SD-95962-01

SHEET INDEX

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APP FIG. 4		C3	7	7																							
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CONTENTS	SHEET NO. PRIOR TO ISS 7AR	SHEET NO. CURRENT ISS	ISSUE NO. 7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
SC 1 INCOMING CALL		E1	7	7																							
SC 2 ATTENDANT ANSWERS SC 3 ATTENDANT DISCONNECT SC 4 CALL NOT ANSWERED SC 5 ALTERNATE USE OF CONTROLLERS AND INDICATOR-CONTROL		E2	7	7																							
SC 6 CALL PROGRESS WITH ALL TRUNKS BUSY		E3	7	7																							
SC 7 CONTROLLER TIME OUT SC 8 SYSTEM TIME OUT SC 9 ALARM RELEASE		E4	7	7																							
CIRCUIT REQUIREMENTS	0108	F1	7	8																							
	0109	F2	7	7																							
CAD. 1-3	0110	G1	7	8																							
CAD. 4-6	0111	G2	7	7																							
CAD. 7-13	0112	G3	7	8																							
CAD. 14	0113	G4	7	7																							
CAD. 15,16		G5	7	8																							
BD 1 CONCENTRATOR IDENTIFIER FUNCTIONAL ORGANIZATION		H1	7	7																							

DRG ISS	CD ISS	DRG ISS	CD ISS	DRG ISS	CD ISS
1	1	2A	1 APP1A	3B	2B
4AR	3AR	5B	3AR APP 1B	6B	3AR APP2B

DRG ISSUE	CE ORGD ISSUE	DATE ISSUED	DRN	APPD
7AR	4AR	2-15-72	RE	HD AMG JS
8B	4AR APP 1B	2-15-72	RE	HD AMG JS

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.
CABINET	J93021F-( )
TRUNK UNIT	J93021FA-( )
INDICATOR, INDICATOR ALLOTTER & ALARM CONTROL UNIT	J93021FB-( )
CONTROLLER AND CONTROLLER CONNECTOR UNIT	J93021FC-( )
TRUNK CONNECTOR UNIT	J93021FD-( )
CHARGE, FUSE & FUSE ALARM UNIT	J93021FE-( )
MAINTENANCE BSP'S APPLIED TO:	
SD-95964-10	473-501-201 473-501-501
SD-99449-01	473-505-201 473-505-501

REPLACES SD-95748-01 EXCEPT FOR ADDITION OF TRUNKS ON EXISTING UNITS

ISSUE 8B

SD-95962-01 1N17

COMMON SYSTEMS

LINE CONCENTRATOR-IDENTIFIER CIRCUIT

APPLIED TO TELEPHONE SECRETARIAL SERVICE TERMINATING END

(2)

AT&TCO STANDARD

SD-95962-01-A1

35 SHEETS

BELL TELEPHONE LABORATORIES INCORPORATED

BRG SIZE 6S

PRINTED IN U.S.A.

SD-95962-01-A1

E-75PS (7-68)

APPARATUS INDEX

DESIG	LOCATION FS	APP FIG.	EQUIP
RELAY			
A	3A0	7	
AR	1E0	10	
ATB	9B4	16	
B	3A2	7	
C	3A1	7	
CA	7G5	10	
CB	7C5	10	
CB1	7F5	10	
CC	10B3	11	
CF	10A2	11	
CI	6A2,6D2	7	
CIA	5E2	7	
CIX	3A7	7	
CL	8F7	10	
CT	10B3	11	
DC	2B7	4	
DC1	2E9	4	
DL	8G2	4	
DL1	8F2	4	
DL2	8G5	4	
E	1G0,1G6	1,2	
F	1G0,1G6	1,2	
FA	10D7	11	
IL	1D4,1D9	1,2	
ITA-	6B4,6E4	25	
ITB-	6C3,6F3	25	
PC	7C1	4	
PC1	7E1	4	
PC2	7F1	4	
PH	2A6,2B6	4	
PP	2A5,2B5	4	
RC	1D0	10	
RCA	8D4	10	
SA	8B5	24	
SA1	8B4	24	
SH	3B6	4	
TC	1D3,1D7	1,2	
TC1	1F3,1F7	1,2	
TC2	1H3,1H9	1,2	
TCA	1B3,1B8	1,2	
TO	8E5,8F5	10	
TS	2H5	4	
US	2F9	4	
X	2F4	4	
XH	2F2	4	
XP	2F2	4	
Y	2F5	4	
YH	2F4	4	
YP	2F4	4	
ZH	2F6	4	
ZP	2F6	4	

DESIG	LOCATION FS	APP FIG.	EQUIP
BATTERY			
-	10C4	11	
-	10C4	11	

DESIG	LOCATION FS	APP FIG.	EQUIP
BUZZER			
FA	10F9	17	
FA1	10F9	18	

DESIG	LOCATION FS	APP FIG.	EQUIP
CAPACITOR			
C-	6B7,6E7	25	
FGP	1F7	3	
FIG-	1E2	1	
FIL-	1D1	1	
T	2G9	4	
TS	1B3,1B7	1,2	

DESIG	LOCATION FS	APP FIG.	EQUIP
CONNECTOR			
J1	6A7	25	

DESIG	LOCATION FS	APP FIG.	EQUIP
CONN BLOCK			
24V	9C8	14	
G	9C8	14	
R	9B8	15	
T	9B8	15	
TLK	9B8	15	

DESIG	LOCATION FS	APP FIG.	EQUIP
DIODE			
A	1E2	1	
ATB	3B6	7	
B	1E1	10	
C	8E3	10	
CI	6A2,6D2	7	
CL	8D3	10	
CX	6B2,6F2	7	
D	1D1	10	
DL	8F1	4	
DL2	8G4	4	
H	1F1	1	
IL	1E4,1D8	1,2	
ITA-	6B2,6E2	25	
PC1	7A8	4	
SA	8B5	24	
SA1	8C2	24	
T5	7A4	10	
TC	1E4,1E8	1,2	

DESIG	LOCATION FS	APP FIG.	EQUIP
FUSE			
A1-6	10B6	11	
BA	10B6	11	
BB	10B6	11	
CA	10B6	11	
CA1	10B6	11	
CB	10B6	11	
CB1	10B6	11	
CC	10B6	11	
CHG	10A6	11	
CO	10E2	11	
CT	10B6	11	
E1-3	10C6	11	
FA	10C6	11	
LB	10D6	11	
TBS	10C6	11	

DESIG	LOCATION FS	APP FIG.	EQUIP
INDUCTOR			
F	10A1	11	
FGP	1F7	3	
FIG-	1E2	1	
FIL-	1C1	1	

DESIG	LOCATION FS	APP FIG.	EQUIP
JACK			
TL	9D6	13	

DESIG	LOCATION FS	APP FIG.	EQUIP
KEY			
AS	SEE APP FIG.	17	
CA		10	
CB		10	
I1		24	
I2		24	

DESIG	LOCATION FS	APP FIG.	EQUIP
LAMP			
ATB	9B7	19	
CL	8G7	10	
FA	10B9,10A9	20,22	
FA1	10B9	17	
I	5E1	7	
IT-	6A4,6D4	25	
L	10B1	11	
T-	1G2,1G8	1,2	
TL	9D7	13	
TO	8E7,8F7	10,23	

DESIG	LOCATION FS	APP FIG.	EQUIP
MESSAGE REGISTER			
AB	9B7,9C7	16,21	

DESIG	LOCATION FS	APP FIG.	EQUIP
NETWORK			
CA	7D3	10	
CB	7C3	10	
DC	2E9	4	
PH	2E2	4	
PP	2G2	4	
SH	2F9	4	
TC	1G1,1G7	1,2	

DESIG	LOCATION FS	APP FIG.	EQUIP
RECTIFIER			
24VG1	10A1	12	

DESIG	LOCATION FS	APP FIG.	EQUIP
RESISTOR			
AR	1E1	10	
ATB	9C4	16	
ATB1	9B5	16	
AX	2F3	4	
AY	2F5	4	
AZ	2F7	4	
CF	10D4	11	
IL	1A2,1A7	1,2	
ITA-	6B4,6E4	25	
R-	6A7,6D7	25	
R1	10A5	11	
R2	10A3	11	
RC	1E1	10	
RS	10B3	11	
T	2G8	4	
TS	1A3,1A7	1,2	
V	8A5	24	
W	8A4	24	

DESIG	LOCATION FS	APP FIG.	EQUIP
SWITCH			
SW1-3	SEE APP FIG.	3	

DESIG	LOCATION FS	APP FIG.	EQUIP
TIMER			
-	6A8	25	

DESIG	LOCATION FS	APP FIG.	EQUIP
TRANSFORMER			
T	1A2, 1A6	1,2	

LEAD INDEX

DESIG	LOCATION FS	LOCATION CAD
20Hz RINGING SUPPLY		
AC	10F7	3C8,3E8
RING G	10F7	3C8
BUILDING BATTERY 20-26V		
BAT.	10D1	3H2
GRD	10D1	3H2
CENTRAL OFFICE BATTERY		
BAT.	10E1	4F0
GRD	10E1	4F0
LINE CONC-IDENT CKT (ORIG END)		
DCR	2B3	4E0
DCRA	2C3	4E0
DCT	2C3	4E0
DCTA	2D3	4E0
P(R1)	2A3	4E0
P(R2)	2B3	4E0
P(T1)	2C3	4E0
P(T2)	2C3	4E0
PR	2A3	4E0
PRA	2B3	4E0
PT	2B3	4E0
PTA	2B3	4E0
R	1B0,1B5	4C0
T	1B0,1B5	4C0
ORIG END GRD AT GO		
ORIG	1F0	4E0
SWITCHBOARD		
R00-29	4C2	4A0
R30-49	4C4	4A0
R50-79	4C7	4A0
R80-99	4C9	4A0
T00-29	4C2	4A0
T30-49	4C4	4A0
T50-79	4C7	4A0
T80-99	4C9	4A0
TONE SUPPLY		
T	1D0,1C5	4C3
TT	1D0	4C3

DRAWING ISSUE

ISSUE 8B

SD-95962-01-A2

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2) SD-95962-01-A2

BELL TELEPHONE LABORATORIES INCORPORATED — DWG SIZE 6S — PRINTED IN U.S.A.

OPTION INDEX

APP OR WRG	RATED ON ISSUE	REF NOTES	LOC
12			APP FIG. 12 10A1, 10B1
17			APP FIG. 17
18			APP FIG. 18
19			APP FIG. 19
21			APP FIG. 21
22			APP FIG. 22
23			APP FIG. 23
Z			10D1, 10D3
Y			10B4,10C3,10C5, 10D5
X	MD 7		2B3,2C3
W	MD 7		2B3,2C3
V		105, 106	APP FIG. 3
T	MD 7	112	1D0,1E0,1E2, 1E6,2A8
S	MD 7		1D0,1E0,1E6, 1F2,2A8
R		105, 106	

APP OR WRG	RATED ON ISSUE	REF NOTES	LOC
ZD	MD 5		APP FIG. 1, 10
ZE	STD 5		APP FIG. 1, 10
ZF	MD 5		APP FIG. 4, 2B5, 2B7
ZG	STD 5		APP FIG. 4, 2A5, 2A6
ZH	MD 6		APP FIG. 1, 2, SHEET B1
ZJ	STD 6		SHEET B1
ZJ	MD 6		6A6, 6D6
ZK	STD 6 MD 7		6A6, 6D6
ZL	MD 6		B67
ZM	MD 6		APP FIG. 11, 10C4
ZN	STD 6		APP FIG. 11, 10D4
ZP	MD 7		APP FIG. 10, 2A3,2C3,2B8, 8E5,8F4,8F5, 8F6
ZQ	STD 7		APP FIG. 10, 2A3,2B3,2C3, 2B7,2B8,8F4, 8F5,8F6
ZR	STD 7	102, 114	1D0,1E0,1E2, 1F6
ZS	STD 7	102, 114	1D0,1E0,1F2, 1F6
ZT	STD 7	102, 114	2B3,2C3,2D3
ZU	STD 7	102, 114	2B3,2C3,2D3
ZV	MD 7		1E1
ZW	STD 7		APP FIG. 10, 1E1
ZX	MD 7		APP FIG. 24
ZY	STD 7		APP FIG. 24
ZZ	STD 7		6A6,6D6
YA	MD 8	114	1C2,1F6
YB	STD 8	114	APP FIG. 1,3, 1C2,1D2,1E3,1F6
YC	MD 8		3A6
YD	STD 8		APP FIG. 7 3A6,6C2,6F2
YE	STD 8		1G2,1G8

DRAWING ISSUE

ISSUE 8B

LINE CONCENTRATOR-IDENTIFIER CIRCUIT

SD-95962-01-A3

BELL TELEPHONE LABORATORIES INCORPORATED

SIZE 6S

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SD-95962-01-A3

FS 1
TRUNK CKT 1 & 2

FS 2
TRUNK CKT 3-6

TO LINE CONC IDENT CKT (ORIG END)

TO TONE SUPPLY (SEE NOTE 110)

TO ORIG END GRD (SEE NOTE 303)

TO OTHER TRUNK

TO OTHER TRUNKS

TO TRK 3-6

TRK(1,2)

TRK(3-6)

RC (TRK 1)
AR (TRK 2)

FIL - INDR
5.1H
FIL-
1.38

FIG - INDR
5.1H
FIG
1.38

FGP INDR
3.2H
FGP
2.15

DRAWING ISSUE
8B

LINE CONCENTRATOR-IDENTIFIER CIRCUIT
(2)
SD-95962-01-81

BELL TELEPHONE LABORATORIES INCORPORATED
SIZE 6S

SD-95962-01-81

LINE CONCENTRATOR-IDENTIFIER CKT
(ORIGINATING END-AT CENTRAL OFFICE)

FS 3
PULSING AND SUPERVISION CKT

CONTROLLER A, B

FS 4
DIGIT REGISTRATION CKT
(CONTROLLER A, B)

NOTES:

1. * WHEN (CA) RELAY IS OPERATED THE CALL IS SERVED BY CONTROLLER "A", WHEN (CA) RELAY IS RELEASED THE CALL IS SERVED BY CONTROLLER "B".

DRAWING ISSUE 7AR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2) SD-95962-01-B2

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-95962-01-B2

INDICATOR 1, 2

CONTROLLER A, B

TRUNKS 1-6

TRUNK CONNECTOR

FS 5
INDICATOR CONNECTOR & TRUNK CONNECTOR CONTROL CKT

DRAWING ISSUE

HOLD ON SW1 E- R L E- -24 200

HOLD ON SW2 F- R L E- -24 200

CI G- 1 2 38 ITB- ITB- ITA CI- E- 2 5 12 8 9T 6B1 OR 6F1

YD 3 4B E-

CIA YC A 1 CIX 5T 5B 400 E- -24 1 6B2, 6F2

ATB 1 2

TC2 (TRK 1-6) ATB1 TBS -24 6B 5 ATB 2T 1 ATB 9C3

SM -24 C- 6B 9T 700 SMA,B SM 5B 4 GA,B 7C2

CA * SMA 7 8T SMB CB 1 2B

A SEE TABLE A SO SW1,2 SW3 V a b (21-3) -24 157 SEE NOTE 113 SW1 SEL ON 2 1 — SEE NOTE 113

1 A S1
2 A S2
3 A S3
4 A S4
5 A S5
6 A S6
7 A S7
8 A S8
9 A S9

TABLE A

SEL MAG	TERM a	TERM b
0	RB	RT
1	RB	RT
2	LT	LB
3	LT	LB
4	RB	RT
5	RB	RT
6	LT	LB
7	LT	LB
8	RB	RT
9	RB	RT

IGO TC1 A- 5B 4 H TC A- 1 A TRK 1,2

IGG TC 2T 1 A- 1 A TC1 -24 TRK 3-6

DRAWING ISSUE 8B

TRK1-6

SW1, A1-4 SW3, A5,6 V R L A(1-6) -24 200 HOLD ON 3 2

SW1, B1-4 SW3, B5,6 V R L A(1-6) -24 200 HOLD ON 3 2

SW2, C1-4 SW3 C5,6 V R L A(1-6) -24 200 HOLD ON 3 2

SW2, D1-4 SW3, D5,6 V R L A(1-6) -24 200 HOLD ON 3 2

E (TRK 1-6) 6T 4B -24

F (TRK 1-6) 6T 4B -24

IGO OR IGI

NOTES:
1. * (CA) RELAY IS OPERATED TO SERVE CONTROLLER "A".

LINE CONCENTRATOR-IDENTIFIER CIRCUIT 2 SD-95962-01-B3

BELL TELEPHONE LABORATORIES INCORPORATED DWG SIZE 6S PRINTED IN U.S.A.

SD-95962-01-B3

FS 6
TRUNK CONNECTOR CKT

SW1
V(A1-4)
(V) SW3
V(A5,6)

SW1
V(B1-4)
(V) SW3
V(B5,6)

SW2
V(C1-4)
(V) SW3
V(C5,6)

SW2
V(D1-4)
(V) SW3
V(D5,6)

T09 R09 T19 R19 T29 R29 T00 R00 T10 R10 T20 R20 — 5C5

T39 R39 T49 R49 T30 R30 T40 R40 — 5C5

T59 R59 T69 R69 T79 R79 T50 R50 T60 R60 T70 R70 — 5C8

T89 R89 T99 R99 T80 R80 T90 R90 — 5C8

L9
L0

0 1 2 3 4 5

TO SWBD

1(1-6)
2(1-6)
3(1-6)
4(1-6)
5(1-6)
6(1-6)

185 OR 189

DRAWING ISSUE

TAR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2) SD-95962-01-B4

BELL TELEPHONE LABORATORIES INCORPORATED

SIZE 6S

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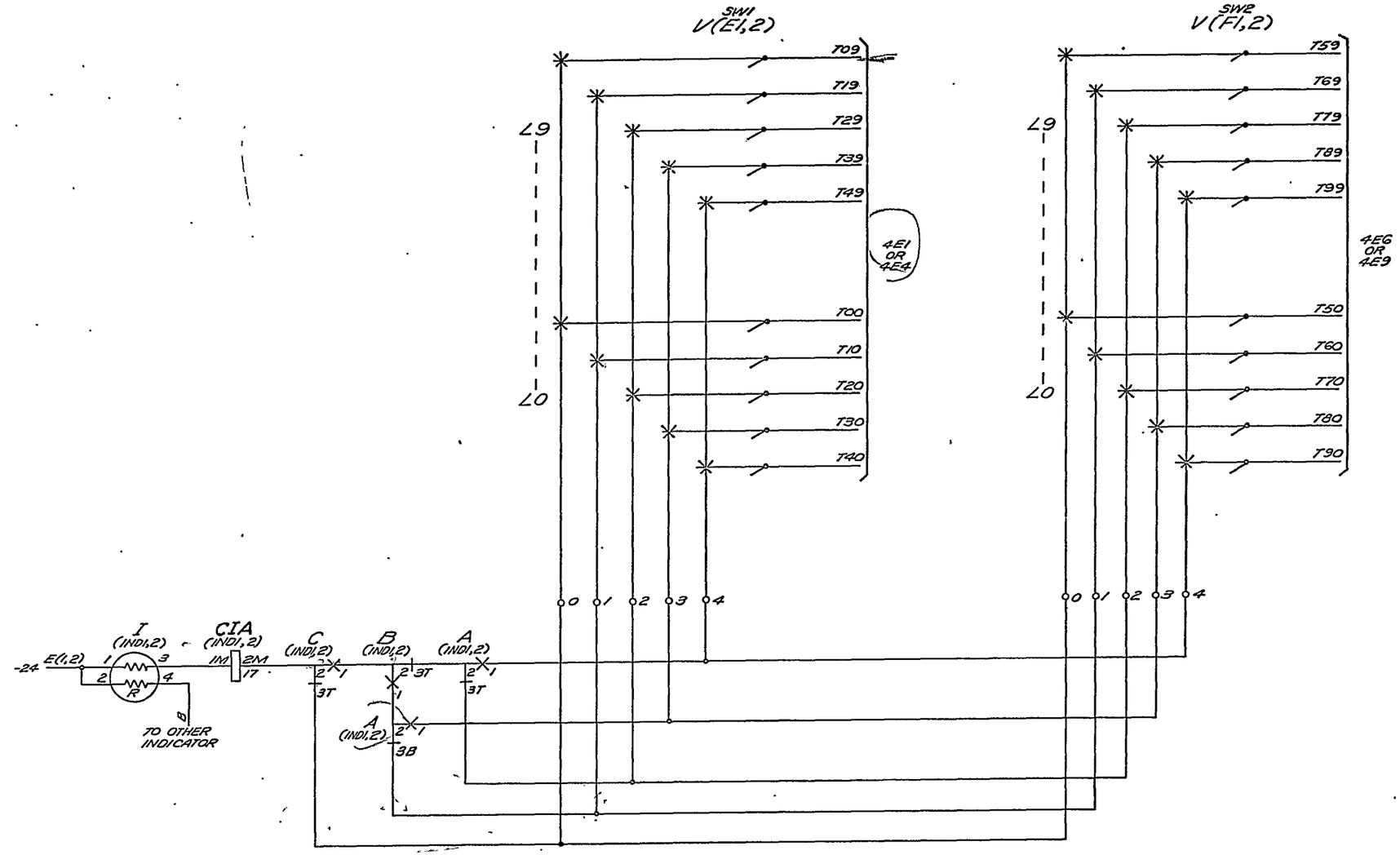
SD-95962-01-B4

FS 7
INDICATOR CONNECTOR CKT



DRAWING ISSUE

DRAWING ISSUE
7AR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2)

SD-95962-01-B5

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

SD-95962-01-B5

FS 8
INDICATOR CONTROL

RELAY DELAY TIMER
ED-99514-10
SD-99361-01 CIRCUIT 1

CIRCUIT 2

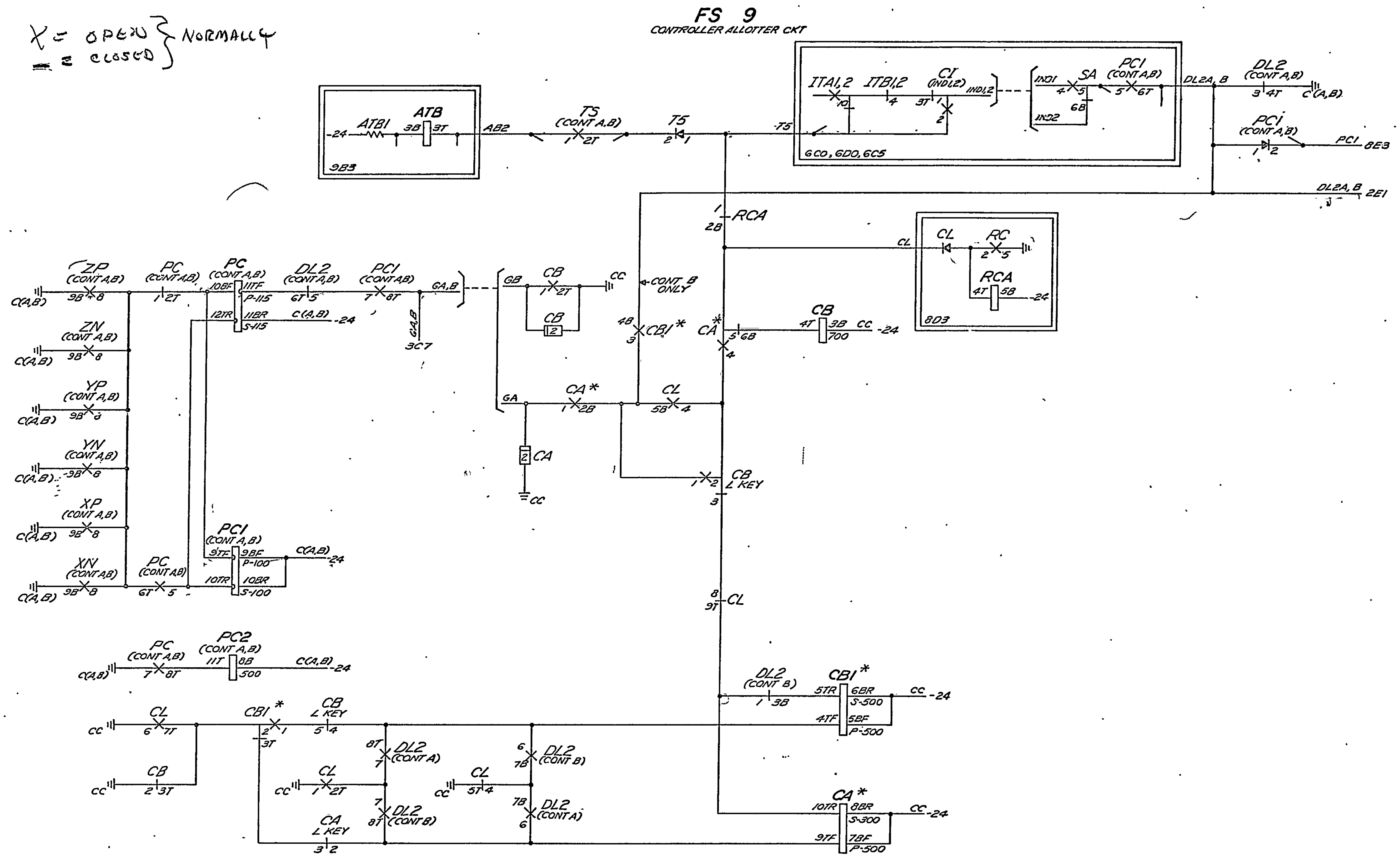
DRAWING ISSUE

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2) SD-95962-01-B6

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

SD-95962-01-B6



NOTES:

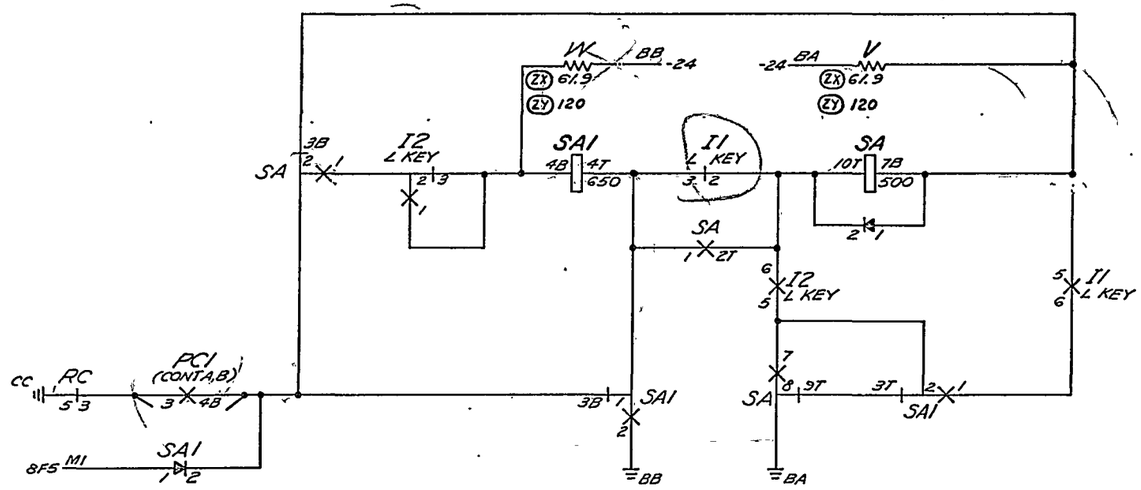
1. * (CA) RELAY IS OPERATED TO SERVE CONTROLLER "A".
(CB1) RELAY IS OPERATED TO SERVE CONTROLLER "B".

LINE CONCENTRATOR-IDENTIFIER CIRCUIT ②	SD-95962-01-B7
BELL TELEPHONE LABORATORIES INCORPORATED	6S

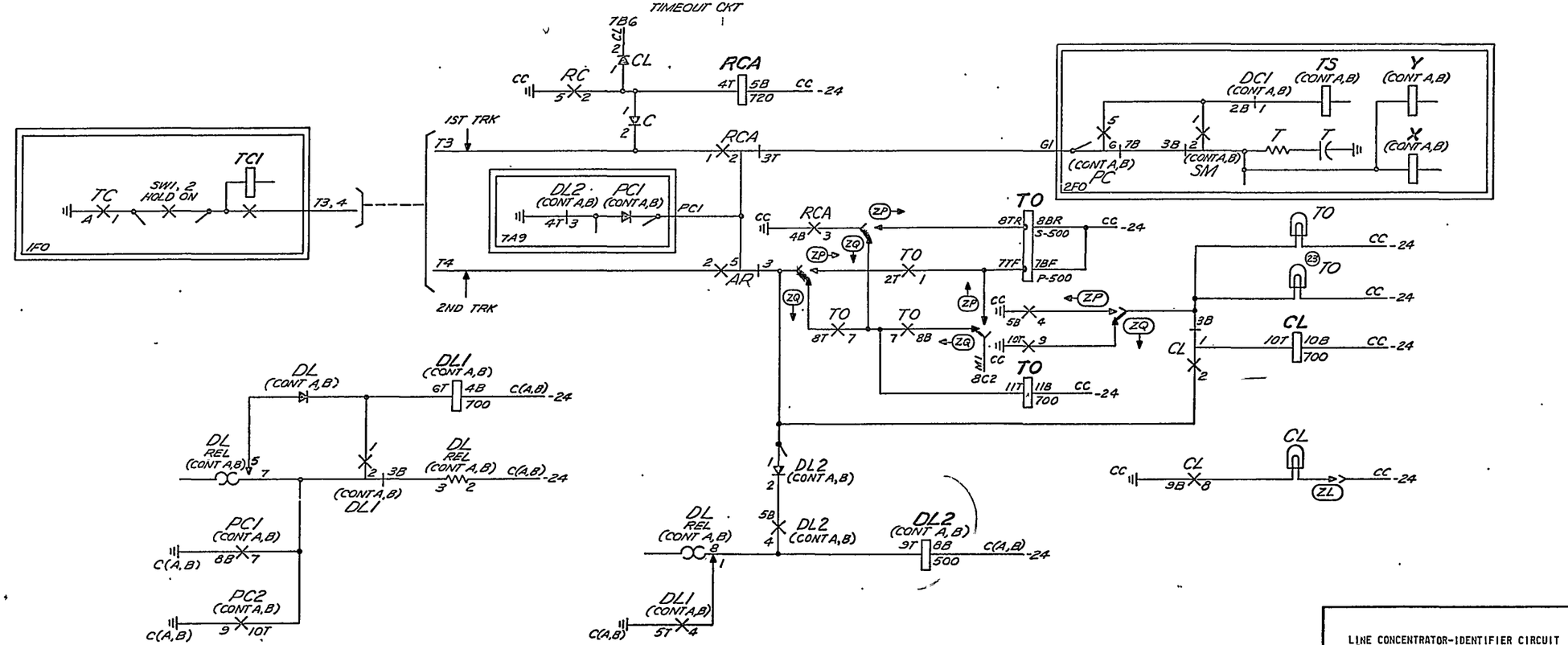
DRAWING ISSUE 7AR

SD-95962-01-B7

FS 10
INDICATOR ALLOTTER CKT



FS 11
TIMEOUT CKT



DRAWING ISSUE 8B

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2)

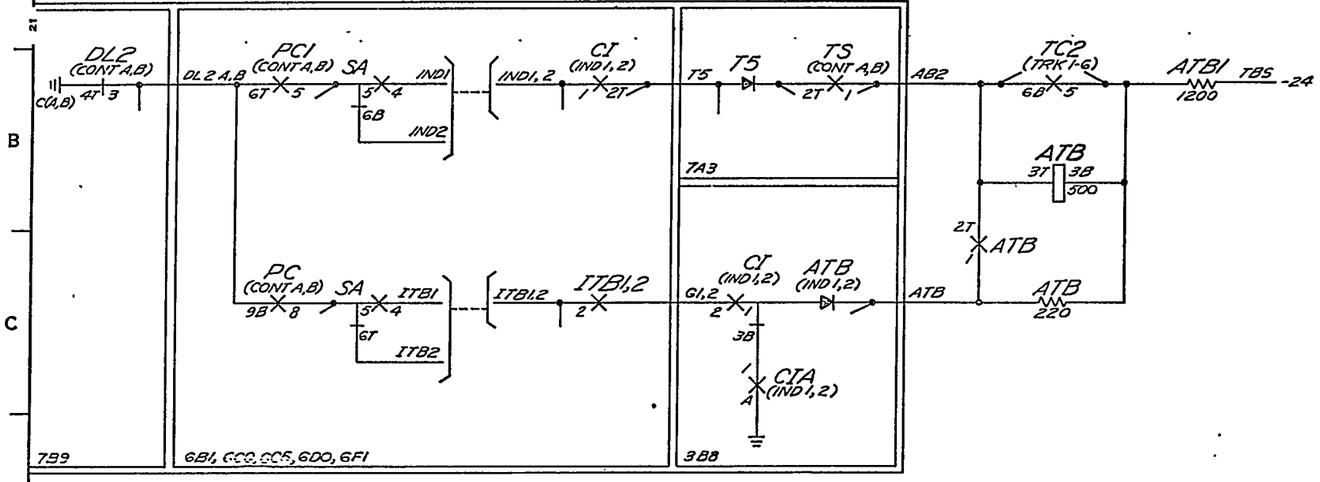
BELL TELEPHONE LABORATORIES INCORPORATED

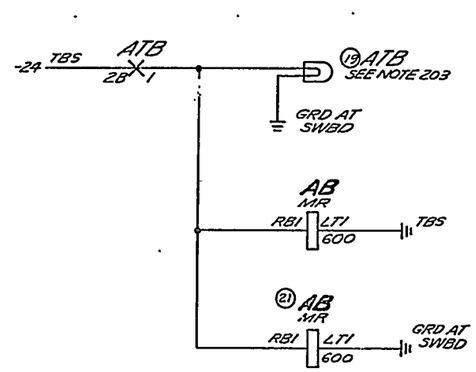
SD-95962-01-B8

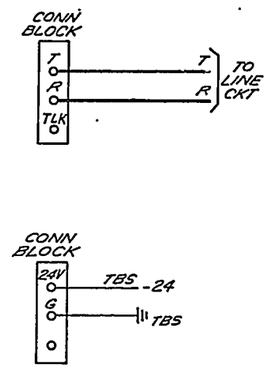
SD-95962-01-B8

FS 12

ALL TRUNKS BUSY AND MISCELLANEOUS CKT







DRAWING ISSUE

7AR.

LINE CONCENTRATOR-IDENTIFIER CIRCUIT

(2)

SD-95962-01-B9

BELL TELEPHONE LABORATORIES INCORPORATED

SIZE 6S

PRINTED IN U.S.A.

SD-95962-01-B9

FS 13

POWER DISTRIBUTION AND FUSE ALARM CKT

DRAWING ISSUE

F INDR 2.13

CF* 4T 6B 3.8

CF* 1 2 3B

R2 SEE NOTES 107 & 108 — 4 8 16 32

R1 SEE NOTES 107 & 108 — 4 8 16 32

CHG 1-1/3A

(12) 24VG1 RECTIFIER

RS 75

L B

CC* R L 500

CT 1 2T

CC* 1 2T

SM (CONT A,B) 8T 7

C(A,B)

CT 5T 3B 2500

(Y)

AI-6, BA, BB, CA-C, CAI, CBI

-24 AI-6, BA, BB CA-C, CAI, CBI 1-1/3A

EI-3, FA, TBS

-24 EI-3, FA, TBS 1-1/3A

20 VOLTS

24 VOLTS

(ZM) (ZN) (Y) (Z) 14 BRG

LOC

LB 5A

TO BUILDING BATTERY 20-26V GRD (Z) BAT (Z)

TO CENTRAL OFFICE BATTERY (SEE NOTES 108 AND 118) GRD BAT

CO 1-1/3A

-24 FA CF 620 CF* 2 3T (V)

FA 5BF 5TF P 1KΩ 6BR 6TR S-2700 FA

-24 FA FA 2B 1 (12) FA RED GRD AT SWBD

(11) FA1 (FUSE ALARM VISUAL) FA

-24 FA FA 4B 3 FA RED FA

RING G FA 3 4T (17) AS L KEY 2 1 3 (SILENCE AUDIBLE ALARM)

TO 20HZ RINGING SUPPLY

(17) FA (FUSE ALARM AUDIBLE) AC DC A C AC

(18) FA1 AC DC A C

NOTES:
L * RELAY IS NORMALLY OPERATED.

DRAWING ISSUE 7AR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2) SD-95962-01-B10

BELL TELEPHONE LABORATORIES INCORPORATED DWG SIZE 6S PRINTED IN U.S.A.

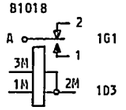
SD-95962-01-B10

APP FIG. 1
(TRUNK CKT 1 & 2)

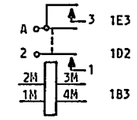
RELAY

DESIG				E			F						IL						TC1			TC2									DESIG
CODE				U242			U242						Y129						U707			U1349									CODE
OPTION																															OPTION
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	
TOP																						8,7	M	3G7							TOP
																						6,5	M	3G6							
				5,4	M	1G0	5,4	M	1G0				6,5,4	BM	1D3				6,5,4	BM		4,3	M	3G5							
				3,2,1	BM	1A4	3,2,1	BM	1A4				3,2,1	BM	1A2				2,1,3	NB	1H2	2,1	M	3G4							
BOT				3,2,1	BM	1C4	3,2,1	BM	1C4				2,1	M	1B3				2,1,3	NB	1F2	2,1	M	3G1							BOT
													4,3	M	1G2				6,5,4	BM	1H1	4,3	M	3G2							
																						6,5	M	9B4							
																						8,7	M								
COIL						1G0			1G0						1D4						1F3			1H3							COIL

RELAY
TC
B1018



RELAY
TCA
B210



CAPACITOR

OPTION	DESIG	LOC	CODE
YB	FIG-	1E2	535DK
YB	FIL-	1D1	535DK
	TS	1B3	542G

DIODE

OPTION	DESIG	LOC	CODE
ZD	A	1E2	400E
ZE	A	1E2	446F
	H	1F1	KS-15724,L3
ZH	IL	1E4	446F
ZH	TC	1E4	446F

INDUCTOR

OPTION	DESIG	LOC	CODE
YB	FIG-	1E2	1596A,5.1H
YB	FIL-	1C1	1596A,5.1H

LAMP

DESIG	LOC	CODE
T-	1G2	B2

NETWORK

DESIG	LOC	CODE
TC	1G1	185A

RESISTOR

DESIG	LOC	CODE
IL	1A2	KS-13492,L1, 220
TS	1A3	18BA

TRANSFORMER

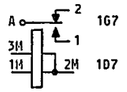
DESIG	LOC	CODE
T	1A2	120C (RC)

APP FIG. 2
(TRUNK CKT 3-6)

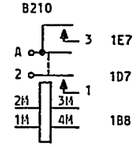
RELAY

DESIG				E			F						IL						TC1			TC2									DESIG
CODE				U242			U242						Y129						U707			U1349									CODE
OPTION																															OPTION
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	
TOP																						8,7	M	3G7							TOP
																						6,5	M	3G6							
				5,4	M	1G6	5,4	M	1G6				6,5,4	BM	1D8				6,5,4	BM		4,3	M	3G5							
				3,2,1	BM	1A8	3,2,1	BM	1A9				3,2,1	BM	1A7				2,1,3	NB	1F7	2,1	M	3G4							
BOT				3,2,1	BM	1C8	3,2,1	BM	1C9				2,1	M	1B7				2,1,3	NB	1H7	2,1	M	3G1							BOT
													4,3	M	1G8				6,5,4	BM		4,3	M	3G2							
																						6,5	M	9B4							
																						8,7	M								
COIL						1G6			1G6						1D9						1F7			1H9							COIL

RELAY
TC
B1018



RELAY
TCA
B210



CAPACITOR

DESIG	LOC	CODE
TS	1B7	542G

DIODE

OPTION	DESIG	LOC	CODE
ZH	IL	1D8	446F
ZH	TC	1E8	446F

LAMP

DESIG	LOC	CODE
T-	1G8	B2

NETWORK

DESIG	LOC	CODE
TC	1G7	185A

RESISTOR

DESIG	LOC	CODE
IL	1A7	KS-13492,L1, 220
TS	1A7	18BA

TRANSFORMER

DESIG	LOC	CODE
T	1A6	120C (RC)

DRAWING ISSUE

ISSUE 8B

LINE CONCENTRATOR-IDENTIFIER CIRCUIT

SD-95962-01-CI

BELL TELEPHONE LABORATORIES INCORPORATED

SIZE 6S

SD-95962-01-CI

APP FIG. 3

SWITCH

SW1
324N

SEL MAG	LOCATION		HOLD MAG	HOLD ON CONT
2 1 RB OR LT RT OR LB	COIL	SEL ON CONT	R L	5 4 6 2 1 3
S9	3G8	3G8		
S8	3F8	3F8		
S7	3F8	3F8		
S6	3F8	3F8		
S5	3E8	3E8		
S4	3E8	3E8		
S3	3E8	3E8		
S2	3D8	3D8		
S1	3D8	3D8		
S0	3C8	3C8		

LOCATION										
DESIG		A1	A2	A3	A4	E1	E2	B1	B2	B3	B4
COIL		3G5	3G5	3G5	3G5	3A4	3A4	3G5	3G5	3G5	3G5
CONTACT	1,2,3	3G5	3G5	3G5	3G5	3A4	3A4	3G5	3G5	3G5	3G5
NO.	4,5,6	1F2	1F2			6B3	6E3	1F3	1F3		
WIRE	0	4A1	4A1	4A1	4A1	5A4	5A4	4A3	4A3	4A3	4A3
	1	4A1	4A1	4A1	4A1	5A4	5A4	4A3	4A3	4A3	4A3
	2	4A1	4A1	4A1	4A1	5A4	5A4	4A3	4A3	4A3	4A3
	3	4A1	4A1	4A1	4A1	5A4	5A4	4A3	4A3	4A3	4A3
	4	4A1	4A1	4A1	4A1	5A4	5A4				
	5	4A1	4A1	4A1	4A1						

SWITCH

SW2
324N

SEL MAG	LOCATION		HOLD MAG	HOLD ON CONT
2 1 RB OR LT RT OR LB	COIL	SEL ON CONT	R L	5 4 6 2 1 3
S9	3G8			
S8	3F8			
S7	3F8			
S6	3F8			
S5	3E8			
S4	3E8			
S3	3E8			
S2	3D8			
S1	3D8			
S0	3C8			

LOCATION										
DESIG		C1	C2	C3	C4	F1	F2	D1	D2	D3	D4
COIL		3G6	3G6	3G6	3G6	3A5	3A5	3G7	3G7	3G7	3G7
CONTACT	1,2,3	3G6	3G6	3G6	3G6	3A5	3A5	3G7	3G7	3G7	3G7
NO.	4,5,6	1F3	1F3			6B3	6E3	1F4	1F4		
WIRE	0	4A6	4A6	4A6	4A6	5A7	5A7	4A8	4A8	4A8	4A8
	1	4A6	4A6	4A6	4A6	5A7	5A7	4A8	4A8	4A8	4A8
	2	4A6	4A6	4A6	4A6	5A7	5A7	4A8	4A8	4A8	4A8
	3	4A6	4A6	4A6	4A6	5A7	5A7	4A8	4A8	4A8	4A8
	4	4A6	4A6	4A6	4A6	5A7	5A7				
	5	4A6	4A6	4A6	4A6						

SWITCH

Ⓥ SW3
324N

SEL MAG	LOCATION		HOLD MAG	HOLD ON CONT
2 1 RB OR LT RT OR LB	COIL	SEL ON CONT	R L	5 4 6 2 1 3
S9	3G8			
S8	3F8			
S7	3F8			
S6	3F8			
S5	3E8			
S4	3E8			
S3	3E8			
S2	3D8			
S1	3D8			
S0	3C8			

LOCATION										
DESIG		A5	A6	B5	B6			C5	C6	D5	D6
COIL		3G5	3G5	3G5	3G5			3G6	3G6	3G7	3G7
CONTACT	1,2,3	3G5	3G5	3G5	3G5			3G6	3G6	3G7	3G7
NO.	4,5,6										
WIRE	0	4A1	4A1	4A3	4A3			4A6	4A6	4A8	4A8
	1	4A1	4A1	4A3	4A3			4A6	4A6	4A8	4A8
	2	4A1	4A1	4A3	4A3			4A6	4A6	4A8	4A8
	3	4A1	4A1	4A3	4A3			4A6	4A6	4A8	4A8
	4	4A1	4A1					4A6	4A6		
	5	4A1	4A1					4A6	4A6		

CAPACITOR

OPTION	DESIG	LOC	CODE
YB	FGP	1F7	535FW

INDUCTOR

OPTION	DESIG	LOC	CODE
YB	FGP	1F7	1596A, 3.2H

DRAWING ISSUE

ISSUE 8B

LINE CONCENTRATOR-IDENTIFIER CIRCUIT

SD-95962-01-C2

BELL TELEPHONE LABORATORIES INCORPORATED

SIZE 6S

SD-95962-01-C2

APP FIG. 4

RELAY

DESIG				DC1			DL1			DL2						PC			PC1			PC2						SM			DESIG
CODE				U814			U420			U781						U995			U1309			U1000						U1133			CODE
OPTION																															OPTION
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	
TOP																10,9	M	2B7													
										8,7	M	b				8,7	M	7F1	8,7	M	7C2	10,9	M	8H1				8,7	M	10C3	
										6,5	B	7C2				6,5	M	7E1	6,5	M	a	8,7,6	BM	3D3				6,5	B	2A7	
							5,4	M	8H3	4,3	B	7A8				4,3	B	2A7	4,3	M		5,4,3	BM	3E3				4,3	M	2B7	
				3,2,1	BM	2A8	3,2,1	BM		2,1	B	2A8				2,1	B	7C1	2,1	B		2,1	B	3E1				2,1	B	2F8	
BOT				2,1	B	2H5	3,2,1	BM	8G2	2,1,3	MB	7F5				2,1	B		2,1	B		3,2,1	BM	3E3				3,2,1	BM	2G4	BOT
				4,3	M	2F8				5,4	M	8G4				4,3	B		4,3	M	8C2	5,4	M	3E2				5,4	PM	3B7	
										7,6	M	a				7,6,5	BM	2H3	6,5	M		7,6	M	3F1							
																9,8	M	a	8,7	M	8G1										
COIL						2E9			8F2			8G5						7C1			7E1			7F1						3B6	COIL

a CONT A 7F3, CONT B 7G3

b CONT A 7G2, CONT B 7F2

a CONT A 6C0, CONT B 6D0

a CONT A 6C0, CONT B 6E0

RELAY

DESIG				TS						US						X			XN			XP						Y			DESIG
CODE				U1046						U1328						U1359			U1404			U1404						U1359			CODE
OPTION																															OPTION
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	
TOP				12,11	M	3B0																									
				10,9	M	3B2				10,9	M	3D7																			
				8,7	M	3B1				8,7	M	3D7							9,8	M	3E4	9,8	M	3E4							
				6,5	M	3B4				6,5	M	3D7							7,6,5	BM	3D4	7,6,5	BM	3D4							
				4,3	M	3B5				4,3	M	3D7				5,4	M		4,3	M	2F3	4,3	M	2F3				5,4	M		
				2,1	M	7A4				2,1	M	3D7				3,2,1	BM	2E2	2,1	B	3C0	2,1	B	3D0				3,2,1	BM	2E4	
				2,1	M	3F4				2,1	M	3D7				2,1	B	2G2	2,1,3	MB	3E4	2,1,3	MB	3E4				2,1	B	2G4	
				4,3	M	3F5				4,3	M	3D7				4,3	M	2G3	5,4	M	3D4	5,4	M	3D4				4,3	M	2G5	
BOT				6,5	M	3F6				6,5	M	3D7							7,6	M	3F4	7,6	M	3F4							BOT
				8,7	M	3F7				8,7	M	3D7							9,8	M	7E0	9,8	M	7E0							
				10,9	M	3F1				10,9	M	3D7																			
				12,11	M	3F2																									
COIL						2H5						2F9						2F4			2F2			2F2						2F5	COIL

RELAY

DESIG	YN			YP						ZN			ZP					
CODE	U1404			U1404						U1404			U1404					
OPTION																		
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																		
	9,8	M	3E3	9,8	M	3F3				9,8	M	3D2	9,8	M	3D1			
	7,6,5	BM	3D3	7,6,5	BM	3C0				7,6,5	BM	3C0	7,6,5	BM	3D1			
	4,3	M	2F5	4,3	M	2F5				4,3	M	2F7	4,3	M	2F7			
	2,1	B	3D0	2,1	B	3D2				2,1	B	3D2	2,1	B	3D1			
BOT	2,1,3	MB	3D2	2,1,3	MB	3D2				2,1,3	MB	3E3	2,1,3	MB	3E2			
	5,4	M	3C2	5,4	M	3C2				5,4	M	3C2	5,4	M	3C2			
	7,6	M	3D1	7,6	M	3D1				7,6	M		7,6	M	3F0			
	9,8	M	7D0	9,8	M	7D0				9,8	M	7C0	9,8	M	7C0			
COIL			2F4			2F4						2F6			2F6			

CAPACITOR

DESIG	LOC	CODE
T	2G9	439QA

DIODE

DESIG	LOC	CODE
DL	8F1	KS-15724,L2
DL2	8G4	446F
PC1	7A8	446F

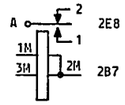
NETWORK

DESIG	LOC	CODE
DC	2E9	185A
PN	2E2	186A
PP	2G2	186A
SM	2F9	185A

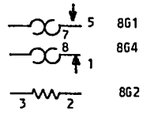
RESISTOR

DESIG	LOC	CODE
AX	2F3	KS-8512,L17A, 30.1
AY	2F5	KS-8512,L17A, 30.1
AZ	2F7	KS-8512,L17A, 30.1
T	2G8	18DJ

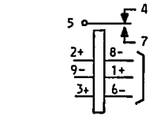
RELAY
DC
B1018



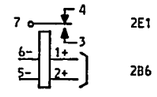
RELAY
DL
KS-16615, L14



RELAY
316J (ZG) PN (ZG) PP



RELAY
280AT (ZF) PN (ZF) PP



SD-95962-01-C3

ISSUE 7AR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2) SD-95962-01-C3

BELL TELEPHONE LABORATORIES INCORPORATED — DWG SIZE 6S — PRINTED IN U.S.A.

APP FIG. 5

NOT USED

APP FIG. 6

NOT USED

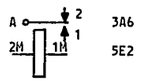
APP FIG. 7

RELAY

DESIG	A			B			C						CI						CIX						DESIG
CODE	U242			U242			U242						U1078						Y319						CODE
OPTION																			YD						OPTION
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	
TOP	-	-	-	-	-	-	-	-	-	-	-	-	12,1T	M	3A4	-	-	-	-	-	-	-	-	-	TOP
													10,9,8	BM	a										
													7,6	M	3A5										
	5,4	M	3A0	5,4	M	3A2	5,4	M	3A1				5,4	B					4,3	B					
	3,2,1	BM	5E3	3,2,1	BM	5E2	3,2,1	BM	5E2				2,1,3	MB	b				2,1	B					
BOT	3,2,1	BM	5F2	3,2,1	BM		3,2,1	BM					2,1,3	MB	3A6				2,1	B					BOT
													5,4	M	3A1				4,3	M	3A7				
													7,6	M	3A2										
													10,9,8	BM	c										
													12,11	M	3A0										
COIL			3A0			3A2			3A1						d						3A7				COIL

a	IND1	6B2
	IND2	6E2
b	IND1	6C4
	IND2	6F4
c	IND1	6D6
	IND2	6A6
d	IND1	6A2
	IND2	6D2

RELAY
CIA
8128



3A6
5E2

DIODE

OPTION	DESIG	LOC	CODE
	ATB	3B6	446F
	CI	6A2 (IND 1) 6D2 (IND 2)	446F
YD	CX	6B2 (IND 1) 6F2 (IND 2)	446F

LAMP

DESIG	LOC	CODE
I	5E1	11B (RES)

APP FIG. 8

PART OF APP FIG. 3 AS OF ISSUE 7AR

APP FIG. 9

PART OF APP FIG. 3 AS OF ISSUE 7AR

DRAWING ISSUE

ISSUE 8B

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2)

SD-95962-01-C4

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

PRINTED IN U.S.A.

SD-95962-01-C4

APP FIG. 10

RELAY

DESIG				CA			CB			CB1			CL						RCA						TO			TO			DESIG
CODE				U556			UA37			U1147			U1188						UA44						U670			U1113			CODE
OPTION																									ZP			ZQ			OPTION
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	
TOP													9,8	B	7E5													10,9	M	8F5	TOP
				8,7	M	3B8							7,6	M	7F1													8,7	M	8F4	
				6,5,4	BM	2A4							5,4	B	7G3										6,5,4	BM	2A4	6,5,4	BM	2A4	
				3,2,1	BM	2C4	3,2,1	BM	a	3,2,1	BM	7F1	2,1,3	MB	7G2				3,2,1	BM	8E4				3,2,1	BM	8F5	3,2,1	BM	2B4	
BOT				3,2,1	BM	7D4	2,1	M	3B8	2,1	B		2,1,3	MB	8F6				2,1	B	7B5				3,2,1	BM	2C4	3,2,1	BM	2C4	BOT
				6,5,4	BM	7C4				4,3	M	7C4	5,4	M	7D4				4,3	M	8E4				6,5,4	BM	8F5	6,5,4	BM	2C4	
													7,6	B														8,7	M	8F5	
													9,8	M	8G6													10,9	M		
COIL						7G5			7C5			7F5			8F7						8D4					8E5			8F5		COIL
								a	7C3 7G1																						

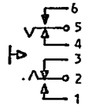
RELAY
280AA

AR	RC
	8C2
8F4	
	8E3
1E0	1D0

DIODE

OPTION	DESIG	LOC	CODE
ZD	B	1E1	400F
ZE	B	1E1	446F
ZD	C	8E3	400E
ZE	C	8E3	446F
	CL	8D3	446F
ZD	D	1D1	400E
ZE	D	1D1	446F
	T5	7A4	446F

KEY
552A



CA CB

7F2 7G2

KEYTOP
552A

CA OR CB

7D5

LAMP

DESIG	LOC	CODE
CL	8G7	B2
TO	8E7	B2

NETWORK

DESIG	LOC	CODE
CA	7D3	186A
CB	7C3	186A

RESISTOR

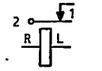
OPTION	DESIG	LOC	CODE
ZW	AR	1E1	KS-13491, L1, 15KΩ
ZW	RC	1E1	KS-13491, L1, 15KΩ

APP FIG. 11

RELAY

DESIG				CF			CT						FA					
CODE				Y228			U1244						U306					
OPTION																		
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																		
							4,3	M					4,3	M	10E8			
				3,2,1	BM	10D5	2,1	B	10B4				2,1	M				
BOT				2,1,3	MB	10A3	2,1	M					2,1	M	10A8			
				5,4	M								4,3	M	10B8			
COIL						10A2			10B3						10D7			

RELAY
CC
253A



10B5
10B3

BATTERY

OPTION	DESIG	LOC	CODE
ZH	[10]-	10C4	KS-5361, L120B
ZN	[12]-	10C4	KS-5361, L120B

FUSE

DESIG	LOC	CODE
[6] A1-6	10B6	70A
BA	10B6	
BB	10B6	
CA	10B6	
CA1	10B6	
CB	10B6	
CB1	10B6	
CC	10B6	
CHG	10A6	
CO	10E2	
CT	10B6	
[3] E1-3	10C6	
FA	10C6	70D
LB	10D6	70A
TBS	10C6	

INDUCTOR

DESIG	LOC	CODE
F	10A1	149N

LAMP

DESIG	LOC	CODE
L	10D1	48 (BALL.)

RESISTOR

DESIG	LOC	CODE
CF	10D4	KS-13492, L1, 620
R1	10A5	KS-5643, L316
R2	10A3	KS-5643, L316
RS	10B3	KS-8512, L17A, 75

DRAWING ISSUE

ISSUE 7AR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT

SD-95962-01-C5

BELL TELEPHONE LABORATORIES INCORPORATED

SIZE 6S

SD-95962-01-C5

⑫ APP FIG. 12

RECTIFIER

DESIG	LOC	CODE
24VG1	10A1	J86205F

APP FIG. 13

JACK

DESIG	LOC	CODE
TL	9D6	239A

LAMP

DESIG	LOC	CODE
TL	9D7	A2

APP FIG. 14

CONN BLOCK

DESIG	LOC	CODE
[1] 24V	9C8	68A
G		

APP FIG. 15

CONN BLOCK

DESIG	LOC	CODE
[1] R		
T	9B8	68A
TLK		

APP FIG. 16

RELAY

DESIG	ATB		
CODE	UA49		
OPTION			
⊠	CONT NO.	CONT ARR	LOC
TOP			
	2,1	11	9C4
BOT	2,1	11	9B6
COIL	⊠	⊠	9B4

MESSAGE REGISTER

DESIG	LOC	CODE
AB	9B7	14E

RESISTOR

DESIG	LOC	CODE
ATB	9C4	KS-13491,L1, 220
ATB1	9B5	KS-13491,L1, 1200

⑰ APP FIG. 17

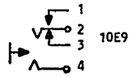
BUZZER

DESIG	LOC	CODE
FA	10F9	4C

KEY

AS

498Y



KEYTOP

498Y

LAMP

DESIG	LOC	CODE
FA1	10B9	K2

⑱ APP FIG. 18

BUZZER

DESIG	LOC	CODE
FA1	10G9	4C

⑲ APP FIG. 19

LAMP

DESIG	LOC	CODE
ATB	9B7	A2

APP FIG. 20

LAMP

DESIG	LOC	CODE
FA	10B9	K2 (RED)

㉑ APP FIG. 21

MESSAGE REGISTER

DESIG	LOC	CODE
AB	9C7	14E

㉒ APP FIG. 22

LAMP

DESIG	LOC	CODE
FA	10A9	K2 (RED)

㉓ APP FIG. 23

LAMP

DESIG	LOC	CODE
TO	8F7	B2

DRAWING ISSUE

ISSUE 7AR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT ②

SD-95962-01-C6

BELL TELEPHONE LABORATORIES INCORPORATED

SIZE 6S

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SD-95962-01-C6

APP FIG. 24

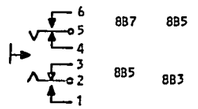
RELAY

DESIG	SA			SA1					
CODE	U810			U267					
OPTION									
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP									
	9,8,7	BM	8C5						
	6,5,4	BM	6C1						
	3,2,1	BM	8B5	3,2,1	B..	8C6			
BOT	3,2,1	BM	8B3	2,1,3	MB	8C5			
	6,5,4	BM	6C1						
COIL			8B5			8B4			

DIODE

DESIG	LOC	CODE
SA	8B5	446F
SA1	8C2	446F

KEY 552A



I1	I2
8B7	8B5
8B5	8B3

KEYTOP 552A

RESISTOR

DESIG	LOC	CODE
V	8A5	KS-8512,L3A (ZX) 61.9 (ZY) 120
W	8A4	KS-8512,L3A (ZX) 61.9 (ZY) 120

APP FIG. 25

RELAY

DESIG	ITA-		ITB-	
CODE	AK30			
OPTION				
	CONT ARR	LOC	CONT ARR	LOC
12	M	6C2,6F2		
11	EBM	6B7,6E7		
10	EBM	6C4;6F4		
9	EMB	6B2,6E2		
8	EMB	6B4,6E4		
7				
6				
5			EMB	6C2,6F2
4			EMB	6C4,6F4
3			EBM	6A5,6D5
2			EBM	6B1,6F1
1			M	6C3,6F3
COIL		6B4,6E4		6C3,6F3

CAPACITOR

DESIG	LOC	CODE
C-	6B7,6E7	542F

CONNECTOR

DESIG	LOC	CODE
J1	6A7	910A

DIODE

DESIG	LOC	CODE
ITA-	6B2,6E2	446F

LAMP

DESIG	LOC	CODE
IT-	6A4,6D4	B2

RESISTOR

DESIG	LOC	CODE
ITA-	6B4,6E4	18F
R-	6A7,6D7	KS-13490,L1, 1.2MΩ

TIMER

DESIG	LOC	CODE
-	6A8	ED-99514-10

DRAWING ISSUE

ISSUE 7AR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2) SD-95962-01-C7

BELL TELEPHONE LABORATORIES INCORPORATED — DWG SIZE 6S — PRINTED IN U.S.A.

SD-95962-01-C7

CIRCUIT NOTES:

101.

DESIG	AMP	POTENTIAL FUSED	ONE PER
A1	1-1/3	20V	1ST FIG. 1 & PART OF FIG. 3
A2	1-1/3	20V	2ND FIG. 1 & PART OF FIG. 3
A3	1-1/3	20V	1ST FIG. 2 & PART OF FIG. 3
A4	1-1/3	20V	2ND FIG. 2 & PART OF FIG. 3
A5	1-1/3	20V	3RD FIG. 2 & PART OF FIG. 3
A6	1-1/3	20V	4TH FIG. 2 & PART OF FIG. 3
BA	1-1/3	20V	FIG.25 (ALLOTTER A) & PART OF FIG. 24
BB	1-1/3	20V	FIG.25 (ALLOTTER B) & PART OF FIG. 24
CA	1-1/3	20V	FIG. 4 (CONT A)
CA1	1-1/3	20V	FIG. 4 (CONT A)
CB	1-1/3	20V	FIG. 4 (CONT B)
CB1	1-1/3	20V	FIG. 4 (CONT B)
CC	1-1/3	20V	FIG. 10
CHG	1-1/3	20V	FIG. 11
CT	1-1/3	20V	FIG. 11
E1	1-1/3	20V	1ST FIGS. 7 & 9 & PART OF FIG. 8
E2	1-1/3	20V	2ND FIGS. 7 & 9 & PART OF FIG. 8
E3	1-1/3	20V	3RD FIG. 9
FA	1-1/3	20V	FIG. 11
LB	5	20V	FIG. 11
TBS	1-1/3	20V	FIGS. 14 & 16
CO	1-1/3	48V	FIG. 11
A		GRD	2 FIGS. 1,4 FIGS. 2
A1		GRD	1ST FIG. 1 & PART OF FIG. 3
A2		GRD	2ND FIG. 1 & PART OF FIG. 3
A3		GRD	1ST FIG. 2 & PART OF FIG. 3
A4		GRD	2ND FIG. 2 & PART OF FIG. 3
A5		GRD	3RD FIG. 2 & PART OF FIG. 3
A6		GRD	4TH FIG. 2 & PART OF FIG. 3
BA		GRD	FIG.25 (CONT A) & PART OF FIG. 24
BB		GRD	FIG.25 (CONT B) & PART OF FIG. 24
CA		GRD	FIG. 4 (CONT A)
CB		GRD	FIG. 4 (CONT B)
CC		GRD	FIG. 10
CO		GRD	FIG. 11
E1		GRD	1ST FIGS. 7 & 9 & PART OF FIG. 8
E2		GRD	2ND FIGS. 7 & 9 & PART OF FIG. 8
FA		GRD	FIG. 11
TBS		GRD	FIGS. 14 & 16
LOC		GRD	FIG. 11

BATTERY SYMBOL	VOLTAGE RANGE
-24	20-26V SEE NOTE 307

CIRCUIT NOTES: (CONT)

102. (CONT)

FEATURE OR OPTION			FIG.	PROVIDE APP OR WRG	PROVIDE QUANTITY
EQUIPMENT COMMON TO BASIC UNIT IDENTIFIER CIRCUIT-TERMINATING END	CONTROLLER CONNECTOR	WITH TERMINATING END GROUND	10	ZS	1 PER UNIT
		WITH ORIGINATING END GROUND		ZR	
	BATTERY CONTROL, CHARGE FAILURE ALARM, FUSE ALARM, FILTER AND DISTRIBUTION FUSE CIRCUIT		11, 20		1 PER UNIT
	TEST LINE		13		
	TEST BATTERY		14		
	REPAIRMAN TALKING TERMINALS		15		
	ALL TRUNKS BUSY RELAY & REGISTER		16		
TO EQUIP	TRUNK CIRCUITS NO. 3 & NO. 4	WITH TERMINATING END GROUND	2	ZS	
		WITH ORIGINATING END GROUND		ZR	
	TRUNK CIRCUITS NO. 5 & NO. 6	WITH TERMINATING END GROUND	2	ZS	
		WITH ORIGINATING END GROUND		ZR	
		TRUNK CONNECTOR	3	V	2ND FIG.3
		UNITS SELECTOR	9	V	P/O 2ND FIG.3
OPTIONAL FEATURES	POWER SUPPLY	LOCAL RECTIFIER	12	Z,Y	ONE PER UNIT SEE FIG. 307
		EXPOSED FEED METALLIC GROUND		Y	
		BUILDING BATTERY		Z	
	ALARM INDICATION		17		AS REQD
	AUX ALARM (REMOTE LOCATION)		18		
	WHEN AN AUX PULSING PAIR IS REQD			ZT	ONE PER FIG. 10
	WHEN AN AUX PULSING PAIR IS NOT REQD			ZU	
	AT SWBD	ALL TRUNKS BUSY LAMP	19		AS REQD
		ALL TRUNKS BUSY REGISTER	21		
		FUSE ALARM LAMP	22		
		TIME OUT LAMP	23		
	LOCKED OUT CONTROLLER RELEASED BY	ALARM RELEASE			P/O FIG.10

102.

FEATURE OR OPTION			FIG.	PROVIDE APP OR WRG	PROVIDE QUANTITY
EQUIPMENT COMMON TO BASIC UNIT IDENTIFIER CIRCUIT-TERMINATING END	TRUNK CIRCUITS NO. 1 & NO. 2	WITH TERMINATING END GROUND	1	ZS	1 PER CKT 2 REQD
		WITH ORIGINATING END GROUND		ZR	
	TRUNK CONNECTORS	TRUNK NO. 1-4	3		ONE PER CKT
	CONTROLLERS (A & B)		4		2 PER UNIT
	INDICATOR	CONTROL	24		1 PER UNIT
		TIMER	25		2 PER UNIT
		CIRCUIT	7		2 PER UNIT
		CONNECTOR	8		2 PER UNIT P/O 1ST FIG.3
	UNITS SELECTOR		9		2 PER UNIT P/O 1ST FIG.3

103.

NETWORK VALUES			
NETWORK NO.	NETWORK CODE	RESISTANCE IN OHMS	CAPACITANCE IN UF
1	185A	470	0.13
2	186A	120	0.35

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	
5B	ZD OR ZE	ZD		ZE		ZD	
5B	ZF OR ZG	ZF		ZG		ZF	
6B	ZH OR ZI	ZH		ZI		ZH	
6B	ZJ OR ZK	ZJ		ZK		ZJ	
6B	ZL	ZL				ZL	
6B	ZM OR ZN	ZM		ZN		ZM	
7AR	ZP OR ZQ	ZP		ZQ		ZP	
7AR	ZS,ZR	S,T	102,114	ZS,ZR		S,T	
7AR	ZT,ZU	X,W	102,114	ZT,ZU		X,W	
7AR	ZV,ZW	ZV		ZW		ZV	
7AR	ZX,ZY	ZX		ZY		ZX	
7AR	ZZ	ZK		ZZ		ZK	
8B	YA,YB	YA	114	YB		YA	
8B	YC,YD	YC		YD		YC	
8B	YE	NONE		YE			

PROVIDE REPEATING COILS AS REQUIRED

105.

TRUNK IMPEDANCE AT 1000~	CODE	OPTION APP	OPTION WRG	IMP RATIO 4-3,8-7 TO 2-1,6-5	WDG RES 2-1 OR 6-5	WDG RES 4-3 OR 8-7
	120C	V		1:1	7.8	5.5
	120CS	R		1:1	20	20

106. USE R OPTION ONLY IF REQUIRED BY GOVERNMENT MATERIAL RESTRICTIONS ON V OPTION.

107. ADJUST CHARGE FOR APPROXIMATELY 0.600 AMPS WITH (CC) NON-OPERATED. READJUST (R1) TO OBTAIN APPROXIMATELY 0.350 AMPS WITH (CC) OPERATED. IF HEAVY TRAFFIC CONDITIONS PREVAIL, THE HIGH CHARGE RATE MAY HAVE TO BE SET HIGHER THAN 0.600 AMPS.

108. WHEN BATTERY SUPPLY IS FROM THE CENTRAL OFFICE ADJUST (R1) FOR 32Ω, ADJUST (R2) SO THAT (R2) PLUS THE LOOP IS MIN 44Ω TO MAX 52Ω. IF HEAVY TRAFFIC CONDITIONS PREVAIL, (R2) MAY HAVE TO BE LESS THAN 44Ω MIN.

109. THE SLEEVE OF THE JACK IS CONNECTED TO BATTERY OR GROUND OR LEFT OPEN, WHICHEVER IS NECESSARY TO CAUSE THE CORD CIRCUIT TO PROVIDE A DRY BRIDGE TO THE T AND R LEADS.

110. DO NOT CONNECT TONE SUPPLY WHEN USED WITH A 5578 SWITCHBOARD, SD-65731-01, ISS. 15AC, FIG. 26 HAVING "ZA" OPTION PROVIDED.

111. THE JK, LP, & PILOT CKT WILL BE FURNISHED AS PART OF THE SWBD.

112. (MFR DISC) SEE NOTE 303 PROVIDE T OPTION WHEN GROUND POTENTIAL BETWEEN ORIGINATING AND TERMINATING ENDS EXCEED ±20V.

113. PRIOR TO ISSUE 5B, SWITCHES 1,2, AND 3 WERE ALL MULTIPLED.

CIRCUIT NOTES: (CONT)

114. (A&M ONLY)

FEATURE OR OPTION			FIG	PROVIDE APP OR WRG	PROVIDE QUANTITY
EQUIPMENT COMMON TO BASIC UNIT IDENTIFIER CKT-TERM. END	CONTROLLER CONNECTOR	WITH TERMINATING END GROUND	10	S	1 PER UNIT
		WITH ORIGINATING END GROUND		T	
TO EQUIP	TRUNK CKT. NO.3 & NO.4	WITH TERMINATING END GROUND	2	S	
		WITH ORIGINATING END GROUND		T	
	TRUNK CKT. NO.5 & NO.6	WITH TERMINATING END GROUND	2	S	
		WITH ORIGINATING END GROUND		T	
EQUIP COMMON TO BASIC UNIT IDENTI-FIER CKT TERMINATING END	TRUNK CKT. NO.1 & NO.2	WITH TERMINATING END GROUND	1	S	1 PER CKT 2 REQ
		WITH ORIGINATING END GROUND		T	
	CONTROLLERS (A&B)	WITH TERMINATING END GROUND	4	S	2 PER UNIT
		WITH ORIGINATING END GROUND		T	
OPTIONAL FEATURE		WHEN AUX. PULSING PAIR IS REQ.		X	ONE PER FIG 10
		WHEN AUX. PULSING PAIR IS NOT REQ.		W	
PROTECTION AGAINST POWER LINE INTERFERENCE		REQUIRED		YB	
		NOT REQUIRED		YA	

EQUIPMENT NOTES:

201. IN THE EVENT A CDF IS NOT AVAILABLE, IT IS RECOMMENDED THAT CABLE TERMINAL BOXES BE PROVIDED, AS REQUIRED, TO INSURE FLEXIBILITY WITH RESPECT TO INSTALLATION, MAINTENANCE AND ADDITIONS. OTHERWISE, RUN CABLES DIRECT.

202. WHEN CENTRAL OFFICE BATTERY, WITH EXPOSED FEED METALLIC GROUND, IS USED FOR CHARGING THE LOCAL BATTERY, THE CI CABINET SHALL BE INSULATED FROM ALL CONTACT WITH BUILDING IRON WORK.

203. RUN THESE CABLES ONLY AS REQUIRED TO MEET JOB CONDITIONS.

204. THIS EQUIP. SHALL BE LOCATED AND MOUNTED IN THE SECRETARIAL SWBD ON A JOB BASIS.

205. THIS BUZZER SHALL BE LOCATED REMOTE FROM THE SWBD, FOR EXAMPLE, IN A REST ROOM.

206. PIN NUMBERS OF THE TIP & RING LEADS IN TABLE A HAVE BEEN REVERSED ON DWG ISSUE 5B TO AGREE WITH BSP 461-200-180, ISSUE 7.

DRAWING ISSUE
SUPER-SEDES ISS 3B
4AR WPA GFH
5B WPA GFH TEP
6B SAS FSH

ISSUE 8B

10-10-29696-SDS

LINE CONCENTRATOR-IDENTIFIER CIRCUIT

BELL TELEPHONE LABORATORIES INCORPORATED

SD-95962-01-DI

6S

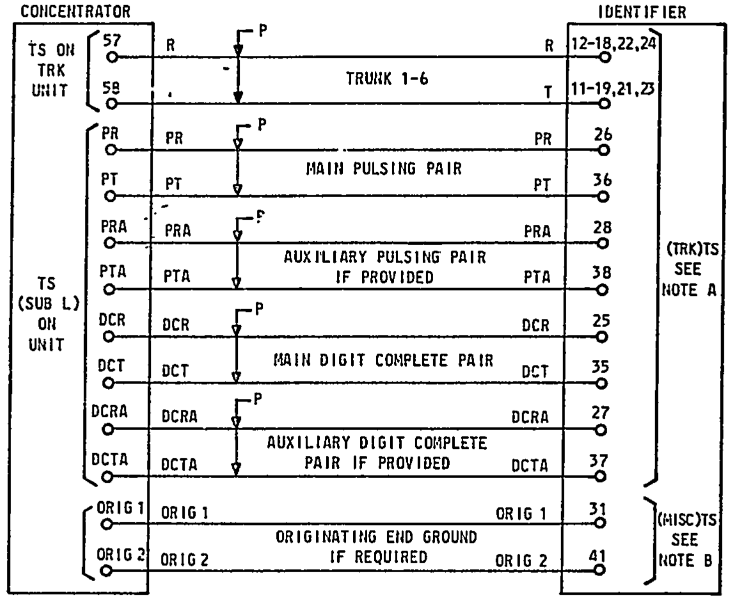
INFORMATION NOTES:

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

302. EACH SUBSCRIBER LINE IS ASSIGNED A NUMBER WHICH CORRESPONDS TO THE NUMERICAL DESIGNATION OF THE SUBSCRIBER LAMP AT THE BUREAU. WHEN A CALL IS TERMINATED TO A SUBSCRIBER LINE, AT THE CENTRAL OFFICE, THIS NUMBER IS TRANSMITTED TO THE BUREAU BY USING THE FOLLOWING CODE WHICH CONSISTS OF POSITIVE AND NEGATIVE PULSES OF COIN POTENTIAL.

DIGIT	FIRST PULSE	SECOND PULSE	THIRD PULSE
0	−		
1	−	−	+
2	−	−	−
3	−	+	−
4	−	+	+
5	+		
6	+	−	+
7	+	−	−
8	+	+	−
9	+	+	+

303. TO REDUCE PULSING IRREGULARITIES AND TO REDUCE EFFECTS OF AC INTERFERENCE, IT IS IMPORTANT TO MAINTAIN PAIRING BETWEEN THE CONCENTRATOR AND IDENTIFIER AS FOLLOWS.



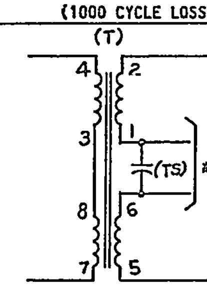
(A). RESISTANCE SHALL NOT EXCEED 2KΩ PER CONDUCTOR. INDIVIDUAL PAIRING SHALL BE MAINTAINED. DO NOT PARALLEL CONDUCTORS TO MEET RESISTANCE LIMITATIONS.

(B) ORIGINATING END GROUND IS REQUIRED ONLY IF DC EARTH POTENTIAL EXCEEDS 20 VOLTS *. WHEN ORIGINATING GROUND IS REQUIRED, TALKING TRUNK PAIRS AND ORIGINATING GROUND LEADS SHALL BE IN THE SAME CABLE SHEATH. THE TOTAL RESISTANCE OF THE RETURN GROUND IS DEPENDENT UPON, (a) THE NUMBER OF TALKING TRUNKS, (b) CONDUCTOR RESISTANCE OF THE TALKING TRUNKS:

TALKING TRUNKS	TRUNK CONDUCTOR RESISTANCE	MAXIMUM ALLOWED RESISTANCE OF RETURN GROUND
2	400Ω	NOT TO EXCEED TRUNK CONDUCTOR RESISTANCE
	800Ω	
	1200Ω	
	1600Ω	1320Ω
	2KΩ	1240Ω
4	400Ω	NOT TO EXCEED TRUNK COND RES
	800Ω	760Ω
	1200Ω	640Ω
	1600Ω	600Ω
	2KΩ	480Ω
6	400Ω	NOT TO EXCEED TRUNK COND RES
	800Ω	375Ω
	1200Ω	370Ω
	1600Ω	330Ω
	2KΩ	310Ω

* DC EARTH POTENTIAL SHALL BE MEASURED BY GROUNDING A SINGLE CONDUCTOR AT IDENTIFIER LOCAL GROUND; AT THE CONCENTRATOR END READ THE VOLTAGE TO C.O. GROUND.

TRANSMISSION TEST REQUIREMENTS
(1000 CYCLE LOSS BETWEEN 600Ω LINES)



MAXIMUM ALLOWABLE CKT LOSS (db)
0.5

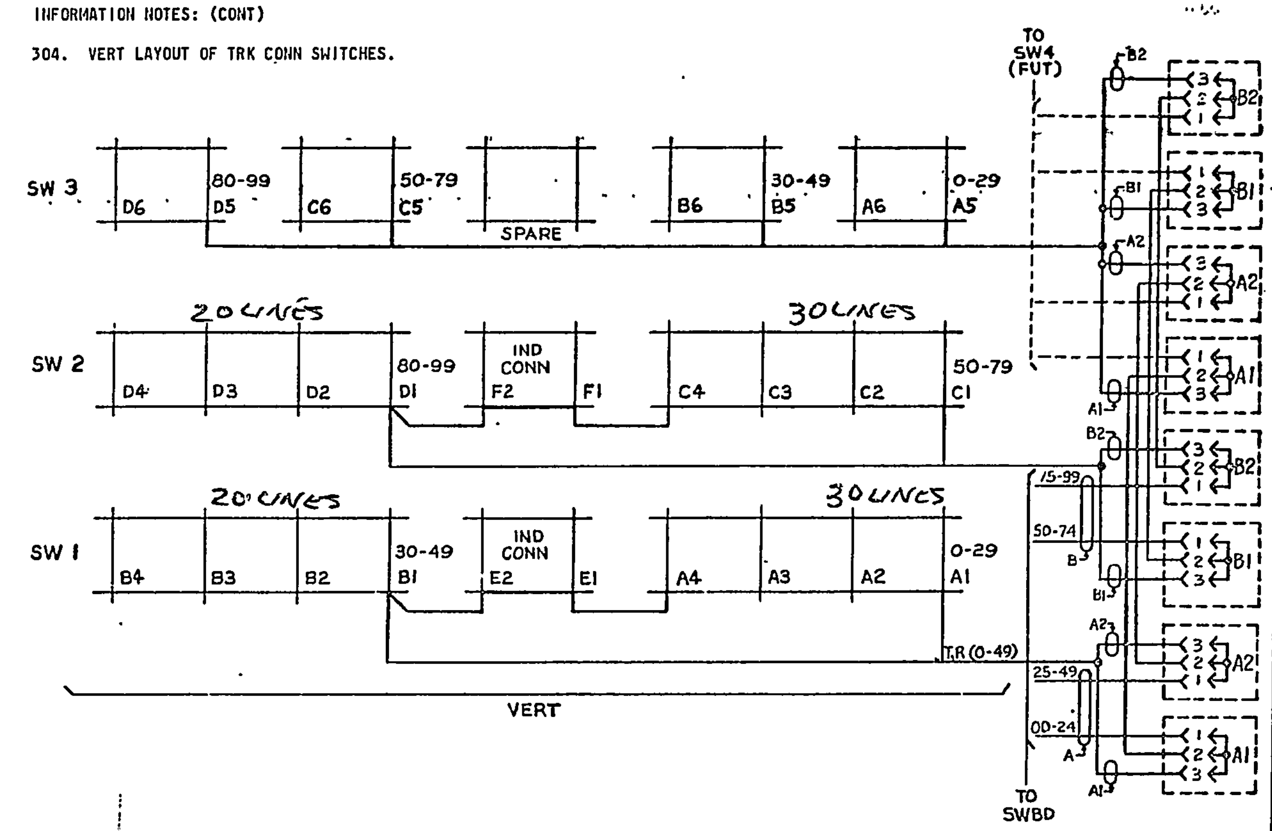
ALLOWABLE INDIVIDUAL APPARATUS LOSSES (db)

APPARATUS	DESIG	CODE	MAX LOSS	MIN LOSS	REMARKS
CAPACITOR	T5		12.8	12.1	
TRANSFORMER	T	120C	0.4	0.2	

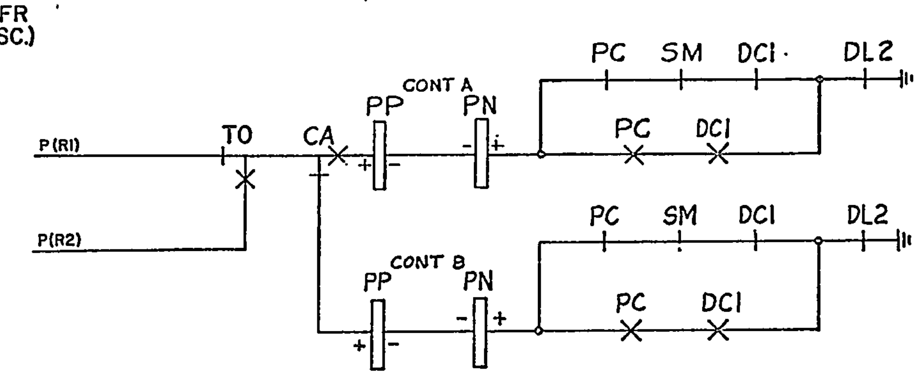
*INDICATES APPARATUS FOR WHICH INDIVIDUAL LOSSES ARE NOT REQUIRED.

INFORMATION NOTES: (CONT)

304. VERT LAYOUT OF TRK CONN SWITCHES.



305. DIGIT PULSING PATH. (MFR DISC.)



LINE CONCENTRATOR-IDENTIFIER CIRCUIT

SD-95962-01-D2

BELL TELEPHONE LABORATORIES INCORPORATED

6S

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DRAWING ISSUE | SUPERSEDES ISS 3B | 4AR

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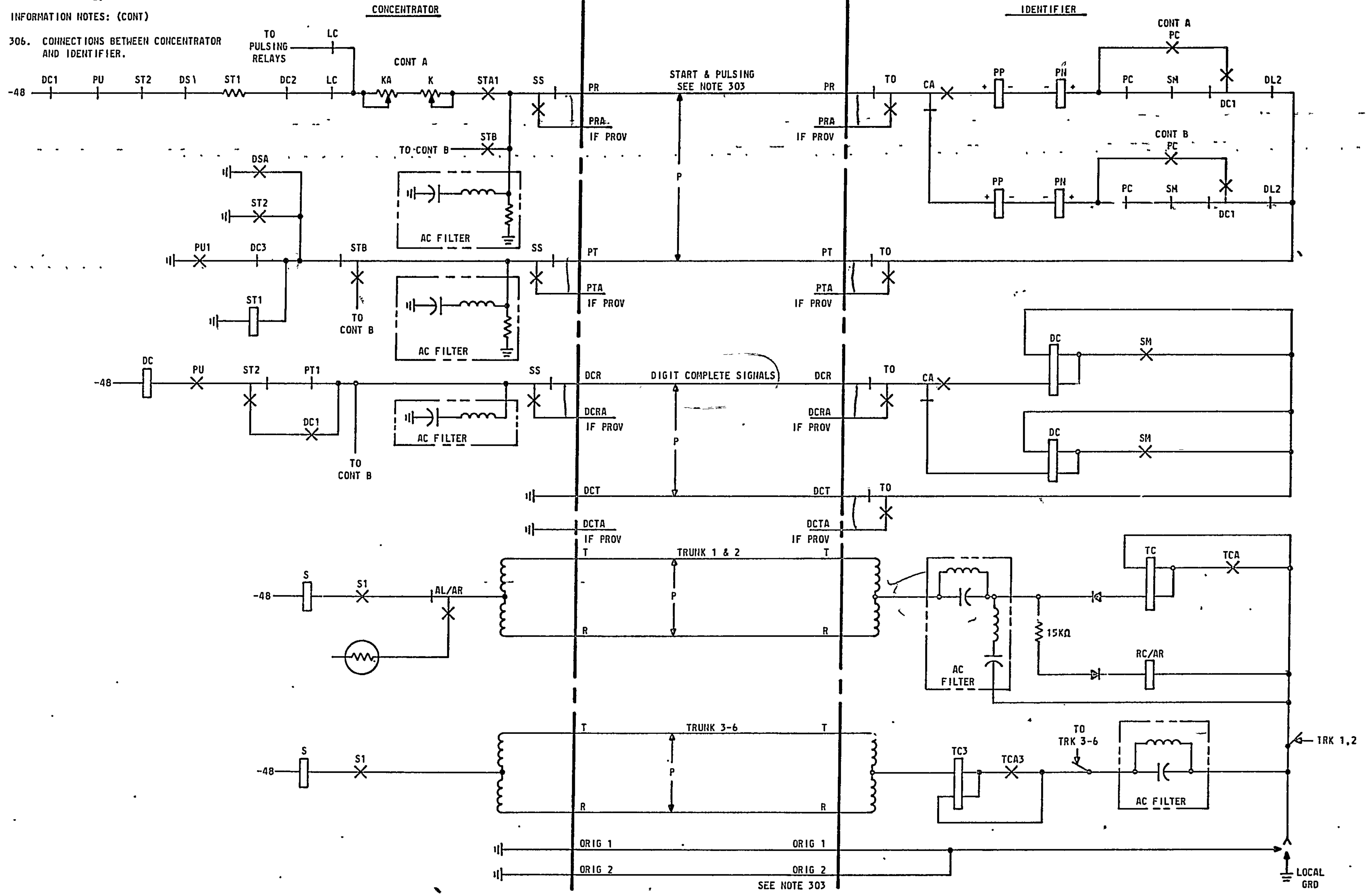
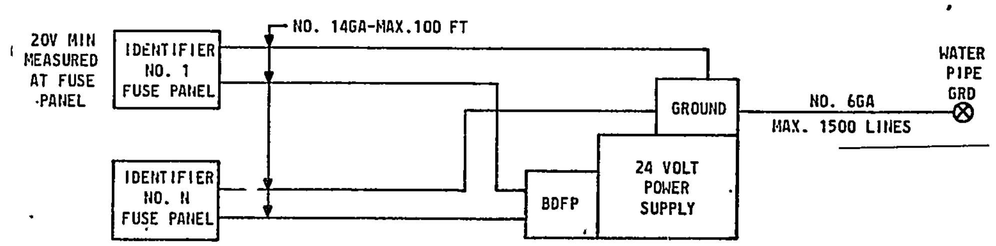
INFORMATION NOTES: (CONT)

306. CONNECTIONS BETWEEN CONCENTRATOR AND IDENTIFIER.



307. SUGGESTED POWER DISTRIBUTION FOR A COMMON POWER SUPPLY (BUILDING BATTERY).

MINIMUM VOLTAGE SHALL BE 20 VOLTS MEASURED AT THE BATTERY FUSE PANEL ON EACH IDENTIFIER UNIT.



LINE CONCENTRATOR-IDENTIFIER CIRCUIT

SD-95962-01-D3

BELL TELEPHONE LABORATORIES INCORPORATED

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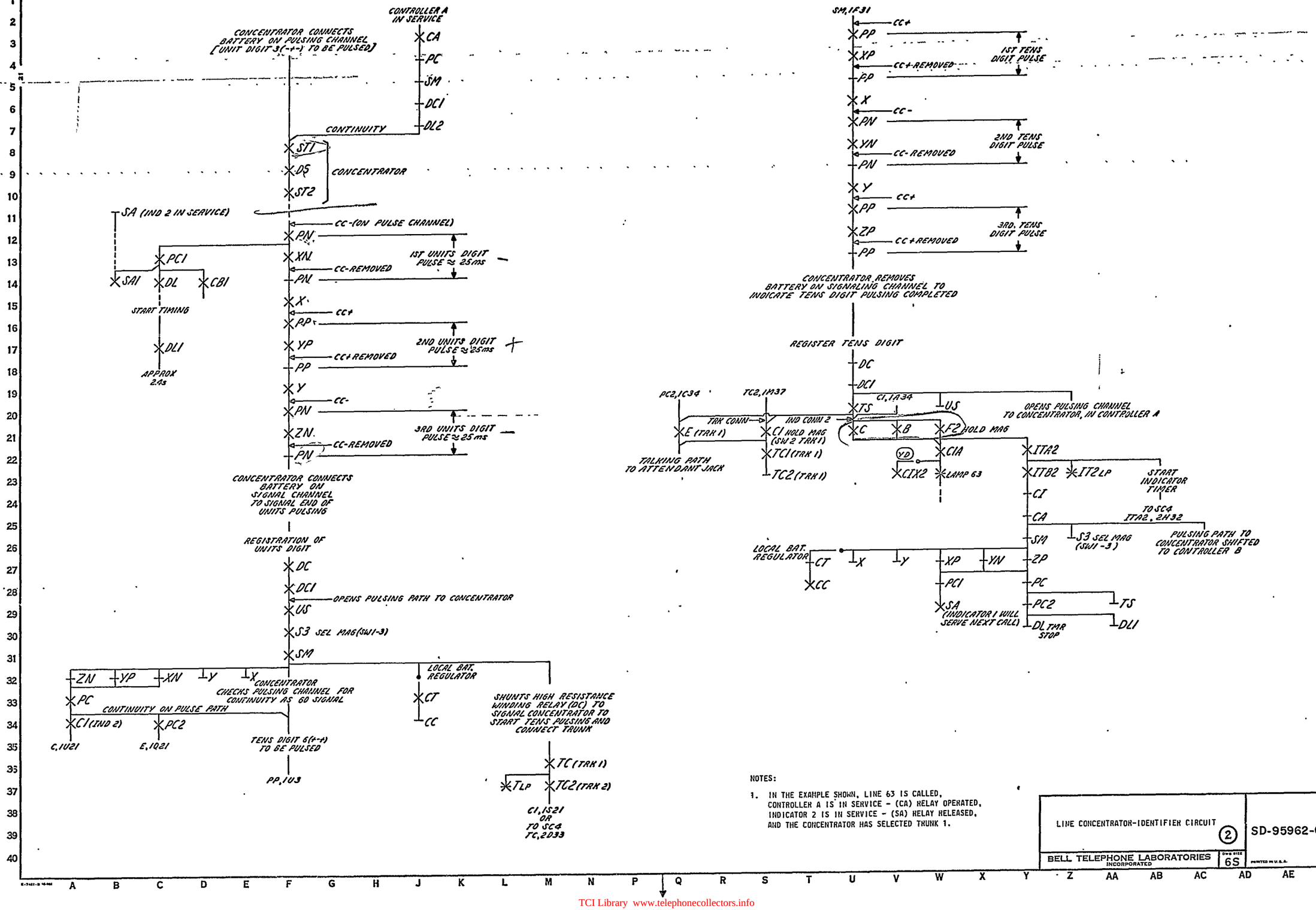
SD-95962-01-D3

SC 1
INCOMING CALL
(SEE NOTE 1)



NOTES:

1. IN THE EXAMPLE SHOWN, LINE 63 IS CALLED, CONTROLLER A IS IN SERVICE - (CA) RELAY OPERATED, INDICATOR 2 IS IN SERVICE - (SA) RELAY RELEASED, AND THE CONCENTRATOR HAS SELECTED TRUNK 1.

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LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2)

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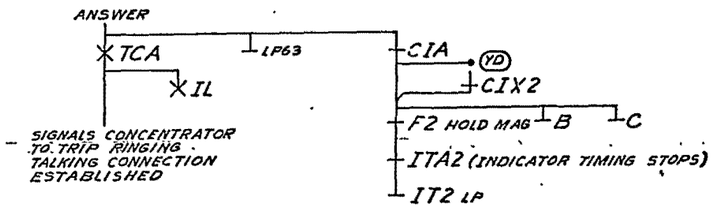
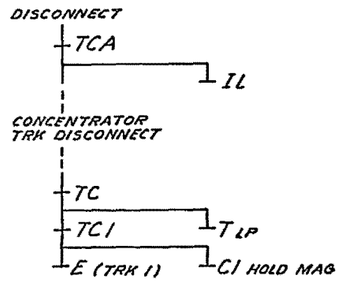
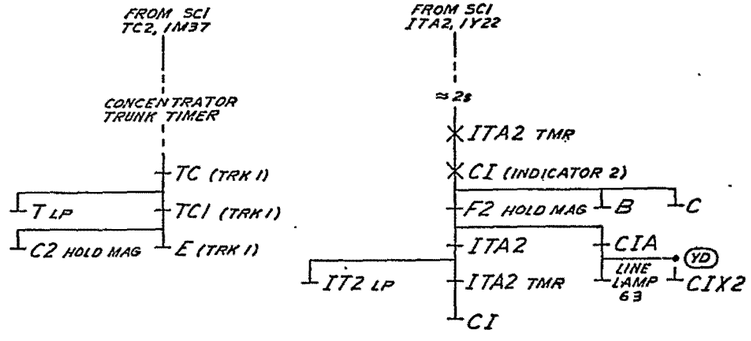
SC 2
ATTENDANT ANSWERS



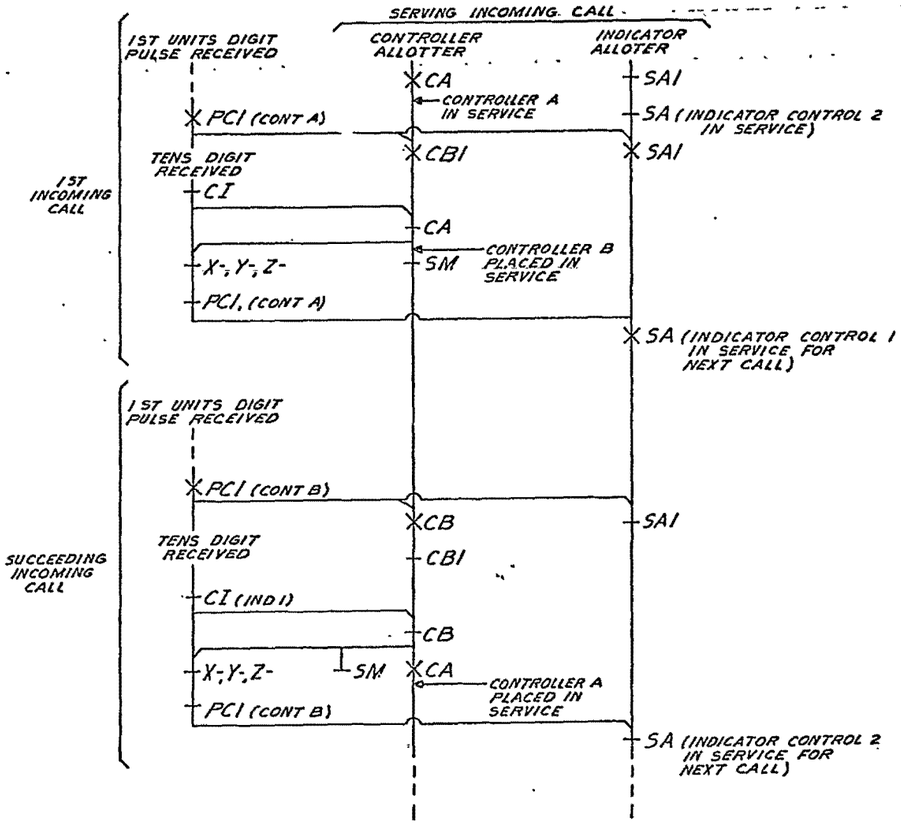
SC 3
ATTENDANT DISCONNECT



SC 4
CALL NOT ANSWERED



SC 5
ALTERNATE USE OF CONTROLLERS AND INDICATOR CONTROL



DRAWING ISSUE

ISSUE 7AR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2) SD-95962-01-E2

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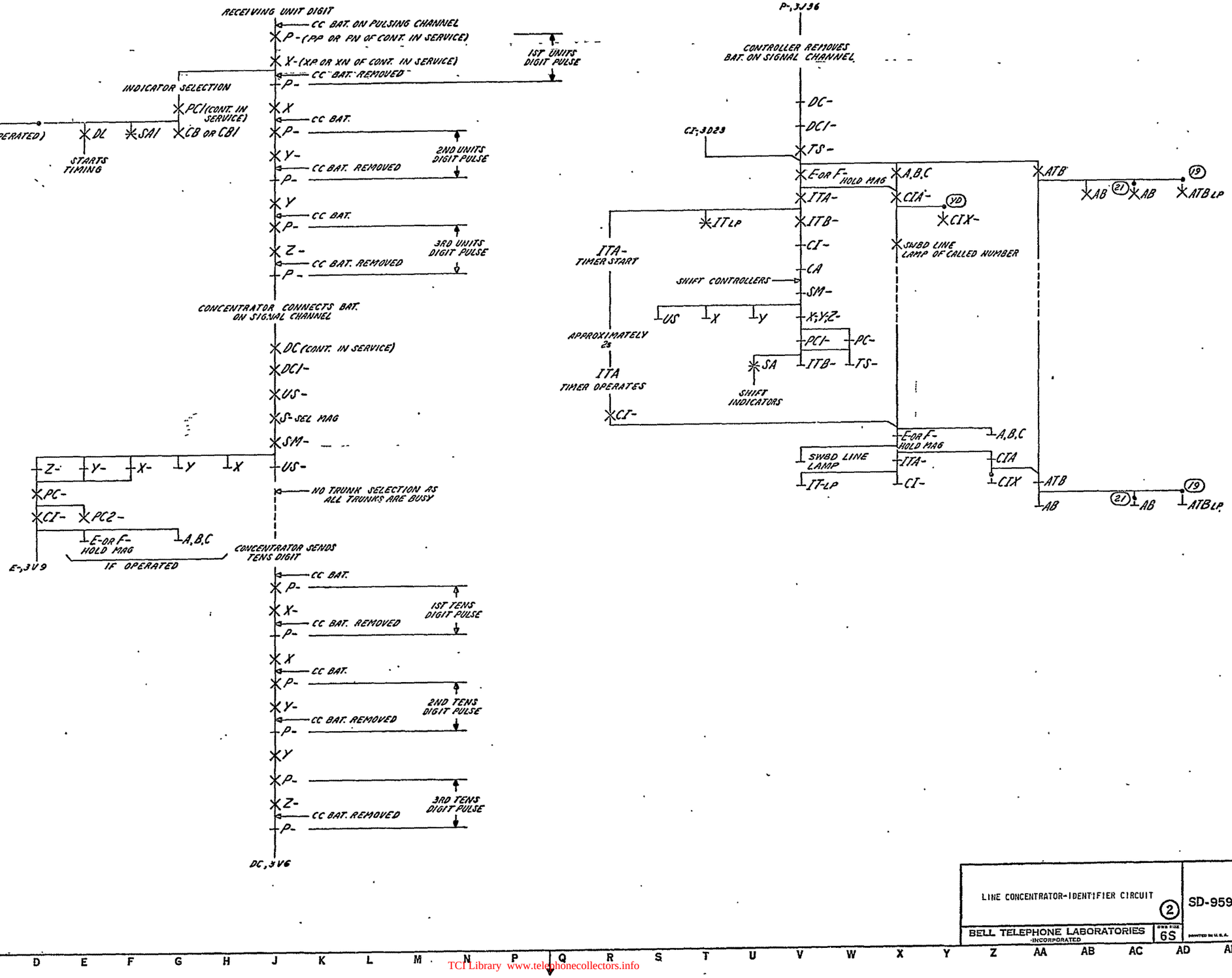
SD-95962-01-E2

SC 6
CALL PROGRESS WITH ALL TRUNKS BUSY

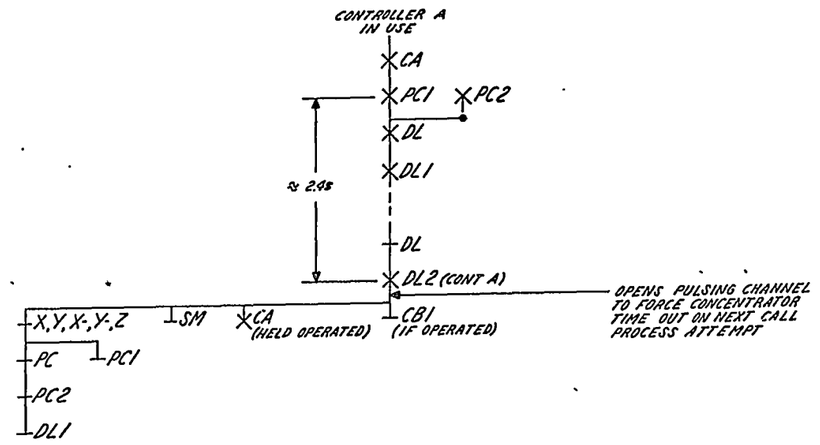


LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2)	SD-95962-01-E3
BELL TELEPHONE LABORATORIES INCORPORATED	DWG SIZE 6S

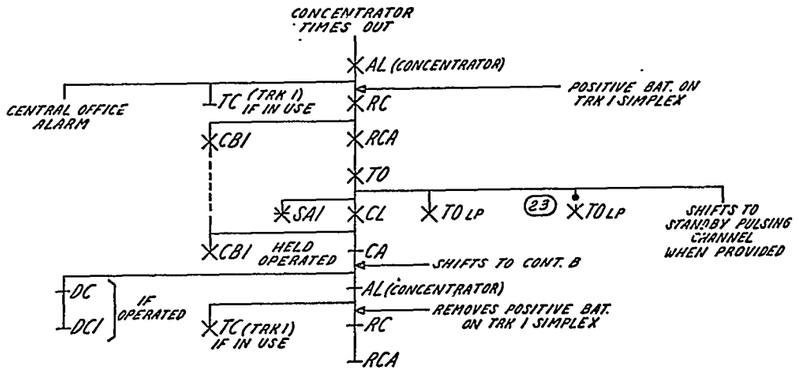
ISSUE 7AR

SD-95962-01-E3

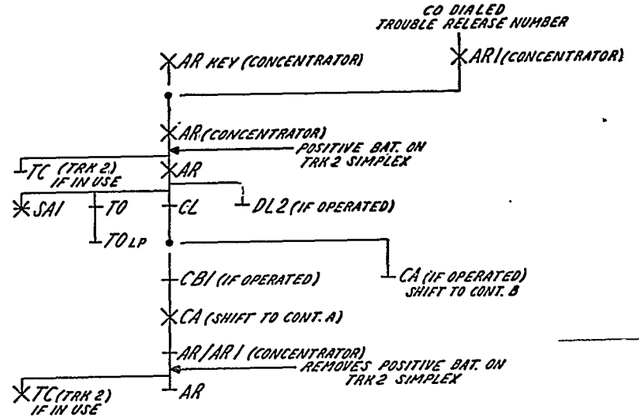
SC 7
CONTROLLER TIME OUT



SC 8
SYSTEM TIME OUT (WITH CONTROLLER A TIMED OUT)



SC 9
ALARM RELEASE



DRAWING ISSUE

ISSUE NO 7AR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2)

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SYS SIZE 6S

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SD-95962-01-E4

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CIRCUIT REQUIREMENTS

LINE CONCENTRATOR IDENTIFIER CIRCUIT

DRAWING ISSUE SUPER-SEDES ISS 3B

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPTION	APPARATUS FIG.	MECH REQT BSP FIG.	MECH REQT CONT PRESS	MECH REQT ARM. TRVL.	CIRCUIT PREPARATION BLOCK OR INSULATE	CIRCUIT PREPARATION TEST CLIP DATA CONN BAT	CIRCUIT PREPARATION TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	TEST WDG	DIRECT CURRENT FLOW REQT TEST FOR	DIRECT CURRENT FLOW REQT AFTER SOAK MA.	DIRECT CURRENT FLOW REQT TEST MA.	DIRECT CURRENT FLOW REQT READJ MA.	REMARKS
MAGNETS																	
HOLD A-F	324N		3,8	11		3	MAG TST		R MAG TST	GRD			.0		52.5	50	
SEL 0-9	SW		9	103							1/2		0		75	71	
RELAYS																	
A	U242		7	108/132	H	47	1B (CI)		T(A)	GRD			0		18.5	17.5	
AB	14E MR		16				ATB(NO)	RB1(AB)		BAT.	10		0		32	30	
							ATB(NO)	RB1(AB)		BAT.	10		R		3.8	4	
AB	14E MR		21				ATB(NO)	RB1(AB)		BAT.	10		0		32	30	
							ATB(NO)	RB1(AB)		BAT.	10		R		3.8	4	
AR	280AA		10	B				4(AR)	1(AR)	NGB			0	-40		0.9	
													NO	-40		0.6	
													0	-60	3.2	3.0	
													R	40	0.1	0.2	
ATB	UA49		16	205/205	H	29	1T(ATB)		T(ATB)	GRD	3		0		6.3	6.0	
									T(ATB)	GRD			NO		3.6	3.8	
B, C	U242		7 7	100/132	H	47	1B(CI)		T REL TST	GRD			.0		18.5	17.5	
CA	U556		10	118/121	H	50	1B(DL2)		TF(CA)	GRD	6	P	0		25	23.5	
									TR(CA)	GRD		S	0		80		WDG ALONE
CB	UA37		10	132/101	H	47	(CA)0		T(CB)	GRD			.0		13	12.5	
													NO		7.9	8.3	
CB1	U1187		10	132/110	H	47	1B(DL2), 3T(CB)		TF(CB1)	GRD		P	0		27	25.5	
									TF(CB1)	GRD		P	R		5	5.5	
									TR(CB1)	GRD	6	S	0		27	25.5	
CC	253A		11				(CT)0				5						
CF	Y228		11	175/130	H	47	3T(CF), 2D(CF), 3B(CF)	6B(CF) 6D(CF) 6B(CF)	4T(CF) 4T(CF) 4T(CF)	B/G B/G B/G	7 7 7		0 H R	360 360 360	310 33.5 10.3	295 31.5 11.1	
CI	U1078		7	197/161	H	59			T(CI)	GRD			0		39	37.5	
CIA	B128		7	3	H	30			2T(CIA)	GRD			0		34	32	
									2M(CIA)	GRD			R		17	18	
CIX	Y319	YD	7	224/188	H	35			T(CIX)	GRD			0	42.5	23.5	22	
													H	42.5	2	1.9	
													H	42.5	1.2	1.3	
CL	U1188		10	177/225	H	53	1B(CL)		1OT(CL)	GRD			0		28	27	
													NO		10.8	11.5	
CT	U1244		11	110/101	H	35			5T(CT)	GRD			0		6.6	6.3	
DC	B1018		4	3	H	30		3M(DC)		BAT.	8/9	P/S	0		0.6	0.5	
								3M(DC)		BAT.	9	P/S	R		0.18	0.2	
								3M(DC)	2M(DC)	B/G	9	P	0		3.3	3.5	

4AR RKU GFH 5B RKU GFH HW 6B TEF SAK RHF

TEST NOTES:

1. ON ALL SWITCHES INSULATE THE OFF NORMAL SPRINGS OF SELECT MAGNETS CORRESPONDING TO THE ONE UNDER TEST.
2. MULTIPLY CURRENT FLOW BY NUMBER OF SELECT MAGNETS CONNECTED IN PARALLEL.
3. CONNECT DIRECT BATTERY TO B(ATB).
4.
5. REMOVE (CHG) FUSE WITH 35C TEST SET. CONNECT BAT. OR RING ON "TEST BAT. & GRD" JACK TO TERMINAL. CONNECT TIP ON "TIP AND RING" JACK TO 1T(CT). CONNECT VOLTMETER ACROSS COIL TERMINALS "R" AND "L" OF (CC). ADJUST IN ACCORDANCE WITH BSP.
6. OPERATE (CA) AND (CB) KEYS.
7. DISCONNECT RECT BEFORE TESTING RELAY.
8. PRI AND SEC WINDINGS IN SERIES AIDING.
9. BLOCK (SM)NO ON CONTROLLER UNDER TEST.
10. DISCONNECT (AB) REGISTER FIG. 21.

PAGE 1

LINE CONCENTRATOR-IDENTIFIER CIRCUIT	SD-95962-01-FI
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SD-95962-01-FI

SD-95962-01

CIRCUIT REQUIREMENTS

DRAWING ISSUE SUPER-SEDES ISS 3B

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPTION	APPARATUS FIG.	MECH REQT BSP FIG.	MECH REQT CONT PRESS	MECH REQT ARM. TRVL.	CIRCUIT PREPARATION BLOCK OR INSULATE	CIRCUIT PREPARATION TEST CLIP DATA CONN BAT.	CIRCUIT PREPARATION TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	TEST WDG	DIRECT CURRENT FLOW REQT TEST FOR	DIRECT CURRENT FLOW REQT AFTER SOAK MA.	DIRECT CURRENT FLOW REQT TEST MA.	DIRECT CURRENT FLOW REQT READJ MA.	REMARKS
DC1	U814		4	132/110	H	47			T(DC1)	GRD			C		21	20	
DL	KS-16615, L14		4						2B(DL1)	GRD	B		0 R				
DL1	U420		4	108/132	H	47			6T(DL1)	GRD			0		17	16	
DL2	U781		4	152/147	H	47	4B(DL2)		9T(DL2)	GRD			0		26	25	
E	U242		1,2	108/132	H	47			T(E)	GRD	1		0		18.5	17.5	
F	U242		1,2	108/132	H	47			T(F)	GRD	1		0		18.5	17.5	
FA	U306		11	111/111	H	29		BF(FA)		BAT		P	0		13.2	12.5	
								BR(FA)		BAT		S	0		7.3		
IL	Y129	F	1,2	121/120	H	50	(TCA)NO		7T(IL)	GRD			0		18.5	17.5	
		B							7T(IL)				H		3.1	2.9	
									7T(IL)				R		0.7	0.9	
ITA	I/2AK30		25	202			1Q(ITA)	2U(ITA)	1U(ITA)	B/G	2	T	0		23	22	MOUNTED WITH (ITB)
ITB	I/2AK30		25	202			5(ITB)		1L(ITB)	GRD	2	B	0		23	22	MOUNTED WITH (ITA)
PC	U995		4	193/149	H	4	6T(DL2) 6T(PC)		TF(PC) TR(PC)	GRD GRD	4 6	P S	0 0		66 76	63	
PC1	U1309		4	134/134	H	35	6T(DL2) 6T(DL2)		TF(PC1) TR(PC1)	GRD GRD	7	P S	0 0		55 207	52	
PC2	U1000		4	150/145	H	50			T(PC2)	GRD			0		22	21	
PN	280AT	ZF	4	B			3T(PC) 3T(PC) 3T(PC) 3T(PC) 3T(PC)	6(PN) 6(PN) 6(PN) 6(PN) 6(PN)	2(PN) 2(PN) 2(PN) 2(PN) 2(PN)	B/G B/G B/G B/G B/G		P/S P/S P/S P/S P/S	0 NO 0 NO R	-40 -40 -40 -40 40	9.9 7.2 4.4	0.9 0.6 9.4 7.6 4.7	
PN	316J	ZG	4	4			3T(PC) 1B(X) 2T(X)	8 (PN) 8 (PN) 8 (PN) 8 (PN) 8 (PN)	1(PN) 1(PN) 1(PN) 1(PN) 1(PN)	B/G 9,10 B/G 9,10 B/G 9,10 B/G 9,10 B/G 9,10,11		P1/P2 P1/P2 P1/P2 P1/P2 P1/P2	0 NO H R 0	-9.5 -9.5 9.5 9.5	3.2 2.0 -2.0 -3.2 12.8		
PP	280AT	ZF	4	B			3T(PC) 3T(PC) 3T(PC) 3T(PC) 3T(PC)	6 (PP) 6 (PP) 6 (PP) 6 (PP) 6 (PP)	2(PP) 2(PP) 2(PP) 2(PP) 2(PP)	B/G B/G B/G B/G B/G		P/S P/S P/S P/S P/S	0 NO 0 NO R	-40 -40 -40 -40 40	9.9 7.2 4.4	0.9 0.6 9.4 7.6 4.7	
PP	316J	ZG	4	4			3T(PC) 1B(X) 2T(X)	3 (PP) 8 (PP) 8 (PP) 8 (PP) 8 (PP)	1(PP) 1(PP) 1(PP) 1(PP) 1(PP)	B/G 9,10 B/G 9,10 B/G 9,10 B/G 9,10 B/G 9,10,11		P1/P2 P1/P2 P1/P2 P1/P2 P1/P2	0 NO H R 0	-9.5 -9.5 9.5 9.5	3.2 2.0 -2.0 -3.2 12.8		

TEST NOTES:

1. INSULATE 5B(TCI) FOR TRUNKS 1 & 2. INSULATE 2B (TCI) FOR TRUNKS 3,4,5,&6.
2. REMOVE PRECISION TRANSISTOR TIMER CIRCUIT BOARD.
3.
4. IN SERIES WITH PRI WDG OF (PC1) RELAY.
5.
6. IN PARALLEL WITH SEC WDG OF (PC1) RELAY.
7. IN PARALLEL WITH SEC WDG OF (PC) RELAY.
8. (DL) IS A THERMAL RELAY. OPERATE TIME IS MINIMUM 3 SECONDS MAXIMUM 4 SECONDS ON 24 VOLTS ±.5 VOLTS. COOLING TIME IS 1.7 SECONDS. RELAY IS NON ADJUSTABLE. IF ABOVE LIMITS CANNOT BE MET REPLACE RELAY.
9. WITH CURRENT APPLIED BETWEEN TERMINALS 1 AND 8, WITH TERMINAL 9 AND 2 STRAPPED. TERMINAL 1 POSITIVE, WITH GRD REMOVED FROM TERMINAL 6.
10. CONNECT OHMMETER BETWEEN TERMINALS 5 AND 7 TO MONITOR MAKE-BREAK.
11. WITH GRD CONNECTED TO TERMINAL 6. RELAY SHOULD RELEASE WHEN CURRENT IS REMOVED FROM TERMINALS 1 AND 8.

PAGE 2

ISSUE 8B

LINE CONCENTRATOR-IDENTIFIER CIRCUIT	SD-95962-01-FI
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CIRCUIT REQUIREMENTS

DRAWING ISSUE: SUPER-SEDES ISS 3E — 4AR RKU GFH — 6B TEF SAK RHP HW

APPARATUS DESIG	CODE	OPTION	FIG.	MECH REQT BSP FIG	CONT PRESS	ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	TEST CLIP DATA CONN BAT.	CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS
RC	280AA		10	B				4(RC)	1(RC)	NGB			0	-40		0.9	
								4(RC)	1(RC)	NGB			NO	-40		0.6	
								4(RC)	1(RC)	NGB			0	-40	3.2	3.0	
								4(RC)	1(RC)	NGB			R	40	0.1	0.2	
RCA	UA44		10	132/110	H	47	5B(CA)		T(RCA)	GRD	1		0		10.9	10.3	
SA	U810		24	139/121	H	59	2B,2T (SA)		T(SA)	GRD	2		0		27.5	26	
SA1	U267		24	132/106	H	47	2B,3B (SA1)		T(SA1)	GRD	2		0		20.5	19.5	
SH	U1133		4	104/319	SPL	SPL	5B(SH)		T(SH)	GRD	3/4		0		18.5	17.5	
TC	B1018		1,2	3	H	30	(TCA)NO	3H(TC)		BAT.	5	P/S	0		0.6	0.5	
								3H(TC)		BAT	5	P/S	R		0.18	0.2	
								3H(TC)	2H(TC)	B/G		P	0		3.7	3.5	
TC1	U707		1,2	102/102	H	53	2T(TC1)		T(TC1)	GRD			0		31.5	30	
TC2	U1349		1,2	109/109	H	29	3T,3B(TC1)		T(TC2)	GRD			0		35.2	33.5	
TCA	B210		1,2	7	H	35	1(TCA) (IL)NO		3H(TCA)	GRD		P	0		6.2	5.9	
									3H(TCA)	GRD		P	R		1.9	2	
								1H(TCA)		BAT.		S	0		6.5		
TO	U670	ZP	10	121/121	H	50	3(AR)		TR(TO)	GRD		S	0		34	32.5	
							3(AR)		TF(TO)	GRD		P	0		34.5		
TO	U1113	ZQ	10	114/114	H	50	8T(TO), 10T(TO), 5B(TO)		T (TO)	GRD			0		22	21	
TS	U1046		4	113/113	H	29	1B(DC1)		T(TS)	GRD			0		51.5	49	
US	U1328		4	112/112	H	29	2T(SH)		T(US)	GRD			0		33	32.5	
X	U1359		4	100/110	H	47	(XN,XP)NO	B(X)	6T(X)	B/G			0		110	105	
XH	U1404		4	215/146	H	47	7B(PC)		T(XH)	GRD			0		152	145	
XP	U1404		4	215/146	H	47	7B(PC)		T(XP)	GRD			0		152	145	
Y	U1359		4	108/110	H	47	(YN,YP)NO	B(Y)	6T(Y)	B/G			0		110	105	
YN	U1404		4	215/146	H	47	7B(PC)		T(YN)	GRD			0		152	145	
YP	U1404		4	215/146	H	47	7B(PC)		T(YP)	GRD			0		152	145	
ZN	U1404		4	215/146	H	47	7B(PC)		T(ZN)	GRD			0		152	145	
ZP	U1404		4	215/146	H	47	7B(PC)		T(ZP)	GRD			0		152	145.	

TEST NOTES:

1. AFTER COMPLETING TEST OPERATE THE (AR) KEY.
2. OPERATE THE (II) KEY.
3. ARM. TRVL 44.
4. CONTACTS MAKE 3T,7T AND 1B,6 READJUST, 4 TEST.
5. PRI AND SEC WDG IN SERIES AIDING. WHERE VOLTAGE LIMIT DOES NOT PERMIT TESTING, CHECK CIRCUIT OPERATION.

PAGE 3

LINE CONCENTRATOR-IDENTIFIER CIRCUIT — SD-95962-01-F2

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SD-95962-01-F2

22

CIRCUIT REQUIREMENTS

DRAWING ISSUE: SUPER-SEDES ISS 3E — 4AR RKU GFH — 6B TEF SAK RHP H1

APPARATUS DESIG	CODE	OPTION	FIG.	MECH REQT BSP FIG.	CONT PRESS	ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	TEST CLIP DATA CONN BAT.	CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS

PAGE

ISSUE 7AR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2) — SD-95962-01-F2

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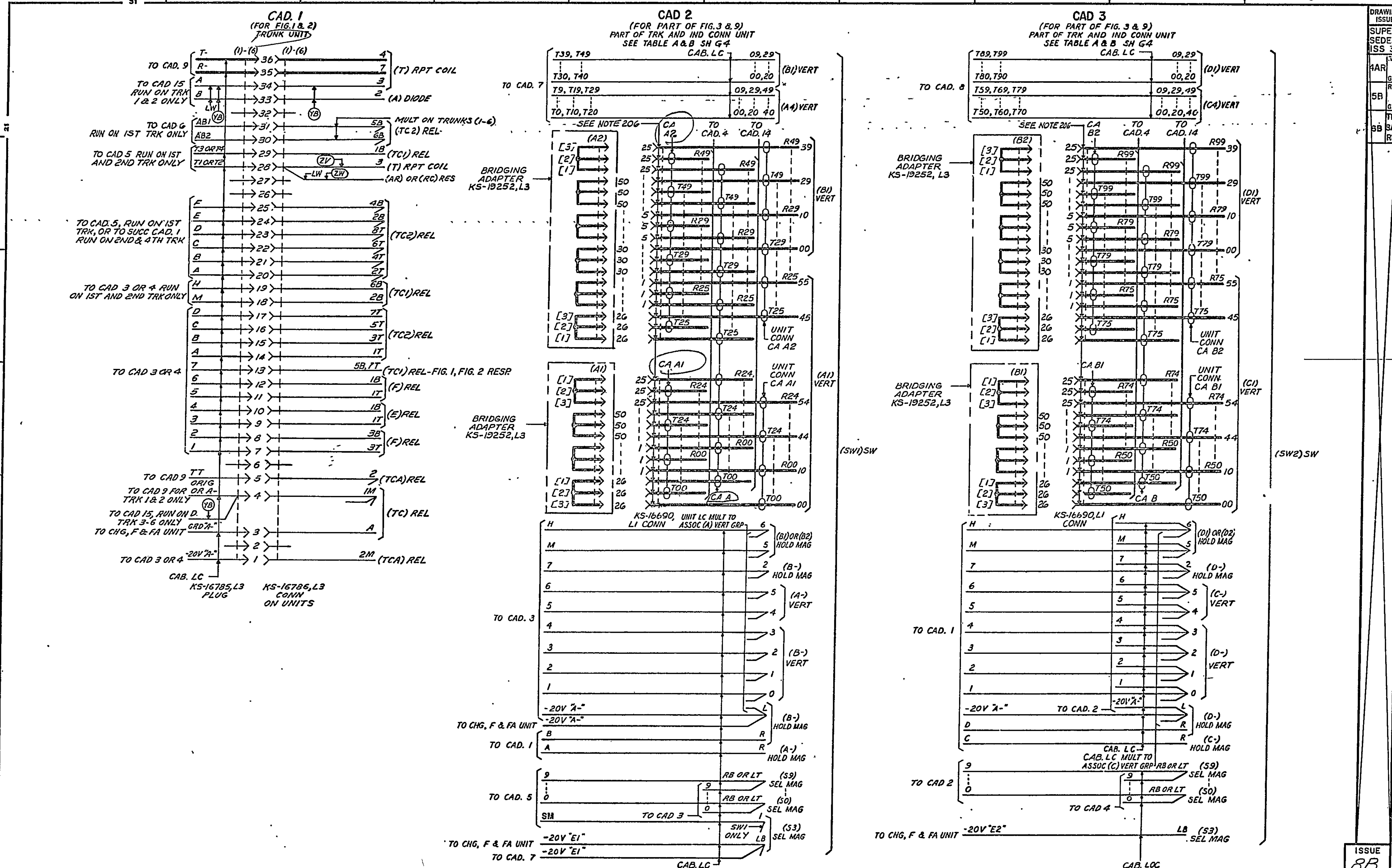


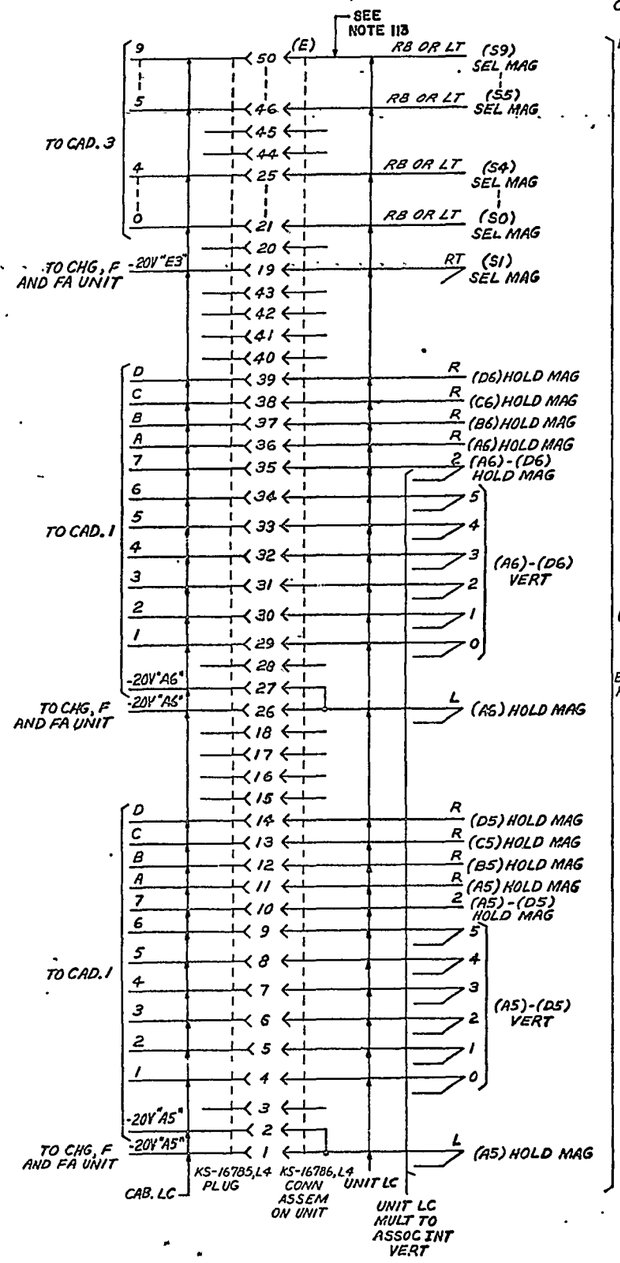
LINE CONCENTRATOR-IDENTIFIER CIRCUIT

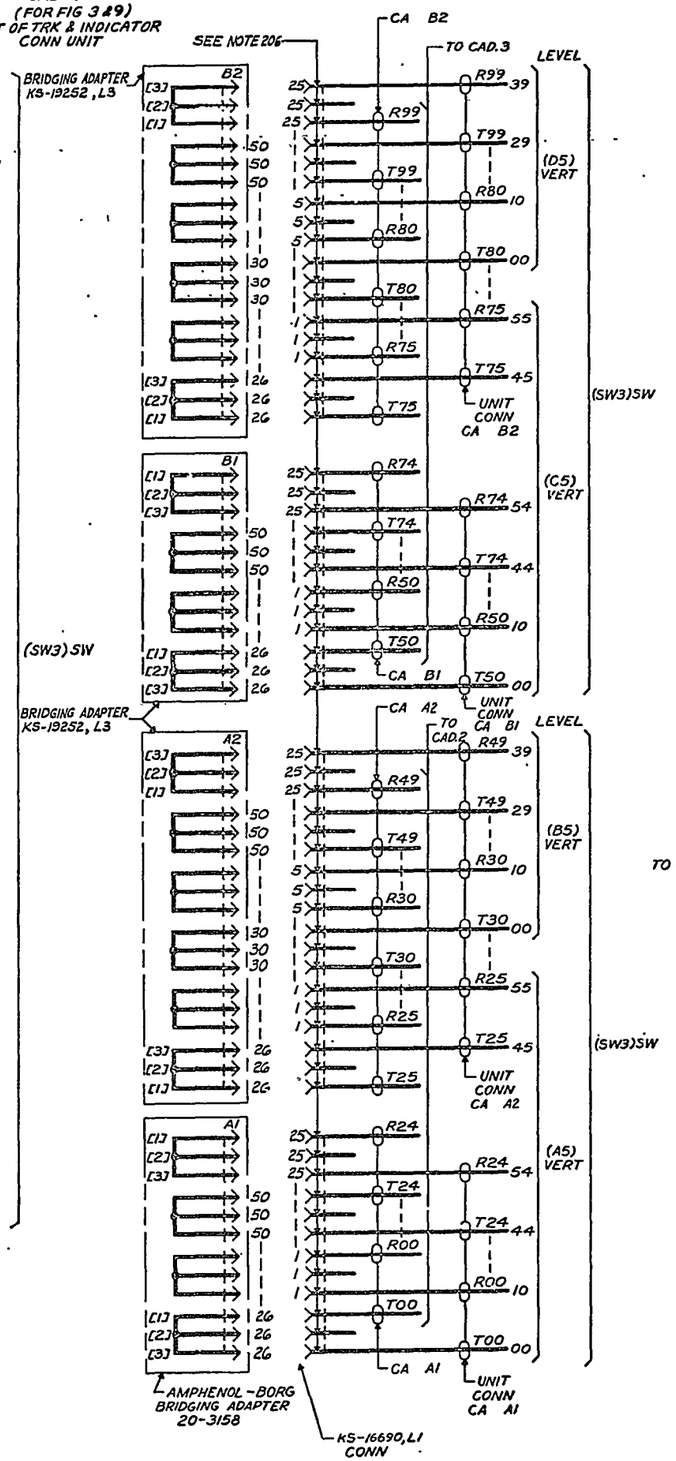
SD-95962-01-G1

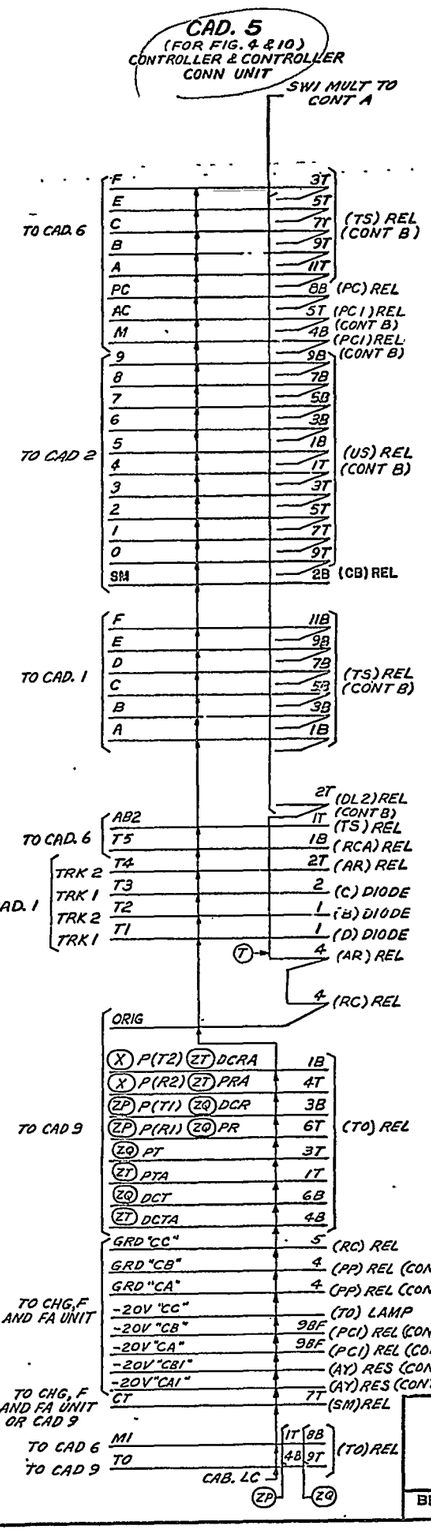
BELL TELEPHONE LABORATORIES INCORPORATED

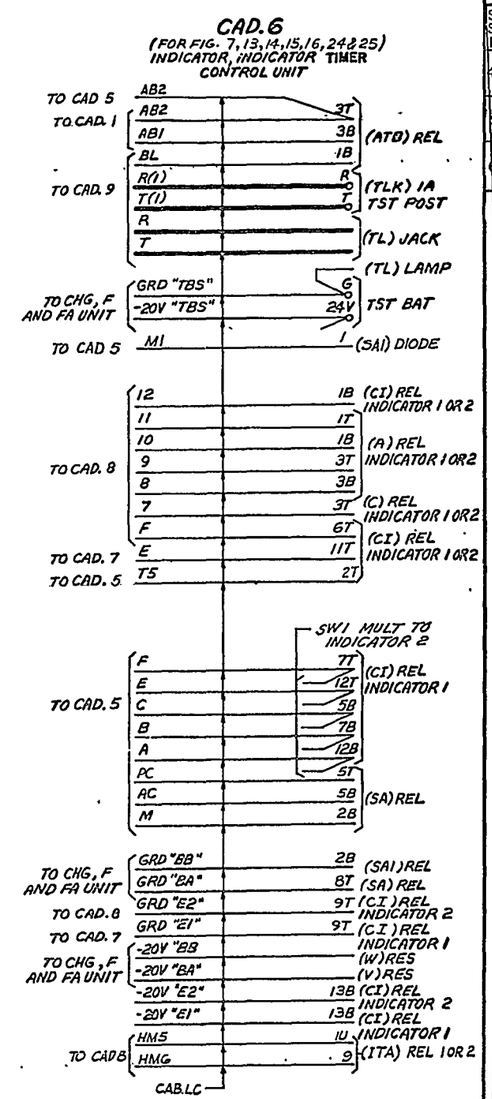
6S

CAD 4
(FOR FIG 3 & 9)
PART OF TRK & INDICATOR CONN UNIT









DRAWING ISSUE
SUPER-SEDES ISS 3B
4AR RKU
GFH
RKU
5B GFH
TCP
6B SAK
RKS

HW

ISSUE 7AR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT

SD-95962-01-G2

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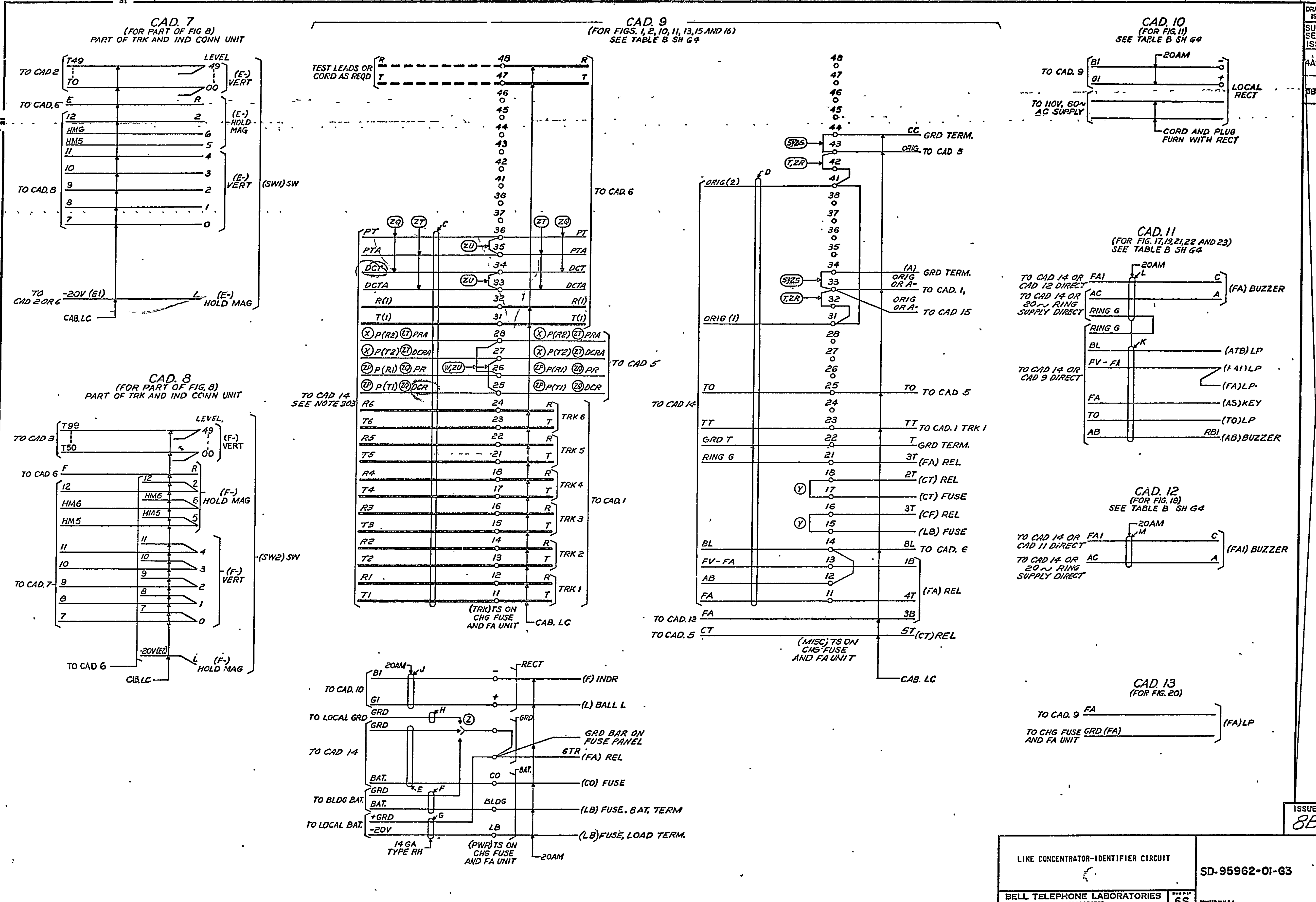
D-95962-01-G2



LINE CONCENTRATOR-IDENTIFIER CIRCUIT

BELL TELEPHONE LABORATORIES INCORPORATED

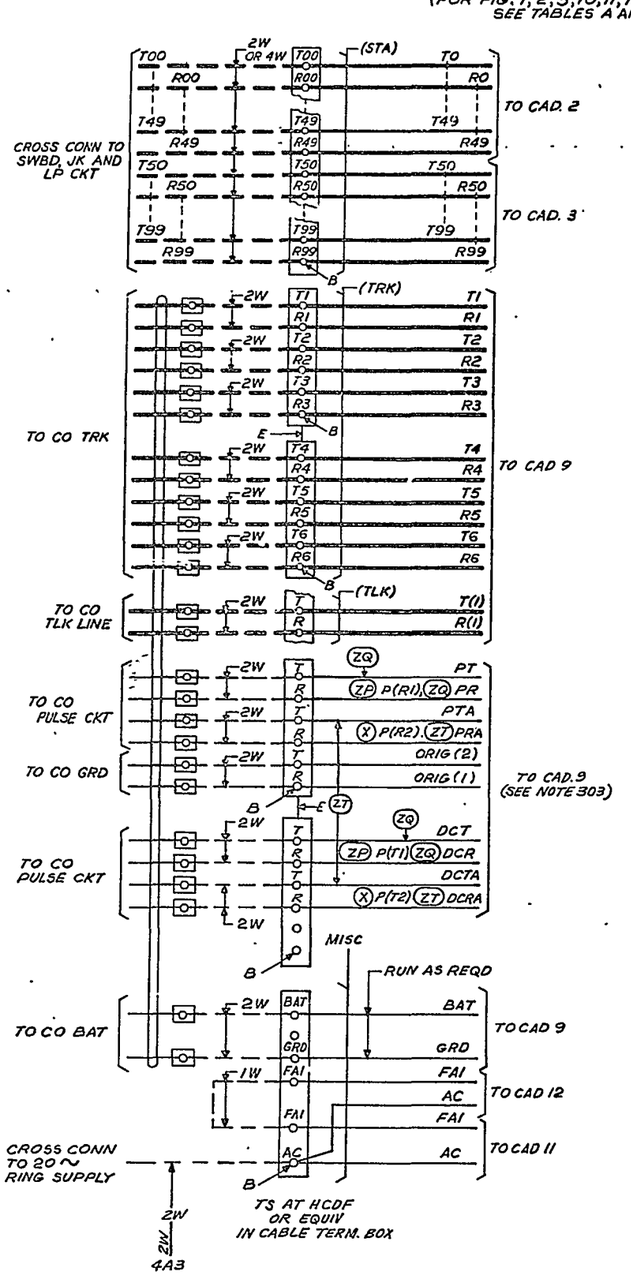
SD-95962-01-G3

ISSUE 8B

6S

CAD 14

(FOR FIG. 1, 2, 3, 10, 11, 15, AND 16)
SEE TABLES A AND B



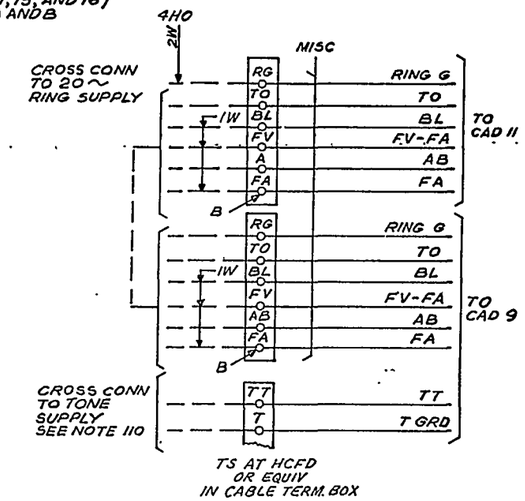


TABLE B
CABLE REQUIREMENTS*

DESIG	NO.	CODE	FROM	TO		CAD. FIG.	SEE NOTE
A	1	A50B	HCDF (STA) TS	CAB. BRDG ADAPTERS	A1,A2	2,14	201
B	1				B1,B2		
A1,A2	2	A25B OR EQUIV	CAB. BRDG ADAPTERS SW1 & SW2 A1,A2 B1,B2	CAB. BRDG ADAPTERS SW3	A1,A2	2,3,4	
B1,B2	2				B1,B2		
C	1	253A OR EQUIV	HCDF (TRK) TS	CI CHG, F & FA UNIT (TRK) TS		9,14	201
D	1	252A OR EQUIV	HCDF (AUX) & (MISC) TS	CI CHG, F & FA UNIT (MISC) TS			
E	1	20AH-P	HCDF (MISC) TS CO. BAT.	CI CHG, F & FA UNIT (PWR) TS			201, 202 203
F	1	KS-5402-01, RHD-RHD (2-14GA)	BLDG BAT.			9	203
G	2	KS-5499, L1545-42.	LOCAL BAT.				
H	1	KS-5402-01, RH-RH (1-14 GA)	LOCAL GRD				
J	1	20AH-P	LOCAL RECT			9,10	
K	1	1450 OR EQUIV 20AH-T 20AH-P	HCDF (MISC) TS	SHBD	LPS & KEY	11,14	201, 204
L	1				(FA) BUZ		
M	1			LOCATION AS SPEC	(FA1) BUZ	12,14	201, 205
*COVERS A FULL COMPLEMENT OF 6 CO TRUNKS & 100 STATIONS							

TABLE A, (SEE NOTE 206)
CABLE CONNECTOR CONNECTIONS

A&B CABLES	WITH BLUE BINDER												WITH ORANGE BINDER											
STA. LINE NO.	CONN		LEAD				PLUG TERM. NO.	STA. LINE NO.	CONN		LEAD				PLUG TERM. NO.	STA. LINE NO.	CONN		LEAD				PLUG TERM. NO.	
			TIP		RING						TIP		RING						TIP		RING			
	A OR A1	C OR C1	COLOR						A OR A1	C OR C1	COLOR						B OR B1	D OR D1	COLOR					
			SOLID	BAND	SOLID	BAND					SOLID	BAND	SOLID	BAND					SOLID	BAND	SOLID	BAND		
0	50				BL	WH	1	14	64				SL	BK	15	25	75				BL	WH	1	39	89	
		WH	BL				26				BK	SL			40			WH	BL				26			BK	SL			40
1	51			OR	WH		2	15	65				BL	YEL	16	26	76			OR	WH		2	40	90			BL	YEL	16
		WH	OR				27				YEL	BL			41			WH	OR				27			YEL	BL			41
2	52			GN	WH		3	16	66				OR	YEL	17	27	77			GN	WH		3	41	91			OR	YEL	17
		WH	GN				28				YEL	OR			42			WH	GN				28			YEL	OR			42
3	53			BR	WH		4	17	67				GN	YEL	18	28	78			BR	WH		4	42	92			GN	YEL	18
		WH	BR				29				YEL	GN			43			WH	BR				29			YEL	GN			43
4	54			SL	WH		5	18	68				BR	YEL	19	29	79			SL	WH		5	43	93			BR	YEL	19
		WH	SL				30				YEL	BR			44			WH	SL				30			YEL	BR			44
5	55			BL	RD		6	19	69				SL	YEL	20	30	80			BL	RD		6	44	94			SL	YEL	20
		RD	BL				31				YEL	SL			45			RD	BL				31			YEL	SL			45
6	56			OR	RD		7	20	70				BL	VIO	21	31	81			OR	RD		7	45	95			BL	VIO	21
		RD	OR				32				VIO	OR			46			RO	OR				32			VIO	BL			46
7	57			GN	RD		8	21	71				OR	VIO	22	32	82			GN	RD		8	46	96			OR	VIO	22
		RD	GN				33				VIO	OR			47			RD	GN				33			VIO	OR			47
8	58			BR	RD		9	22	72				GN	VIO	23	33	83			BR	RD		9	47	97			GN	VIO	23
		RD	BR				34				VIO	GN			48			RD	BR				34			VIO	GN			48
9	59			SL	RD		10	23	73				BR	VIO	24	34	84			SL	RD		10	48	98			BR	VIO	24
		RD	SL				35				VIO	BR			49			RD	SL				35			VIO	BR			49
10	60			BL	BK		11	24	74				SL	VIO	25	35	85			BL	BK		11	49	99			SL	VIO	25
		BK	BL				36				VIO	SL			50			BK	BL				36			VIO	SL			50
11	61			OR	BK		12									36	86			OR	BK		12							
		BK	OR				37											BK	OR				37							
12	62			GN	BK		13									37	87			GN	BK		13							
		BK	GN				38											BK	GN				38							
13	63			BR	BK		14									38	88			BR	BK		14							
		BK	BR				39											BK	BR				39							

ISSUE 7AR

LINE CONCENTRATOR-IDENTIFIER CIRCUIT

SD-95962-01-G4

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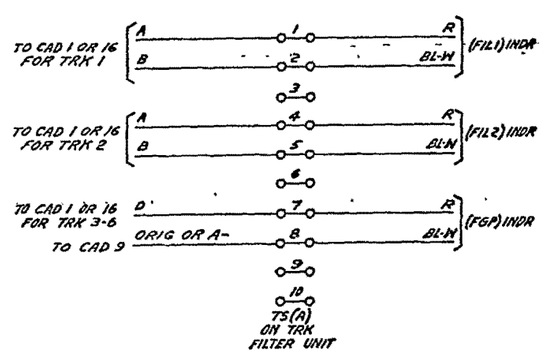
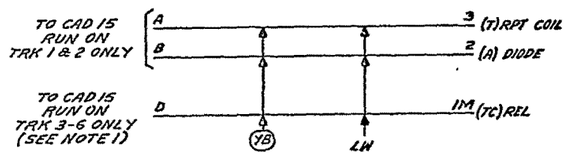
CAD 15

(FOR FIG. 1 & 2)
TRK FILTERS



CAD 16

FIELD MODIFICATION
PRIOR TO ISSUE 7 THIS DWG
FOR TRK FILTERS FIG. 1 & 2



NOTES:

1. BEFORE CONNECTING D LEAD AT 1M(TC) REL TRK 3, REMOVE CABLE LEAD FROM 1M(TC) REL TRK 2 AND TRK 3.

DRAWING ISSUE

ISSUE 8B

LINE CONCENTRATOR-IDENTIFIER CIRCUIT (2)

SD-95962-01-65

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

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SD-95962-01-G5

BD I

CONCENTRATOR IDENTIFIER
FUNCTIONAL ORGANIZATION

SD-95964-01

SD-95962-01

TO LINE TERMINAL T,R

FS 1 RINGING DETECTOR B1

FS 2 LOCKOUT B2

FS 3 UNITS IDENTIFIER B3

FS 5 TENS IDENTIFIER B4

FS 10 TRUNK CONNECTOR B9

FS 11 TRUNK TRANSMISSION & SUPERVISION B10

FS 8 TRUNK ALLOTTER B7

FS 9 TRUNK SEIZURE AND TIMING B8

FS 1, FS 2 TRUNK B1

FS 6 TRUNK CONNECTOR B4

T,R TO SWBD OR 1A TAS

FS 4 CONTROLLER SELECTOR B3

FS 6 DIGIT TRANSMISSION B5

FS 7 PULSE GENERATOR B6

FS 3 PULSING & SUPERVISION B2

FS 9 CONTROLLER ALLOTTER B7

FS 4 DIGIT REGISTRATION B2

FS 5 INDICATOR & TRLNK CONNECTOR CONTROL B3

FS 7 INDICATOR CONNECTOR B5

FS 10 INDICATOR ALLOTTER B8

FS 8 INDICATOR CONTROL B6

FS 12 ALARM TIMER B11

FS 13 TROUBLE INDICATOR B11

FS 17 TEST JACKS B12

FS 11 TIMEOUT B8

FS 12 ALL TRUNKS BUSY & MISC. B9

FS 13 POWER B10

FS 14 CENT. OFFICE ALARM CONNECTIONS B11

FS 15 ALARM RELEASE B11

FS 18 TRAFFIC REGISTER B12

FS 16 POWER B12

BRAWING ISSUE

DRAWING ISSUE 7AR

LINE-CONCENTRATOR-IDENTIFIER CIRCUIT (2)

SD-95962-01-HI

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

SD-95962-01-HI