

SERVICE

664-TYPE TELEPHONE SETS

1. GENERAL

1.01 This section is reissued to:

- Include the KS-20419L1 buzzer
- Show 242-type amplifier
- Delete schematic for 242B amplifier.

1.02 These sets are supplied factory-wired as 664A1 only. For conversion to 664A2 or 664A3 the appropriate key unit must be ordered and installed separately. The sets are equipped

with a 242-type amplifier to provide for headset operation. A 52- or 53-type headset must be ordered separately.

1.03 Current sets are factory-equipped with a KS-20419L1 (10 volt AC only) buzzer wired to the (BL-V) (V-BL) cord conductors. These conductors should be used when adding buzzer in the field.

1.04 For information on the 242-type amplifiers, refer to Section 501-226-101.♦

TABLE A
PICKUP-SIGNAL KEY CONVERSION, 664A1 TELEPHONE SET

CONVERSION OPTIONS	657A OR 599A KEY LEADS				
	(S-W)	(G-R)	(BL-BK)	(BR-BK)	(BR-W)
H P P P P P	A2	A2	A2	A2	5
H P P P P S	A2	A2	A2	SG	5
H P P P S S	A2	A2	SG	SG	5
H P P S S S	A2	SG	SG	SG	5
H P P P P * S *	A2	A2	5	A2	5
H P P P * P * S *	A2	5	5	A2	5
H P P * P * P * S *	5	5	5	A2	5

Note: All line key positions as furnished are pickup keys. To convert from pickup (locking) to signal (nonlocking) remove the P-10E837 screw from the plunger at the key position being converted.

* These arrangements are used on private or intercommunicating lines with a common signal key.

SECTION 502-617-404

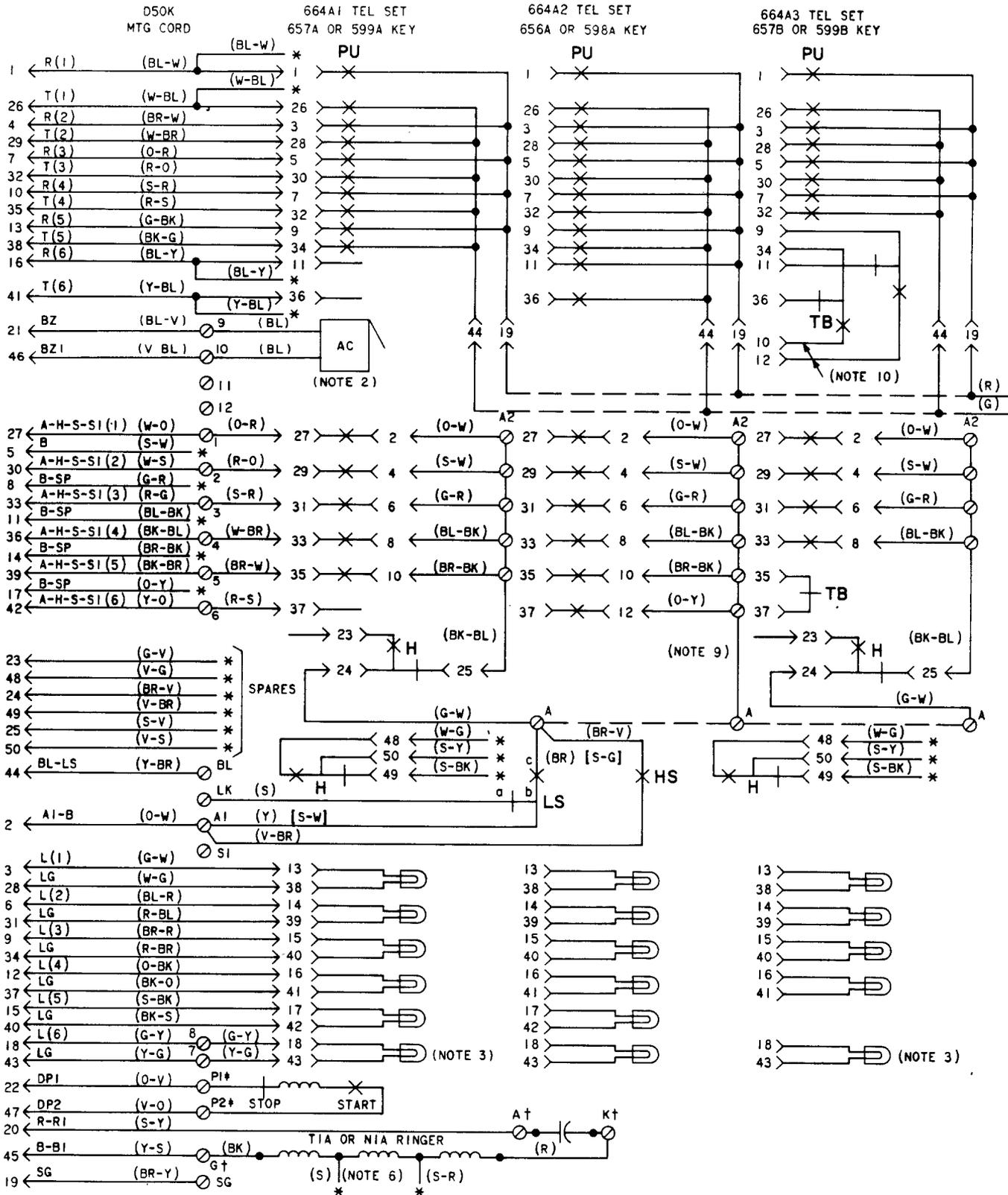
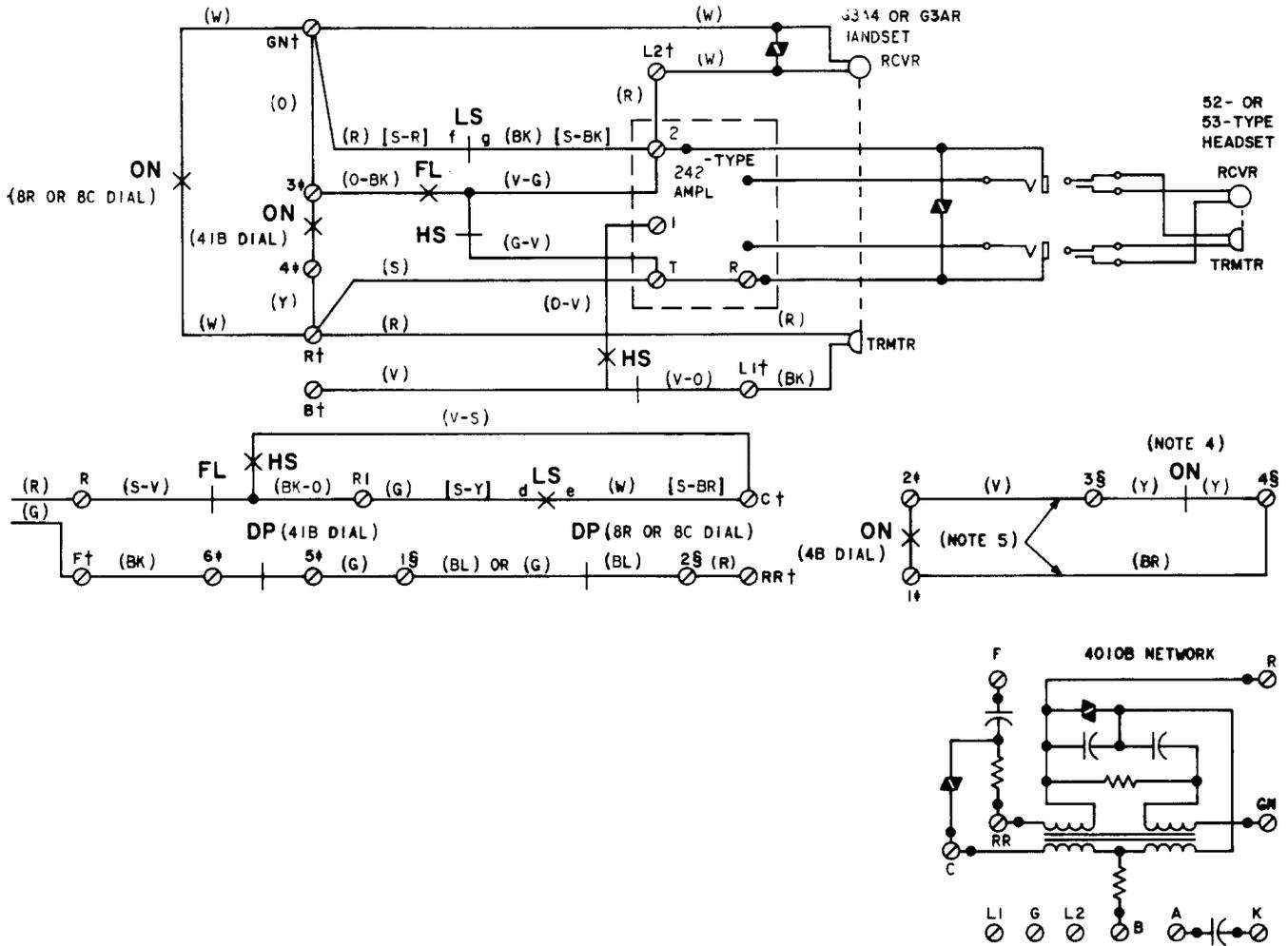


Fig. 1—664-Type Telephone Set, Connections (Sheet 1 of 2)

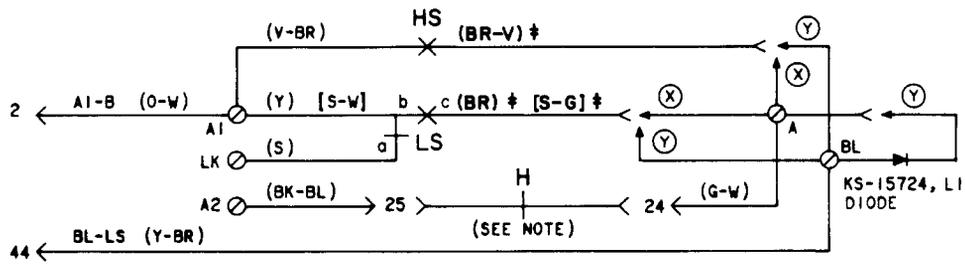


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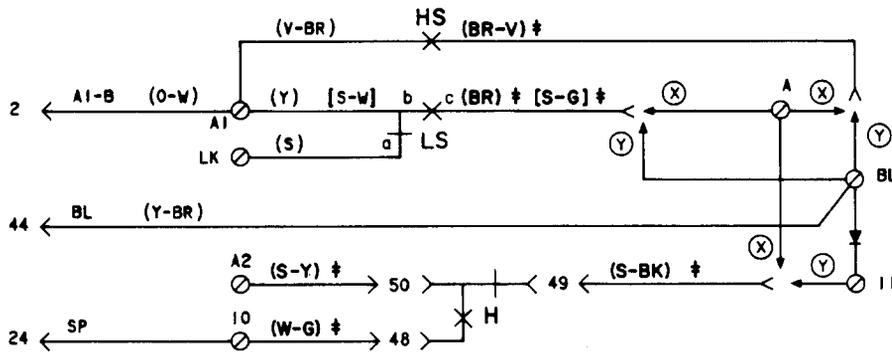
1. THE ON POSITION OF HEADSET KEY TRANSFERS THE TALKING CIRCUIT FROM HANDSET TO HEADSET. THE FLASH CONTACTS ARE OPERATED BY DEPRESSING THE KEY.
2. CURRENT SETS ARE SUPPLIED WITH BUZZER AS SHOWN, USE SIMILAR CONNECTIONS WHEN ADDING BUZZER IN FIELD.
3. TO USE 6TH LAMP, EQUIP KEY WITH PROPER LAMP AND CONNECT ASSOCIATED LEADS AT EQUIPMENT OR DISTRIBUTION TERMINAL AS REQUIRED.
4. DIAL OFF-NORMAL CONTACTS AND ASSOCIATED (Y) LEADS ARE ON 8C DIAL ONLY.
5. (V) AND (BR) LEADS ARE ON EARLY PRODUCTION SETS EQUIPPED WITH AN 8C DIAL.
6. (S) AND (S-R) LEADS ARE ON NIA RINGER ONLY.
7. IF CAPACITOR IS NOT REQUIRED IN RINGER CIRCUIT, MOVE (R) RINGER LEAD TO A OF NETWORK.
8. TO SILENCE RINGER PERMANENTLY CONNECT (BK) RINGER LEAD TO K OF NETWORK.
9. WHEN 656A OR 598A KEY IS PROVIDED ADD STRAP BETWEEN KEY TERMINALS A AND A2.
10. THESE LEADS CONNECT TO (BR-BK) AND (O-Y) LEADS TERMINATED ON A2.
11. LINE SWITCH SEQUENCE:
 - bc MAKES
 - de MAKES
 - ab BREAKS
 - fg BREAKS

- DP - DIAL PULSE CONTACTS
- LS - LINE SWITCH
- ON - DIAL OFF-NORMAL CONTACTS
- H - HOLD KEY
- FL - FLASH KEY
- HS - HEADSET ON-OFF KEY
- PU - PICKUP KEY
- * - INSULATED AND STORED
- † - TERMINAL ON NETWORK, UNDESIGNATED TERMINALS ARE TB2
- ‡ - TERMINAL ON 41B DIAL
- § - TERMINAL ON TB1
- () - CURRENT COLOR CODE
- [] - MD COLOR CODE

Fig. 1—664-Type Telephone Set, Connections (Sheet 2 of 2)



A. WITHOUT I HOLD



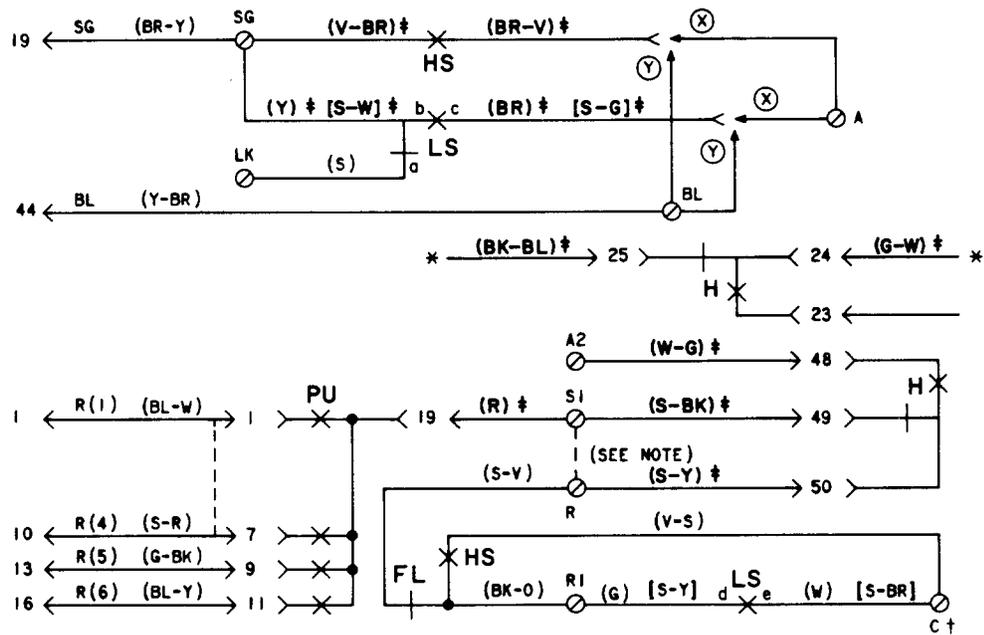
B. WITH I HOLD

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
- () - CURRENT COLOR CODE
- [] - MD COLOR CODE

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



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

- 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
- () - CURRENT COLOR CODE
- [] - MD COLOR CODE

Fig. 3—664-Type Telephone Set Converted for 1A KTS—With or Without Busy Lamp

TABLE B
PICKUP-SIGNAL KEY CONVERSION, 664A2 TELEPHONE SET

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

Note: All line key positions as furnished are pickup keys. To convert from pickup (locking) to signal (nonlocking) remove the P-10E837 screw from the plunger at the key position being converted.

* These arrangements are used on private or intercommunicating lines with a common signal key.

◆ TABLE C ◆
PICKUP-SIGNAL KEY CONVERSION, 664A3 TELEPHONE SET

CONVERSION OPTIONS	657B OR 599B KEY LEADS								
	(S-W)	(G-R)	(BL-BK)	(W-BR)	(Y-BL)	(BL-Y)	(BR-BK)	(O-Y)	(R-S)
H P P P P C	A2	A2	A2	4	†	†	A2	A2	†
H P P P S C	A2	A2	SG	4	†	†	A2	A2	†
H P P S S C	A2	SG	SG	4	†	†	A2	A2	†
H P P P * S * C	A2	4	A2	4	†	†	A2	A2	†
H P P * P * S * C	4	4	A2	4	†	†	A2	A2	†
H P P P P C (1)	A2	A2	A2	4	†	†	SG	SG	†
H P P P P C (2)	A2	A2	A2	4	TB2-12†	A of net.†	†	†	†
H P P P P C (3)	A2	A2	A2	4	TB2-9	TB2-10	†	†	†
H P P P P C (4)	A2	A2	A2	4	†	†	†	†	†

Note: All line key positions as furnished are pickup keys. To convert from pickup (locking) to signal (nonlocking) remove the P-10E837 screw from the plunger at the key position being converted.

* These arrangements are used on private or intercommunicating lines with a common signal key.

† Insulate and store

‡ Remove mounting cord (S-Y) (Y-S) leads, insulate and store. Move (BK) ringer lead from G of network to TB2-12.

Turnbutton used to:

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

◆ TABLE D ◆

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	3		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 LS	TB2-BL	19	Y-BR	44	37
SG	TB2-SG		BR-Y	19	38
B or B1	G of net	20	Y-S	45	39
R or R1	A of net		S-Y	20	40
BZ1	TB2-10	21	V-BL	46	41
BZ	TB2-9		BL-V	21	42
DP2	P2 of 41-type dial	22	V-O	47	43
DP1	P1 or 41-type dial		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.

* Insulate and store.