

SHEET INDEX

Table with columns: CONTENTS, SHEET NO., ISSUE NO. (1-50), SHEET NO. (A1-E4). Rows include SHEET INDEX, APPARATUS INDEX, PART OF FS 1, FS 4, FS 5, FS 6, FS 7, APP FIG. 1, EQUIPMENT NOTES, INFORMATION NOTES, SC 1-25.

CONT ON SHEET A2

SUPPORTING INFORMATION

Table with columns: CATEGORY, NO. Includes 756A PBX CABLING DIAGRAM, 756A PBX FEATURE CABLE, EQUIPMENT INFORMATION, SERVICE OPTION BSP.

Table with columns: DWG ISSUE, CD, DATE ISSUED, DRN, APP. Lists drawing issues from 1 to 148.

Table with columns: DWG ISSUE, CD, DATE ISSUED, DRN, APP. Lists drawing issues from 34B to 43D.

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.

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

Box containing: PBX SYSTEMS, NO. 756A, TWO-WAY TRUNK CIRCUIT TO CENTRAL OFFICE, 2J07, A&M ONLY, SD-65752-01-AI, 24 SHEETS, BELL TELEPHONE LABORATORIES INCORPORATED, 65.

APPARATUS INDEX

DESIG	LOCATION		
	FS	APP FIG.	EQPT
RELAYS			
AC	1B6	1	↑
ACA	1A7	1	↑
BY	3A2	1	↑
CT	1H9	1	↑
DR	1F4	1	↑
DRA	1G4	7	↑
FF	1A2	1	↑
H	1D8	1	↑
HD	2G4	1	↑
HM	2E3	1	↑
IC(0-9)	4B6	6	SLIDE 5
MC	2G3	1	↑
N	2C3	1	↑
NI	1B8	1	↑
P	1E3	1	↑
R	1D8	1	↑
RI	2C4	1	↑
RS	3C2	1	↑
RT	1G2	1	↑
S	1D6	1	↑
SI	1C2	1	↑
SEO-9	4B1	2	↑
SL	2A3	1	↑
SR	1C7	1	↑
TLA	3E2	1	↑
TT	3D2	1	↑
CAPACITORS			
A	1E4	1	↑
FB	1E2	1	↑
FF	1B2	1	↑
R	1E9	1	↑
RV	1E3	1	↑
S	1D6	1	↑
TN	1G7	1	↑
DIODES			
A	1E2	1	↑
B	1D3	1	↑
C	1D5	1	↑
D	1E9	1	↑
DR	1F3	1	↑
F	2A2	1	↑
FF	4E1	5	↑
G	2A3	1	↑
H	1C7	1	↑
HD	2H5	1	↑
IT	1E6	8	↑
J	1C7	1	↑
K	1A7	1	↑
KO-9	1A7	2	↑
L	3F2	1	↑
LI	2C5	1	↑
M	1G4	1	↑
N	1G2	1	↑
NR	1G8	1	↑
NRI	3C1	1	↑
R	4G2	5	↑
RS	3C2	1	↑
S1	1G7	1	↑
S8, S8	2C5	1	↑
SF1, SE2	1B9	1	↑

DESIG	LOCATION		
	FS	APP FIG.	EQPT
INDUCTORS			
H	1D5	1	↓
HI	1E5, 1F5	1	↓
JACKS			
T	4A4	3	↓
LAMPS			
L	4B4	2	↓
LAMPS, RESISTANCE			
SLO-9	4B1	2	↓
RESISTORS			
B	1D3	1	↑
BF	1F7	1	↑
CS	2B2	1	↑
FF	1B2	1	↑
H	1E7	1	↑
HS	1E6	1	↑
L	3D8	1	↑
LS	1E6	1	↑
PD	2A4	1	↑
R	4F2	5	↑
S	3C8	1	↑
SH	2B4	1	↑
SLO-9	4C1	2	↑
T	3B8	1	↑
THERMISTORS			
R	1E8	1	↑
TI	4F1	5	↓
TRANSISTORS			
Q1	4F1	5	↓
VARISTORS			
E	1E9	1	↓

LEAD INDEX

DESIG	FS LOC
CORDLESS POS CKT	
ACA	5E2
BAT	4B7
BT	3E8
BZ	3E8
BZ(0-9)	3E8
CO	4C7
COA	4C7
CS	4C7
FB	2G7
H	2E7
HD	2G7
HG	2F7
HM	2E7
ICI	4B7
IC2	4C7
L	3D8
LR	1B4
LT	1B4
NT	3G2
RC	4F7
SL1	3C8
SL2	3C8
SP	2E7
SS	4E7
T	3G8
TC	4F7
TL1	3B8
TL2	3B8
TR	1B4
TT	1B4
U	3G8
W	3F2
MKR CLASS OF SERVICE CKT	
BY(E,O)	3B1
FF(E,O)	1A1
NT	3G1
RLS(E,O)	2G1
RS(E,O)	3C1
RT(E,O)	1H2
TLA(E,O)	3E1
TT(E,O)	3D1
ALM TRFR AND TST CKT	
NC(0-9)	5G2
NCA(0-9)	5G1
ON(0-9)	5G2
NS(E,O)	2C2
IT(9-)	2G2
ITC(9-)	2G2
R	1F9
T	1D9
MKR LINK TEST CKT	
CW	2A1

DESIG	FS LOC
POWER SUPPLY CKT	
BT	1G6
CR	3F4
FI(,2)	3D4
FC(1,2)	3D4
FR(1,2)	3E4
FT	3E4
RI	1H2
RG GRD	1H1
SF(1,2)	3C4
MKR TRK HOLD MAG CKT	
IT(90-99)	2F1
MIE(O)	2E1
ST(90-99)	2F1
MKR LINK CKT	
R	1F1
S	2B1
T	1D1
MKR UNITS SEL CKT	
U(0-9)	3G4
MKR TENS SEL CKT	
TR(0,1)	3G4
TMS REMOTE SCANNER	
TU(T-)	2E3
TU(T-A)	2D4
CORD SWITCHBOARD	
L	4B3, 4C3
R	4B3, 4C3
S	4B3, 4C3
SL	4B3, 4C3
T	4B3, 4C3
608A CORE SWBD AUX SIG, FA, BCO & MISC CKT	
NA	2B5
608D CORE SWBD AUX SIG FA, BCO & MISC CIRCUIT	
NA	2B5

DESIG	FS LOC
DIAL PULSE REG.	
LD	2H3
AUX POSITION CKT	
ACA	5F1
HD	5F5
HDI	5F5
LO	5E5
RTK	5F8
STA DIA TRFR CONTROLLER CKT	
AAA	5D5
AAB	5C5
CG	5C5
ER	5B2
FL1	5C9
FL2	5C9
FR	5A2
GR	5B2
LL	5C9
MTR	5A5
PA	5B5
PB	5B5
RBA	5B2
RBS	5B2
RCA	5C2
RLR	5B9
RS	5D2
SG	5C5
SR	5A2
TBA	5C2
TBS	5C2
TCA	5D2
TL	5C9
TP	5D9
TT	5D2
U	5B9
STATION MESSAGE REG PULSE AND SURCHARGE CKT	
H	6C0
R1	6E0
R2	6E0
R1	6C0
SR	6B0
SS1	6D0
SS2	6D0
AUX LONG LINES CKT FOR TOUCH-TONE CONVERSION	
R	1F9
T	1D9
MB & BY DISPL CKT	
IT	2H2
ITB	1H2
ITT	2H2

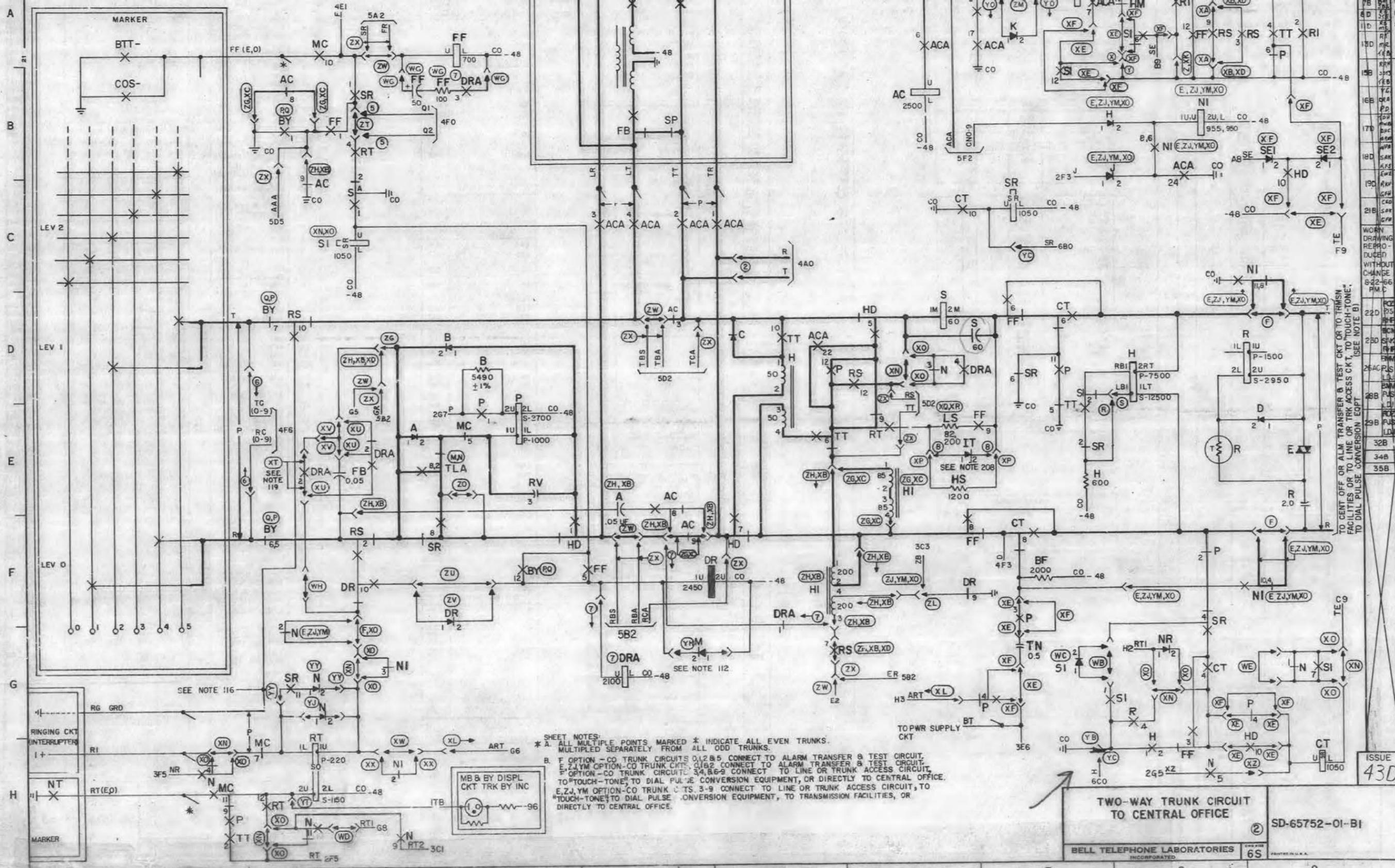
OPTION INDEX

APP OR WIRING	LOCATION
2	APP FIG. 2, 1A7, 1A9, 1C5, 3B7, 4A1, 4B0, 4D1
3	APP FIG. 3, 4A4, 4B4
4	APP FIG. 4, 4C4
5	APP FIG. 5, 1B2, 4E1
6	APP FIG. 6, 1D1, 1E1, 2H5, 4B6, 4C6
7	APP FIG. 7, 1F2, 1F4
8	APP FIG. 8, 1E7, 1E8
9	1B8
Y	1B8
X	1B8
W	2F7
V	2F2
T	2F2
S	1E7
R	1E7
Q	1B1, 1D1, 1F1, 1F3, 2B3, 2C2, 3A2-3E6
P	1B1, 1D1, 1F1, 1F3, 2B3, 2C2, 3A2-3E6
N	1E3, 2A3, 2E4, 3B2, 3D2, 3E2
M	1E3, 2A3, 2E4, 3B2, 3D2, 3E2
K	2F2
J	2F2
H	2G7
G	2G7
F	1D9, 1F9, 2F6, 1G2, 1F2-1F9, 2B2, 2C3, 2F6, 3C3, 5F2, 5G4
E	APP FIG. 1
B	3E2
A	APP FIG. 1, 3E1
ZA	2F7
ZB	2F7
ZC	3F7
ZD	3F7
ZE	4B1, APP FIG. 2
ZF	4C1, APP FIG. 2
ZG	1B1-1F6
ZH	APP FIG. 1, 3C2
ZJ	APP FIG. 1, 3C2
ZK	1F2-1F9, 2A2, 2B2, 2C3, 2F6, 3C2, 3C3, APP FIG. 1, 4B5, 5F2, 5G4
ZL	1F6
ZM	1A7
ZN	2G3
ZO	1E3
ZP	2G3
ZQ	2F2
ZR	3F5
ZS	3F5
ZT	1B2
ZU	1F3
ZV	1F3, APP FIG. 1
ZW	1A2-1G5, 2C6, 2G6, 3C8, 3F4, 3F6
ZX	1A2-1G6, 2C6, 2E6, 2G6, 2H4, 3C1-B8
ZY	5F2, 5F5, 5G5
ZZ	5F1, 5F8, 5H1, 5G5
YA	4B5, 4C5, 4C6
YB	1H7, 2B4, 2C5
YC	1C7, 1H7, 2B4, 2C4, 2F3, 2C7
YD	2C5
YE	2C5
YF	4C1
YG	4C1
YH	APP FIG. 1
YI	4B5, 4C5
YJ	APP FIG. 1
YK	4B7
YL	2F3, 3C2

APP OR WIRING	LOCATION
YM	APP FIG. 1, 1F2-1F9, 2B2, 2B2, 2C3, 2G3, 2F3, 3C2, 4B5, 5F2, 5G4
YN	APP FIG. 2
YO	APP FIG. 1
YP	2F2, 2G2
YQ	2G3
YR	2F2, 2F3
YS	2G2
YT	1H1, 2G2
YU	2E5
YV	2E5
YW	APP FIG. 1
YX	APP FIG. 1
YY	1G1, 1G2, APP FIG. 1
YZ	1G1, 3C2, APP FIG. 1
XA	1A8, 1B8, 2H4, 2H5, APP FIG. 1
XB	1A8, 1B2, 1B8, 1C1, 1E2, 1E4, 1E5, 1F4, 1G6, 2H4, 2H5, 3A3, 3C1
XC	APP FIG. 1, 1B1, 1B2, 1E6, 1F4, 1F6
XD	APP FIG. 1, 1A8, 1B8, 1E2, 1G6, 2H4, 2H5, 3A3, 3B1
XE	APP FIG. 1, 1A7, 1A8, 1B7, 1G8, 1G9, 1H9, 1H9, 3B6, 1C9
XF	APP FIG. 1, 1A7, 1A8, 1B8, 1G8, 1G9, 3B5, 3B7, 1B9, 1C9
XG	4B1
XH	2G2
XI	3A3
XJ	APP FIG. 1, 3B3
XK	1B8
XL	1G6, 1H3
XM	2C5, 2G3, 3E2, APP FIG. 1
XN	APP FIG. 1, 1C1, 1D6, 1G1, 1G2, 1G8, 1G9, 1H1, 2B2, 2C3, 2E6, 2G2, 3C1, 3D8
XO	APP FIG. 1, 1B8, 1C2, 1D6, 1D8, 1D9, 1F6, 1F8, 1F9, 1G2, 1G8, 1G9, 1H1, 1H2, 2B2, 2B4, 2C3, 2E6, 2F6, 2G3
XP	1E6, 1E7
XQ	APP FIG. 1, 1E6
XR	APP FIG. 1, 1E6
XS	2F3, 2D4
XT	APP FIG. 7, 1E1
XU	APP FIG. 7, 1E2
XV	1E2
XW	1H2
XX	1H2
XY	2F2
XZ	1H9, 2G5, APP FIG. 1
WA	3E1, APP FIG. 1
WB	1G7
WC	1G7, APP FIG. 1
WD	1H2
WE	1G9
WF	2H4, 2H5, APP FIG. 1
WG	1B2, 1B3, APP FIG. 1
WH	1F1

DRAWING ISSUE	
1	ISSUE
2B	ISSUE
3B	ISSUE
4A	ISSUE
5B	ISSUE
7B	ISSUE
8D	ISSUE
11D	ISSUE
30	ISSUE
35	ISSUE
14B	ISSUE
15B	ISSUE
16B	ISSUE
17D	ISSUE
18D	ISSUE
19D	ISSUE
20C	ISSUE
21B	ISSUE
22D	ISSUE
24A	ISSUE
25D	ISSUE
26C	ISSUE
28B	ISSUE
29B	ISSUE
30A	ISSUE
31A	ISSUE
32B	ISSUE
33D	ISSUE
34B	ISSUE
35B	ISSUE
ISSUE 43D	

PART OF FS I
TIP AND RING CONTROL
(SEE NOTE "A" FOR MULTIPLE DESIGNATIONS)



SHEET NOTES:
 * A. ALL MULTIPLE POINTS MARKED * INDICATE ALL EVEN TRUNKS. MULTIPLED SEPARATELY FROM ALL ODD TRUNKS.
 B. F OPTION - CO TRUNK CIRCUITS 0,1,2,8,5 CONNECT TO ALARM TRANSFER & TEST CIRCUIT. E,Z,J,YM OPTION - CO TRUNK CIRCUITS 3,4,8,6,9 CONNECT TO ALARM TRANSFER & TEST CIRCUIT. F OPTION - CO TRUNK CIRCUITS 3,4,8,6,9 CONNECT TO LINE OR TRUNK ACCESS CIRCUIT. TO TOUCH-TONE, TO DIAL PULSE CONVERSION EQUIPMENT, OR DIRECTLY TO CENTRAL OFFICE. E,Z,J,YM OPTION - CO TRUNK CIRCUITS 3-9 CONNECT TO LINE OR TRUNK ACCESS CIRCUIT, TO TOUCH-TONE, TO DIAL PULSE CONVERSION EQUIPMENT, TO TRANSMISSION FACILITIES, OR DIRECTLY TO CENTRAL OFFICE.

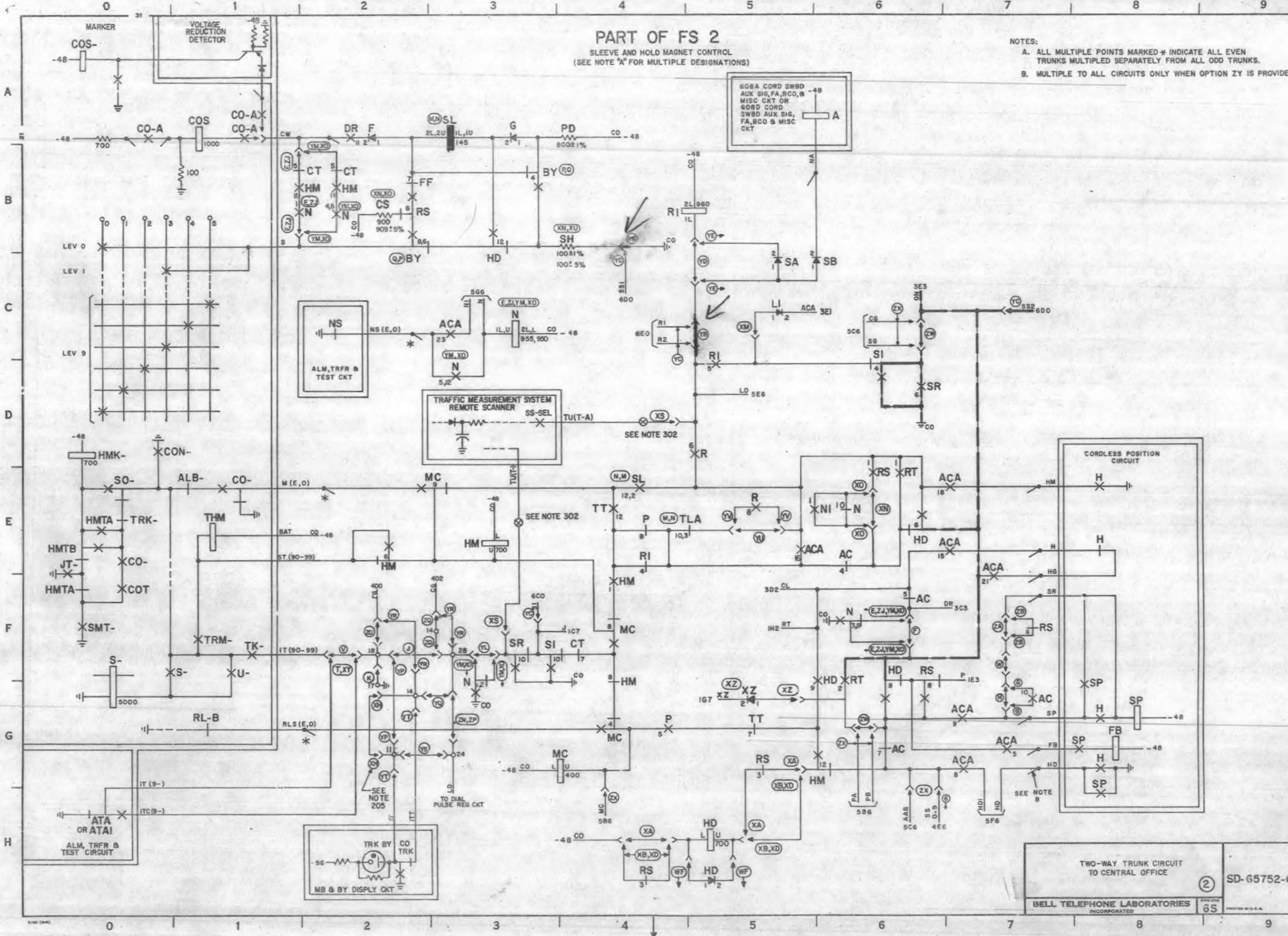
DRAWING ISSUE	
1	5L
2B	5L
3B	5L
4A	5L
5A	5L
6D	5L
7B	5L
8D	5L
9D	5L
10D	5L
11D	5L
12D	5L
13D	5L
14D	5L
15D	5L
16B	5L
17D	5L
18D	5L
19D	5L
20B	5L
21B	5L
22D	5L
23D	5L
24C	5L
25B	5L
26B	5L
27B	5L
28B	5L
29B	5L
30B	5L
31B	5L
32B	5L
33B	5L
34B	5L
35B	5L

ISSUE
43D

TWO-WAY TRUNK CIRCUIT TO CENTRAL OFFICE
 SD-65752-01-B1
 BELL TELEPHONE LABORATORIES
 INCORPORATED
 6S

PART OF FS 2
SLEEVE AND HOLD MAGNET CONTROL
(SEE NOTE "A" FOR MULTIPLE DESIGNATIONS)

NOTES:
A. ALL MULTIPLE POINTS MARKED * INDICATE ALL EVEN TRUNKS MULTIPLIED SEPARATELY FROM ALL ODD TRUNKS.
B. MULTIPLE TO ALL CIRCUITS ONLY WHEN OPTION ZY IS PROVIDED



DRAWING		ISSUE
1	S.L. M.B.	40B
2B	F.A.S.	
3B	F.A.S.	
4A	J.S.	
5B	J.M.	
7B	J.M.	
9D	R.C.	
9D	R.C.	
14B	V.S.	
15B	H.M.	
16B	C.H.A.	
17D	D.H.C.	
18D	S.W.K.	
19D	S.W.K.	
21B	C.E.D.	
21B	S.A.K.	
21B	H.P.H.	
22D	R.C.	
22D	R.C.	
23D	S.A.K.	
24D	R.H.P.	
24D	R.H.P.	
28B	F.H.P.	
28B	F.H.P.	
29F	R.C.	
30A	F.H.S.	
30A	F.H.S.	
32B	F.H.S.	
33D	F.H.S.	
34B	F.H.S.	

SD-65752-01-B2

TWO-WAY TRUNK CIRCUIT
TO CENTRAL OFFICE

SD-65752-01-B2

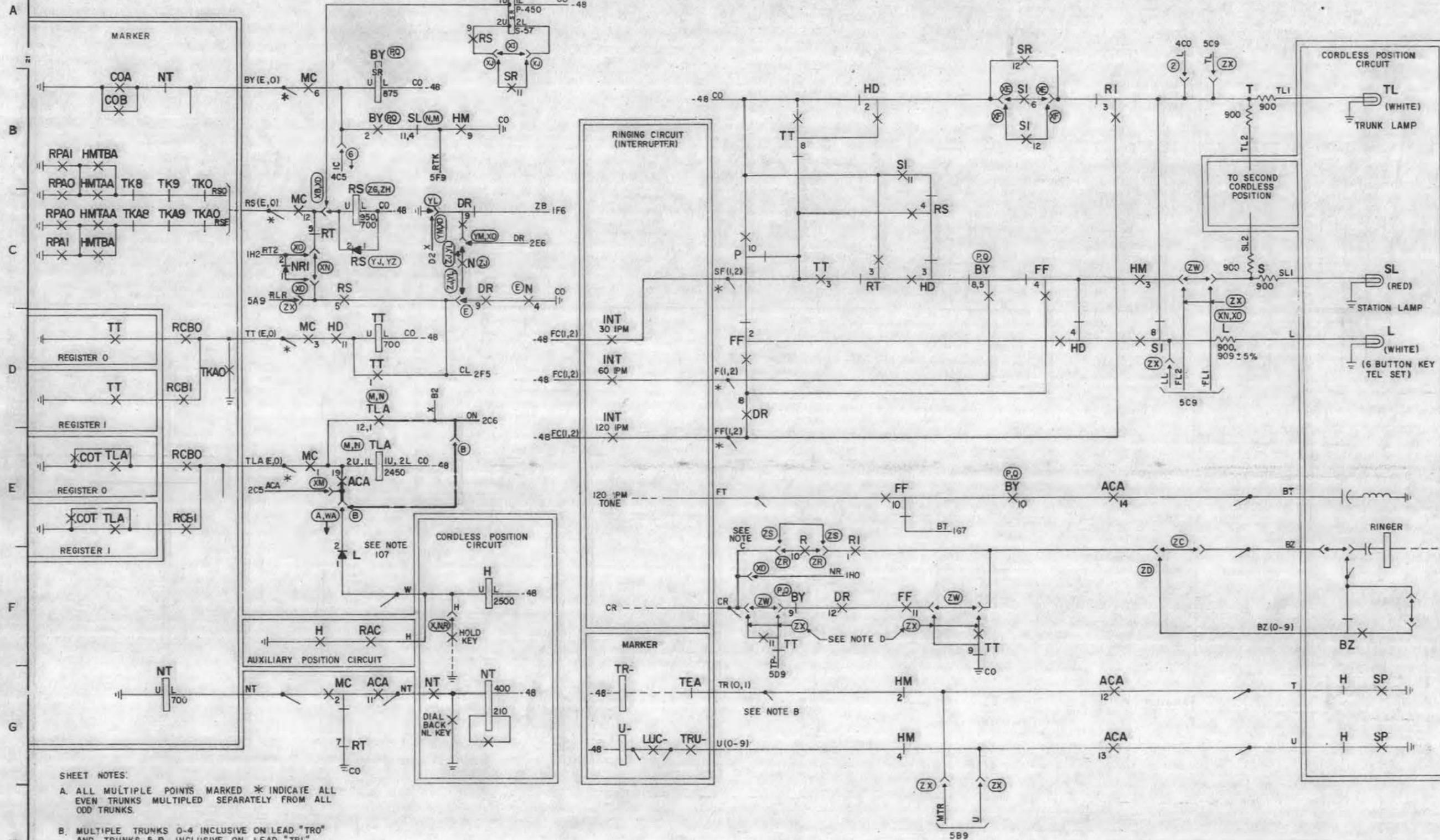
BELL TELEPHONE LABORATORIES
INCORPORATED

PART OF FS 3

CLASS OF SERVICE
(SEE NOTE "A" FOR MULTIPLE DESIGNATIONS)

FS 4

LAMP, BUZZER AND TONE CONTROL & MARKER START



- SHEET NOTES:
- A. ALL MULTIPLE POINTS MARKED * INDICATE ALL EVEN TRUNKS MULTIPLIED SEPARATELY FROM ALL ODD TRUNKS.
 - B. MULTIPLE TRUNKS 0-4 INCLUSIVE ON LEAD "TRO" AND TRUNKS 5-9 INCLUSIVE ON LEAD "TRI".
 - C. WHEN ZS OPTION IS REQUIRED THE INSTALLER SHALL ADD A STRAP ACROSS TERM 10 AND 10M OF (R) RELAY.
 - D. WHEN ZX OPTION IS REQUIRED THE INSTALLER SHALL REMOVE STRAPS BETWEEN 9 & 9M AND 11 & 11M OF (TT) RELAY, AND CONNECT GROUND TO 9B (TT) RELAY.

DRAWING	ISSUE
1	37B
2B	
4A	
7B	
8D	
10D	
12B	
13D	
16B	
17D	
18D	
21B	
26A	
26B	
28B	
29B	
31A	
32E	

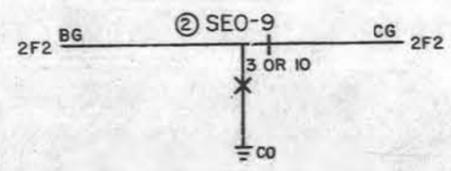
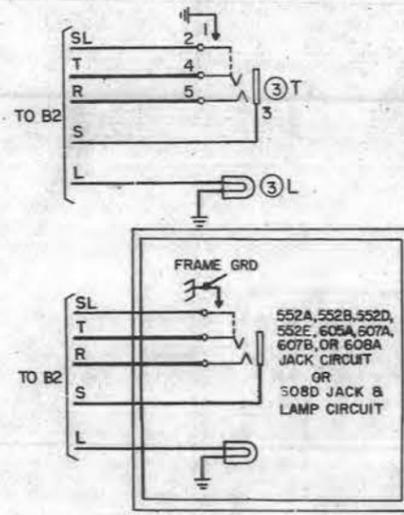
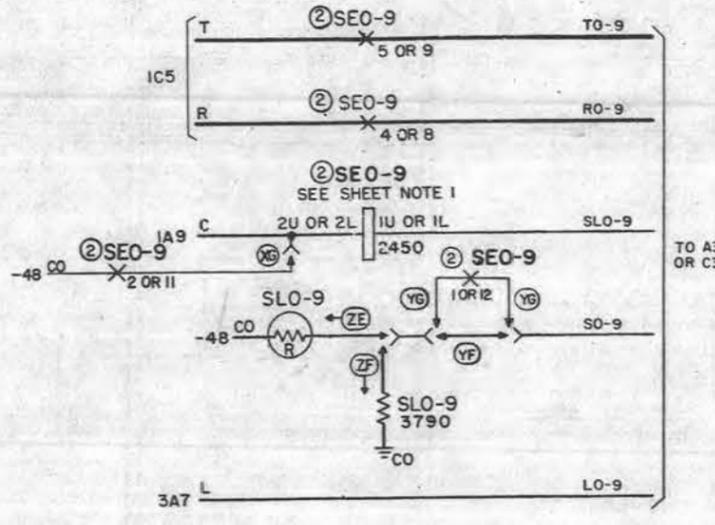
ISSUE
37B

TWO-WAY TRUNK CIRCUIT TO CENTRAL OFFICE ② SD-65752-01-83

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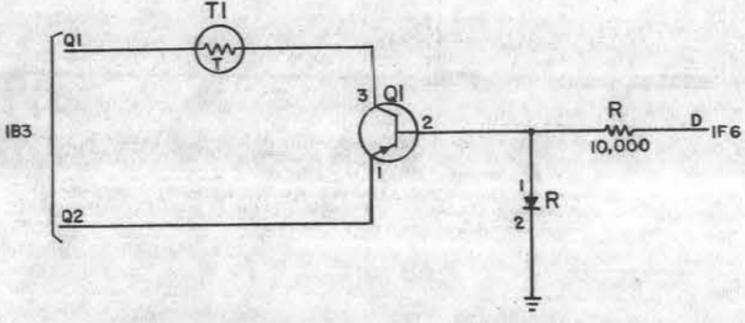
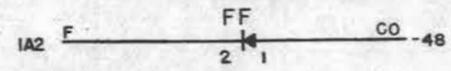
SD-65752-01-83

FS 5
RELAY AND JACK CKT FOR TRUNK
APPEARANCE AT CORD SWITCHBOARD



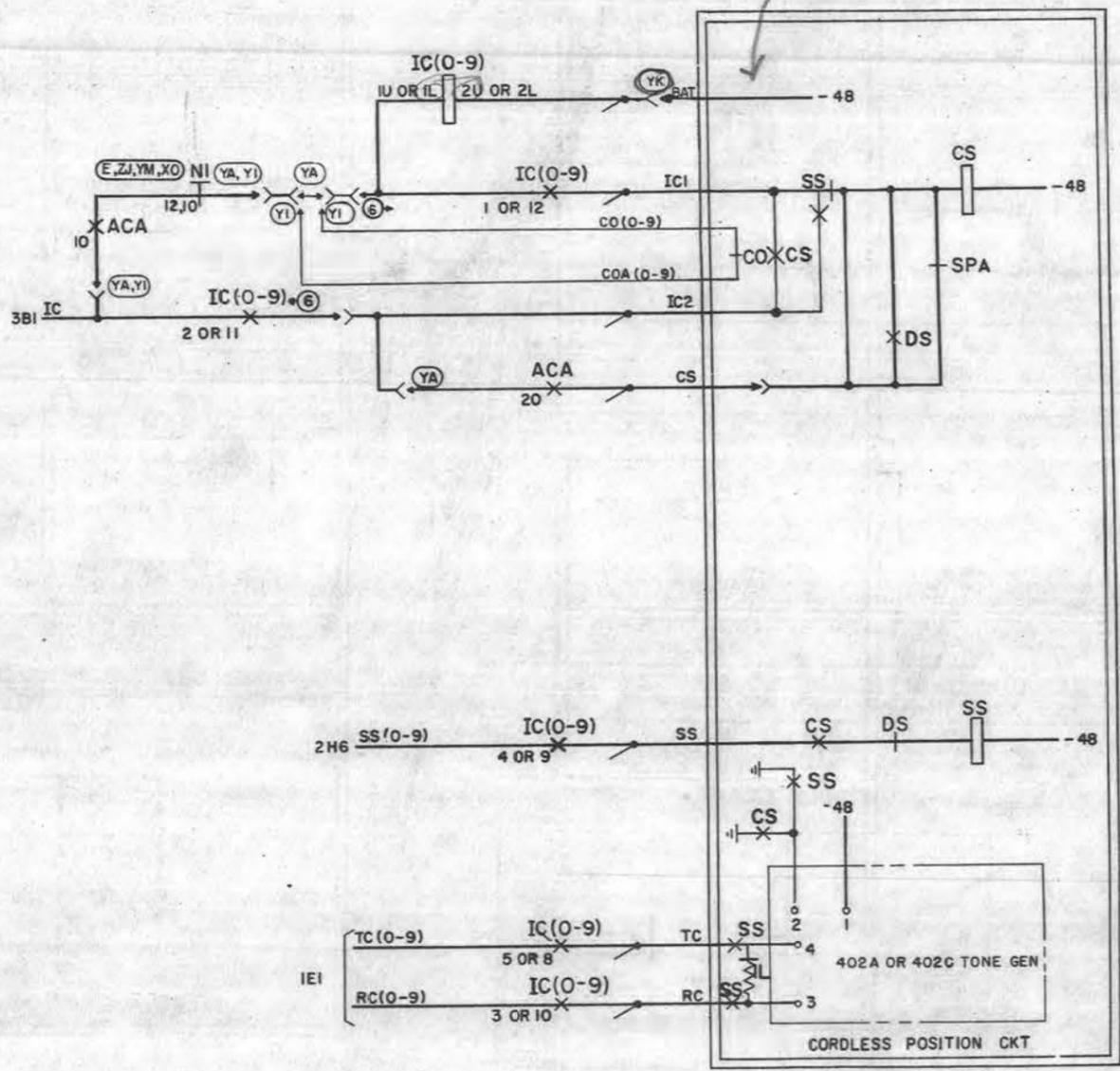
FS 6

FALSE RECALL DETECTOR CIRCUIT (REQUIRED WHEN TRUNK IS CONNECTED TO A PANEL OR AN ESS CENTRAL OFFICE - SEE SHEET NOTE 2)



- SHEET NOTES:**
- RELAYS SE0,2,4,6,8 ARE ASSOCIATED WITH EVEN NUMBERED CIRCUITS, RELAYS SE1,3,5,7,9 ARE ASSOCIATED WITH ODD NUMBERED CIRCUITS.
 - EQUIPMENT TO BE MOUNTED LOCALLY.
 - SPRINGS 1 TO 5 WITH COIL TERMINALS 1L AND 2L APPLY TO LOWER RELAYS (IC0,2,4,6 AND 8). SPRINGS 8 TO 12 WITH COIL TERMINALS 1U AND 2U APPLY TO UPPER RELAYS (IC1,3,5,7, AND 9).

FS 7
INDICATION OF CAMPED-ON
CALL TO BUSY LINE
SEE NOTE 3



DRAWING	ISSUE	DATE	BY
11D	42D		
16B			
7D			
9D			
20A			
21B			
22B			
32B			

SD-65752-01-B4

ISSUE
42D

DR
H

**TWO-WAY TRUNK CIRCUIT
TO CENTRAL OFFICE** ② SD-65752-01-B4

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PART OF FS 1

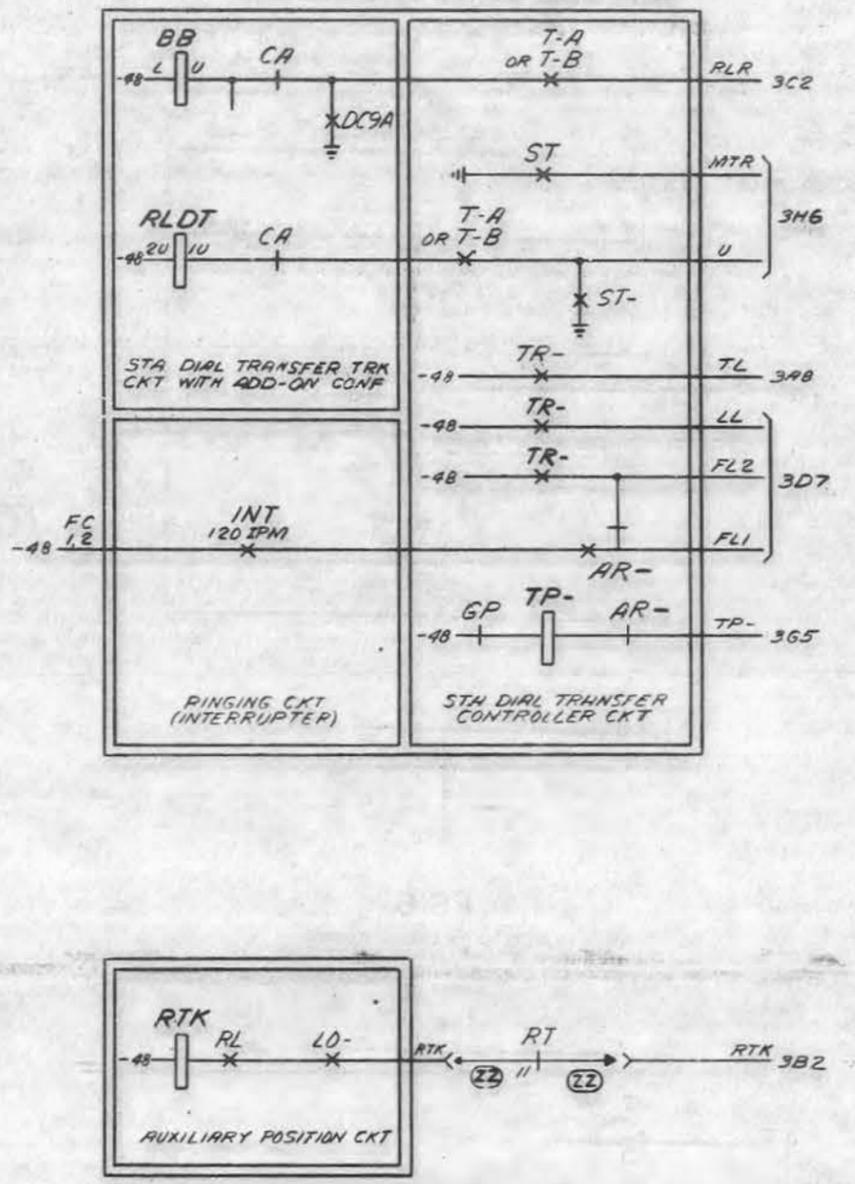
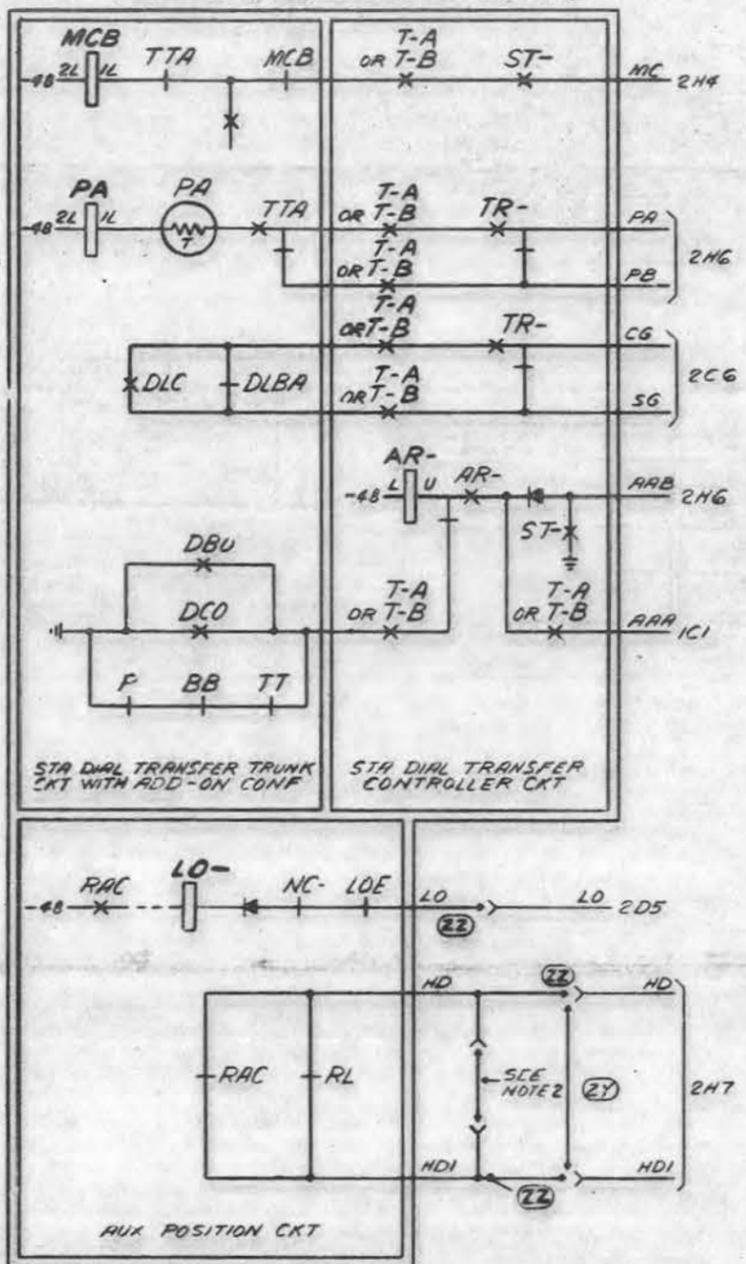
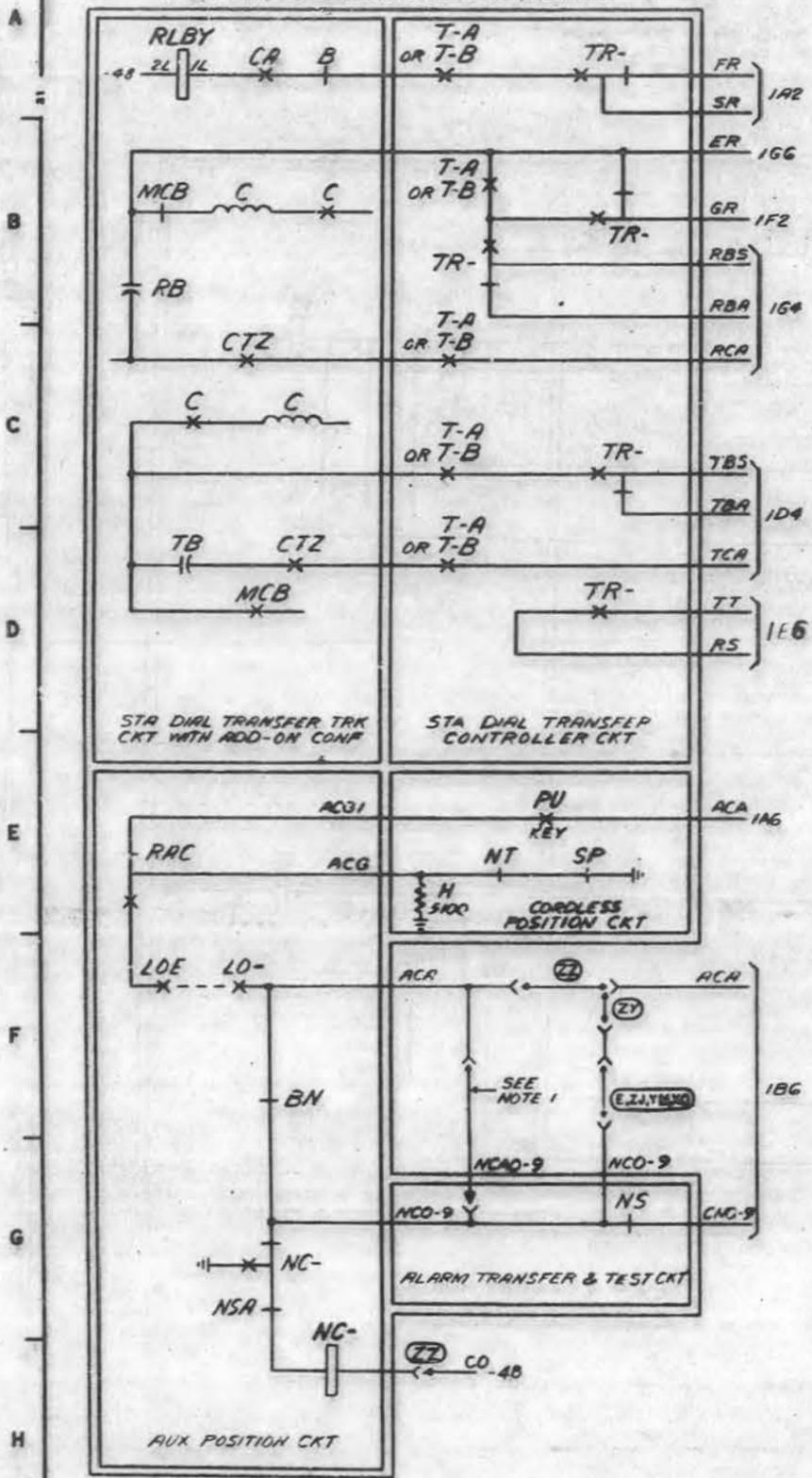
TIP AND RING CONTROL
(SEE NOTE "A" FOR MULTIPLE DESIGNATIONS)

PART OF FS 2

SLEEVE AND HOLD MAGNET CONTROL
(SEE NOTE "A" FOR MULTIPLE DESIGNATIONS)

PART OF FS 3

CLASS OF SERVICE
(SEE NOTE "A" FOR MULTIPLE DESIGNATIONS)



SHEET NOTES:
1. LEADS NCAO-9 ARE REQUIRED WHEN AUXILIARY POSITION CIRCUIT IS NOT PROVIDED AND THESE LEADS ARE PROVIDED BY STRAPPED PLUG IN CROWN.
2. STRAP BETWEEN LEAD HD AND LEAD HDI IS REQUIRED WHEN AUXILIARY POSITION CIRCUIT IS NOT PROVIDED AND STRAP IS PROVIDED BY STRAPPED PLUG IN CROWN.

SD-65752-01-B5

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TWO WAY TRUNK CIRCUIT TO CENTRAL OFFICE	② SD-65752-01-B5
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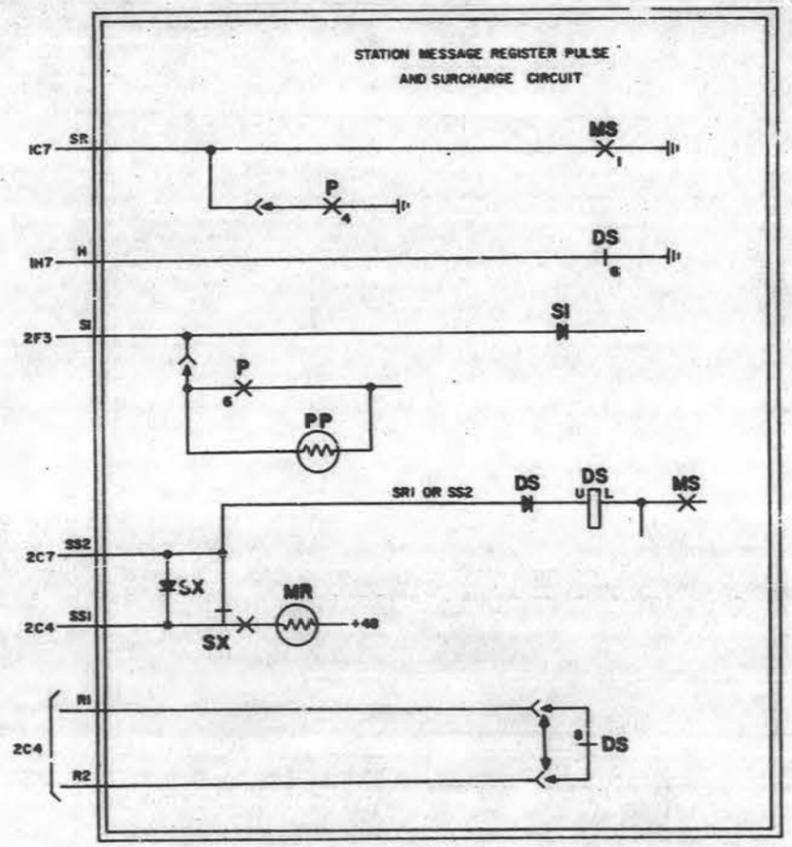
0 1 2 3 4 5 6 7 8 9

DRAWING
ISSUE
18D SAK HW
21B SAM
21B SAM
21B SAM

PART OF FS2 SLEEVE AND HOLD MAGNET CONTROL

A
B
C
D
E
F
G
H

A
B
C
D
E
F
G
H



21

SD-65752-01-B6

PBX SYSTEMS	
TWO WAY TRUNK CIRCUIT TO CENTRAL OFFICE	
2	SD-65752-01-B6
6S	6S

0 1 2 3 4 5 6 7 8 9

APP FIG. 1

RELAY																
DESIG	AC	BY				CT	DR	R1	FF	HD				HM	DESIG	
CODE	AF159	F51895 AG33				AG16	AK8				AJ15	AJ15 AF100				CODE
OPTION		Q										OPTION				
CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	
12		EM	1F3	EM	1F3	M	3F5	EM	1A8	EM	2B3	EM	2G6	I2		
11	M	2G7	M	3E6	M	3E6	M	1C7	EM	2A2	EM	3D2	M	a	I1	
10	B	a	B	3F5	B	3F5	EM	a	EM	3E4	EM	b	EM	1A8	I0	
9	EM	b	EM	2B2	EM	3C6	EM	1F7	EM	3E5	EM	2G6	EM	3B2	9	
8	B	2G6	B	1D1	B	1D1	B	2F3	EM	1F7	EM	2G6	EM	2G4	8	
7	EM	1A6	B	1F1	EM	2B2	EM	1D7	EM	1F5	EM	1F5	EM	2E4	7	
6	B	2F6	EM	2B3	EM	2B3	M	1G8	EM	2E6	EM	2E6	EM	2E2	6	
5	EM	2E6	EM	2B3	EM	2B3	M	1G8	EM	1D5	EM	1D5	EM	2E2	5	
4	B	1D4	EM	3B7	EM	1H8	EM	3B7	EM	3D7	EM	3G5	EM	3C7	4	
3	B	1D4	EM	3B7	EM	1H8	EM	3B7	EM	3D7	EM	3G5	EM	3C7	3	
2	M	3B2	M	3B2	EM	1A9	EM	3D4	EM	3B5	EM	3E5	EM	3E5	2	
1	M	1B1	M	1B1	EM	1A9	EM	3D4	EM	1F3	EM	2F4	EM	2F4	1	
COIL	186	3B2	3B2	1A9	1F4	2C4	1A3			2H5	2E3	COIL				

RELAY															
DESIG	S1	S1	SL	SL	SR	TLA	TLA	TT					DESIG		
CODE	AG54	AG61	AK9	F51877	AG54	AK9	F51877	AJ12					CODE		
OPTION	XN	XD	M	N	M	N	N	AJ12					OPTION		
CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC		
12	M	b	EM	b	M	2E4	M	3B6	M	3E2	EM	2E3	I2		
11	M	3C6	M	3C6	B	3B2	M	b	EM	3F5	EM	3F5	I1		
10	EM	2F3	EM	2F3	EM	2F3	B	2E4	EM	1D5	EM	3F6	I0		
9	EM	3D7	EM	3D7	EM	1F2	EM	1E2	EM	3B5	EM	3B5	9		
8	EM	a	EM	a	EM	a	EM	a	EM	2G5	EM	1E5	8		
7	EM	a	EM	a	EM	a	EM	a	EM	1E7	EM	1E7	7		
6	EM	2D6	EM	2D6	B	3B2	EM	1G8	EM	1A9	EM	3C5	6		
5	EM	1E7	EM	1E7	M	2E4	EM	1E7	EM	1E2	EM	1H2	5		
4	M	1G8	M	1G8	M	1B2	M	1B2	EM	3D2	EM	3D2	4		
3	M	1G8	M	1G8	M	1B2	M	1B2	EM	3D2	EM	3D2	3		
2	M	1G8	M	1G8	M	1B2	M	1B2	EM	3D2	EM	3D2	2		
1	M	1G8	M	1G8	M	1B2	M	1B2	EM	3D2	EM	3D2	1		
COIL	1E2	1C2	2B3	2B3	1C7	3E2	3E2	3D2				COIL			

RELAY															
DESIG	MC	N	N1	N	N1	P	R	RS	RS	RS	RT	DESIG			
CODE	AJ56	AJ3	AJ3	AK7		AJ28	AJ48	AJ15	AJ3	AG53	AJ58	CODE			
OPTION	XD		XD		E,ZJ,YM		E,ZJ,YM		ZH	ZG	XB,XD	OPTION			
CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC		
12	EM	3C1	EM	2C3	EM	5G4	EM	4B5	EM	1D5	EM	1D2	I2		
11	EM	1H1	EM	1H1	EM	4B5	EM	1D9	EM	1D7	EM	5F8	I1		
10	M	1A2	EM	2E6	EM	4B5	EM	1F9	EM	3C4	M	3E5	I0		
9	EM	2F3	M	1H2	EM	1D9	EM	5G4	M	1H1	EM	3A3	9		
8	EM	2F3	EM	2F6	EM	1D9	EM	1C8	EM	2E4	M	2E5	8		
7	B	1G1	EM	2B2	EM	1B8	EM	1A9	EM	1G5	B	3G2	7		
6	M	3B1	EM	2B2	EM	1B8	EM	1A9	M	2D5	EM	2B2	6		
5	S	1E3	M	1H8	M	1H8	EM	2C3	M	2G4	EM	3C1	5		
4	EM	2G3	EM	1H1	EM	1F9	EM	a	M	1G8	EM	3C6	4		
3	M	3C1	EM	1D6	EM	1G2	EM	2F6	M	1F7	EM	2G5	3		
2	EM	3G1	EM	2G3	EM	1H2	EM	1F2	EM	1F8	EM	1F2	2		
1	M	3E1	EM	1G9	EM	2C6	EM	b	M	1E3	EM	2E6	1		
COIL	2G3	2C3	1B8	2C3	1B8	1E3			1D9	3C2	3A3	1G2	COIL		

RELAY			
DESIG	ACA		
CODE	AJ202		
OPTION			
CONT	LOC	CONT	LOC
24	M	1C8	
23	M	2C3	
22	M	1E5	
21	M	2F7	
20	M	4C7	
19	M	3E2	
18	M	2E6	
17	M	1A6	
16	M	2E5	
15	M	2F6	
14	M	3E7	
13	M	3G7	
12	M	3G7	
11	M	3G2	
10	M	4B5	
9	M	2G6	
8	M	2G6	
7	M	1A7	
6	M	1A6	
5	M	2G7	
4	M	1C4	
3	M	1C4	
2	M	1C4	
1	M	1C5	
COIL	1A7		

VARISTOR (DIODE)		
DESIG	LOC	CODE
A	1E2	KS-15724, L2 DIODE
B	1D3	KS-15724, L2 DIODE
C	1D5	KS-15724, L2 DIODE
D	1E9	400E DIODE
DR	1F3	4206-446F DIODE
E	1E9	317A VARISTOR
F	2A2	KS-15724, L2 DIODE
G	2A3	KS-15724, L2 DIODE
H	1B8	KS-15724, L2 446F
HD	2H5	446F
J	1C8	KS-15724, L2
K	1A7	4206-446F
L	3F2	KS-15724, L2 446F
L1	3F2	KS-15724, L2 446F
L2	2C5	
M	1G4	
N	1G2	
NR	1G8	
NRI	3C1	
RS	3C2	
S1	1G7	
SA	2C5	
SB	2C5	
SE1	1B9	
SE2	1B9	
AZ	2G5	

CAPACITOR		
DESIG	LOC	CODE
ZH, XB	1E4	KS-13614, L5, 0.05
FB	1E2	OR KS-20300, L3, .05
FF	1B2	KS-19658-L42, 50
R	1E9	439A
RV	1E3	444A, 3UF
YW	1D6	KS-13486, 60 UF
YX	1D6	KS-19524, L9, 50UF
TN	1G7	441B

INDUCTOR		
DESIG	LOC	CODE
H	1D5	274AC
ZG, XC	1E6	274AH
ZH, XB	1F5	274L

RESISTOR		
DESIG	LOC	CODE
B	1D3	146A, 5490 21%
BF	1F7	KS-13492, L1, 2000
CS	2B2	18FB (XO) KS-14603, L1A, 909±5%
IB2	1B2	KS-20289, L6C, 100
H	1E7	18AE
HS	1E6	KS-13492, L1, 1200
L	3D8	KS-14603, L1A, 909±5%
L	3D8	18FB
LS	1E6	KS-13492, L1, 82
LS	1E6	KS-13492, L1, 200
PD	2A4	18GF
S	3C8	198A
SH	2B4	18BW
SH	2B4	KS-14603, L1A, 100±5%
T	3B8	198A

THERMISTOR		
DESIG	LOC	CODE
R	1E3	BA

DIODE
SEE VARISTOR

DRAWING ISSUE	
1	SI
2B	MS
3B	MS
4A	MS
5B	MS
7B	MS
8D	MS
10D	MS
11D	MS

DRAWING ISSUE	
16B	MS
17D	MS
21B	MS
22D	MS
23B	MS
24A	MS
25D	MS
26A	MS
28B	MS
29B	MS
31A	MS
32B	MS
34B	MS
35B	MS

ISSUE
43D

TWO-WAY TRUNK CIRCUIT
TO CENTRAL OFFICE

BELL TELEPHONE LABORATORIES
INCORPORATED

SD-65752-01-C1

6S

APP FIG. 2

APP FIG. 3

RELAY		[5] SE1,2,4,6,8		[5] SE1,3,5,7,9	
DESIG	CODE	AKU			
OPTION					
CONT	LOC	CONT	LOC	CONT	LOC
12				M	4C1
11				EBM	4B0
10				EBM	4D1
9				EMB	4A1
8				EMB	4A1
7					
6					
5				EMB	4A1
4				EMB	4A1
3				EBM	4D1
2				EBM	4B0
1				M	4C1
COIL					

DIODE			LAMP RESISTANCE			RESISTOR		
DESIG	LOC	CODE	DESIG	LOC	CODE	DESIG	LOC	CODE
YN	1A7	KS-15724.12	[10] ZE	S10-9	4B1	158	[10] ZF	S10-9
								4C1
								145,3790

JACK			LAMP		
DESIG	LOC	CODE	DESIG	LOC	CODE
T	4A4	295	L	4A4	2Y

APP FIG. 4 (MFR DISC)

APP FIG. 5

JACK			LAMP		
DESIG	LOC	CODE	DESIG	LOC	CODE
T	4B4	510A	L	4C4	2Y

DIODE			RESISTOR		
DESIG	LOC	CODE	DESIG	LOC	CODE
FF	4E1	4206 446F	R	4F2	KS-13492,L1 10,000
R	4G2	4206 446F			

THERMISTOR			TRANSISTOR		
DESIG	LOC	CODE	DESIG	LOC	CODE
T1	4F1	88	Q1	4F1	12N

APP FIG. 6

APP FIG. 7

APP FIG. 8

RELAY		[5] IC 0,2,4,6,8		[5] IC 1,3,5,7,9	
DESIG	CODE	AK4			
OPTION					
CONT	LOC	CONT	LOC	CONT	LOC
12				R	4B7
11				EBM	4C5
10				EBM	4F7
9				EMB	4E7
8				EMB	4F7
7					
6					
5				EMB	4E7
4				EMB	4E7
3				EBM	4F7
2				EBM	4C5
1				R	4B7
COIL					

RELAY		DRA	
DESIG	CODE	MA6C	
OPTION			
CONT	LOC	CONT	LOC
4		EBM	1D6
3		EBM	1B3
2		EBM	2
1		EBM	1G5
COIL			1G4

DIODE		
DESIG	LOC	CODE
IT	1E6	426AK

DRAWING ISSUE	
110	PC
168	CR
170	PC
8D	SK
9D	SK
21B	SA
29B	FUS
32B	LDU
34B	

ISSUE 43D

TWO WAY TRUNK CIRCUIT TO CENTRAL OFFICE

BELL TELEPHONE LABORATORIES INCORPORATED

SD-65752-01-C2

65

A
B
C
D
E
F
G
H

CIRCUIT NOTES:

DESIG	FUSE AMP	POTENTIAL	ONE PER	TERM DESIG
CO	1-1/3	-48V	APP FIG. 1,2	
FC1	1-1/3	-48V	PBX	
FC2	1-1/3	-48V	PBX	
CD		GRD	APP FIG. 1,2	

<u>BATTERY SYMBOL</u>	<u>VOLTAGE RANGE</u>
-48	45-52V

FEATURE OR OPTION	PROVIDE			
	APP FIG.	APP OR WRG	QUANTITY	
ATTENDANT SERVICE	LOCKOUT	YES	1,7	
		NO		
	SECRECY	YES		KK
		NO		W
RESTRICTED (SEE NOTE 117)	YES	Y		
	NO			
	TRK 0,1, & 2	I		
	TRK 3,4,5,6, B & 9	XY		
AUTOMATIC TRANSFER	YES	V		
	NO			
2-WAY CO TRUNK CONNECTED TO	PANEL CO	5	1 PER TRK	
		R,XP		
	CROSSBAR	WITH 72V CO BAT. (UNIGAUGE) SEE NOTE 20B		B
		WITHOUT 72V CO BAT.		R,XP ZT
ESS CO	WITH 72V CO BAT. (UNIGAUGE) SEE NOTE 20B	5,8		
	WITHOUT 72V CO BAT.	R,XP		
SxS CO SEE NOTE 120 & 121			S,XP, ZT	
	2-WAY ASSIGNED SERVICE	1,7	YF,YO	
2-WAY ASSIGNED SRV EQUIPPED FOR NIGHT CONN WITH CORD SHED		2	YP,YR	
	ONE-WAY INCOMING UNASSIGNED SERVICE		X	
LONG DISTANT SRV BY SOL DIG. DL WITH AUD SGL. (SEE NOTE 118)			XL,YQ,YS TRK 6,7,8 & 9	
	NO		ZR,ZD	
TRUNK APPEARANCE AT CORD S.I.B.D.	YES		ZS	
	RELAY EQPT	556A	2	
	60BA OR D		YG,ZE,YD	
JACK EQPT	556A	3	YF,ZF,YE	
DIAL TR STA CONT (SEE NOTE 122)	REQD		ZX,WG	
INDICATION OF CAMPED-ON CALL TO BUSY LINE	REQD		ZH,WH	
STR MSG REGISTRATION (SEE NOTE 203)	REQD		YX	
WHEN TRUNK IS CONNECTED TO STEP BY STEP CENTRAL OFFICE USING POSITIVE TRIP BATTERY			YB	
			YC	
			YD	
			YE	
			YF	
			YG	
			YH	
			YI	
			YJ	
			YK	
			YL	
			YM	
			YN	
			ZO	
			ZP	
			ZQ	
			ZR	
			ZS	
			ZT	
			ZU	
			ZV	
			ZW	
			ZX	
			ZY	
			ZZ	

103.

NETWORK NO.	NETWORK VALUES	
	RESISTANCE IN OHMS	CAPACITANCE IN UF

104.

CHANGED ON ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT		
				STD	A&M	MD
2B	Q OR P	Q	102	P		Q
2B	N OR M	N	102	M		N
5B	G OR H	H		G		H
7B	E OR F	F	105	E		F
8D	A OR B	B		A		B
11D	ZA OR ZB	ZA		ZB		ZA
11D	ZC OR ZD	ZC		ZD		ZC
11D	ZE OR ZF	NONE		ZE, ZF		
11D	ZH OR ZG	ZG		ZH		ZG
11D	ZJ OR ZL	E OR F	105,106	ZJ, ZL		E
11D	FIG. 2 OR ZM	ZM		FIG. 2 ZM		
14B	ZN	K OR J	102	ZN, K, J		
15B	ZO	NONE		ZO		
16B	ZP, ZQ	NONE	102	ZP, ZQ		
16B	ZR, ZS	ZR	102	ZR, ZS		
16B	ZT	ZT	102	ZT		
16B	FIG. 5	ZT	102	FIG. 5		
16B	ZU, ZV	ZU		ZV		ZU
17D	ZX, ZW	ZW	108	ZX, ZW		
17D	YA	FIG. 6	NONE	102	FIG. 6	
18D	ZZ, ZY	ZY	109	ZZ		ZY
18D	YB OR YC	YB	102	YB, YC		
19D	YD, YE	YD	102	YD, YE		
19D	YF, YG	YF	102	YF		YG
20AC	YI	YA	111	YI		YA
20AC	YK	NONE	102	YK		
21B	Y	NONE	112			YH
21B	A		115			A
21B	YJ	NONE		YJ		
21B	YL, YM	ZJ, YL	102	YM		ZJ, YL
21B	YO	ZH, YN	113	YO		ZH, YN

104. (CONT)

CHANGED ON ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CHART		
				STD	A&M	MD
22D	YP, YR YQ, YS	ZQ, J ZN, ZP	102	YP, YR YQ, YS		ZQ, J ZN, ZP
24AC	YU, YV	YU	115	YU		YU
25D	YW, YX	YW		YX		YW, NOTE 107
26AC	YY, YZ	YJ	116	YY, YZ		YJ
28B	XA, XB	ZH		XB		ZH, XA YY, YZ NOTE 116
29B	XC, XD, FIG. 7	XB	204	XC, YD FIG. 7		XB
29B	XE OR XF	XE, X	117	XF		X, XE
29B	XG, XL	NONE	102, 118	XG, XL		
30A	XH	NONE	205	XH		
31A	XI, XJ	XI		XJ		XI
31A	XM	NONE		XM		
32B	XN, XO	YM, XN	105, 106	XO		YM, XN
32B	XP, FIG. 8	XP	102, 208	XP		FIG. 8
32B	XQ, XR	XQ		XR		XQ
33D	XS	NONE	302	XS		
34B	XT		119			XT
35B	XU OR XV	XV		XU		XV
35B	XW OR XX	XW		XX		XW
37B	XY OR Y	Y		XY		
37B	XZ	NONE		XZ		
37B	WB	NONE		WB		
38B	WB OR WC	WB	102	WB, WC		
39B	WD	WD	121	WD		
39B	WE	NONE	120	WE		WC XZ
40B	WF	NONE		WF		
42D	WF	NONE				WF
43D	WG, WH	NONE	102, 122	WG, WH		

- 105. WHEN E, ZJ, YM (MFR DISC.) OR XO OPT IS PROVIDED FOR FLEX N SRV CONNECTIONS, V OPTION SHALL BE PROVIDED IN CENTRAL OFFICE TRUNK CIRCUIT NO. 5, S OPTION IN LINE CIRCUIT NO. 33 AND R OPTION IN THE ALARM TRANSFER & TEST CKT. (SD-65743-01)
- 106. WHEN MODIFYING EXISTING JOBS FOR ZH OPTION THAT DO NOT HAVE FLEXIBLE NIGHT CONNECTIONS (OPTION F) PROVIDE ZL OPTION. WHEN ZH OPTION IS PROVIDED WITH FLEXIBLE NIGHT CONNECTIONS, PROVIDE E, ZJ, YM (MFR DISC) OR XO OPTION.
- 107. WHEN TRUNK UNITS ARE ADDED HAVING "A" OR "WA" OPTION, ALL OTHER TRUNK UNITS SHOULD BE WIRED FOR "A" OPTION.
- 108. WHEN THE PRX IS MODIFIED FOR DIAL TRANSFER STATION CONTROLLED, OPTION "ZX" MUST BE PROVIDED, REPLACING OPTION "ZM".
- 109. WHEN THE PBX IS MODIFIED TO PROVIDE AN AUXILIARY POSITION CIRCUIT, OPTION "ZZ" MUST BE PROVIDED.
- 110. PRIOR TO ISSUE 19D TRUNK JACKS AND LAMPS FOR USE WITH THE 60BA SWITCHBOARD WERE SHOWN AS APP FIG. 4 ON THIS CIRCUIT.
- 111. OPTION YI IS REQUIRED ON EXISTING JOBS WHEN INDICATION OF CAMPED-ON CALL TO A BUSY LINK IS SPECIFIED. OPTION YA IS TO BE REMOVED.
- 112. OPTION YH IS ADDED AS A MANUFACTURED DISCONTINUED OPTION. THE INSTALLER SHALL ADD OPTION YH WHEN USING A 1A2 KEY TELEPHONE SYSTEM WITH A 400B K.T.U.
- 113. PRIOR TO ISSUE 21B OPTION YN WAS PART OF APP FIG. 2.
- 114. TRUNK MAY BE ARRANGED FOR ONE TYPE OF SERVICE ONLY.
- 115. IF OPTION A (L DIODE) IS REMOVED, OPTION YV MUST BE ADDED AND OPTION YU REMOVED. ASSOCIATED OPTI.S IN THE REGISTER CIRCUITS MUST BE PROVIDED: OPTIONS YZ PER ISSUE 24B OR OPTION XB PER ISSUE 26D.
- (MFR DISC.) 116. THE INSTALLER SHALL REMOVE OPTION YJ AND ADD OPTIONS YY AND YZ ON ALL TRUNK UNITS FURNISHED PER ISSUE 21B OR LATER, EXCEPT OPTION YY MUST BE OMITTED ON ALL TRUNK UNITS WHEN MORE THAN ONE 1A1 KTU LINE CIRCUIT IS BRIDGED ON A STATION LINE OR WHEN A DATA SET IS USED AS A STATION LINE, OR WHEN A 24VA REPEATER IS CONNECTED TO ANY STATION LINE FOR FX SERVICE.
- 117. PRIOR TO ISSUE 29B OPTION X IS PROVIDED AS AN ATTENDANT RESTRICTION FEATURE (PREVENTS THE ATTENDANT FROM MAKING OUTGOING CO CALLS). ON ISSUE 29B OR LATER, ATTENDANT RESTRICTION IS ALWAYS PROVIDED PER OPTION XF.
- 118. OPTION XL IS REQUIRED FOR AUDIBLE RINGING TONE WHEN THIS CIRCUIT IS USED AS TRUNK TO TOLL.
- 119. PRIOR TO ISSUE 34B OPTION XT WAS PART OF APP FIG. 7.
- 120. FOR OPERATION WITH SxS CO THE INSTALLER SHALL REMOVE OPTION WD AND ADD OPTION WE.
- 121. PRIOR TO ISSUE 39B OPTION WD WAS PART OF OPTION XO.
- 122. BEFORE OPTION WG CAN BE APPLIED, APP FIG. 7 MUST BE ADDED TO UNITS BUILT TO ISSUE 33D OR EARLIER.

ISSUE
43D

TWO-WAY TRUNK CIRCUIT
TO CENTRAL OFFICE

SD-65752-01-DI

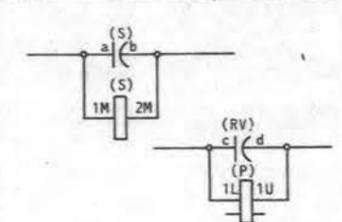
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6S

EQUIPMENT NOTES:

201. OPTION YK IS ALWAYS PROVIDED. WHEN INDICATION OF CAMPED-ON CALL TO BUSY LINE IS NOT REQUIRED YK OPTION SHALL BE REMOVED BETWEEN L WDG OF CS RELAY & 2U OF 1C9 RELAY.
207. WHEN TRUNKS PER ISSUE 21B OR LATER (WITHOUT "A" OPTION) ARE ADDED TO AN EXISTING PBX EQUIPPED WITH OLDER ISSUE TRUNKS (WITH "A" OPTION), THE TELEPHONE COMPANY MUST EITHER REMOVE "A" AND "YU" OPTIONS AND ADD "YV" OPTION TO ALL EXISTING TRUNKS AND ADD "Y2" OR "XB" OPTION TO EACH REGISTER CIRCUIT ("E" NOTE 115) OR, FURNISH AND INSTALL A 446F TYPE DIODE (DIODE L) AND ADD LEAD "W" IN THE NEWLY ADDED TRUNK UNITS.
203. WHEN PLUG-IN TRUNKS (3,4,8 & 9) ARE USED, THE INSTALLER SHALL ADD OPTION YB TO THE PLUG-IN TRUNK WHEN THE FOLLOWING CONDITIONS EXIST:
1. TRUNK IS MADE PER ISSUE 18D AND PRIOR TO ISSUE 27AC.
 2. THE PBX IS NOT ARRANGED FOR STATION MESSAGE REGISTERS.
- (WHEN PLUG-IN TRUNKS PER ISSUE 27AC OR LATER ARE USED AND WHEN STATION MESSAGE REGISTER FEATURE IS REQUIRED, THE INSTALLER SHALL REMOVE OPTION YB.)
204. WHEN MODIFYING EXISTING JOBS TO:
- A. PREVENT TALKING BETWEEN A CAMPED-ON PARTY AND BUSY STATION (BUSY STATION REMAINS OFF-HOOK AFTER THE PARTY CONNECTED TO BUSY STATION DISCONNECTS)
 - B. ENABLE THE TOLL OPERATOR TO RE-RING THE PBX ATTENDANT OVER A CO TRUNK PLACED ON HOLD
- THE INSTALLER SHALL DO THE FOLLOWING:
- | PROBLEM | ISSUE | REMOVE | PROVIDE |
|--------------|-------|--------|------------|
| CAMP-ON | 1-10 | YW,ZG | YX,XC,XD,7 |
| | 11-24 | YW,ZH | |
| TOLL RE-RING | 25-27 | ZH | XC,XD,7 |
| | 28 | XB | |
205. WHEN PLUG-IN TRUNKS (3,4,8 & 9) MANUFACTURED PER ISSUE 22D OR LATER ARE ADDED TO EXISTING PBX'S THAT ARE NOT ARRANGED FOR MAKE BUSY & BUSY DISPLAY FEATURE, THE INSTALLER SHALL ADD OPTION XH.
206. WHEN A PLUG-IN TRUNK (3,4,8 & 9) PER ISSUE 22D OR LATER IS ADDED TO AN EXISTING PBX (PERMANENT TRUNKS PER ISSUE 16-21) EQUIPPED WITH A CORD SWITCHBOARD AND THE PARTICULAR PLUG-IN TRUNK DOES NOT REQUIRE A JACK APPEARANCE ON THE SWITCHBOARD, THE INSTALLER SHALL REMOVE LEAD BG FROM PIN 17 ON CONNECTOR A OF THE TRUNK PATCH UNIT - SEE CAD 8 ON PBX CABLING DIAGRAM (SD-65746-01) FOR COLOR OF BG LEAD.
207. WHEN A PLUG-IN TRUNK (3,4,8 OR 9) PER ISSUE 22D OR LATER IS ADDED TO AN EXISTING PBX WHICH HAS BEEN PREVIOUSLY FIELD MODIFIED TO PROVIDE THE MAKE BUSY AND BUSY DISPLAY FEATURE, THE INSTALLER SHALL REMOVE LEAD BG FROM PIN 17 ON CONNECTOR A OF THE TRUNK PATCH UNIT AND RECONNECT LEAD BG TO PIN 14 ON THE TRUNK T.S. SEE CAD 8 ON PBX CABLING DIAGRAM SD-65746-01 FOR COLOR OF BG LEAD.
208. OPTION XP IS ALWAYS PROVIDED. WHEN 72- VOLT CO BATTERY IS USED, THE INSTALLER SHALL REMOVE OPTION XP(HS RESISTOR) AND ADD FIG. 8 (IT DIODE).

ELECTROLYTIC CAPACITOR TEST REQUIREMENTS (1000 CYCLE TEST, USING 73A TEST SET, BETWEEN 6000 LINES)						
OVERALL LOSSES						
TEST	TEST SET TERM	CONN TO	MIN LOSS IN db	REMARKS		
CAP(S)	3-6	2M 1M(S)	5.6			
CAP(RV)	3-6	1L 1U(P)	5.6			
ALLOWABLE INDIVIDUAL APPARATUS LOSSES						
APPARATUS	DESIG	CODE	TEST CONNECTIONS		+ MIN LOSS IN db	REMARKS
			TEST SET TERMINALS	CONNECT TO		
CAPACITOR	RV	444A	3-6	c-d	5.4	DISC CAP. FROM CKT
CAPACITOR	S	KS-13486 KS-19524,L9	3-6	a-b	5.4	DISC CAP. FROM CKT
CAUTION DISCHARGE CAPACITORS IN ACCORDANCE WITH THE A200 SECTION BSP COVERING THE TESTING OF ELECTROLYTIC CAPACITORS. DO NOT SHORT CKT. CAPACITORS.						



WORKING LIMITS

"S" RELAY - THE TRUNK CONDUCTOR LOOP RES PLUS THE MAXIMUM STATION LOOP RES SHALL NOT EXCEED THE CENTRAL OFFICE SUBSCRIBER LOOP RANGF OF THE CONNECTING CENTRAL OFFICE LESS 65 OHMS.

CONDUCTOR LOOP RESISTANCE

"R" RELAY - RING UP RE-RING

2000Ω
1200Ω

ISSUE
39B

TWO-WAY TRUNK CIRCUIT TO CENTRAL OFFICE	SD-65752-01-D2
WELL TELEPHONE LABORATORIES INCORPORATED	65 PRINTED IN U.S.A.

SD-65752-01-D2

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.
- 302. SEE SD-66920-01 PER ISSUE 16D FOR CONNECTION TO THE TRAFFIC MEASUREMENT SYSTEM REMOTE SCANNER.
- 303. THE PURPOSE OF THIS NOTE IS TO POINT OUT CERTAIN OPTIONS WHICH SHOULD BE ADDED OR REMOVED TO THE TRUNKS AND/OR TO THE 756A PBX SYSTEM TO ENSURE PROPER OPERATION:

(A) SYSTEM (RIGHT MODULE)	CHANGES REQUIRED
J58829A-4, L54, A OR L55, A	NO CHANGES REQUIRED
J58829A-4, L54 OR L55 TO J58829A-3, L54, AG OR L54, AH	ADD XM OPTION SD-65752-01 ADD XU OPTION SD-65752-01 REMOVE XT, XV OPTIONS SD-65752-01
J58829A-3, L54, AD OR L55, AE TO J58829A-3, L46, R OR L47, R	ADD XM OPTION SD-65752-01
J58829A-3, L40, G, K, M, OR L41, H, L, N	ADD XM OPTION SD-65752-01 ADD WM OPTION SD-65741-01 REMOVE WL, YR OPTIONS SD-65741-01
J58829A-3, L40, G, K OR L41, H, L TO J58829A, L2 OR L3	ADD WM OPTION SD-65741-01 REMOVE WL, YR OPTIONS SD-65741-01

(B) WHEN PLUG-IN CENTRAL OFFICE TRUNKS, J58829M, ARE ADDED TO THE VARIOUS VINTAGES OF 756A PBX, CERTAIN WIRING CHANGES MUST BE ADDED TO THE PLUG-IN TRUNKS TO ENSURE PROPER CIRCUIT OPERATION. INDICATED BELOW IS A LISTING OF STANDARD SD OPTIONS REQUIRED TO ALLOW THE USE OF VARIOUS VINTAGES OF TRUNKS WITH VARIOUS VINTAGES OF SYSTEMS.

PLUG-IN CENTRAL OFFICE TRUNK	SYSTEM AND CHANGES
J58829M-2, L4, A (SD-155 17)	J58829A-4, L56, B, L54, D, L55, E, L52, G, C, L53, H, C OR LATER CHANGE NO. 5
J58829M-4, L4, A OR LATER (SD-155 34, 36 OR LATER)	J58829A-3, L32-L35 CHANGE NO. 6
J58829M-4, L4 (SD-155 32, 34)	J58829A-4, L52-L55 J58829A-3, L52-L55 NO CHANGE REQUIRED J58829A-3, L48-L51, L44-L47, L38-L41, L32-L35 CHANGE NUMBER 1 J58829A1-A3, L1-L27 CHANGE NUMBER 1 NUMBER 4
J58829M-3, L4, B, C (SD-155 29, 31)	J58829A-4, L52-L55 J58829A-3, L52-L55 CHANGE NUMBER 2 NUMBER 3 J58829A-3, L48-L51, L44-L47, L38-L41, L32-L35 CHANGE NUMBER 1 NUMBER 2 NUMBER 3
J58829M-3, L4, A OR J58829M-3, L4 (SD-155 28, 30, 31 OR 155 27, 30)	J58829A1-A3, L1-L27 CHANGE NUMBER 1 NUMBER 2 NUMBER 3 NUMBER 4 J58829A-4, L52-L55 A-3, L52-L55 CHANGE NUMBER 2 J58829A-3, L48-L51, L44-L47, L38-L41, L32-L35 CHANGE NUMBER 1 NUMBER 2 J58829A1-A3, L1-L27 CHANGE NUMBER 1 NUMBER 2 NUMBER 4

INFORMATION NOTES (CONT):

303. (B)(CONT)
(CONT) PLUG-IN CENTRAL OFFICE TRUNK SYSTEM AND CHANGES

J58829M-2, L4, J OR J58829M-2, L4, G OR J58829M-2, L4, E (SD-155 21, 23, 24, 25, 26, 27 OR 155 21, 23, 24)	J58829A-3, L48-L51, L44-L47, L38-L41, L32-L35 CHANGE NUMBER 2 J58829A1-A3, L1-L27 CHANGE NUMBER 2 NUMBER 4
J58829M-2, L4, D, WE (SD-155 17, 20, 21, 24)	J58829A-3, L44-L47, L38-L41, L32-L35 CHANGE NUMBER 2 J58829A1-A3, L1-L27 CHANGE NUMBER 2 NUMBER 4
J58829M-2, L4, B (SD-155 17, 20)	J58829A-3, L32-L35 NO CHANGE REQUIRED J58829A1-A3, L1-L27 CHANGE NUMBER 4
J58829M-2, L4 OR J58829M-1, L4, E (SD-155 16 OR 15)	J58829A1-A3, L1-L27 NO CHANGE REQUIRED

- CHANGE NO. 1 ADD XM OPTION SD-65752-01
- CHANGE NO. 2 ADD XM OPTION SD-65752-01
- CHANGE NO. 3 ADD XU OPTION SD-65752-01 REMOVE XT, XV OPTIONS SD-65752-01
- CHANGE NO. 4 ADD J58829M, LIST 7 (SHORTING PLUG FOR (C) CONN.)
- CHANGE NO. 5 REMOVE OPTION YA IN PLUG IN TRUNKS AND IF INDICATION OF CAMP-ON IS REQUIRED ADD OPTION Y1.
- CHANGE NO. 6 REMOVE OPTION YA IN HARD WIRED TRUNKS AND IF INDICATION OF CAMP-ON IS REQUIRED ADD OPTION Y1.

- (C) 1. OPTION XM MUST BE PROVIDED ON TRUNKS MADE PER ISSUE 21B AND PRIOR TO ISSUE 34B.
- 2. WHEN TRUNKS ARE MADE PER ISSUE 29B AND PRIOR TO ISSUE 34B, OPTION XU MUST BE PROVIDED AND OPTIONS XT AND XV MUST BE REMOVED.
- 3. WHEN PLUG-IN TRUNKS (3, 4, B & 9) PER ISSUE 28B OR LATER ARE ADDED TO AN EXISTING PBX (LINE, LINK & MARKER CIRCUIT PER ISSUE 31D OR EARLIER) OPTIONS WL & YR MUST BE REMOVED AND OPTIONS WM MUST BE ADDED IN THE LINE, LINK, AND MARKER CIRCUIT (SD-65741-01).

SD-65752-01-D3

ISSUE 40B

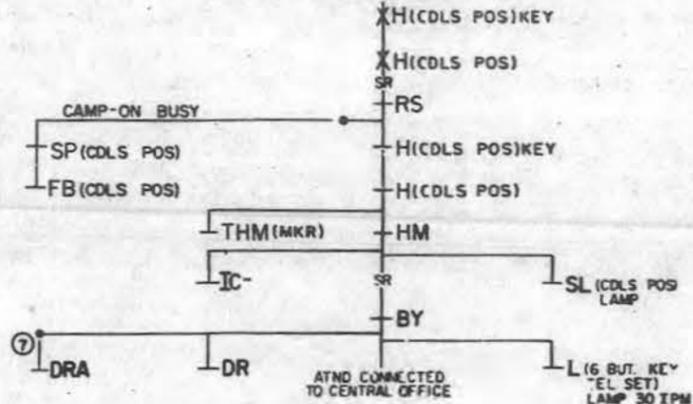
TWO-WAY TRUNK CIRCUIT TO CENTRAL OFFICE

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-65752-01-D3

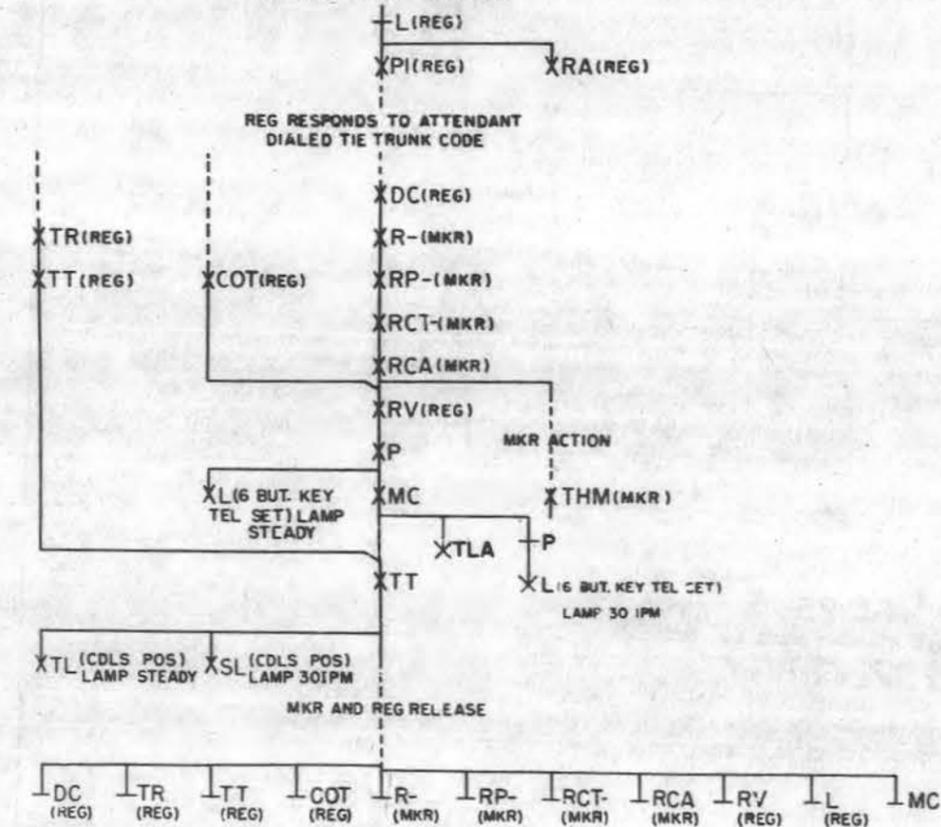
SC 16

ATTENDANT DISCHARGES CAMP-ON OR CAMP-ON BUSY CONNECTION
(PREVIOUS ACTION AS IN SC 13 OR SC 15)

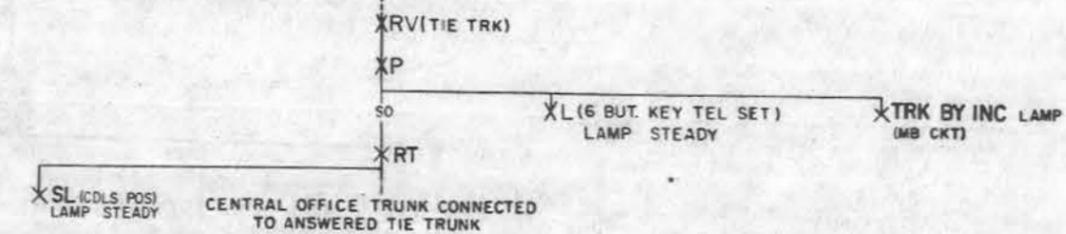


SC 17

INCOMING CENTRAL OFFICE TRUNK REQUESTS CONNECTION TO DIAL REPEATING OR DIAL TRANSMITTING TIE TRUNK
(PREVIOUS ACTION SHOWN IN SC 5)
ATTENDANT DIALES TIE TRUNK CODE

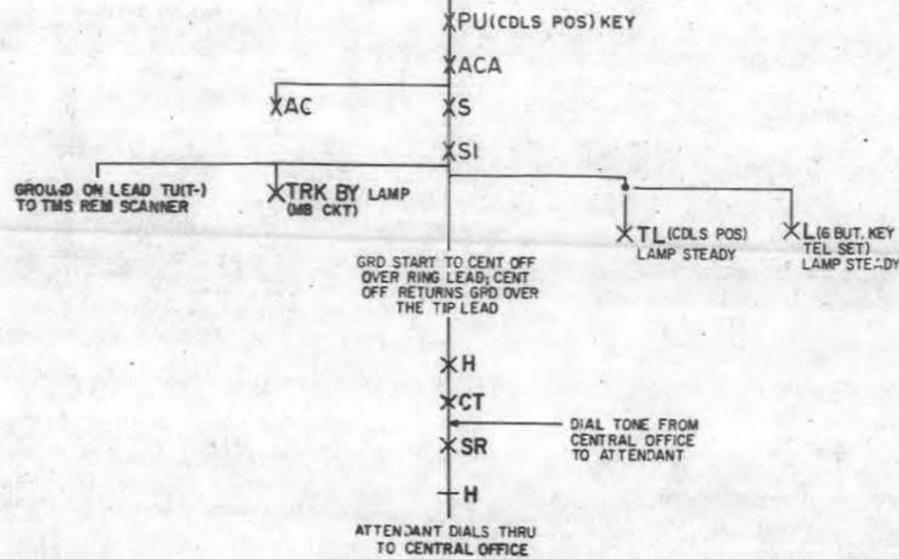


CONNECTION TO TIE TRUNK COMPLETE, ATTENDANT DIALES OR MANUAL PBX ANSWERS, TIE TRUNK SUPERVISES



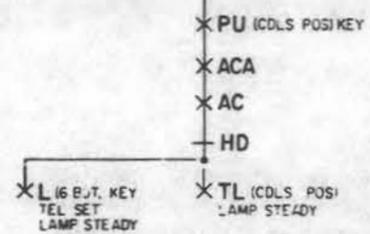
SC 18

ATTENDANT ORIGINATES CENTRAL OFFICE CALL



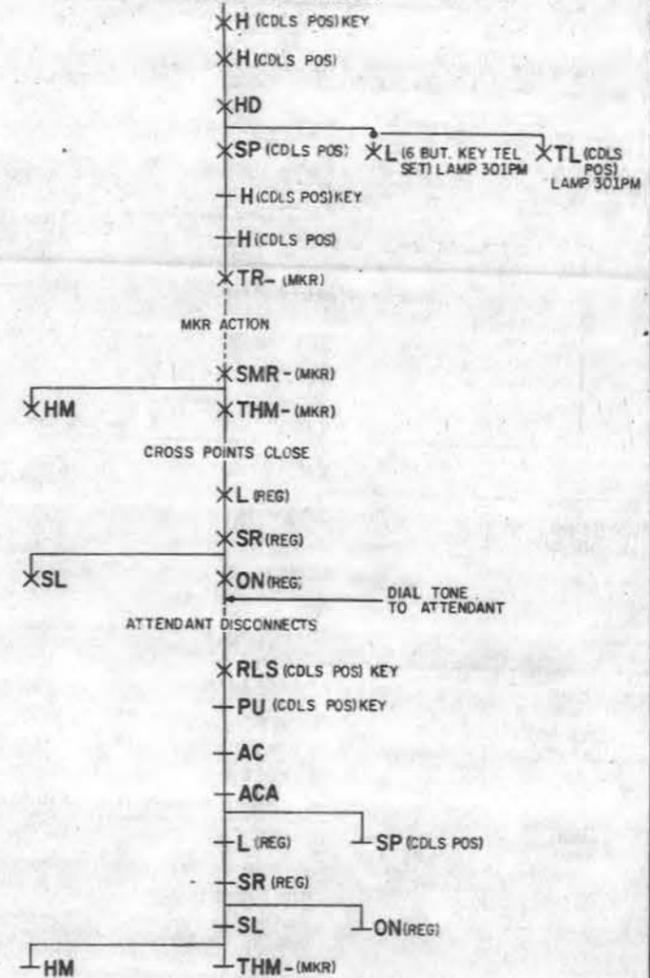
SC 20

ATTENDANT REENTERS HELD CENTRAL OFFICE TRUNK
(PREVIOUS ACTION SHOWN IN SC 19)



SC 19

ATTENDANT HOLDS CENTRAL OFFICE TRUNK TO HANDLE OTHER TRAFFIC
(PREVIOUS ACTION SHOWN IN SC 18 OR SC 2)



TWO WAY TRUNK CIRCUIT TO CENTRAL OFFICE

SD-65752-01-E3

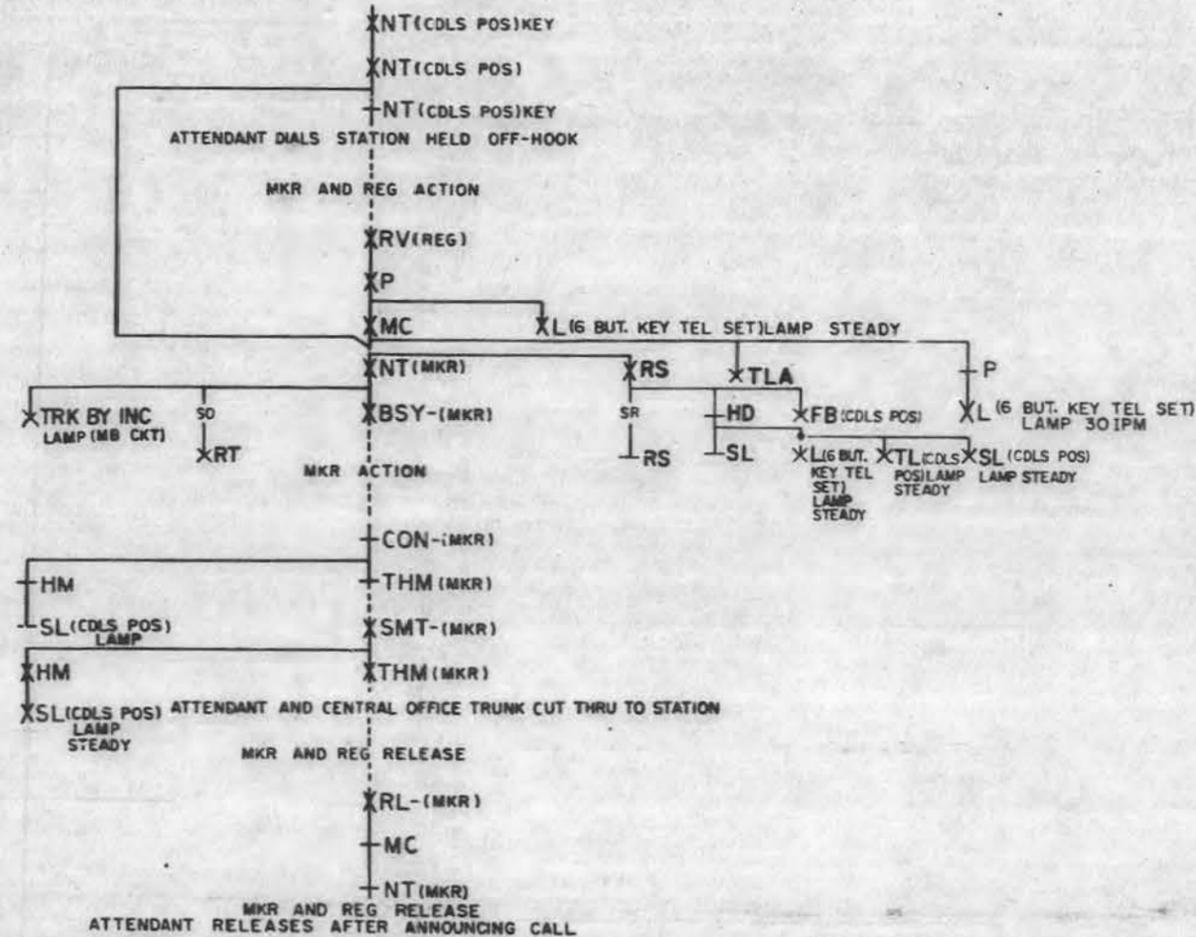
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SD-65752-01-E3

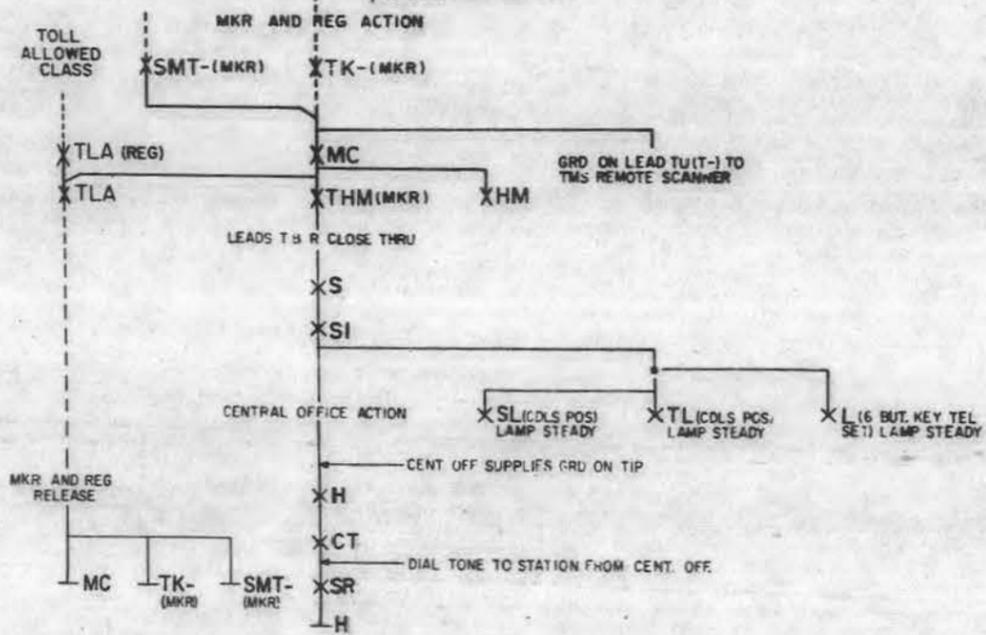
SC 21

ATTENDANT PLACES NO-TEST CALL TO RESTRICTED STATION
(PREVIOUS ACTION AS IN SC 5 EXCEPT ATTENDANT PLACES OUTGOING CENTRAL OFFICE CALL INITIALLY)



SC 22

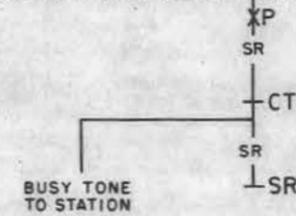
OUTGOING DIAL SELECTED CALL TO CENTRAL OFFICE
*TRK BY LAMP (MB CKT)



SC 23

TOLL DENIED STATION DIALS LD CODE
(PREVIOUS ACTION SHOWN IN SC 22 WITH TLA CLASS NORMAL)

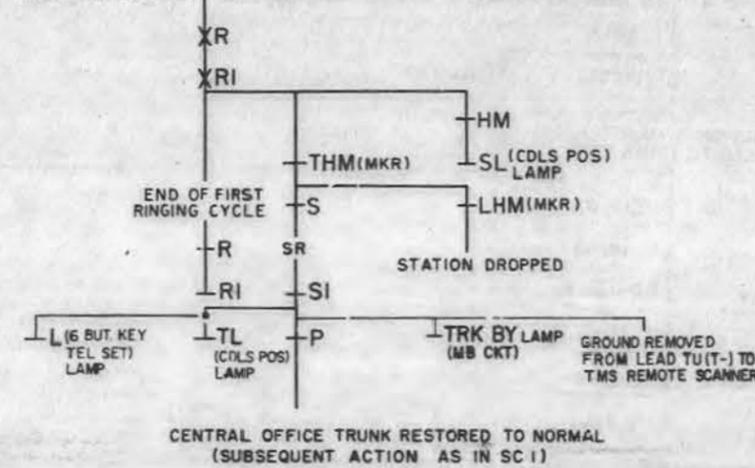
BAT & GRD REVERSE TO CENTRAL OFFICE TRUNK WHEN TOLL OPERATOR ANSWERS



SC 24

CENTRAL OFFICE TRUNK SEIZED AT CENTRAL OFFICE IMMEDIATELY AFTER TOLL DENIED STATION IS DIVERTED AT PBX
(PREVIOUS ACTION SHOWN IN SC 23)

CENTRAL OFFICE RINGING APPLIED TO TRUNK BEFORE STATION DISCONNECTS



SC 25

TOLL ALLOWED STATION DIALS LD CODE
(PREVIOUS ACTION SHOWN IN SC 22 WITH TLA CLASS OPERATED)

BAT. & GRD REVERSE FROM TOLL TRUNK AFTER LD OPERATOR ANSWERS
OPERATOR RECEIVES INFORMATION FROM STATION

TWO WAY TRUNK CIRCUIT TO CENTRAL OFFICE

SD-65752-01-E4

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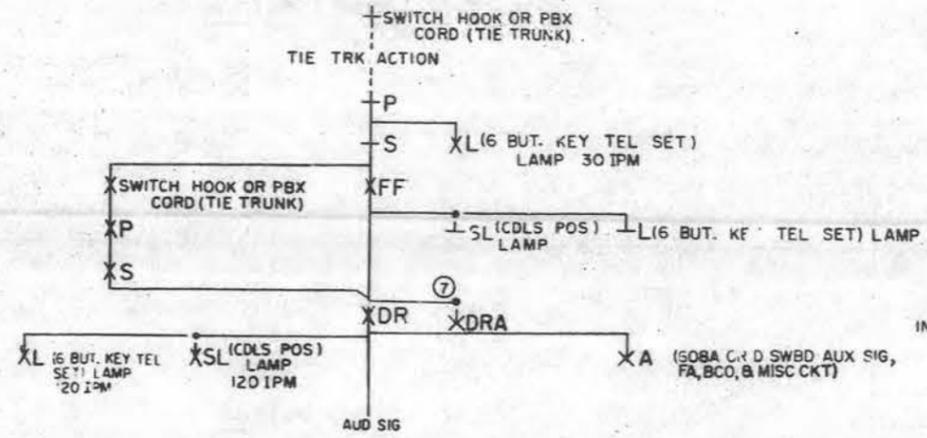
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SD-65752-01-E4

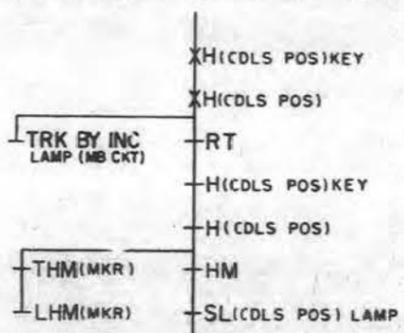
33

DRAWING ISSUE
1
BD
16B
21 B
22D
26B
33D

SC 26
 RECALL FROM DIAL REPEATING OR DIAL TRANSMITTING TIE TRUNK
 (PREVIOUS ACTION SHOWN IN SC 17)

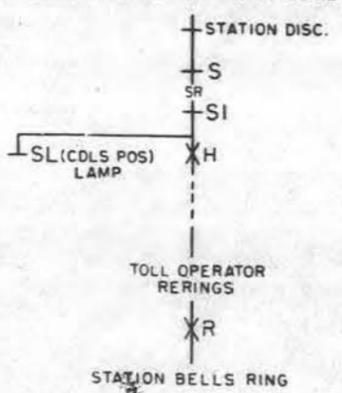


SC 27
 ATTENDANT DISCONNECTS NO-TEST CALL
 (PREVIOUS ACTION AS IN SC 21 EXCEPT
 ATTENDANT OPERATES H KEY INSTEAD OF RELEASING)



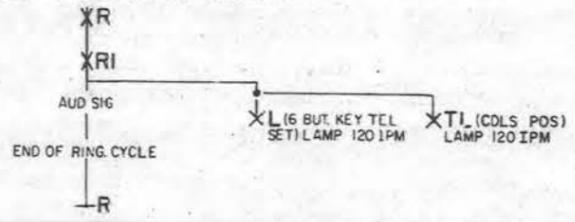
ATTENDANT CONNECTED TO CENTRAL OFFICE
 SUBSEQUENT ACTION SHOWN IN SC 5
 EXCEPT THAT TLA WAS PREVIOUSLY
 OPERATED

SC 28
 TOLL OPERATOR RERINGS ON TOLL ALLOWED STATION CALL
 THAT WAS DISCONNECTED
 (PREVIOUS ACTION AS IN SC 22)

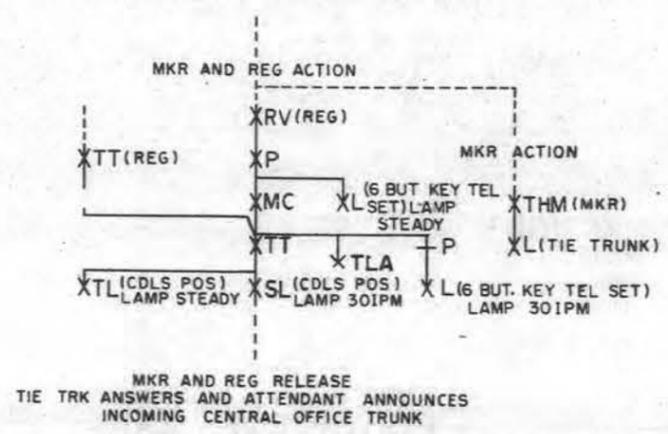


TOLL OPERATOR RERINGS

SC 29
 TOLL OPERATOR RERINGS ON ATTENDANT ORIGINATED CALL
 (PREVIOUS ACTION SHOWN IN SC 19)

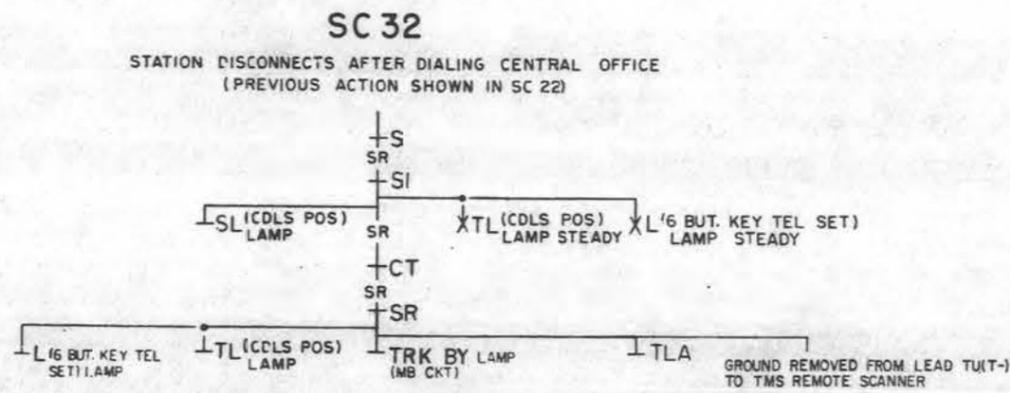


SC 30
 INCOMING CENTRAL OFFICE TRUNK REQUESTS RING DOWN TIE TRUNK CONNECTION
 (PREVIOUS ACTION SHOWN IN SC 5)
 ATTENDANT DIALS TIE TRUNK CODE

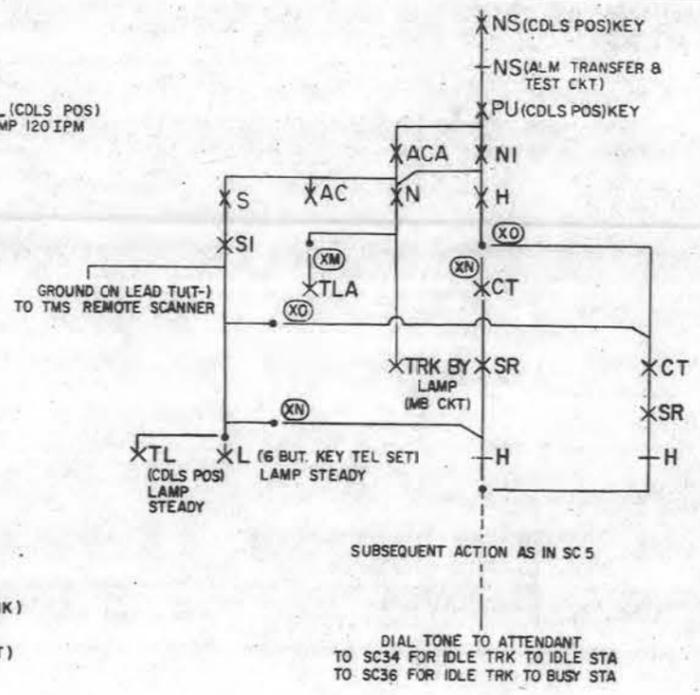


MKR AND REG RELEASE
 TIE TRK ANSWERS AND ATTENDANT ANNOUNCES
 INCOMING CENTRAL OFFICE TRUNK

SC 31
 DIAL REPEATING DIAL TRANSMITTING OR RING DOWN
 TIE TRUNK ORIGINATES CENTRAL OFFICE CALL
 (ACTION SAME AS IN SC 22)



SC 33
 FLEXIBLE NIGHT CONNECTION



SD-65752-01-E5

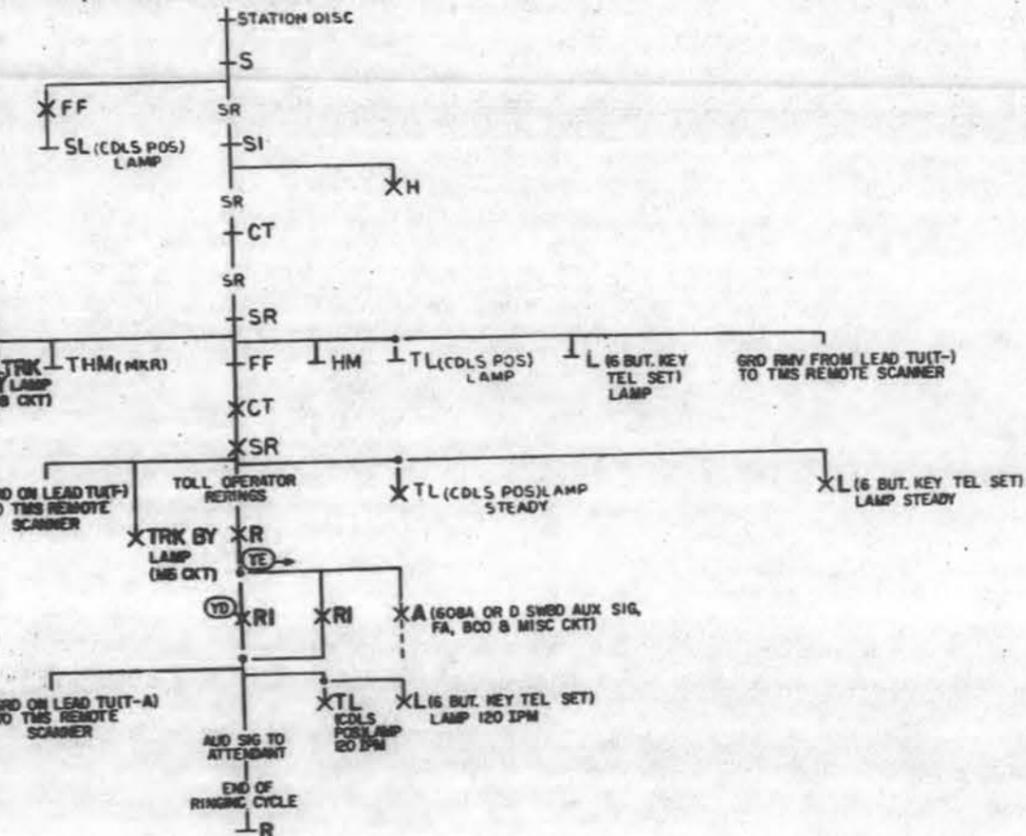
TWO WAY TRUNK CIRCUIT TO CENTRAL OFFICE (2) SD-65752-01-E.5
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1	EL
7B	WAT
8D	EE
16B	VC
	CR
	PD
17D	DHC
	AM
	WGR
19D	SAK
	EPH
	CEP
21B	SAK
	SPH
	CK
22D	PJ
	RFH
	EM
28B	PUS
	DJ
29B	PUS
	KU
32B	
33D	

33

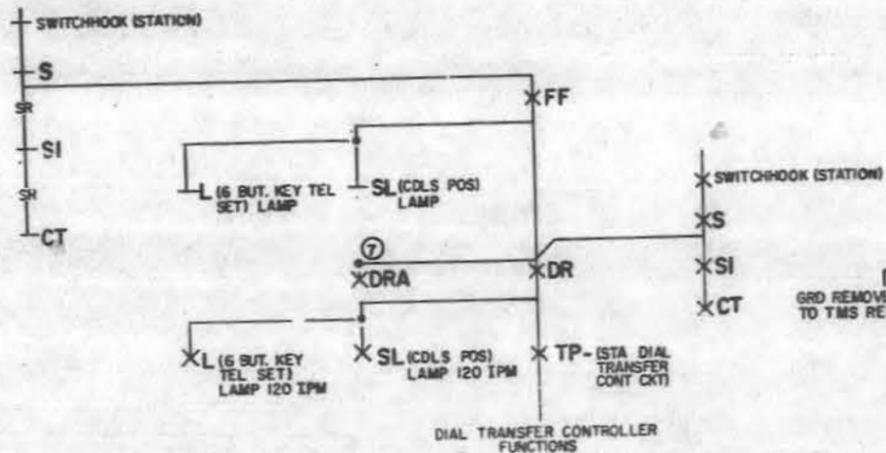
SC 38

TOLL OPERATOR RERINGS ON TOLL DENIED OR RESTRICTED STATION CONNECTED BY THE ATTENDANT (PREVIOUS ACTION AS IN SC 21)



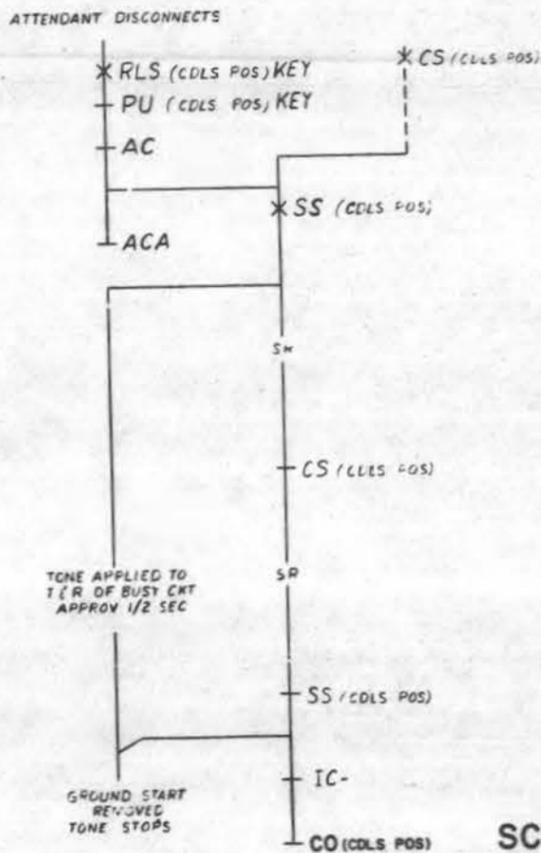
SC 39

STATION DIAL TRANSFER (PREVIOUS ACTION SHOWN IN SC 8)



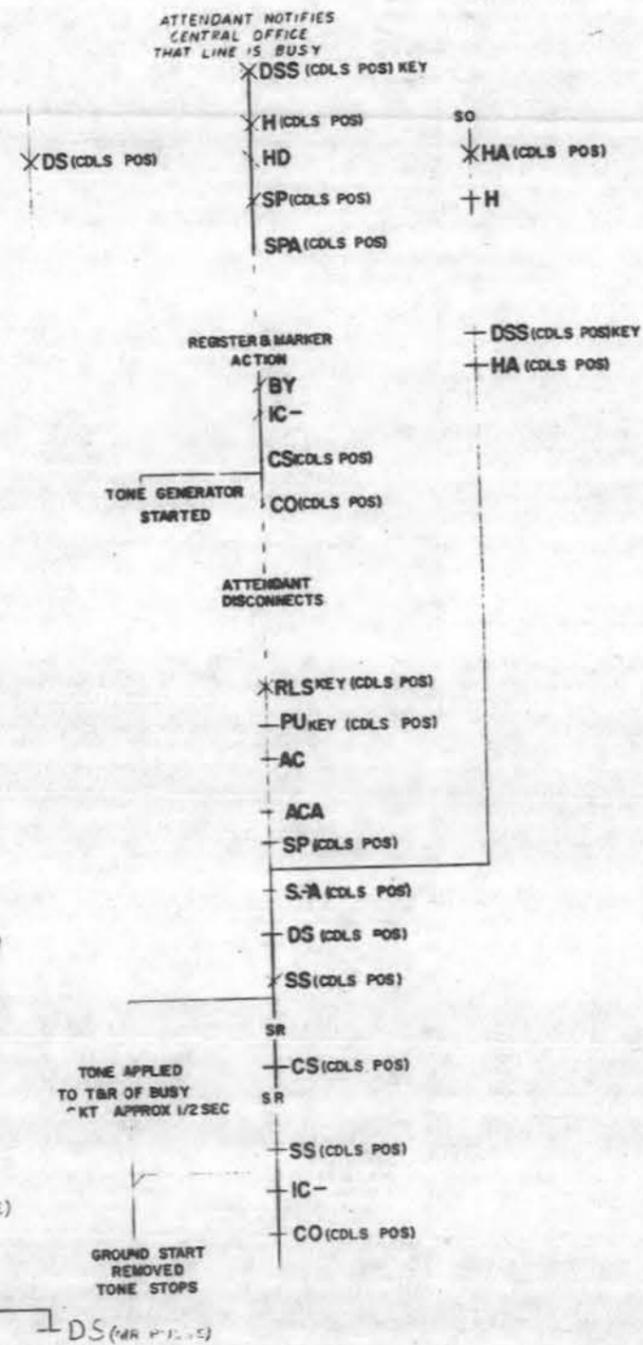
SC 40

INDICATION OF CAMPED-ON CALL TO BUSY LINE (PREVIOUS ACTION SHOWN IN SC 12)



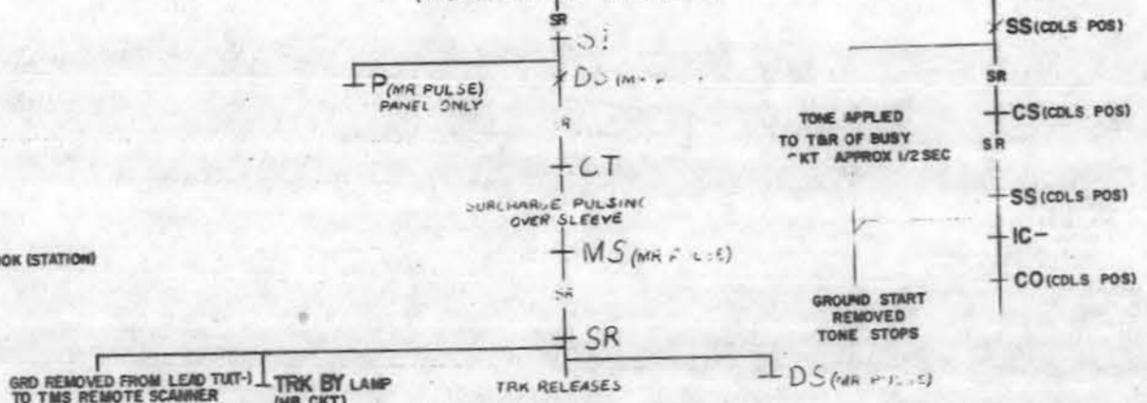
SC 41

INDICATION OF CAMPED-ON CALL TO BUSY LINE USING DSS (PREVIOUS ACTION SHOWN IN SC 2)



SC 42

MESSAGE SYSTEM SURCHANGING (PREVIOUS ACTION SHOWN IN SC 22)



SD-65752-01-E7

TWO WAY TRUNK CIRCUIT TO CENTRAL OFFICE

SD-65752-01-E7

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SC 43

FLEXIBLE NIGHT CONNECTION
INCOMING CALL TO NIGHT CONNECTED TRUNK

CENT. OFF. TRK SEIZED AT CENT. OFF.
(SILENT INTERVAL)

XH

RNG SIGNAL
FROM CENT. OFF.

XR

XRS

PBX RNG SIGNAL
RINGS STATION

*SL (CDLS POS)
LAMP

CENT. OFF. TRK SEIZED AT CENT. OFF.
(RINGING INTERVAL)

XR

PBX RNG SIGNAL
RINGS STATION

*SL (CDLS POS)
LAMP

STATION ANSWERS

DURING SILENT INTERVAL

XS

XSI

XCT

XSR

GROUND ON LEAD TUIT-)
TO TMS REMOTE SCANNER

*SL (CDLS POS)
LAMP STEADY

*XL (6 BUT. KEY
TEL SET)
LAMP STEADY

DURING RINGING INTERVAL

XRT

RS

RT

XS

XSI

XCT

XSR

GROUND ON LEAD TUIT-)
TO TMS REMOTE SCANNER

*SL (CDLS POS)
LAMP STEADY

*XL (6 BUT. KEY
TEL SET)
LAMP STEADY

STATION RELEASES

S

SR

SI

SR

CT

SR

SR

GROUND REMOVED FROM
LEAD TUIT-)
TO TMS
REMOTE SCANNER

TL (CDLS POS)
LAMP

L

(6 BUT. KEY
TEL SET)
LAMP

CENT. OFF. RELEASES

H

SD-65752-01-E8

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TWO WAY TRUNK CIRCUIT TO CENTRAL OFFICE		SD-65752-01-E8
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CIRCUIT REQUIREMENTS																	
APPARATUS				MECH REQ			CIRCUIT PREPARATION				TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQ				REMARKS
DESIG	CODE	OPT	FIG.	BSP FIG.	CONT PRES	ARM TRVL	BLOCK OR INSULATE	TEST CLIP DATA		TEST WDG			TEST FOR	AFTER SOAK MA	TEST MA	READJ MA	
							CONN BAT.	CONN GRD									
RELAYS																	
AC	AF139		1	256				U(AC)	GRD		0	FS	8.3	7.9			
								U(AC)	GRD		H	FS	4.8	4.5			
ACA	AJ202		1	500			10(MM)	L(ACA)	U(ACA)	B/G	0		42.5	40.5			
BY	AG33	P	1	305B				U(BY)	GRD		0	FS	14.7	14			
											H	FS	2.5	2.3			
											R	FS	1.3	1.5			
BY	F51895	Q	1	305B				U(BY)	GRD		0	FS	14.7	14			
											H	FS	2.5	2.3			
											R	FS	1.3	1.5			
CT	AG16		1	233B				U(CT)	GRD		0	FS	17.5	16.5			
DR	1/2AK8		1	204				1U(DR)	GRD		0		9.2	8.7	MOUNTED WITH (R1)		
DRA	MA6C		7	100				U(DRA)	GRD		0		11.6	11			
FF	AJ15		1	249				U(FF)	GRD		0		42.5	40.5			
H	S534		1			SPL	2(S1)	RB1(H)	2RT(H)	B/G	2	P	0	FS	3.3	3.1	
							2(S1)	RB1(H)	2RT(H)	B/G		P	NO	FS	2.4	2.6	
							2(S1)	RB1(H)	2RT(H)	B/G		P	R	FS	2.2	2.3	
							(S1)NO	1LT(H)	2RT(H)	B/G		P/S	0		1.7		
							(S1)NO	1LT(H)	2RT(H)	B/G		P/S	R		1		
HD	AJ15		1	249				U(FF)	GRD		0		42.5	40.5			
HM	AF100		1	252			6(MM)	U(HM)	GRD		0		41.5	39.5			
IC 0,2,4, 6	1/2AK4		6	202				1L(IC-)	GRD	3	0		11.9	11.3	MOUNTED WITH (IC1,3,5,7,9)		
IC 1,3,5, 7,9	1/2AK4		6	202				1U(IC-)	GRD	3	0		11.9	11.3	MOUNTED WITH (IC0,2,4,6,8)		
MC	AJ56		1	413				U(MC)	GRD		0		57.5	54.5			

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CIRCUIT REQUIREMENTS																	
APPARATUS				MECH REQ			CIRCUIT PREPARATION				TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQ				REMARKS
DESIG	CODE	OPT	FIG.	BSP FIG.	CONT PRES	ARM TRVL	BLOCK OR INSULATE	TEST CLIP DATA		TEST WDG			TEST FOR	AFTER SOAK MA	TEST MA	READJ MA	
							CONN BAT.	CONN GRD									
N	1/2AK7		1	203				1L(N)	GRD		0		27	25.5	MOUNTED WITH (N1)		
N	AJ3	X0	1	226				U(M)	GRD		0		18	17			
N1	1/2AK7		1	203				1U(N1)	GRD		0		27	25.5	MOUNTED WITH (N)		
N1	AJ3	X0	1	226				U(N1)	GRD		0		18	17			
P	AJ28		1	257				2U(P)	GRD		S	0	12.4	11.8			
								2U(P)	GRD		S	R	1.9	2	WDG ALONE & WDG WITH		
							(AC)0	1L(P)	B/G		P	0	23.5	22	VARIATOR SHUNT		
							(AC)0	1L(P)	B/G		P	NO	11.1	11.6			
R	AJ48		1	3			2B(S1)	2U(P)	2L(P)	B/G	1	S	0	5.4	5.1	WDG ALONE & WDG WITH	
															VARIATOR SHUNT		
R1	1/2AK8		1	204				1L(P1)	GRD		0		17	16	MOUNTED WITH (DR)		
RS	AJ3	Z6	1	226				5P(RT)	U(P5)	GRD		0	18	17			
RS	AJ15	7H	1	249				5B(RT)	U(R5)	GRD		0	42.5	40.5			
RS	AJ53	X8	1	249B				5B(RT)	1U(R5)	GRD	P	0	FS	65	62		
								5B(RT)	1U(R5)	GRD	P	H	FS	12	11.4		
								5B(RT)	1U(R5)	GRD	P	R	FS	5.9	6.6		
								5B(RT)	2L(R5)	1U(R5)	B/G	S	0	FS	85	80	
RT	AJ58		1	308				7(MC)	1L(RT)	1U(RT)	B/G	P	0	28	26.5	EM CONTACTS NEED ONLY MAKE	
								7(MC)	1L(RT)	1U(RT)	B/G	P	0	29.5	28		
								7(MC)	1L(RT)	1U(RT)	B/G	P	NO	20	21.5		
								(AC)0	2U(RT)	GRD	S	0	19				

- TEST NOTES:
1. ARMATURE BACK TENSION TEST MIN 15 GRAMS READJ MIN 20 GRAMS.
 2. ARM. TRVL 40±1; ARM. BASE GAP SPL 30±2.
 3. CONNECT TEST CLIP TO RELAY BEING TESTED.

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TWO WAY TRUNK CIRCUIT TO CENTRAL OFFICE) SD-65752-01-F1

BELL TELEPHONE LABORATORIES INCORPORATED 65

