

SPEAKERPHONE SYSTEMS — 3 TYPE

660 AND 1660 SERIES TELEPHONE SETS

CONNECTIONS

1. GENERAL

- 1.01** This section shows the connections between the speakerphone components and the 660, 661, 662, and 1662 series telephone sets.
- 1.02** This section is being reissued to:
- Add connections for the 661-, 662-, and 1662-type telephone sets.
 - Show modification of 55A control unit for use with TOUCH-TONE dial equipped telephone sets.
- 1.03** Connections for sets with plug ended cords are shown using either 148A or 149A adapter. The adapter extends speakerphone leads for connection to the control unit. Use adapter if control unit is remote from the station key equipment.
- 1.04** For proper operation of the 3-type speakerphone system, ground must be present on the A1 lead. Connect ground to appropriate punching on telephone set, or at 55-type control unit.

2. CONNECTIONS INDEX

Fig. 1 - 660-Type Telephone Set

Fig. 2 - 661-Type Telephone Set with 148A Adapter

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Fig. 6 - 1662-Type Telephone Set with 148A Adapter

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Fig. 8 - Modification of 55A Control Unit for Use with TOUCH-TONE Dial Sets

Table A - Connections Between 3-Type Speakerphone and 660A1 Telephone Set

Table B - Connections Between 3-Type Speakerphone and 661-, 662-, and 1662-Type Telephone Sets

TABLE A
CONNECTIONS BETWEEN 3-TYPE SPEAKERPHONE
AND 660AI TELEPHONE SET

Lead Desig	Mtg Cord	Terms. in Set	Term. on Control Unit	
			55A	55B
T	W-BL	F (Net.)		
R	BL-W	L1 (TB1)		
GRD-A1	O-W	P2 (TB1)		
T1	W-O	6 (41A)	19	1
P3	W-G	2 (41A)	21	4
P4	G-W	1 (41A)	30	13
LK	W-BR	L2 (TB1)	*	*
A1	BR-W	P2 (TB1)	12	2
P2	W-S	P2 (41A)		
P1	S-W	P1 (41A)		
R1	†		28	10

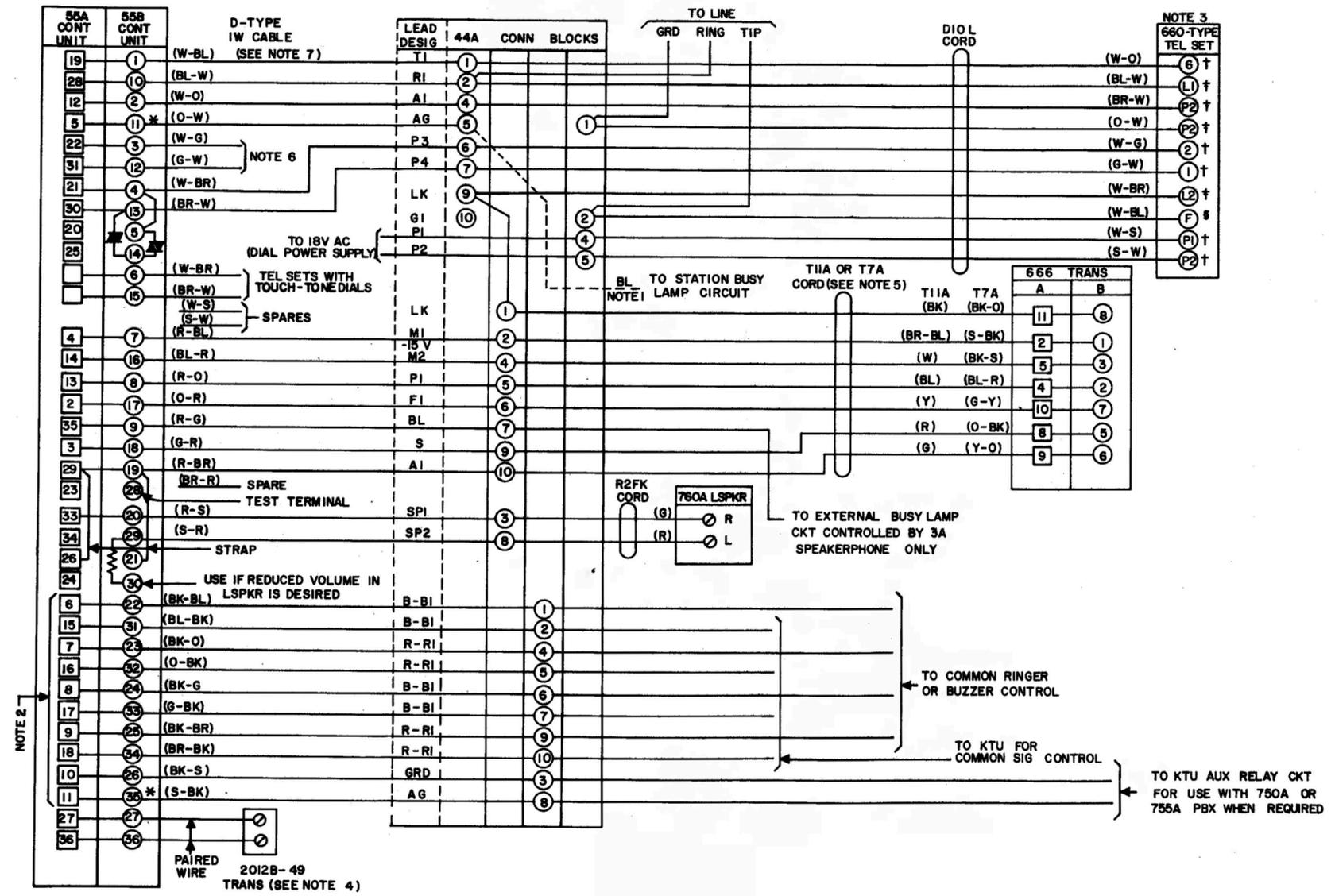
Note 1: D6AB cord furnished with set must be replaced with D10L.

Note 2: In addition to the above connections, it will be necessary to make the following wiring changes in the set:

- Strap 1 & 2 (TB2) to 1 & 2 (41A Dial).
- Move (S-G) from C (network) to 1 (TB1).
- Move (S-W) from L2 (TB1) to P2 (TB1).
- Move (S-BR) from F (network) to C (network).
- Move (R) from L2 (network) to L1 (network).
- Move (BK) from G (network) to F (network).

* Connect to (BK) of 666A transmitter or (BK-O) of 666B transmitter.

† Strap to (BL-W) at connecting block.



NOTE 1: WHEN STATION BUSY LAMP FEATURE IS REQUIRED, CONNECT BL LEAD TO AG LEAD AT CONNECTING BLOCK. USE ONE STATION BUSY LAMP CONTROL UNIT FOR EACH TELEPHONE SET AND 55-TYPE CONTROL UNIT.

NOTE 2: CONNECT TO 44A BLOCK USING IW CABLE, OR CONNECT DIRECTLY TO CONTROL UNIT WITH INSIDE WIRE AS REQUIRED.

NOTE 3: FOR TELEPHONE SET CONNECTIONS, REFER TO APPROPRIATE SECTION.

NOTE 4: DUE TO THE LOWER VOLTAGE RATING, THE 2012A TRANSFORMER SHOULD NEVER BE USED TO POWER THE 55-TYPE CONTROL UNIT.

NOTE 5: INSULATE AND STORE SPARE LEADS IN T11A CORD.

NOTE 6: G1 LEADS FOR TIP PARTY IDENTIFICATION.

NOTE 7: SPEAKERPHONE LEADS NEED NOT BE RUN IN SEPARATE IW CABLE IF LENGTH DOES NOT EXCEED 100 FEET.

Fig. 1 - 660-Type Telephone Set

TABLE B
CONNECTIONS BETWEEN 3-TYPE SPEAKERPHONE SYSTEM AND
661-, 662-, AND 1662-TYPE TELEPHONE SETS

55-Type Control Unit Terminals (See READ) 55B		Lead Desig	148A Adapter	149A Adapter	D50E or D50K Cord	Terminations in Tel Set			
						661 Type		662 Type	1662 Type
						D50E Cord	D50K Cord	D50K Cord	D50K Cord
19	1	T1	BK-W	8A	V-G	1*	1*	2*	9
28	10	R1	BK-BL	7A	G-V	C	C	R	R
12	2	A1	G-BK	A1	O-W	A1	A1	A1	A1
5	11	AG	S-BK	12A	V-S	A-BL	A-BL	A-BL	A-BL
21	4	P3	S	10A	V-BR	10	10	1†	
30	13	P4	BL-W	9A	BR-V	9	9	2†	
32	6	IT‡	S	10A	V-BR				Insulate and Store
1	15	IR‡	BL-W	9A	BR-V				10
§	§	LK	S-Y	11A	S-V	LK	LK	LK	LK
6	22	BZ1	Y-BK	4B	V-BL	2	KS-8109 Buzzer	KS-8109 Buzzer	KS-8109 Buzzer
7	23	BZ	G-W	3B	BL-V	1	KS-8109 Buzzer	KS-8109 Buzzer	KS-8109 Buzzer
8	24	B-B1	G-Y	2A	Y-S	3*	3*	G	6*
9	25	R-R1	R-W	1A	S-Y	A	A	A	A

* TBL.

† 41A dial.

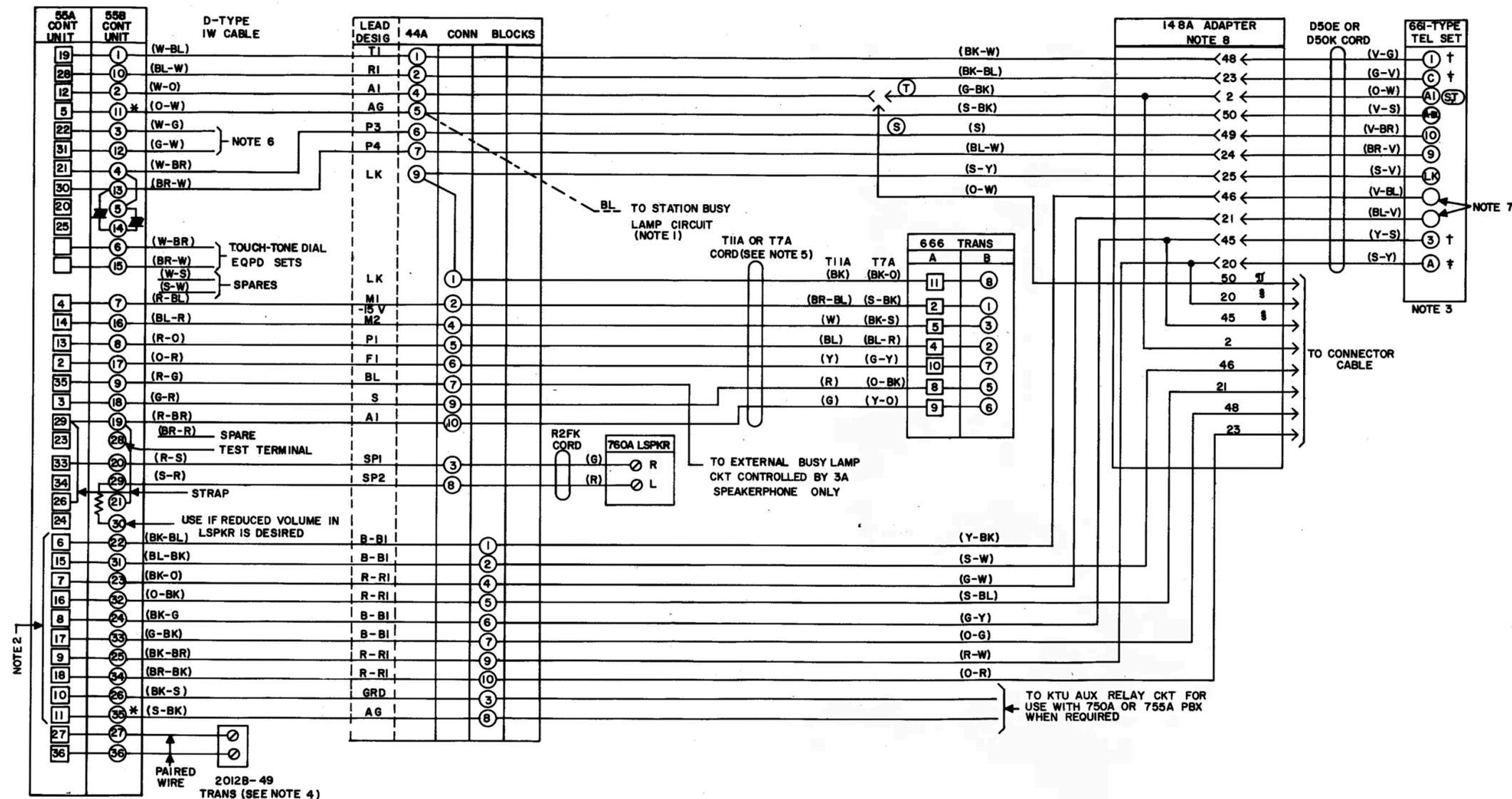
‡ TOUCH-TONE dial equipped sets use IR, IT leads instead of P3, P4 leads.

§ Connect to:

- (BK) on 666A transmitter unit.
- (BK-O) on 666B transmitter unit.



The 55A control unit cannot be used with TOUCH-TONE dial equipped sets unless it has been modified (Fig. 8).



NOTE 1: WHEN STATION BUSY LAMP FEATURE IS REQUIRED, CONNECT BL LEAD TO AG LEAD AT CONNECTING BLOCK. USE ONE STATION BUSY LAMP CONTROL UNIT FOR EACH TELEPHONE SET AND 55-TYPE CONTROL UNIT.

NOTE 2: CONNECT TO 44A CONNECTING BLOCK USING IW CABLE, OR CONNECT DIRECTLY TO CONTROL UNIT WITH INSIDE WIRE AS REQUIRED.

NOTE 3: FOR TELEPHONE SET CONNECTIONS, REFER TO THE APPROPRIATE SECTION.

NOTE 4: DUE TO THE LOWER VOLTAGE RATING, THE 2012A TRANSFORMER SHOULD NEVER BE USED TO POWER THE 55-TYPE CONTROL UNIT.

NOTE 5: INSULATE AND STORE SPARE LEADS IN T11A CORD.

NOTE 6: G1 LEADS FOR TIP PARTY IDENTIFICATION.

NOTE 7: CONNECT (BL-V) AND (V-BL) AS FOLLOWS:

- D50E CORD: TERMINALS 1 AND 2 OF TB2
- D50K CORD: TERMINALS OF KS-8109 BUZZER (IF BUZZER IS NOT PROVIDED, INSULATE AND STORE CONDUCTORS)

NOTE 8: ADAPTER IS NOT NECESSARY IF 55-TYPE CONTROL UNIT IS IN SAME LOCATION AS STATION KEY EQUIPMENT.

Ⓢ 1A KEY TELEPHONE SYSTEM WITH SPEAKERPHONE, CONNECT YY LEAD IN TELEPHONE SET TO SG TERMINAL ON TBII.

Ⓣ 1A1 OR 1A2 TELEPHONE SYSTEM WITH SPEAKERPHONE, CONNECT YY LEAD IN TELEPHONE SET TO A1 TERMINAL ON TBII.

* STRAP 35 AND 11 AT CU FOR KTU AUX RELAY CKT.

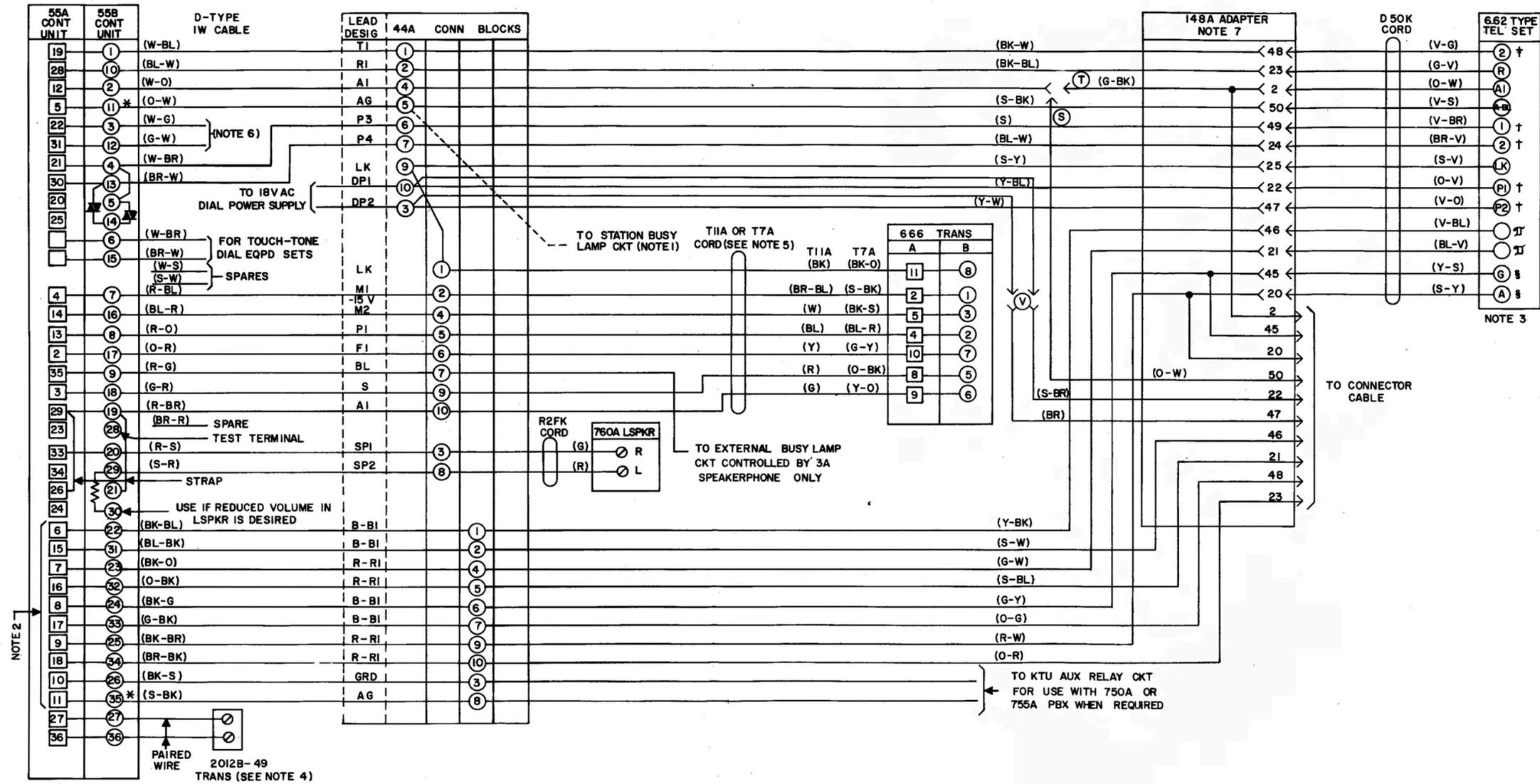
† TB1

‡ TERMINALS ON NETWORK

§ DO NOT CONNECT CORRESPONDING CONNECTOR CABLE AT EQPT.

¶ CONNECT (V-S) OF CONNECTOR CABLE TO SG LEAD AT EQPT.

Fig. 2 - 661-Type Telephone Set with 148A Adapter



NOTE 1: WHEN STATION BUSY LAMP FEATURE IS REQUIRED, CONNECT BL LEAD TO AG LEAD AT CONNECTING BLOCK. USE ONE STATION BUSY LAMP CONTROL UNIT FOR EACH TELEPHONE SET AND 55-TYPE CONTROL UNIT.

NOTE 2: CONNECT TO 44A BLOCK USING IW CABLE, OR CONNECT DIRECTLY TO CONTROL UNIT WITH INSIDE WIRE AS REQUIRED.

NOTE 3: FOR TELEPHONE SET CONNECTIONS, REFER TO THE APPROPRIATE SECTION.

NOTE 4: DUE TO THE LOWER VOLTAGE RATING, THE 2012A TRANSFORMER SHOULD NEVER BE USED TO POWER THE 55-TYPE CONTROL UNIT.

NOTE 5: INSULATE AND STORE SPARE LEADS IN T11A CORD.

NOTE 6: G1 LEADS FOR TIP PARTY IDENTIFICATION.

NOTE 7: ADAPTER IS NOT NECESSARY IF 55-TYPE CONTROL UNIT IS IN SAME LOCATION AS STATION KEY EQUIPMENT.

Ⓢ 1A KTS WITH 3-TYPE SPEAKERPHONE. CONNECT (S-W) TO SG TERMINAL AT TB II; CONNECT (V-S) OF CONNECTOR CABLE TO SG LEAD AT EQUIPMENT.

Ⓣ 1A1 OR 1A2 KTS WITH 3-TYPE SPEAKERPHONE. CONNECT (S-W) TO A1 TERMINAL AT TB II.

Ⓥ 18VAC POWER SUPPLY AT SAME LOCATION AS KEY EQUIPMENT. CONNECT 18VAC TO (O-V) AND (V-O) OF CONNECTOR CABLE.

* STRAP 35 AND 11 AT CU FOR KTU AUX RELAY CKT.

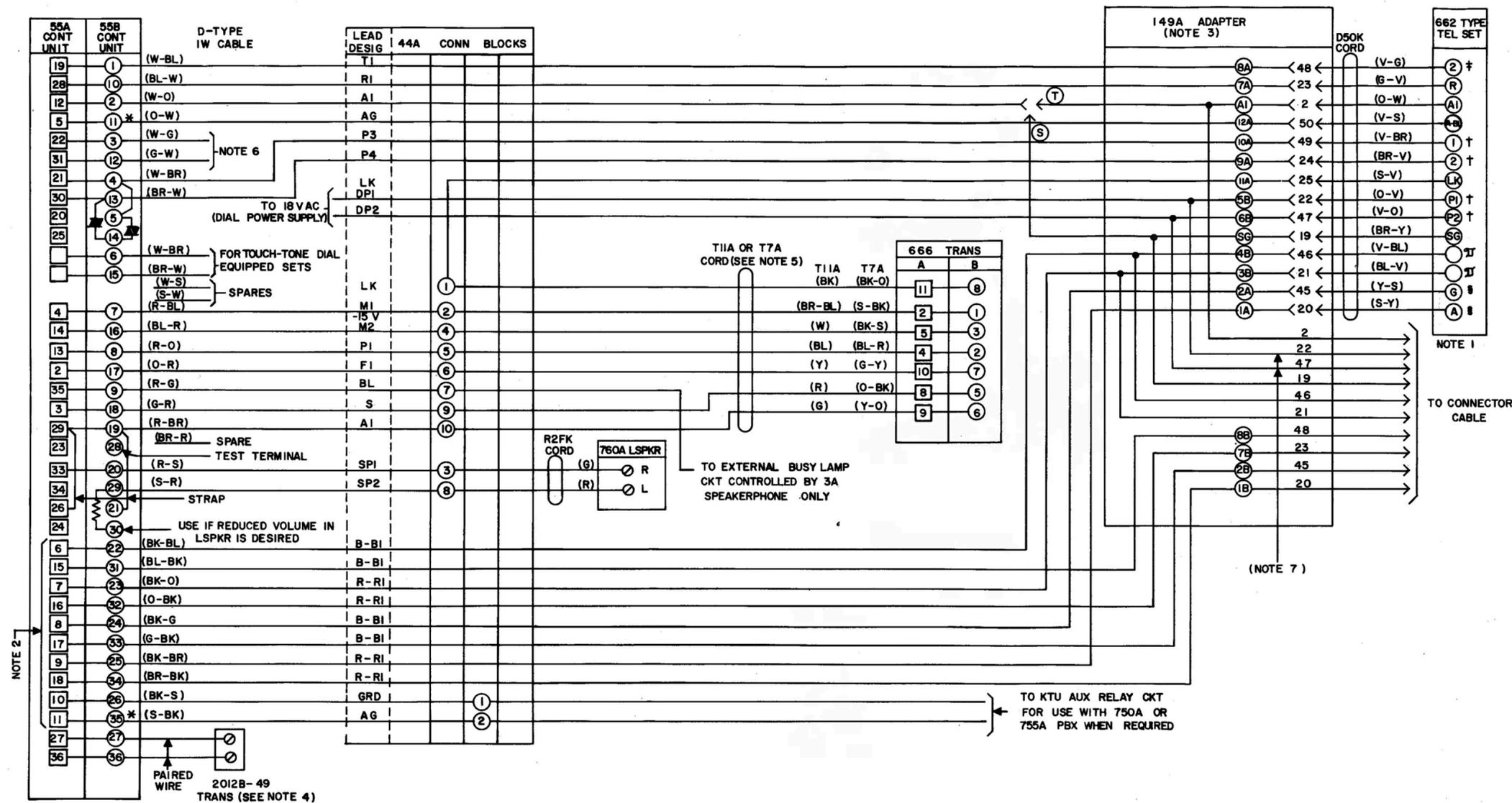
† 41A DIAL

‡ TB1

§ NETWORK

Ⓢ KS-8100-TYPE BUZZER

Fig. 4 - 662-Type Telephone Set with 148A Adapter



- NOTE 1: FOR TELEPHONE SET CONNECTIONS, REFER TO APPROPRIATE SECTION.
- NOTE 2: CONNECT TO 44A BLOCK USING IW CABLE, OR CONNECT DIRECT TO CONTROL UNIT WITH INSIDE WIRE AS REQUIRED.
- NOTE 3: ADAPTER IS NOT NECESSARY IF 55-TYPE CONTROL UNIT IS IN SAME LOCATION AS STATION KEY EQUIPMENT.
- NOTE 4: DUE TO THE LOWER VOLTAGE RATING, THE 2012A TRANSFORMER SHOULD NEVER BE USED TO POWER THE 55-TYPE CONTROL UNIT.
- NOTE 5: INSULATE AND STORE SPARE LEADS IN T11A CORD.
- NOTE 6: G1 LEADS FOR TIP PARTY IDENTIFICATION.
- NOTE 7: DO NOT CONNECT CORRESPONDING CONNECTOR CABLE CONDUCTORS AT EQUIPMENT UNLESS 18VAC POWER SUPPLY IS AT SAME LOCATION AS KEY EQUIPMENT.
- Ⓢ 1A KTS WITH 3-TYPE SPEAKERPHONE. CONNECT (S-W) TO SG TERMINAL AT TBII; CONNECT (V-S) OF CONNECTOR CABLE TO SG LEAD AT EQUIPMENT.
 - Ⓣ 1A1 OR 1A2 KTS WITH 3-TYPE SPEAKERPHONE. CONNECT (S-W) TO A1 TERMINAL AT TBII.
- * STRAP 35 AND 11 AT CU FOR KTU AUX RELAY CKT.
 - † 41A DIAL
 - ‡ TB1
 - § NETWORK
 - Ⓜ KS-8100-TYPE BUZZER

Fig. 5 - 662-Type Telephone Set with 149A Adapter

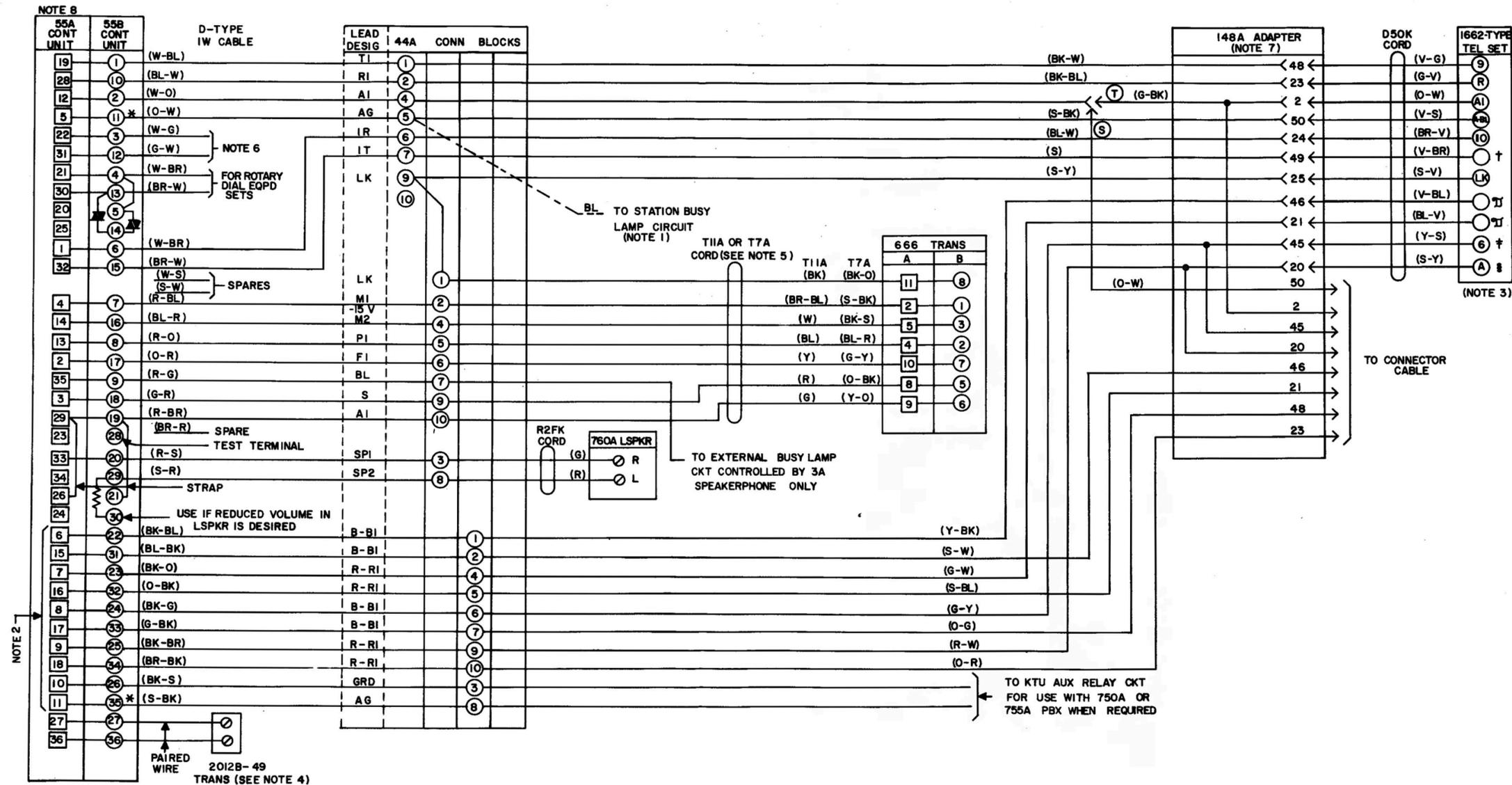
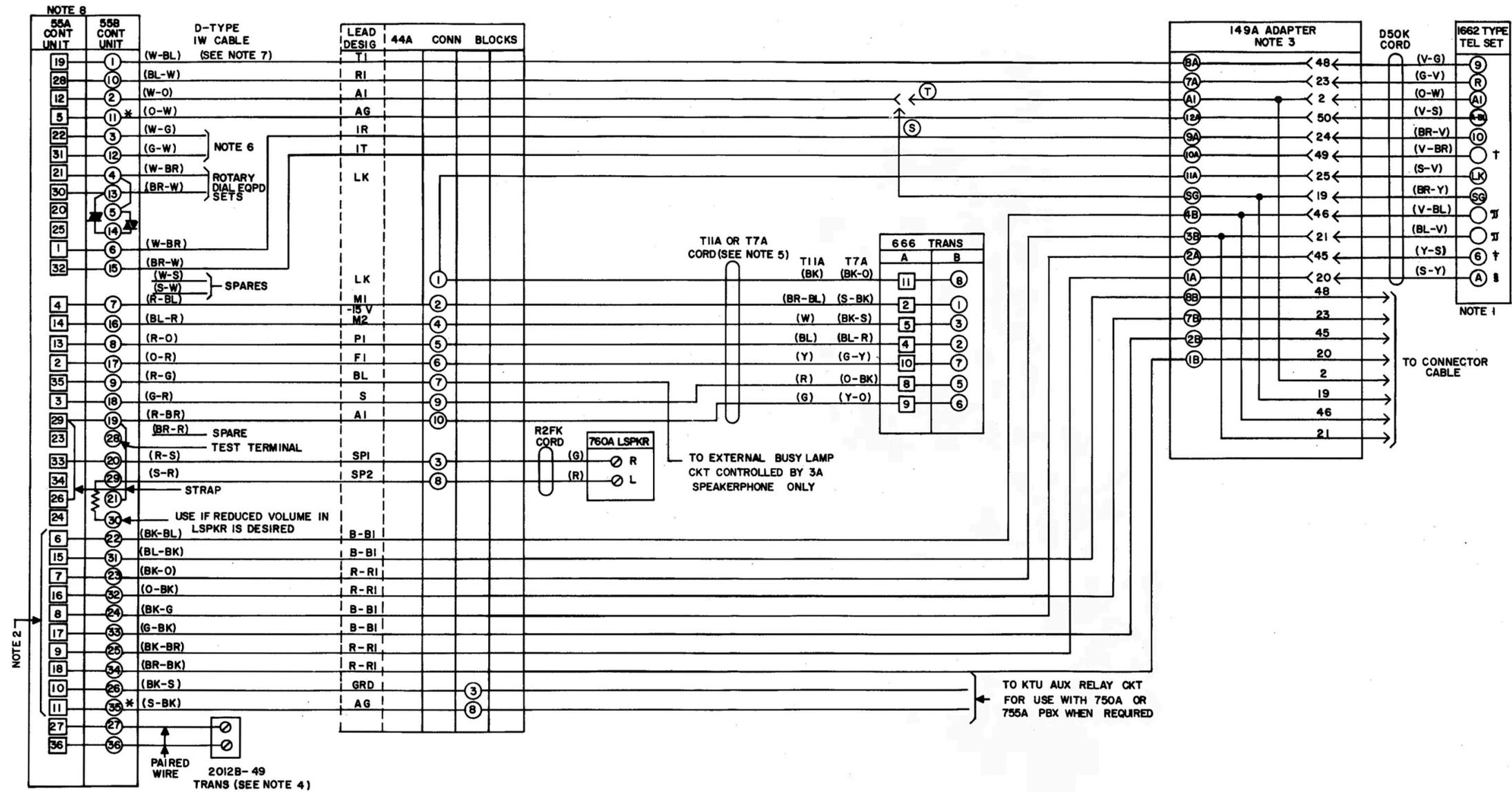


Fig. 6 - 1662-Type Telephone Set with 148A Adapter



NOTE 1: FOR TELEPHONE SET CONNECTIONS, REFER TO THE APPROPRIATE SECTION.

NOTE 2: CONNECT TO 44A BLOCK USING IW CABLE, OR CONNECT DIRECTLY TO CONTROL UNIT WITH INSIDE WIRE AS REQUIRED.

NOTE 3: ADAPTER IS NOT NECESSARY IF 55-TYPE CONTROL UNIT IS IN SAME LOCATION AS STATION KEY EQUIPMENT.

NOTE 4: DUE TO THE LOWER VOLTAGE RATING, THE 2012A TRANSFORMER SHOULD NOT BE USED TO POWER THE 55-TYPE CONTROL UNIT.

NOTE 5: INSULATE AND STORE SPARE LEADS IN T11A CORD.

NOTE 6: G1 LEADS FOR TIP PARTY IDENTIFICATION.

NOTE 7: SPEAKERPHONE LEADS NEED NOT BE RUN IN SEPARATE IW CABLE IF LENGTH DOES NOT EXCEED 100 FEET.

NOTE 8: THE 55A CONTROL UNIT MUST BE MODIFIED FOR USE WITH TOUCH-TONE DIAL EQUIPPED SETS (FIG. 8).

Ⓢ 1A KTS WITH 3-TYPE SPEAKERPHONE. CONNECT (S-W) IN SET TO SG TERMINAL AT TBII.

Ⓣ 1A1 AND 1A2 KTS WITH 3-TYPE SPEAKERPHONE. CONNECT (S-W) IN SET TO A1 TERMINAL AT TBII.

* STRAP 35 AND 11 AT CU FOR KTU AUX RELAY CKT.

† INSULATE AND STORE

‡ TB1

§ NETWORK TERMINAL

¶ KS-8100 TYPE BUZZER

Fig. 7 - 1662-Type Telephone Set with 149A Adapter

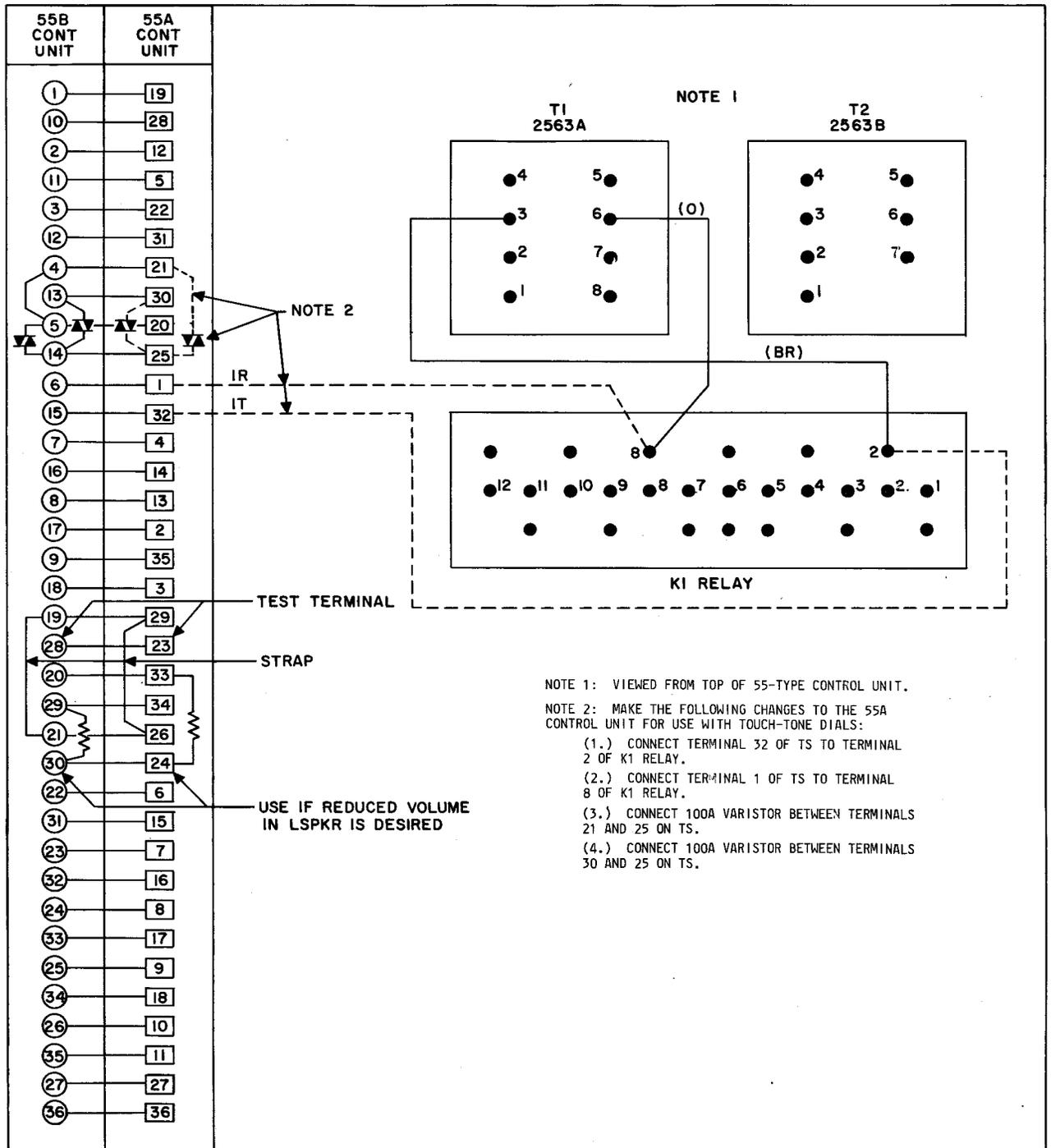


Fig. 8 - Modification of 55A Control Unit for Use with TOUCH-TONE Dial Sets