

APPARATUS INDEX

LEAD INDEX

DESIG	LOCATION		
	FS	APP FIG	EQPT
CAPACITORS			
A	4B2	B	
A	4B2	A	
B	4B3	1	
C	4B5	1	
D	2F3	1	
F	2F1	1	
G	1B4	F	
G	1B4	G	
CORDS			
		4	
		5	
		6	
		7	
		8	
		9	
		10	
		11	
		12	
		13	
		14	
DIALS			
DIAL	2G2	1	
FUSES			
M	5F3	1	
INDUCTORS			
A	4E3	1	
JACKS			
% BK	1D3	1	
24V	6C5	2	
48V	6C5	2	
72V	6E5	2	
CT	6B8	2	
LIME	1F7	3	
MDF (R)	1C8	3	
MDF (T)	1C8	3	
R+	6F9	3	
R,R-	6F9	3	
T DAT	6G5	2	
TC B	1F7	3	
TEL	4B0	2	
TEL	4B0	2	
TST	1A8	3	

DESIG	LOCATION		
	FS	APP FIG	EQPT
KEYS			
±		1	
± OR ±		1	
-STA		1	
+STA		1	
% BK		1	
TMS		1	
1000		1	
20,000		1	
340		1	
TT		1	
3WT		1	
REV		1	
BT		1	
G		1	
C CKT		1	
SS		1	
COIM +		1	
COIM -		1	
DO		1	
DIAL		F	
NON		F	
DIAL		G	
NON		G	
DT		1	
FEMF		1	
RCCI		1	
IN		1	
RH		1	
LRP RG		1	
VM REV		1	
MR		1	
REX		1	
T		1	
TMT		1	
TD		C	
TRK		D	
		1	

SEE APP FIG.

DESIG	LOCATION		
	FS	APP FIG	EQPT
LAMPS			
A	4G4	1	
B	4G3	1	
METERS			
VNA	5E3	1	
POTENTIOMETERS			
R	5F1	1	
RESISTORS			
A	3G4	1	
AA	3C4	1	
AB	1G5	1	
AC	5D2	1	
B	3D7	F	
B	3D7	G	
B	5F5	1	
B1	3D7	F	
B1	3D7	G	
BA	4G2	1	
BB	4G3	1	
BC	4G3	1	
C	3B2	1	
C	3C2	1	
C1	3C2	1	
CA	3C2	1	
D	2F1	1	
DTF	5B6	1	
E	3B1	1	
F	4F2	1	
G	4F2	1	
J	3E6	1	
K	3G6	1	
L	3E5	1	
M	3G5	1	
N	3E4	1	
P	3G4	1	
R	3E2	1	
R1	4G2	1	
R2	4G2	1	
S	3G2	1	
T	2F3	1	
TT	3D4	1	
U	2F4	1	
V	2F5	1	
W	2F5	1	
X	3D6	1	
Y	2B2	1	

DESIG	LOCATION		
	FS	APP FIG	EQPT
TEL SETS (HEAD)			
HEAD TEL SET	4B0	B	
			100
			100
TRANSFORMERS			
A	4F5	1	
A	4B2	B	
A	4D2	A	
VARIABLES			
A	4B1	1	

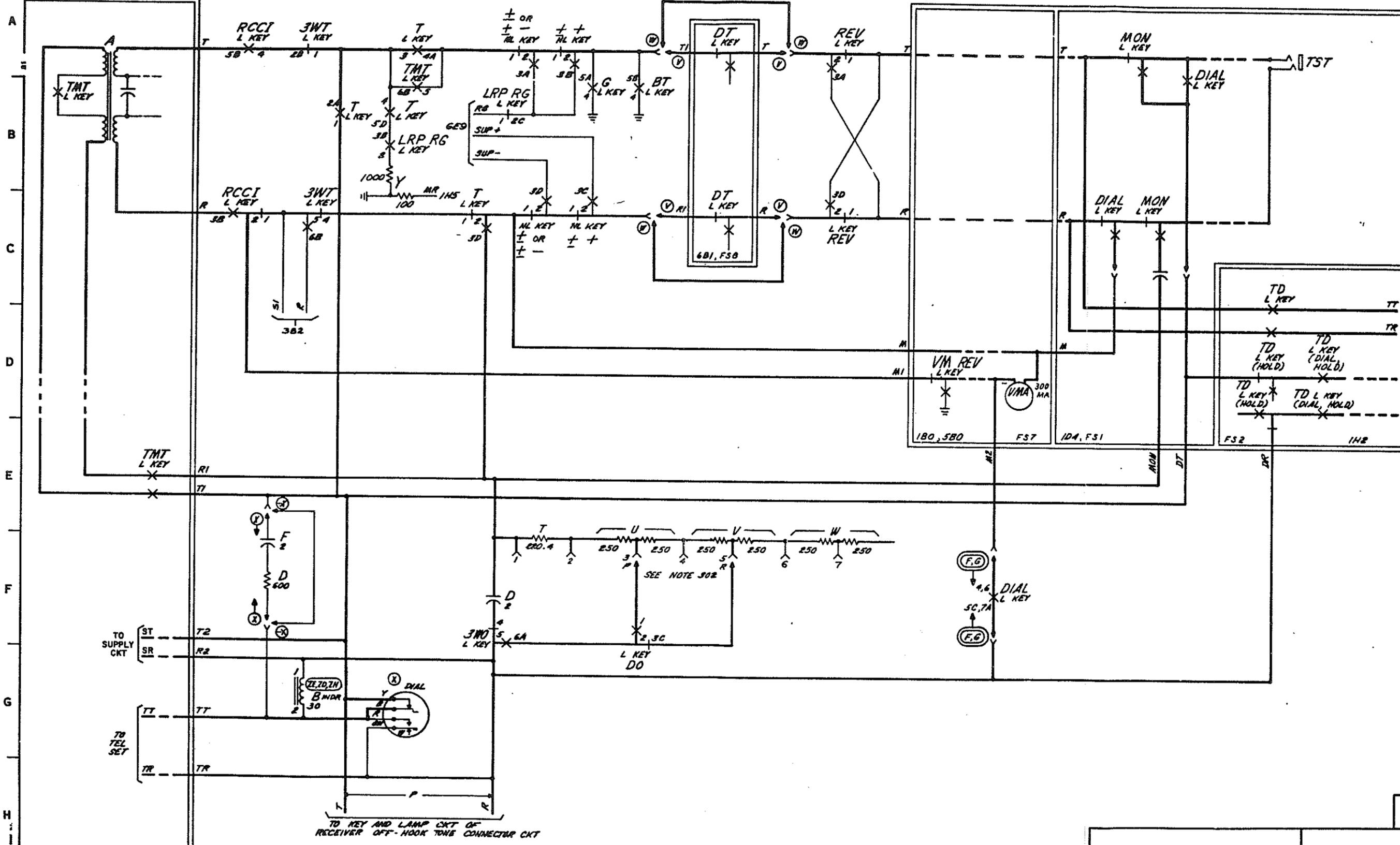
DESIG	LOCATION		
	FS	APP FIG	EQPT
CALL CKT			
CR	4A6		
CT	4A6		
R			100
T			100
DIAL TESTING CKT			
B	6D1	103, 105	
C	6E3		
D	6F1		
DT	6C3		
G	6D3		
GRD	6D3		
H	6F1		
R	6C1		
S	6F1		
T	6C1	103, 105	
KEY AND LAMP CKT			
R	2H2	1B0-1B5	
T	2H2	1B0-1B5	
KEYSET CKT			
TR	1A7	1D3, 1D5	
TS	1A7	1D3, 1D5	
TT	1A7	1D3, 1D5	
TI	1A8	1D8	
RI	1A8	1D8	
SI	1A8	1D8	
SUPPLY CKT			
20V	6A7	1E0-1E5	
24V 1	6A7		
24V 2	6A7		
24V 3	6A7	1A0-1A5	
+48V	6A7	1H5	
48V 1	6A7		
48V 2	6A7		
48V 3	6A7	1F5	
-72V	6A7	1G5	
100V	6A7	1E0-1E5	
+116	6A7	1D0-1D5	
-116	6A7	1D0-1D5	
200V	6A7	1C0-1E5	
COIM +	6A7	1D0-1D5	
COIM -	6A7	1D0-1D5	
CS	6A7	1H5	
GRD 1	6A7		
GRD 2	6A7		
RING GRD C	6F8	1C0-1C5	
RL	1B7	1E0-1E5	
RS	1B7	1E0-1E5	

DESIG	LOCATION		
	FS	APP FIG	EQPT
SUPPLY CKT (CONT)			
SR	4E4	1C0-1C5	
ST	4E4	1C0-1C5	
SUP+ AUD C	6F8	1C0-1C5	
SUP- AUD 105±	6F8	1C0-1C5	
DR AC-DC AUD			
T1	4D0	1A0-1A5	
T2	4D0	1A0-1A5	
T3	4D0	1A0-1A5	
T4	4D0	1A0-1A5	
TL	1B7	1E0-1E5	
TS	1B7	1E0-1E5	
SWITCH GAIN REPEATER			
RA	4C5	1H5	
RB	4C5	1H5	
TA	4C5	1H5	
TB	4C5	1H5	
TEST DIST JACK CKT			
LT	1G8	1C0-1C5	
LR	1G8	1C0-1C5	
TR	1A7	1D0-1D5	
TR	1G8	1E0-1E5	
TS	1A7	1D0-1D5	
TT	1A7	1D0-1D5	
TT	1G8	1E0-1E5	
TEST TRK CKT			
R	1A6	1D8	
R1	1A6	1D8	
S	1A6	1D8	
S1	1A8	1D8	
T	1A6	1D8	
T1	1A8	1D8	

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FS 3

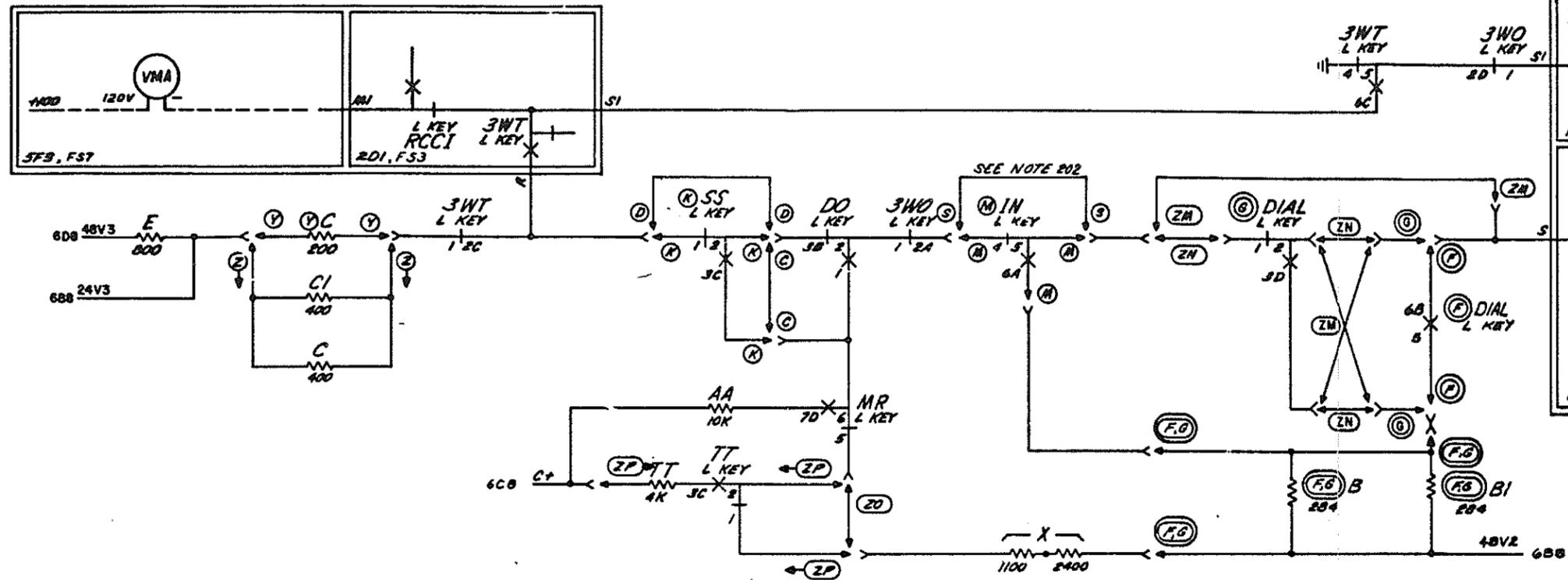
DIALING, RINGING, TALKING, MONITORING



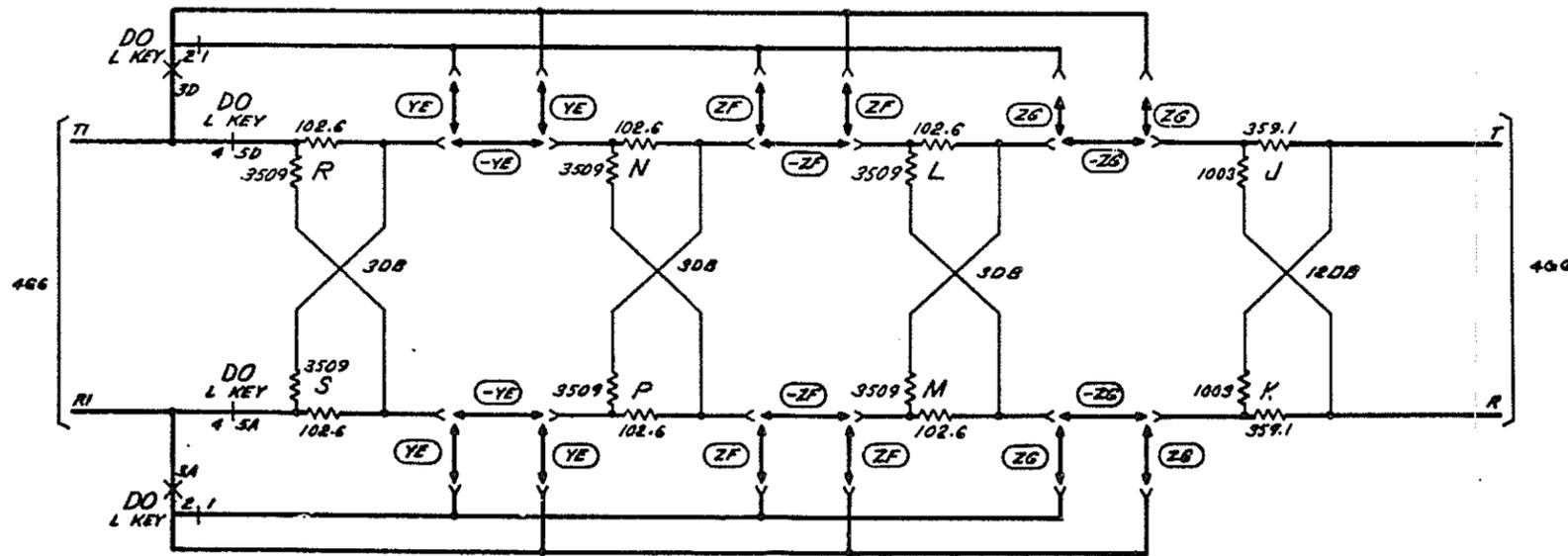
SD-96181-01-B2

4F6, FS6

FS 4
SLEEVE CIRCUITS



FS 5
TRANSMISSION TEST PAD

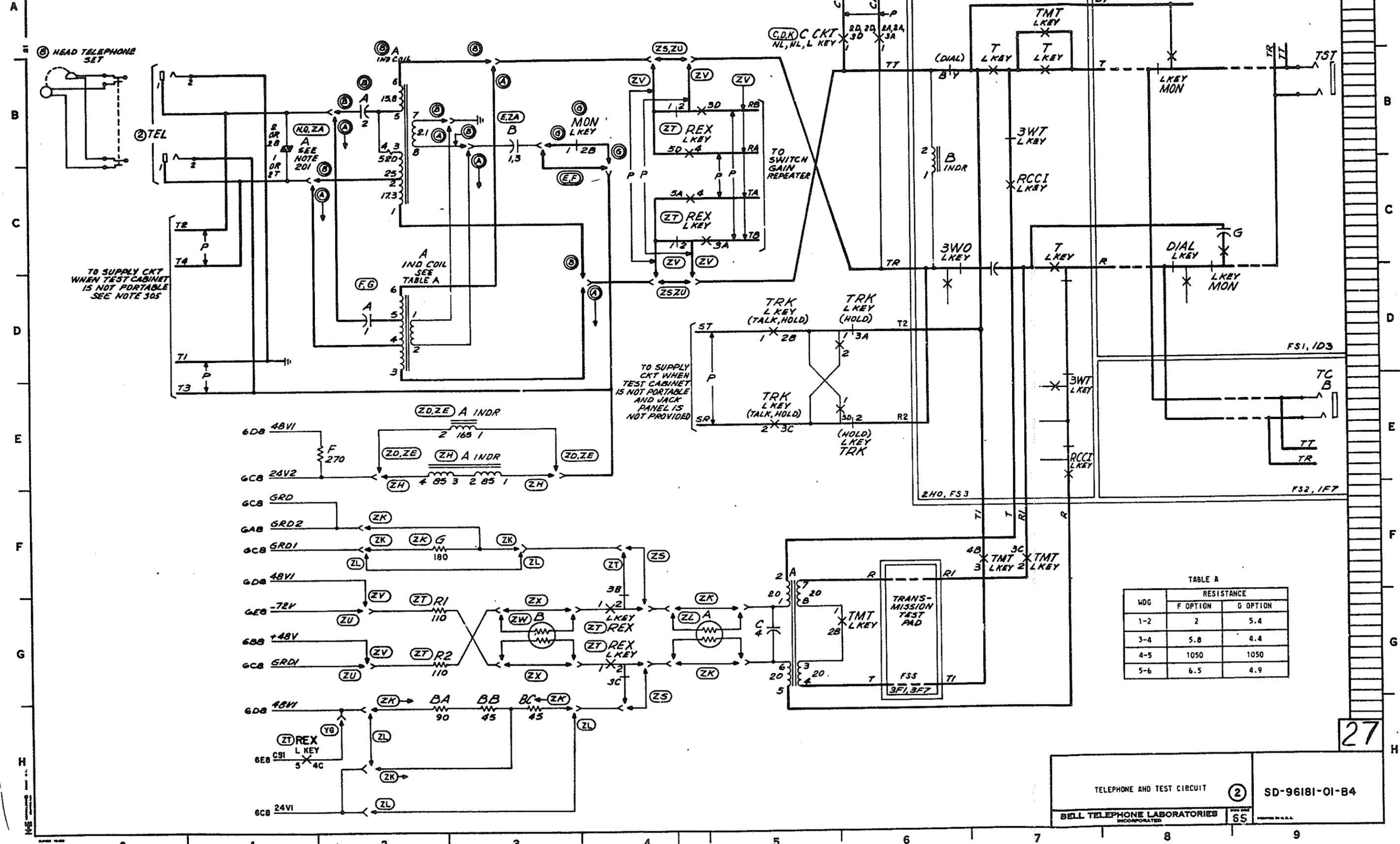


DRAWING
ISSUE
24D
26B
27B

SD-96181-01-B3

FS 6
TELEPHONE SET AND TRANSMISSION TEST

CRAWLING
ISSUE
24D
26B
27B HW



TO SUPPLY CKT
WHEN TEST CABINET
IS NOT PORTABLE
SEE NOTE 305

TO SUPPLY CKT WHEN
TEST CABINET
IS NOT PORTABLE
AND JACK
PANEL IS
NOT PROVIDED

TABLE A
RESISTANCE

WDG	F OPTION	G OPTION
1-2	2	5.4
3-4	5.8	4.4
4-5	1050	1050
5-6	6.5	4.9

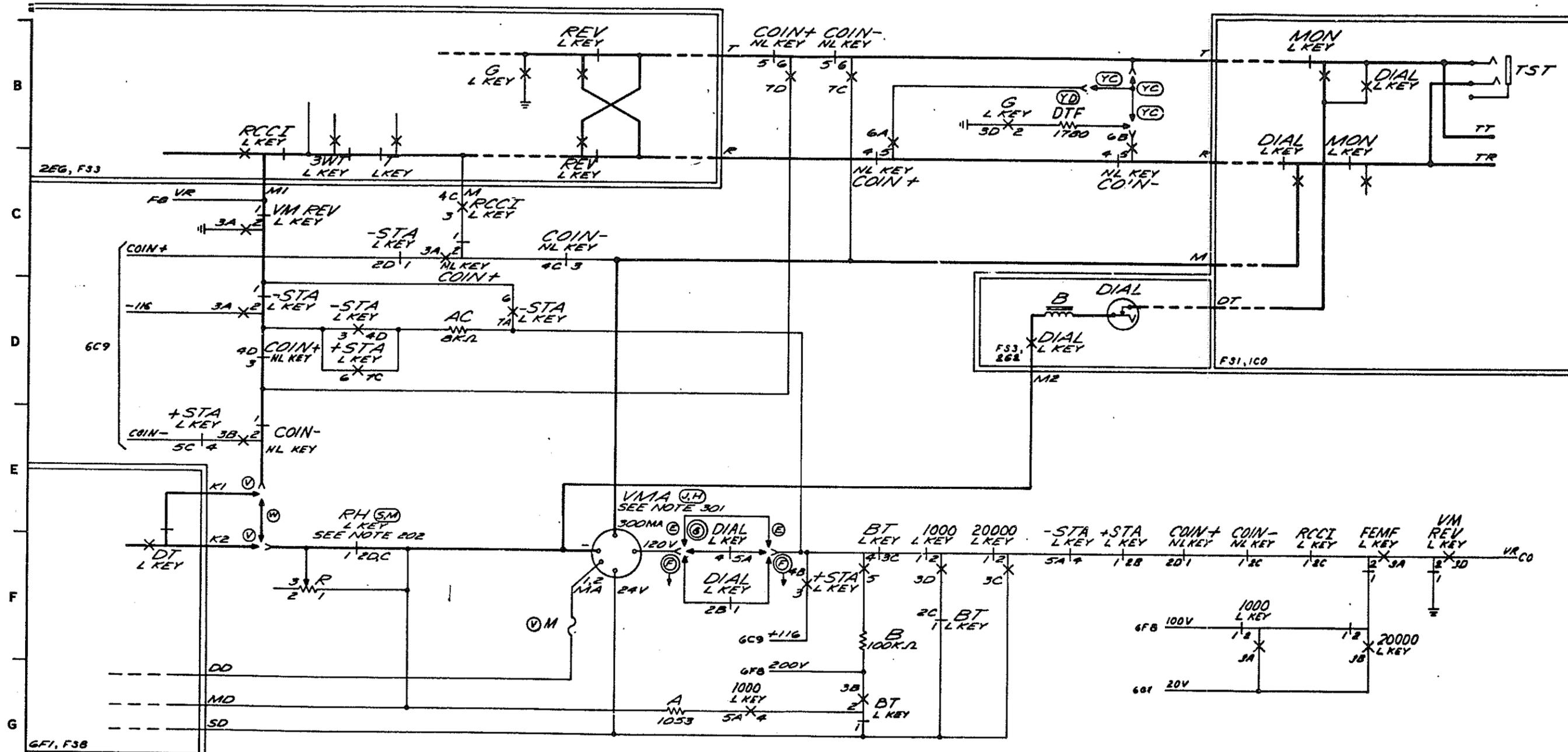
SD-96181-01-B4

TELEPHONE AND TEST CIRCUIT (2) SD-96181-01-B4
BELL TELEPHONE LABORATORIES INCORPORATED 6S

27

FS 7
BREAKDOWN, STATION, COIN AND VOLTMILLIAMETER TESTS

DRAWING
240
250



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26

LOCAL TEST CABINET NO. 3 TELEPHONE AND TEST CIRCUIT	2	SD-96181-01-B5
BELL TELEPHONE LABORATORIES INCORPORATED	65	

APP FIG. 1

DRAWING
ISSUE
24D
26B

CAPACITOR

DESIG	LOC	CODE
(E) B	4B3	441A
(ZA) B	4B3	444A
C	4G5	437A
D	2F3	439A
(I) F	2F1	439A

DIAL

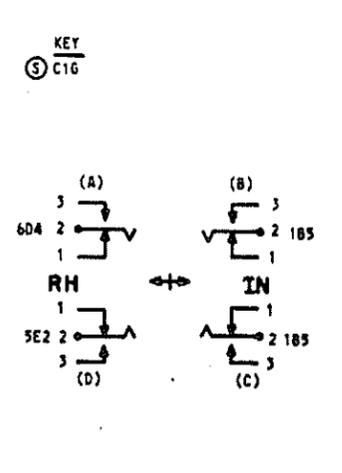
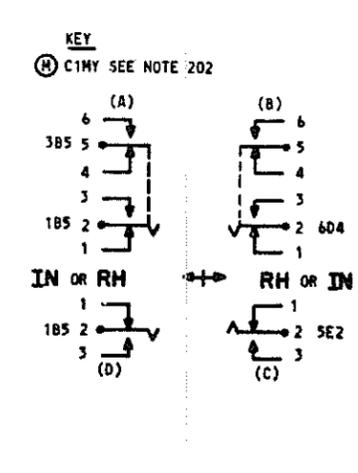
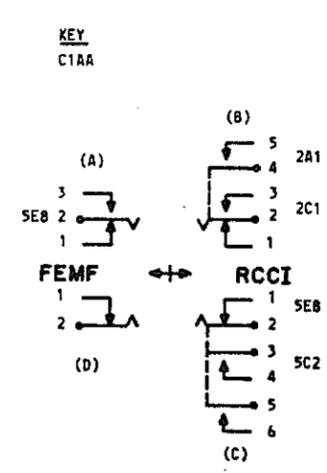
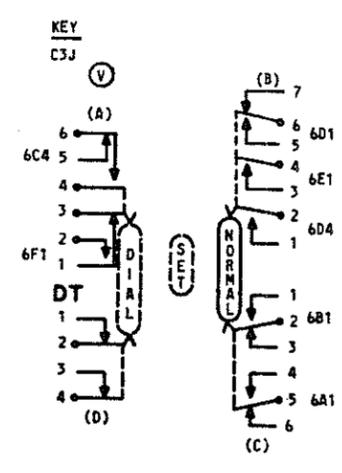
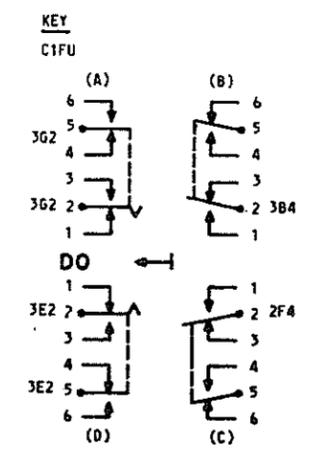
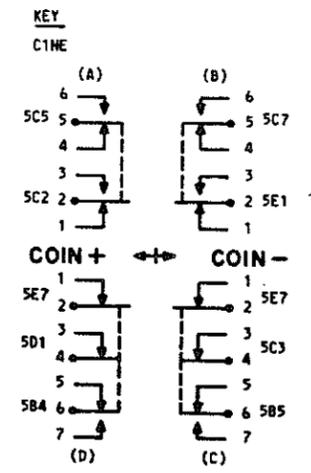
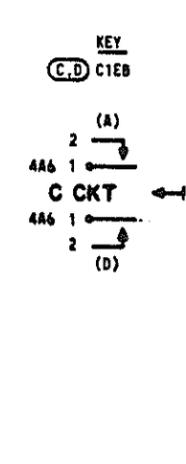
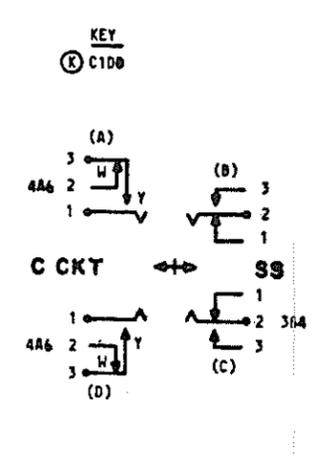
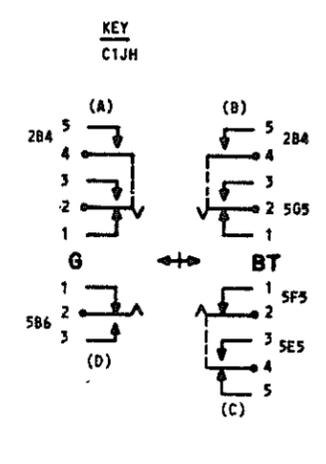
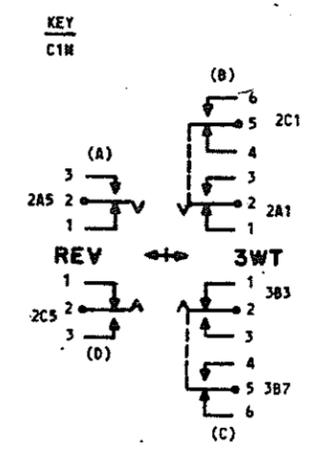
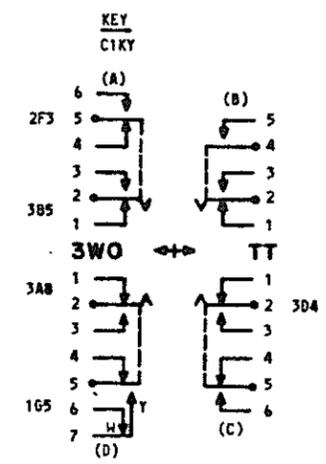
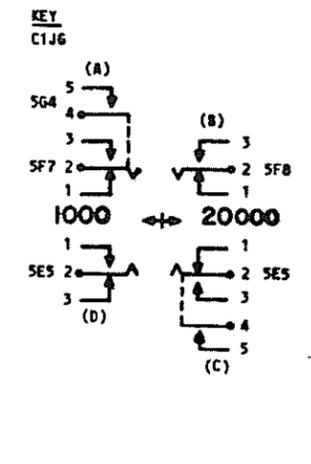
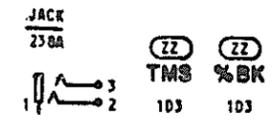
DESIG	LOC	CODE
(I) DIAL	2G2	5L OR 6E

FUSE

DESIG	LOC	CODE
(V) H	5F3	59A

INDUCTOR

DESIG	LOC	CODE
(ZD) A	4E3	54R
(ZE) A	4E3	274R
(ZH) A	4E3	274AH
(ZD) B	2G2	54S
(ZE, ZH) B	2G2	274S



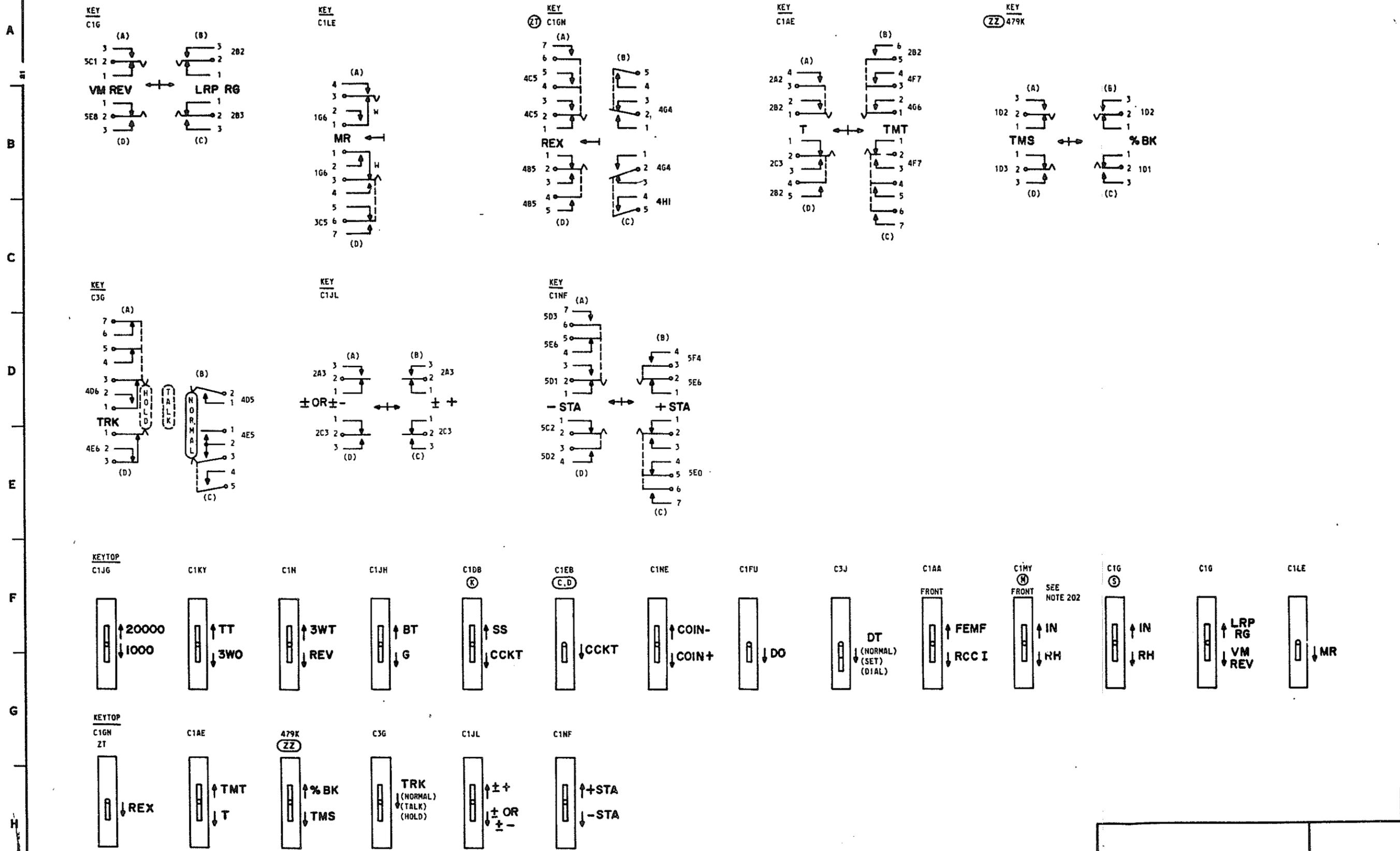
SD-96181-01-C1

26

LOCAL TEST CABINET NO. 3 TELEPHONE AND TEST CIRCUIT	(2)	SD-96181-01-C1
BELL TELEPHONE LABORATORIES INCORPORATED	6S	

PART OF APP FIG. 1

DRAWING
ISSUE
240
268
278



SD-96181-01-C2

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TELEPHONE AND TEST CIRCUIT ② SD-96181-01-C2
 BELL TELEPHONE LABORATORIES INCORPORATED 6S

PART OF APP FIG. 1

DRAWING
ISSUE
240
268
270

LAMP DESIG	LOC	CODE
ZL A	4G4	11B (RES)
ZW B	4G3	11B (RES)

METER DESIG	LOC	CODE
J VMA	5E3	KS-B271
H VMA	5E3	C9B

POTENTIOMETER DESIG	LOC	CODE
R	5F1	KS-B316, 3500

RESISTOR DESIG	LOC	CODE
A	5G4	101ED
AA	3C4	630T
YA AB	1G5	630H
AC	5D2	638K
ZB B	5F5	38H
ZC B	5F5	107A, 100KN
ZK BA	4G2	44R
ZK BB	4G3	44B
ZK BC	4G3	44B
Y C	3B2	18G
Z C	3C2	18AJ
Y CA	6F1	107B, 25.650
Z C1	3C2	18AJ
X D	2F1	18AE
YD DTF	5B6	KS-14603 L1A, 1780
E	3B1	18CN
F	4E2	18EJ
ZK G	4F2	18N
J	3E6	19PF

RESISTOR DESIG	LOC	CODE
K	3G6	19PF
L	3E3	
M	3G3	
N	3E4	
P	3G4	
R	3E2	
ZT R1	4G2	KS-14603 L2A, 110
ZT R2	4G2	KS-14603 L2A, 110
S	3G2	19PC
T	2F3	18JO
ZP TT	3D4	18FC
U	2F4	19HD
V	2F5	19HD
W	2F5	19HD
X	3D6	19SN
Y	2B2	19DU

TRANSFORMER DESIG	LOC	CODE
A	4F5	94E (RC)

VARIATOR DESIG	LOC	CODE
ZA A	4B1	33L
Q A	4B1	4A
N A	4B1	33A

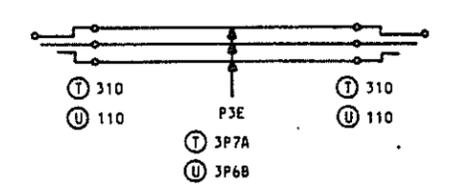
APP FIG. 2

JACK DESIG	LOC	CODE
24V	6C5	291
48V	6D5	241
ZU 72V	6E5	238
CT	6B8	238
T BAT	6G5	238
TEL	4B0	223
TEL	4B0	223

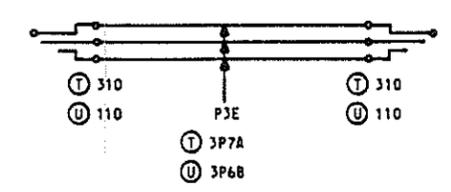
APP FIG. 3

JACK DESIG	LOC	CODE
YA LINE	1F7	238
MDF(R)	1C8	223
MDF(T)	1C8	223
R+	6F9	238
R,R-	6F9	238
YA TC B	1F7	238
TST	1A8	238

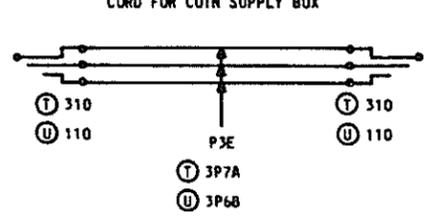
APP FIG. 4



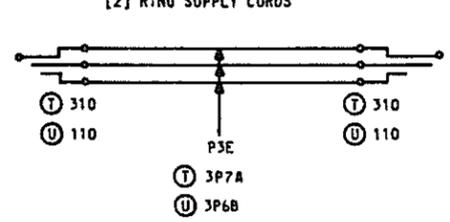
APP FIG. 5



APP FIG. 6



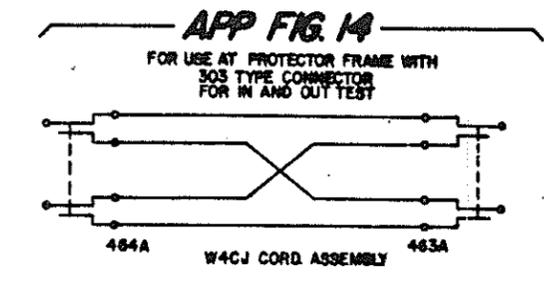
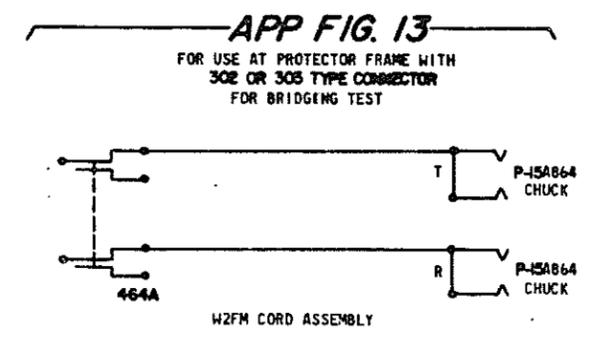
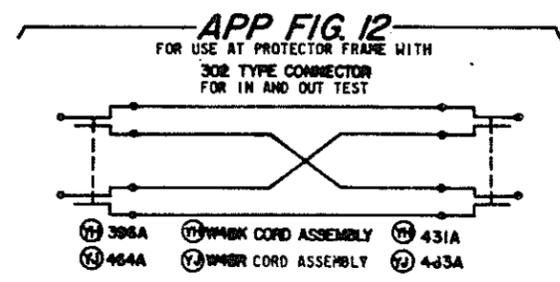
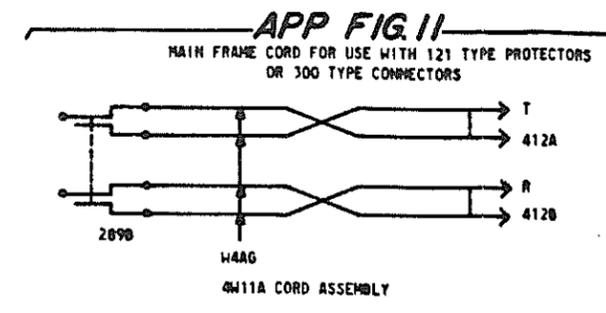
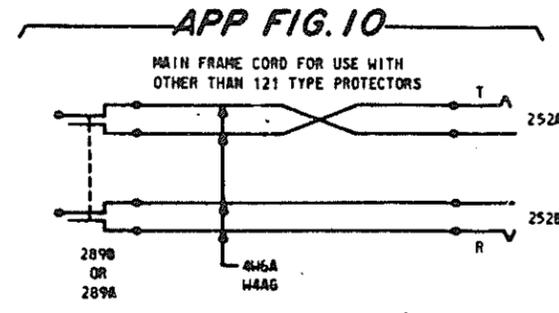
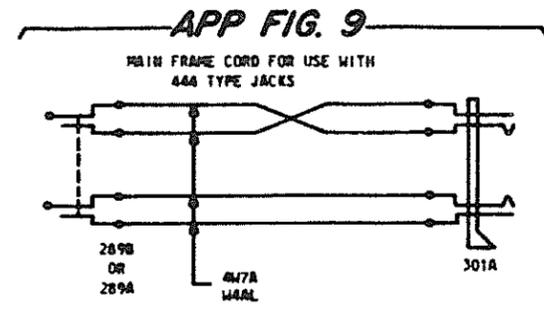
APP FIG. 7



APP FIG. 8

HEAD TELEPHONE SET DESIG	LOC	CODE
HEAD TEL SET	4B0	52A (MD) 52S (STD)

SD-96181-01-C3



APP FIG. A (MFR DISC.)

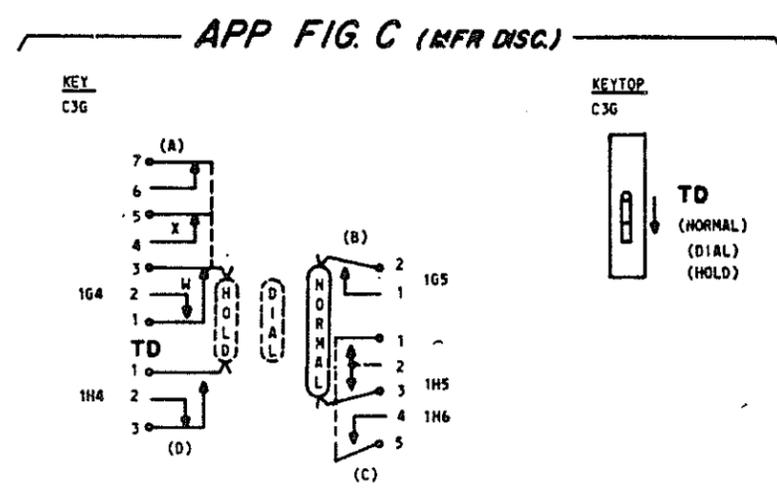
CAPACITOR		
DESIG	LOC	CODE
F A	4D2	
G A	4D2	

TRANSFORMER		
DESIG	LOC	CODE
F A	4D2	178E (1ND COIL)
G A	4D2	102C (1ND COIL)

APP FIG. B

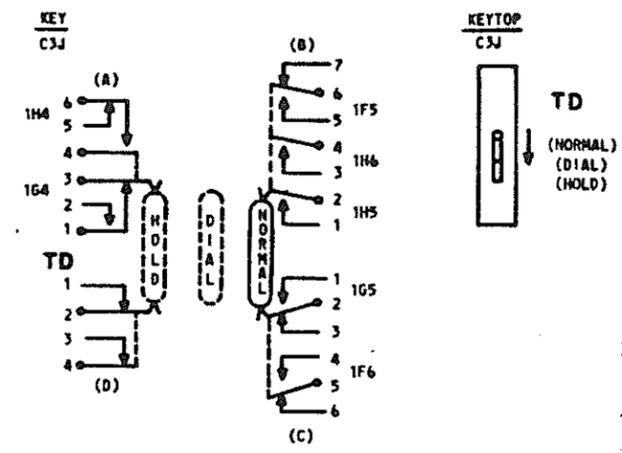
CAPACITOR		
DESIG	LOC	CODE
A	4B2	441A

TRANSFORMER		
DESIG	LOC	CODE
A	4B2	181B (1ND COIL)



SD-96181-01-C4

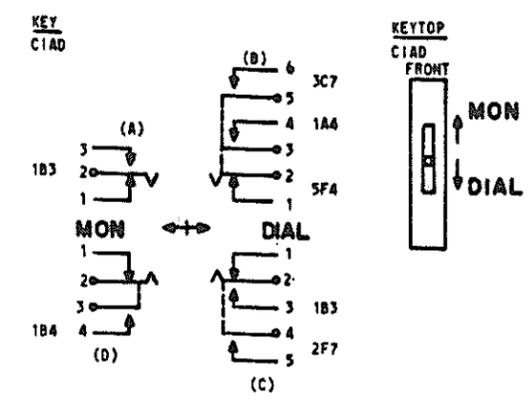
APP FIG. D



APP FIG. E (MFR DISC.)
WIRING ONLY

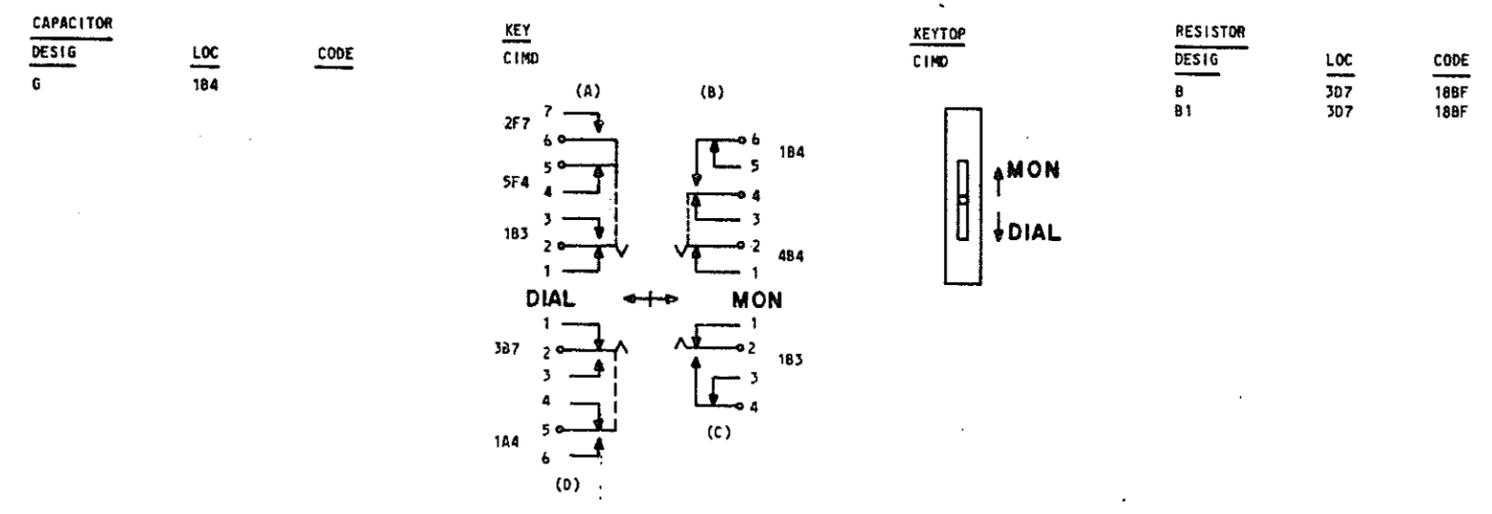
CAPACITOR DESIG	LOC	CODE
G	184	

APP FIG. F (MFR DISC.)



RESISTOR DESIG	LOC	CODE
B	3D7	18BF
B1	3D7	18BF

APP FIG. G



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CIRCUIT NOTES:

DESIG	FUSE AMP	POTENTIAL	ONE PER

FEATURE OR OPTION	PROVIDE	
	FIG.	QUANTITY
TEST CABINET CIRCUIT	1, 8	1 PER CKT
WHEN TEST CABINET IS PORTABLE	5, 7, 8, 7	YF 1 PER CKT
KEY ACCESS TO TEST TRUNK REQUIRED	YES	YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YZ
FOR USE WITH 444 TYPE JACKS		
FOR USE WITH 121 TYPE PROTS OR 300 TYPE CONNS	11	1 PER CKT AS REQD
FOR USE WITH OTHER TYPE PROTS	10	
WHEN COIN POTENTIAL IS 116-120V AND TEST CAB. IS OR IS NOT PORTABLE		ZI
OTHER VOLTAGES THAN 116-120V AND TEST CAB. IS NOT PORTABLE		ZJ
WHEN TEST CAB. IS REQ TO WORK WITH (SEE NOTE 108)		ZQ, D
702A PBX, PAN. OR TOLL SHBD TEST TRUNKS IN SAME BLDG		ZQ, C
TEST TRUNKS TO SWITCHBOARDS OR ESS IN DIST BLDG OR PAN., CBR., SXS SAME OR DIST BLDG		ZQ, C
COMBINATION OF BOTH OF ABOVE TYPES		ZQ, K
TEST CIRCUITS IN ESS LOCATED IN SAME BLDG		ZR, C
DIAL REQUIRED		X
THIS CIRCUIT IS ASSOCIATED DIRECTLY WITH A TEST DISTRIBUTOR CKT. (NOT VIA TEST DIST. CONTROL CKT)	YES	ZK
	NO	ZL
USED WITH UNIGAUGE PLANT		ZY
LOCAL TESTING ONLY	NO. 2 ESS	ZU
DIST. OFF. TESTING REQD		ZV
ZK OPTION PROV		ZW
ZL OPTION PROV		ZX
NOT USED WITH UNIGAUGE PLANT		ZS
PROTECTOR FRAME WITH 302 TYPE CONNECTOR	IN AND OUT	12 YJ
	BRIDGING	13
TRANSMISSION AND DIAL PULSE TESTS ARE MADE FROM POLE MOUNTED VF TRMSN MESSAGE AND SIGNAL REPEATER CKT	YES	ZZ
	NO	ZY
SOME OF COIN STATIONS ARE DIAL TONE FIRST (SEE NOTE 109)	YES	YD
	NO	YC
PROT FR WITH 303 TYPE CONN	IN AND OUT	14
	BRIDGING	13

CIRCUIT NOTES: (CONT)

FEATURE OR OPTION	PROVIDE	
	FIG.	QUANTITY

NETWORK VALUES			
NO.	NETWORK CODE	RESISTANCE	CAPACITANCE
		IN OHMS	IN UF

CIRCUIT NOTES: (CONT)

CHANGED ON ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION HAS FURN	SEE NOTE	USE IN CIRCUIT		
				STD	A&M	NO
3D	Y OR Z	Y		Z	Y	
4D	V OR W	W		V	W	
4D	T OR U	U		T	U	
5D	Q OR N	Q		H	Q	
5D	FIG. D	FIG. C		FIG. D	FIG. C	
6D	M OR S	S		M	S	
9B	C, D OR K	C OR D	102	C, D, K		
10D	F OR G	G		F	G	
10D	ZA OR E	E & N OR E&Q		ZA	E & H	
10D	ZB OR ZC	ZB		ZC	ZB	
10D	H OR J	J		H	J	
10D	ZD OR ZE	ZD		ZE	ZD	
13D			105	FIG. G	FIGS. E & F	
13D			106, 107	ZG	ZF	
14D	FIG. A OR B	FIG. A		B	A	
14D	ZH	ZE OR ZD		ZH	ZE	
14D		PLUGS	289B		289A	
14D		DIALS	6E		5L	
15D	ZI OR ZJ	A & B OR ZJ	102	ZI, ZJ	A, B	
15D			102	FIG. 11		
15D	ZK OR ZL	ZK	102	ZL	ZK	
16D	ZM OR ZN	ZM		ZM	ZM	
18AC			102	ZK		
19D	ZO OR ZP	ZO	102	ZP	ZO	
			113			
20D	FIG. 12 OR FIG. 13	NONE	102	FIG. 12 & FIG. 13		
21B	ZQ OR ZR	ZQ	102, 108	ZQ, ZR		
22B	ZS OR ZT	ZS	102	ZS, ZT		
22B	ZU, ZV, ZW, OR ZX	NONE	102	ZU, ZV, ZW, ZX		
22B				HEAD TEL SET	52S	
26D	ZY OR ZZ	ZY	102	ZY, ZZ		
26D	YA OR YB	YA	102, 112	YA, YB		
26D	YC OR YD	YC	109	YC, YD		
26D			187, 111		YE	
26D	YF	NONE	110	YF		
27B	YG	NONE	102	YG		
	YH OR YJ	YH	102	YJ	YH	
28D	FIG 14	NONE	102	FIG 14		
	YK OR YL	YK	102	YK, YL		

CIRCUIT NOTES: (CONT)

- 105. PRIOR TO ISSUE 13D FIGURE Q WAS NOT SHOWN. FIGURE E WAS PART OF S OPTION AND FIGURE F WAS PART OF M OPTION.
- 106. PRIOR TO ISSUE 13D, ZF AND ZG OPTIONS WERE NOT DESIGNATED.
- 107. CONNECT LEADS A, B, C, AND D TO THE TRANSMISSION PAD TO PROVIDE COMPENSATION FOR THE TRANSMISSION LOSS IN TRUNKS TO DISTANT OFFICE. THE FOLLOWING TABLE SHOWS THE DB LOSS FOR THE VARIOUS CONDITIONS:
 - (STD) 21 db WHEN (DO) KEY IS NOT OPERATED.
 - (MFR DISC.) 18 db WHEN (DO) KEY IS OPERATED AND LEADS A, B, C, AND D ARE CONNECTED TO RESISTORS (H), (R), (S) AND (P) RESPECTIVELY (OPTION YE)
 - (MFR DISC.) 15 db WHEN (DO) KEY IS OPERATED AND LEADS A, B, C, AND D ARE CONNECTED TO RESISTORS (L), (N), (P) AND (P) RESPECTIVELY. (OPTION ZF)
 - (STD) 12 db WHEN (DO) KEY IS OPERATED AND LEADS A, B, C, AND D ARE CONNECTED TO RESISTORS (J), (L), (M) AND (K) RESPECTIVELY. (OPTION ZO)
- 108. PRIOR TO ISSUE 21B, ZQ OPTION WAS NOT DESIGNATED.
- 109. PRIOR TO ISSUE 26D, OPTIONS YC AND YD WERE NOT DESIGNATED. OPTION YD WAS ADDED TO PERMIT TESTING DIAL TONE FIRST COIN TELEPHONES IN ADDITION TO COIN FIRST STATIONS. OPTION YC PERMITS TESTING ONLY COIN FIRST STATIONS.
- 110. OPTION YF CONNECTS 48V2 AND 48V3 LEADS TOGETHER WHEN THE CABINET IS PORTABLE. WITHOUT THIS STRAP NOT ALL FEATURES WERE AVAILABLE WHEN THIS CABINET WAS PORTABLE.
- 111. PRIOR TO ISSUE 26D, OPTION YE WAS NOT DESIGNATED. OPTION YE WAS ADDED AND THE USE OF OPTIONS ZF AND ZG WAS MODIFIED TO CLARIFY THE STRAPPING POSSIBILITIES IN THE TRANSMISSION TEST PADS. SEE NOTE 107.
- 112. WHEN CONNECTION IS MADE TO SD-96229-01 (YB OPTION IS USED) FIG. G MUST BE PROVIDED.
- 113. OPTION ZP, SINCE ISSUE 19D, A STANDARD BASIC OPTION FOR TESTING TOUCH-TONE DIALS, REQUIRES A SOURCE OF POSITIVE COIN VOLTAGE. THEREFORE, CONNECT FS9 TO POSITIVE COIN VOLTAGE VIA JD-96205-01 FIG. 6 OR 12 EVEN IF TESTING TO COIN LINES IS NOT REQUIRED.

SD-96181-Q1-D1

TELEPHONE AND TEST CIRCUIT 2 SD-96181-Q1-D1

BELL TELEPHONE LABORATORIES INCORPORATED 65

ISSUE 26D

ISSUE 28D

EQUIPMENT NOTES:

201. RUN A PAIR OF WIRES FROM THE VARISTOR TO THE (TEL) JACKS AND ANOTHER PAIR FROM THE VARISTOR TO THE (A) CAPACITOR AND INDUCTION COIL.
202. KEY C16 IS MOUNTED NORMALLY (CODE SIDE DOWNWARD) BUT KEY C17 MAY BE FOUND MOUNTED EITHER CODE UP OR CODE DOWN, ACCORDING TO WHICH WIRING DNG AND J DNG WERE USED FOR MANUFACTURE OF THE CABINET. THIS RESULTS IN QUADRANT LETTERING CHANGES IN THE SCHEMATIC.

EQUIVALENT TERMINALS

KEY CODE UP	KEY CODE DOWN
IN A 1-6 = B 1-6	
D 1-3 = C 1-3	
RH B 1-6 = A 1-6	
C 1-3 = D 1-3	

INFORMATION NOTES:

301. THE SCALE READINGS AND RESISTANCES OF THE VOLTHILLIAMMETER ARE AS FOLLOWS:
- | SCALE | M.A. | RESISTANCE |
|-----------|------|------------|
| 0-120V | 1.2 | 100,000Ω |
| 0-24V | 1.2 | 20,000Ω |
| GALV | 1.2 | 200Ω |
| 0-300M.A. | 300 | MAX 3Ω |
302. CONNECT LEAD R TO THE RESISTOR TERMINALS 4,5,6 OR 7 SO THAT THE TOTAL VALUE OF RESISTANCE CUT-IN IS EQUAL TO THE MAXIMUM SUBSCRIBER LINE LOOP IN THE SHORTEST RANGE OFFICE IN THE SAME BUILDING. CONNECT LEAD P TO RESISTOR TERMINALS 1,2,3,4,5 OR 6 SO THAT THE TOTAL VALUE OF RESISTANCE CUT-IN PLUS THE RESISTANCE OF THE LONGEST TEST TRUNK IS EQUAL TO THE MAXIMUM SUBSCRIBER LINE LOOP IN THE SHORTEST RANGE OFFICE TO WHICH THE TEST TRUNK TO OFFICES OUTSIDE THE BUILDING CONNECT. DISREGARD ANY UNIGAUGE LINES.
303. AT AN ESS OFFICE, IN ORDER TO MINIMIZE NOISE PICK UP, THE TEST CABINET FRAMEWORK GROUND SHALL BE CONNECTED TO THE ESS GROUND ONLY. SINCE THE TEST CABINET NO. 3 FRAMEWORK IS METAL THE METHOD OF MOUNTING SHALL BE SUCH THAT THE FRAMEWORK AND IT'S MOUNTING SCREWS ETC. ARE AT NO OTHER GROUND POINT THAN THE ESS OFFICE GROUND. THIS NOTE APPLIES WHEN THIS CABINET IS MOUNTED IN THE ESS AREA; OTHERWISE IT DOES NOT APPLY. WHEN THE CABINET IS MOUNTED ON A DISTRIBUTING FRAME IT SHOULD BE GROUNDED TO THE CENTRAL OFFICE SERVING THAT FRAME.
304. UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS; CAPACITANCE VALUES ARE IN MICROFARADS; VALUES PRECEDED BY THE SYMBOL + (PLUS) OR - (MINUS) ARE IN VOLTS.

305. BATTERY AND GROUND CONNECTIONS

TESTING REQUIRED TO	PORTABLE PATCH BATTERY SUPPLY		PERMANENTLY MOUNTED SUPPLY CIRCUIT LEAD		REMARKS
	PATCH BATTERY SUPPLY	CONNECT LEADS	SUPPLY CIRCUIT LEAD		
SXS, CROSSBAR, ESS, MANUAL NO. 12, OR PANEL WITH 48V TALK BATTERY ON DISTRICT SELECTOR	48V	48V1, 48V2, 48V3	48V		
		GRD 1	GRD		
MANUAL IN SAME BLDG, (EXCEPT NO. 12) AND PANEL WITH 24V TALK BATTERY ON DISTRICT SELECTOR	24V	24V1, 24V2, 24V3	24V		
		GRD 1	GRD		
		GRD 2	GRD		
MANUAL IN SAME BLDG (EXCEPT NO. 12) AND TESTING OUT OF BLDG IS ALSO REQUIRED	NOT PROVIDED	48V1, 48V2, 24V3	48V, 24V		
		GRD 1	GRD		
702A PBX	NOT PROVIDED	48V1, 48V2, 24V3	48V, 48V, 24V		Z AND B OPTIONS REQUIRED
		GRD 1	GRD		
UNIGAUGE PLANT IN LOCAL OFFICE ONLY	-72V	-72V	-72V		
		GRD 1	GRD		
UNIGAUGE PLANT IN LOCAL AND DISTANT OFFICE	NOT PROVIDED	+48V, 48V1	+48V, 48V		
		GRD 1	GRD		

TRANSMISSION TEST REQUIREMENTS (1000 CYCLE LOSS BETWEEN 6000 LINES)

TEMP	MAX. ALLOWABLE CIRCUIT LOSS (DB)			
	TRANS	(TNY)&(DO) KEYS NORMAL	(TNY)&(DB) KEYS OPER	(TNY)KEY OPERATED (DO)KEY NORMAL
ANY	10.7			
70		6.3	18.3	27.3
80		6.5	18.5	27.5
90		6.7	18.7	27.7
100		6.8	18.8	27.8
110		7	19	28

IND COIL	MAX. ALLOWABLE CIRCUIT LOSS (DB)					
	VAR	CAP.(B)	BRIDGE	TRANS	REC	SEE NOTE
102C	4A OR 33A	1 UF	4.5	8.3	10	2
102C	33L	3 UF	6.1	8.2	5.9	3
178E	33L	3 UF	4.6	11.3	6.1	3

ALLOWABLE INDIVIDUAL APPARATUS LOSS (DB)					
APPARATUS	DESIG	CODE	MAX. LOSS	MIN LOSS	REMARKS
CAPACITOR	A OR B	3 UF	8.5	6.6	
CAPACITOR	B	3 UF	17.2	15.1	
CAPACITOR	D	2 UF	13.7	11.7	
IND COIL	A	102C	8.6	6.1	
IND COIL	A	178E	12.4	8	
IND COIL	A	181B	11.1	9.3	FIGURE B
INDUCTOR	B	54S, 274S	0.2		
REP COIL	A	94E	0.2		
VARISTOR	A	4A, 33A, 33L			WINDINGS 2-1, AND 6-5 BRIDGED SEE NOTE 1

NOTES:

- FOR METHOD OF MAKING INDIVIDUAL APPARATUS LOSS TEST, SEE BSP ON TRANSMISSION TEST OF VARISTORS. REQUIREMENTS USING 1A ATTENUATOR:

TEMPERATURE AT VARISTOR	70°	80°	90°	100°	105°
INDIVIDUAL LOSS (4A-33A)	1.7	2.3	3.1	3.9	4.4

- REQUIREMENTS USING 12db PAD:

TEMPERATURE AT VARISTOR	70°	80°	90°	100°	105°
INDIVIDUAL LOSS (4A OR 33A VAR)	2.1	2.7	3.4	4.1	4.5
INDIVIDUAL LOSS (33L VAR)	0.4	0.5	0.6	0.7	0.8

- LOSSES FOR TEMPERATURES OTHER THAN THOSE LISTED ABOVE MAY BE DETERMINED BY INTERPOLATION.
- TEMPERATURE 85° FOR EACH INCREASE OR DECREASE OF 10° IN TEMPERATURE, ADD OR SUBTRACT 0.1db RESPECTIVELY FOR BRIDGING LOSS AND 0.7db FOR RECEIVING LOSS.
- TEMPERATURE 85°. FOR EACH INCREASE OR DECREASE OF 10° IN TEMPERATURE, ADD OR SUBTRACT 0.3db RESPECTIVELY FOR RECEIVING LOSSES.
- * INDICATES APPARATUS FOR WHICH INDIVIDUAL LOSSES ARE NOT REQUIRED.

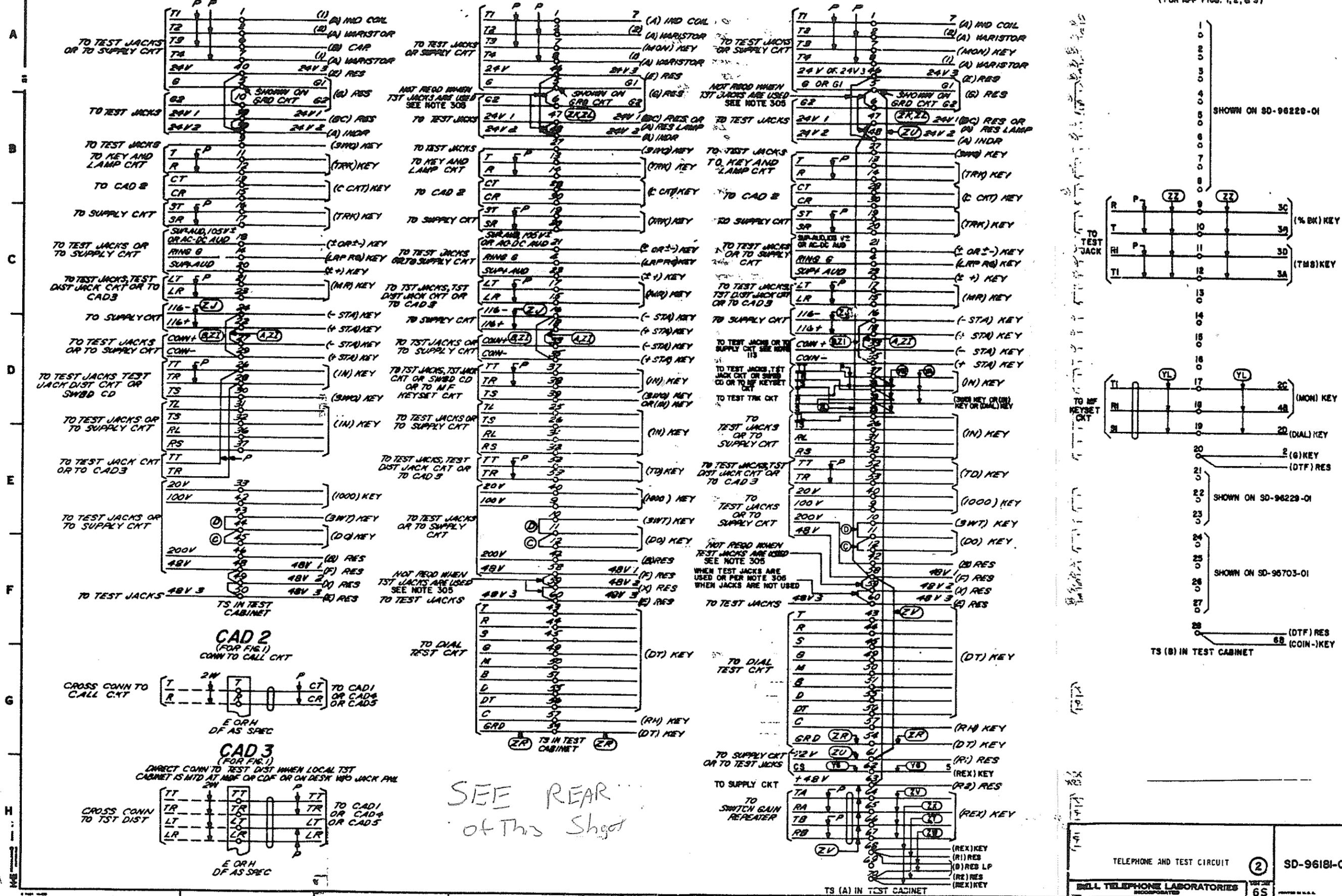
CAD 1 (MFR DISC.)
(FOR APP FIG. 1)
UNIVERSAL COMM IN TEST CABINET

CAD 4 (MFR DISC.)
(FOR APP FIGS. 1, 2, & 3)
UNIVERSAL COMM IN TEST CABINET

CAD 5 (FOR APP FIGS. 1, 2, & 3)
UNIVERSAL COMM IN TEST CABINET

CAD 6
(FOR APP FIGS. 1, 2, & 3)

DRAWING ISSUE
240
250
270
ISSUE
280



SEE REAR
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