

SHEET INDEX

[illegible][illegible]

SHEET INDEX NOTES		SUPPORTING INFORMATION	
		CATEGORY	NO.
1. WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.		EQUIPMENT INFORMATION	J33030AF-()
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.		KEYSHEETS NO. 1 355A 350A 35E97	SD-31359-01 SD-31780-01 SD-31364-01 SD-32325-01
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.			

NOTICE - NOT FOR USE OR DISCLOSURE OUTSIDE THE BELL SYSTEM EXCEPT UNDER WRITTEN AGREEMENT

ISSUE
5B

STEP BY STEP SYSTEMS
NO.1, 35XA, 35SA, 35-E-97
INFORMATION TRUNK CIRCUIT
LOOP OR E&M
LEAD SIGNALING
FOR LOCAL DIRECTORY ASSISTANCE
(411)

1099

A78TCO
STANDARD

A8M ONLY FOR 350A & 35E97

SD-35036-01-A1

17 SHEETS

(INFO TRK)

BELL TELEPHONE LABORATORIES
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②

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APPARATUS INDEX

EQPT LOC	APP FIG.	
	NO.	SH NO.
CIRCUIT PACKS		
DET	1	C1
TM	3	C2

DESIG	LOCATION		
	FS	APP FIG.	EQPT
RELAYS			
A	1B3, 2C5	1, 2	3
AI	1F4, 2F5	3	
A2	3F5	3	
B	3C1	3	
BI	3C2	3	
ID	3E2	3	
IDC	3E2	3	

DESIG	LOCATION		
	FS	APP FIG.	EQPT
RELAYS (CONT)			
LC	1C1, 2C2	3	
LCI	3E5	3	
MB	3D2	3	
PI	3D4	3	
RV1	3D5	3	
RV2	3B1	3	
TM	3B6	3	

DESIG	LOCATION		
	FS	APP FIG.	EQPT
CAPACITORS			
A	1B4, 2C6	1, 2	CA2, CA3
AI	1G4, 2G4	3	CA1
B	1B5	1	CA2
C	1B8, 2B7	1, 2	CA2, CA3
D	3D6	3	
TM	3B4	3	CA1

DIODES			
A	1B3, 2C5	1, 2	CA2, CA3
A2	3F5	3	
B	3C0	3	CA1
BI	3C2	3	CA1
M	2E7	2	CA3

DESIG	LOCATION		
	FS	APP FIG.	EQPT
JACKS			
T	SEE APP FIG.	1, 2	
TT		1	

LAMPS			
A	3F2	3	
M	2E6	2	

RESISTORS			
A	1B3, 2B5	1, 2	CA2, CA3
B	1B8, 2C7	1, 2	CA2, CA3
C	3C7	3	CA1
D	1B2	1	CA2
IDC	3E1	3	
M	2E7	2	CA3
MB	3D1	3	
TM	3B3	3	CA1

DESIG	LOCATION		
	FS	APP FIG.	EQPT
REPEAT COIL			
A	1B5	1	

SD-35036-01-A2

ISSUE
4AR

INFORMATION TRUNK CIRCUIT

SD-35036-01-A2

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SD-35036-01-A3

A
B
C
D
E
F
G
H

LEAD INDEX

DESIG	LOCATION	
	FS	CAD
ACCESS CIRCUIT		
CO	3E0	1D1
CT	3E0	1D1
R	1A2, 2B2	1C1
RI	1A7, 2B6	1D1
S	1A1, 2B1	1C1
ST	3F0	1E1
T	1A1, 2B2	1C1
TI	1A7, 2B6	1C1

LOCAL SELECTOR BANK MULTIPLE CKT		
R OR -	1C0, 2C0	1A1, 1B5, 2B4
S OR C	1D0, 2D0	1A1, 1B5, 2B4
T OR +	1A0, 2B0	1A1, 1A5, 2B4

POWER RINGING CIRCUIT OR MISC ALARM CIRCUIT		
120 IPM BUSY	1H4, 2H4	1G1
120 IPM LT	1H4, 2H4	1G1
BT2 120 IPM	1H4, 2H4	1G1
LT1 120 IPM BR2	1H4, 2H4	1F1
LT1 120 IPM TB	1H4, 2H4	1F1

ROTARY OUT TRK SWITCH CKT		
R OR -	1C0, 1F0, 2C0, 2F0	2C4
S OR C	1D0, 1F0, 2D0, 2E0	2D4
T OR +	1A0, 1E0, 2B0, 2E0	2C4

DESIG	LOCATION	
	FS	CAD
TANDEM SELECTOR BANK MULTIPLE CKT		
R OR -	1F0, 2F0	1B1
S OR C	1F0, 2E0	1B1
T OR +	1E0, 2E0	1B1

TRAFFIC REGISTER CKT OR MISC ALARM CKT (REGISTER)		
LTB	1G0, 2F0	1B1, 2E1

TRANSMISSION AND SIGNALING FACILITIES TYPE 1-		
E	2F7	1E5, 1F1
M	2E7	1F1, 1F5

TRANSMISSION FACILITIES		
A	2B8	1E1, 1E5
B	2C8	1E5, 1F1
R OR -	1C9, 2C8	1D5, 2B1
T OR +	1A9, 2B8	1D5, 2B1

DESIG	LOCATION	
	FS	CAD
MANUAL OUTGOING TRUNK TEST CKT		
CTA	3F0	1B1

DESIG	LOCATION	
	FS	CAD
PORTABLE DIRECTORY ASSISTANCE TEST CKT		
CTA	3F0	1B1

TOTALIZER CIRCUIT		
TT-	3G7	1A1, 2E6
TU-	3G7	1A1

TRAFFIC USAGE RECORDER CIRCUIT		
TT-	3G7	1A1
TU-	3G7	1A1

APP OR WRG	RATED ON ISSUE	REF NOTES	LOCATION
Z			APP FIG. 1
Y			APP FIG. 1
X			3C4, F1
W			3G6

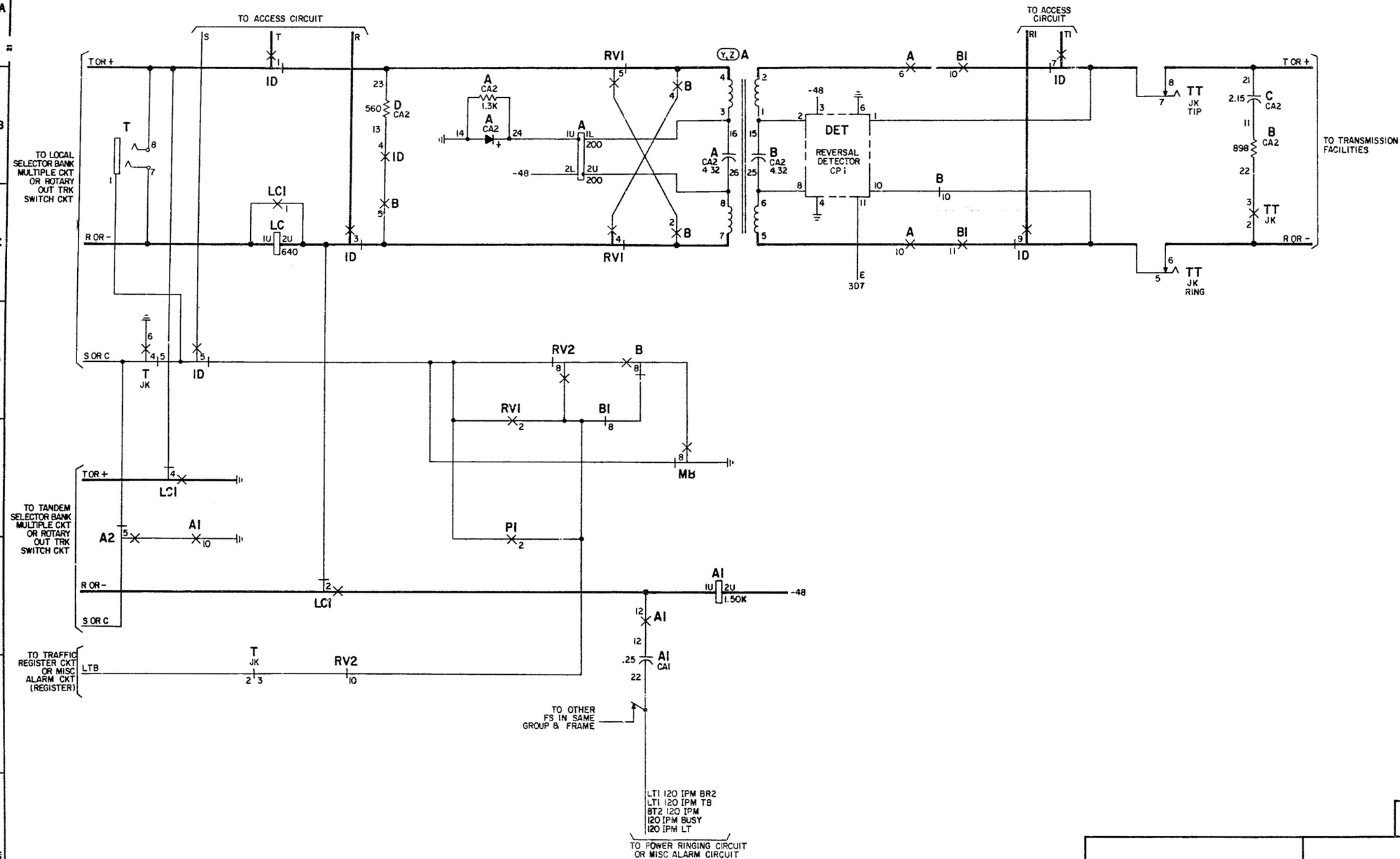
A
B
C
D
E
F
G
H

ISSUE
5B

INFORMATION TRUNK CIRCUIT		②	SD-35036-01-A3
BELL TELEPHONE LABORATORIES INCORPORATED			
		DATE MADE 6S	PRINTED IN U.S.A.

0 1 2 3 4 5 6 7 8 9

FS I
LOOP SIGNALING



C

SD-35036-01-B1

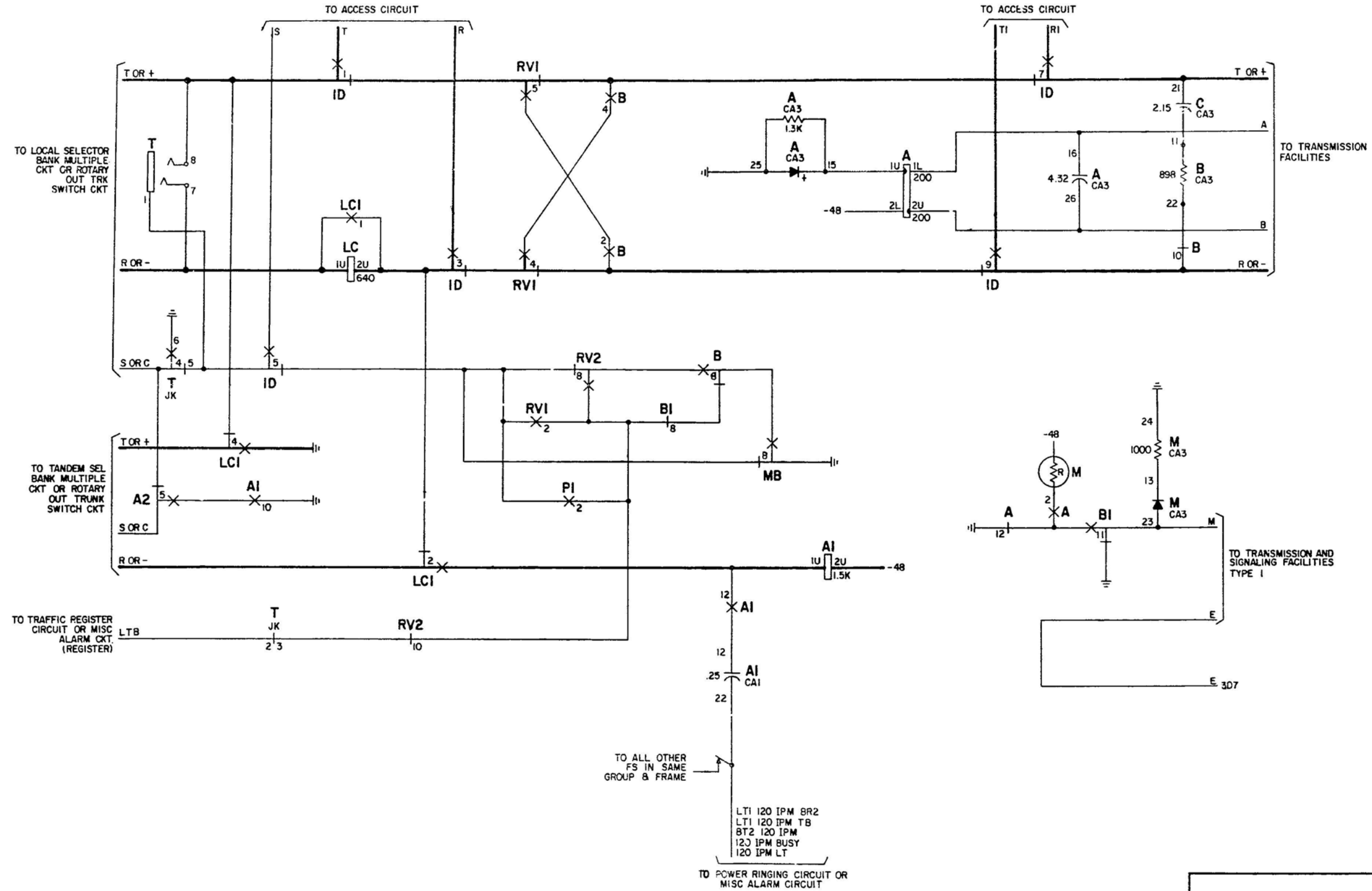
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FS 2

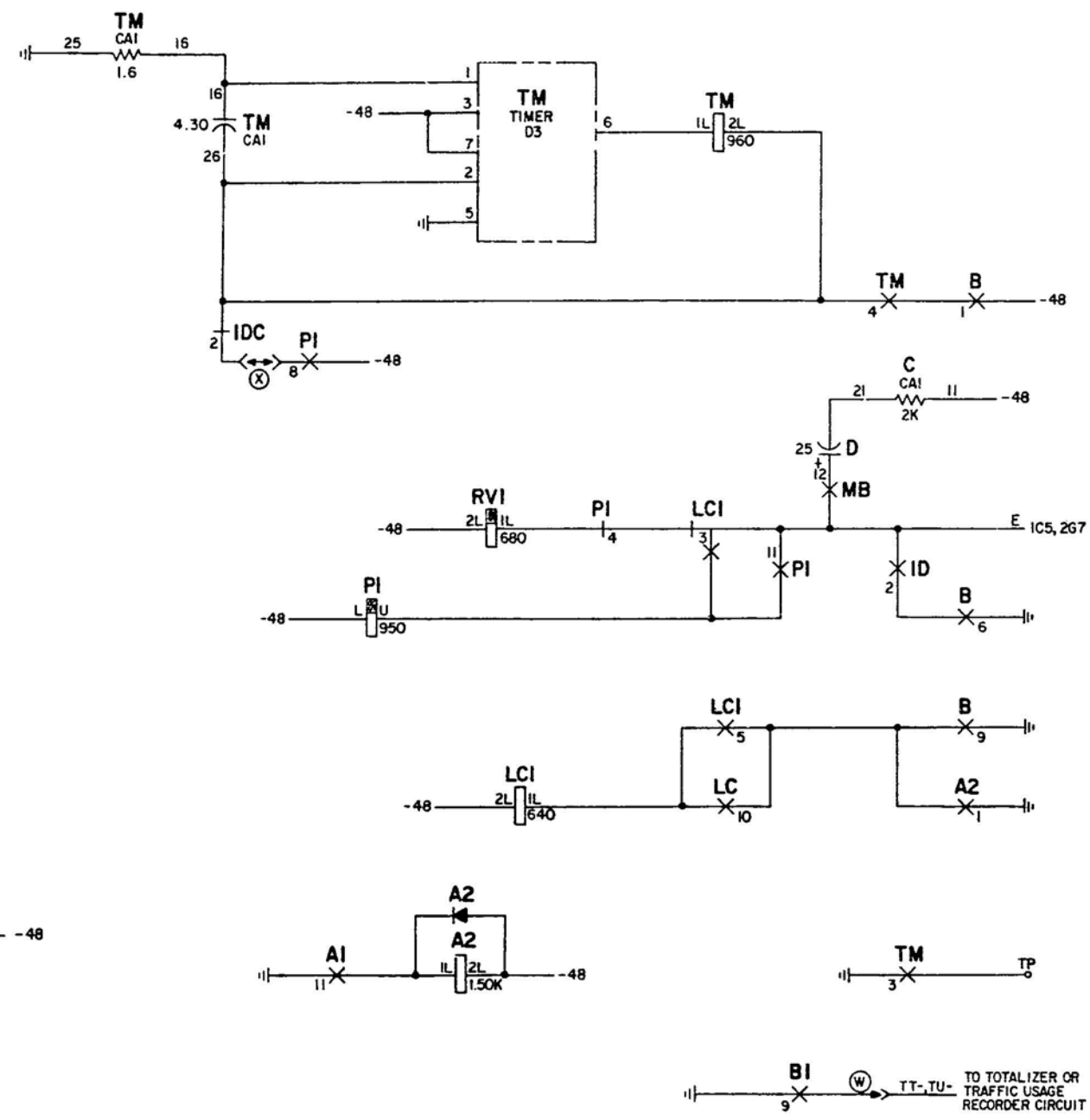
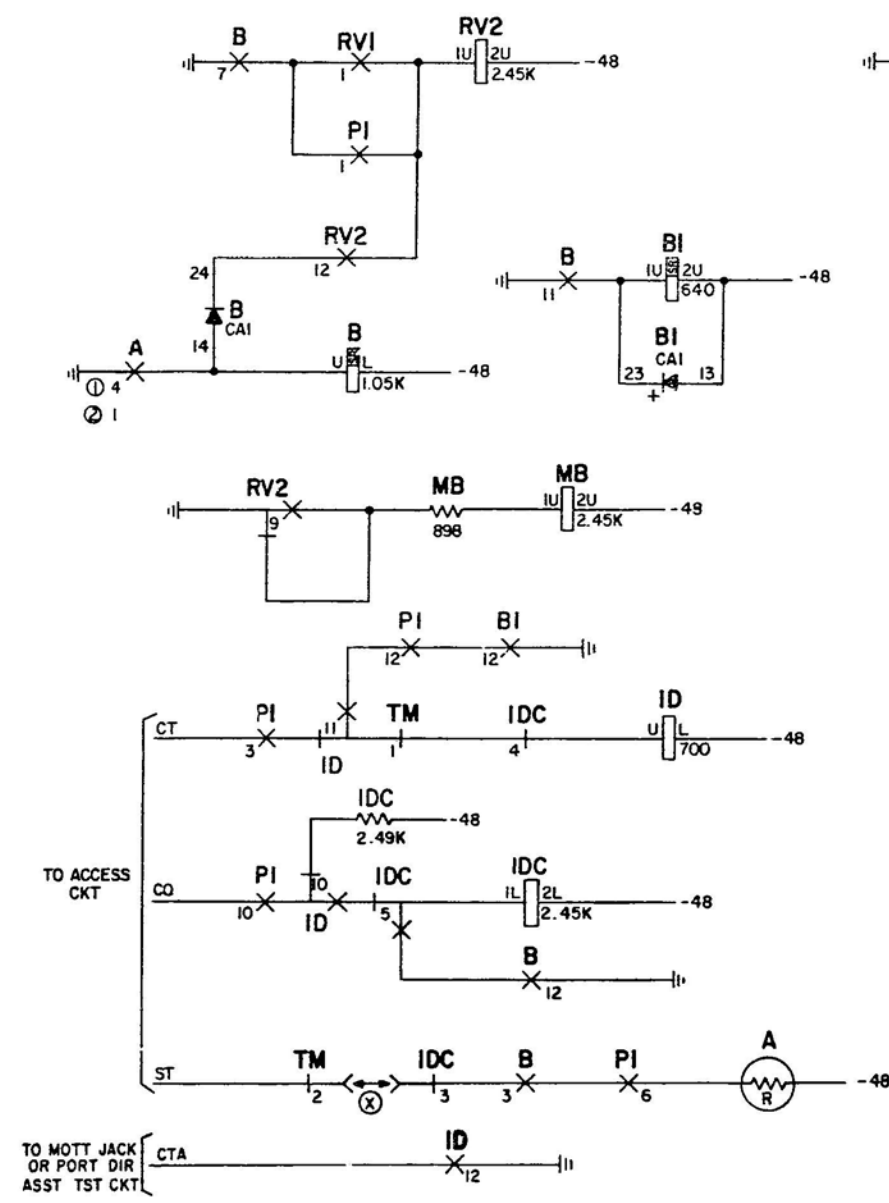
E&M LEAD SIGNALING



SD-35036-01-B2

FS 3

CONTROL RELAYS



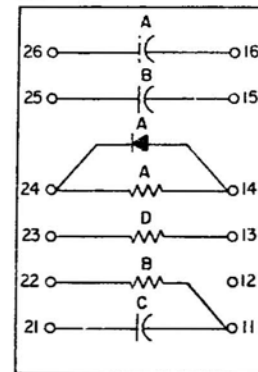
SD-35036-01-B3

APP FIG. 1

CIRCUIT PACK

DESIG LOC CODE
DET (CPI) 1B5 ED-35017-()
(REV DET)

RELAY										DESIG	
A										CODE	
AJ140										OPTION	
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION
ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR
12											12
11											11
10	M	1C6									10
9											9
8	M										8
7											7
6	M	1A6									6
5											5
4	M	3C0									4
3											3
2											2
1											1
COIL		1B3									COIL

COMPONENT ASSEMBLY
278A TS E/WDESIG
CA2

CAPACITORS

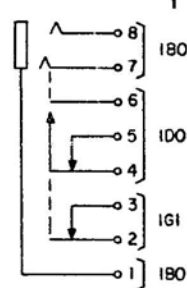
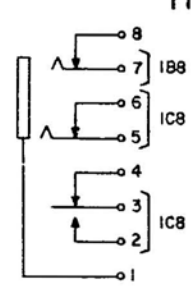
DESIG	LOC	CODE
A	1B4	535GH
B	1B5	
C	1B8	535FW

DIODES

DESIG	LOC	CODE
A	1B3	446F

RESISTORS

DESIG	LOC	CODE
A	1B3	KS-13492, L1, 1300Ω
B	1B8	KS-20289, L3C, 898Ω
D	1B2	KS-13492, L1, 560Ω

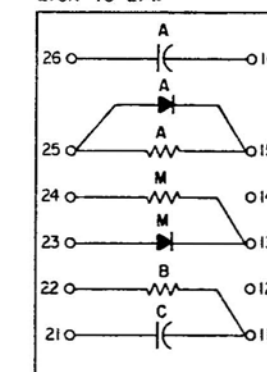
JACK
458 TYPEJACK
280 TYPE

REPEAT COIL

DESIG	LOC	CODE
A	1B5	120C (Y)
		120D (Z)

APP FIG. 2

RELAY										DESIG	
A										CODE	
AJ102										OPTION	
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION
ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR	ARR
12	B	2E6									12
11											11
10											10
9											9
8											8
7											7
6											6
5											5
4											4
3											3
2	M	2E6									2
1	M	3C0									1
COIL		2C5									COIL

COMPONENT ASSEMBLY
278A TS E/WDESIG
CA3

CAPACITORS

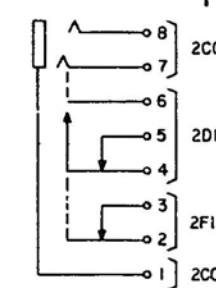
DESIG	LOC	CODE
A	2C6	535GH
C	2B7	535FW

DIODES

DESIG	LOC	CODE
A	2C5	446F
M	2E7	533A

RESISTORS

DESIG	LOC	CODE
A	2B5	KS-13492, L1, 1300Ω
B	2C7	KS-20289, L3C, 898Ω
M	2E7	KS-20810, L1A, 1000Ω

JACK
458 TYPELAMP
DESIG

DESIG	LOC	CODE
M	2E6	13A (RES)

SD-35036-01-C1

B-PHY (7-6-71)

INFORMATION TRUNK CIRCUIT

②

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APP FIG. 3

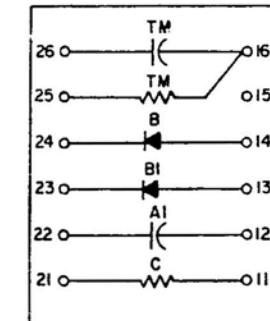
[illegible]

<u>CIRCUIT PACK</u>		
<u>DESIG</u>	<u>LJC</u>	<u>CODE</u>
TM	3B5	D3 TIMER

RELAY		AK4										AK30										DESIG
DESIG	IDC	MB										LC1		BI				DESIG				
CODE																			CODE			
OPTION																			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				
12			M	3D6											M	3D2			12			
11			EBM												EBM	a			11			
10			EBM												EBM	1A6			10			
9			EBM												EBM	3G6			9			
8			EBM	a											EBM	b			8			
7																			7			
6																			6			
5	EBM	3E1												EBM	3E6				5			
4	EBM	3E2												EBM	a				4			
3	EBM	3F1												EBM	3D6				3			
2	EBM	3C4												EBM	b				2			
1	M													M	c				1			
COIL		3E2		3D2										3E5		3C2			COIL			
			a	1E4									a	1E1	a	1C6						
				2E4										2E1		2E7						
													b	1F2	b	1D4						
														2F2		2E4						
													c	1C1								
														2C2								
COMPONENT ASSEMBLY										DESIG												
278A TS E/W										CAI												

COMPONENT ASSEMBLY

278A TS E/W



DESIG

CAI

CAPACITORS		
DESIG	LOC	CODE
AI	1G4, 2G4	542C
TM	3B4	535GH

DIODES		
DESIG	LOC	CODE
B	3C0	446F
BI	3C2	446F

<u>RESISTORS</u>		
<u>DESIG</u>	<u>LOC</u>	<u>CODE</u>
C	3C7	KS-20289, L3C, 2K
TM	3B3	KS-20810, L1A, 1.6

[illegible]

<u>CAPACITOR</u>		
<u>DESIG</u>	<u>LOC</u>	<u>CODE</u>
D	306	KS-19658, L10, 25

<u>DIODE</u>		
<u>DESIG</u>	<u>LOC</u>	<u>CODE</u>
A2	3F5	446F

<u>LAMP</u>		
<u>DESIG</u>	<u>LOC</u>	<u>CODE</u>
A	3F2	13J (RES)

DESIG	LOC	CODE
IDC	3E1	KS-20289, L6C, 2.49K
MB	3D1	KS-20289, L3C, 898Ω

[illegible]

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ISSUE
58

INFORMATION TRUNK CIRCUIT

②

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CONCLUSIONS

CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
	1-1/3	-48 TALK	APP FIG. 1,3 OR APP FIG. 1,2
	GRD		APP FIG. 1,3 OR APP FIG. 1,2
BATTERY SYMBOL -48		VOLTAGE RANGE 45-52	

102.

FEATURE OR OPTION		PROVIDE		
		APP FIG.	APP OR WRG	QUANTITY
LOOP SIGNALING TRUNK CIRCUIT		1,3		ONE PER TRUNK SEE NOTE 105
E & M LEAD SIGNALING TRUNK CIRCUIT		2,3		ONE PER TRUNK
ANI OPERATION	R. 20		X	ONE PER TRUNK
	NOT REQD			

CIRCUIT NOTES: (CONT)

102.

FEATURE OR OPTION	PROVIDE		
	APP FIG.	APP OR WRG	QUANTITY

103.

NETWORK VALUES		
NETWORK NO.	RESISTANCE IN OHMS	CAPACITANCE IN UF

CIRCUIT NOTES: (CONT)

104.

RECORD OF APP 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
5B	W	NONE		W		

CIRCUIT NOTES: (CONT)

105. PROVIDE REPEAT COIL (A) (APP FIG. 1) IN ACCORDANCE WITH THE FOLLOWING TABLE:

TRANS FAC IMP AT 1KHz	CODE	OPTION		WINDING RATIO 2-1, 6-5 TO 4-3, 8-7	WINDING RESISTANCE	
		APP	WRG		2-1 OR 6.5	4-3 OR 8.7
UP TO 1.1KΩ	120C		Y	1:1	7.8	5.5
1.1KΩ OR GREATER	120D		Z	1:1.5	12.7	5.5

SD-35036-01-D1

B-NET (10-71)

0

1

2

3

4

5

6

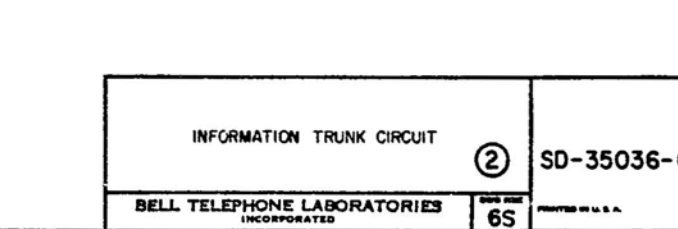
7

8

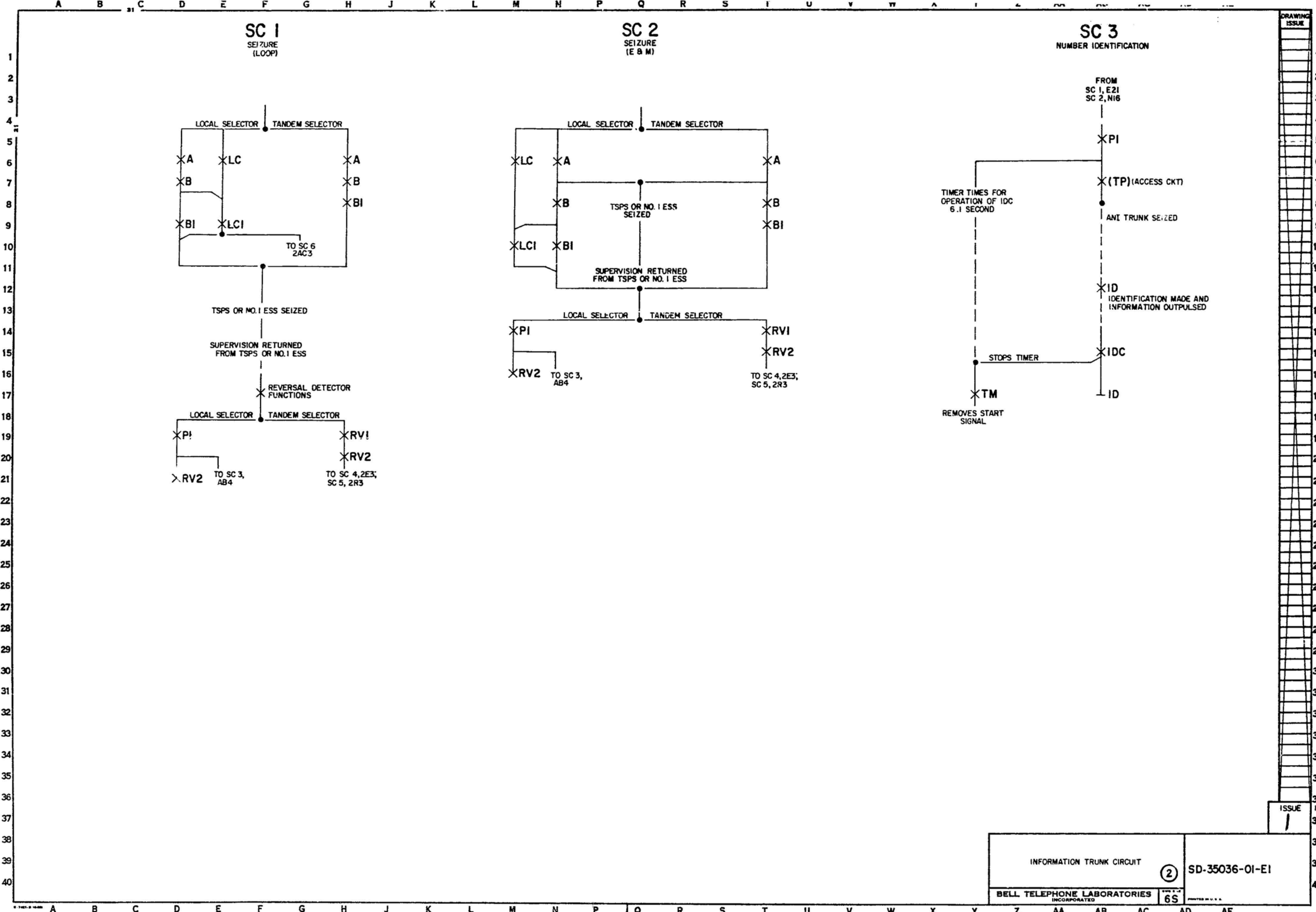
9

INFORMATION TRUNK CIRCUIT		ISSUE 5B
BELL TELEPHONE LABORATORIES INCORPORATED		SD-35036-01-D1
6S		

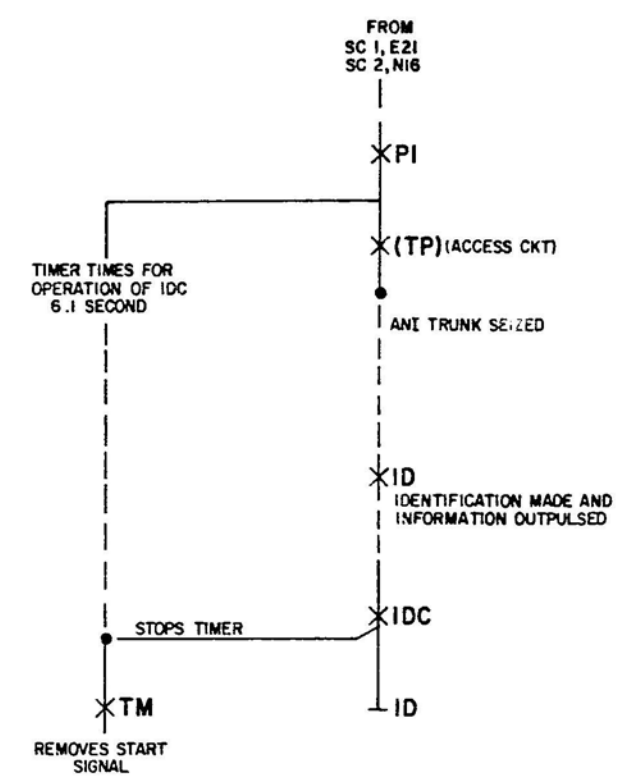
301. UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS,
CAPACITANCE VALUES ARE IN MICROFARADS,
VALUES PRECEDED BY THE SYMBOL + (PLUS)
OR - (MINUS) ARE IN VOLTS.



<u>WORKING LIMITS</u>			SUPERVISION RELAY A
MAX EXT CKT LOOP RES	LOW ACCESS	45V	1400
		48V	1500
	TANDEM ACCESS	45V	2300
		48V	2400
	DET		
	REVERSAL DETECTOR		
MAX EXT CKT LOOP RES	10K		
MIN INSULATION RES	30K		15K
MAX EARTH POTENTIAL			± 3V
MAX SUPERVISORY "E" LEAD (APP FIG. 2) RES 50			



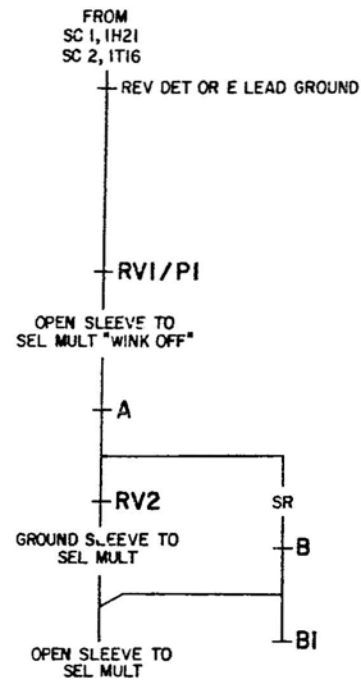
SC 3
NUMBER IDENTIFICATION



SD-35036-01-E1

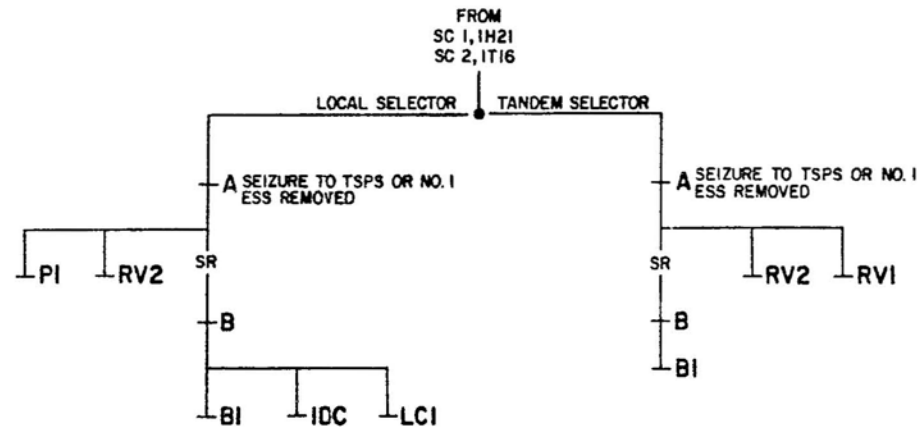
SC 4

CALLED PARTY DISCONNECTS
 FIRST TIMED DISCONNECT
 (SUPERVISION FROM DISTANT OFFICE)



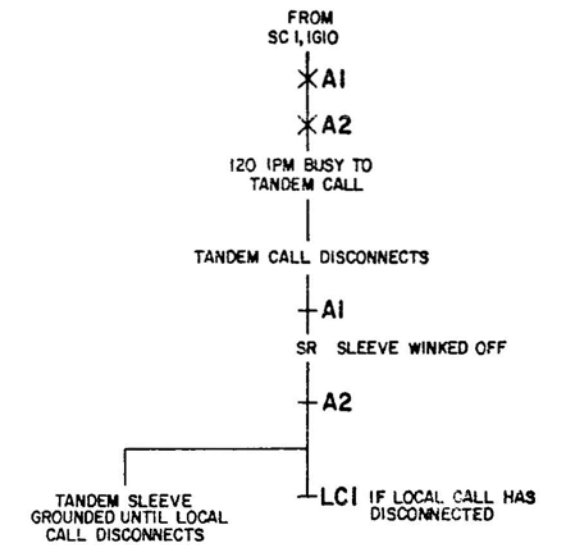
SC 5

CALLING PARTY DISCONNECTS
 FIRST



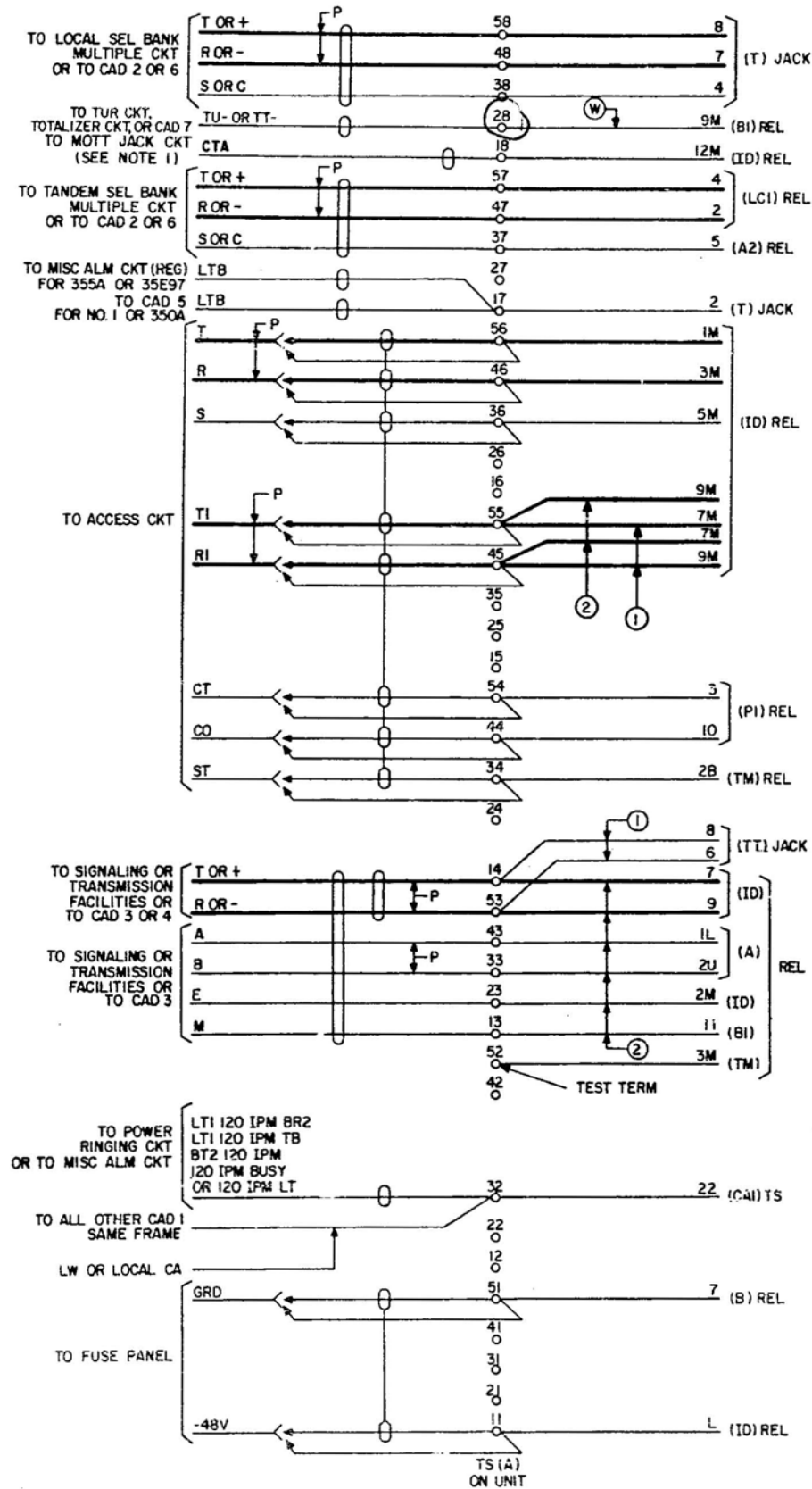
SC 6

SIMULTANEOUS SEIZURE

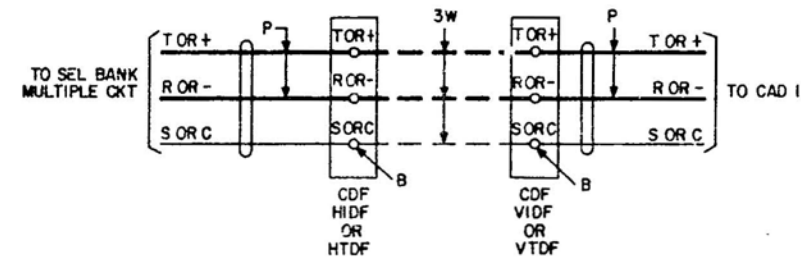


SD-35036-01-E2

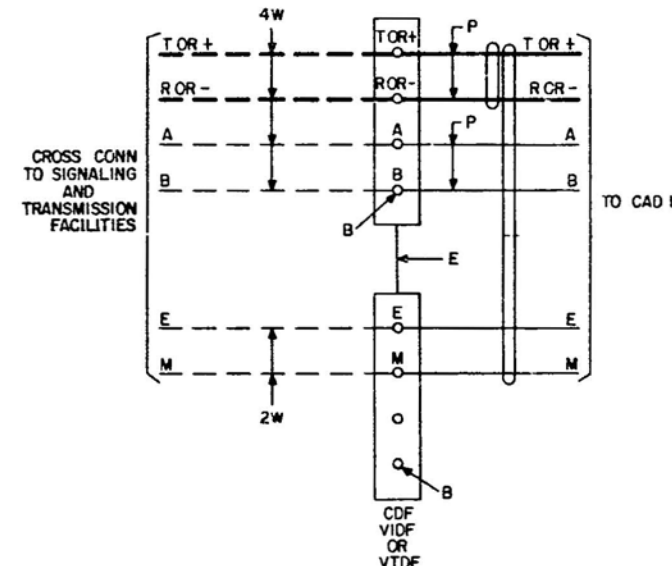
CAD 1 (APP FIG. 1, 2, 3)



CAD 2 CONN TO SEL BANK MULTIPLE CKT THRU IDF, TDF OR CDF (FOR LOCAL OR TANDEM)



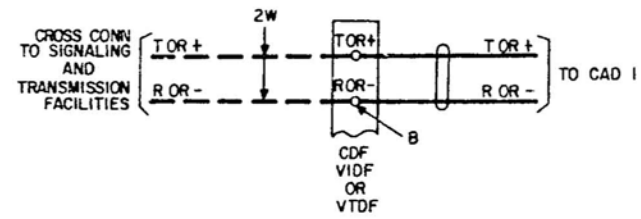
CAD 3 DISTRIBUTING FRAME TERMINATION OUTGOING END (E&M SIGNALING)



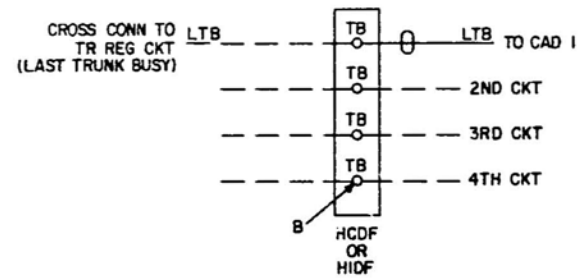
NOTE:
1. PUNCHING 18 ON TS (A) IS TO BE USED FOR A CORD CONNECTION WHEN A PORTABLE DIRECTORY ASSISTANCE TEST SET (J34732A-1), IS USED.

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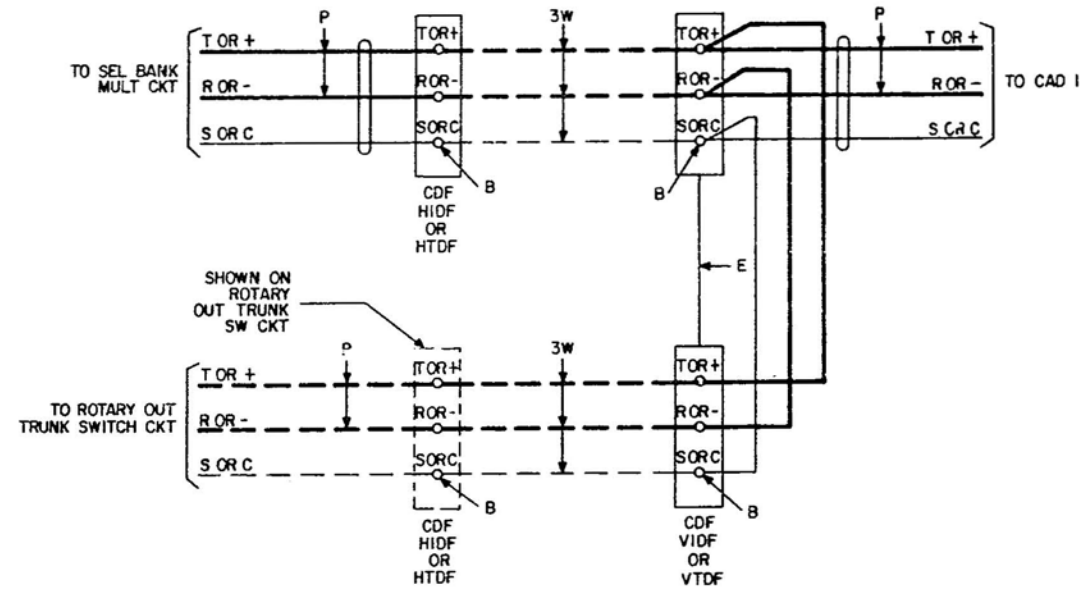
CAD 4 DISTRIBUTING FRAME TERMINATION OUTGOING END (LOOP SIGNALING)



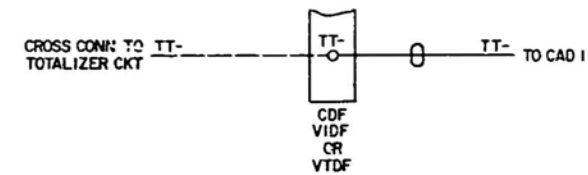
CAD 5 FOR NO. 1 & 350A OFFICES WHERE TRUNKS ARE CROSS CONN AT TDF & TR REG AT CDF OR IDF



CAD 6 CONNECT TO SEL BANK MULTIPLE CKT AND ROTARY OUT TRUNK SWITCH CKT VIA IDF, TDF, CDF (FOR LOCAL OR TANDEM)

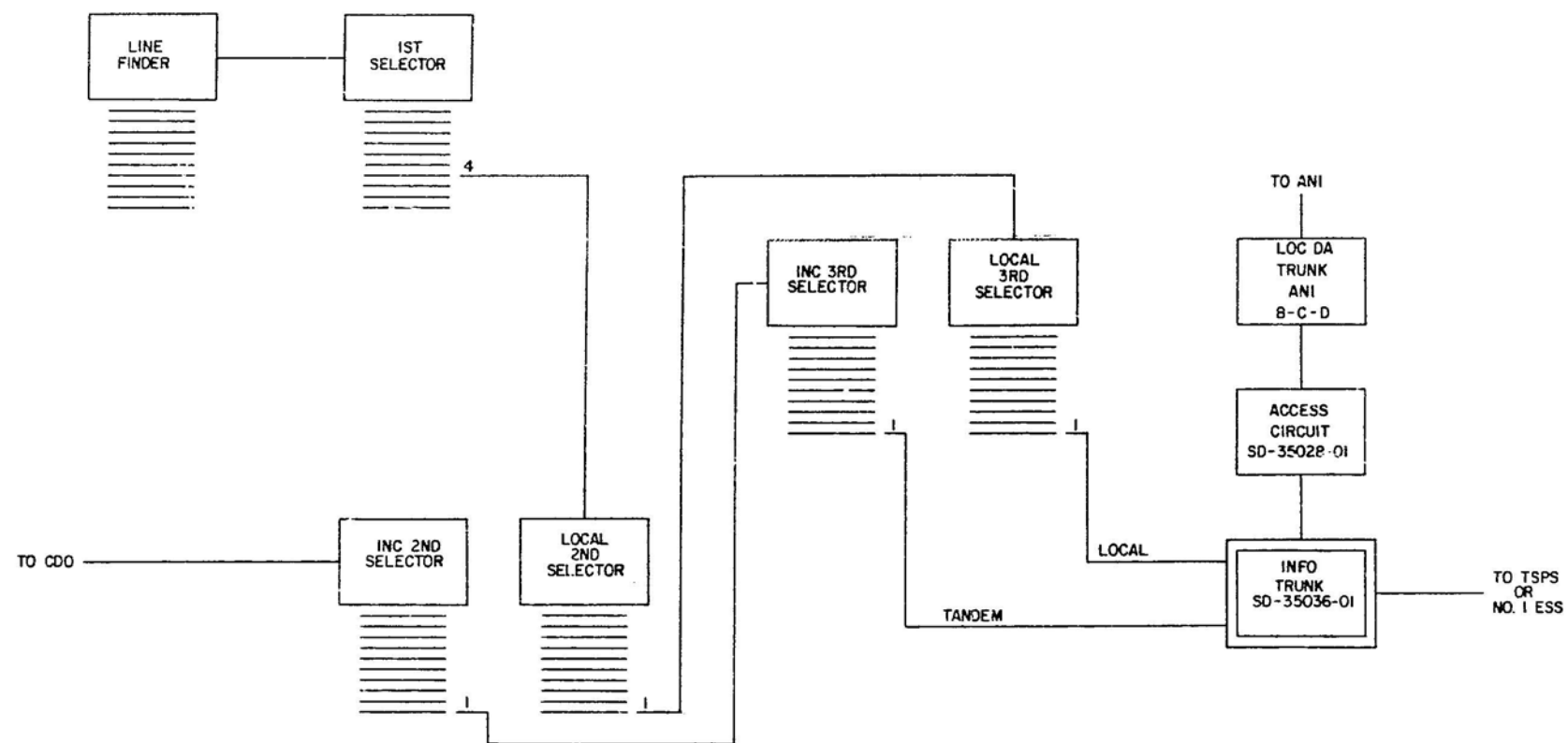


CAD 7 WHEN CONNECTION TO TOTALIZER CKT IS REQUIRED ON A CROSS CONN BASIS



SD-35036-01-G2

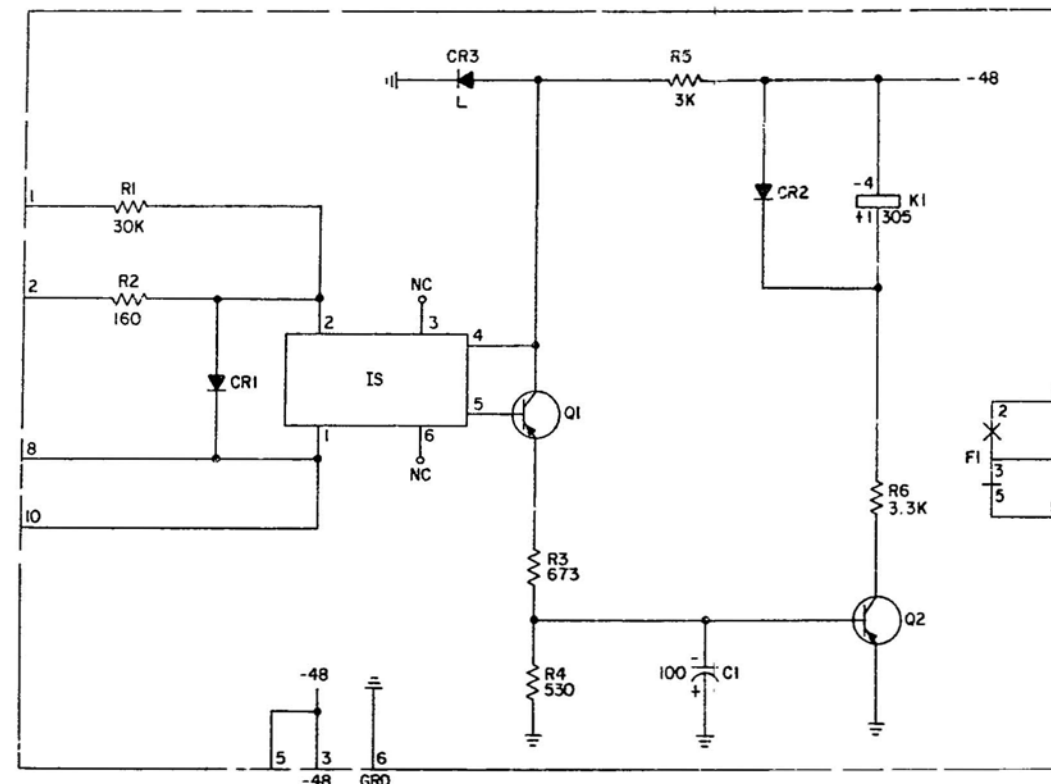
BD I BLOCK DIAGRAM



SD-35036-01-HI

INFORMATION TRUNK CIRCUIT		②	SD-35036-01-HI
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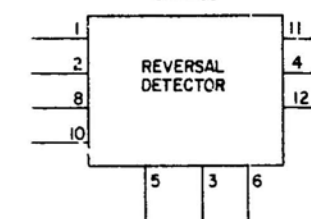
CPS I REVERSAL DETECTOR



MANUFACTURING REFERENCES

CATEGORY	NO.
CIRCUIT PACK CODE AND ASSEMBLY DRAWING	ED-35017-()
CONTROLLING CIRCUIT SHEET NO.	SD-35020-01 J1
CONNECTOR ON FRAME	KS-19437, L1

SYMBOL



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

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INFORMATION TRUNK CIRCUIT

②

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