

APPARATUS INDEX

DESIG	LOCATION		
	FS	APP FIG	EOPT
DIODES			
DLT	2C5	1	

KEYS			
ATND TRKO-2	2H6	1	
BT	1E8	1	
CO TRKO-9	3H5	1	
DLTRO,1	1F4	1	
JCTRO-5	3E1	1	
LINE 80-89	2D6	1	
LINK 02-09	2B4	1	
LINK 12-19	2B4	1	
PWR	1B1,1C0	1	
REGO,1	3D7	1	

DESIG	LOCATION		
	FS	APP FIG	EOPT
LAMPS			
ATND TRKO-2	2G9	1	
BT	1D8	1	
DLTRO,1	1F4	1	
JCTRO-5 ORIG	3C4	1	
JCTRO-5 TERM	3E2	1	
LINE 80-89	2D8	1	
LINK 02-09	2C4	1	
LINK 12-19	2C4	1	
PWR-48	1B1	1	
PWR-96	1D1	1	
REGO,1	3D6	1	
TRKO-9 BY	3H5	1	
TRKO-9 BY INC	3F2	1	

RESISTORS			
AQ-2	2G9	1	
ATO-2	2G9	1	
B	1D9	1	
BT	1E8	1	
DO,1	1F4	1	
DAO,1	1G4	1	
JAO-5	3E2	1	
JBO-5	3C4	1	
JCO-5	3E2	1	
JDO-5	3C3	1	
LBO-89	2D7	1	
LABO-89	2D8	1	
LO2-09	2C4	1	
LI2-19	2C4	1	
LA	2B5	1	
P	1C1	1	
RO,1	3D6	1	
TAQ-9	3G2	1	
TBC-9	3H4	1	
TCO-9	3F2	1	
TDO-9	3H5	1	

LEAD INDEX

DESIG	LOCATION	
	FS	CAD
ATT. TRUNK CKT.		
BDO-2	2F9	
TNO-2	2H7	

C.O. TRUNK CKT.		
ITQ-9	3G5	
ITBO-9	3E3	
ITTO-9	3G6	

JUNCTOR CKT.		
OHMO-5	3B3	

DESIG	LOCATION	
	FS	CAD
LINE, LINK & MARKER CKT.		
HMO7	1C8	
L3 BAT	1B1	
LB80-89	2C7	
LDBO-89	2C6	
S02-09	2B4	
S12-19	2B4	
THMO-5	3D1	

REGISTER CKT.		
MBO,1	3D7	
RHMO,1	3D6	

STA DIAL TR TRUNK CKT.		
HMO,E	1E5	
MBTO,E	1E4	

OPTION INDEX

APP OR WIRING	LOCATION
Z	APP FIG.1, 2C5
Y	APP FIG.1, 2C5
X	APP FIG.1, 1B1
W	APP FIG.1, 1B1

DRAWING ISSUE	
1.	CON PLS
2D	TEF
	REP
4A	WR PLS
	LDJ
5D	RFN PLS
	LDJ

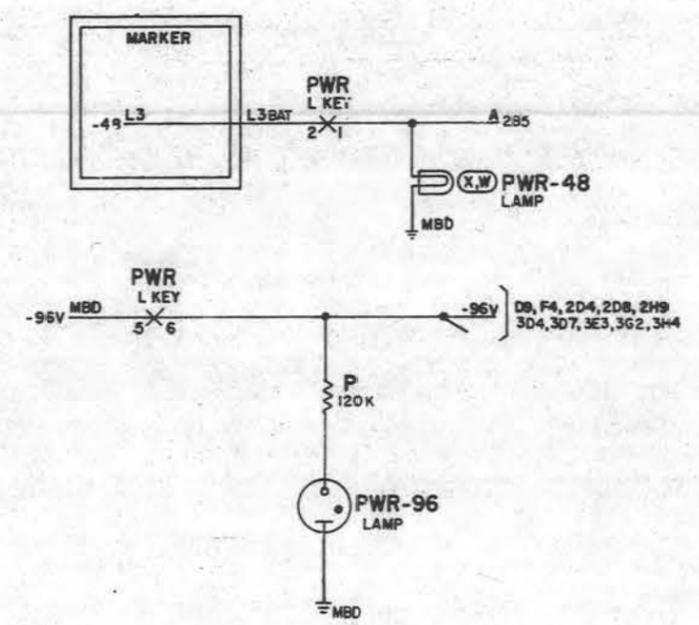
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MAKE BUSY & BUSY DISPLAY CIRCUIT	SD-5E029-01-A2
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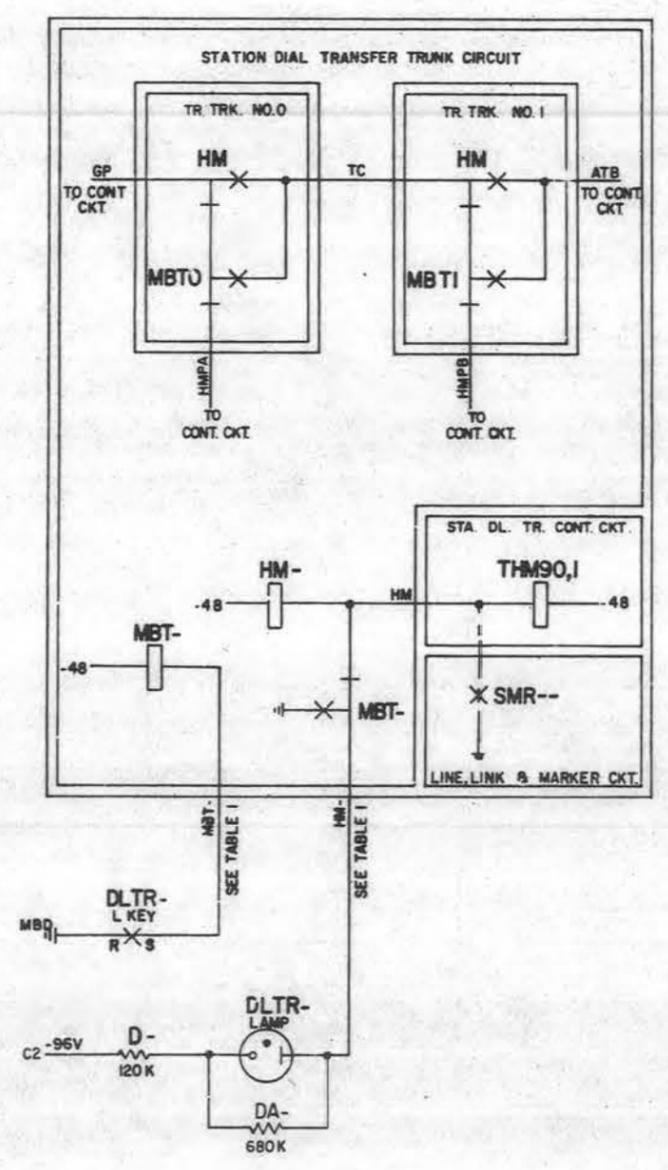
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ISSUE	
1	BCM P/S R/P
2D	TEF P/S R/P
3A	WR P/S L/D
4A	WR P/S L/D
5D	RR P/S L/D

FS 1 POWER KEYS AND LAMPS



FS 2 STATION DIAL TRANSFER TRUNKS



FS 3 BUSY TONE TRUNK

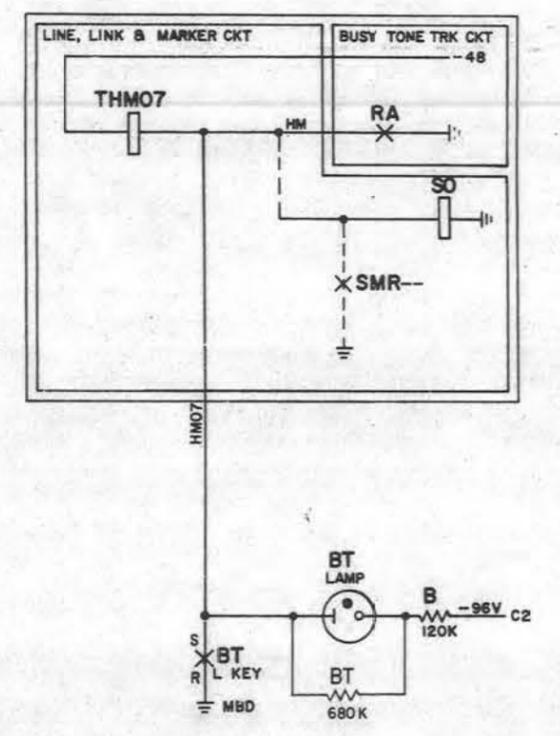


TABLE I

TRANSFER TRUNK	ASSOC. LEADS
0	HME MBTE
1	HMC MBTO

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DRAWING
ISSUE
1. BCM
20 RHF
3A WR
50 RUS
LDJ

HW.

A

B

C

D

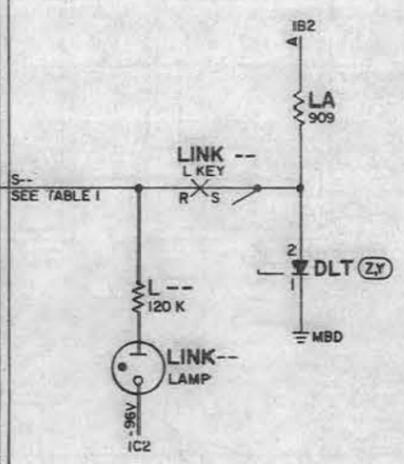
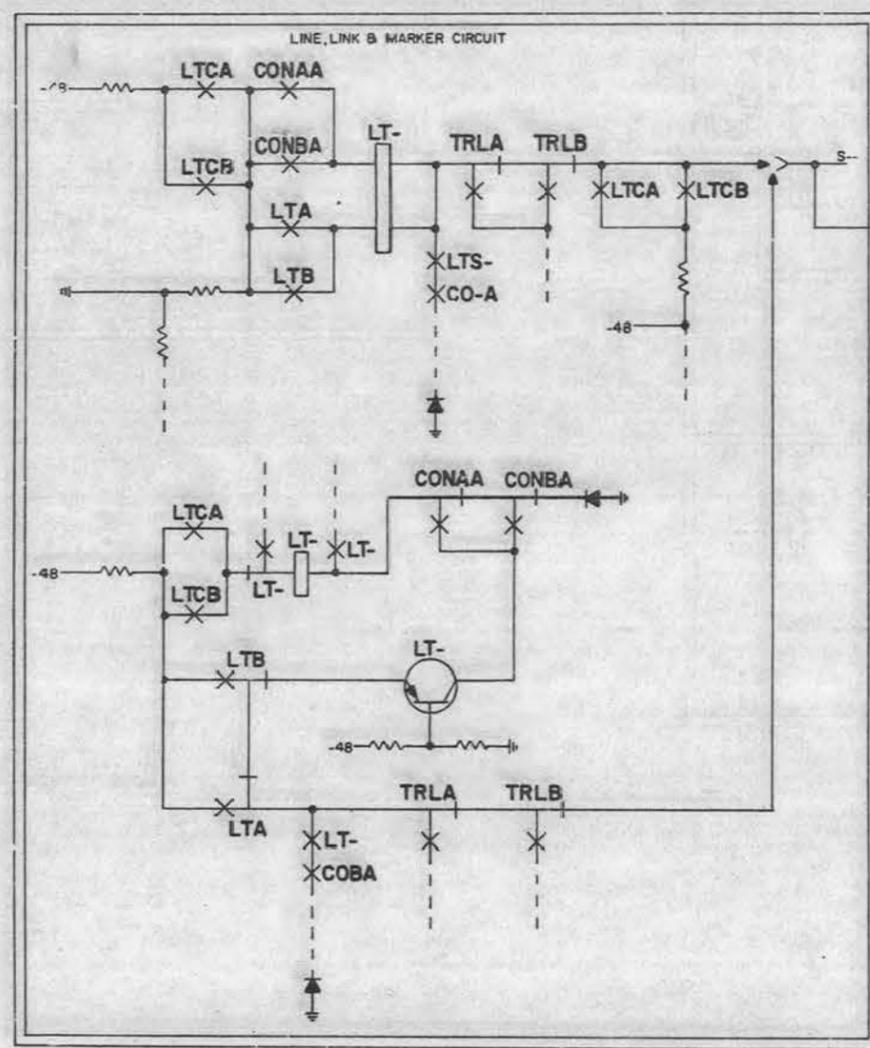
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F

G

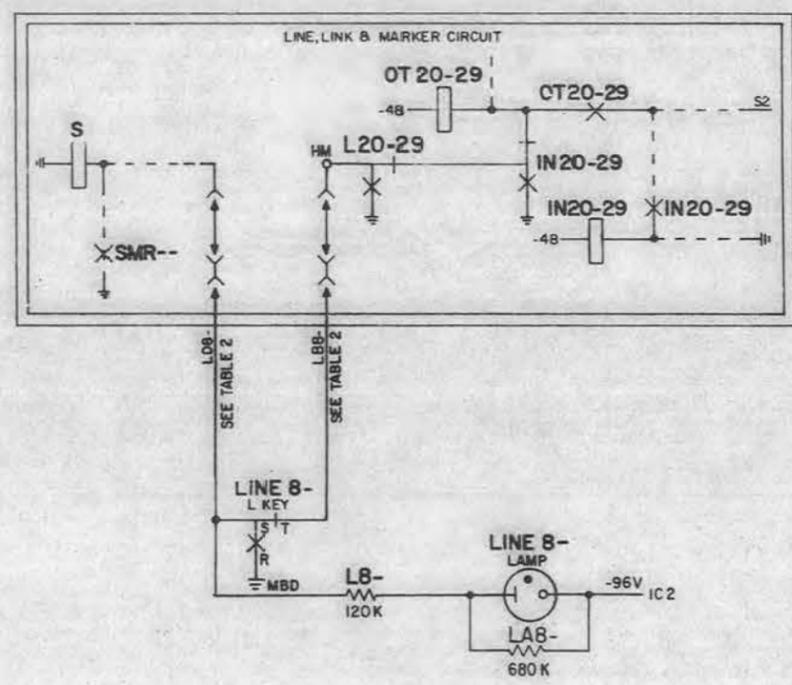
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FS 4 LINKS



FS 5

UNIVERSAL LINES
ASSIGNED TO TWO-WAY TIE TRUNKS



FS 6

ATTENDANT TRUNKS

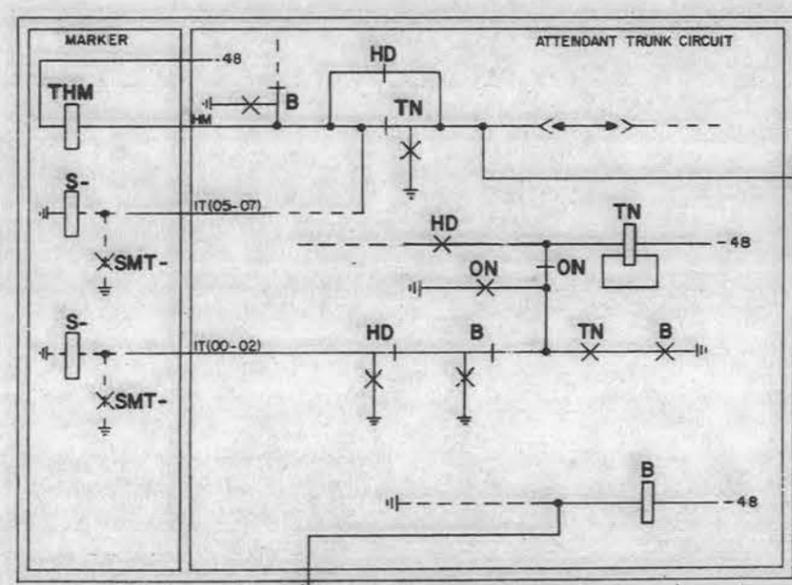


TABLE 1

LINK	ASSOC S-LEAD
02	S02
12	S12
03	S03
13	S13
04	S04
14	S14
05	S05
15	S15
06	S06
16	S16
07	S07
17	S17
08	S08
18	S18
09	S09
19	S19

TABLE 2

LINE	ASSOC LEADS
80	LB80 LD80
81	LB81 LD81
82	LB82 LD82
83	LB83 LD83
84	LB84 LD84
85	LB85 LD85
86	LB86 LD86
87	LB87 LD87
88	LB88 LD88
89	LB89 LD89

TABLE 3

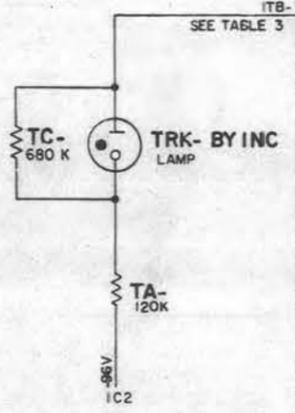
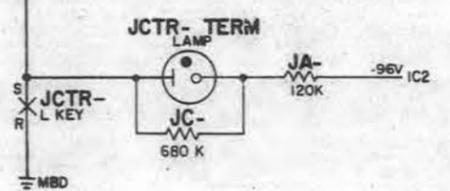
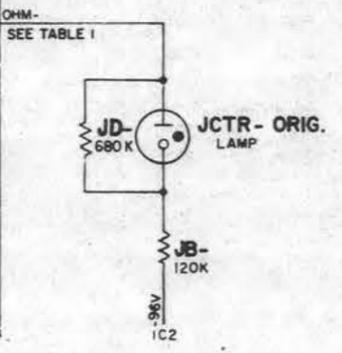
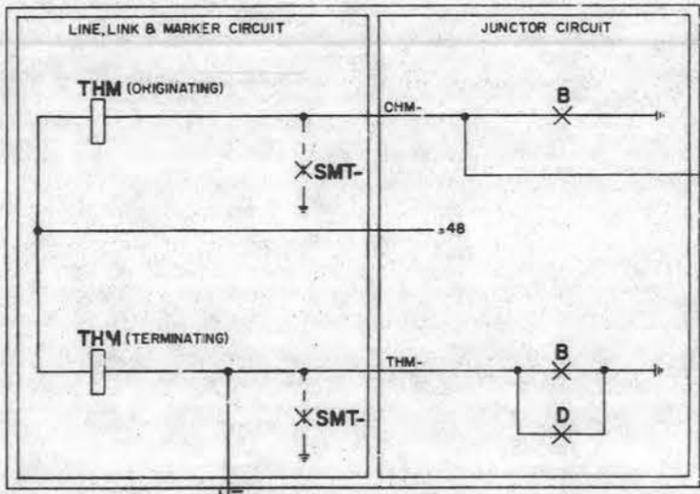
ATTENDANT TRUNK	ASSOC LEAD
0	BD0 TN0
1	BD1 TN1
2	BD2 TN2

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FS 7
 JUNCTORS



FS 8
 DIAL PULSE REGISTERS

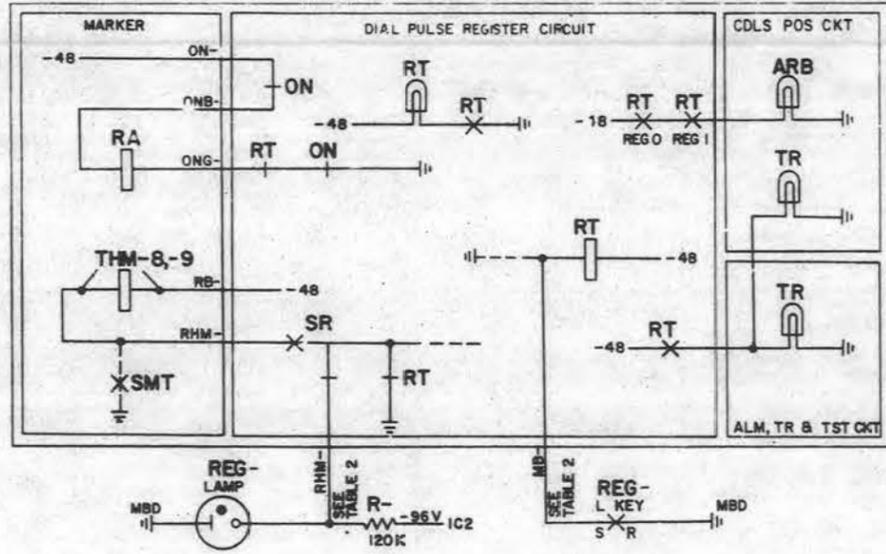


TABLE 1

JUNCTOR	ASSOC LEADS
0	OHM0 THM0
1	OHM1 THM1
2	OHM2 THM2
3	OHM3 THM3
4	OHM4 THM4
5	OHM5 THM5

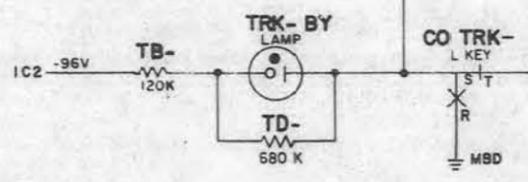
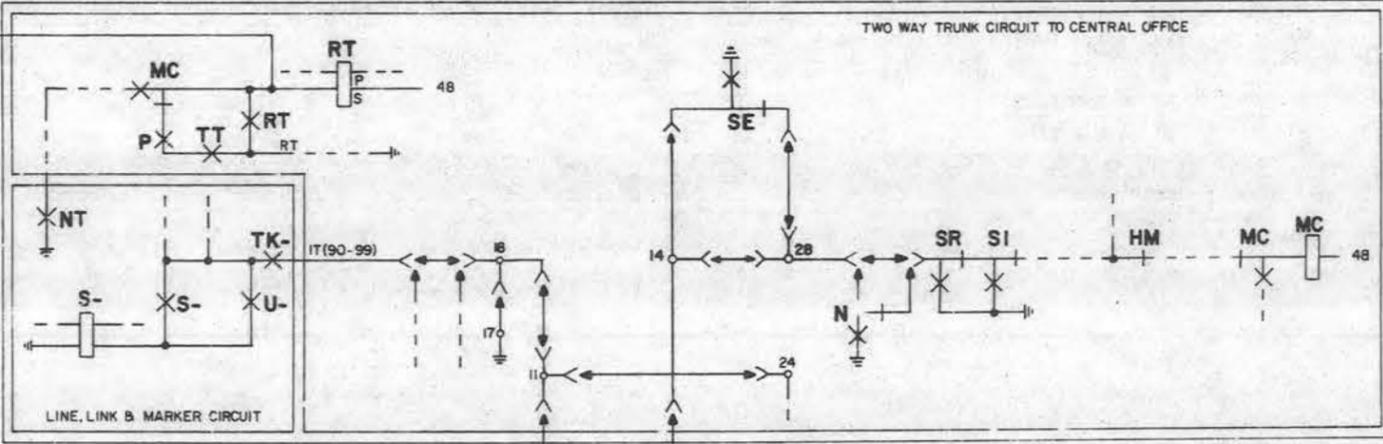
TABLE 2

REGISTER	ASSOC LEADS
0	MBO RHMO
1	MBI RHMI

TABLE 3

C.O. TRUNK	ASSOC LEADS
0	IT0 ITB0 ITT0
1	IT1 ITB1 ITT1
2	IT2 ITB2 ITT2
3	IT3 ITB3 ITT3
4	IT4 ITB4 ITT4
5	IT5 ITB5 ITT5
6	IT6 ITB6 ITT6
7	IT7 ITB7 ITT7
8	IT8 ITB8 ITT8
9	IT9 ITB9 ITT9

FS 9
 CENTRAL OFFICE TRUNKS



SD-5E029-01-B3

APP. FIG. 1

1	BCH	HW.
2D	TEF	
3A	WR	
4A	WR	
50	RFN	

DESIG	LOC	CODE
A & M (Z) DLT	2C5	425AC
(Y) DLT	2C5	485AC

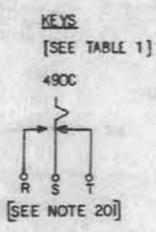
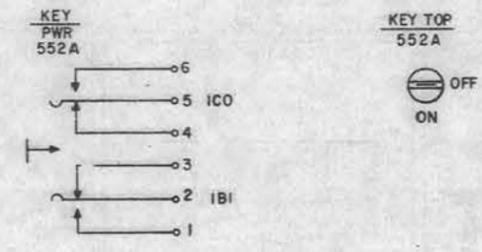


TABLE 1

KEYS	LOC	CODE
[3] ATND TRKO-2	2H6	490C
BT	1E8	490C
[10] CD TRKO-9	3H5	490C
[2] DLTR,1	1F4	490C
[6] JCTRO-5	3E1	490C
[10] LINE 80-89	2D6	490C
[16] [LINK 02-09] [LINK 12-19]	2B4	490C
[2] REGO,1	3D7	490C



LAMPS	LOC	CODE
[3] ATND TRKO-2	2G9	G.E. NE-3 OR EQUIV.
BT	1D8	G.E. NE-3 OR EQUIV.
[2] DLTR,1	1F4	G.E. NE-3 OR EQUIV.
[6] JCTRO-5 ORIG	3C4	G.E. NE-3 OR EQUIV.
[6] JCTRO-5 TERM	3E2	G.E. NE-3 OR EQUIV.
[10] LINE 80-89	2D8	G.E. NE-3 OR EQUIV.
[16] [LINK 02-09] [LINK 12-19]	2C4	G.E. NE-3 OR EQUIV.
MD (X) PWR-48	1B1	MI
(W) PWR-48	1B1	2Y
PWR-96	1D1	G.E. NE-3 OR EQUIV.
[2] REGO,1	3D6	G.E. NE-3 OR EQUIV.
[10] TRKO-9 RY	3H5	G.E. NE-3 OR EQUIV.
[10] TRKO-9 BY INC	3F2	G.E. NE-3 OR EQUIV.

RESISTORS	LOC	CODE
[3] AO-2	2G9	KS-13490, LI, 120K
[3] ATO-2	2G9	KS-13490, LI, 680K
B	1D9	KS-13490, LI, 120K
BT	1E8	KS-13490, LI, 680K
[2] DAO,1	1G4	KS-13490, LI, 680K
[2] DO,1	1F4	KS-13490, LI, 120K
[6] JAO-5	3E2	KS-13490, LI, 120K
[6] JBO-5	3C4	KS-13490, LI, 120K
[6] JCC-5	3E2	KS-13490, LI, 680K
[6] JDO-5	3C3	KS-13490, LI, 680K
[10] LBO-89	2D7	KS-13490, LI, 120K
[10] LABO-89	2D8	KS-13490, LI, 680K
[16] [LO2-09] [LI2-19]	2C4	KS-13490, LI, 120K
LA	2B5	KS-14603, LIA, 909
P	1C1	KS-13490, LI, 120K
[2] RO,1	3D6	KS-13490, LI, 120K
[10] TAO-9	3G2	KS-13490, LI, 120K
[10] TBO-9	3H4	KS-13490, LI, 120K
[10] TCO-9	3F2	KS-13490, LI, 680K
[10] TDO-9	3H5	KS-13490, LI, 680K

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MAKE BUSY & BUSY DISPLAY CIRCUIT		(2)	SD-5E029-01-C1
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CIRCUIT NOTES:

DESIG.	FUSE AMP	POTENTIAL	ONE PER
MBD	.180	-96V	PBX
MBD		GROUND	PBX
<u>BATTERY SYMBOL</u>		<u>VOLTAGE RANGE</u>	
-48V		45-52 V	
-96V		93-108 V	

104. RECORD OF APP FIG., WIRING, AND APPARATUS CHANGES.

CHANGED ON ISSUE	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN.	SEE NOTE	USE IN CIRCUIT		
				STD	A & M	MD
5D	YORZ	Z		Y	Z	
	XORW	X		W		X

EQUIPMENT NOTES:
 201. THE NORMAL POSITION (OFF POSITION) OF 490C KEYS FOR THIS APPLICATION IS AS SHOWN IN APP. FIG.1 WITH THE PLUNGER PUSHED IN.

102.

FEATURE OR OPTION	PROVIDE		
	APP FIG.	APP OR WIR	QUANTITY
MAKE BUSY AND BUSY DISPLAY CKT	I		I PER PBX

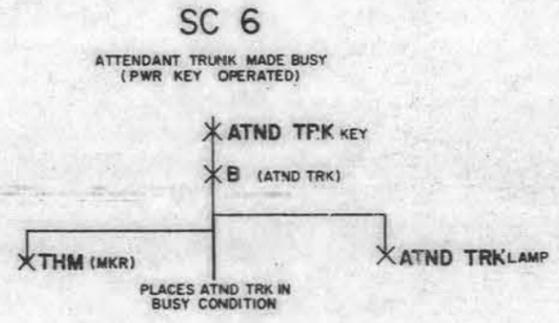
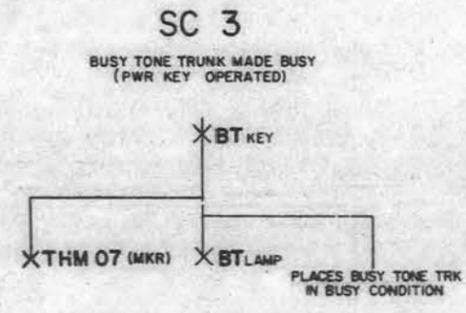
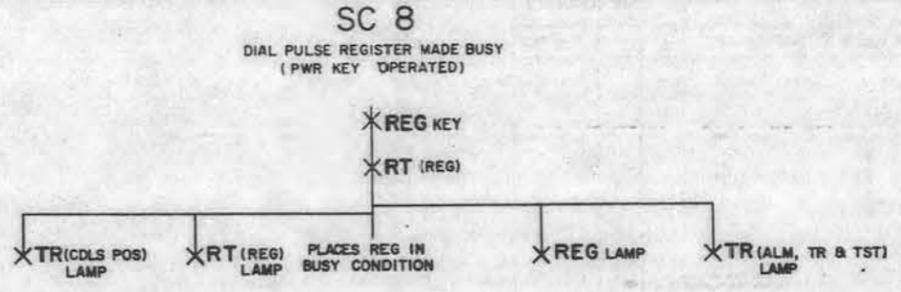
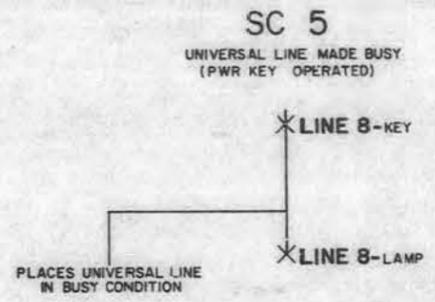
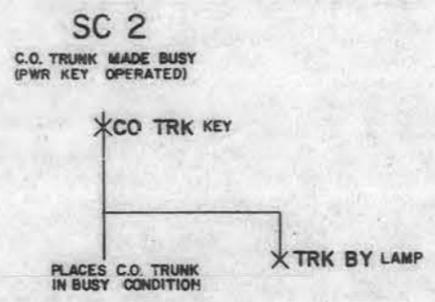
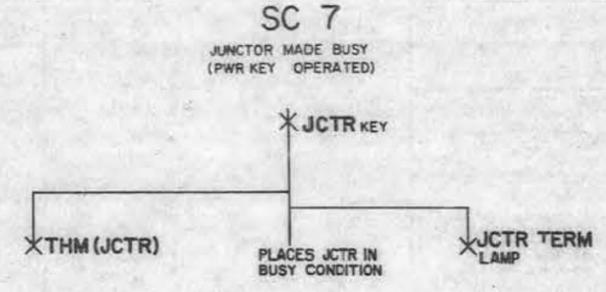
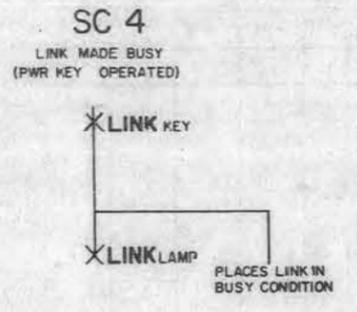
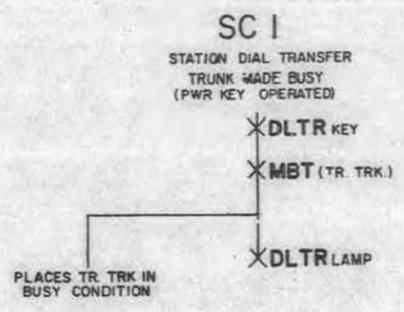
103.

NETWORK VALUES			
NETWORKS		RESISTANCE	CAPACITANCE
NO	CODE	IN OHMS	IN UF

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(2)		
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DRAWING	HW
ISSUE	
BCV	
FRF	
4A	WR
	RJS
	LDJ



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MAKE BUSY & BUSY DISPLAY CIRCUIT

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SD-5E029-01-EI

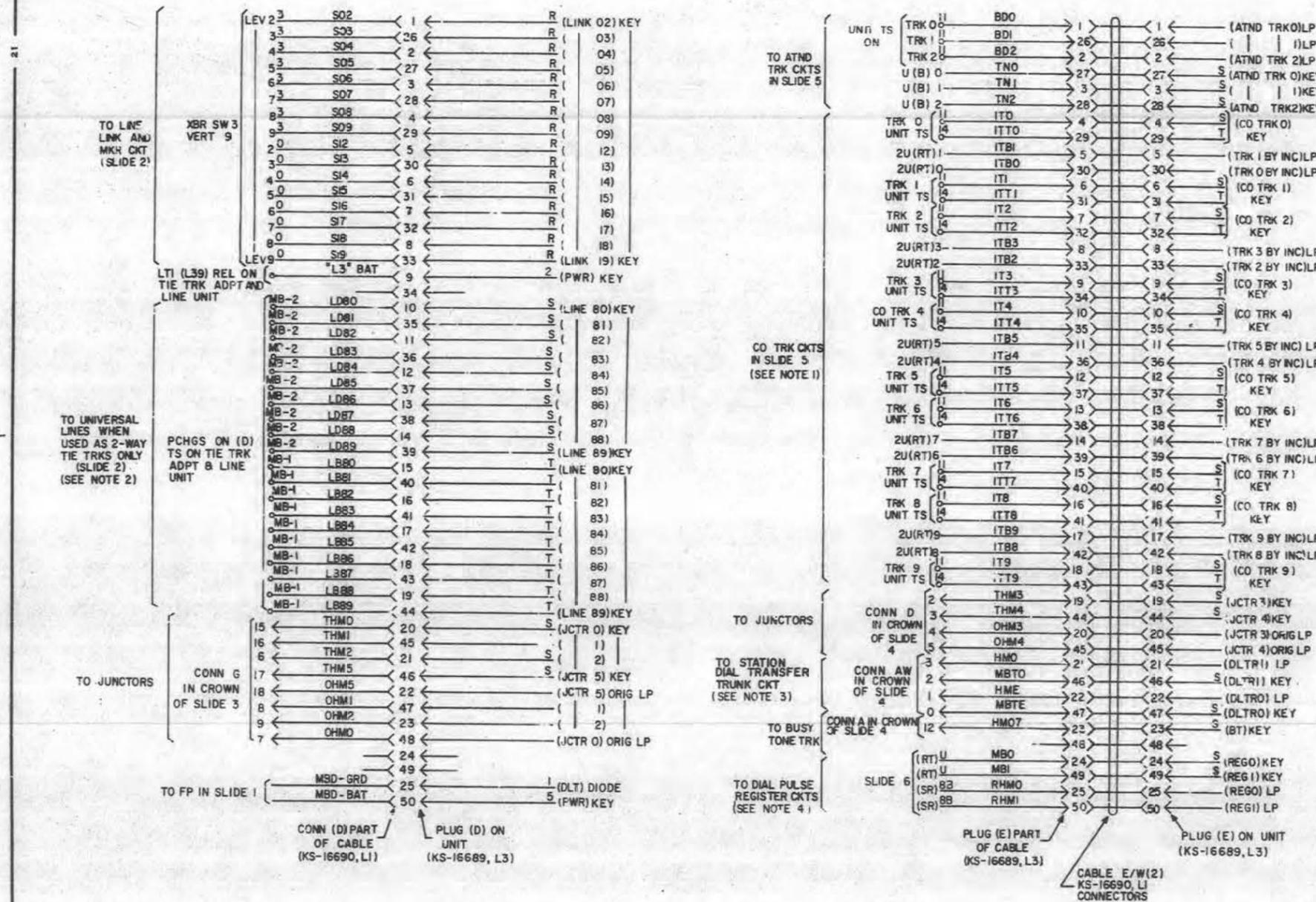
CAD I (A & M ONLY)

SHEET NOTES:

1. CHANGE STRAPS AT THE CO TRK TS AS SHOWN IN CAD 6 OF SD-65746-01, ISS 36. CHANGE CONNECTIONS TO THE CO TRK TS AS SHOWN IN THE FOLLOWING TABLE:
NOTE: ON TRUNKS PRIOR TO ISSUE 16 TABLE DOES NOT APPLY.

TRK NO	DISCONNECT LEAD	RECONNECT LEAD	COLOR	LEAD TERMINATION *
ALL	14 CO TRK TS	28 CO TRK TS		
0	18 CO TRK TS	14 CO TRK TS	BL	0 (AG5)
1	18 CO TRK TS	14 CO TRK TS	D	10 (SE1)
2	18 CO TRK TS	14 CO TRK TS	G	3 (SE2)
6	18 CO TRK TS	14 CO TRK TS	R	10 (SE5)
7	18 CO TRK TS	14 CO TRK TS	BK	3 (SE6)
8	18 CO TRK TS	14 CO TRK TS	R-G	10 (SE7)
9	17 (A) CONN (ON TRK PTCH UNIT)	14 CO TRK TS	FR	3 (SE3)
4	** 17 (A) CONN (ON TRK PTCH UNIT)	14 CO TRK TS	S	4 # 3 (SE4)
8	17 (A) CONN (ON TRK PTCH UNIT)	14 CO TRK TS	R-B-W	8 3 (SE8)
9	17 (A) CONN (ON TRK PTCH UNIT)	14 CO TRK TS	R-G-W	9 (AG5) 10 (SE9)

- * TERMINATION SHOWN ONLY FOR IDENTIFICATION: (AG5) - CONNECTOR IN CROWN OF SLIDE 5. (SE-) - RELAY ON MOUNTING PLATE AB OF SLIDE 5.
- ** TWO LEADS TERMINATED, ONLY ONE IS MOVED AS SHOWN.
- # APPLY WHEN TRKS 0, 1, 2, 5, 6, AND 7 ARE PER ISSUE 17-21
- ** APPLY WHEN TRKS 0, 1, 2, 5, 6, AND 7 ARE PER ISSUE 16
- NOTE: LEADS MOVED ON TRKS 3, 4, 8, AND 9 MUST BE DISCONNECTED AND TAGGED OR RECONNECTED TO PIN 17 OF CONNECTOR (A) ON THE TRK PTCH UNIT WHEN "PLUG" IN TRUNK UNIT IS REMOVED FROM PBX.
- 2. WHEN CONNECTION TO UNIVERSAL LINE CKTS IS REQUIRED, INSTALLER SHALL REMOVE CONNECTION BETWEEN TERMINAL HM OF (LINE) TS & TERMINAL HM-2 OF (D) TS. PROVIDE CONNECTIONS BETWEEN TERMINAL HM OF (LINE) TS & MB-1 OF (D) TS, AND STRAP BETWEEN TERMINALS MB-2 & HM-2 OF (D) TS FOR THOSE LINES USED AS TIE TRKS ONLY, PER INSTRUCTIONS FROM TEL CO ENGINEER.
- 3. WHEN THE PBX IS ARRANGED FOR STATION DIAL TRANSFER FEATURE AND CONNECTION FROM MAKE BUSY AND BUSY DISPLAY CIRCUIT IS DESIRED, CONNECT SPARE LEADS IN (90) PLUG ASSEMBLY PER H-912 -, PLUG 3 TERMINALS 16, 41, 17, & 42 TO KS-16344, L2 PLUG TERMINALS 0, 1, 2 & 3 RESPECTIVELY. KS-16344, L2 MUST BE PROVIDED AND LOCATED IN POSITION AW4. SEE SD-66909-01 ISSUE 3 AND SD-66921-01 ISSUE 3 FOR ADDITIONAL CHANGES.
- 4. DIAL PULSE REGISTER CIRCUIT MUST BE CHANGED PER SD-65742-01, ISSUE 27D.



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DRAWING ISSUE
1 P/MC
2 P/S
3 P/M
4 TEF
5 2D
6 P/S
7 RHP
8 WR
9 RUS
10 LDJ
11 4A
12 WR
13 RUS
14 LDJ
15 5D
16 P/S
17 LDJ

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MAKE BUSY & BUSY DISPLAY CIRCUIT

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SD-5E029-01-G1

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