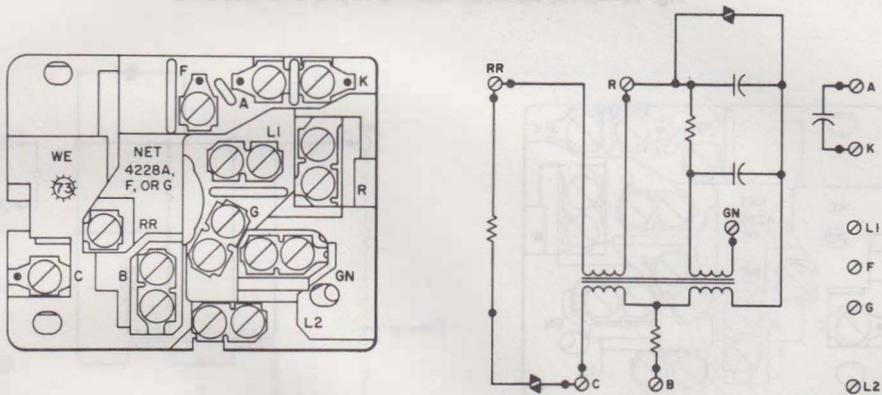
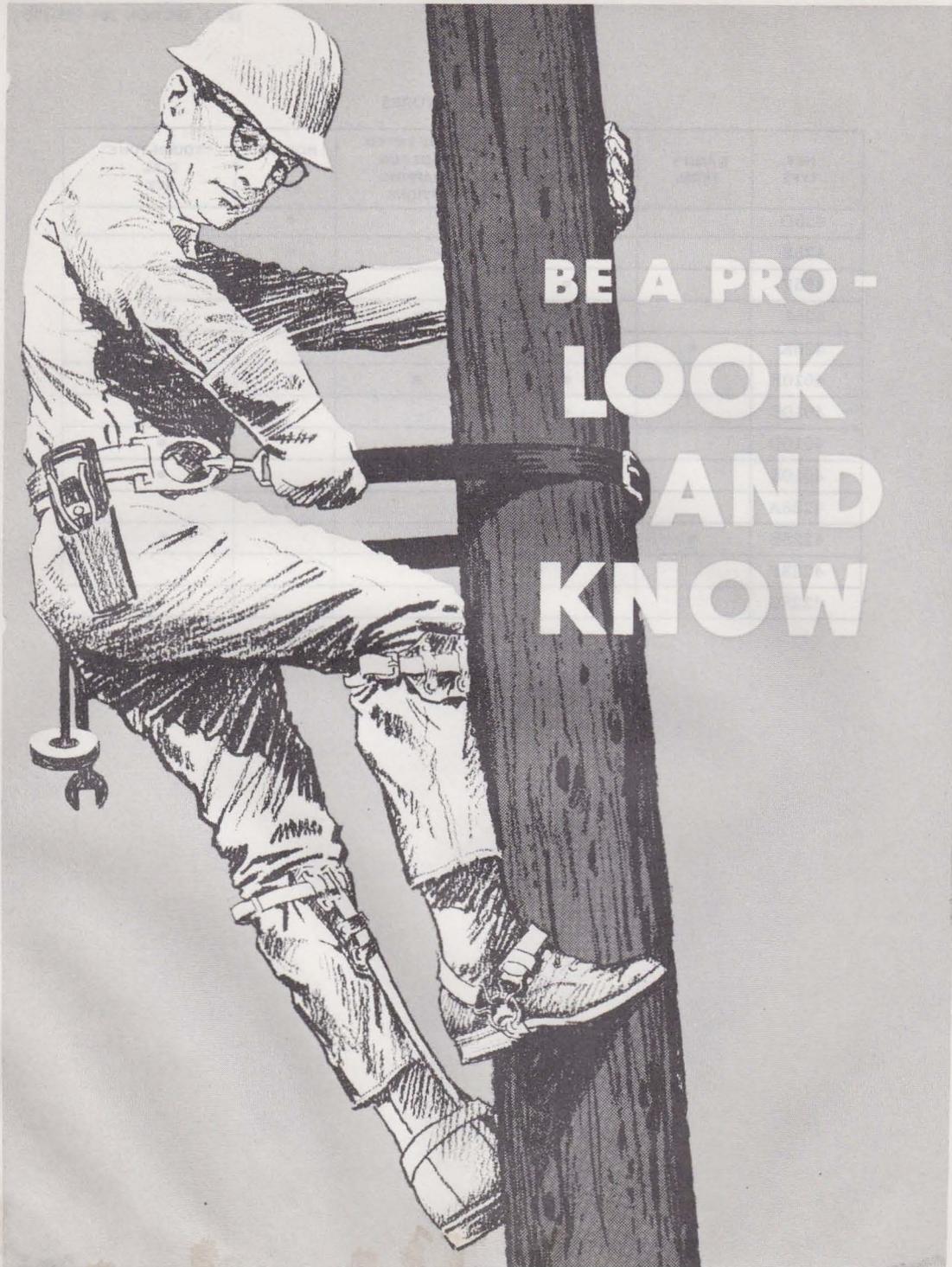


Fig. 15—4228G Network, Terminal Layout and Schematic

TABLE A
NETWORK FEATURES

NET. TYPE	S AND T TERM.	CAPACITOR ON F TERM.	SPADE TIPPED LEADS FOR STRAPPING OPTIONS	ROTARY DIAL SET	"TOUCH-TONE" DIAL SET
425D		•		•	
425E		•		•	
425F		•		•	
425J		•	•		•
425K	•				•
4010B		•	•	•	
4010C		•			•
4010D					•
4010E		•	•		•
4228A		•		•	
4228B	•				•
4228F		•		•	
4228G					•



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