

## TELEPHONE SETS

### 881B109, 881C109, 2881B109, AND 2881C109

#### 1. GENERAL

1.01 This section contains identification, installation, and connection information for the 881B109 (MD), 881C109, 2881B109 (MD), and 2881C109 (Fig. 1) DESIGN LINE\* telephone (The Mickey Mouse® Phone\*\*) sets.

\*Trademark AT&TCo.

\*\*Housing manufactured by American Telecommunication Corporation.

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**Warning: Telephone apparatus or wiring shall not be installed in a location where minimum separation from other wiring as specified in Section 460-300-149 cannot be maintained.**

1.02 This section is reissued to:

- Add 881C109 and 2881C109 telephone sets
- Show 881B109 and 2881B109 telephone sets MD
- Add 841391238 handset assembly
- Add 1A converter
  
- Add Tables C and E.

1.03 The 881C109 and 2881C109 telephone sets are like the 881B109 and 2881B109 sets, except that the C codes have a new line switch [identified by two extra leads (BL and BL-W) and an 8HA-120 dial is used in the rotary set replacing the 6UA dial]. Refer to Fig. 8 and 9 for wiring information.



Fig. 1—2881C109 DESIGN LINE Telephone Set

1.04 The customer's premises must be properly wired with an appropriate connecting block or jack in order to accept the D4BU-29 plug-ended mounting cord.

#### 2. IDENTIFICATION

2.01 The 881C109 (rotary dial) and 2881C109 (TOUCH-TONE® dial) equipped telephone sets are new DESIGN LINE telephone sets being made available to the customer. The customer buys the housing and handset from the telephone company and the telephone company retains ownership of the transmission and signaling components.

#### NOTICE

Not for use or disclosure outside the  
Bell System except under written agreement

2.02 Refer to Table A for available codes and ordering information.

2.03 These telephone sets are intended to be used as single line or two-party desk sets and are not recommended for use on four- and eight-party service.

### 3. INSTALLATION AND CONNECTIONS

3.01 These telephone sets are furnished from the factory fully assembled and wired for bridged ringing. To connect the telephone set, plug the mounting cord into a 625-type connecting block or if the existing jack is a 548A or equivalent, use the 1A converter, ordered separately.

3.02 The internal connections for the 881B109 and 2881B109 telephone sets, for monkey system use, are shown in Fig. 4 and 5.

3.03 Connections for 1A KTS requires no telephone set modifications and are wired same as Fig. 4 and 5 or Fig. 8 and 9.

3.04 Connections for use with 1A1 or 1A2 KTS are shown in Fig. 6 and 7 for the 881B109 and 2881B109 telephone set. Table F includes necessary wiring modification required for 1A1 or 1A2 key telephone system use.

3.05 Connections for 881C109 and 2881C109 telephone sets are shown in Fig. 8 and 9.

3.06 To gain access to the interior of these sets for wiring changes, refer to Part 4.

#### 3.07 *Line and Ringer Connections:*

- (1) Refer to Tables B (881B109), C (881C109), D (2881B109), and E (2881C109) for single

line and two-party service for these telephone sets.

- (2) For adjustments and ringer cutoff feature of the P1A ringer, refer to Section 501-259-101.

3.08 When needed a 819040528 (P-90D052) polarity guard assembly can be mounted to the right hand dial mounting bracket. Refer to Table G for connections.

### 4. REMOVAL OF TELEPHONE COMPANY-OWNED COMPONENTS

4.01 When it is desired to discontinue telephone service of these DESIGN LINE telephone sets, proceed as follows:

**Note:** Remove telephone company-owned components that can be easily removed. To provide the appearance of a complete telephone set, components such as the dial and handset cord will remain with the telephone set.

- (1) Remove four housing mounting screws from the bottom of the telephone set (Fig. 2) and remove housing.

(2) For the 881B109 or 2881B109 only, pop off small black cover on bottom of base and remove two outer line switch mounting screws from the base and remove line switch.

(3) For the 881C109 or 2881C109 only, remove two line switch mounting screws and remove line switch (Fig. 3).

(4) Remove two network and two ringer mounting screws from the base and remove network and ringer. (Fig. 3).

#### ◆ TABLE A ◆

#### ORDERING GUIDE

TEL SET CODE	DIAL	TRMTR UNIT	RCVR UNIT	HANDSET CORD JACK	MTG CORD JACK	HANDSET CORD	MTG CORD	HANDSET ASSY	RINGER	NET.
881C109	8HA-120	T1	U3	616P	623P4	H4DU-58	D4BU-29	841391238	P1A	4228A
2881C109	35AH3D	T1	U3	616P	623P4	H4DU-58	D4BU-29	841391238	P1A	4228B

- (5) Unscrew transmitter and receiver caps and remove T1 transmitter and U3 receiver units.
- 4.02 Follow local procedures for returning telephone company-owned components.

4.03 When it is desired to return a set to Western Electric for repair, it should be packed using the D-180779 Kit of Parts which contains packing materials and instructions.

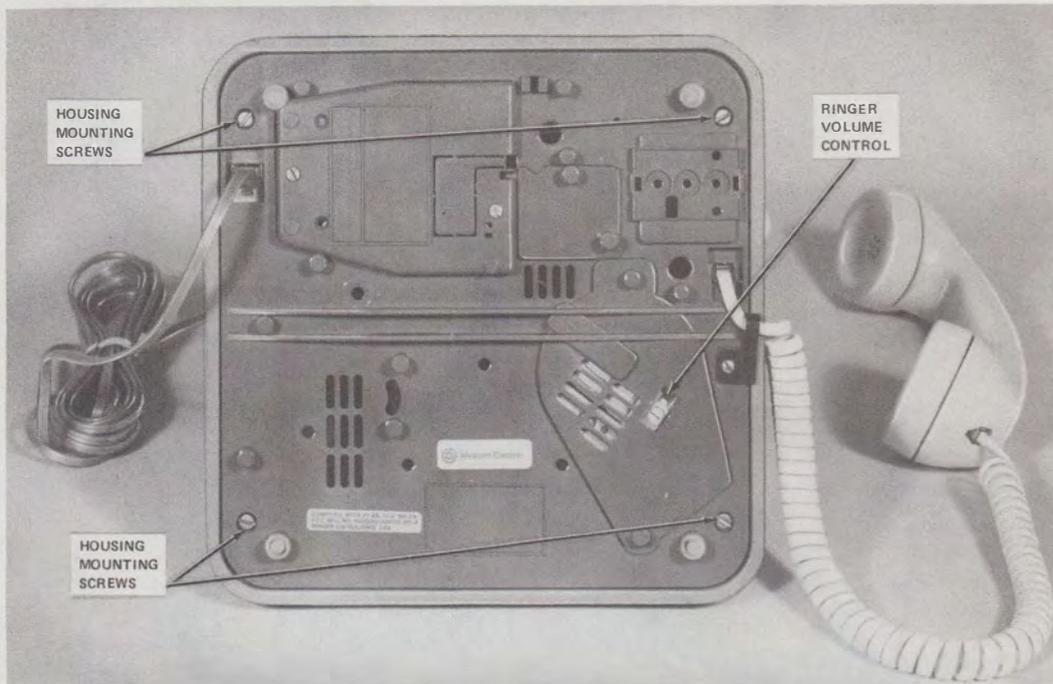


Fig. 2—881C109 or 2881C109 Telephone Set, Bottom View

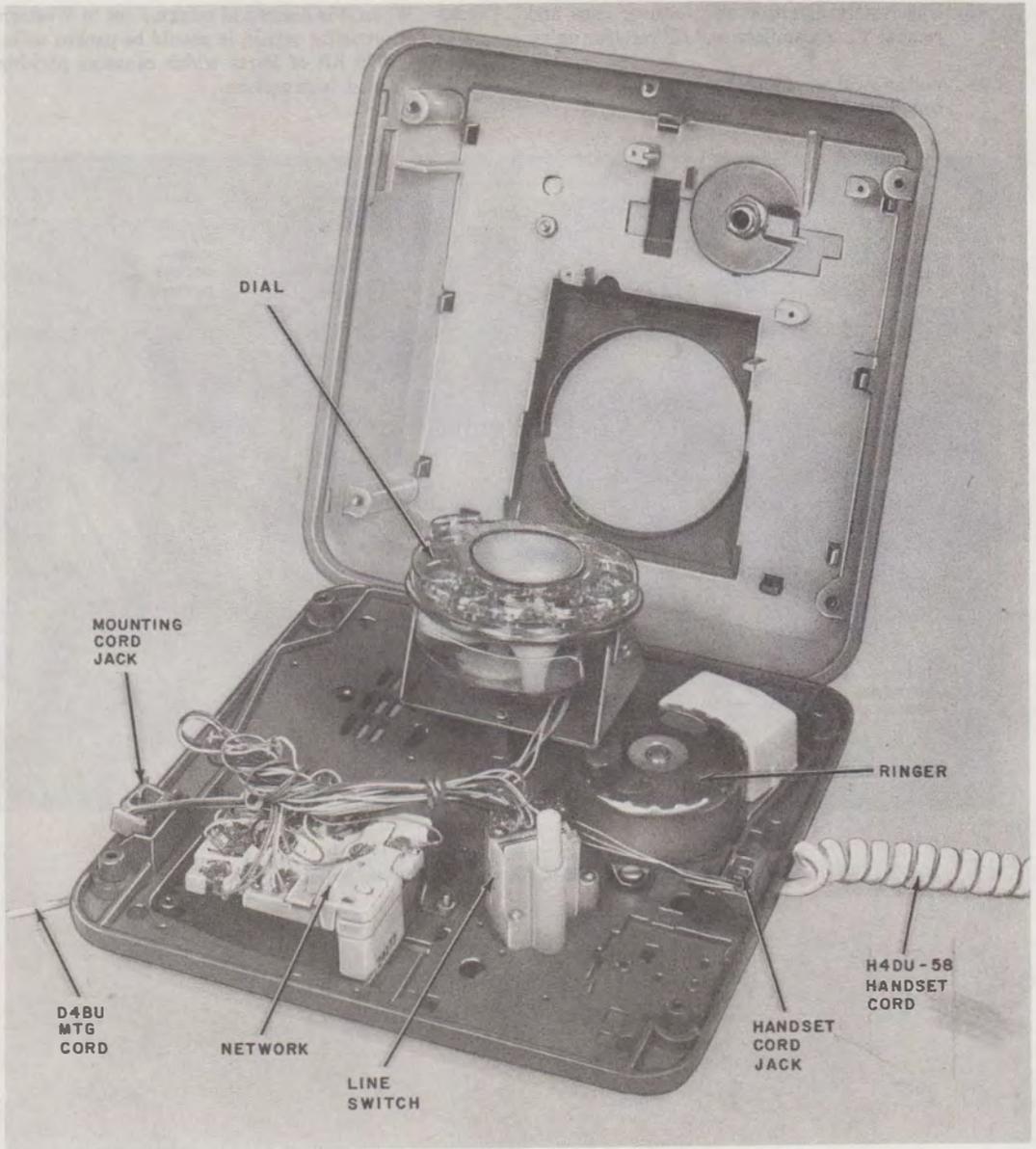


Fig. 3—881C109 Telephone Set With Housing Open

TABLE B

**LINE AND RINGER CONNECTIONS  
(881B109 TELEPHONE SET)†**

WIRE OR LEAD	COLOR	INDIVID. OR BRIDGED	RING PARTY	TIP PARTY		
				NO INDENT GROUND	IDENT GROUND	
					1000Ω	2650Ω
Inside Wire at 625-type Conn Blk	R	R	R	R	R	R
	G	G	G	G	G	G
	Y	Y	Y	Y	Y	Y
	BK	B	B	B	B	B
623P4 Line Cord Jack Assy	R	A	A	L1	F	F
	G	L1	L1	A	L2	L2
	Y	G	G	G	G	G
	BK	L2	L2	L2	*	*
Ringer	R	K	K	K	K	K
	S-R	*	*	*	*	L1
	S	*	*	*	L1	*
	BK	L1	G	G	G	G
Line Switch	Y	A	A	A	L2	L2
	W	F	F	F	B	B

\*Insulate and store.

†For access to set wiring follow applicable steps in Part 4.

♦TABLE C♦  
LINE AND RINGER CONNECTIONS (881C109 TELEPHONE SET)†

WIRE DR LEAD	COLOR	INDIVID. OR BRIDGED	RING PARTY	TIP PARTY		
				NO IDENT GROUND	IDENT GROUND	
					1000Ω	2650Ω
Inside Wire at 625-Type Conn Blk	R	R	R	R	R	R
	G	G	G	G	G	G
	Y	Y	Y	Y	Y	Y
	BK	B	B	B	B	B
623P4 Line Cord Jack Assy	R	A	A	L1	F	F
	G	L1	L1	A	L2	L2
	Y	G	G	G	G	G
	BK	L2	L2	L2	*	*
Ringer	R	K	K	K	K	K
	S-R	*	*	*	*	L1
	S	*	*	*	L1	*
	BK	L1	G	G	G	G
Line Switch	W	F	F	F	B	B
	BL	C	C	C	*	*
	BL-W	A	A	A	*	*
	BR	L2	L2	L2	C	C
	S	L2	L2	L2	A	A

\*Insulated and stored.

† For access to set wiring follow applicable steps in Part 4.

TABLE D

**LINE AND RINGER CONNECTIONS  
(2881B109 TELEPHONE SET)†**

WIRE OR LEAD	COLOR	INOIVIO. OR BRIDGED	RING PARTY	TIP PARTY		
				NO IDENT GROUND	IDENTGROUND	
					1000Ω	2650Ω
Inside Wire at 625-Type Conn. Blk	R	R	R	R	R	R
	G	G	G	G	G	G
	Y	Y	Y	Y	Y	Y
	BK	B	B	B	B	B
623P4 Line Cord Jack Assy	R	A	A	L1	C	C
	G	L1	L1	A	L2	L2
	Y	G	G	G	G	G
	BK	L2	L2	L2	*	*
Ringer	R	K	K	K	K	K
	S-R	*	*	*	*	L1
	S	*	*	*	L1	*
	BK	L1	G	G	G	G
Line Switch	Y	A	A	A	L2	L2
	W	F	F	C	B	B
	BR	C	C	F	F	F

\* Insulate and store.

† For access to set wiring follow applicable steps in Part 4.

◆ TABLE E ◆  
 LINE AND RINGER CONNECTIONS (2881C109 TELEPHONE SET)†

WIRE OR LEAD	COLOR	INDIVID. OR BRIDGED	RING PARTY	TIP PARTY		
				NO IDENT GROUND	IDENT GROUND	
					1000 Ω	2650 Ω
Inside Wire at 625-Type Conn Blk	R	R	R	R	R	R
	G	G	G	G	G	G
	Y	Y	Y	Y	Y	Y
	BK	B	B	B	B	B
623P4 Line Cord Jack Assy	R	A	A	L1	C	C
	G	L1	L1	A	L2	L2
	Y	G	G	G	G	G
	BK	L2	L2	L2	*	*
Ringer	R	K	K	K	K	K
	S-R	*	*	*	*	L1
	S	*	*	*	L1	*
	BK	L1	G	G	G	G
Line Switch	W	F	F	F	B	B
	G	L1	L1	A	L1	L1
	BL	C	C	C	*	*
	BL-W	A	A	L1	*	*
	BR	L2	L2	L2	F	F
	S	L2	L2	L2	A	A

\*Insulated and stored.

† For access to set wiring follow applicable steps in Part 4.

◆ TABLE F ◆

## MODIFICATIONS FOR 1A1 OR 1A2 KTS (881B109 OR 2881B109 TELEPHONE SET NOTES 1 AND 2)

LEAD	COLOR	NETWORK TERMINAL	
		REMOVE FROM	CONNECT TO
Line Switch	S	A	L2
	Y	A	L2
	BR	C	G
	G	L1	A
	W	F	C
623P4 Line Cord Jack Assy	G	L1	F
Ringer	BK	L1	F

Note 1: For access to set wiring follow applicable steps in Part 4.

Note 2: For 881C109 and 2881C109 telephone set, the only modification needed is to move (BR) line switch lead from network terminal L2 and connect to terminal G, see Fig. 8 and 9.

◆ TABLE G ◆

## POLARITY GUARD CONNECTIONS FOR 2881B109 OR 2881C109 TELEPHONE SET 819040528 (P-90D052) GUARD ASSEMBLY\*

LEAD	COLOR	DIS-CONNECT FROM	CONNECT TO	
		NET.	NET.	POLARITY GUARD
Dial	BK	RR		T
Line Switch	BR or BL†	C		S
	W‡			
623P4 Line Cord Jack Assy.	R§			
Polarity Guard	G		RR	
	W		C	

\* For access to set wiring follow applicable steps in Part 4.

† If wired for bridged service or ring party, BR lead on 2881B109 and BL lead on 2881C109.

‡ If wired for tip party with no identification ground, 1A1 KTS, or 1A2 KTS. (2881B109 only).

§ If wired for tip party with identification ground.

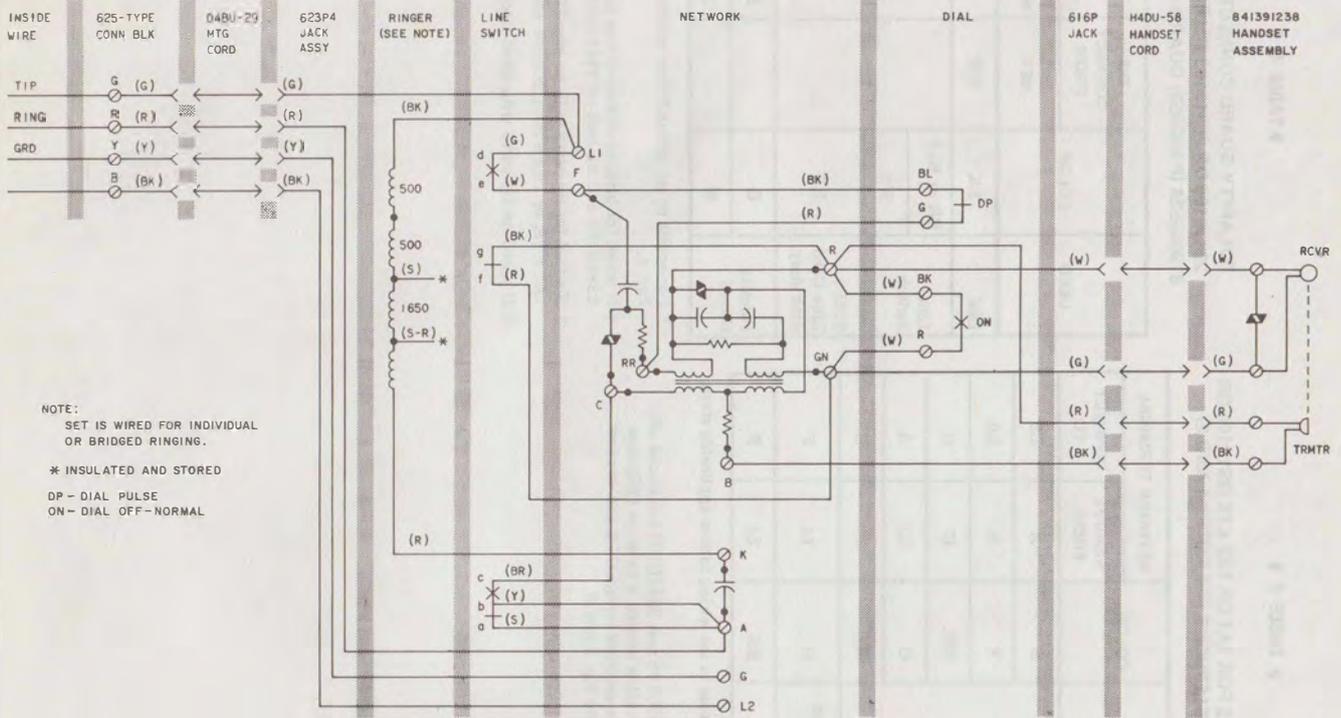
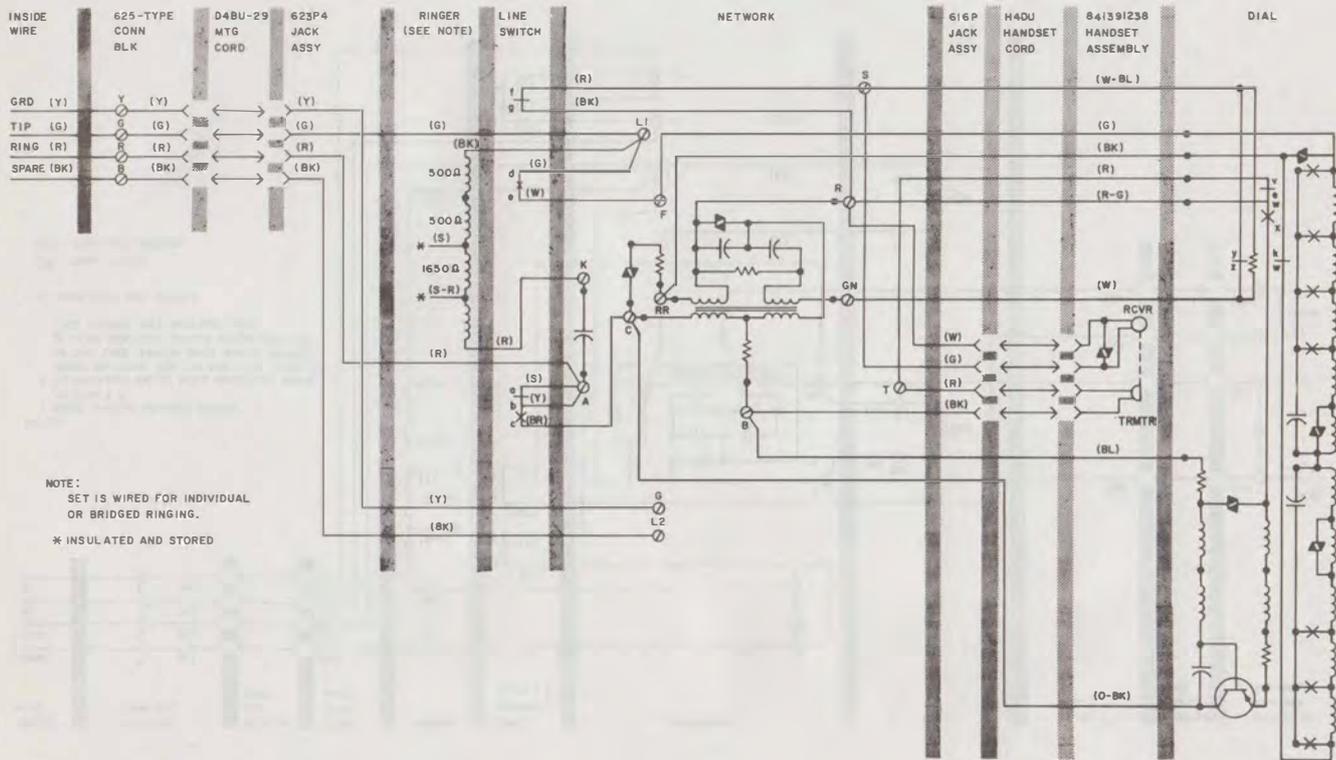


Fig. 4—881B109 (MD) Telephone Set, Connections



NOTE:  
 SET IS WIRED FOR INDIVIDUAL  
 OR BRIDGED RINGING.  
 \* INSULATED AND STORED

Fig. 5—2881B109 (MD) Telephone Set, Connections

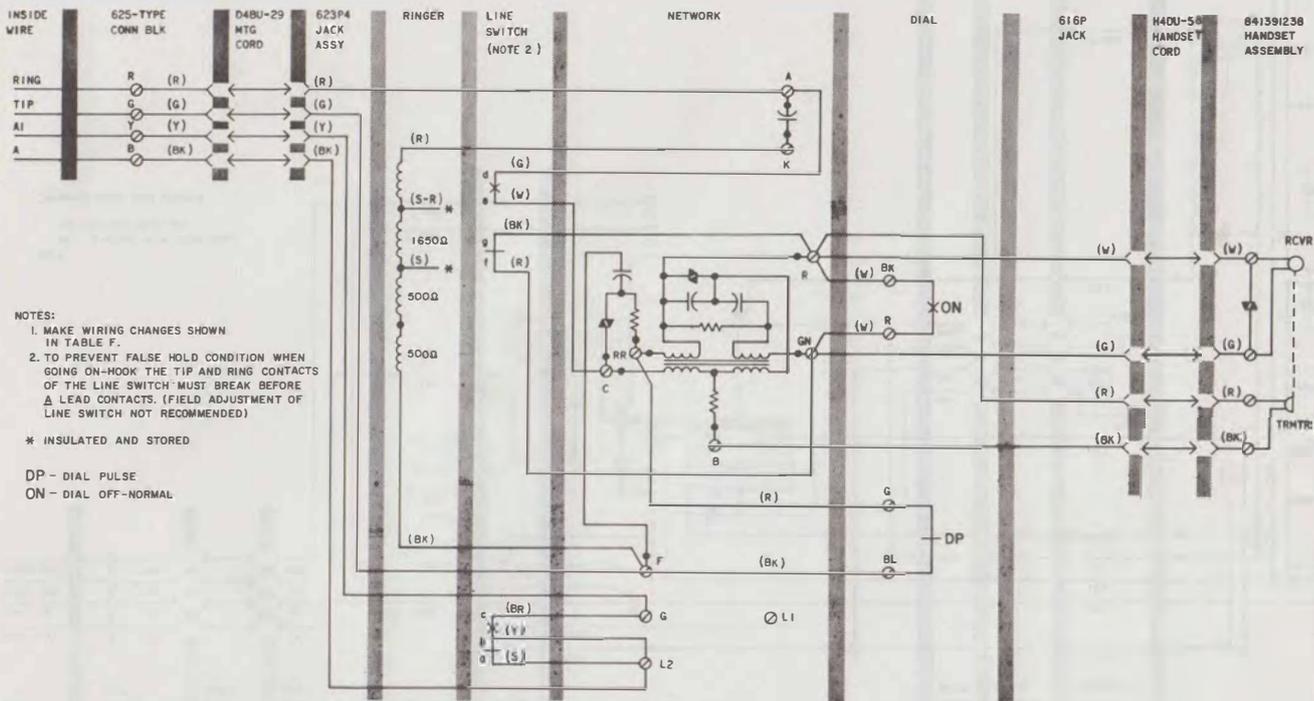
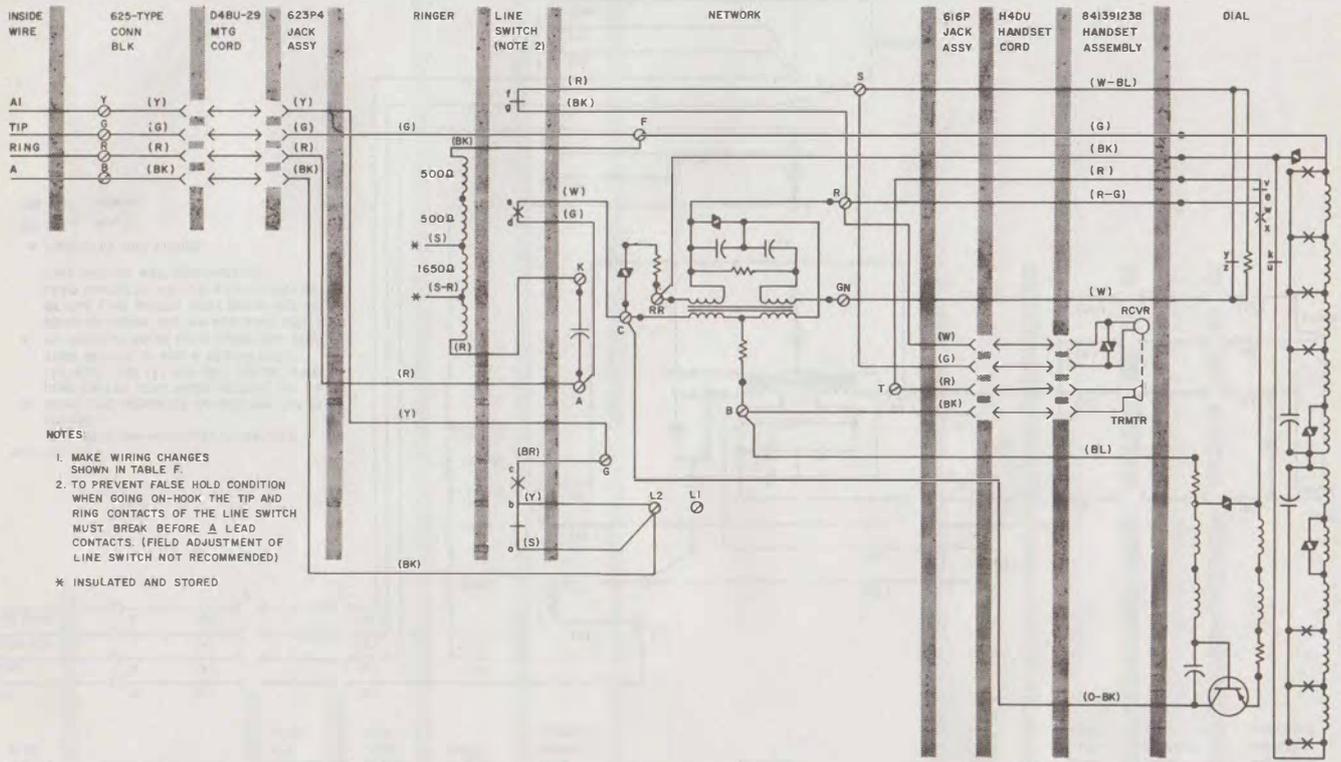


Fig. 6—881B109 (MD) Telephone Set Wired for 1A1 or 1A1 KTS

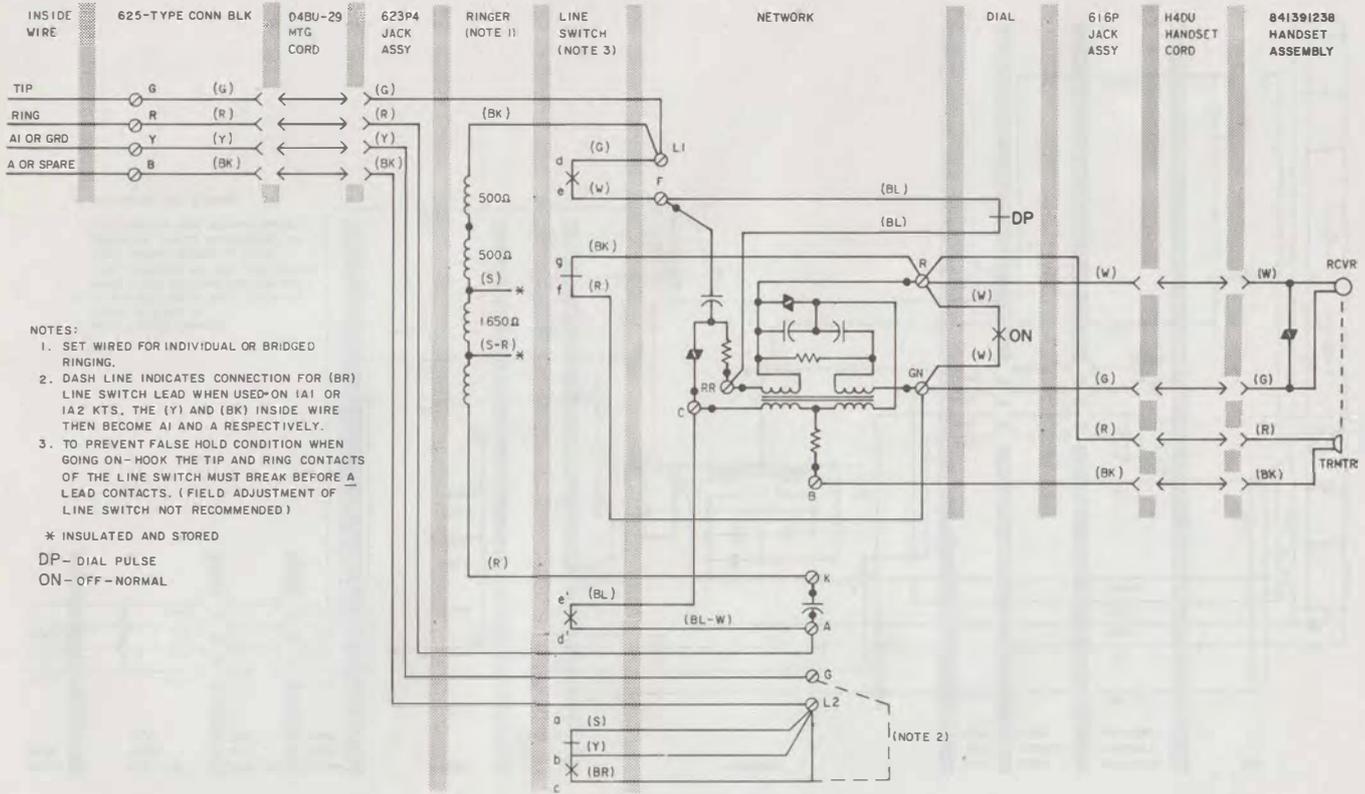


NOTES:

1. MAKE WIRING CHANGES SHOWN IN TABLE F.
2. TO PREVENT FALSE HOLD CONDITION WHEN GOING ON-HOOK THE TIP AND RING CONTACTS OF THE LINE SWITCH MUST BREAK BEFORE A LEAD CONTACTS. (FIELD ADJUSTMENT OF LINE SWITCH NOT RECOMMENDED)

\* INSULATED AND STORED

Fig. 7—2881B109 (MD) Telephone Set Wired for 1A1 or 1A2 KTS



- NOTES:
1. SET WIRED FOR INDIVIDUAL OR BRIDGED RINGING.
  2. DASH LINE INDICATES CONNECTION FOR (BR) LINE SWITCH LEAD WHEN USED-ON IA1 OR IA2 KTS. THE (Y) AND (BK) INSIDE WIRE THEN BECOME AI AND A RESPECTIVELY.
  3. TO PREVENT FALSE HOLD CONDITION WHEN GOING ON-HOOK THE TIP AND RING CONTACTS OF THE LINE SWITCH MUST BREAK BEFORE A LEAD CONTACTS. (FIELD ADJUSTMENT OF LINE SWITCH NOT RECOMMENDED)

\* INSULATED AND STORED  
 DP- DIAL PULSE  
 ON- OFF-NORMAL

Fig. 8—881C109 Telephone Set, Connections

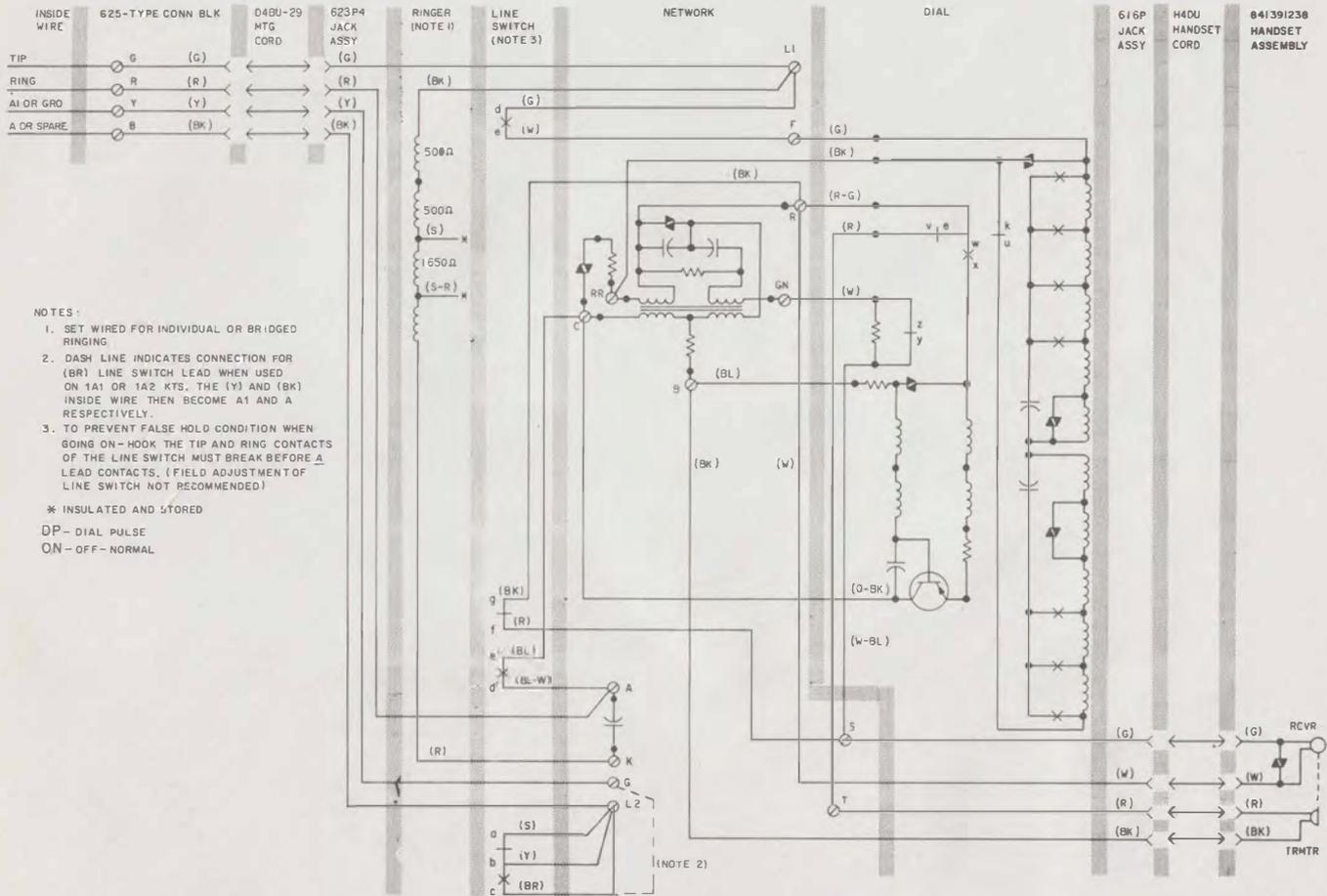


Fig. 9—2881C109 Telephone Set, Connections