

## SERVICE

### 2664-TYPE TELEPHONE SETS

#### 1. GENERAL

##### 1.01 Reissued to:

- Add KS-20419L1 buzzer
- Add M1B ringer
- Add 242C amplifier
- Add 4228B network
- Remove amplifier schematic.

**1.02** These sets are factory-wired as 2664A1 only. For conversion to 2664A2 or 2664A3 the appropriate key must be ordered and installed separately.

**1.03** These sets are supplied with headset jacks and 242-type amplifier to provide for headset operation. A headset must be ordered separately.

**1.04** The 2664-type telephone sets are designed for use in 1A, 1A1, 1A2, and 6A key telephone systems.

**TABLE A**

**P-90D012 POLARITY GUARD CONNECTIONS**

LEAD		REMOVE FROM	CONNECT TO	
		NET	NET	POLARITY GUARD
Dial	BK	RR		T
Line Switch	W	C		S
Polarity Guard	G		RR	
	W		C	

*Note:* Polarity guard used when specified by local instruction for end-to-end signaling installation when battery and ground reversals may be encountered.

**TABLE B**

**PICKUP-SIGNAL KEY CONVERSION, 2664A1 TELEPHONE SET**

CONVERSION OPTIONS	657A OR 599A KEY LEADS					
	(O-W)	(S-W)	(G-R)	(BL-BK)	(BR-BK)	(BR-W)
HPPPPP (Note)	A2	A2	A2	A2	A2	5
HPPPPS	A2	A2	A2	A2	SG	5
HPPPSS	A2	A2	A2	SG	SG	5
HPPSSS	A2	A2	SG	SG	SG	5
HPPPP*S*	A2	A2	A2	S1	A2†	S1
HPPP*P*S*	A2	A2	S1	S1	A2†	S1
HPP*P*P*S*	A2	S1	S1	S1	A2†	S1

\* These arrangements use line switch controlled ground for common signal key used with private or intercommunicating lines. Common signal should be used to operate a common signal relay. Do not wire directly to a buzzer. Fig. 2 and 3 shows line switch lead terminations.

† For 1A KTS connect (BR-BK) key lead to BL terminal.

*Note:* 657A or 599A key as furnished in 2664A telephone set. To convert from pickup (locking) to signal (nonlocking) remove the P-10E837 screw from the plunger at the key position being converted.

SECTION 502-619-404

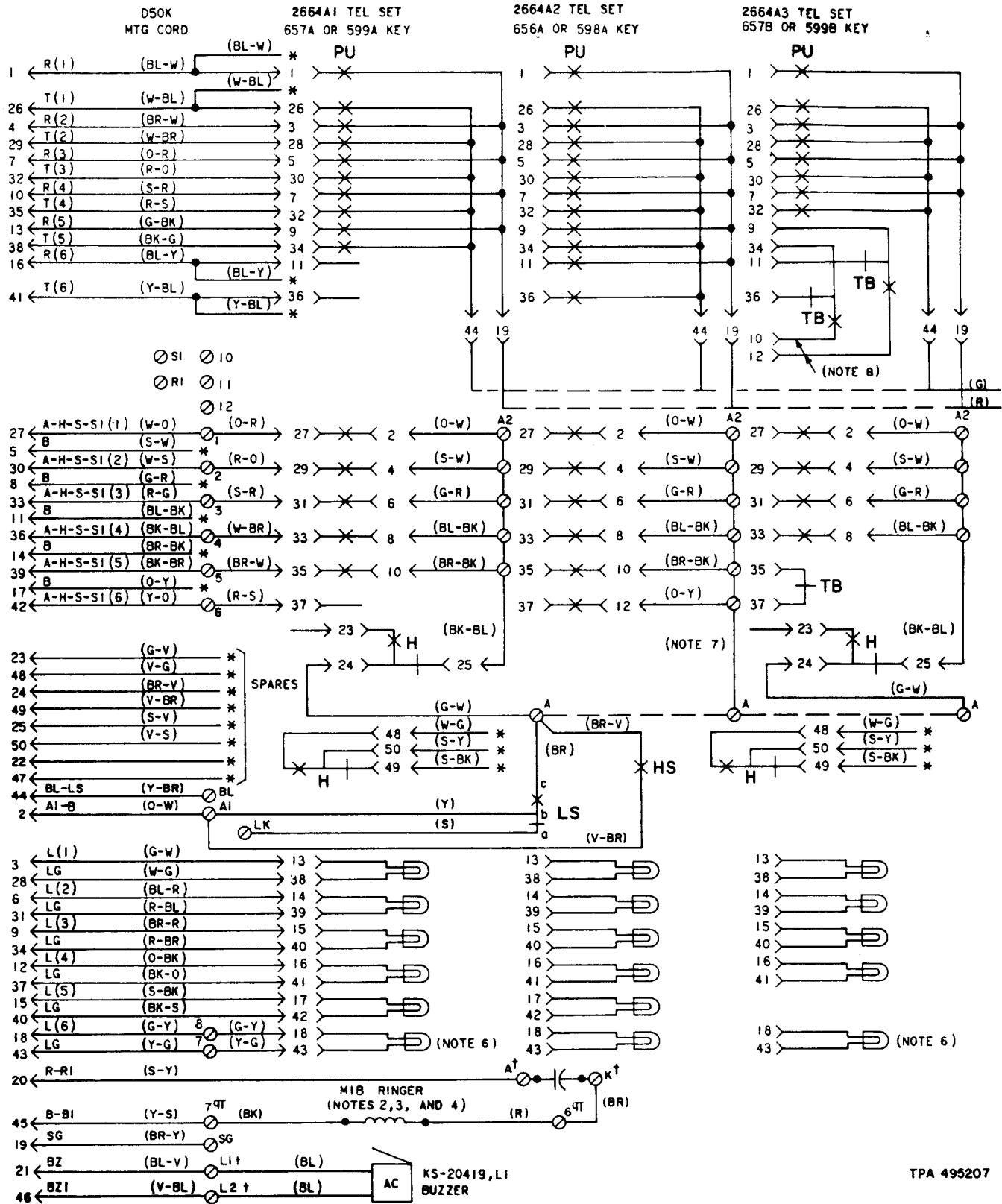
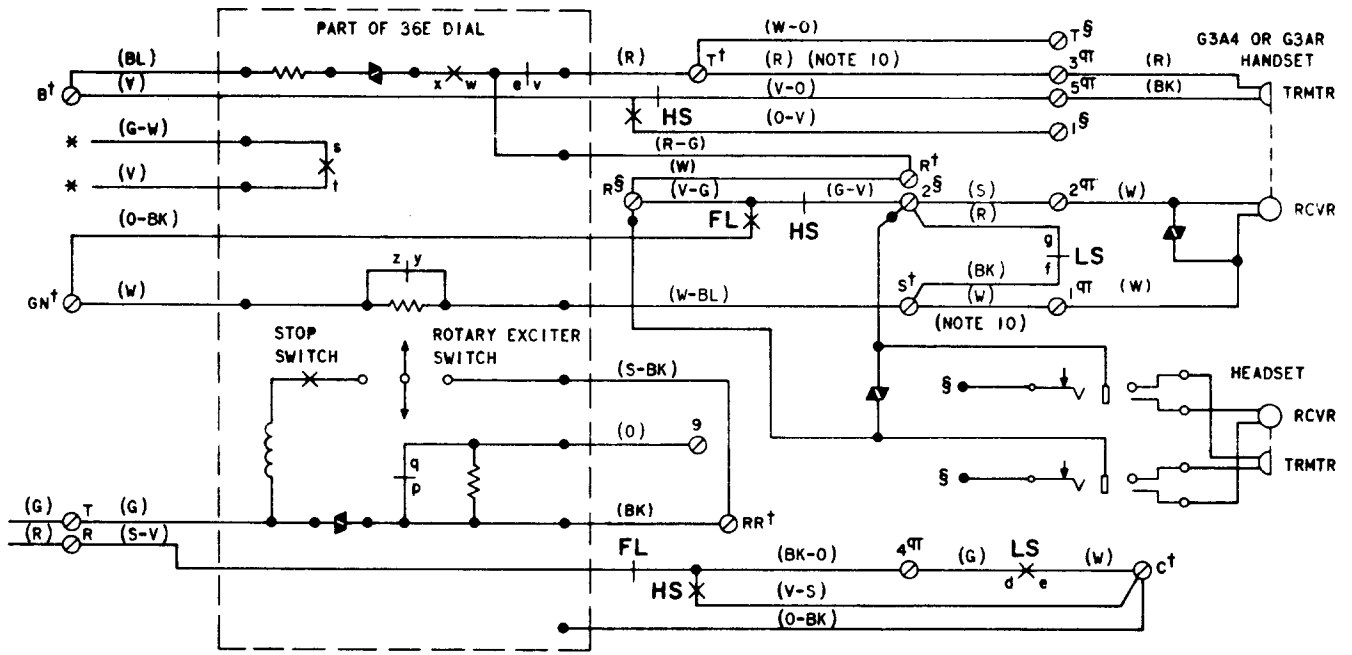
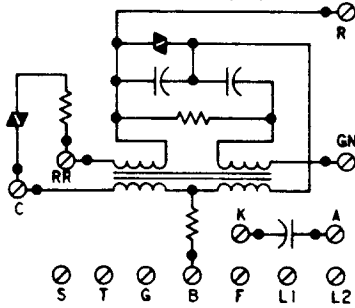


Fig. 1—2664-Type Telephone Set, Connections (Sheet 1 of 2)

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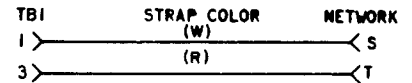
4228B, 425K, OR 425G(MD) NETWORK (NOTE 1)



LEAD CONNECTIONS ON 425G(MD), 425K, OR CURRENT 4228B NETWORK

LEADS	COLOR	425G NETWORK	4228B OR 425K NETWORK
LINE SWITCH	BK	1 OF TBI	S ON NET.
DIAL	W-BL	1 OF TBI	S ON NET.
	R	3 OF TBI	T ON NET.
AMPLIFIER	W-0	3 OF TBI	T ON NET.

STRAPS REQUIRED ON 4228B OR 425K NETWORK



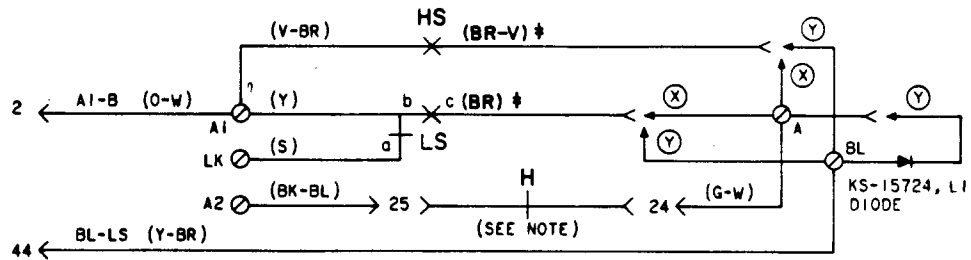
NOTES:

- 425G(MD) NETWORK IS ELECTRICALLY THE SAME AS THE 425K OR 4228B NETWORK. THE 425K OR 4228B NETWORK PROVIDES S AND T TIE POINT TERMINALS.
- CONNECTIONS FOR MIB RINGER SHOWN. CONNECTIONS FOR MIA SAME AS MIB EXCEPT UNUSED RINGER LEADS ARE INSULATED AND STORED.
- IF CAPACITOR IS NOT REQUIRED IN RINGER CIRCUIT, MOVE (BR) LEAD FROM K TO A OF NETWORK.
- TO SILENCE RINGER PERMANENTLY MOVE (BK) RINGER LEAD FROM TERMINAL 7 TO TERMINAL 6 OF TBI.
- THE ON POSITION OF HEADSET KEY TRANSFERS THE TALKING CIRCUIT FROM HANDSET TO HEADSET. THE FLASH CONTACTS ARE OPERATED BY DEPRESSING THE KEY.
- TO USE 6TH LAMP, EQUIP KEY WITH PROPER LAMP AND CONNECT ASSOCIATED LEADS AT EQUIPMENT OR DISTRIBUTION TERMINAL AS REQUIRED.
- WHEN 656A OR 598A KEY IS PROVIDED ADD STRAP BETWEEN KEY TERMINALS A AND A2.
- THESE PINS CONNECT TO (BR-BK) AND (O-Y) LEADS TERMINATED ON A2.
- LINE SWITCH SEQUENCE, HANDSET REMOVED:  
bc- MAKES      ab- BREAKS  
de- MAKES      fg- BREAKS
- STRAPS REQUIRED ON 425K OR 4228B NETWORK.

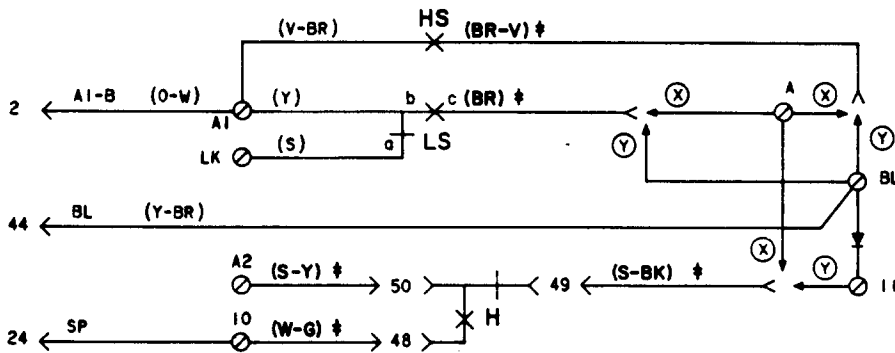
- \*- INSULATE AND STORE
- †- NETWORK TERMINAL, UNDESIGNATED TERMINALS ARE ON TB2.
- §- TERMINAL OR CONNECTION ON 242-TYPE AMPLIFIER
- ¶- TERMINAL ON TBI.
- FL- FLASH KEY
- HS- HEADSET ON-OFF KEY
- LS- LINE SWITCH
- H- HOLD KEY

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Fig. 1—2664-Type Telephone Set, Connections (Sheet 2 of 2)



A. WITHOUT I HOLD



B. WITH I HOLD

NOTE:

WHEN 656A OR 598A KEY IS PROVIDED, ADD STRAP BETWEEN TERMINALS A AND A2.

H - HOLD KEY

HS - HEADSET ON-OFF KEY

LS - LINE SWITCH

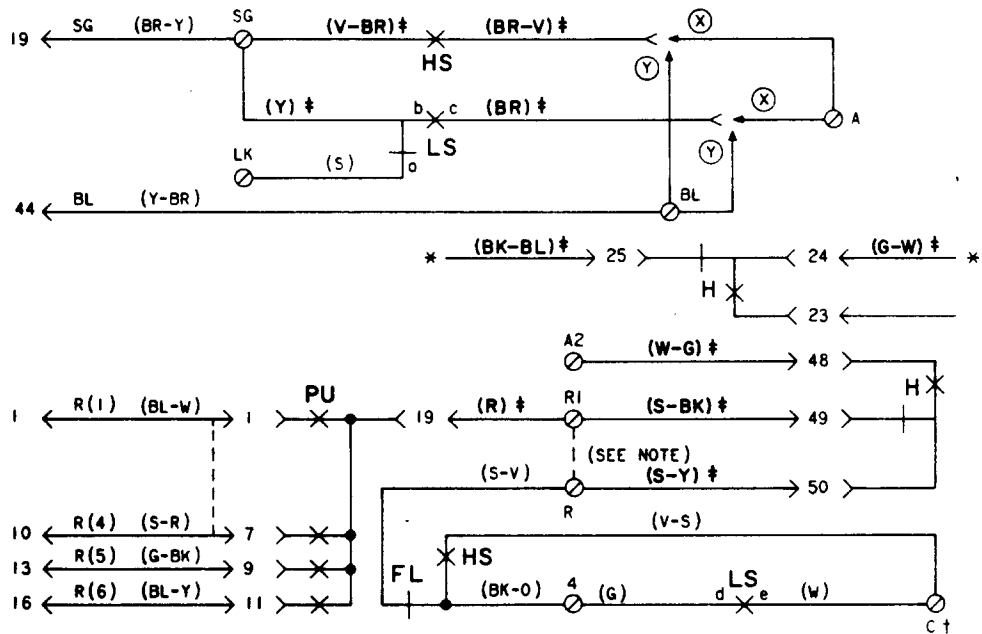
(X) - WITHOUT BUSY LAMP

(Y) - WITH BUSY LAMP

‡ - LEADS INVOLVED IN MODIFICATION

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Fig. 2—1A1 or 1A2 KTS-I Hold and/or Station Busy Lamp



NOTE:

IF 656A OR 598A KEY IS PROVIDED, ADD STRAP BETWEEN TERMINALS R AND RI.

- H - HOLD KEY
- FL - FLASH KEY
- HS - HEADSET ON-OFF KEY
- LS - LINE SWITCH
- (X) - WITHOUT BUSY LAMP
- (Y) - WITH BUSY LAMP
- \* - INSULATED AND STORED
- † - NETWORK TERMINAL, UNDESIGNATED TERMINALS ARE ON TB2
- ‡ - LEADS INVOLVED IN MODIFICATION

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Fig. 3—2664-Type Telephone Set Converted for 1A KTS- With or Without Busy Lamp

**TABLE C**  
**PICKUP-SIGNAL KEY CONVERSION, 2664A2 TELEPHONE SET**

CONVERSION OPTIONS	656A OR 598A KEY LEADS						
	(O-W)	(S-W)	(G-R)	(BL-BK)	(BR-BK)	(O-Y)	(R-S)
PPPPPP (Note)	A2	A2	A2	A2	A2	A2	6
PPPPPS	A2	A2	A2	A2	A2	SG	6
PPPPSS	A2	A2	A2	A2	SG	SG	6
PPSSSS	A2	A2	A2	SG	SG	SG	6
PPSSSS	A2	A2	SG	SG	SG	SG	6
PPPPPS*	A2	A2	A2	A2	S1	A2†	S1
PPPPPS‡	A2	A2	A2	S1	S1	A2†	S1
PPP*P*P*S*	A2	A2	S1	S1	S1	A2†	S1
PP*P*P*P*S*	A2	S1	S1	S1	S1	A2†	S1

\* These arrangements use line switch controlled ground for common signal key used with private or intercommunicating lines. Common signal should be used to operate a common signal relay. Do not wire directly to buzzer. Fig. 2 and 3 shows line switch lead terminations.

† For 1A KTS connect (O-Y) key lead to BL terminal.

Note: 656A or 598A key as furnished in 2664A2 telephone set. To convert from pickup (locking) to signal (nonlocking) remove the P-10E837 screw from the plunger at the key position being converted.

◆ **TABLE D** ◆  
**PICKUP-SIGNAL KEY CONVERSION, 2664A3 TELEPHONE SET**

CONVERSION OPTIONS	657B OR 599B KEY LEADS								
	(O-W)	(S-W)	(G-R)	(BL-BK)	(W-BR)	(Y-BL)	(BL-Y)	(BR-BK)	(O-Y)
HPPPPC (Note)	A2	A2	A2	A2	4	†	†	A2	A2
HPPPSC	A2	A2	A2	SG	4	†	†	A2	A2
HPPSSC	A2	A2	SG	SG	4	†	†	A2	A2
HPPP*S*C	A2	A2	S1	A2§	S1	†	†	A2	A2
HPP*P*S*C	A2	S1	S1	A2§	S1	†	†	A2	A2
HPPPPC(1)	A2	A2	A2	A2	4	†	†	A2	A2
HPPPPC(2)	A2	A2	A2	A2	4	TB1-7†	A of NET†	†	†
HPPPPC(3)	A2	A2	A2	A2	4	L1 of Net. ¶	L2 of Net. ¶	†	†
HPPPPC(4)	A2	A2	A2	A2	4	†	†	†	†

\* These arrangements use line switch controlled ground for common signal key used with private or intercommunicating lines. Common signal should be used to operate a common signal relay. Do not wire directly to a buzzer. Fig. 2 and 3 shows line switch lead terminations.

† Insulated and stored

‡ Remove mounting cord (S-Y) (Y-S) leads, insulate and store

§ For 1A KTS connect (BL-BK) key lead to BL terminal

¶ Remove mounting cord (BL-V) (V-BL) leads; insulate and store.

Turn button key may be used to:

- (1) Operate auxiliary relay [through 5th R and T (G-BK) (BK-G) pair].
- (2) Cut off ringer in set } Connect 5th R and T (G-BK) (BK-G) pair to ringer or signal circuit.
- (3) Cut off buzzer in set }
- (4) Cut off external audible signal [connect 5th R and T (G-BK) (BK-G) pair to signal circuit; connect 6th R and T (BL-Y) (Y-BL) pair to external signal].

Note: 657B or 599B key wired as furnished in 2664A3 telephone set. To convert from pickup (locking) to signal (nonlocking) remove the P-10E837 screw from the plunger at key position being converted.

◆ TABLE F ◆

## CONDUCTOR ASSIGNMENTS USING 66E-TYPE CONNECTOR BLOCK OR A25B CONNECTOR CABLE

LEAD DESIG	TEL SET TERM. (NOTE)	MTG CORD OR A25B CONN CABLE		PLUG OR CONN	66E-TYPE CONN BLOCK
		PAIR NO.	CONDUCTOR COLOR	PIN NO.	CLIP TERM. NO.
T	26	1	W-BL	26	1
R	1		BL-W	1	2
A,H,S, or S1	TB2-1	2	W-O	27	3
A1 or B*	TB2-A1		O-W	2	4
LG	38	3	W-G	28	5
L1	13		G-W	3	6
T	28	4	W-BR	29	7
R	4		BR-W	4	8
A,H,S, or S1	TB2-2	5	W-S	30	9
Spare or B*	†		S-W	5	10
LG	39	6	R-BL	31	11
L2	14		BL-R	6	12
T	30	7	R-O	32	13
R	5		O-R	7	14
A,H,S, or S1	TB2-3	8	R-G	33	15
Spare or B*	†		G-R	8	16
LG	40	9	R-BR	34	17
L3	15		BR-R	9	18
T	32	10	R-S	35	19
R	7		S-R	10	20
A,H,S, or S1	TB2-4	11	BK-BL	36	21
Spare or B*	†		BL-BK	11	22
LG	41	12	BK-O	37	23
L4	16		O-BK	12	24
T	34	13	BK-G	38	25
R	9		G-BK	13	26
A,H,S, or S1	TB2-5	14	BK-BR	39	27
Spare or B*	†		BR-BK	14	28
LG	42	15	BK-S	40	29
L5	17		S-BK	15	30
T	36	16	Y-BL	41	31
R	11		BL-Y	16	32
A,H,S, or S1	TB2-6	17	Y-O	42	33
Spare or B*	†		O-Y	17	34
LG	TB2-7	18	Y-G	43	35
L6	TB2-8		G-Y	18	36
BL or L5	TB2-BL	19	Y-BR	44	37
SG	TB2-SG		BR-Y	19	38
B or B1	TB1-7	20	Y-S	45	39
R or R1	A of net		S-Y	20	40
BZ1	L2 of net.	21	V-BL	46	41
BZ	L1 of net.		BL-V	21	42
Spare	†	22	V-O	47	43
Spare	†		O-V	22	44
Spare	†	23	V-G	48	45
Spare	†		G-V	23	46
Spare	†	24	V-BR	49	47
Spare	†		BR-V	24	48
Spare	†	25	V-S	50	49
Spare	†		S-V	25	50

*Note:* Contacts of key plug unless otherwise noted.

\*When set is used in 1A key telephone system, these balance leads must not be used for other purposes.

†Insulate and store.