CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
A	1-1/3	48V SIG	COMB FIG. 8, 9, & 10; COMB FIG. 8, 9, & 11; COMB FIG. 17 & 18; OR FIG. 18
B	1-1/3	48V SIG	FIG. 14
	1/2 H[illegible]	+130V PLT	FIG. 8 OR 18

BATTERY SYMBOL	VOLTAGE RANGE
-48	45-50
+130	125-135

102.

FEATURE OR OPTION				PROVIDE FIG.	APP OR WRG	QUANTITY
TEST CORD OR TEST JACK CKT	T BD NO. 17B (FOR TESTING TWX TRUNKS) SEE NOTE 305	TESTING OF WIDE BAND TRUNKS ONLY		2	Z,S	1 PER POS
	TT BD NO. 17B FOR	XBR TDM		2	Z,S	1 PER POS
		OTHER THAN XBR TDM OR OVERSEAS OPERATOR TRUNKS		2	S,M	1 PER POS
		TESTING OVERSEAS OPERATOR BRIDGE TRUNKS		2	Z,S	1 PER POS
	T BD NO. 20A			3	X,A	1 PER POS
	TT BD NO 17D			3	X,A	1 PER POS
	TT BD NO. 17C	E&M LEAD SPLITTING REL PROVIDED AND	POSITION ARRANGED FOR SMAS* TESTING YES	3	ZA	1 PER POS
			NO		X,A	
		NOT PROVIDED AND	YES		W,ZA	
			NO		W,A	
	PATCHING TRUNK FOR EXTENDING (TEST) JACKS TO CKT PATCH BAY			4		1 PER APP
	T BD NO. 17E	JOINT USE WITH CKT PATCH BAY (VIA JK CONVERTER)	NOT REQD	3	X,A	2 PER POS
			REQD		X,W,A	
	TT BD NO. 18B	309 PLUG BD		5	V,S	1 PER POS
		310 PLUG BD			U,S	
	CKT PATCH BAY OR RELAY RACK	DIALING ON "E" & "M" LEAD TRK NOT REQD		7	S	1 PER APP
		REQD DIAL AVAILABLE YES		5	U,S	1 PER APP
		NO		5,13	U,S	
	TUBE AND RESISTOR CKT			18		1 PER FIG.15 OR 17
				8		1 PER FIG. 2,3,4,5,6 OR 7
	DIAL PULSING RELAY CKT			9	R	1 PER FIG. 2,3,4,5 OR 6
	RESISTANCE LAMP CKT			10		1 PER FIG.7 OR 9
TEST CORD OR TEST JACK	TBD NO. 21A	WHERE TESTING OF CIRCUITS WITH E&M LEAD SPLITTING RELAY (SEE NOTE 107)	NOT REQD	3	W,A	1 OR 2 PER POS
			REQD SEE NOTE 106	3	X,W,A	1 OR 2 PER POS
		TESTING REQD FOR E&M LEADS ASSOC. WITH LINE CONCENTRATOR NO. 2B TYPE CKTS			J	
		ADDRESSABLE AND CROSS-TELL DATA BRIDGE CKTS (SEE NOTE 307)			J	
	TBD NO. 19A	TESTING OF E&M LEADS ASSOC WITH ADDRESS-ABLE AND CROSSTELL DATA BRIDGE CKTS (SEE NOTE 307)	NOT REQD	6		1 PER POS
			REQD	6	H	1 PER POS

CIRCUIT NOTES: (CONT)

102. (CONT)

FEATURE OR OPTION					PROVIDE FIG.	APP OR WRG	QUANTITY
TESTING OF CIRCUITS WITH PRE-EMPTION FEATURE	NOT REQD				A		
	REQD	T BD NO. 19A OR 21A AND	RING FWD KEY	NOT REQD.	14, B,D	G	1 PER ASSOC FIG.6 OR 3
				REQD	14, B,E	F	1 PER ASSOC FIG.6 OR 3
		CKT PATCH BAY ASSOC WITH T BD NO.19A	RING FWD KEY	NOT REQD.	14, C,D		1 PER ASSOC FIG.5 OR 7
				REQD.	14, C,E	E	1 PER ASSOC FIG.5 OR 7
MONITORING ONLY REQ'D (NO TESTING)	TESTBOARD NO. 21A ASSOC WITH	TESTBOARD POSITION (SEE NOTE 309)			15		1 PER POS
		JACK FIELD OR JACK BAY (SEE NOTE 309)			16,17		1 PER APP

*SMAS = SWITCHED MAINTENANCE ACCESS SYSTEM NO. 3 TYPE

103.

NETWORK VALUES			
NETWORK NO.	NETWORK CODE	RESISTANCE IN OHMS	CAPACITANCE IN UF
1	186A	120	0.3
2	185A	470	0.11

CIRCUIT NOTES: (CONT)

104.

RECORD OF FIGURES, WIRING AND APPARATUS CHANGES							
CHANGED ON ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT STD	A&M	MD	
1			105		FIG 1		
1	-		105		FIG.11 & 12		
1			105		T,Q		
3D	P OR N	P		N		P	
3D	M	Z OR Y	102, 105	H,Z		Y	
4AC	K	NONE		K			
5B			102	FIG.13			
			102	FIG.14			
7B	FIG. A, B OR C	FIG.A	102, 308	FIG. A, B OR C			
8AC	J	NONE	102, 307	J			
9B	H	NONE	102, 307	H			
	FIG. D OR E	FIG. D	102, 308	FIG. D OR E			
	E,F, OR G	G OR NONE	102, 308	E,F OR G			
	D OR B	D		B		D	
11B			102	FIG.15, 16, 17, 18			
13D	A OR ZA	A & X, OR NONE	102	X,A, ZA			
	CORDS			S6D E/M 371C PLUG		S6B	
	LAMPS			K1B1		K1B	

105. (A&M ONLY)

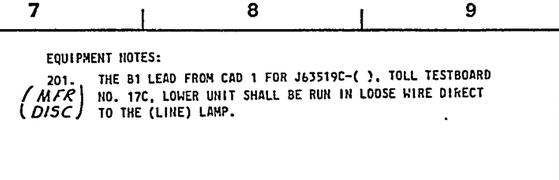
FEATURE OR OPTION		PROVIDE FIG.	APP OR WRG	QUANTITY
TEST CORD CKT FOR TT BD NO. 17B IN XBR TDM OFF. WHERE 479 TYPE KEYS ARE REQD.		1		1 PER POS
		8,9	R	1 PER FIG.1
		10		1 PER FIG.9
TEST CORD OR TEST JACK CKT USED FOR TESTING NON-RELAY AUX PULSE LINK CONNECTIONS WHEN PATCHING JACKS ARE PROVIDED	TT BD NO. 17B	2,12		1 PER POS
		8,9	M,Q	1 PER FIG.2
		11	T	1 PER FIG.9
	TT BD NO. 18B	5,12	Q	1 PER POS
		8,9	T,U	1 PER FIG.5
		11		1 PER FIG.9
	CKT PATCH BAY OR RELAY RACK	7,12	T	1 PER APP
		8,11		1 PER FIG.7

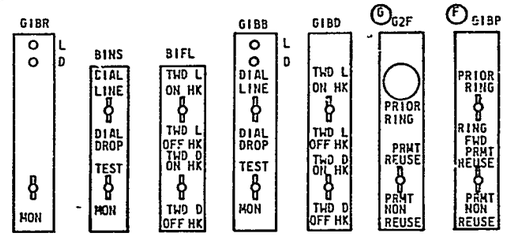
106. THE USE OF FIG.3 AND X OPTION ONLY AT A T BD NO.21A IS RATED MFR DISC. ON ISS 7B. FOR THOSE T BD NO.21A WHERE CIRCUITS WITHOUT E AND M SPLITTING RELAYS ARE ADDED, W OPTION SHOULD BE ADDED AND FIG.3 AND X OPTION RETAINED PER THIS CKT.

107. PRIOR TO ISSUE 7B, FIG.3 WAS SPECIFIED "ONE PER POS" FOR T BD NO. 21A.

EQUIPMENT NOTES:

201. (MFR) (DISC) THE B1 LEAD FROM CAD 1 FOR J63519C-( ), TOLL TESTBOARD NO. 17C, LOWER UNIT SHALL BE RUN IN LOOSE WIRE DIRECT TO THE (LINE) LAMP.





DRAWING ISSUE

8AC	DS WE JS
9B	DS WE JS
10A	JS MP JJ
11B	
13D	
14B	

ISSUE 15D

SIGNALING TEST CIRCUIT (2)

SD-56497-01-IA

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-56497-01-IA

INFORMATION NOTES:

301. UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS,
CAPACITANCE VALUES ARE IN MICOFARADS,
VALUES PRECEDED BY THE SYMBOL + (PLUS)
OR - (MINUS) ARE IN VOLTS.

302. THE VOLTAGES INDICATED ARE THOSE OBTAINTED WHEN THE CKT IS NORMAL, POLARITIES SHOWN ARE WITH RESPECT TO GROUND. MEASUREMENTS SHOULD BE MADE WITH AN ELECTRON TUBE VOLTMETER AND MAY VARY ±15% FROM THOSE INDICATED.

303. THE FOLLOWING TABLE LISTS TYPICAL PATCHING CORDS WHICH MAY BE USED WITH THIS CKT BUT ARE PROVIDED BY THE TEL CO. ALL PLUGS ARE INSERTED WITH THE KNURLED EDGE UP OR TO THE LEFT AS PEQD BY JACK CONFIGURATION.

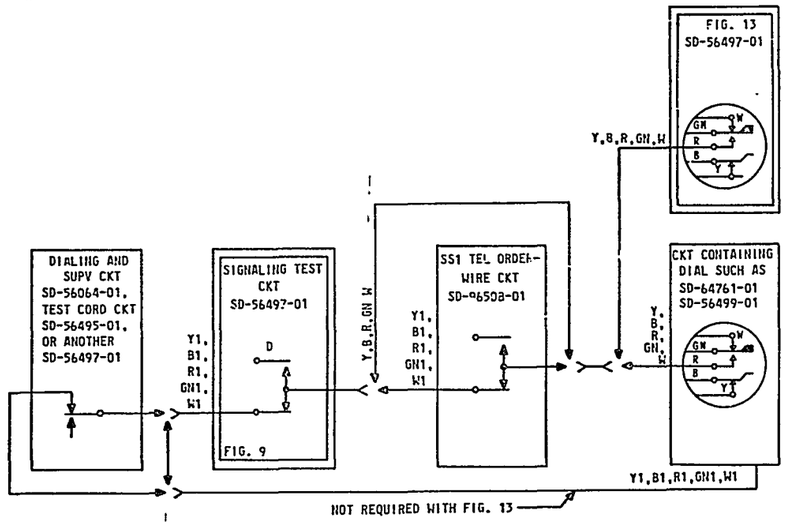
CODE OF CORD AND PLUG ASSEMBLY	CORD	PLUGS	REMARKS	
4P3A	P4H	2-288A	USED WITH FIG. 5	U OPTION
(2) 2P23A	P3D	2-309		V OPTION
4P3A	P4H	2-288A	USED WITH FIG. 7	

304. BECAUSE OF DC OPERATION, THE NEON LAMPS MAY BE REVERSED IN THEIR SOCKET BEFORE BEING REPLACED FOR FAILURE TO LIGHT.

305. DEFINITIONS:
TWX TRKS - TELETYPEWRITER EXCHANGE TRUNKS.

WIDE BAND TRK - SOMETIMES REFERRED TO AS VOICE BAND TRUNKS (NOT ASSOCIATED WITH B1 DATA CARRIER TERMINAL).

306. TYPICAL CONNECTIONS TO THE VARIOUS CIRCUITS WHICH MAY SHARE THE SAME DIAL, ARE SHOWN BELOW.



307. THE JACKS ASSOCIATED WITH THE ADDRESSABLE AND CROSSTELL DATA BRIDGES MAY BE MOUNTED IN A BAY ADJACENT TO A TESTBOARD NO. 19A OR 21A. WHEN TESTING THE E AND M LEADS OF THE DATA BRIDGE CIRCUIT, THE KEYS OF THIS TEST CIRCUIT DESIGNATED (LINE) AND (DROP) ARE EQUIVALENT TO (BRDG) AND (TRK) RESPECTIVELY IN THE TESTING AND PATCHING JACK CIRCUIT, SD-1C232-01

INFORMATION NOTES (CONT):

308. THE FOLLOWING INTERVALS ARE PRESENT ON THE M LEAD ASSUMING THE (TEST) AND (TWD L OFF HK) KEYS ARE OPERATED AND THIS SIGNALING TEST CIRCUIT IS CONNECTED TO THE CIRCUIT UNDER TEST.

KEY OPERATED	FUNCTION	M LEAD (LINE)
PRMT REUSE	PRE-EMPT REUSE	BAT (OFF-HOOK) → ≈ 345MS GRD (ON-HOOK) → ← 100MS
PRMT NON-REUSE	PRE-EMPT FOR NON-REUSE	BAT (OFF-HOOK) → GRD (ON-HOOK) → PRMT NON-REUSE KEY OPERATED OR TWD L OFF HK KEY RELEASED. ← 345MS
PRIOR RING	PRIORITY RINGING	BAT (OFF-HOOK) → GRD (ON-HOOK) → ---- ETC UNTIL PRIOR RING KEY IS RELEASED ← 1655MS → ← 1655MS
RING FWD	RING FOWARD (FOR USE WITH 103 TYPE TEST LINES)	BAT (OFF-HOOK) → GRD (ON-HOOK) → ← 100MS RING FWD KEY RELEASED ← 100MS RING FWD KEY REOPERATED

309. THE SIG MON L CORD OR JACK IN FIG. 15 OR 16 SHALL BE CONNECTED TO THE L(TOP) SIG JACK FOR MONITORING PURPOSE ONLY. (SEE SD-56543-01). PROVIDE A P3D PATCH CORD OR EQUIVALENT FOR USE WITH FIG. 16. (SEE NOTE 303).

DRAWING ISSUE

8AC	DS WE JS
98	DS WE JS
10A	JB MD JS
11B	HJ
13D	HG

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SIGNALING TEST CIRCUIT (2)

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SIZE 6S

FIG. 1 (A&M ONLY)
TEST CORD CIRCUIT

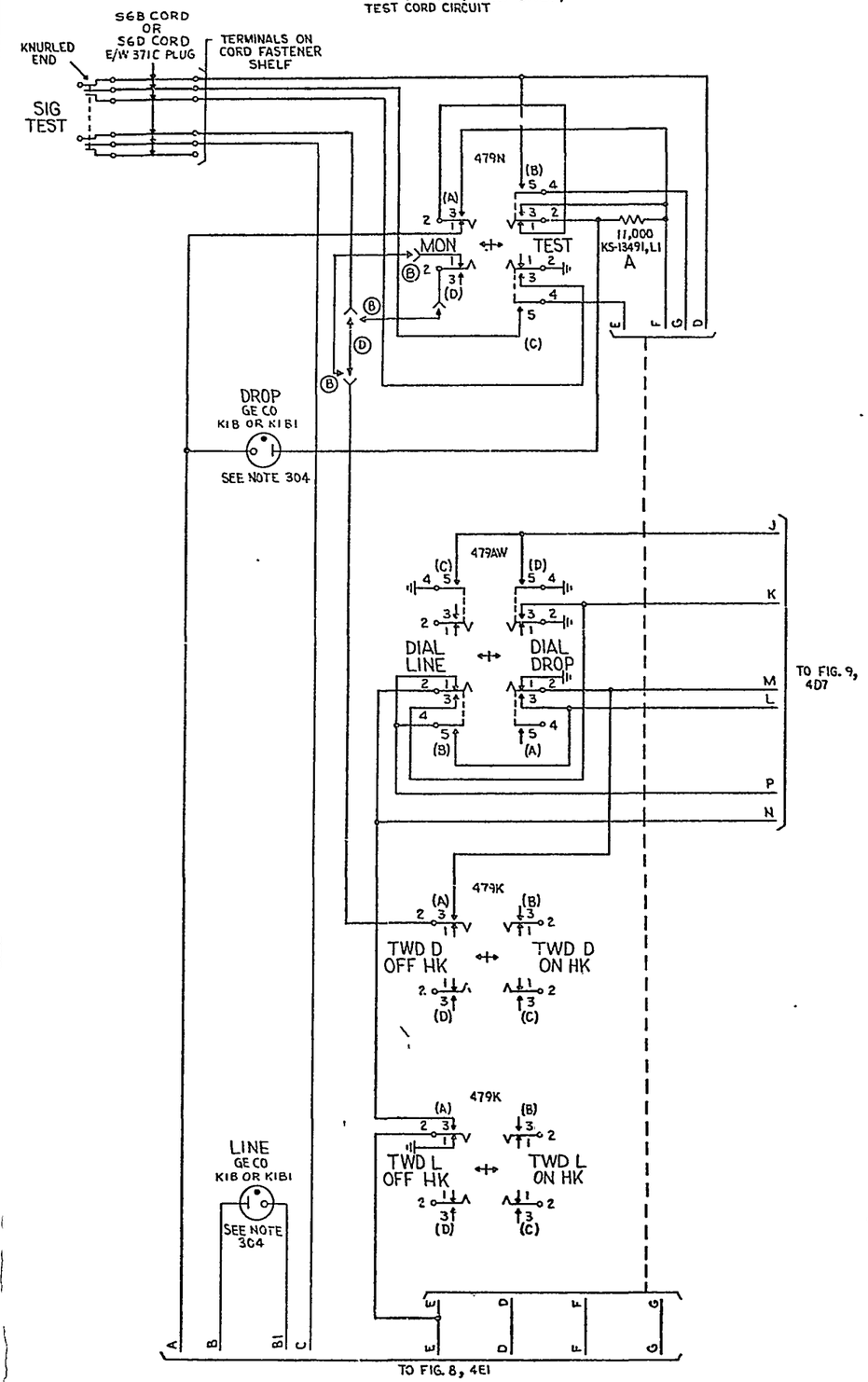
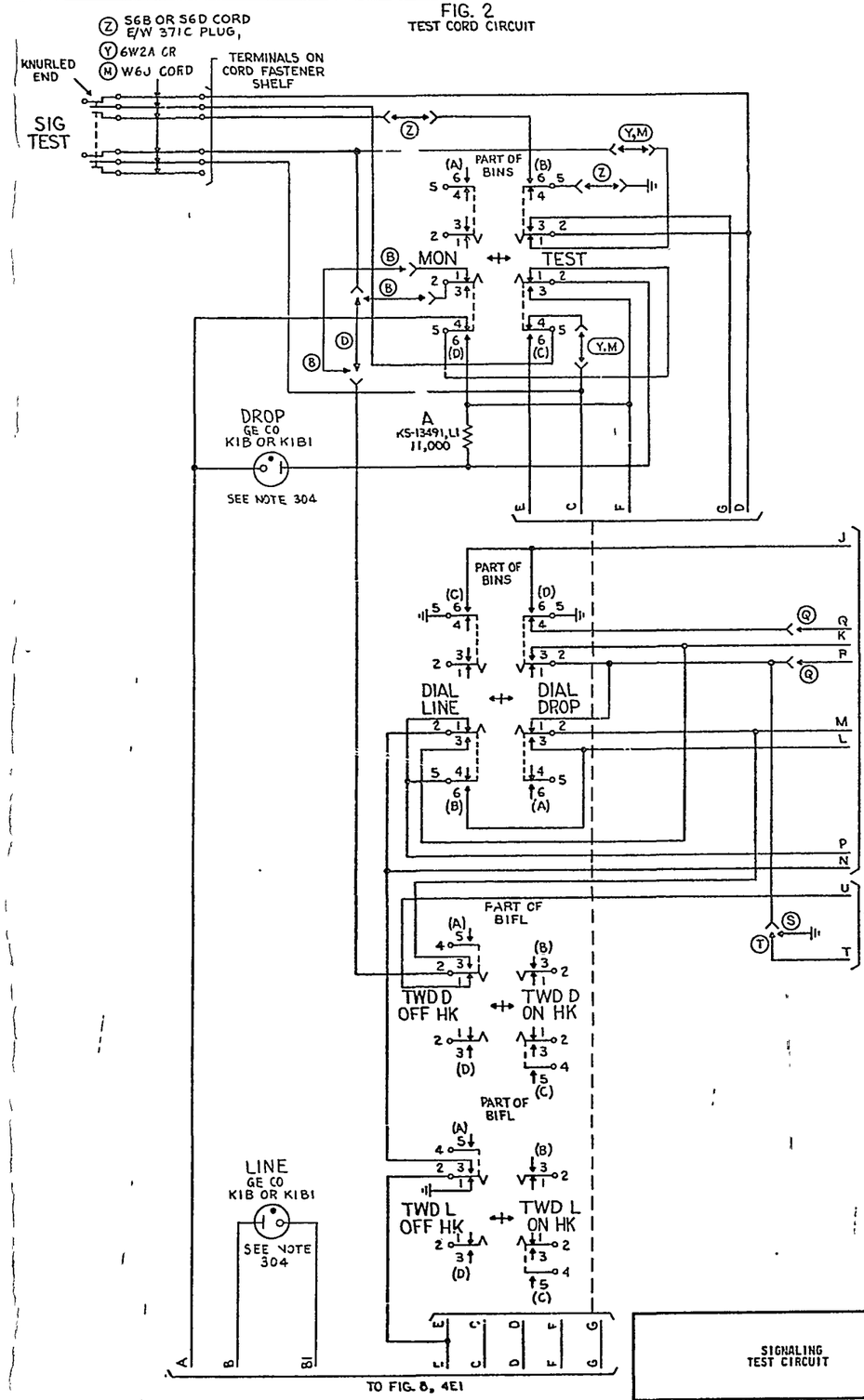


FIG. 2
TEST CORD CIRCUIT



DRAWING ISSUE

1	A.D.	7-68
2A	R.J.B.	11-5
	P.D.	
3D	R.E.J.	
	E.A.H.	
	F.O.B.	
4AC	W.H.	
	L.L.	
	P.O.B.	11-9
5B	R.A.H.	
	L.L.	8-10
	P.O.B.	
6AR	G.B.	
	G.A.S.	10-3
	P.O.B.	
7B	G.B.	
	G.A.S.	11-5
	P.O.B.	
9B	D.S.	
	W.E.	11-12
	J.S.	
11B		11-15
13D		11-16

13

SIGNALING TEST CIRCUIT

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6S

SD-56497-01-2

FIG. 4
PATCHING TRUNK CIRCUIT

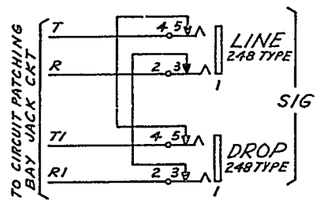

FIG. 3
TEST CORD CIRCUIT

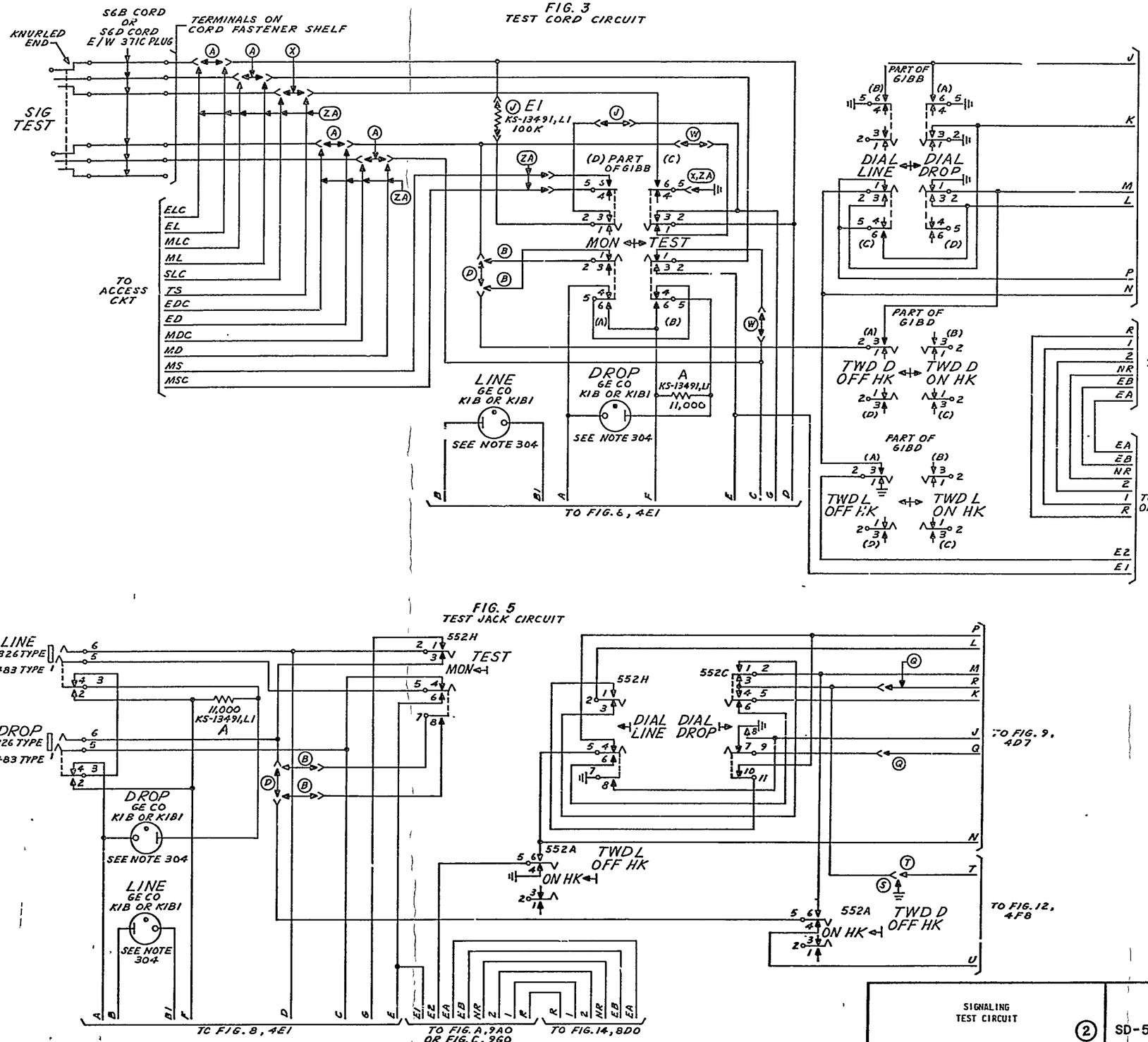

FIG. 5
TEST JACK CIRCUIT

SIGNALING TEST CIRCUIT (2)
SD-56497-01-3
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6S
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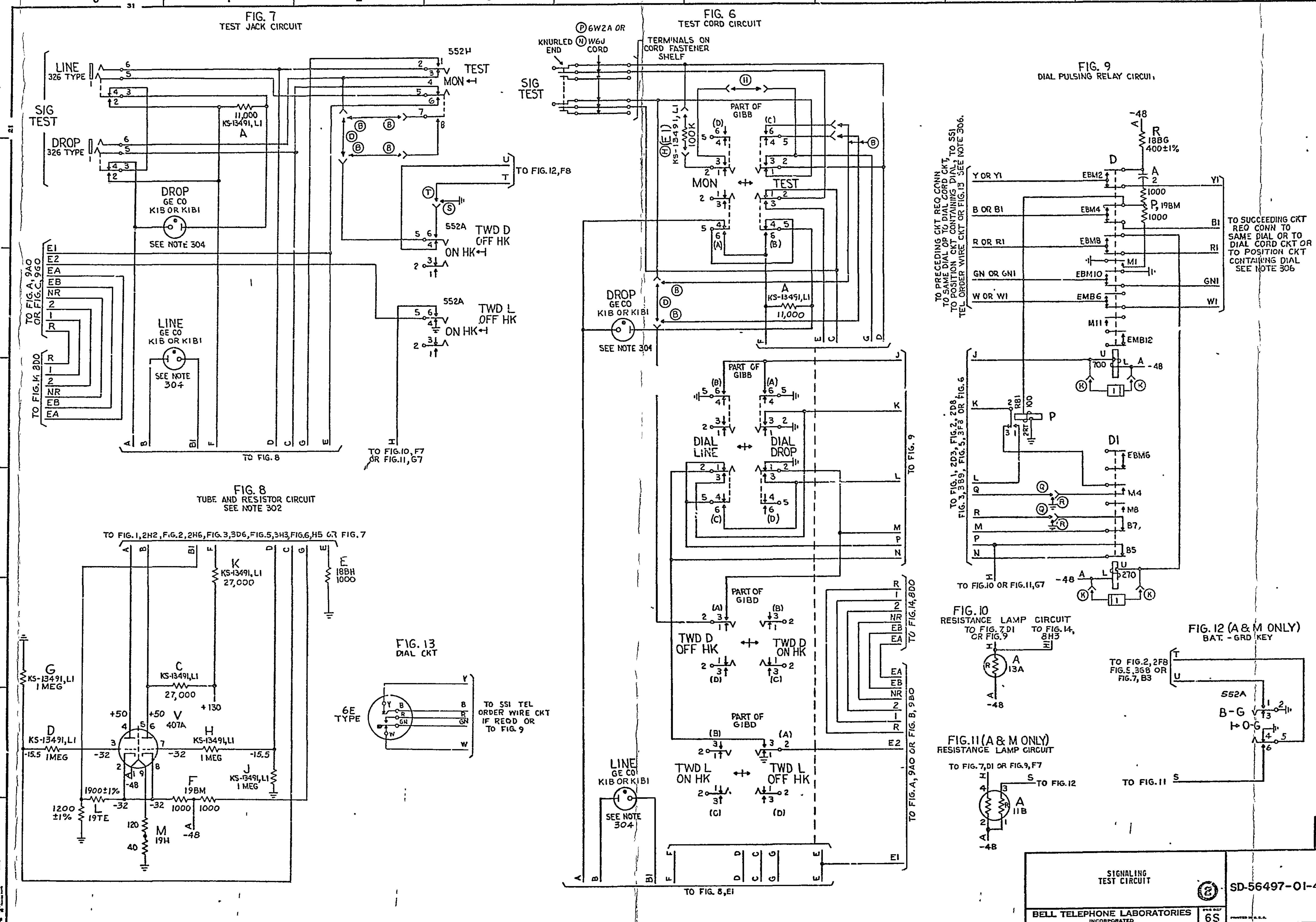
SD-56497-01-3



SIGNALING TEST CIRCUIT

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CIRCUIT REQUIREMENTS

SIGNALING TEST CIRCUIT (SIG TEST), (SIG MON)

APPARATUS DESIG	CODE	OPTION	FIG.		MECH REQT BSP FIG.	CONT PRESS	ARM. TRVL.	CIRCUIT PREPARATION BLOCK OR INSULATE	TEST CLIP DATA CONN BAT.	TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS
RELAYS																		
D	AF20		9		205					U(D)	GRD			0		36	34	
D1	AF90		9		242					U(D1)	GRD			0		65.5	62	
H	AF115		17		274					U(H)	GRD			0		7.1	6.7	
NR	AF134		14		230			(ST) NO		U(NR)	GRD			0		10.3	9.8	
P	S522		9						RB(P)		BAT.			0	FS	7.9	7.5	
									RB(P)		BAT.			NO	FS	6.3	6.7	BASE GAP 6 ±1
									RB(P)		BAT.			R	FS	4.3	4.6	
PR	AF32		14		208			(ST) NO		U(PR)	GRD			0		32.5	30.5	
R	AF54		14		25			(ST) NO		U(R)	GRD			0		30.5	29	
RF	AJ69		E		278			(NR) NO		U(FR)	GRD			0		32.5	30.5	
ST	AJ69		14		278			(T1) NO		U(ST)	GRD			0		32.5	30.5	
T	AJ69		14		278					U(T)	GRD			0		32.5	30.5	
T1	1/2AK22		14		216				2L(T1)		BAT.			0		27.5	26	MTD WITH (T23)
T23	1/2AK22		14		216			(NR) NO	2U(T23)		BAT.			0		27.5	26	MTD WITH (T1)
TIME REQT																		
TMR1	CPD6		14					1B3(T23)				1,3						BEFORE STARTING TESTS, (ST),(T) AND (T1) SHOULD BE NON-OPERATED.
TMR2	CPD6		14					(ST)O, (T1)NO				1,2,3						
TMR3	CPD6		14					(ST)O, (T1)NO				1,2,3						ALLOW 2 MINUTES BETWEEN TESTS

TEST NOTES:

1. ADJUST WITH (R1) POTENTIOMETER OF ASSOCIATED TIMER.
2. BEFORE STARTING TESTS, BLOCK (T) OPERATED AND REMOVE BLOCKING TOOL. (T) SHOULD REMAIN OPERATED, WITH (ST) OPERATED, UNTIL END OF TEST. PRIOR TO EACH TEST, (T) SHOULD BE OPERATED AND (T23) NON-OPERATED.
3. USE TEST SET FOR TIMING TESTS:

DESIG	TEST CLIP DATA CONN BK	CONN R	CONN W	TST SET PREP SEND KEY	RCV SW	TIME REQT MSEC MIN	MAX
TMR1	GRD	U(ST)	1B(T)	MK	OC-GRD	336	354
TMR2	GRD	U(PR)	1M(T)	MK	OC-GRD	1575	1735
TMR3	GRD	U(NR)	1M(T)	MK	OC-GRD	96	104

SIGNALING TEST CIRCUIT

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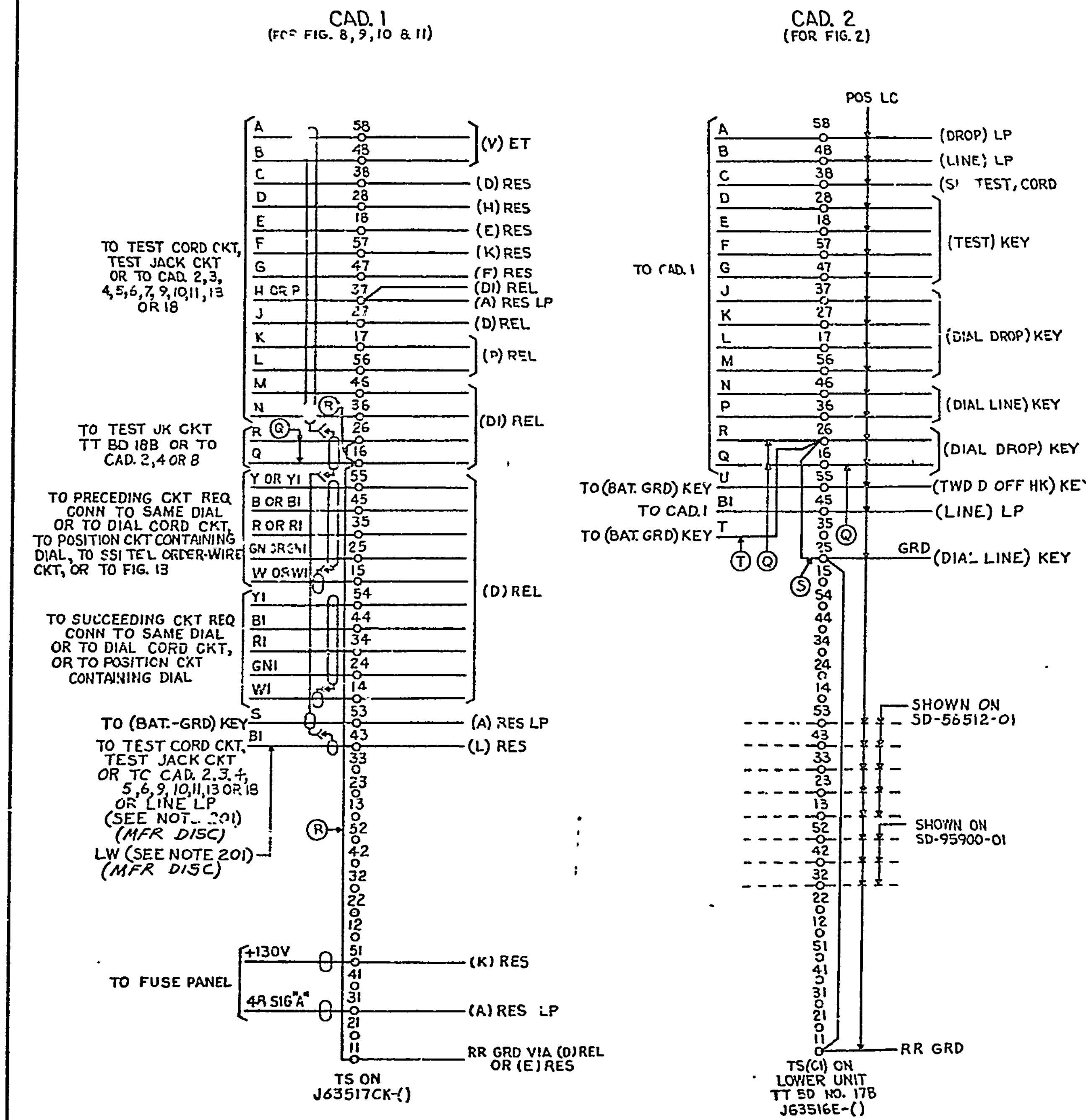
DRAWING ISSUE: 1, 2A, 3D, 4AC, 5B, 6AR, 7B, 9B, 10A, 11B, 13D



ISSUE 15D

SIGNALING TEST CIRCUIT

②

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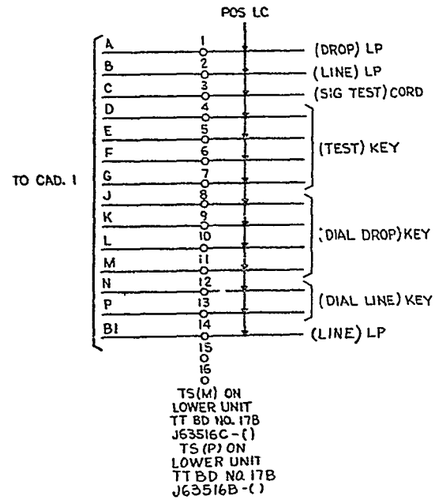
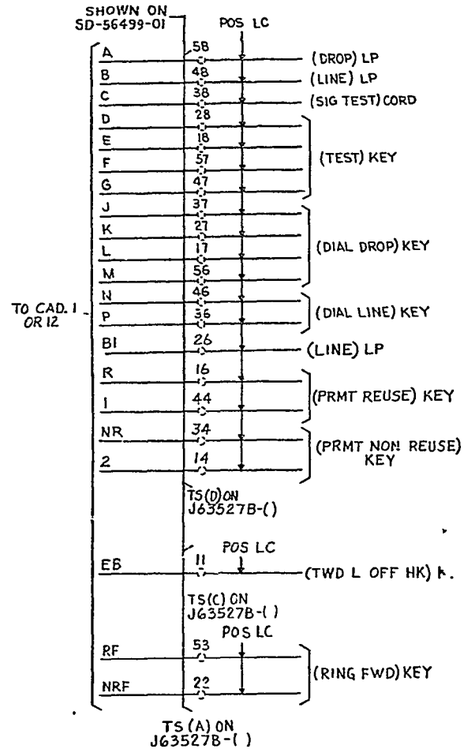
6S

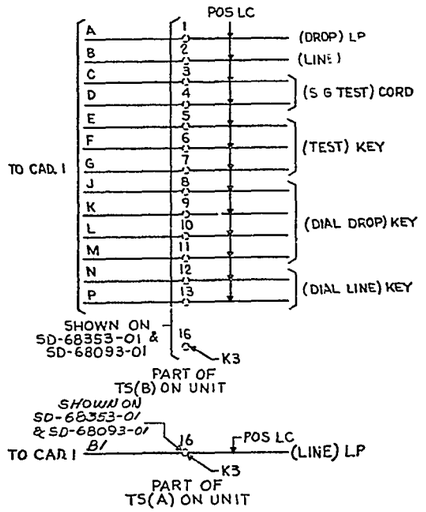
CAD. 3 (A&M ONLY)
(FOR FIG. 1 OR 2)



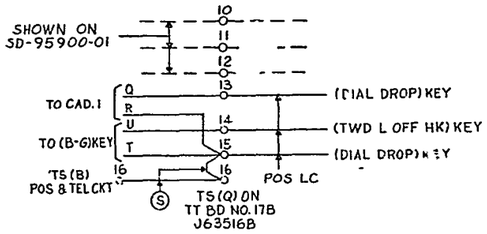
CAD. 5
(FOR FIG. 6 OR 6 & B)



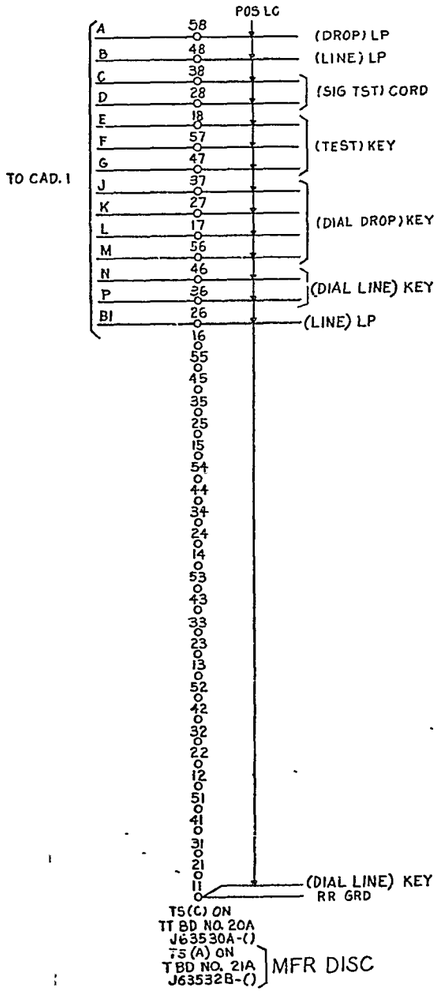
CAD. 6 (A&M ONLY)
(FOR FIG. 3 & W.O. N
TOLL TESTBOARD NO. 17C
(A&M ONLY) FOR J63519C
(MFR DISC.) FOR J63519B, D, G & H



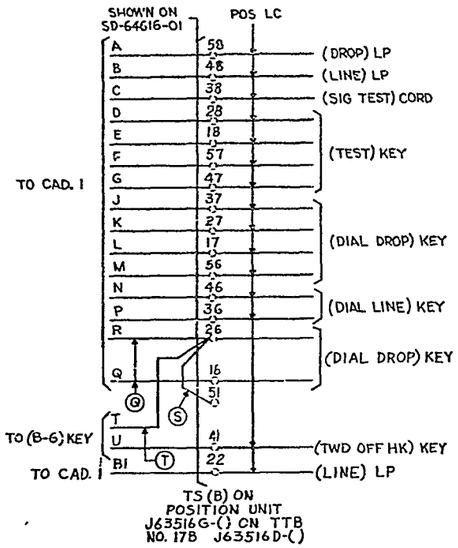
CAD. 8 (A&M ONLY)
(FOR FIG. 12)



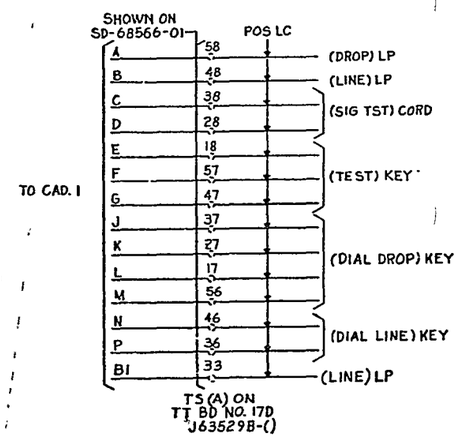
CAD. 10
(FOR FIG. 3)



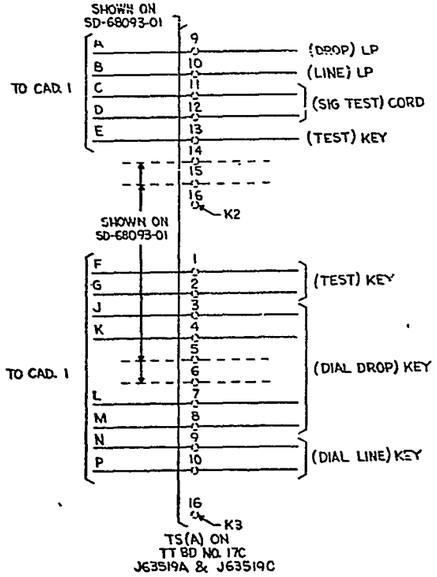
CAD. 4
(FOR FIG. 2)



CAD. 9
(FOR FIG. 3)



CAD. 7 (MFR DISC.)
(FOR FIG. 3)



DRAWING ISSUE

1	AP LAS	T-C-S
2A	RJB GAS PD	
3D	REV ORY POS	A
4AC	WB LL PCB	NO
5B	RAN LL PAB	NO
6AR	GB GAS PAB	NO
7B	GB GAS PAB	NO B
9B	AS WE LS	NO
18D		NO

ISSUE 15D

SIGNALING TEST CIRCUIT (2)

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SIZE 6S

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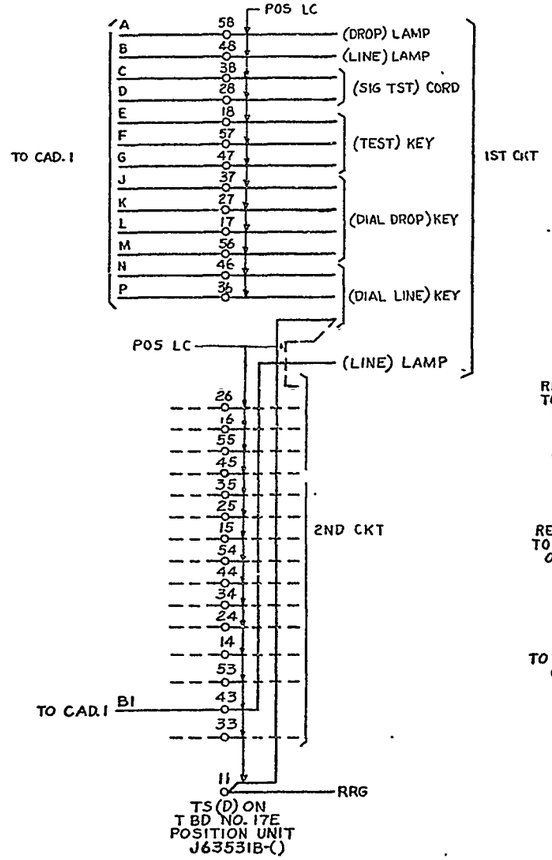
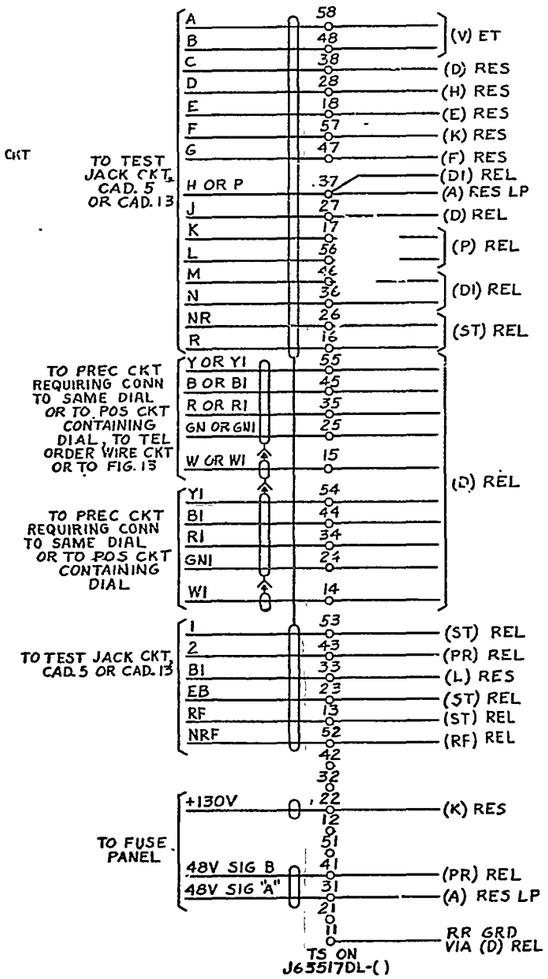
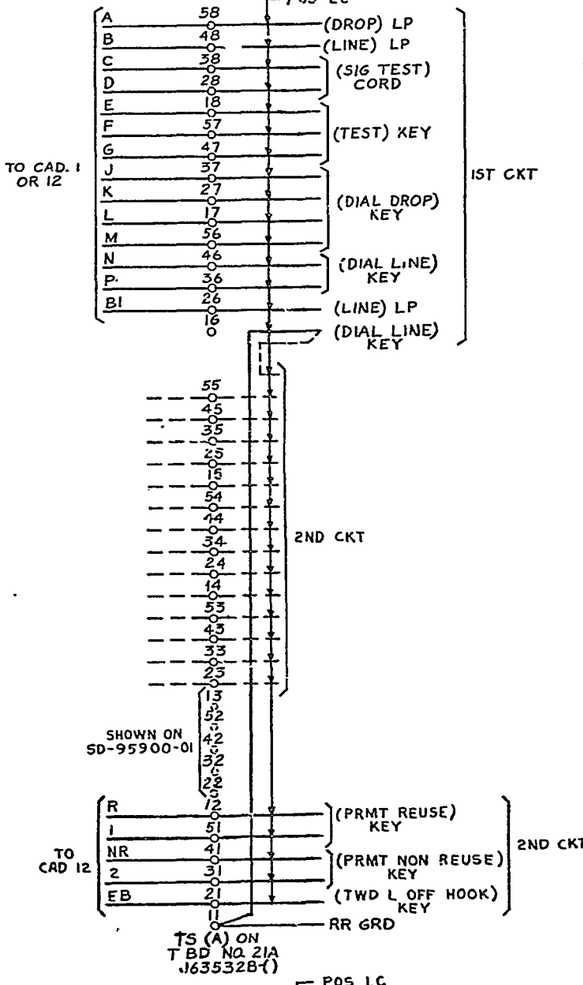
CAD. 11
(FOR FIG. 3)



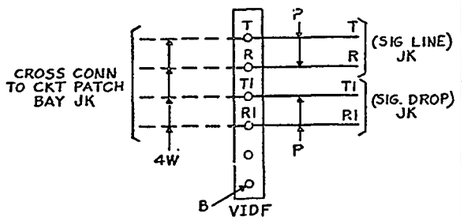
CAD. 12
(FOR FIG. 8, 9, 10 & 14)



CAD. 13
(FOR FIG. 3 OR 3A & B)
(F & G OPTION)



CAD. 14
(FOR FIG. 4)



DRAWING ISSUE
5B PAR LL POB
6AR GB POB
7B GD JC
9B DS WE JS

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SIGNALING TEST CIRCUIT (2)
SD-56497-01-7
BELL TELEPHONE LABORATORIES INCORPORATED
6S

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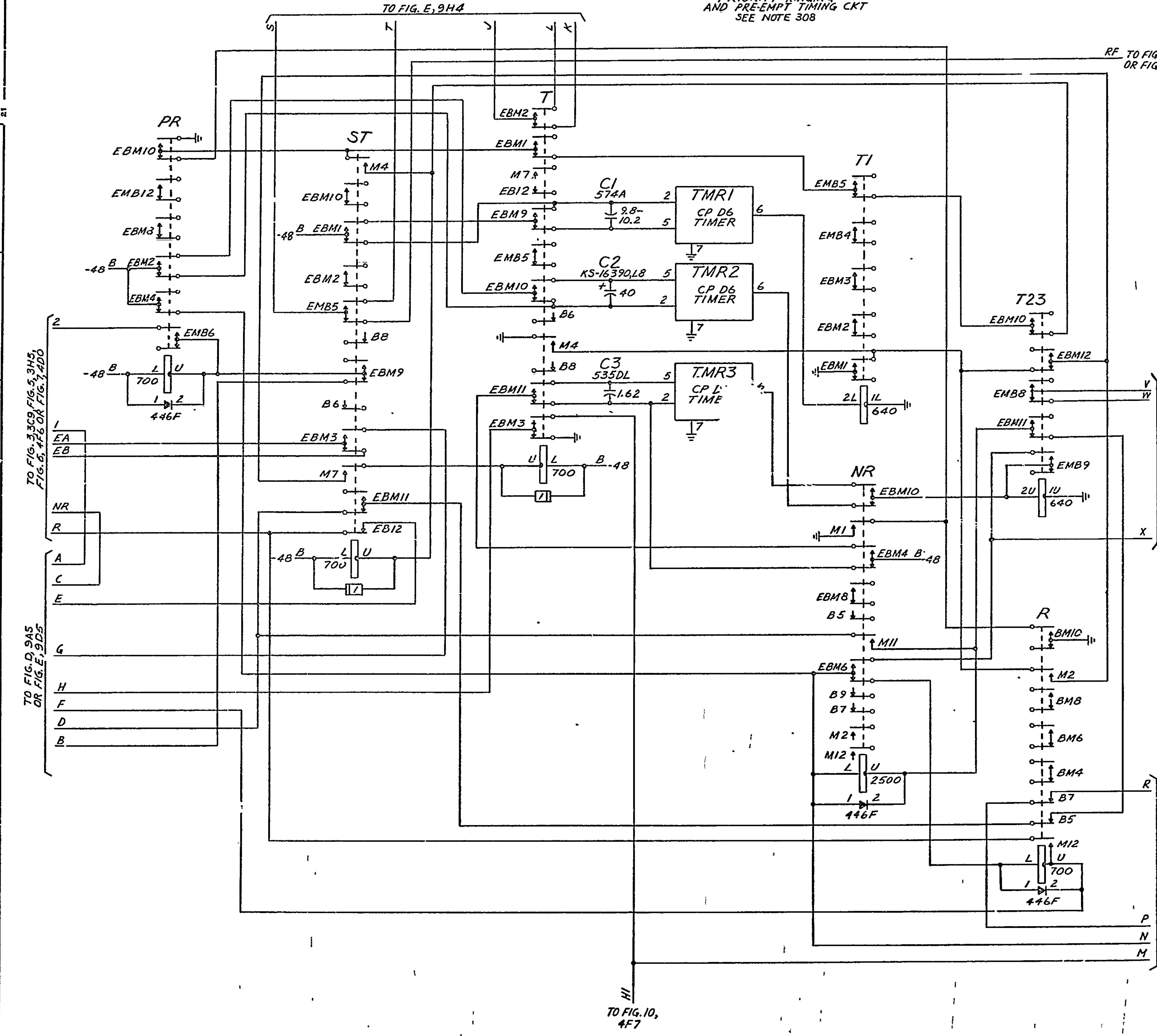
FIG. 14
PRIORITY RINGING AND PRE-EMPT TIMING CKT
SEE NOTE 308



DRAWING ISSUE	
7B	GB GRS PDB
9B	DS WE JS
10A	JJB MD JS
13D	

13

SIGNALING
TEST CIRCUIT

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BELL TELEPHONE LABORATORIES INCORPORATED

6S

FIG. A

TO FIG. 3, 3D9, FIG. 5, 3H5, FIG. 6, 4G6 OR FIG. 7, 4C0

E2
E1

FIG. B
SEE NOTE 308

TO FIG. 3, 3D9 OR FIG. 6, 4G6

EA
EB
E2
E1
NR
R
PART OF G G2F OR F G1BP
(B) 2 3 1
(A) 3 2 1
PRMT REUSE ⟷ PRMT NON REUSE
I
(C) 2 1 3
(D) 1 2 3
E
TO FIG. 14 8A7
RF
PART OF F G1BP
PRIOR RING ⟷ RING FWD
NRF TO FIG. E
PART OF G G2F
PRIOR RING

FIG. C
SEE NOTE 308

TO FIG. 5, 3H5 OR FIG. 7, 4C0

EA
EB
E2
E1
NR
PRMT NON REUSE 547B (RED)
2
PRIOR RING 547A
1
PRMT REUSE 547B (RED)
R
TO FIG. 14 8A7
RF
E RING FWD 547B
NRF TO FIG. E

FIG. D

TO FIG. 14, 8F0

A
C
E
G
H
F
D
B

FIG. E

TO FIG. B OR C
NRF

TO FIG. 14, 8F0

A
C
E
RF
BG
BB
EBM2
G
H
F
EBM11
D
B
EB12
M7
EBM10
W
TO FIG. 14
X
EBM9
V
EBM3
M4
EBM5
R
P
U
L
700
TO FIG. 14, 8G7
N
M
S
T
J
K
L
TO FIG. 14, 8A2

DRAWING ISSUE

9B	DS WE JS
10A	JJB HP JS
11B	
13D	

SIGNALING TEST CIRCUIT

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SYSTEM 6S

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FIG. 15
MON CORD CKT

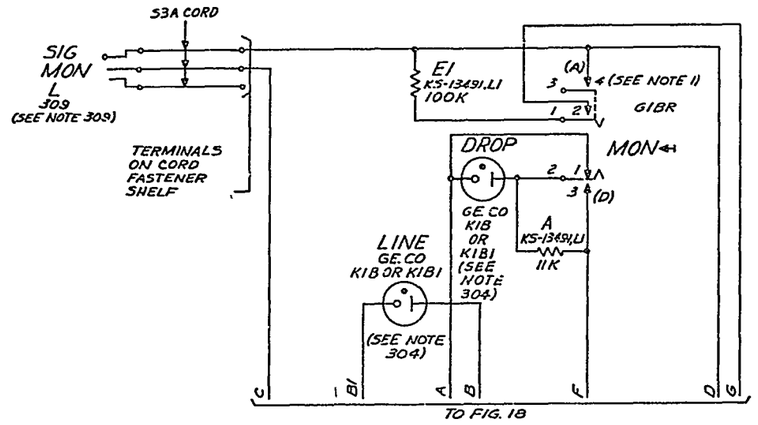


FIG. 16
MON JACK CKT

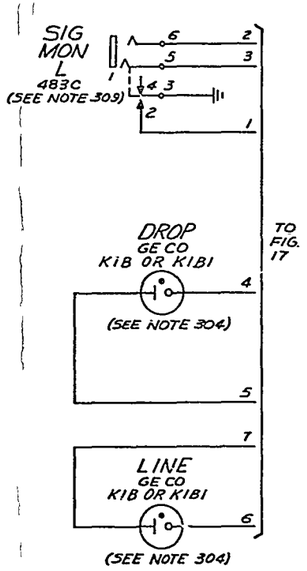


FIG. 17
AUX RELAY CKT

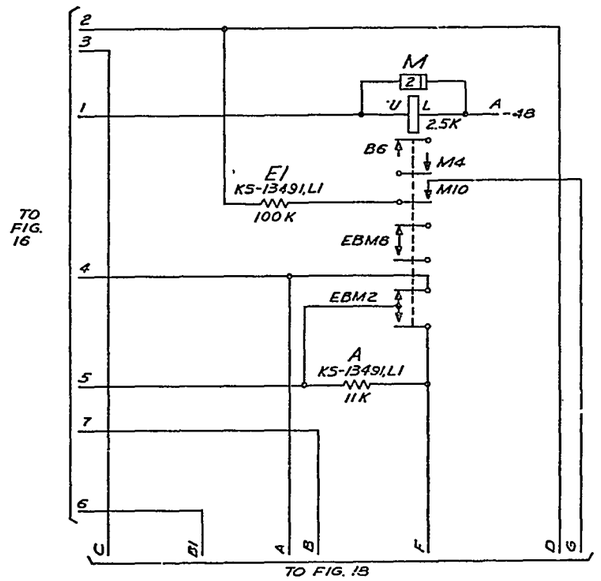
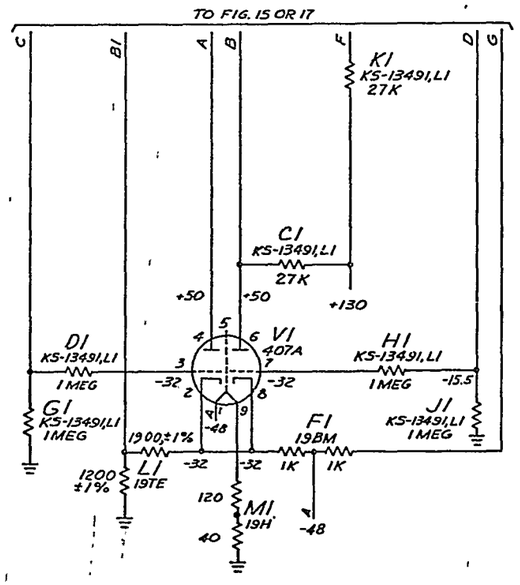


FIG. 18
TUBE AND REGISTER CKT
FOR MONITORING ONLY
(SEE NOTE 302)



NOTES

1. TERMINAL 4 OF THE MON KEY IS USED FOR TERMINATING THE E1 RESISTOR.

DRAWING ISSUE
11B
12AR
13D

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13

SIGNALING
TEST CIRCUIT (2)

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BELL TELEPHONE LABORATORIES
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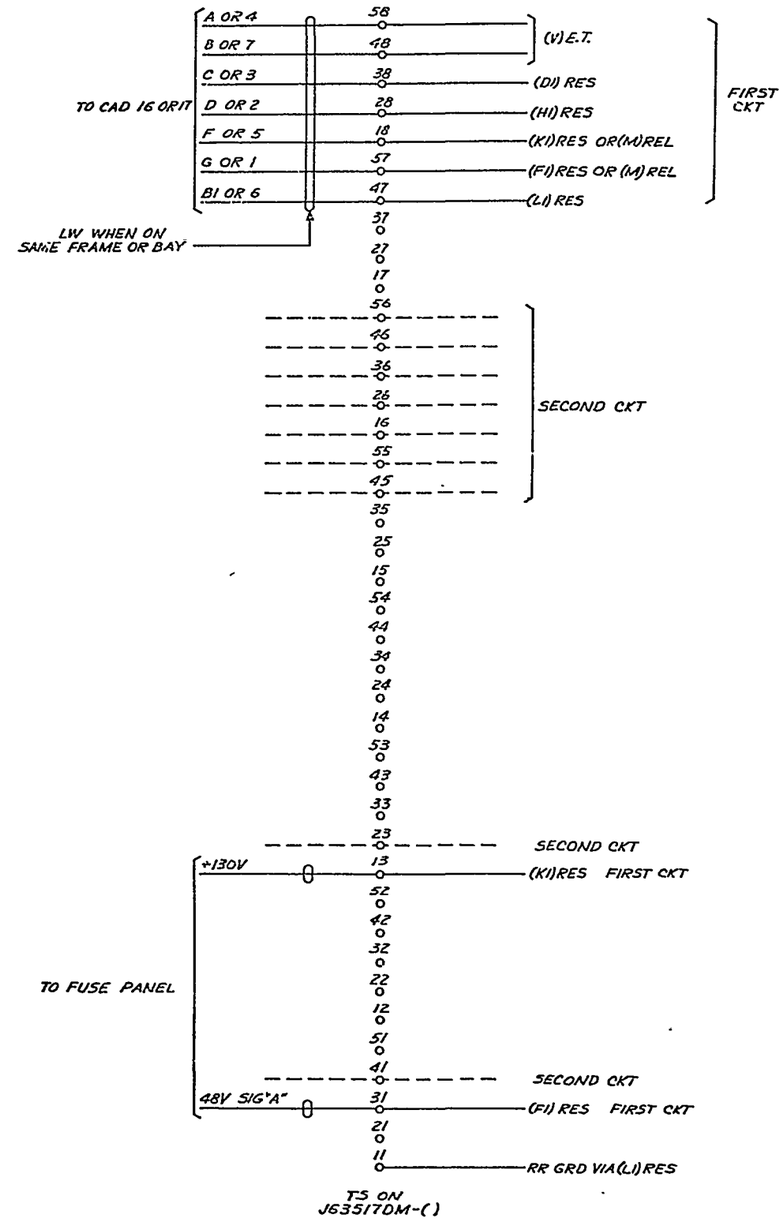
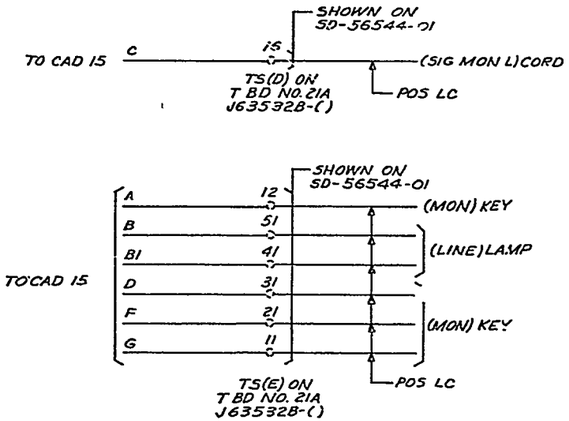
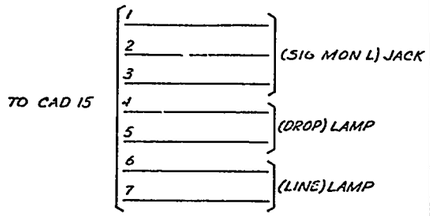
CAD 15
(FOR FIG. 17 AND 18)



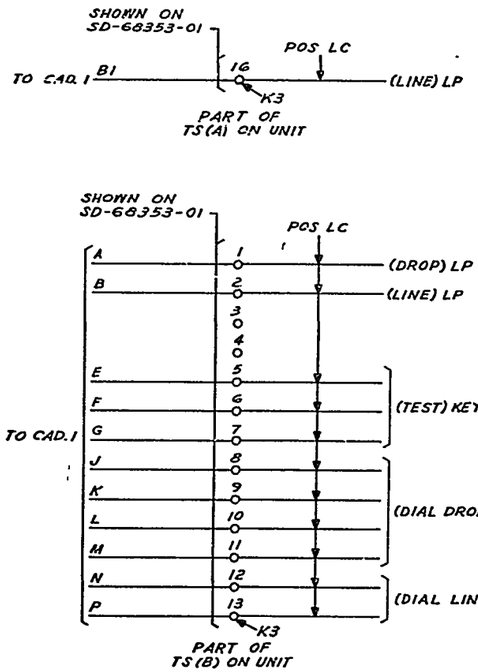
CAD 16
(FOR FIG. 15)

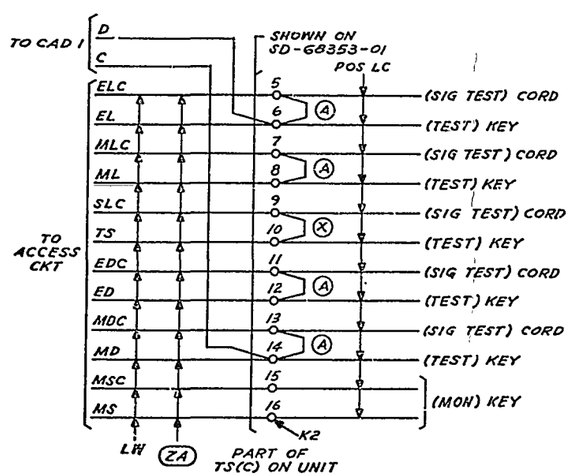


CAD 17
(FOR FIG. 16)



CAD 18
(FOR FIG. 3 AND W, X, A & ZA OPTIONS)
TOLL TESTBOARD NO. 17C
(J63519G-( ))





DRAWING ISSUE
11B
13D

ISSUE 15D

SIGNALING TEST CIRCUIT (2)

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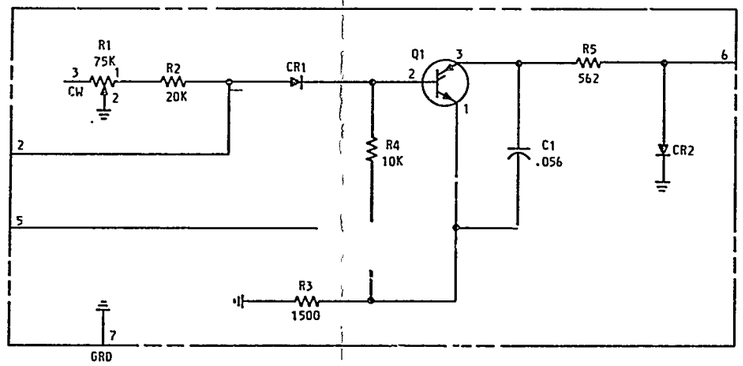
CPS D6

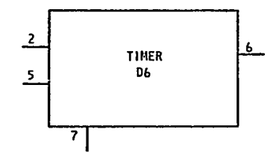
TIMER



MANUFACTURING REFERENCES

CATEGORY	NO.
CONTROLLING DRAWING	SD-3B150-01
CIRCUIT PACK CODE	D6
CONNECTOR ON FRAME	910A
MANUFACTURING TEST REQUIREMENTS	SEE BELOW

SYMBOL



NOTES:

1. UNLESS OTHERWISE SPECIFIED:
   RESISTANCE VALUES ARE IN OHMS,
   CAPACITANCE VALUES ARE IN MICROFARADS,
   VALUES PRECEDED BY THE SYMBOL + (PLUS)
   OR - (MINUS) ARE IN VOLTS.

INPUT/OUTPUT INFORMATION:

TERMINAL 2 IS CONNECTED TO THE NEGATIVE (-) TERMINAL OF THE TIMING CAPACITOR AND ALSO TO THE BREAK CONTACT OF AN EARLY-BREAK-MAKE CONTACT OF THE TIMING START RELAY. TERMINAL 5 IS CONNECTED TO THE POSITIVE (+) TERMINAL OF THE TIMING CAPACITOR AND ALSO TO THE MAKE CONTACT OF THE EARLY-BREAK-MAKE CONTACT OF THE TIMING START RELAY. THE FIXED CONTACT OF THE TIMING START RELAY IS CONNECTED TO -48 VOLTS. TERMINAL 7 IS CONNECTED TO GROUND. TERMINAL 6 IS CONNECTED TO THE WINDING OF THE RELAY THAT IS TO OPERATE AT THE END OF THE TIMING PERIOD. THE OTHER END OF THIS RELAY WINDING IS CONNECTED TO GROUND.

THE VALUE OF THE TIMING CAPACITOR FOR THE TIME INTERVAL (IN SECONDS) BETWEEN THE OPERATION OF THE TIMING START RELAY AND THE OUTPUT OF BATTERY ON TERMINAL 6 IS

$$C\ MIN\ (ufd) = \frac{TIME\ (MAX)}{.0566}$$

$$C\ MAX\ (ufd) = \frac{TIME\ (MIN)}{.01745}$$

FOR 45 TO 50 VOLT POWER SUPPLY

$$C\ MIN\ (ufd) = \frac{TIME\ (MAX)}{.0526}$$

$$C\ MAX\ (ufd) = \frac{TIME\ (MIN)}{.0187}$$

FOR 42.75 TO 52.5 VOLT POWER SUPPLY

INPUT/OUTPUT INFORMATION: (CONT)

WITH THE TIMING CAPACITOR SELECTED WITHIN THESE VALUES, POTENTIOMETER (R1) IS ADJUSTED FOR THE EXACT TIME REQUIRED.

RECYCLE TIME, IN SECONDS, IS A FUNCTION OF THE VALUE OF THE TIMING CAPACITOR.

$$TIME\ (NOM) = 7.5 \times 10^{-3} C\ NOM\ (ufd)$$

FASTER RECYCLE MAY BE OBTAINED BY CONNECTING AN EXTERNAL RESISTOR PARALLEL TO (R3) FROM TERMINAL 5 TO GROUND.

THE OUTPUT RELAY MUST BE SELECTED TO OPERATE IN SERIES WITH 590 OHMS ON THE MINIMUM BATTERY VOLTAGE MINUS TWO VOLTS.

CIRCUIT DESCRIPTION:

WITH THE TIMING START RELAY NON-OPERATED, THE TIMING CAPACITOR WILL BE CHARGED TO THE BATTERY VOLTAGE. WHEN THE TIMING START RELAY OPERATES, BATTERY IS CONNECTED TO THE POSITIVE SIDE OF THE TIMING CAPACITOR CAUSING THE NEGATIVE SIDE TO GO TO TWICE THE BATTERY VOLTAGE. UNDER THIS CONDITION DIODE (CR1) AND THE BASE EMITTER N JUNCTION OF TRANSISTOR (Q1) IS BACK BIASED. WHEN THE TIMING CAPACITOR HAS DISCHARGED THROUGH THE (R1) AND (R2) RESISTORS TO A POINT WHERE DIODE (CR1) AND TRANSISTOR (Q1) ARE FORWARD BIASED, TRANSISTOR (Q1) WILL TURN ON. THE FORWARD CURRENT OF TRANSISTOR (Q1) WILL OPERATE THE OUTPUT RELAY.

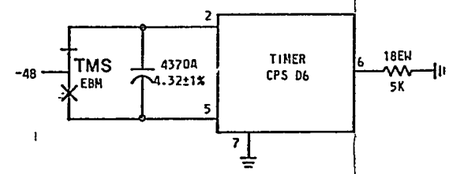
THE RELEASE OF THE TIMING START RELAY WILL TURN-OFF TRANSISTOR (Q1) AND RECYCLE THE TIMER.

MANUFACTURING TEST REQUIREMENTS:

THE TIME INTERVAL BETWEEN THE OPERATION OF TMS AND THE OUTPUT OF BATTERY ON TERMINAL 6 SHOULD BE:

76 MSEC MAX WITH POTENTIOMETER (R1) FULLY COUNTER-CLOCKWISE.

242 MSEC MIN WITH POTENTIOMETER (R1) FULLY CLOCKWISE.



DRAWING ISSUE 13D

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SIGNALING TEST CIRCUIT (2)

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