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SD-65827-01

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1	1	2B	2B	3D	2B APP 1D
4D	2B APP 2D	5D	2B APP 3D	6B	2B APP 4B

DWG ISSUE	CD ISSUE	DATE ISSUED	Diagram	Appd
7B	3B	1-6-72	LFS GB#	HRP FLS AFR

SHEET INDEX NOTES

1. WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.
2. THIS SHEET INDEX WILL BE REISSUED AND BROUGHT UP TO DATE EACH TIME ANY SHEET OF THE DRAWING IS REISSUED, OR A NEW SHEET IS ADDED.
3. THE ISSUE NUMBER ASSIGNED TO A CHANGED OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE SHEET INDEX.
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER.
5. THE LAST ISSUE NUMBER OF THE SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.

SUPPORTING INFORMATION

CATEGORY	NO.
EQUIPMENT DRAWINGS	J58837AD
MAINTENANCE BSP	540-560-501

7

SD-65827-01 1J07

PBX SYSTEMS
NO. 701B
TEST CIRCUIT
FOR TESTING REGISTER SENDER AND LINK CIRCUITS

(TST CKT FOR REG SDR & LNK) (2)

BELL TELEPHONE LABORATORIES INCORPORATED 6S

AT&TCO STANDARD

SD-65827-01-A1
10 SHEETS

SD-65827-01-A1

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DRAWING ISSUE 7B

APPARATUS INDEX

RELAYS

DESIG	LOCATION FS	APP FIG	EQPT
C	1G1	1	
CLA2	2C3	1	
P	2A4	1	
P1	1A1	1	
P2	1B1	1	
P3	1B1	1	
P4	1D1	1	
P5	1F1	1	
SC	2E3	1	

CORDS

-	2B7	2	
-	2D7	3	
PATCH CORD	3A4	5	
PATCH CORD 1	2B7,2B9	4	
PATCH CORD 2	2D7,2D9	4	

DIODES

A	1G6	1	
B	1G6	1	
C	1G6	1	
CS	2C3	1	
D	1F6	1	
E	1F6	1	
F	1F6	1	
G	1E6	1	
H	1E6	1	
J	1E6	1	
K	1D6	1	

JACK

DESIG	LOCATION FS	APP FIG	EQPT
A	2B6, 2C6	1	
B	2B6, 2C6	1	
C	2D6, 2E6	1	
D	2D6, 2E6	1	
PPS	2A6	1	

KEY

CLA, CMS, CT	SEE APP FIG.	1	
PUSH BUTTON DIAL	2B1	1	
RV	SEE APP FIG.	1	

LAMPS

CS	2D4	1	
DIGIT 0	1C6	1	
1	1A6	1	
2	1B6	1	
3	1B6	1	
4	1B6	1	
5	1A6	1	
6	1C6	1	
7	1D6	1	
8	1D6	1	
DIGIT 9	1C6	1	

LAMPS (CONT)

DESIG	LOCATION FS	APP FIG	EQPT
DTM	2C4	1	
RL	2B0	1	
SDR 0	1G6	1	
1	1G6	1	
2	1G6	1	
3	1F6	1	
4	1F6	1	
5	1F6	1	
6	1E6	1	
7	1E6	1	
8	1E6	1	
SDR 9	1D6	1	

PLUG

A & B	2B7,2C7	2,4	
C & D	2D7,2E7	3,4	
L	2B8	2,4	
R	2D8	3,4	

RESISTORS

A	2C5	1	
B	2D3	1	
HG	2B5	1	
P1	1B3	1	
P2	1B3	1	
RL	2C3	1	

SOCKET

DESIG	LOCATION FS	APP FIG	EQPT
SR0	3B6	5	
SR1	3B6	5	
SR2-9	3A6	5	
TR	3B3	5	

LEAD INDEX

DESIG	LOCATION FS	CAD
REGISTER SENDER CIRCUIT		
0	3B7	1D6
1	3B7	1D6
2	3B7	1D6
4	3B7	1D6
7	3B7	1D6
CLA	3B7	1D6
CLA2	3B7	1D6
CS	3B7	1E0,1A3 1D6
CT	3B7	1D6
KR	3B7	1D6
R	3B7	1D6
SD-9	1F7	1A3,1E0 1C6
T	3B7	1D6

OPTION INDEX

APP OR WRG	LOCATION FS	APP FIG.	CAD
2	2B7,2C7	2	
3	2D7,2E7	3	
4	2B7,2C7,2D7,2E7	4	
5	2F6,3B2	5	1
-			
Z	2A5,2B5	1	
Y	2A5,2A6,2B6	1	
X	2D3		1,2
W	2D4		1,2
V	2C2	1	
T	2C2	1	2
S	2D4		
R	2D4		
Q	2B6,2B7,2C6, 2D6,2D7,2E6	4	
N	2B6,2C6,2D6,2E6	4	
M	2B3,2B4,2C2,2C4	1	1
K	2B3,2B4,2C3,2C4	1	1
E	2C2	1	2

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TEST CIRCUIT (2) SD-65827-01-A2

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-65827-01-A2

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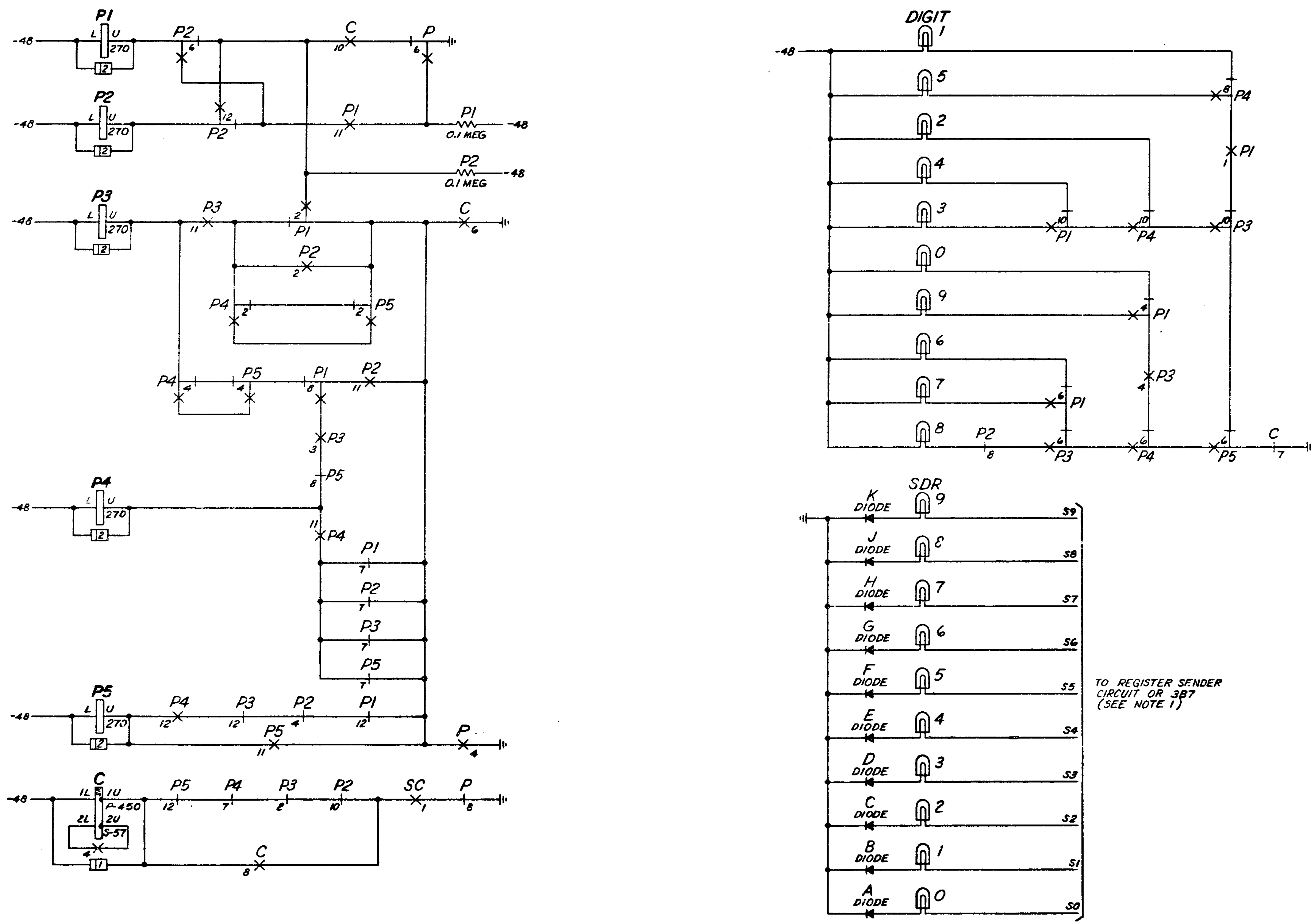
PART OF FS I
TEST CIRCUIT



NOTE:
1. LEADS S0-S9 CONNECT TO THE FIRST THRU TENTH REGISTER SENDERS RESPECTIVELY, ONE S- LEAD PER REGISTER SENDER.

DRAWING ISSUE	
1	
2B	
3D	
4D	
5D	
6B	PJS RHP
7B	

7

TEST CIRCUIT

SD-65827-01-B1

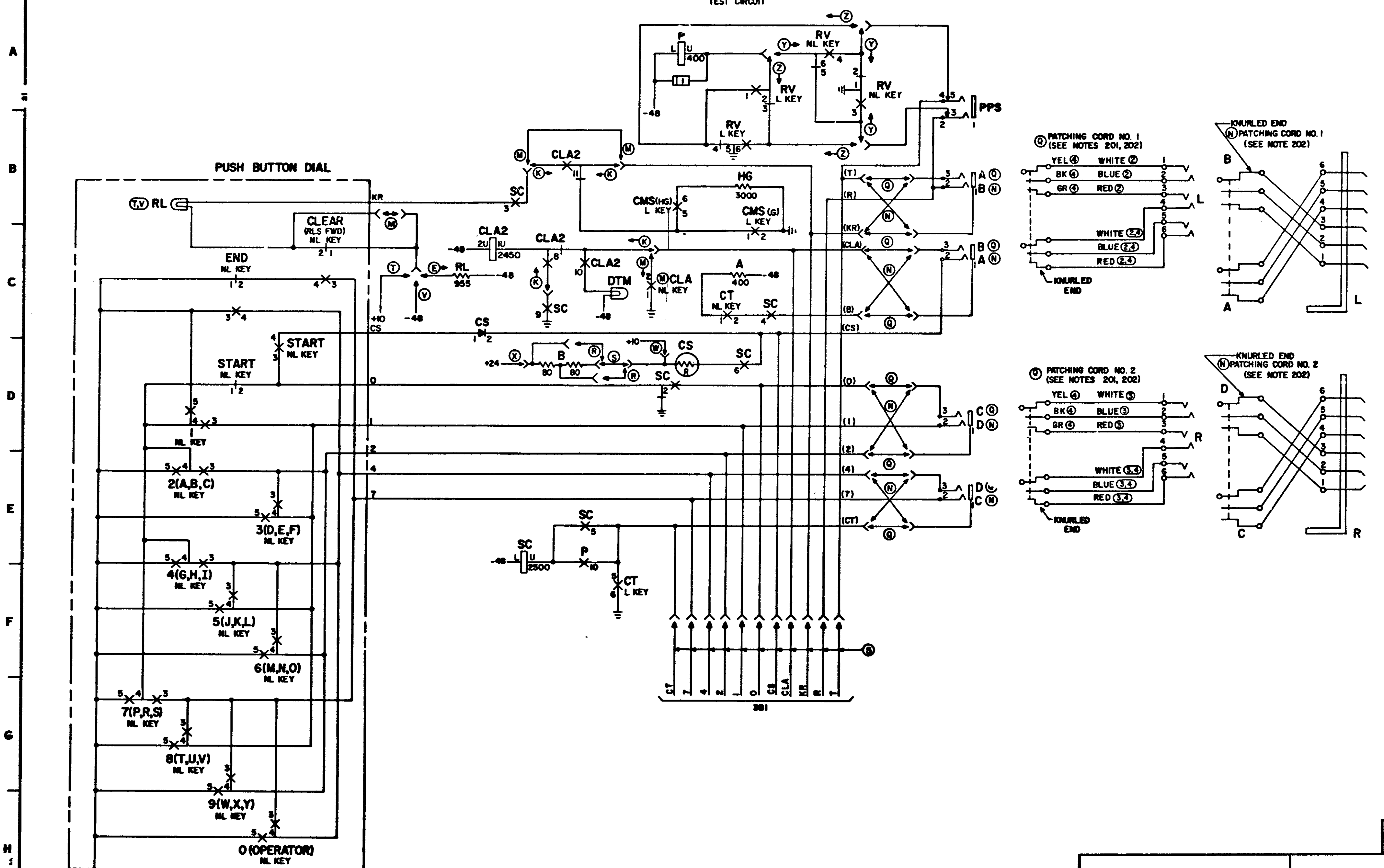
BELL TELEPHONE LABORATORIES INCORPORATED

6S

SD-65827-01-B1

TCI Library http://www.telephonecollectors.info/

PART OF FS 1
TEST CIRCUIT



PUSH BUTTON DIAL
RL
CLEAR (RLS FWD) NL KEY
END NL KEY
START NL KEY
2(A,B,C) NL KEY
3(D,E,F) NL KEY
4(G,H,I) NL KEY
5(J,K,L) NL KEY
6(M,N,O) NL KEY
7(P,R,S) NL KEY
8(T,U,V) NL KEY
9(W,X,Y) NL KEY
0 (OPERATOR) NL KEY
RV NL KEY
RV L KEY
PPS
CLA2
CMS(HG) L KEY
HG 3000
CMS (G) L KEY
DTM
CLA NL KEY
CT NL KEY
CS
SC
P
CT L KEY
PATCHING CORD NO. 1 (SEE NOTES 201, 202)
PATCHING CORD NO. 2 (SEE NOTES 201, 202)
KNURLED END
PATCHING CORD NO. 1 (SEE NOTE 202)
PATCHING CORD NO. 2 (SEE NOTE 202)
YEL
BK
GR
WHITE
BLUE
RED
381

DRAWING ISSUE		
1	JB RE	E.A. NY
2B	ES JBS POB	
3D	GDP JBS PD	
4D	VS HM TEB	
5D	VOG GE TEB	NY
6B	CED PJS RHP	HW

LOST DRAWING REPRODUCED WITHOUT CHANGE 9-17-69 RPR

7

TEST CIRCUIT ②

SD-65827-01-B2

BELL TELEPHONE LABORATORIES INCORPORATED

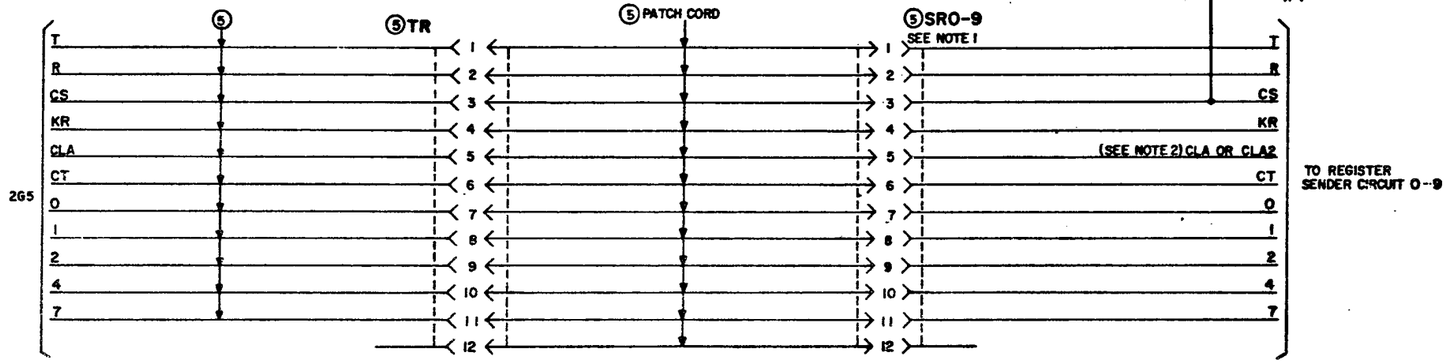
6S

SD-65827-01-B2

TCI Library- http://www.telephonecollectors.info/

FS2

TEST PATCH CIRCUIT



NOTES:

1. ONE SR- RECEPTACLE IS PROVIDED PER REGISTER SENDER CIRCUIT.
2. LEAD DESIGNATION CLA IS ASSOCIATED WITH REGISTER-SENDER CIRCUIT; SD-65816-01, OPTION ZR. LEAD DESIGNATION CLA2 IS ASSOCIATED WITH REGISTER-SENDER CIRCUIT, SD-65816-01, OPTIONS ZS AND YS.

DRAWING ISSUE 7B

7

TEST CIRCUIT ②

SD-65827-01-83

BELL TELEPHONE LABORATORIES 6S

SD-65827-01-83

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APP FIG. 1

RELAY

DESIG	C		CLA2						P		P1		P2		P3		P4		P5				SC	DESIG
CODE	AG37		AK4						AF527		AF518		AF518		AF515		AF515		AF515				AJ83	CODE
OPTION			K																					OPTION
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	
12			M								EMB	1F3	EMB	1B2	BM	1F2	BM	1F1	BM	1G1			EBM		12
11			EBM	2B3							M	1B3	M	1D3	M	1B2	M	1E2	M	1F2			EBM		11
10	M	1A5	EBM	2C4					M	2E3	EBM	1C7	EBM	1G2	BM	1B8	BM	1B7	BM				EBM		10
9			EMB																				EBM	2C3	9
8	EMB	1G2	EMB	2C3					BM	1G3	EBM	1D2	EBM	1D6	BM		BM	1A8	BM	1D2			EBM		8
7	EB	1C5							B	1E3	B	1E3	B	1E3	M	1E3	M	1G2	M	1F3			EBM		7
6	EMB	1B3							BM	1A3	EMB	1D7	EMB	1A1	BM	1D7	BM	1D7	BM	1D8			EBM	2D5	6
5					EMB																		EBM	2E4	5
4	EMB	1G1			EMB				M	1F3	EBM	1C7	EBM	1F2	BM	1D7	BM	1D1	BM	1D2			EBM	2C5	4
3					EBM						M		M		M	1D2	M		M				EBM	2B3	3
2					EBM						EBM	1B2	EBM	1C2	BM	1Q2	BM	1C2	BM	1C3			EBM	2D4	2
1					M						M	1B8	M		M		M		M				EBM	1G3	1
COIL		1G1		2C3						2A4		1A1		1B1		*B1		1D1		1F1				2E3	COIL

NETWORK

DESIG	LOC	CODE
C	1G1	185A
P	2A4	
P1	1A1	186A
P2	1B1	
P3	1B1	
P4	1D1	
P5	1F1	

RESISTOR

OPTION	DESIG	LOC	CODE
	A	2C5	18AJ
	B	2D3	19JJ
K	HG	2B5	18HC
	P1	1B3	KS-13490,L1,.1 MEG
	P2	1B3	
E	RL	2C3	18CB

DIODE

DESIG	LOC	CODE
A	1G6	
B	1G6	
C	1G6	
CS	2C3	
D	1F6	
E	1F6	
F	1F6	
G	1E6	
H	1E6	
J	1E6	
K	1D6	

(G) 420G
(F) 446F

KEY 552A

	CT	RV
6	2F4	2B5
5	2F4	2B5
4		2B5
3		2A5
2	2C5	2A5
1	2C5	2A5

KEY 92W

	RV
6	2A5
5	2A5
4	2A5
3	2A6
2	2A6
1	2A6

JACK

DESIG	LOC		
A	(N) 2C6, 2B6, 2E6, 2D6,	(O) 2B6 2C6 2D6 2E6	246A
B			
C			
D			
PPS	2A6		239A

KEY 547A

	CLA
2	2C4
1	2C4

KEY TOP
(K) CMS
HG (1) G

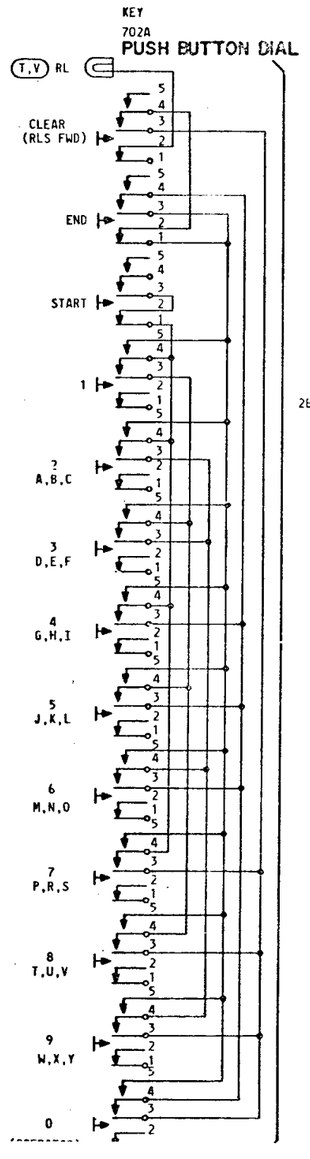
KEY 552E
(K) CMS

G	HG
1	2B5
2	2B5
3	
4	2B4
5	2B4
6	

KEY TOP

CT	RV
OFF	OFF

KEY
702A
PUSH BUTTON DIAL



LAMP

OPTION	DESIG	LOC	CODE
	CS	2D4	13J (RES)
	DIGIT 0	1C6	
	1	1A6	
	2	1B6	
	3	1B6	2Y
	4	1B6	
	5	1A6	
	6	1C6	
	7	1D6	
	8	1D6	
	DIGIT 9	1C6	
K	DTM	2C4	
T	RL	2B0	J2
V	RL	2B0	2Y
	SDRO	1G6	
	1	1G6	
	2	1G6	
	3	1F6	
	4	1F6	
	5	1F6	
	6	1E6	
	7	1E6	
	8	1E6	
	SDR9	1D6	

2B1

LAMP CAP

OPTION	DESIG	CODE
	DIGIT 0	72A
	1	72B
	2	72C
	3	72D
	4	72E
	5	72F
	6	72G
	7	72H
	8	72J
	DIGIT 9	72K
K	DTM	2AY
	RL	2H
	SDRO	
	1	
	2	
	3	72R CHARACTERS AS SPECIFIED IN ORDER
	4	
	5	
	6	
	7	
	8	
	SDR9	

72P USED IN PLACE OF 72R LAMP CAPS FOR UNEQUIPPED SENDER POSITIONS.

⑤APP FIG. 5

CORD

DESIG	LOC	CODE
PATCH CORD	3A4	P12A, 3 FOOT CORD

SOCKET

	DESIG	LOC	CODE
[10]	SRO-9	3A6	KS-8586,L40
	TR	3B3	KS-8586,L40

②APP FIG. 2 (MFR DISC.)

CORD

DESIG	LOC	CODE
[2] -	2B7	P3U

PLUG

DESIG	LOC	CODE
[1] A	2B7	253A
[1] B	2C7	
L	2B8	351G

③APP FIG. 3 (MFR DISC.)

CORD

DESIG	LOC	CODE
[2] -	2D7	P3U

PLUG

DESIG	LOC	CODE
[1] C	2D7	353A
[1] D	2E7	
R	2D8	351G

④APP FIG. 4

CORD

OPTION	DESIG	LOC	CODE
N	PATCH CORD 1	2B9	6P11A
Q	PATCH CORD 1	2B7	P6K
N	PATCH CORD 2	2D9	6P11A
Q	PATCH CORD 2	2D7	P6K

PLUG

OPTION	DESIG	LOC	CODE
Q	[1] A	2B7	428A
	[1] B	2C7	
Q	[1] C	2D7	428A
	[1] D	2E7	
Q	L	2B8	351G
Q	R	2D8	351G

DRAWING ISSUE 7B

7

TEST CIRCUIT

(2) SD-65827-01-CI

BELL TELEPHONE LABORATORIES

SD-65827-01-CI

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CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
	1-1/3	-48V SIGNAL	TEST CIRCUIT
	1/2	+10V SIGNAL	TEST CIRCUIT
	1/2	+24V SIGNAL	TEST CIRCUIT

BATTERY SYMBOL	VOLTAGE RANGE
-48	44 - 52
+10	9 - 11
+24	22 - 26

102.

FEATURE OR OPTION	PROVIDE APP FIG.	PROVIDE APP OR WRG	PROVIDE QUANTITY
TEST CIRCUIT (SEE NOTE 108)	1,5		ONE PER SDR GRP
WHEN +10V IS AVAILABLE IN PBX		W	
WHEN +24V IS AVAILABLE IN PBX		X	
PATCHING CORD	4		TWO PER APP FIG.1
WHEN USED WITH 608B OR 608D SWITCHBOARDS		E	
WHEN USED WITH 1 AND 2, OR 21, 41, AND 51 TYPE TELEPHONE CONSOLE		T	

103.

NETWORK VALUES		
NETWORK NO.	RESISTANCE IN OHMS	CAPACITANCE IN UF
1	470	0.11
2	120	0.30

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	USE IN CIRCUIT A&M	USE IN CIRCUIT MD	
2B	Y OR Z	Z		Y		Z	
	W OR X	W	102	W,X			
3B			102, 105	APP FIG. 2,3			
4D	APP FIG. 2,3,4	APP FIG. 2,3	102, 202	4		2,3	
5D	T OR V	V	102	T		V	
6B	R	S		R		S	
	N	Q		N		Q	
7B	K OR M	M		K		M	
	APP FIG 5	NONE	102	APP FIG. 5			
	F,G	G		F		G	
	E	NONE	102	E			

105. PRIOR TO ISSUE 3D APP FIGS. 2 & 3 WERE PART OF APP FIG. 1.

106. K OPTION SHALL BE FURNISHED FOR USE WITH REG-SDR ISSUE 11B OR LATER.

107. PRIOR TO ISSUE 9B OF REG-SDR THE CLA KEY WAS USED TO CHANGE PULSING SPEED TO 20 PPS WHEN T OPTION WAS FURNISHED IN REG SDR. ISSUE 9B OF REG SDR USED CLA FUNCTION TO PREVENT RECYCLE IN ERROR. CLA KEY HAD NO SPEED CONTROL FUNCTION AFTER THIS ISSUE.

108. THE TEST PATCH CIRCUIT IS FURNISHED AS PART OF THE BASIC REGISTER SENDER TEST UNIT. FOR FIELD MODIFICATIONS TO ADD THE TEST PATCH CIRCUIT TO AN EXISTING REGISTER SENDER TEST UNIT, APP. FIG. 5 CAN BE ORDERED AS SEPARATE A&M RATED EQUIPMENT UNIT PER J58837AD.

EQUIPMENT NOTES:

201. THE KNURLED PORTION OF ONE 353A PLUG TO BE STENCILED "B", THE OTHER PORTION "A". THE 351G PLUG TO BE STENCILED "L". (MFR DISC.) THE KNURLED PORTION OF THE OTHER 353A PLUG TO BE STENCILED "D", THE OTHER PORTION "C". THE 351G PLUG TO BE STENCILED "R".

202. INSTALLER TO STENCIL PATCHING CORDS 1 & 2 AS INDICATED ON SHEET 3.

INFORMATION NOTES:

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

DRAWING ISSUE 7B

7

TEST CIRCUIT (2)

SD-65827-01-D1

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-65827-01-D1

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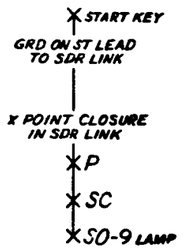
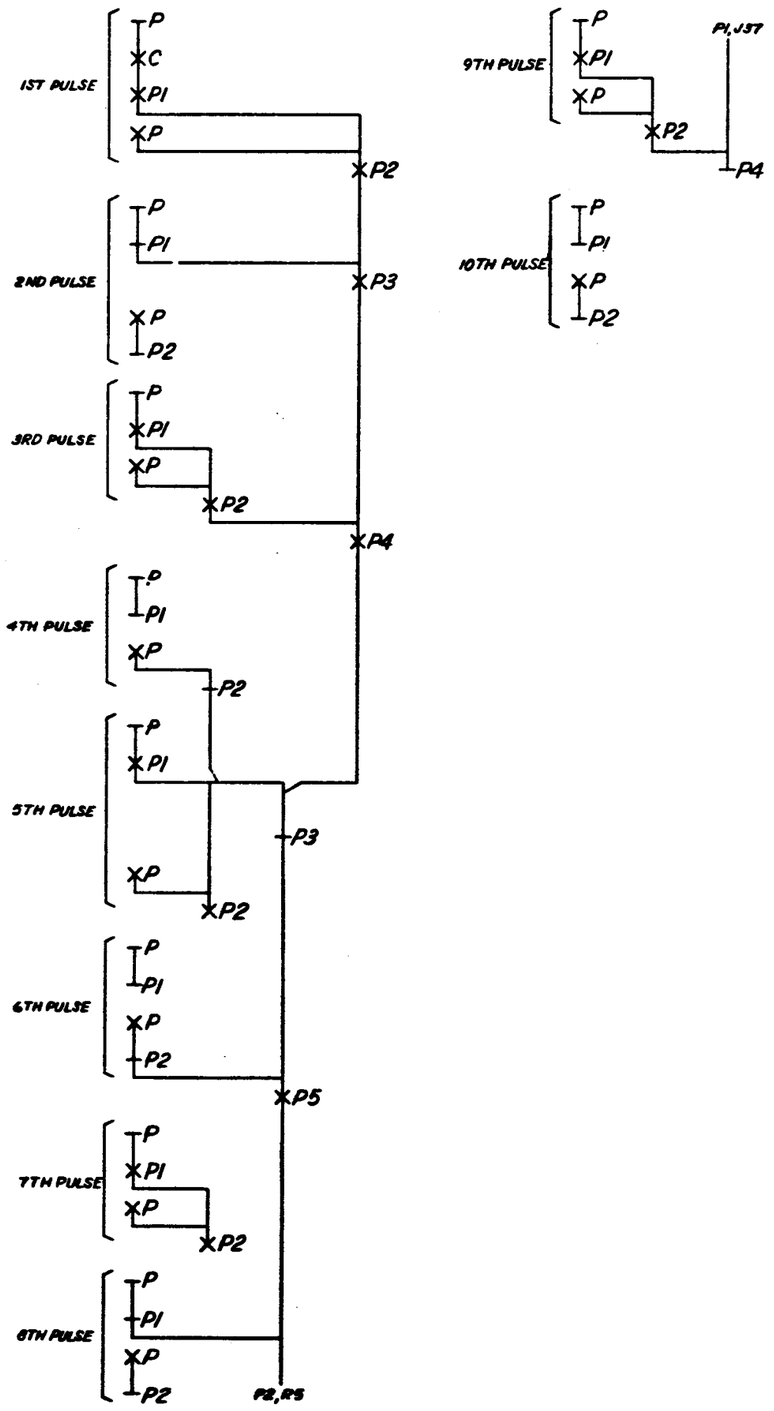
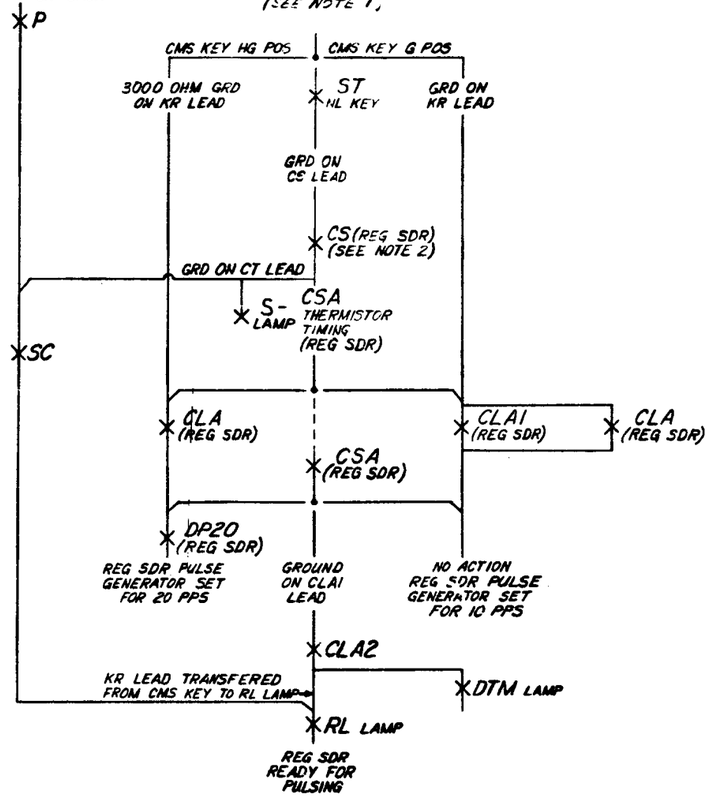
SC 1
SEIZURE OF SENDER FOR TEST (WITHOUT OPTION J)



SC 2
SENDER TEST COUNTING DIAL PULSES



ⓚSC 3
SENDER SEIZURE AND DIAL PULSE SPEED CONTROL (SEE NOTE 1)



NOTES:
1. REGISTER SENDER PER SD-65816-01 MUST BE EQUIPPED WITH YS AND YT OPTIONS (DRAWING ISSUE 11B A&M ONLY).
2. REGISTER SENDER PER SD-65816-02 RELAYS CS AND CSA RELAYS ARE DESIGNATED ON AND ONI.

DRAWING ISSUE: 1, 2B, 3D, 4D, 5D, 6B, 7B

7

TEST CIRCUIT (2) SD-65827-01-E1

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SD-65827-01

CIRCUIT REQUIREMENTS

NO. 701B REGISTER SENDER AND SENDER LINK TEST CIRCUIT

APPARATUS					MECH REQT			CIRCUIT PREPARATION					DIRECT CURRENT FLOW REQT					
DESIG	CODE	OPTION	FIG	LOC	BSP FIG	CON PRESS	ARM TRVL	BLOCK OR INSULATE	TEST CLIP DATA COMM BAT	TEST CLIP DATA COMM GRD	TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK MA	TEST MA	READJ MA	REMARKS
RELAYS																		
C	AG37		1	2G1	297B					1U(C)	GRD		P	O	FS	48.5	46	SHORT CIRCUIT SEC WDG BY
										1U(C)			P	H	FS	6.3	5.9	CONNECTING 2L(C) TO 2U(C)
										1U(C)			P	R	FS	3.9	4.6	
									2L (C)	2U(C)	B/G		S	O		60.5		
CLA2	AK4	K	1	2C3	202					1U(CLA2)	GRD			O		11.9	11.3	MOUNTED WITH SPARE
P	AF527		1	3B4	18					U(P)	GRD			O		36.5	34.5	
P1	AF518		1	2A1	224					U(P1)	GRD			O		100	95	
P2	AF518		1	2B1	224					U(P2)	GRD			O		100	95	
P3	AF515		1	2B1	31					U(P3)	GRD			O		95	90	
P4	AF515		1	2D1	31					U(P4)	GRD			O		95	90	
P5	AF515		1	2F1	31					U(P5)	GRD			O		95	90	
SC	AJ83		1	3E4	249					U(SC)	GRD			O		13.2	12.6	

DRAWING ISSUE	
1	JF R.E. EA
2B	E.S. JAS PDR
3D	GDP JJS P.D.
4D	VS EFB
5D	WDG TJB
6B	CED PJS RHP
7B	

PAGE 1

TEST CIRCUIT

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TEST CIRCUIT (2)

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6S

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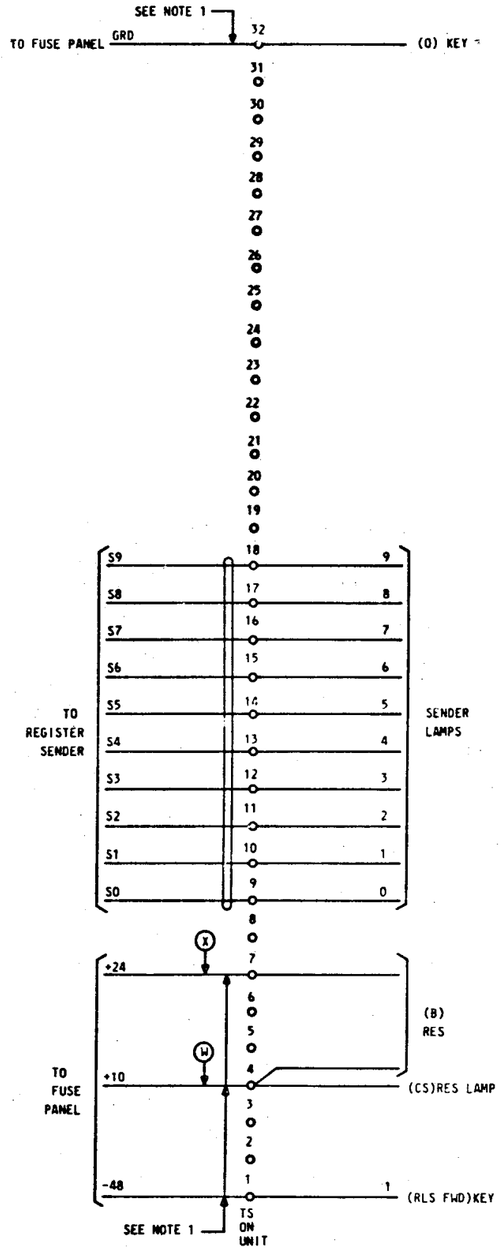
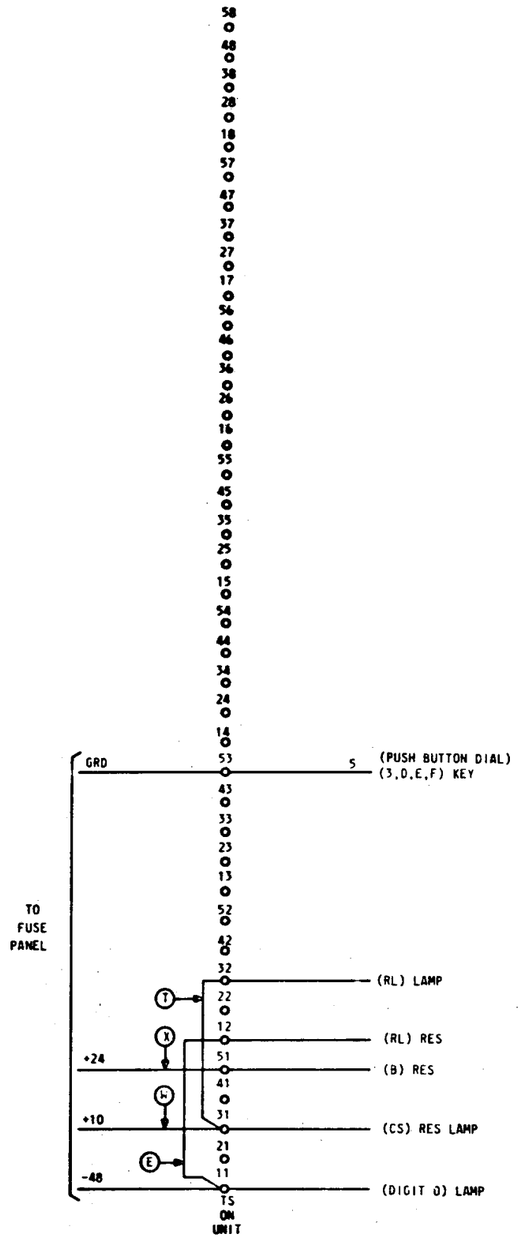
CAD 1 (MFR DISC)

(FOR APP FIG. 1)



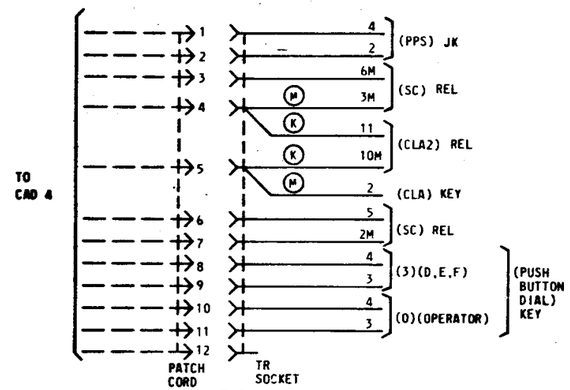
CAD 2

(FOR APP FIG. 1)



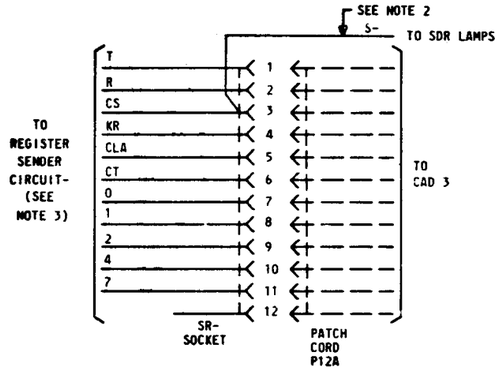
CAD 3

(FOR PART OF APP FIG. 5
TR SOCKET ON PATCH FIELD)



CAD 4

(FOR PART OF APP FIG. 5
SR SOCKETS ON PATCH FIELD)



NOTES:

1. RUN LEADS AS LOOSE WIRE WHEN EQUIPMENT IS LOCATED ON THE SAME MISCELLANEOUS RELAY RACK: OTHERWISE RUN IN CABLE.
2. S- LEAD TO SENDER LAMPS NOT REQUIRED WHEN MODIFYING EXISTING TEST UNITS INSTALLED PER CAD 1.
3. THE REGISTER SENDER CIRCUIT-, LEAD S-, AND SOCKET SR- ARE RELATED IN THE FOLLOWING MANNER:

REGISTER SENDER CIRCUIT	1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH
S- LEAD	0	1	2	3	4	5	6	7	8	9
SR- SOCKET	0	1	2	3	4	5	6	7	8	9

DRAWING ISSUE 7B

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TEST CIRCUIT (2)

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