

STATION DIALS

25-TYPE

IDENTIFICATION AND MAINTENANCE

1. GENERAL

1.01 This section is reissued to revise the illustrations and to make associated changes in the text.

1.02 Due to extensive changes, marginal arrows have been omitted.

2. IDENTIFICATION

2.01 The 25-type TOUCH-TONE dial is a 10-button multifrequency dialing device. It is equipped with pushbuttons having numbers and letters (Fig. 1). It has a transistorized oscillator, printed circuit board, frequency contacts, and a common switch.

2.02 The transistorized oscillator generates the customer dialing signals and is powered by current from the telephone line.

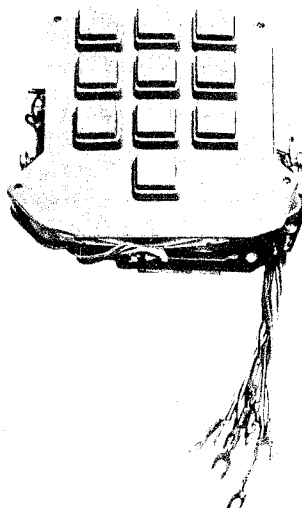


Fig. 1 — 25-Type Dial, Front View

SECTION 501-164-105CA

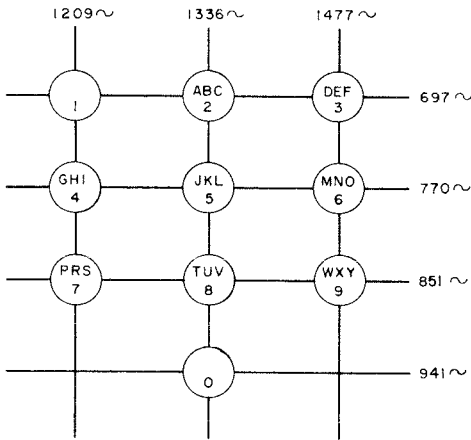


Fig. 2 — Dial Frequencies

2.03 Any pushbutton depressed will close one low band and one high band frequency contact. These contacts close a path for 2 of the 7 output frequencies of the oscillator. (Fig. 2).

2.04 Continued travel of the button will operate the common switch (Fig. 3). Each button operates a different pair of frequency contacts. All buttons operate the common switch. The signal will remain on the line as long as the button is depressed. For example: when button number 5 is depressed, it selects frequencies of 770 and 1336 cycles simultaneously for transmission to the central office.

2.05 The common switch (Fig. 3), when operated, reduces the sidetone to the receiver, opens the transmitter path, applies bias voltage to the transistorized oscillator, and breaks the dc energy path to the tank coils.

2.06 The central office must be equipped with a converter that will accept the oscillator signals and translate them into a 2-out-of-5 digit code for cross-bar offices or dial pulses for step-by-step offices. The converter in the central office does not interfere with rotary dial pulse signals. Both TOUCH-TONE and rotary dial type sets may be served by the same central office equipment.

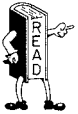
TABLE A

DIALS

DIAL NUMBER	PUSHBUTTON CHARACTERS	USES	REMARKS	FIG. NO.
25A3	Letters and Numbers	General purpose; in desk, wall, and panel mounted telephone sets	Has standard common switch. Cannot be used with 3A speakerphone.	1.3 & 6
25B3		In telephone sets for 3A speakerphone systems	Similar to 25A3 dial but has an expanded common switch and additional leads.	4
25E3		In coin telephone	Similar to 25A3 dial but has modified circuit for use with coin telephones.	8
25H4		For use in PRINCESS sets	Dial light illuminates the pushbuttons by means of a clear plastic light guide mounted within the dial.	5 & 6

Dials are available in grey only.

3. MAINTENANCE



Maintenance of 25-type dial consists only of determining if the dial is defective. Do not attempt adjustments of the dial in the field.

Note: Check polarity of dial before testing to determine if dial is defective.

3.01 The 25-type dial will function only when the O-BK dial lead is connected to the ring (- negative) side of the line and the G dial lead is connected to the tip (+ positive) side of the line.

3.02 Use the following methods to determine if the dial is defective:

(1) Check for presence of dial tone. If no dial tone is heard, make a check with the 1011 test set at the connecting block. If dial tone is heard at the connecting block, make

normal test of telephone set components as described in appropriate sections.

(2) Break dial tone by dialing digit 2. If unable to break dial tone, restore switch hook to normal and connect 1011 test set across incoming line terminations of network. Dial a digit to break dial tone. If dial tone can be broken at the network, replace the dial.

(3) Check all buttons for tone feedback. When any button is depressed, two tones should be heard. These tones are blended together but can be identified as two tones. When any two adjacent buttons are depressed simultaneously, only one tone should be heard.

(4) Replace dial if feedback tones are not as described.

(5) Dial the station ringer test circuit for test of TOUCH-TONE dials. Refer to Section 951-920-100 for details.

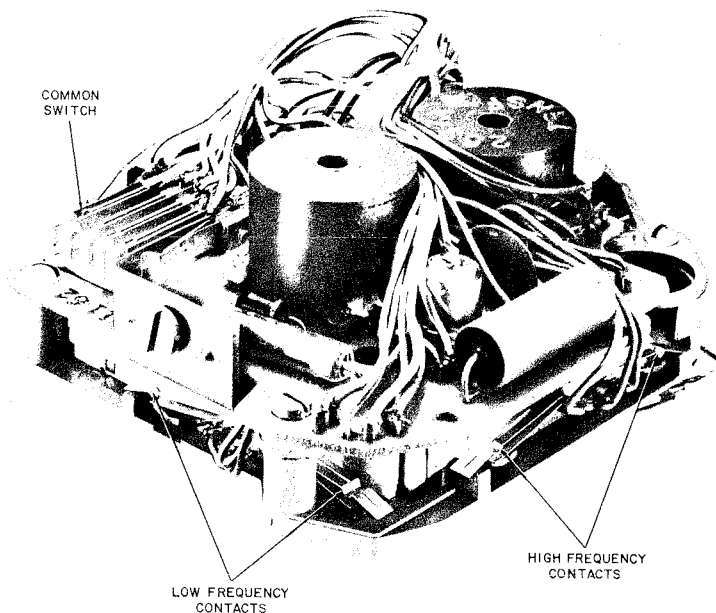


Fig. 3 — 25-Type Dial, Rear View

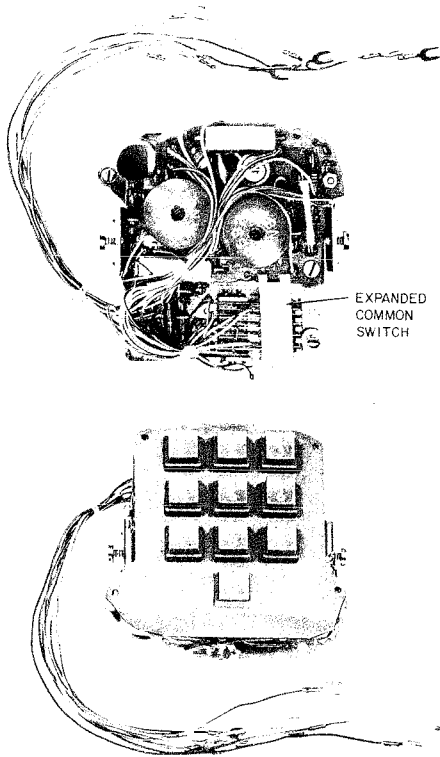


Fig. 4 - 25B3 Dial

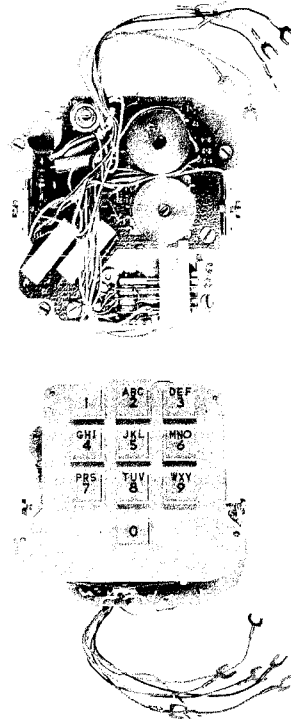


Fig. 5 - 25H4 Dial

3.03 If telephone set meets requirements in Part 3 and trouble still exists, check the central office or PBX equipment.

4. SCHEMATIC INDEX

Fig. 6 — 25A and H Dials

Fig. 7 — 25B Dial

Fig. 8 — 25E Dial

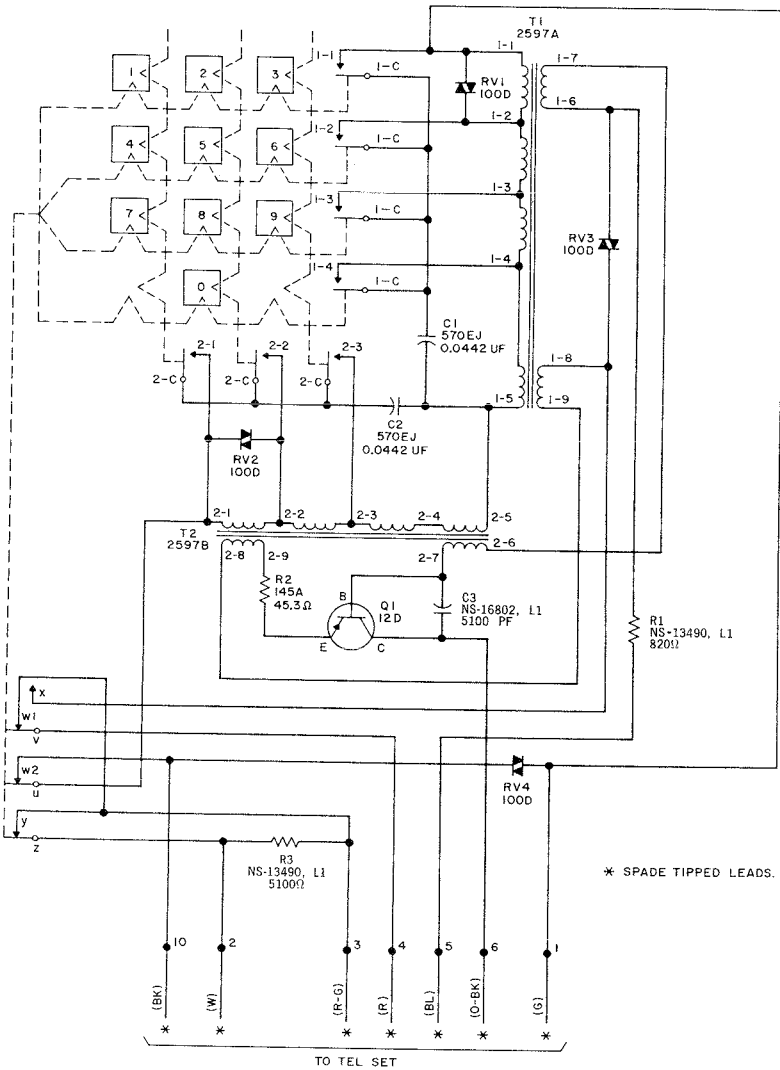


Fig. 6 -- 25A and H Dials

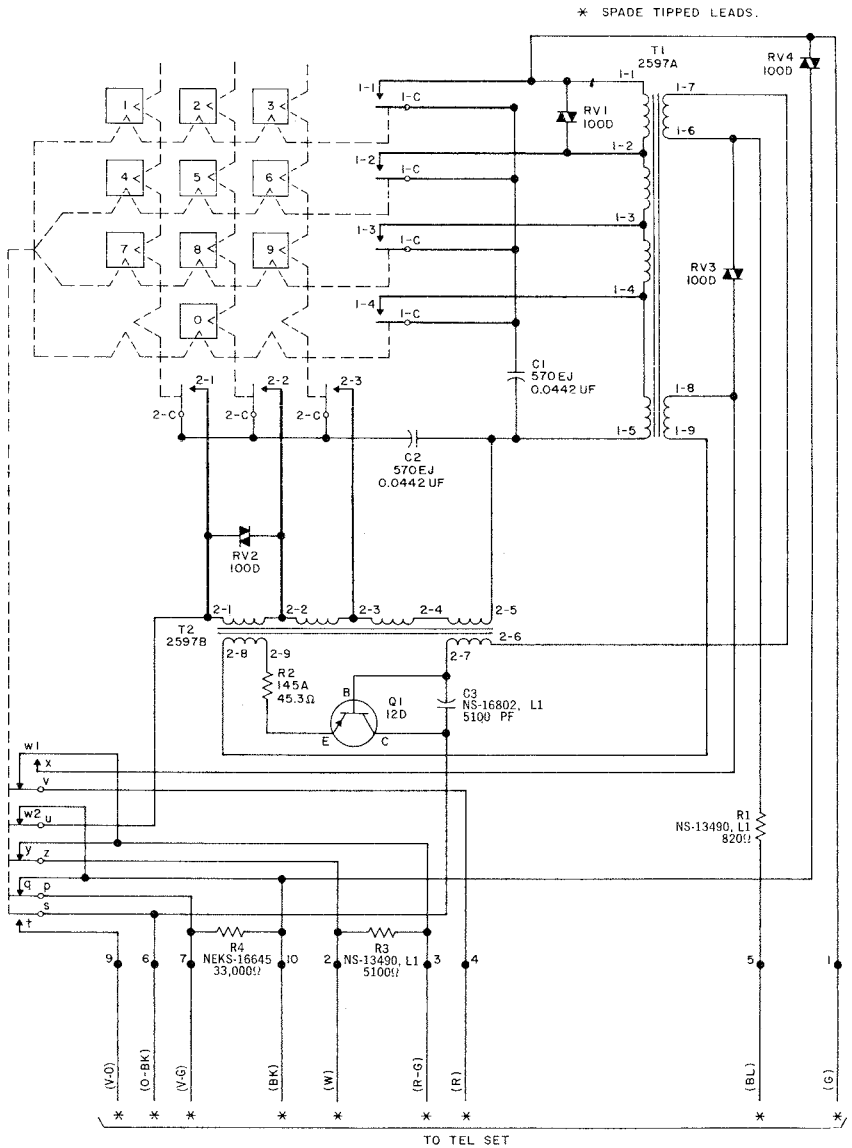


Fig. 7 - 25B Dial

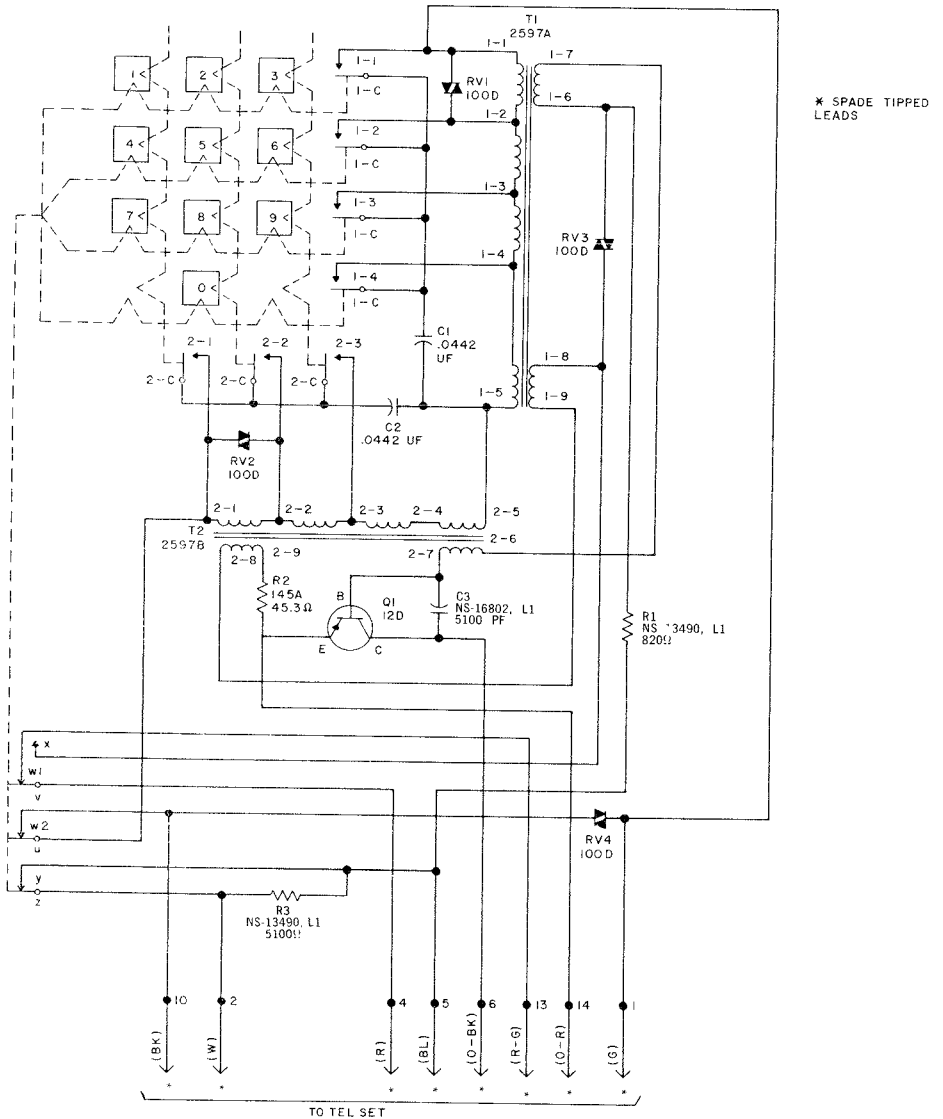


Fig. 8 -- 25E Dial