

0 1 2 3 4 5 6 7 8 9

CIRCUIT NOTES: (CONT)

141. PRIOR TO ISSUE 25AC, B WIRING AND APPARATUS WAS NOT SPECIFIED FOR USE IN 2 PARTY OFFICES.

142. IN OFFICES EQUIPPED WITH A PRECISE TONE PLANT, THE TT2 LEAD OF FIG. 4 SHALL BE 16 GA BK SHIELDED WIRE. THE TT2 LEAD DOES NOT REQUIRE FUSING AT THE MISC FUSE PANEL. BOTH ENDS OF THE SHIELD SHALL BE GROUNDED USING CRIMPED CONNECTIONS PER BSP SECTION 800-612-164. THE LENGTH OF THE TT2 LEAD SHALL NOT EXCEED 100 FEET. IF THIS LIMITATION CANNOT BE MET, REFER TO THE RINGING AND TONE PLANT DRAWINGS FOR ALTERNATE ARRANGEMENTS.

143. THE TT3 LEADS FROM SUPPLY CIRCUIT SHALL BE 22 GA SHIELDED WIRE. THE SHIELD SHALL BE GROUNDED AT BOTH ENDS. GROUND CONNECTIONS SHALL BE CRIMPED CONNECTIONS PER BSP SECTION 800-612-164. THE LENGTH OF THE TT3 LEADS SHALL NOT EXCEED 600 FEET.

A

B

B

C

D

E

F

G

H

A

B

C

D

E

F

G

HW

H

SD-31141-01-10

TEST CIRCUIT		2	SD-31141-01-10
BELL TELEPHONE LABORATORIES INCORPORATED		6S	PRINTED IN U. S. A.

0 1 2 3 4 5 6 7 8 9

LEAD INDEX		
DESIG	FIG.	LOC

TONE SUPPLY		
LT2, TT2	4	SC1
TT3, TT3T	7	SH4
"TOUCH-TONE" FREQUENCY-CONNECTOR CKT		
A		509
B		
PL		
C		
D		
H		
R		
RL		
SS		
ST		
T		
TS		

SD-31141-01-3

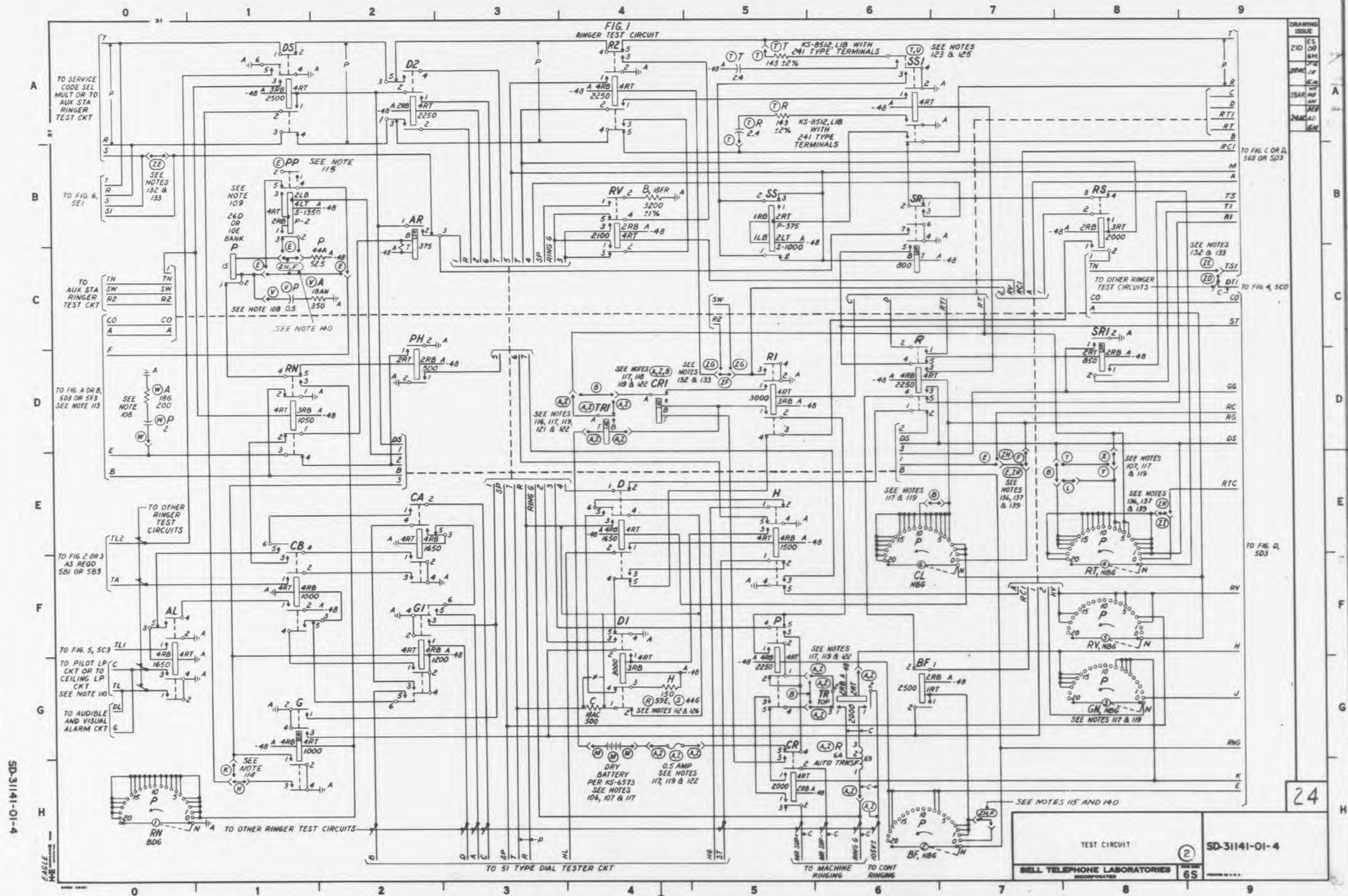


FIG. D
"TOUCH-TONE" CONNECTING CIRCUIT
SEE NOTES 136, 137 & 139

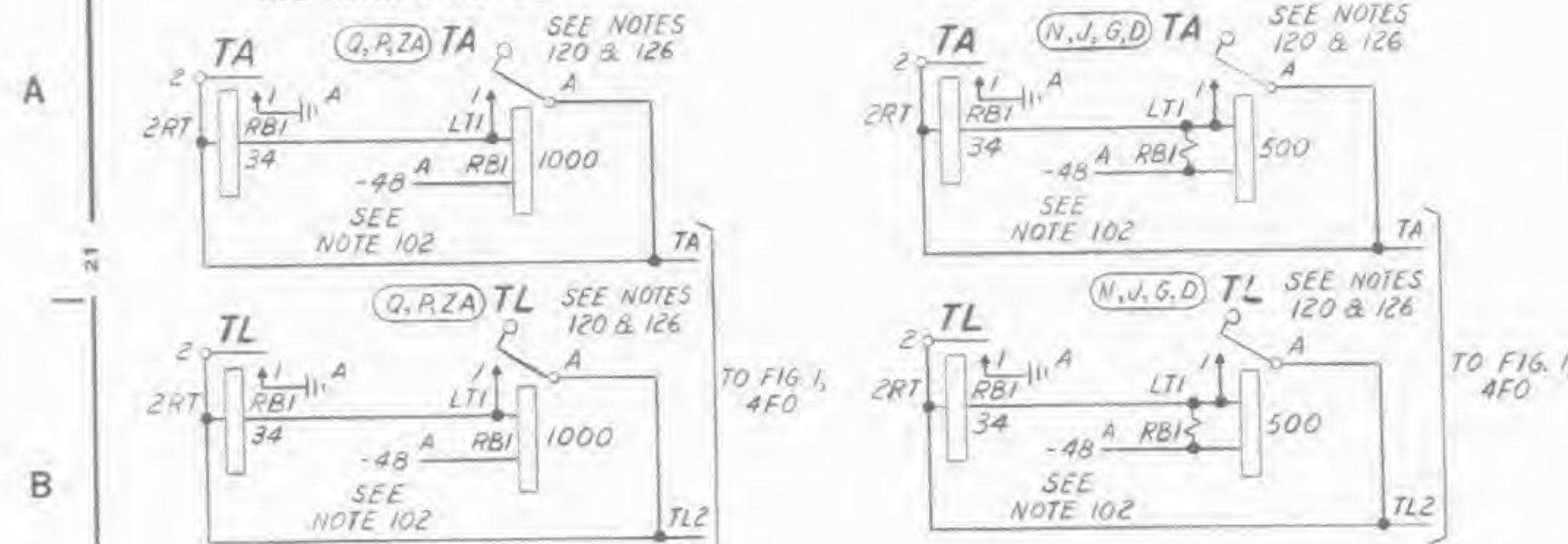


FIG. 5
TROUBLE LAMP CIRCUIT
TL
2Y
AT RELAY RACK



FIG. 4
LT2 OR TT2 DIAL TONE SUPPLY CIRCUIT
SEE NOTES 131 & 142

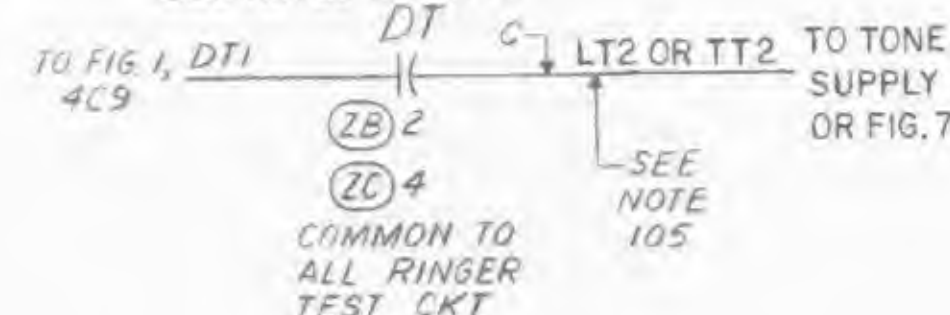


FIG. A (MFR DISC)
SEE NOTE 113

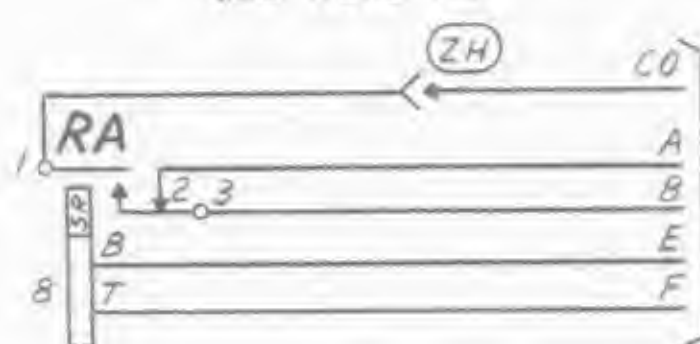


FIG. 6
TEST AND MAKE BUSY JACK CIRCUIT

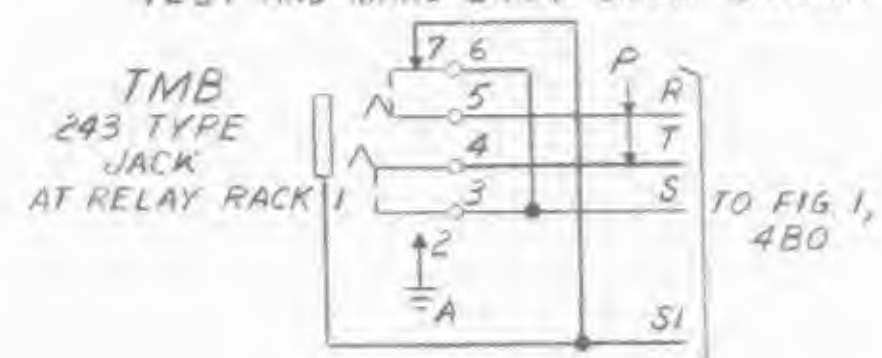


FIG. B
SEE NOTE 113

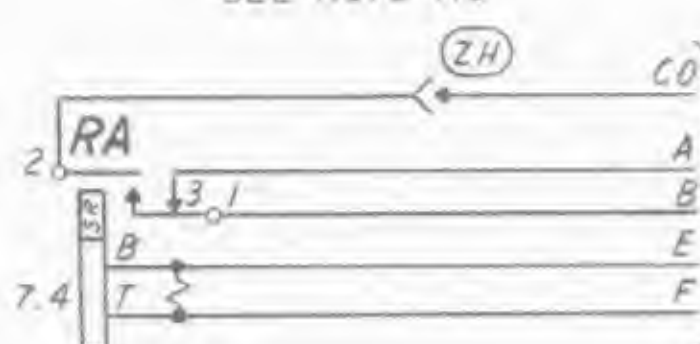


FIG. C
DIAL STATION ONLY
DIAL TONE CIRCUIT
SEE NOTES 136, 137 & 139

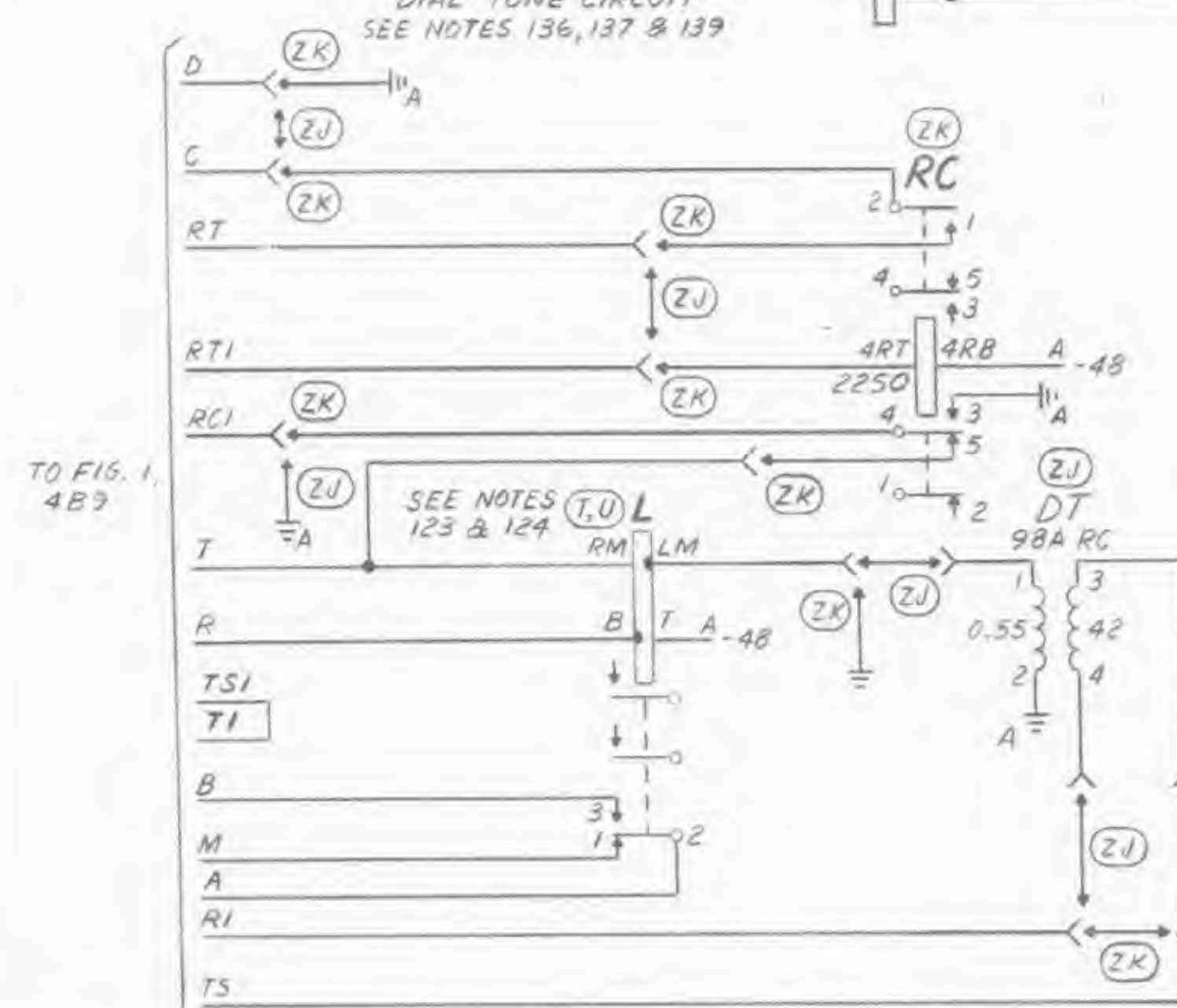
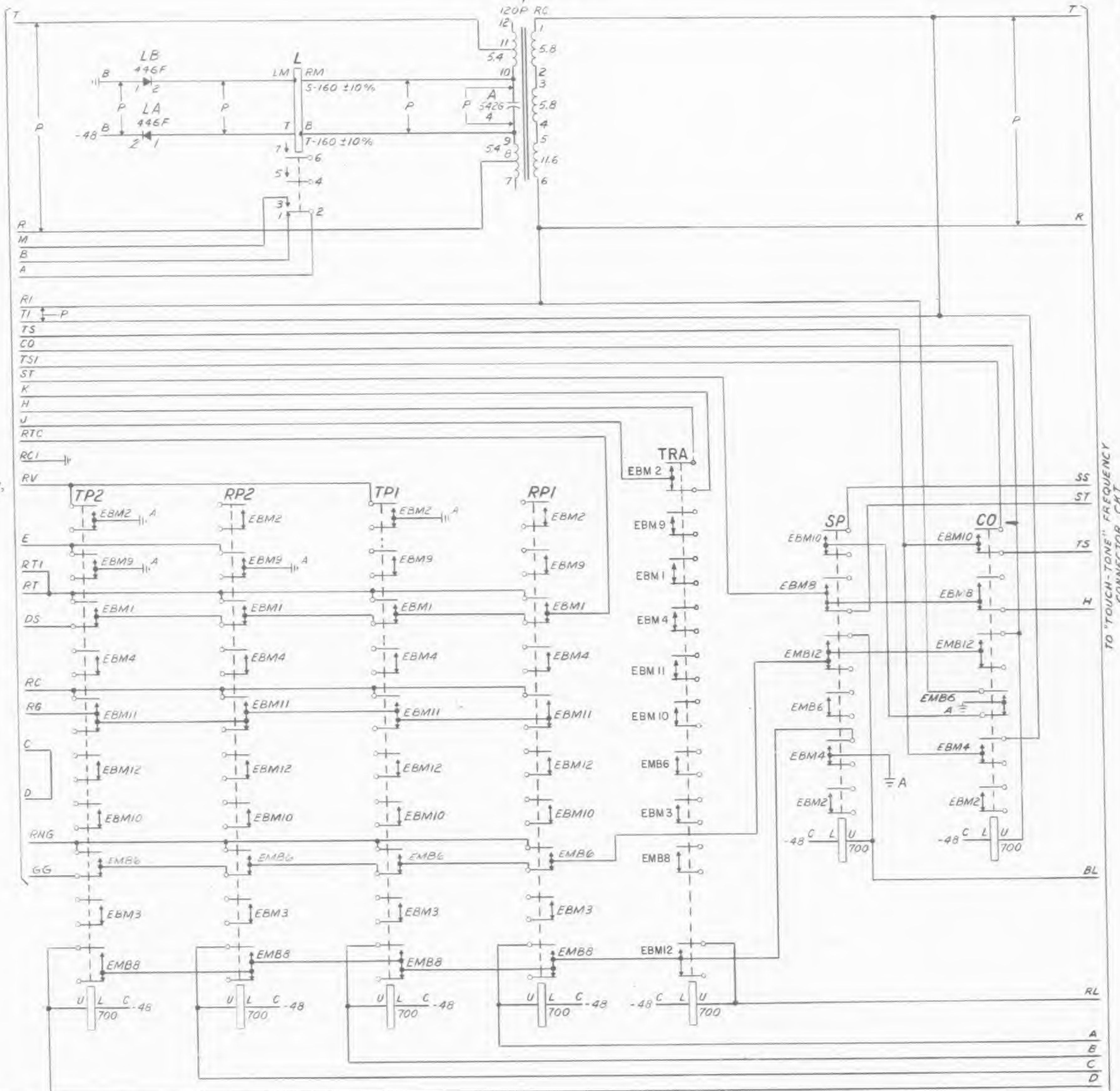
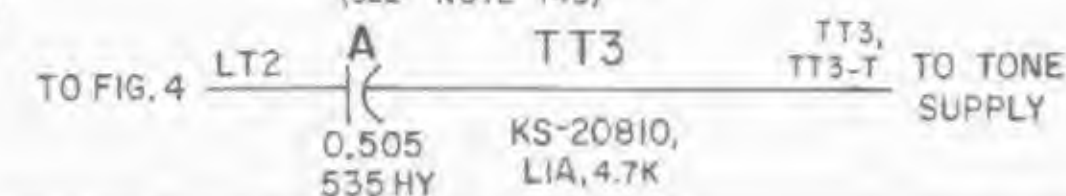


FIG. 7
"TOUCH-TONE" DIAL TONE
(SEE NOTE 143)



TO "TOUCH-TONE" FREQUENCY
CONNECTOR CKT

CIRCUIT REQUIREMENTS																								
RINGER TEST CKT (RING TEST SEL RING)																								
APPARATUS					MECH REQ					CIRCUIT PREPARATION					TEST SET PREP					DIRECT CURRENT FLOW REQ				
DESIG	CODE	OPT.	FIG.	LOC	BSP FIG.	CONT PRES	ARM TRVL	RESID	TEST CLIP DATA	TEST CLIP DATA	TEST CLIP DATA	TEST CLIP DATA	TEST CLIP DATA	TEST CLIP DATA	TEST SET PREP	TEST SET PREP	TEST SET PREP	TEST SET PREP	TEST SET PREP	TEST SET PREP	TEST SET PREP	TEST SET PREP	TEST SET PREP	TEST SET PREP
MAGNETS					RELAYS					REMARKS														
F	200AG		1	4C1	SEE BSP				(G)4(DS)NO	2(P)MAG	G/V				SEE BSP									
	206AA								(G)4(DS)NO	1(P)MAG	G/V				SEE BSP									
	SEL																							
AL	R153,		1	4F0	9/11	H	35		RB(AL)	BAT.					0									
	R1851																							
AR	221DW		1	4B2	24		15	0	1B(RN)	GRD					0	110	15.5	14.7						
									1B(RN)	GRD					NO	110	10.6	11.2						
BF	R1209		1	4G6	2/1	H	15		RT(BF)	GRD					0			6.6	6.2					
CA	R153,		1	4E2	9/11	H	35		RB(CA)	BAT.					0			24	14					
	R1851																							
CB	E1757		1	4E1	23/9	H	35		RB(CB)	BAT.					0			40	27					
CD	AF32		D	5D9	208				U(CD)	GRD					0			32.5	30.5					
CR	E545,		1	4Q5	8/3	H	20		RT(CR)	GRD					0			19	16					
	E572																							
CR1	114BL	A,Z	1	4D4			15		3T(CR)	1B(R1)	B/G				0	50	47.5							
									3T(CR)	1B(R1)	B/G				NO	41	43							
									3T(CR)	1B(R1)	B/G				0	55	52							
									3T(CR)	1B(R1)	B/G				NO	46.5	49							
CR1	114KA	B	1	4D4			20		3T(CR)	1B(R1)	B/G	2			0	-50	26	25						
									3T(CR)	1B(R1)	B/G	2			NO	-50	22	23						
D	R997		1	4E4	26/8	H	30		RT(D)	GRD					0			24	16					
D1	R339		1	4F4	8/15	H	20		RT(D1)	GRD					0			13	11					
D2	R511		1	4A2	9/14	H	35		RT(D2)	GRD					0			18	15					
DS	R460		1	4A1	26/10	H	30		RT(DS)	GRD					0			16	13					
G	E1947		1	4G1	11/11	H	15		RT(G)	GRD					0			24.5	23					
G1	R1267,		1	4F2	23/23	H	30		RT(G1)	GRD					0			31	27.5					
	R1378																							
H	E1593		1	4E5	7/7	H	20		RT(H)	GRD					0			23	20					
L	221A	U	C	5G1	11		8	7-11	(RN)O	ST(R2)	5B(R2)	M	3/5	F/R	0	100	15.1	14.8						
									(RN)O	ST(R2)	5B(R2)	M	3/5	F/R	NO	100	13.9	14.4						
L	221FAC	T	C	5G1	366		8	4-8	(RN)O	ST(R2)	5B(R2)	M	3/4	P/S	0	FS	14.1	13.4						
									(RN)O	ST(R2)	5B(R2)	M	3/4	P/S	NO	FS	11.7	12.4						

- TEST NOTES:
- TEST CLIP DATA ASSUMES THAT CIRCUIT HAS BEEN MADE BUSY BY INSERTING A PLUG IN (TMB) JACK.
 - PRIOR TO ISSUE 180 THE CURRENT FLOW VALUES WERE AS FOLLOWS AND THE CORRESPONDING TRIPPING RANGE WAS 1000 OHMS.
- | | |
|------|---------|
| TEST | READJ |
| 0 | 33 MA |
| NO | 28 MA |
| | 31.5 MA |
| | 29.5 MA |
- ARMATURE NEED NOT TOUCH CORE ON OPERATE CURRENT.
 - TEST CONTACT SEPARATION MIN 3 CONTACT FOLLOW 2-3, 4-5 AND 6-7 MIN 8 TEST AND READJUST.
 - TEST CONTACT SEPARATION MIN 3 CONTACT FOLLOW MIN 8.

TEST CIRCUIT	SD-31141-01-6
BELL TELEPHONE LABORATORIES	PRINTED IN U.S.A.

CIRCUIT REQUIREMENTS

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CIRCUIT REQUIREMENTS

DRAWING
ISSUE

NRC
ZID 247
GM

APPARATUS				LOC	MECH REQ				CIRCUIT PREPARATION				TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQ						REMARKS
DESIG	CODE	OPT.	FIG.		BSP FIG.	CONT PRES	ARM. TRVL	RESID	BLOCK OR INSULATE	TEST CLIP DATA					TEST WDG	TEST FOR	AFTER SOAK MA	TEST MA	READJ MA		
TA	E654 E199		3	5A1	1	H	15		1(TA)		RT(TA)	GRD				0		35	33		
TL	5Y MR 12E MR 14LH MR	Q P ZA	2	5B0							RB1(TL) RB1(TL)	GRD GRD	2 2			0 NO		30 21	28 23		
TL	E654, E199		2	5B0	1	H	15		1(TL)		RT(TL)	GRD	3			0		35	33		
TL	5AF MR 12C MR 14LL MR 14K MR	N J G D	3	5B2							RB1(TL) RB1(TL)	GRD GRD	2 2			0 NO		62 40	59 43		
TL	E654, E199		3	5B1	1		15		1(TL)		RT(TL)	GRD				0		35	33		
TP1	AJ9		0	5D5	234						U(TP1)	GRD				0		40	38		
TP2	AJ9		0	5D4	234						U(TP2)	GRD				0		40	38		
TR	E672		1	4G6	3/1	H	20				RT(TR)	GRD				0		19	12		
TR1	114 BT, 114 EA	A	1	4D4			20		T(TR1) T(TR1)	B(TR1) B(TR1)	B/G B/G					0 NO		37 31	35 33		
TR1	114 AK	Z	1	4D4			34	(TR)O					4								
TRA	AJ9		D	5E7	234						U(TRA)	GRD				0		40	38		
DIODES																					
LA	446F		D	5B4									5,6							REMOVE B BAT CONNECTION	
LB	446F		D	5A4									5,7							REMOVE B GRD CONNECTION	
TEST NOTES:																					
1. TEST CLIP DATA ASSUMES THAT CIRCUIT HAS BEEN MADE BUSY BY INSERTING A PLUG IN (TMB) JACK.																					
2. TEST CLIP DATA REFERS TO RELAY.																					
3. CONNECT (H) RESISTOR IN PARALLEL WITH REGISTER BY PATCHING 3B(D1) AND RB(TL).																					
4. THE 114AK REL SHALL BE TESTED AND READJUSTED BY CONNECTING IN SERIES THE FOLLOWING RES BETWEEN "B" TERM. OF REL UNDER TEST AND GRD.																					
(A) FOR STANDARD 42A RING. WITH 900Ω SUB LOOPS OPERATE 900Ω ±1% NON-OPERATE 1035Ω ±1%																					
(B) FOR INVERTED 42A RING. WITH 1000Ω SUB LOOPS OPERATE 1000Ω ±1% NON-OPERATE 1150Ω ±1%																					
5. USE VOLTMETER WITH 20,000 OHMS/VOLT OR HIGHER SENSITIVITY. DOTTED LINES INDICATE TEMPORARY TEST LEADS. IN TEST FIG. 1 VOLTAGE ACROSS DIODE SHOULD NOT EXCEED 2 VOLTS. IN TEST FIG. 2 VOLTAGE ACROSS 0.1 MEG RESISTOR SHOULD NOT EXCEED 2 VOLTS.																					
7. BLOCK OR INSULATE TO ISOLATE TERM NO. 2 OF (LB) DIODE SUPPLY GROUND TO TERM NO. 1 AND MAKE FORWARD TEST AS SHOWN IN NOTE 5, TEST FIG. 1. REMOVE GRD AND SUPPLY BAT. TO TERM. NO. 1 AND MAKE REVERSE TEST AS SHOWN IN NOTE 5, TEST FIG. 2.																					

FIG. 1
FORWARD TEST

FIG. 2
REVERSE TEST

TEST CIRCUIT

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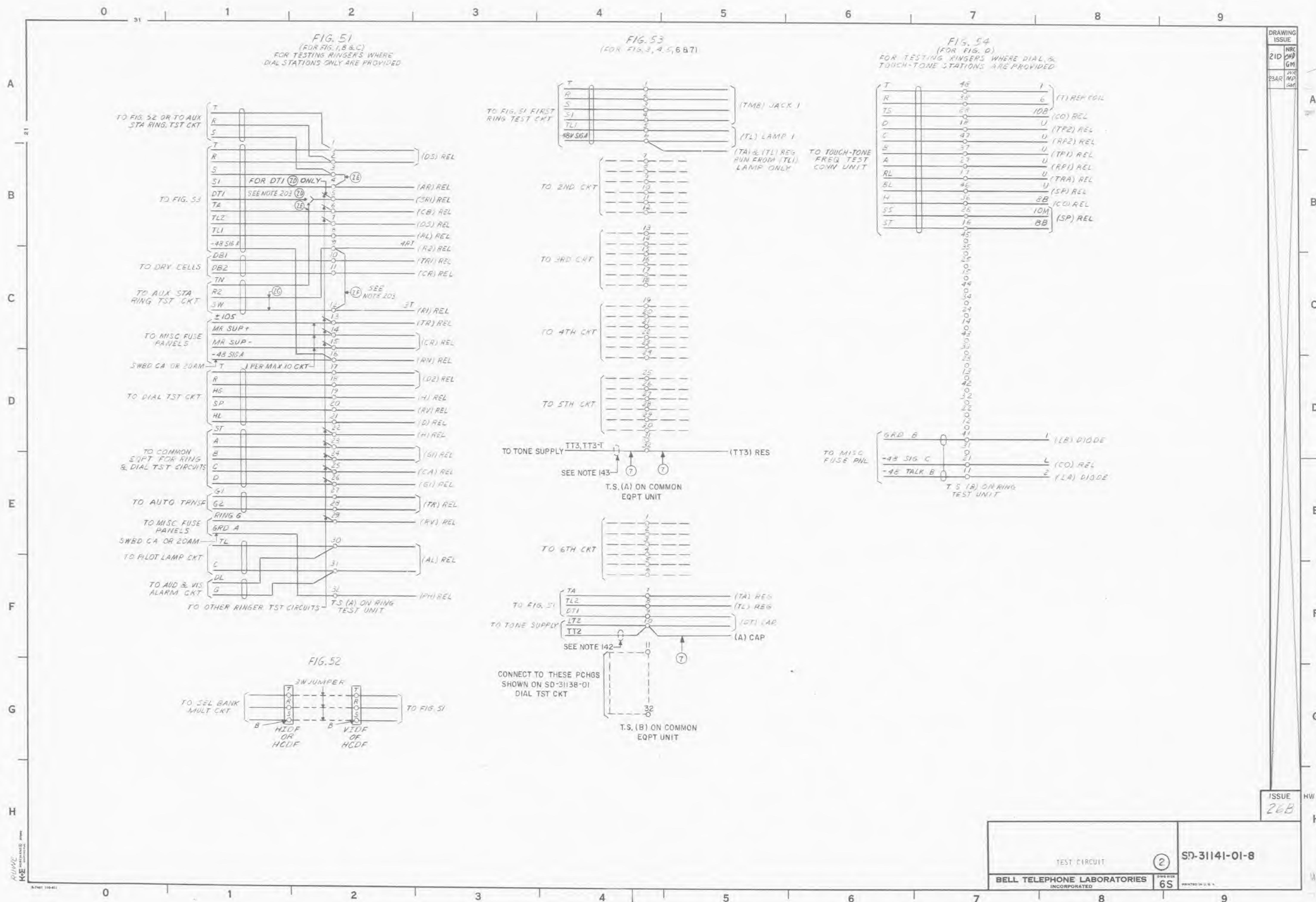


FIG. M (MFR DISC.)
SEE NOTE 202

