

TELEPHONE SETS—568 TYPE

CONNECTIONS

I. GENERAL

I.01 This section shows how to connect the 568HT (TOUCH-TONE dial, Fig. 1 and 3) and the 568HB (Rotary dialing, Fig. 2) telephone sets.

I.02 This section is reissued to:

- Change connections in Fig. 2.
- Add the H1A ringer to Fig. 2.
- Change connections in Table C.

I.03 Tables A, B, C, and D are used in conjunction with Fig. 2 and 3.

I.04 The key and telephone circuits are wired for use with 2- and 4-wire common battery lines. The sets are furnished wired for key telephone systems using A lead control.

I.05 These sets do not provide connections for 4-wire local battery private lines, speaker-phone feature, or busy lamp feature.

I.06 Maximum connector cable resistance per conductor:

- Lamp L leads — 25 ohms
- 4-wire relay FW lead — 50 ohms

I.07 The FW relay (Fig. 2 and 3) switches the receiver from 2-wire to 4-wire circuitry.

(a) On 2-wire lines, the contacts on the non-operated FW relay connect the receiver to the 425E network. The handset and network function in the same manner as a common battery subscriber station circuit.

(b) On 4-wire lines, the FW relay will operate to disconnect the receiver from the network and connect it to the RR and RT

leads. The transmitter and network function in the same manner as a common battery transmitter circuit. The receiver leads (RR and RT) are switched to impedance-matching repeat coils in the associated line circuits.

I.08 A pushbutton-type dial is provided in the 568HT set (Fig. 3). This dial includes a transistor oscillator capable of generating two frequencies simultaneously. The oscillator is powered by line current from the common battery source.

I.09 With no dial buttons depressed, the tip side of the 2-wire line (or the transmitting tip of a 4-wire line) is connected through the dial to the network, effectively introducing only a small resistance in series with the line. The ring side of the line connects directly to the network, thus providing a satisfactory transmission path from the line to the network and transmitter.

I.10 When a dial button is depressed, two tuned circuits are selected corresponding to the two frequencies required (Fig. 1), and the dial circuit is closed to the ring side of the line. The two frequencies generated by the oscillator are transmitted over the line to the central office receiving equipment which registers the corresponding digit.

I.11 The P (priority) and SG (special grade) buttons may be used on 4-wire lines as a preliminary code to indicate a request for special handling of the call on a priority basis or special transmission consideration for data-type messages. The latter requires a simultaneous dc signal for the station equipment which is provided by a set of contacts operated by the SG button and results in a closure of the SP and P3 leads.

I.12 If the 22A dial is defective, replace the telephone set.

TABLE A

PICKUP-SIGNAL KEY CONVERSION*

Convertible-Key Options	Key Leads		
	BR	S-BR	BK-BR
HPPPPP	M	M	X
HPPPPS	M	M	SG
HPPSSS	M	SG	X
HPPSSS	X	SG	X

Note: When converting key positions 4 and 5 from pickup (locking) to transfer circuit control leads (nonlocking) no wiring changes are necessary. Conversion to signal circuits will require connection change per table.

* All convertible key positions are arranged in the shop as pickup positions. To convert a key position from pickup (locking) to signal (nonlocking), remove the screw detail (P-12A592) and store the removed screw (or screws) in notches furnished on the edge of the 589H key in the set for this purpose. Make the necessary connection changes. To convert a key position from nonlocking to locking, reverse the above procedure. When using convertible keys for signaling, use S lead of key involved for signal circuit and G lead for common signal ground.

TABLE B

RINGER OR BUZZER CONNECTIONS

Option	Ringer or Buzzer Lead			
	SL-R	SL	BK	R
When used as bridged ringer on any one line*	A	K	RT	RR
When used as private line, common sig, or other use†	With capacitor	K		
	Without capacitor	A		
Set ringer not used‡	A	K		

Note: When a buzzer is required in a set equipped with a C4A ringer, remove ringer, install a 44B bracket, 7-type buzzer, and make desired connection change. When a buzzer is required in sets equipped with an H1A ringer, it is not necessary to remove the ringer. The buzzer (KS-8100 type) will mount on the ringer.

- * Connect cable pair associated with the ringer leads to the desired 2-wire line.
- † Connect ringer without capacitor on all common, private, or intercommunicating lines, unless otherwise specified.
- ‡ Do not terminate associated cable pair at distribution terminal when ringer is not used.

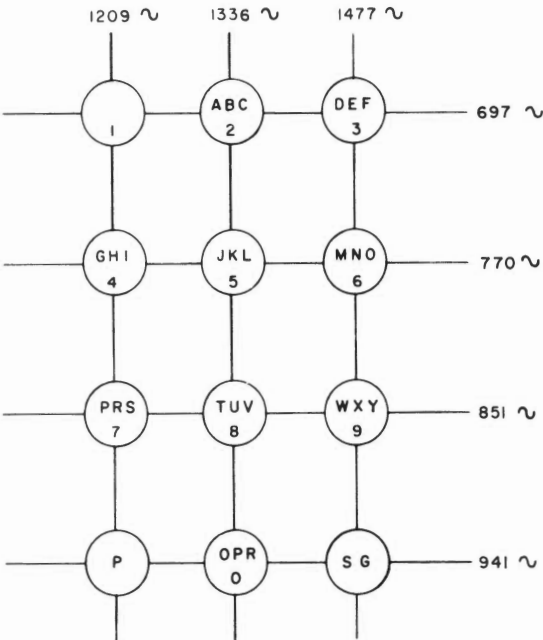


Fig. 1 – Dial Frequencies

TABLE C
D50C (MOUNTING) CORD
TERMINATION

LEAD DESIGNATION	TERM. STRIP ON KEY ASSEM	CORD COLOR	PLUG
R	1R	BL - W	1
T	1T	W - BL	26
A1	1B	O - W	2
A	1H	W - O	27
L	1L	G - W	3
LG	1LG	W - G	28
F	2R	BR - W	4
T	2T	W - BP	29
VACANT		S - W	5
A	2H	W - S	30
L	2L	BL - R	6
LG	2LG	R - BL	31
R	3R	O - R	7
T	3T	R - O	32
VACANT		G - R	8
A-S-S1	3H	R - G	33
L	3L	BR - R	9
LG	3LG	R - BR	34
R	4R	S - R	10
T	4T	R - S	35
VACANT		BL - BK	11
A-S-S1	4H	BK - BL	36
L	4L	O - BK	12
LG	4LG	BK - O	37
F	5R	G - BK	13
T	5T	BK - G	38
VACANT		BR - BK	14
A-S-S1	5H	BK - BR	39
L	5L	S - BK	15
LG	5LG	BK - S	40
VACANT	†	BL - Y	16
FW	†	Y - BL	41
RR	6	O - Y	17
RT	5	Y - O	42
VACANT	HL	G - Y	18
VACANT	HLG	Y - G	43
G	SG	BR - Y	19
VACANT	†	Y - BR	44
R-R1	RR	S - Y	20
B-B1	RT	Y - S	45
ER-R	ER	BL - V	21
ET-T	ET	V - BL	46
VACANT	EB	O - V	22
A	EH	V - O	47
VACANT	R	G - V	23
VACANT	RR †	V - G	48
SP-P4-ON	ON	BR - V	24
P3	ON1	V - BR	49
VACANT	L1 †	S - V	25
VACANT	N	V - S	50

TABLE D
A25B CONNECTOR
TERMINATION

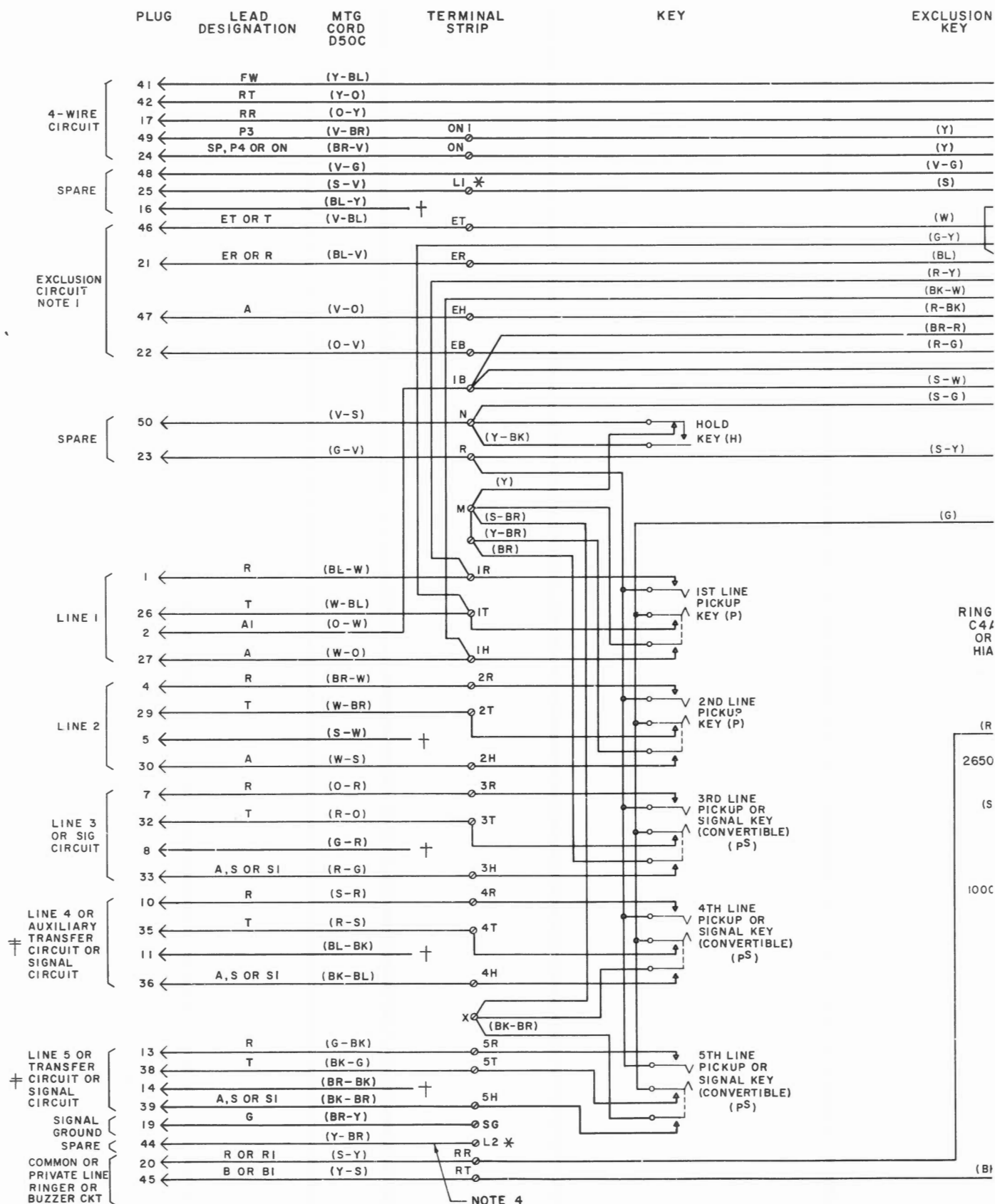
CONNECTOR	CABLE COLOR	CABLE PAIR	LEAD DESIGNATION	TO
1	BL - W	1	R	DISTRIBUTION TERMINAL OF APPARATUS CABINET
26	W - BL		T	
2	O - W	2	A1	
27	W - O		A	
3	G - W	3	L	
28	W - G		LG	
4	BR - W	4	R	
29	W - BR		T	
5	S - W	5	SPARE	
30	W - S		A	
6	BL - R	6	L	
31	R - BL		LG	
7	O - R	7	R	
32	R - O		T	
8	G - R	8	SPARE	
33	R - G		A-S-S1	
9	BR - R	9	L	
34	R - BR		LG	
10	S - R	10	R	
35	R - S		T	
11	BL - BK	11	SPARE	
36	BK - BL		A-S-S1	
12	O - BK	12	L	
37	BK - O		LG	
13	G - BK	13	R	
38	BK - G		T	
14	BR - BK	14	SPARE	
39	BK - BR		A-S-S1	
15	S - BK	15	L	
40	BK - S		LG	
16	BL - Y	16	SPARE	
41	Y - BL		FW	
17	O - Y	17	RR	
42	Y - O		RT	
18	G - Y	18	SPARE	
43	Y - G		SPARE	
19	BR - Y	19	G	
44	Y - BR		SPARE	
20	S - Y	20	R-R1	
45	Y - S		B-B1	
21	BL - V	21	ER-R	
46	V - BL		ET-T	
22	O - V	22	SPARE	
47	V - O		A	
23	G - V	23	SPARE	
48	V - G		SPARE	
24	BR - V	24	SP-P4-ON	
49	V - BR		P3	
25	S - V	25	SPARE	
50	V - S		SPARE	

* Leads individually insulated and stored under terminal strip.

† Terminal on network.

‡ Insulated and stored in 568HB telephone set.

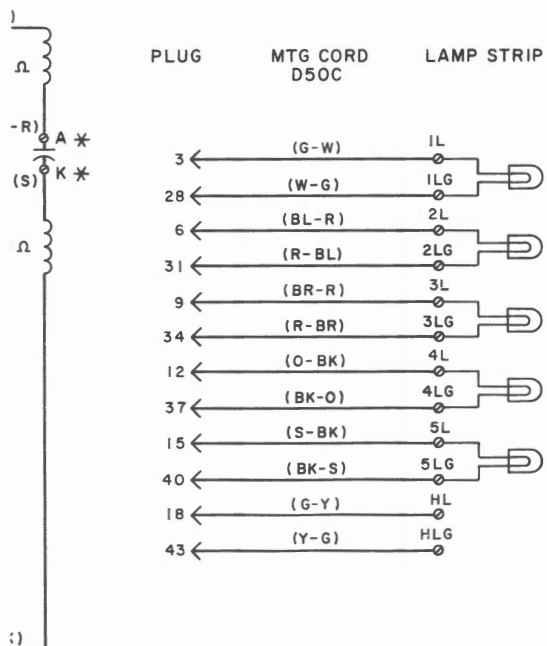
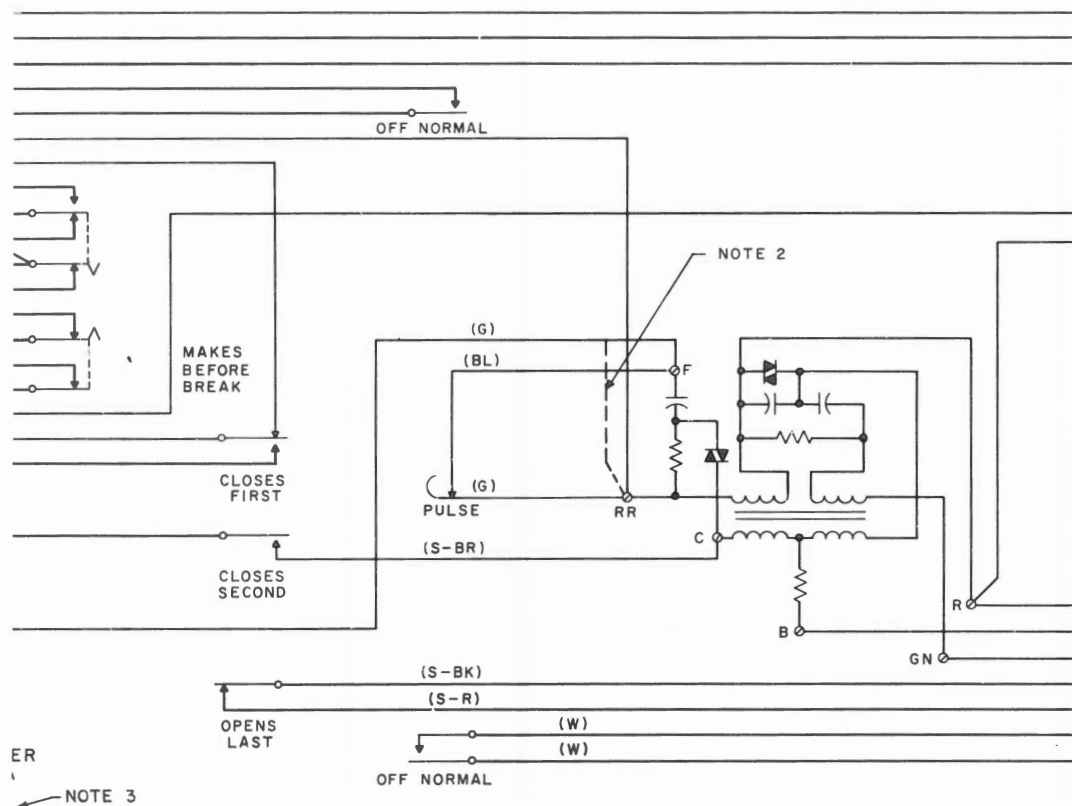
§ Sets may have this lead insulated and stored depending on the manufacturing date.

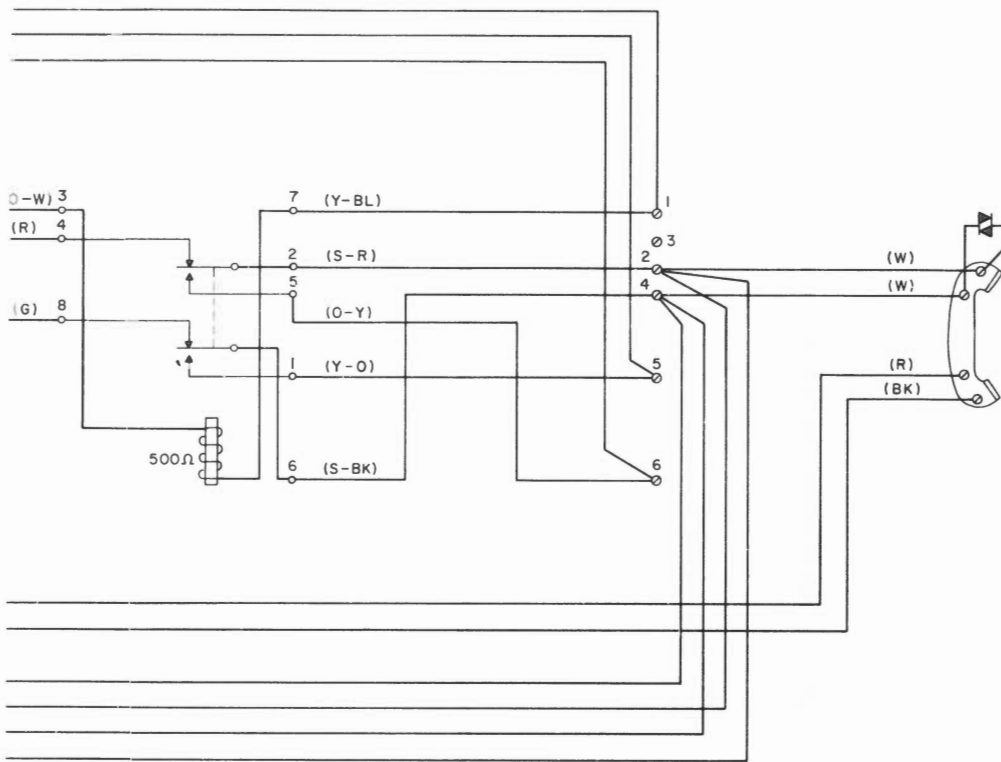


SWITCH
ASSEMBLY

DIAL
7H OR 7G

NETWORK
425E



RELAY
FWTERMINAL STRIP
ASSEMBLYHAND SET
G1A OR
G3A TYPE

Note 1 When exclusion is provided on a 4-wire line, disconnect, insulate, and store the R-Y, G-Y, and BK-W exclusion key leads. Connect ET and ER leads from set to external pickup relay associated with control station. When exclusion is provided on a 2-wire line, connect the R-Y, G-Y, and BK-W exclusion key leads to R, T, and H terminals of line involved. (Set is furnished with exclusion key leads wired to exclude line 1.)

Note 2 For manual service replace dial apparatus blank and transfer green key lead from F terminal to RR terminal on network.

Note 3 Sets may be equipped with C4A or H1A ringers, depending on the manufacturing date.

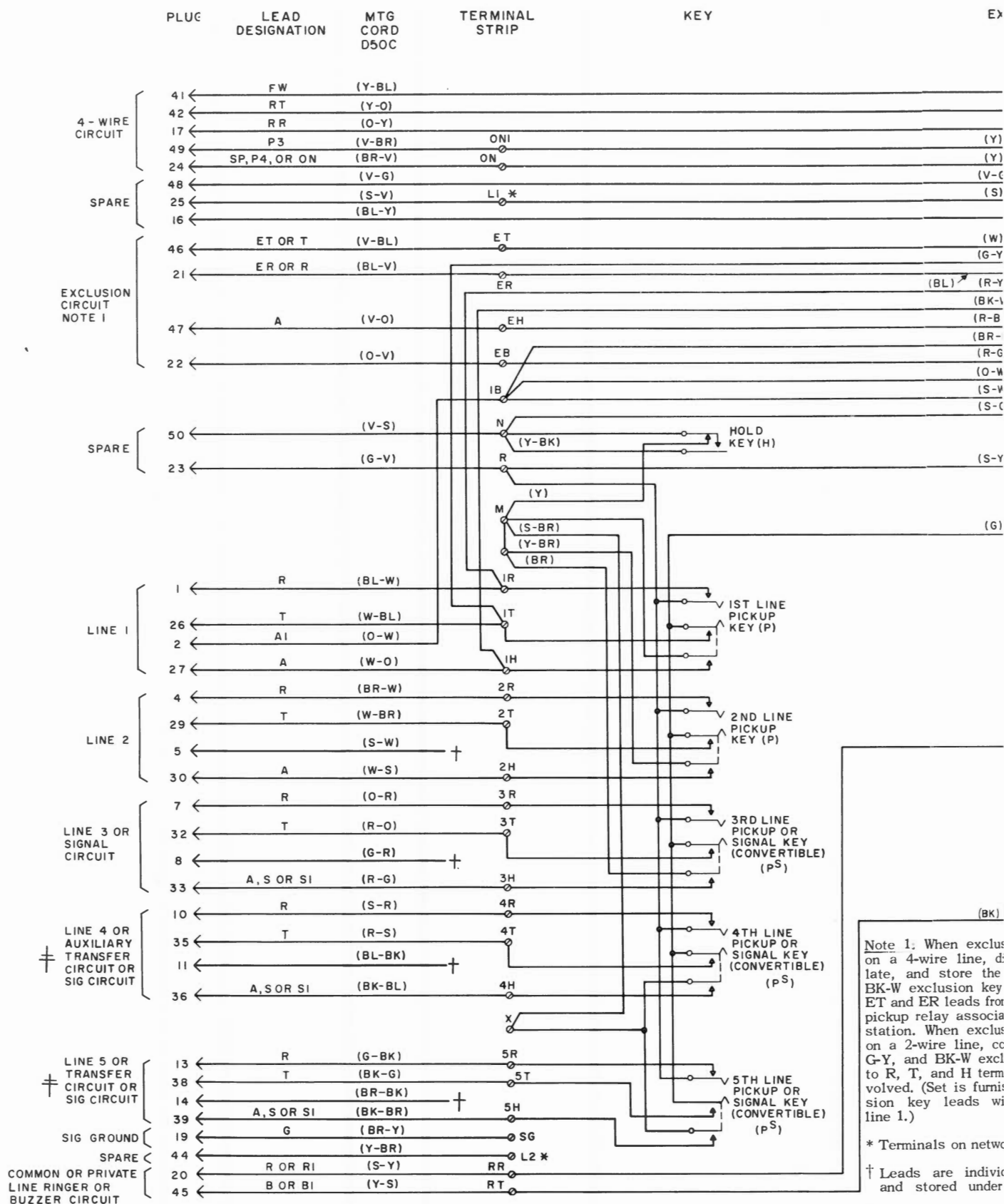
Note 4 Sets may have this lead insulated and stored depending on manufacturing date.

* Terminals on network.

† Leads are individually insulated and stored under terminal strip.

‡ No wiring changes are necessary on keys 4 and 5 when converting to transfer option.

Fig. 2 - 568HB Telephone Set



SWITCH ASSEMBLY

Diagram illustrating the wiring for a control system, showing the connection of a RINGER C4A transformer, a control circuit, and a LAMP STRIP.

Transformer and Control Circuit:

- RINGER C4A:** A transformer with a primary winding connected to a control circuit and a secondary winding (1000Ω) connected to a control circuit.
- Control Circuit:** Includes a series of switches labeled "MAKES BEFORE BREAK", "CLOSES FIRST", "CLOSES SECOND", and "OPENS LAST". These switches are connected to a complex relay assembly.
- Relay Assembly:** Features a common contact "C" and a normally open contact "Y-BR". The relay is powered by a transformer with a primary winding connected to a "GN" (ground) and a secondary winding connected to a "B" terminal.
- Fuse:** A fuse "F" is connected to the primary winding of the relay transformer.

Wiring Connections:

- PLUG MTG CORD D50C:** A 18-pin connector with the following connections:
 - Pin 3: (G-W) to IL
 - Pin 28: (W-G) to 1LG
 - Pin 6: (BL-R) to 2L
 - Pin 31: (R-BL) to 2LG
 - Pin 9: (BR-R) to 3L
 - Pin 34: (R-BR) to 3LG
 - Pin 12: (O-BK) to 4L
 - Pin 37: (BK-O) to 4LG
 - Pin 15: (S-BK) to 5L
 - Pin 40: (BK-S) to 5LG
 - Pin 18: (G-Y) to HL
 - Pin 43: (Y-G) to HLG
- LAMP STRIP:** A strip of terminals labeled IL, 1LG, 2L, 2LG, 3L, 3LG, 4L, 4LG, 5L, 5LG, HL, and HLG.

Additional Components:

- SI:** A switch or indicator connected to the control circuit.
- T2:** A terminal or connection point at the bottom right.

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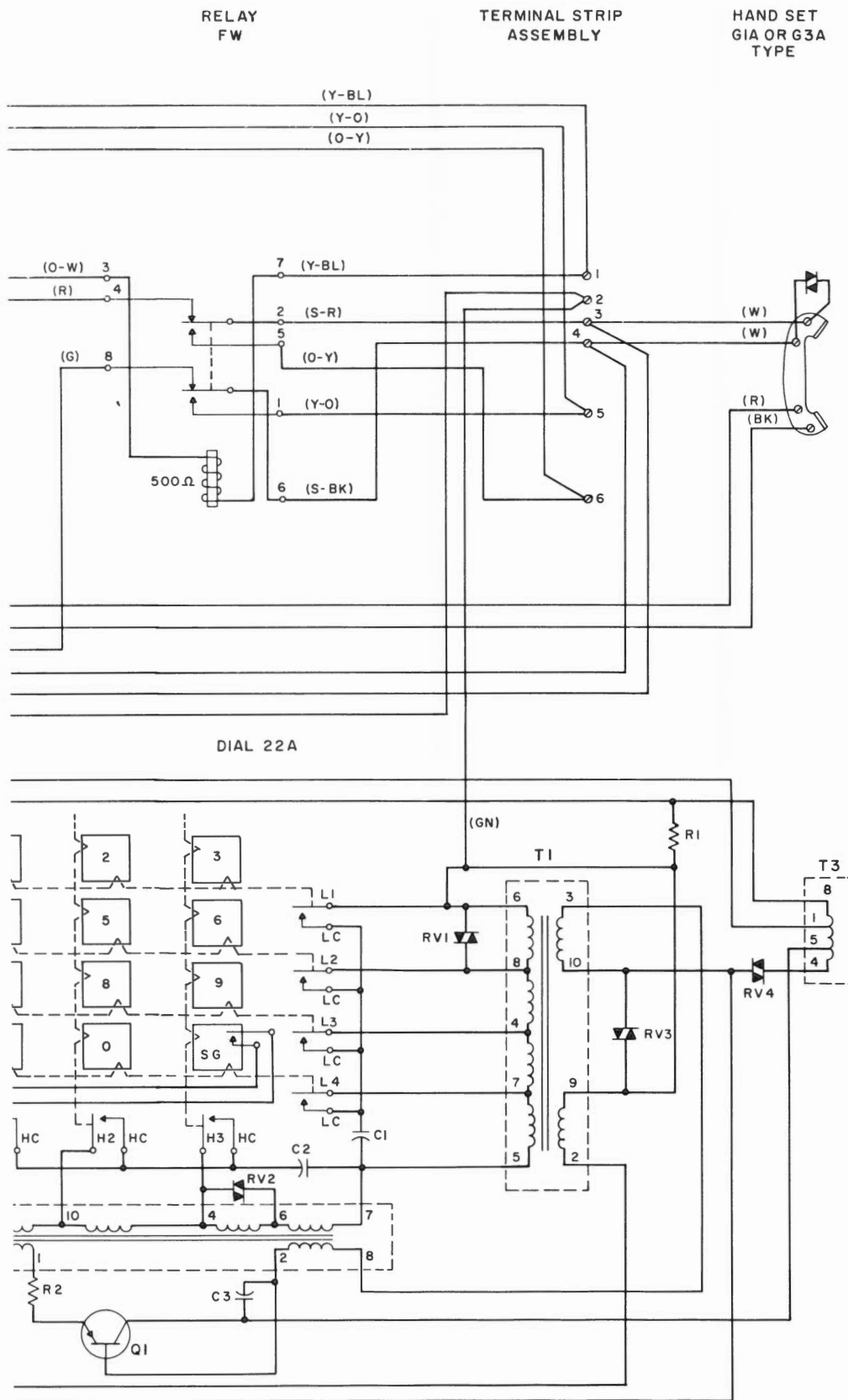


Fig. 3 - 568HT Key Telephone Set