PLEASE NOTE:

STATION DIALS—22-TYPE

IDENTIFICATION AND MAINTENANCE

1. GENERAL

1.01 This section is reissued to:

- Change Fig. 6
- Change Fig. 7

1.02 The 22-type dial (Fig. 1) has twelve pushbuttons. Ten are used in letter-number dialing and two are used to give special-service connections.

Fig. 1—22E3 Dial, Front View

1.03 The twelve pushbuttons and multifrequency oscillator are a unit which can be mounted in a telephone set in the same manner as a rotary dial.

1.04 Depressing any button operates two frequency signal switches and a common switch (Fig. 2). The frequency signal switches determine the two frequencies to be generated.

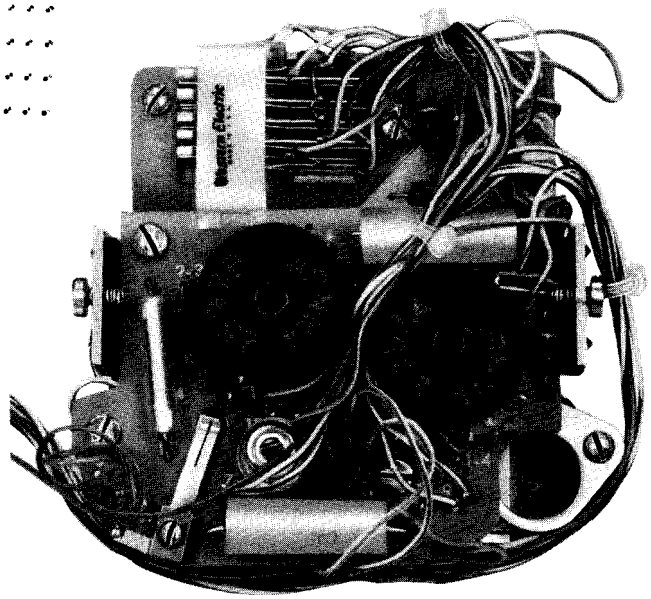

Fig. 2—22-Type Dial, Rear View

1.05 The relationship of pushbuttons to available frequencies is shown in Fig. 3 and 4. A pushbutton located at a specific intersection selects those two frequencies. For example, depressing button 5 selects and transmits 1336 and 770 cycles to the central office.

1.06 The 22C3 or 22D3 dial, when keyed from a remote location, furnishes four additional combinations of two frequencies each. This is in addition to the twelve combinations furnished by the pushbuttons.

2. IDENTIFICATION

2.01 Table A lists the 22-type dials and describes their application and design features.

3. MAINTENANCE

Maintenance of 22-type dial consists only of determining if the dial is inoperative. Do not attempt adjustments of the dial in the field.

3.01 Use the following methods to determine if dial is inoperative:

(1) Check for dial tone.

(2) If no dial tone is heard, make check with 1011B handset at connecting block. Make normal test of telephone set components as described in appropriate sections and replace if necessary.

(3) Check line polarity and connections.

The 22-type dial will function only when the orange-black dial lead is negative (−) and the green lead is positive (+).

(4) Check all buttons for tone feedback. Two tones should be heard in the receiver when any button is pushed. These tones are blended together, but can be identified as two separate tones.

(5) If above requirements are not met, replace dial.

4. SCHEMATICS

Fig. 5—22B3 (MD) Dial

Fig. 6—22C3 Dial

Fig. 7—22D3 Dial

Fig. 8—22E3 Dial

TABLE A

ORDERING GUIDE	APPLICATION	DESIGN FEATURES
22B3 (MD)	1616-type CALL DIRECTOR® telephone set	Special service buttons are red and marked P and SG in white characters. Pushbutton P is used to obtain priority service Pushbutton SG is equipped with a set of contacts for obtaining special grade (4-wire) service Arranged for use with speakerphone systems
22C3	Master and maintenance control centers of No. 1 and No. 101 ESS	Provides 16 combinations of frequencies for testing purposes when keyed remotely by an automatic test frame Spade-tipped leads for connecting dial to remote keying equipment Dial frequencies are tuned during manufacture with the external leads from the coil taps effectively open circuited at the spade tips. Connections which add length to these leads may necessitate retuning of the dial for a particular installation. Refer to appropriate section for retuning dial Special service buttons are light gray with no marking
22D3	2626A1 telephone set, 904E data test center, 10C telegraph test board, attendant circuit for M35 teletypewriter, master control center for 4-wire ESS	Similar to 22C3 except for minor variations in the common switch Special service buttons are medium gray with the left button unmarked, the right button marked A
22E3	1616-type CALL DIRECTOR telephone set 3-type Speakerphone	Special service buttons are red and marked P and SG in white characters Pushbutton SG is equipped with a set of contacts for obtaining special grade (4-wire) service Arranged for use with telephone sets having polarity guard and surge protector, G6- and G8-type handsets and telephone sets wired for 2-wire-4-wire operation Replaces 22B3 dial

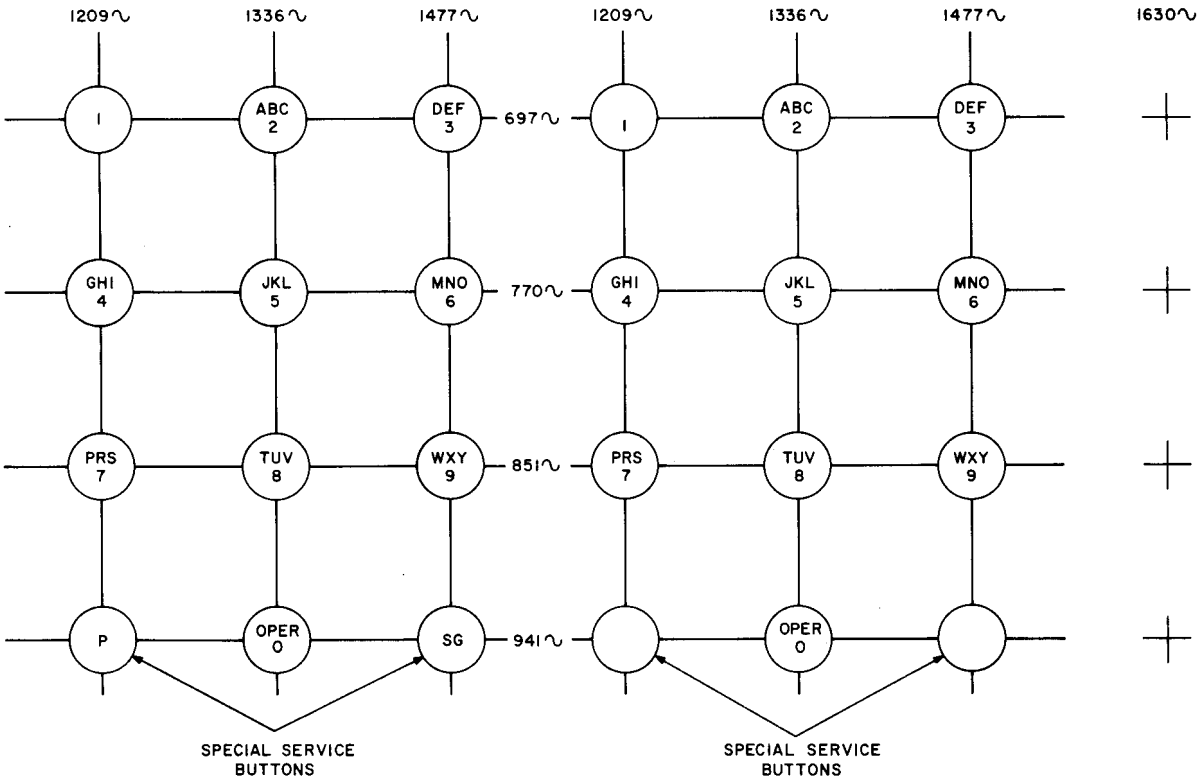

Fig. 3—22B3 (MD) and 22E3 Dial Frequencies

Fig. 4—22C3 and 22D3 Dial Frequencies

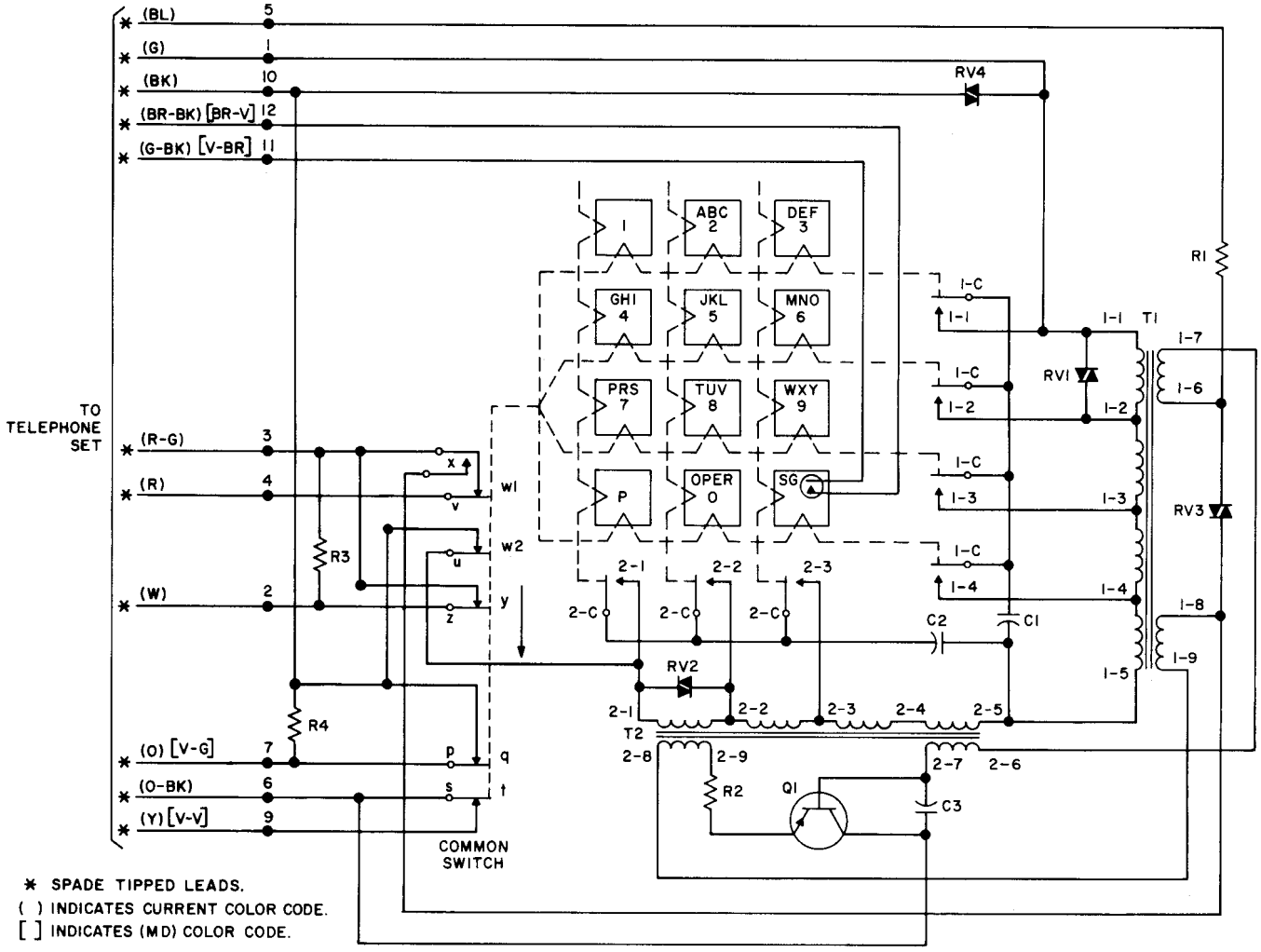

Fig. 5—22B3 (MD) Dial, Schematic

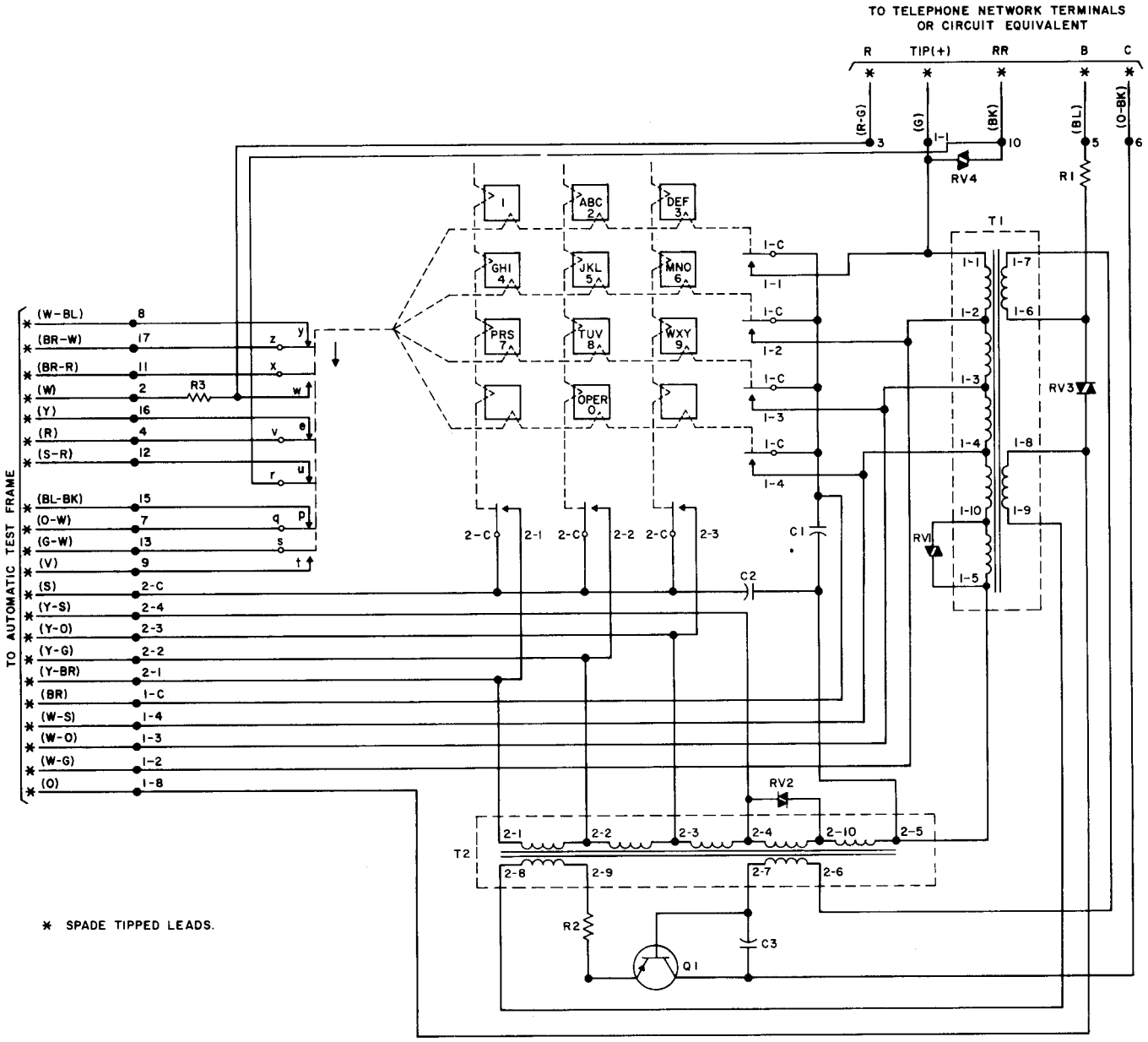

Fig. 6—22C3 Dial, Schematic

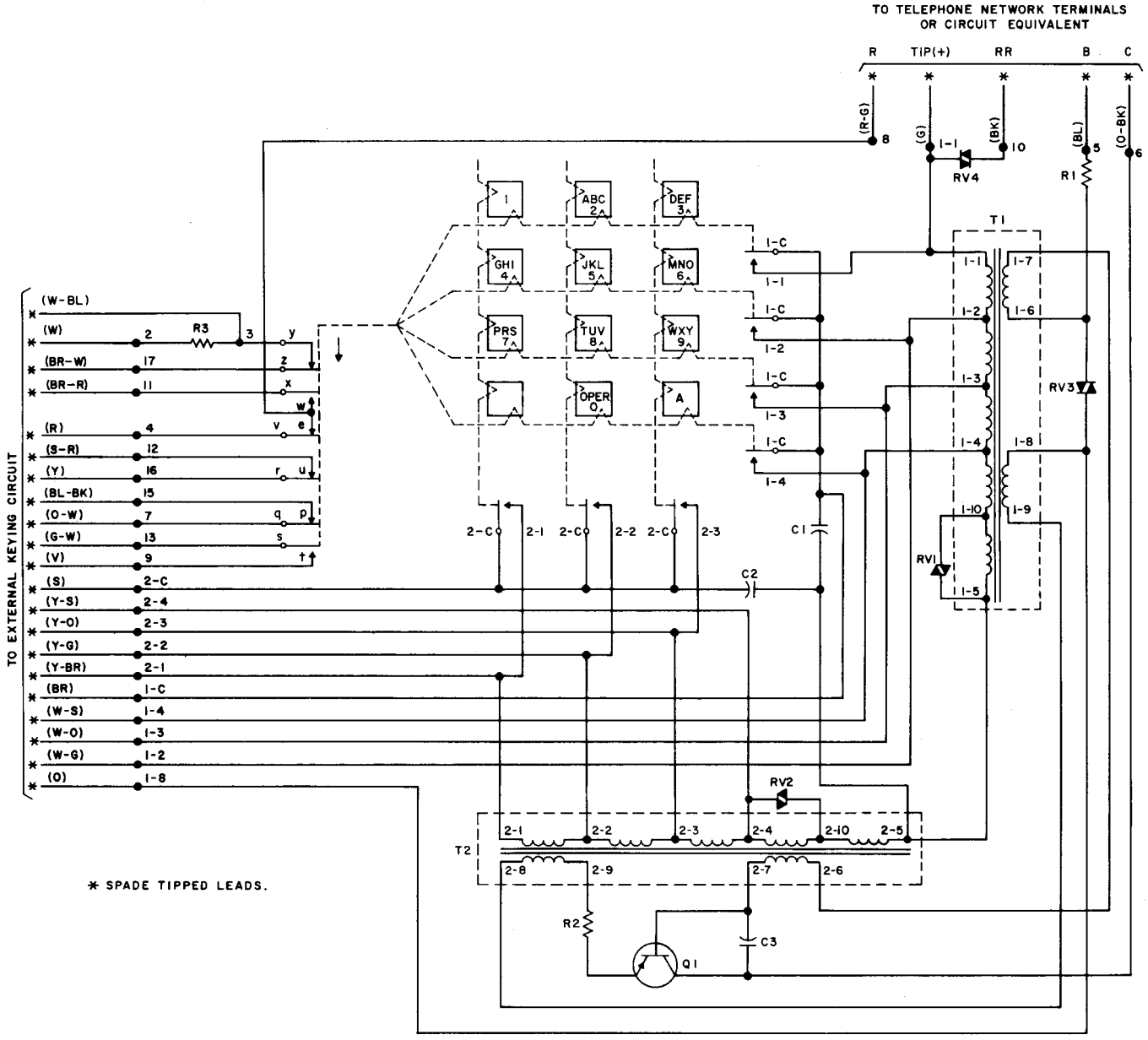

Fig. 7—22D3 Dial, Schematic

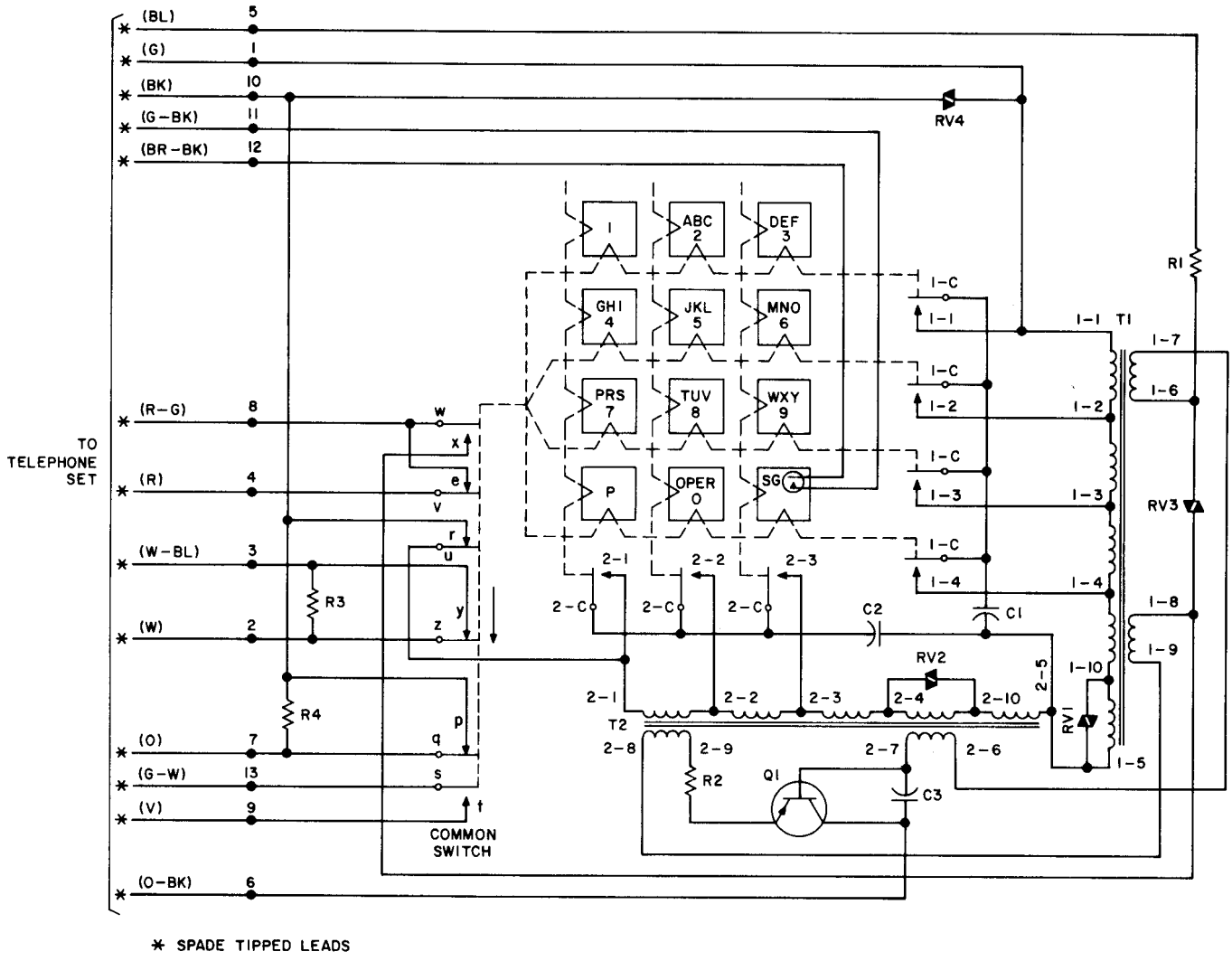

Fig. 8—22E3 Dial, Schematic