

SHEET INDEX																									
FIG.	CONTENTS	SHEET NO.	ISSUE NO.																				OLD SHEET NO.		
			5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22					
	SHEET INDEX SUPPORTING INFORMATION	A1	5																						
	SHEET INDEX (CONT)	A2	5																						
1 2 3 6 8 16 F G H J K L M N P	CORD CKT UNIT J59013E ATTENDANTS TELEPHONE AND DIAL CKT UNIT J59013D AUXILIARY SIGNAL CKT BAT. DISTRIBUTING, GEN. & BAT. KEY & PILOT LAMP CKT DIAL AUXILIARY SIGNAL CKT FOR MULTIPLE TRUNKS	B1	5																					-0101	
4 5 7 10 11 22 A B C	AUXILIARY TELEPHONE CKT STATION LINE CKT TELEPHONE SET JACKS POSITION SPLITTING KEY CKT SERVICE OBSERVING COIL BAT. CUTOFF KEY TELEPHONE SET LINE RELAY	B2	5																					-0102 -0101 -0102 -0101 -0102	
9 12 13 14 15 D E	AUXILIARY RINGER HAND GENERATOR FUSE ALARM RELAY CKT FUSE ALARM CKT RINGING SUPPLY & BUZZER BUZZER FOOT SWITCH	B3	5																					-0102	
17 18 19 20 21	POSITION GROUPING CKT MODIFICATION OF POSITION NO. 1 POSITION GROUPING CKT MODIFICATION OF TELEPHONE CKT IN POSITION NO. 2 POSITION GROUPING KEY TEAMWORK ANSWER JACK TEAMWORK EXTENSION JACK	B4	5																					-0102	
PLEASE NOTE AND RETURN: BURNS, J. G. 3 DI INS, G. C. 5 JACK ON, G. C. 5 KLAISS, M. J. 5 PERRIN, A. B. 5																									

SHEET INDEX NOTES

- WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.
- 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.
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- SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER.
- THE LAST ISSUE NUMBER OF THE SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.
- "OLD SHEET NO." REFERS TO SHEET NO. PRIOR TO ISSUE: 5D

SUPPORTING INFORMATION

CATEGORY	NO.
EQUIPMENT INFO	ED-65843-01

SD- 65714-01	AT&TCO STANDARD
PBX SYSTEMS NO. 557A CORD, TELEPHONE, DIAL, AUXILIARY SIGNAL, STATION LINE, POSITION GROUPING, RINGING AND BATTERY CIRCUITS	SD-65714-01-AI
(CORD)(TEL)(AUX TEL)	16 SHEETS
BELL TELEPHONE LABORATORIES INCORPORATED	PRINTED IN U.S.A.

DWG 159	CD 159	DWG 159	CD 159	DWG 159	CD 159
1	1	2D	2D	3B	3
4D	4D				
DWG 159	CD 159	DATE 159	DRW 159	DATE 159	DRW 159
5D	5D	5-21-63	CRA	F	F

SHEET INDEX

FIG.	CONTENTS	SHEET NO.	ISSUE NO.																				OLD SHEET NO.
			5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
	SHEET INDEX	A1	5	6	7	8	9	10															
	SHEET INDEX (CONT)	A2	5	6	7	8	9	10															
1 2 3 6 8 16 F, G H, J K, L M, N P, S T	CORD CKT UNIT J59013E ATTENDANTS TELEPHONE AND DIAL CKT UNIT J59013D AUXILIARY SIGNAL CKT BAT. DISTRIBUTING, GEN. & BAT. KEY & PILOT LAMP CKT ROTARY DIAL AUXILIARY SIGNAL CKT FOR MULTIPLE TRUNKS	B1	5	6	7	8	8	10														-0101	
4 5 7 10 11 22 23 24 A B C 27	AUXILIARY TELEPHONE CKT STATION LINE CKT TELEPHONE SET JACKS POSITION SPLITTING KEY CKT SERVICE OBSERVING COIL BAT. CUTOFF KEY DIAL AUX CKT TOUCH-TONE DIAL TELEPHONE SET LINE RELAY POSITION SPLITTING KEY CKT	B2	5	6	7	7	7	10														-0102 -0101 -0102 -0101 -0102	
9 12 13 14 15 D E 25	AUXILIARY RINGER HAND GENERATOR FUSE ALARM RELAY CKT FUSE ALARM CKT RINGING SUPPLY & BUZZER BUZZER FOOT SWITCH ROTARY CARD DIALER	B3	5	5	7	8	8	8														-0102	
7 18 19 20 21	POSITION GROUPING CKT MODIFICATION OF POSITION NO. 1 POSITION GROUPING CKT MODIFICATION OF TELEPHONE CKT IN POSITION NO. 2 POSITION GROUPING KEY TEAMWORK ANSWER JACK TEAMWORK EXTENSION JACK	B4	5	5	5	5	5	5														-0102	
26 Q R V 28	TOUCH-TONE CARD DIALER ZIP TONE CKT FOR AUX. TEL CKT ZIP TONE WITH OR WITHOUT BUSY TEST ZIP TONE CKT POS TEL & DIAL TOUCH-TONE ENABLE RELAY	B5			7	8	8	10															

PLEASE NOTE:

FOREMAN 01.
FOREMAN 02.
FOREMAN 03.
FOREMAN 04.
FOREMAN 05.
FOREMAN 06.
FOREMAN 07.
FOREMAN 08.
FOREMAN 09.
FOREMAN 10.

FILE
DESTROY
SUPPORTING INFORMATION

SHEET INDEX NOTES

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CATEGORY	NO.
EQUIPMENT INFO	ED-65843-01

SD-65714-01		IJ05	
PBX SYSTEMS		AT&TCO STANDARD	
NO. 557A CORD, TELEPHONE, DIAL, AUXILIARY SIGNAL, STATION LINE, POSITION GROUPING, RINGING AND BATTERY CIRCUITS		SD-65714-01-AI	
(CORD)(TEL)(AUX TEL)		17 SHEETS	
BELL TELEPHONE LABORATORIES INCORPORATED		HND8K DWG	

DWG ISS	CD ISS	DWG ISS	CD ISS	DWG ISS	CD ISS
1	1	20	20	3B	3B
4D	4D				
DWG ISSUE	CD ISSUE	DATE ISSUED	DRAWN CRA	APPD PJH	
5D	5D	5-21-63		AFB PD	
6D	5D APP 1D	7-8-64	LRG MR	EFK FAR TEB	
7D	5D APP 2D	9-7-65	RBB JAY JRK	FAR FAR PEG	
8D	5D APP 3D	1-18-67	RBB RBB	CLD FAR ZEG	
9D	5D APP 4D	12-3-68	JDF RBB	JR FAR FAR	
10A	5D APP 5A	8-23-73	ZEN GE	ADP J.S.	

DRAWING ISSUE	
5D	CRA PD
6D	LRB TAB
7D	RRB J.P.C. P.E.S.
8D	PBB RBB PES
9D	MP RBB H.N.

DRAWING ISSUE	
5D	CRA PD
6D	LRB TAB
7D	RRB J.P.C. P.E.S.
8D	PBB RBB PES
9D	MP RBB H.N.

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DRAWING ISSUE	
5D	CRA PD

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JACKSON, G. C.

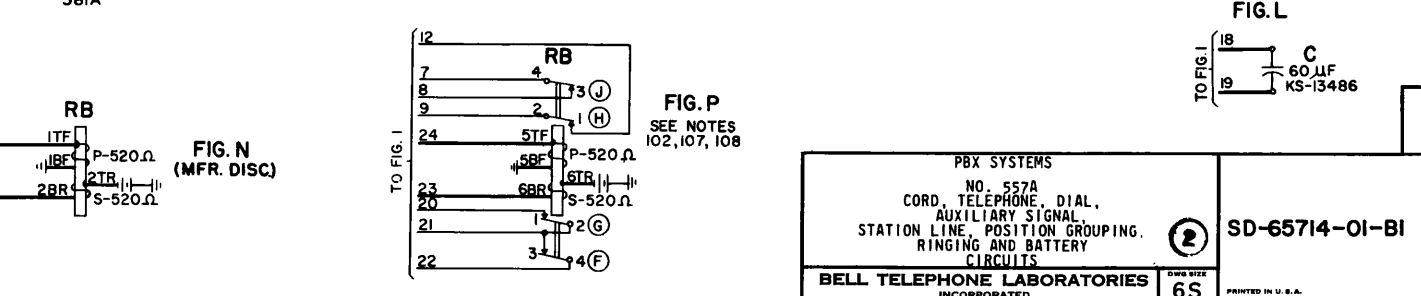
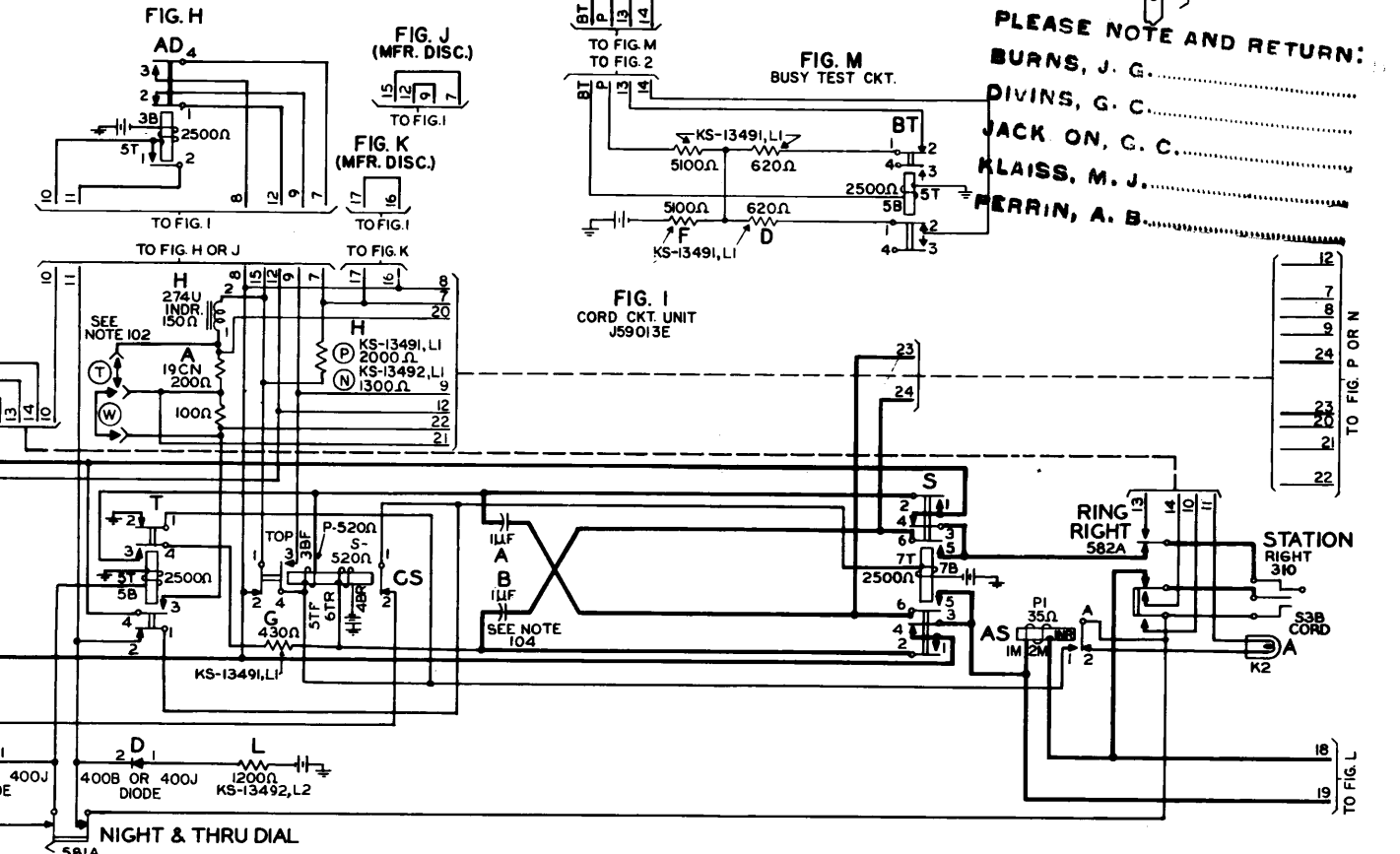
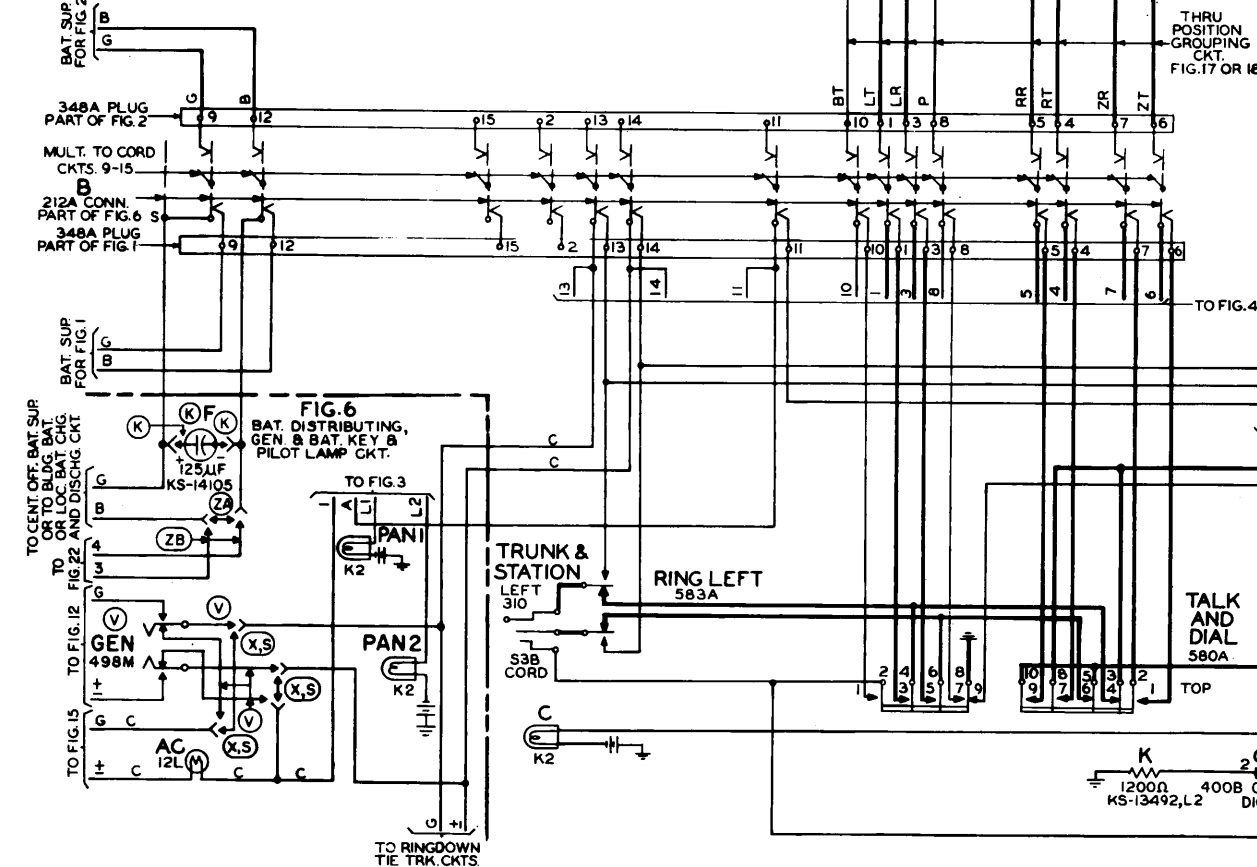
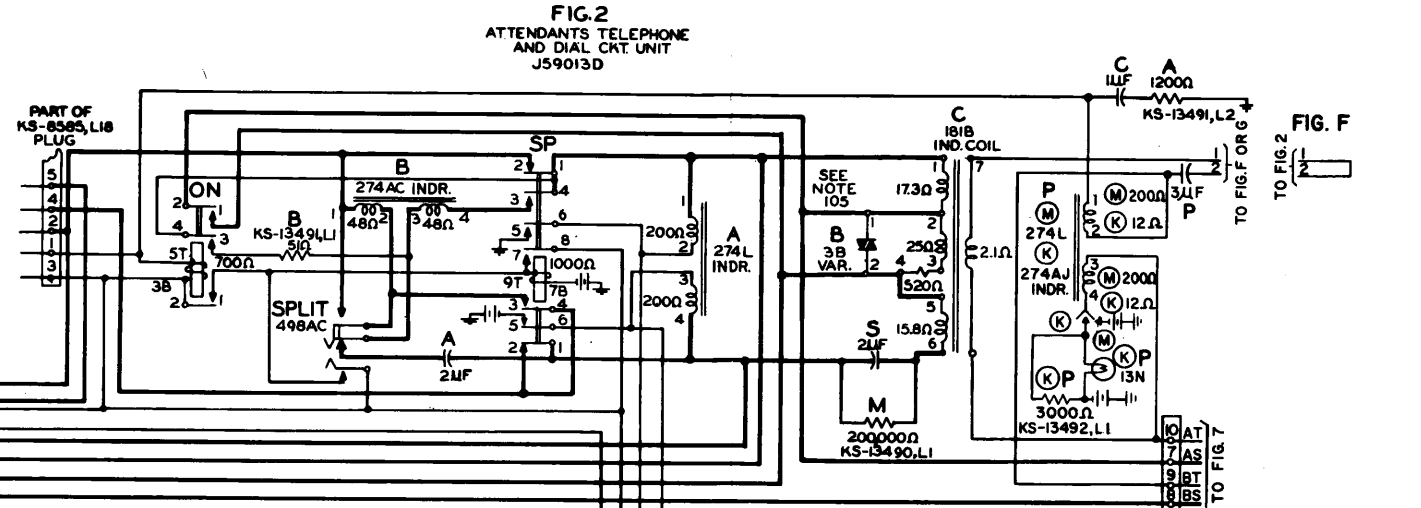
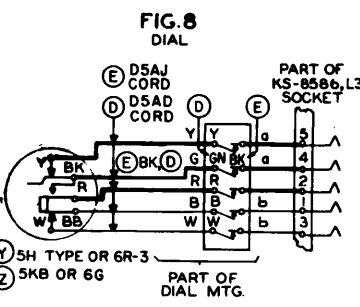
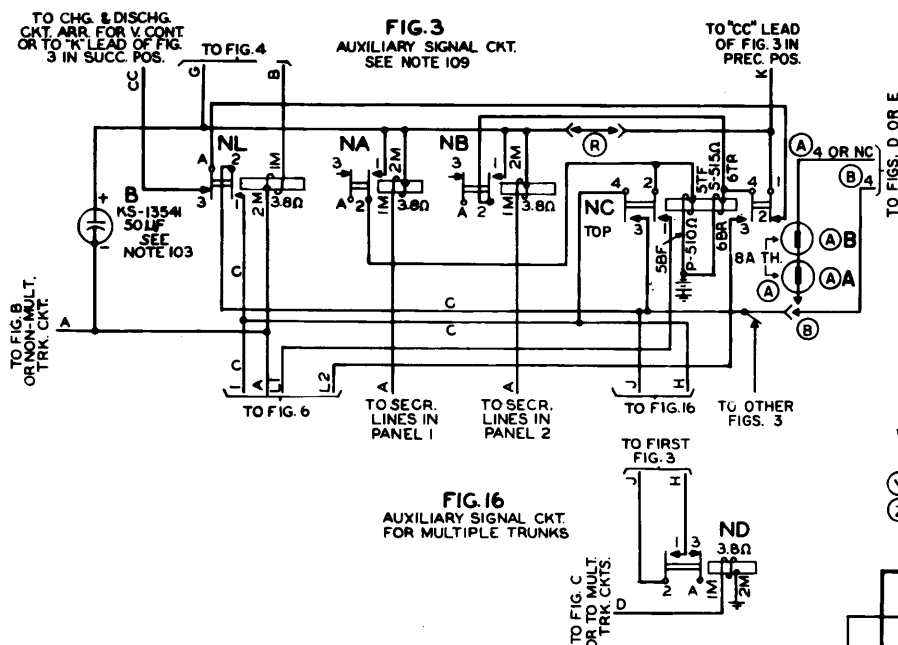
MAISS, M. J.

CARRIN, A. B.

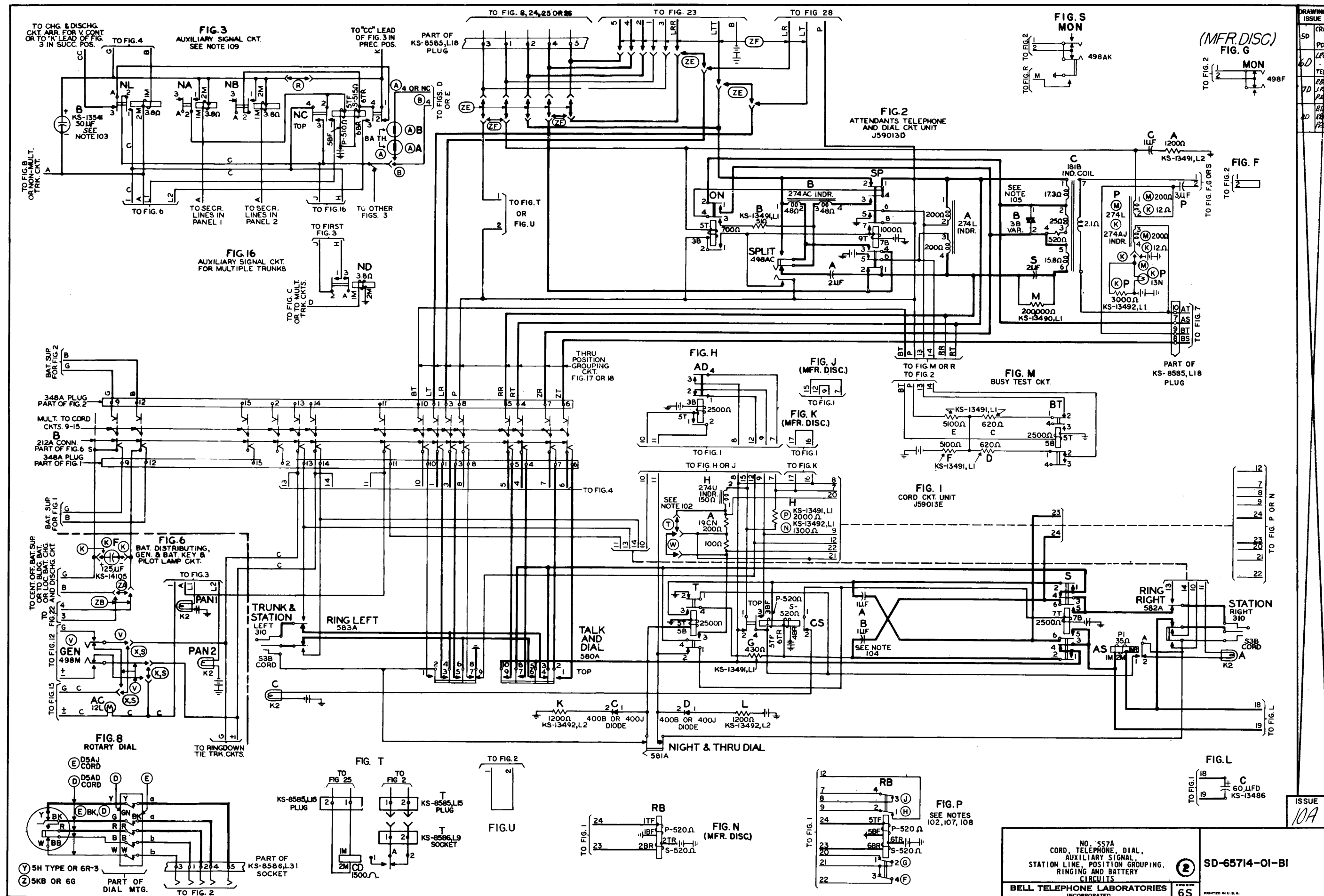
②

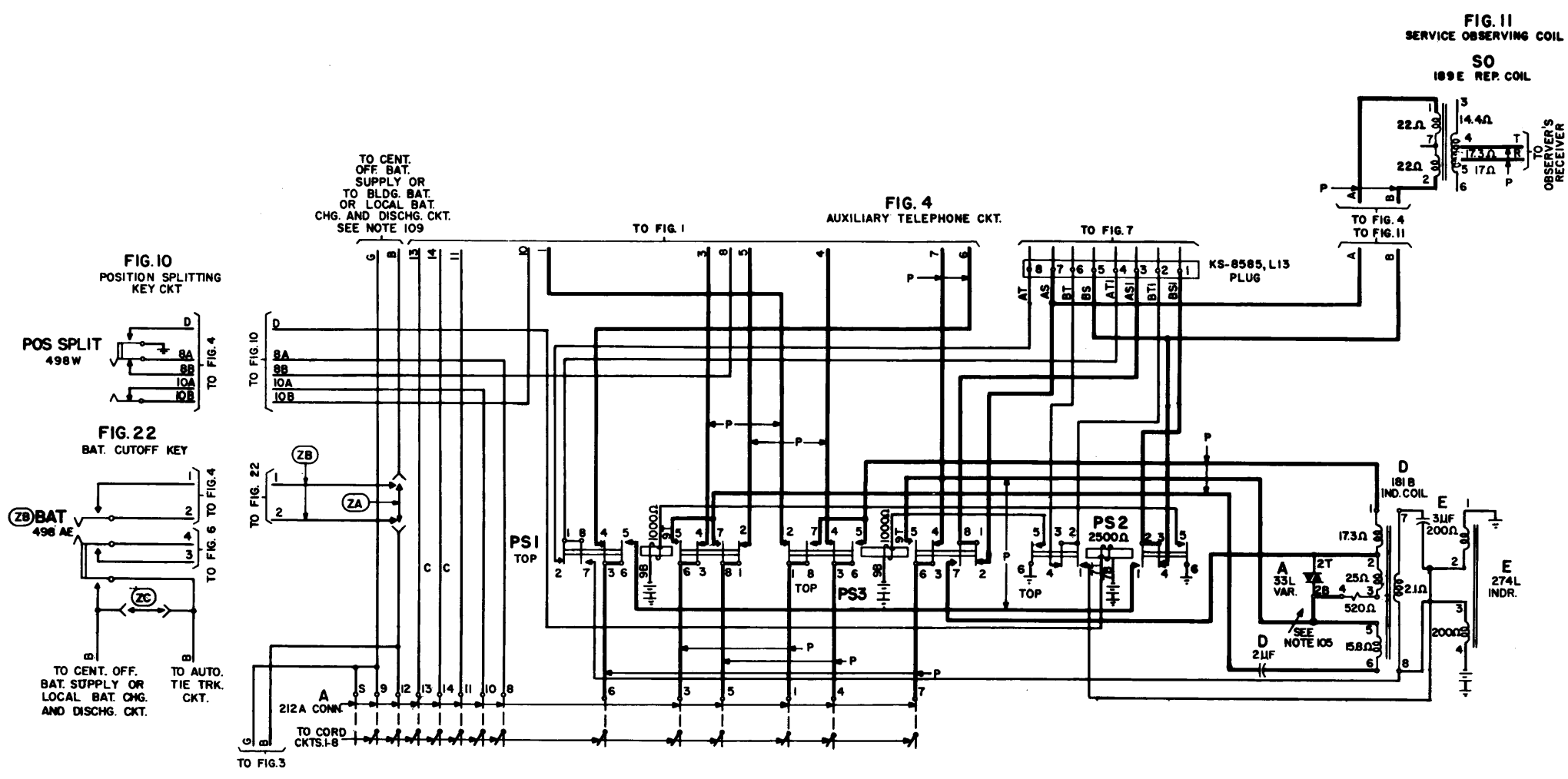
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KLAISS, M. J.
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FIG.17
POSITION GROUPING CIRCUIT
MODIFICATION OF
POSITION NO.1

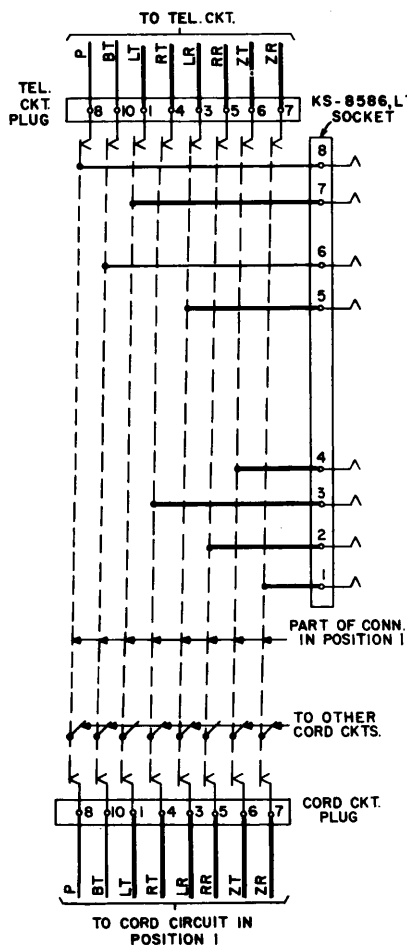
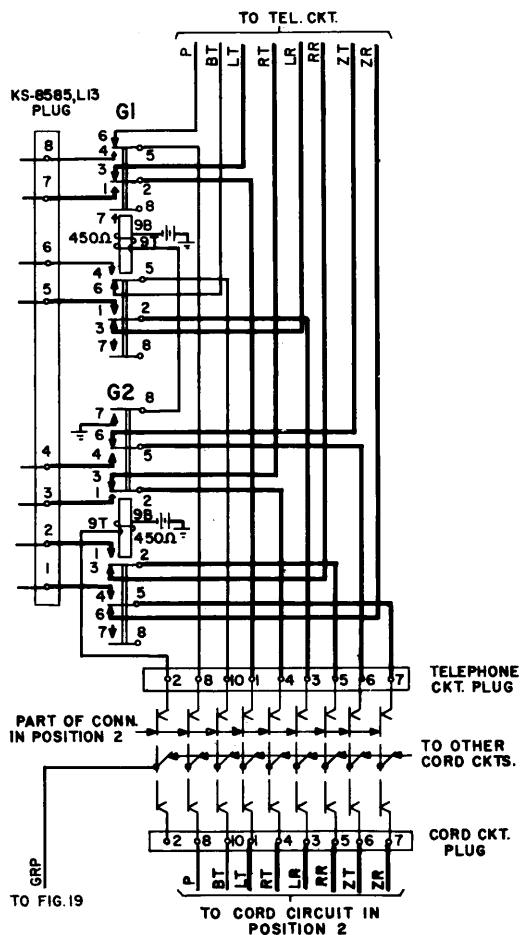


FIG.18
POSITION GROUPING CIRCUIT
MODIFICATION OF TELEPHONE
CKT. IN POS. NO.2



TO FIG.19

TO FIG.18

FIG.19
POSITION GROUPING KEY



FIG.20
TEAMWORK ANSWER JACK

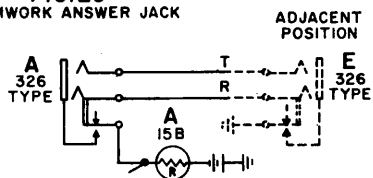
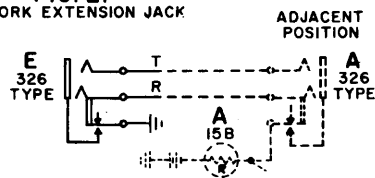


FIG.21
TEAMWORK EXTENSION JACK



[illegible]

FUSE ALARM FA
 498 M
 531A-3, 687A-3, OR 687A-49
 SUBSCRIBER SET
 TO FIG. 13
 TO FIG. 15

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 JACK ON, G. C.
 KLAISS, M. J.
 PERRIN, A. B.

[illegible]

TO FIG.15

TO OTHER SWBD. POSITIONS

L2 K LI

531A-3, 687A-3, OR 687A-49
SUBSCRIBER SET

FIG. E
BUZZER FOOT SWITCH

FOR 4C ONLY

4C (MFR. DISC.)
OR
KS-16821, LI
FOOT
SWITCH

4 OR NC

3 OR C

FOR KS-16821, LI ONLY

TO
FIG. 5

PLEASE NOTE AND RETURN:

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DI INS, G. C.

JACK ON, G. C.

KLAISS, M. J.

PERRIN, A. B.

FIG.17
POSITION GROUPING CIRCUIT
MODIFICATION OF
POSITION NO.1

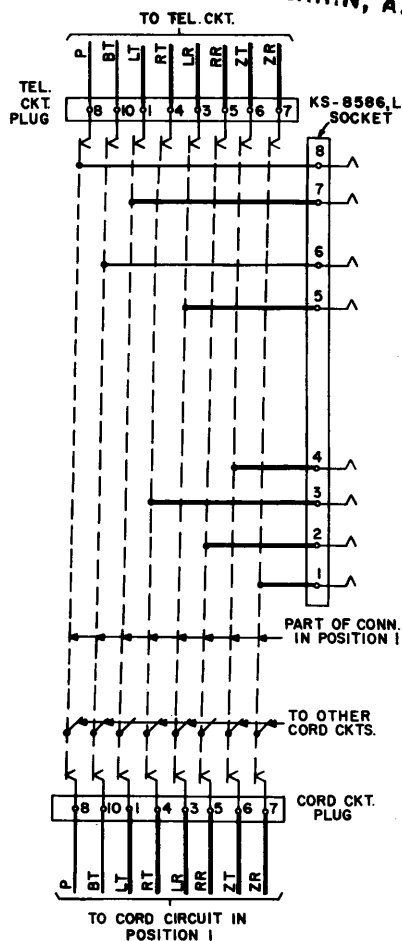


FIG.18
POSITION GROUPING CIRCUIT
MODIFICATION OF TELEPHONE
CKT. IN POS. NO.2

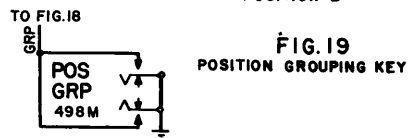
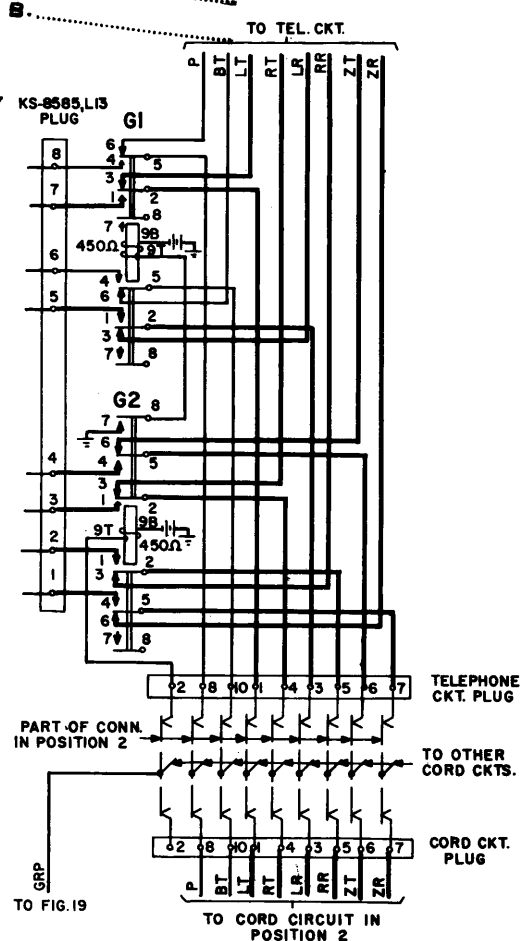


FIG.20
TEAMWORK ANSWER JACK

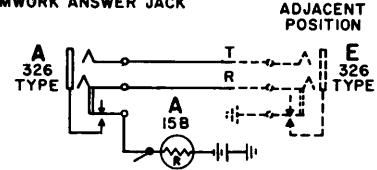


FIG.21
TEAMWORK EXTENSION JACK

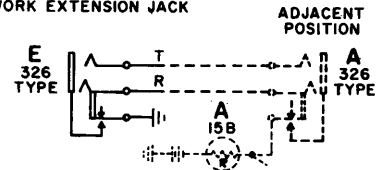


FIG. 26
TOUCH-TONE CARD DIALER

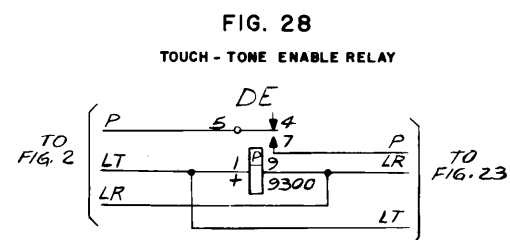
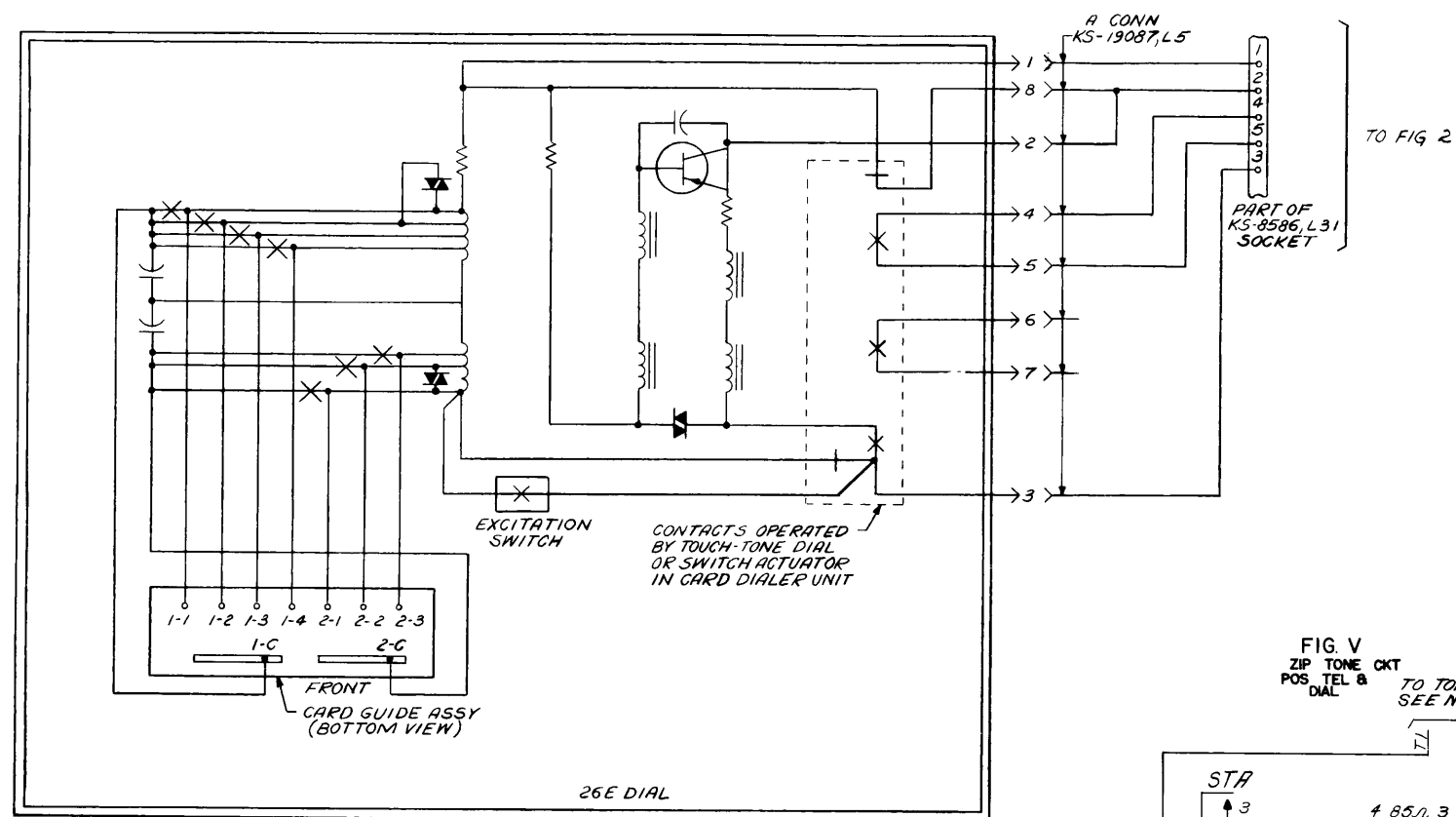


FIG. Q
ZIP TONE CKT
AUX TEL

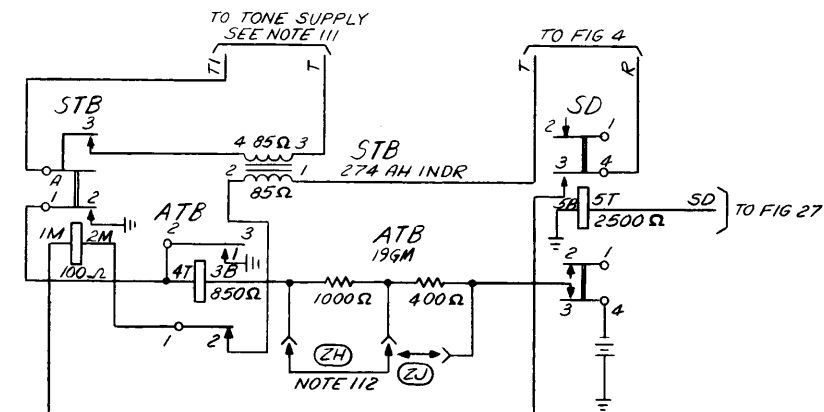


FIG. V
ZIP TONE CKT
POS. TEL &
DIAL

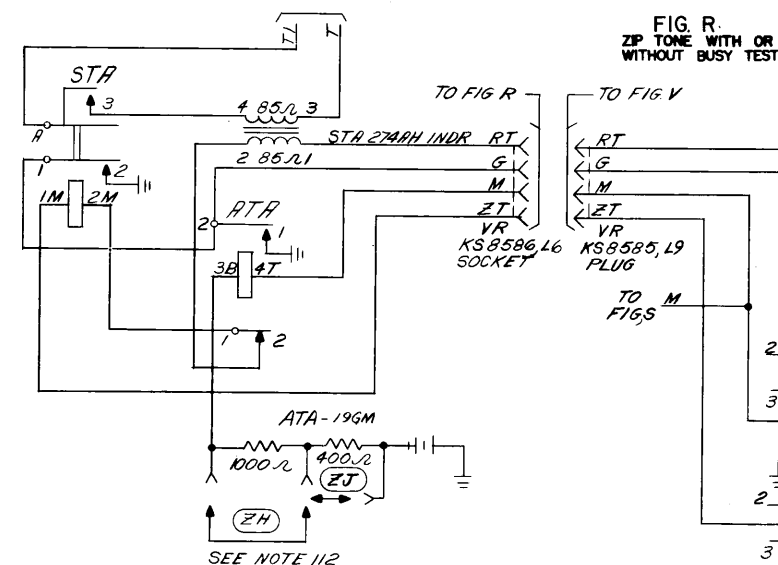
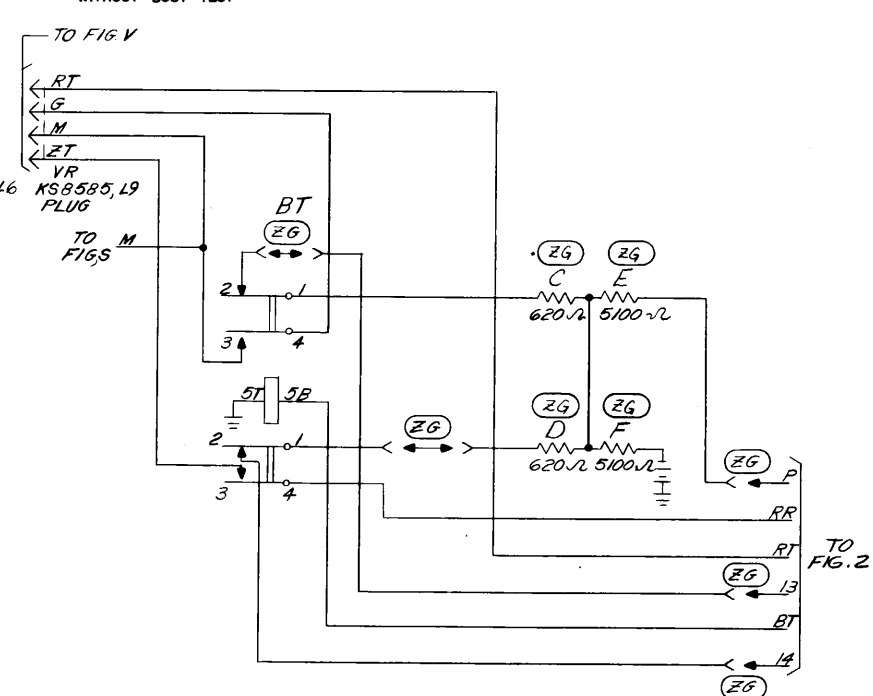


FIG. R
ZIP TONE WITH OR
WITHOUT BUSY TEST



CIRCUIT NOTES:

101. PROVIDE FUSES PER POSITION IN BATTERY SUPPLY IN.

1. LOCAL PBX BATTERY CHARGE AND DISCHARGE CIRCUIT 2 - 1 1/3 AMP FUSES
2. BUILDING PBX BATTERY CHARGE AND DISCHARGE CIRCUIT 2 - 1 1/3 AMP FUSES
3. CENTRAL OFFICE BATTERY SUPPLY CIRCUIT FOR PBX'S, 2-1 1/3 AMP FUSES
EXCEPT AS RESTRICTED BY FEEDER RESISTANCE TABLE.

102.

FEATURE OR OPTION		PROVIDE	
		FIGS	QUANTITY
CORD CIRCUIT		1	
SUPERVISION ON INC TRUNK	THRU ON OUT & NON-THRU ON IN * *	H	
CALLS & ATT	THRU * *	H	
DIALED OUT TRUNK CALLS	NON-THRU * *	J	
			MAX 15 PER POS
HOLDING BRIDGE	TRUNK CONDUCTOR LOOP RES WHEN CENT OFF RANGE IS		
RES. SEE	635 Ω 885 Ω 1200 Ω		
WORKING LIMITS	1500 500 Ω & OVER 2500 400 Ω TO 500 Ω 500 Ω & OVER 3500 200 Ω TO 400 Ω 400 Ω TO 500 Ω 900 Ω TO 1150 Ω 4500 0 TO 200 Ω 0 TO 400 Ω 0 TO 900 Ω	F, G G F	
SUPERVISORY RELAY SHUNT	WHEN CABLE PAIR TO ANY ONE STATION EXCEEDS 1000 FEET INCLUDING BRIDGED TAPS	L	
TELEPHONE AND DIAL CIRCUIT		2 & 7	
	NCT REQUIRED	8	* ZE
	ROTARY 10 P.P.S.	8	Y, ZE
	20 P.P.S.	8	Z, ZE
	TOUCH-TONE	23, 24, 28	ZF
	CARD ROTARY 10 P.P.S. 20 P.P.S.	25, T	ZE, Z
	DIAL TOUCH-TONE	23, 24, 28	ZF
MONITORING		S	
WITHOUT MONITORING		F	
TELEPHONE SET		A	
AUX. TEL. CKT		4	
	WITH ZIP TONE	Q	
POSITION SPLITTING KEY CIRCUIT		27	
BUSY TEST ON IDLE CORD CKT. WITHOUT ZIP TONE		M	
ZIP TONE	WITHOUT BUSY TEST	R, V	
	WITH BUSY TEST	R, V	ZG
AUX SIG. BAT DIST. AND GEN KEY CKT		3, 6	
BUZZER FOOT SWITCH	REQUIRED	E	
	NOT REQUIRED	J	
AUG. SIG. CKT. FOR MULT. TRUNKS		16	
STATION LINE CIRCUIT		5	
NON MULTIPLE		B	1 PER APPEARANCE MAX 4 (L) LAMPS
MULTIPLE		C	1 PER STA. LINE
AUXILIARY RINGER		9	
SERVICE OBSERVING		11	1 PER POS
FUSE ALARM RELAY CKT.		13	1 PER INSTAL
FUSE ALARM CKT		14	1 PER INSTAL
RINGING SUPPLY, BUZZER & BAT. CUT-OFF		15	1 PER INSTAL
EMERGENCY RINGING SUPPLY	FROM CENT. OFF. RING SUP LEAD	X	
	FROM HAND GEN.	12	V 1 PER POS
	NOT REQ.	S	
POSITION GROUPING	POS. GROUPING CKT. FOR POS. NO. 1	17	
	POS. GROUPING CKT. FOR POS. NO. 2	18, 19	1 PER POS
FIRST POSITION IN SWITCHBOARD		R	
TEAMWORK	EXTENSION JACK	21	2 PER POS
	ANSWER JACK	20	2 PER POS
BAT. CUTOFF KEY	REQUIRED	ZB	1 PER POS
	NOT REQUIRED	ZA	
BAT. CUTOFF KEY PROVIDED BUT NOT REQUIRED FOR TIE TRUNK		22	ZC 1 PER POS
** SEE NOTES 107 & 108			
* SPLICE LEADS a & b			

DRAWING	ISSUE
5D	CRA
6D	PD
7D	LRB
	TEB
	FAB
	JAK
	AKG
	ABG
	FAB
	LRB

NO. 557A
CORD, TELEPHONE, DIAL,
AUXILIARY SIGNAL
STATION LINE, POSITION GROUPING,
RINGING AND BATTERY
CIRCUITS

BELL TELEPHONE LABORATORIES

INCORPORATED

3S

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SD-65714-OI-DI

CIRCUIT NOTES (CONTINUED):

103. THE MAXIMUM RESISTANCE OF THE BATTERY AND GROUND LEADS BETWEEN CAP. (B) AND LAST STATION LINE CIRCUIT SHALL NOT EXCEED 0.25Ω PER LEAD.
104. TO PROVIDE SATISFACTORY BALANCE THE DIFFERENCE IN CAPACITY BETWEEN CAP. (A) AND (B), FIG.1, SHALL NOT EXCEED .055 μF.
105. RUN SEPARATE WIRES IN EACH DIRECTION FROM VARISTOR (A) FIG.4 AND VARISTOR (B) FIG.2 AS INDICATED.

106. 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	M.D.
2D	DIALS			6A		5H
				6G		5KB
3B	FIG.N OR FIG.P	FIG.N		FIG.P		FIG.N
3B	H.J	FIG.J, K OR H	108	H.J	FIG.H	FIGS. JK
3B	F.G	T.W OR NONE	108	F.G		T.W
3B	DIODES			400J		400B
3B	N OR P	P		N		P
3B	SUB. SET			687A-3		531A-3
3B	D OR E	D		E		D
3B	A OR B	B		A		B
3B	M OR K	M		K		M
3B	DIALS			6R-3		6A
3B	FOOT SWITCH			KS-168211		4C
4D	ZA, ZB OR ZC	NONE	102	ZA, ZB OR ZC		
4D	FIG. 22	NONE	102	FIG. 22		
5D	SUBSET			687A-49		687A-3
6D	ZE OR ZF	ZE		ZE OR ZF		
7D	FIG. 25	NONE	102	FIG. 25		
7D	FIG. 26	NONE	102	FIG. 26		
7D	FIG. S	FIG. G		FIG. S		FIG. G
7D	FIG. 27	FIG. 10		FIG. 27		FIG. 10
7D	FIG. R	FIG. M		FIG. M OR R		
7D	FIG. 26	NONE		26		
7D	FIG. Q	NONE		FIG. Q		
7D	FIG. T	FIG. U		FIG. T OR U		

112 REF TO FIGS. Q & R

SUPPLY VOLTS	RES	OPTION
16 - 24V	0 Ω	ZH & ZJ
24 - 35V	400 Ω	ZH
35 - 52V	1000 Ω	ZJ

107. THE CONTACTS OF (RB) RELAY, FIG. P ARE PERMANENTLY OPERATED BY A MECHANICALLY LOCKED ARMATURE. IN THIS CONDITION OPTIONS F, G, H, AND J ARE PROVIDED. WHEN AN OPTION IS NOT USED, OPEN THE ASSOCIATED CONTACT BY PLACING PLASTIC SLEEVING PER P32B860 ON SPRINGS 1T, 3T, 1B OR 3B.
108. WHEN EXISTING CIRCUITS EQUIPPED WITH FIG. J OR K OR OPTION T OR W ARE MODIFIED TO PROVIDE FIG. P, FIG. J OR K AND OPTION T OR W MUST BE REMOVED.
109. THE GROUND ON THE AUXILIARY SIGNAL CIRCUIT RELAYS (NA) AND (NB) WHEN USED WITH THE CONCENTRATOR-IDENTIFIER SYSTEM SHALL BE THE SAME GROUND AS THE CONCENTRATOR-IDENTIFIER GROUND.
110. SUPPLY VOLTAGE MAY BE OBTAINED FROM A 2075A TRANSFORMER. THE ROTARY CARD DIALER HAS A POWER DRAIN OF 3 WATTS. THE VOLTAGE AT TERMINALS P1 & P2 SHALL BE WITHIN 13-18 VAC.
111. TONE SUPPLY IS A 102A FREQ. GEN. OR EQUIVALENT. INPUT TO 102A IS 115 VAC, OUTPUT TERMINALS ON 102A FREQ. GEN. MUST BE SELECTED TO GIVE SUFFICIENT VOLUME. NO LOAD OUTPUT VOLTS ARE:

BETWEEN TERMINALS	OUTPUT VOLTS
2-3	.7V
3-4	1.6V
1-2	2.2V
1-3	2.9V
1-4	4.5V

NO. 557A
CORD, TELEPHONE, DIAL,
AUXILIARY SIGNAL,
STATION LINE, POSITION GROUPING
RINGING AND BATTERY
CIRCUITS

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INCORPORATED

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				STD.	A&M	M.D.
2D	DIALS			6A		5H
				6G		5KB
3B	FIG.N OR FIG.P	FIG.N		FIG.P		FIG.N
3B	H, J	FIG. J, K OR H	108	H, J FIG.H		FIGS. J, K
3B	F, G	T, W OR NONE	108	F, G		T, W
3B	DIODES			400J		400B
3B	N OR P	P		N		P
3B	SUB. SET			687A-3		531A-3
3B	D OR E	D		E		D
3B	A OR B	B		A		B
3B	M OR K	M		K		M
3B	DIALS			6R-3		6A
3B	FOOT SWITCH			KS-1682111		4C
4D	ZA, ZB OR ZC	NONE	102	ZA, ZB OR ZC		
4D	FIG. 22	NONE	102	FIG. 22		
5D	SUBSET			687A-49		687A-3

PLEASE NOTE AND RETURN:

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DIVINS, G. C.

JACK ON, G. C.

KLAISS, M. J.

PERRIN, A. B.

107. THE CONTACTS OF (RB) RELAY, FIG. P ARE PERMANENTLY OPERATED BY A MECHANICALLY LOCKED ARMATURE. IN THIS CONDITION OPTIONS F, G, H, AND J ARE PROVIDED. WHEN AN OPTION IS NOT USED, OPEN THE ASSOCIATED CONTACT, BY PLACING PLASTIC SLEEVING PER P32B860 ON SPRINGS 1T, 3T, 1B OR 3B.
108. WHEN EXISTING CIRCUITS EQUIPPED WITH FIG. J OR K OR OPTION T OR W ARE MODIFIED TO PROVIDE FIG. P, FIG. J OR K AND OPTION T OR W MUST BE REMOVED.
109. THE GROUND ON THE AUXILIARY SIGNAL CIRCUIT RELAYS (NA) AND (NB) WHEN USED WITH THE CONCENTRATOR-IDENTIFIER SYSTEM SHALL BE THE SAME GROUND AS THE CONCENTRATOR-IDENTIFIER GROUND.

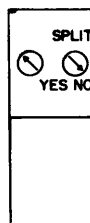
PBX SYSTEMS
NO. 557A
CORD, TELEPHONE, DIAL,
AUXILIARY SIGNAL,
STATION LINE, POSITION GROUPING,
RINGING AND BATTERY
CIRCUITSBELL TELEPHONE LABORATORIES
INCORPORATED2
3S

SD-65714-01-D2

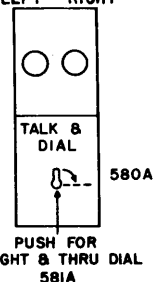
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OPTIONS USED			
FIGS.	APP OR WIRING		
1	A	Z	ZC
2	B	Y	ZD
3	C	X	
4	D	W	
5	E	V	
6	F		
7	G	T	
8	H	S	
9	J	R	
10	K		
11	L	P	
12	M	N	
13	N	M	
14	P	K	
15		J	
16		H	
17		G	
18		F	
19		E	
20		D	
21		B	
22		A	
		ZA	
		ZB	

TEL. CKT.
KEYS
498F 498AC



CORD CKT.
KEYS
583A 582A
RING RING
LEFT RIGHT



FA
498M
OFF ON

BAT
498AE
OFF ON

BUZ
498T
OFF ON



PLEASE NOTE AND RETURN:

BURNS J.G.
DIVING G.C.
JACK ON, G.C.
GEN
KL ISS. 498M
EMG
REG
R.N. A. B.

POS SPLIT
498W
YES NO

STATION SUPERVISION
FIG. 1
(CS) RELAY RANGE

WORKING LIMITS
STATION SIGNALING
FIG. 5

FIG. 3

FIG. C

	MIN. VOLTAGE			MIN. VOLTAGE						MIN. VOLTAGE					
	16V.	18V.	20V.	16V.	18V.	20V.	22V.	24V.	26V.	16V.	18V.	20V.	22V.	24V.	26V.
MAX. EXT. CKT. LOOP RES.	450Ω	600Ω	780Ω	150Ω	240Ω	330Ω	420Ω	510Ω	600Ω	675Ω	850Ω	1000Ω	1150Ω	1300Ω	1450Ω
MIN. INS. RES.	30,000Ω	30,000Ω	30,000Ω	*	*	*	*	*	*	8000Ω	20,000Ω				

* LIMITED BY FIG. 3
** COMBINED INSULATION RESISTANCE OF ALL STATION LINES WITHOUT LINE RELAYS (FIGS. 5 & B) COMMON TO ONE (NL) RELAY (FIG. 3).

PBX SYSTEMS
NO. 557A
CORD, TELEPHONE, DIAL,
AUXILIARY SIGNAL
STATION LINE, POSITION GROUPING,
RINGING AND BATTERY
CIRCUITS

BELL TELEPHONE LABORATORIES
INCORPORATED

2
3S

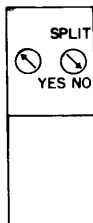
SD-65714-01-D3

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OPTIONS USED			
FIGS.	A	Z	ZE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
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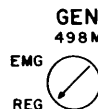
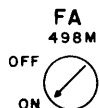
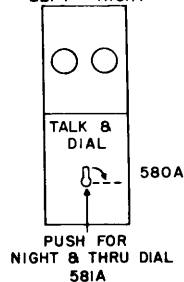
TEL. CKT. KEYS

498 F 498 AC



CORD CKT. KEYS

583 A 582 A
RING RING
LEFT RIGHT



WORKING LIMITS

STATION SUPERVISION
FIG. 1
(CS) RELAY RANGE

STATION SIGNALING
FIG. 5

FIG. 3

FIG. C

MIN. VOLTAGE				MIN. VOLTAGE						MIN. VOLTAGE					
16V.	18V.	20V.		16V.	18V.	20V.	22V.	24V.	26V.	16V.	18V.	20V.	22V.	24V.	26V.
MAX. EXT. CKT. LOOP RES.	450Ω	600Ω	780Ω	150Ω	240Ω	330Ω	420Ω	510Ω	600Ω	675Ω	850Ω	1000Ω	1150Ω	1300Ω	1450Ω
MIN. INS. RES.	30,000Ω	30,000Ω	30,000Ω	*	*	*	*	*	*	8000Ω	20,000Ω				

- * LIMITED BY FIG. 3
- ** COMBINED INSULATION RESISTANCE OF ALL STATION LINES WITHOUT LINE RELAYS (FIGS. 5 & B) COMMON TO ONE (NL) RELAY (FIG. 3).

MINIMUM AND MAXIMUM ALLOWABLE FEEDER RESISTANCES FROM 45-52 VOLT BATTERY ONE HALF OF ONE POS.

NUMBER OF CORDS	MAXIMUM FEEDER RESISTANCE IN OHMS	MINIMUM FEEDER RESISTANCE IN OHMS
3	102	
4	91	
5	85	2
6	80	5
7	73	9
8	67	11
9	62	15
10	59	16
11	56	18
12	54	19

P.B.X. VOLTAGES OBTAINED WITH VARIOUS FEEDER RESISTANCES ONE HALF OF ONE POSITION.

NUMBER OF CORDS	16V.	18V.	20V.	22V.	24V.	26V.	28V.	30V.	32V.	34V.
3	102	85	74	59	49	41	34	28	23	18
4	91	75	63	52	44	37	30	25	20	16
5	85	70	59	49	41	34	29	23	19	15
6	80	66	55	46	39	32	27	22	18	14
7	73	60	50	42	35	29	24	20	16	13
8	67	57	47	40	33	28	23	18	15	12
9	62	51	43	35	30	25	21	17	14	
10	59	49	40	34	28	24	20	16		
11	56	47	39	32	27	23	19			
12	54	45	37	31	26	22	18			

ELECTROLYTIC CAPACITOR TEST REQUIREMENTS (1000 CYCLE TEST, USING 73A TEST SET. BETWEEN 600" LINES)						
			OVERALL LOSSES			
			TEST TERMINALS	TEST SET CONNECT TO	+ MIN. LOSS IN db	REMARKS
CAP. (B)			3-7 GRD. 2M (NL)	7.8	(BAT.) KEY (OFF)	
CAP. (C)			3-6 2M 1M (AS)	5.6		
INDIVIDUAL APPARATUS LOSSES						
APPARATUS	DESIG.	CODE	TEST SET TERMINALS	CONNECT TO	+MIN. LOSS IN db	REMARKS
CAPACITOR	B	KS13541				
CAPACITOR	C	KS13486				
NOTES: I. DEV.=MAX. DEVIATION FROM SHORT CIRCUITED READING. CAUTION DISCHARGE CAPACITORS IN ACCORDANCE WITH THE A200 SECTION BSP COVERING THE TESTING OF ELECTROLYTIC CAPACITORS. DO NOT SHORT CIRCUIT CAPACITORS.						

MINIMUM AND MAXIMUM ALLOWABLE FEEDER RESISTANCES FROM 45-52 VOLT BATTERY ONE HALF OF ONE POS.

NUMBER OF CORDS	MAXIMUM FEEDER RESISTANCE IN OHMS	MINIMUM FEEDER RESISTANCE IN OHMS
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4	91	75	63	52	44	37	30	25	20	16
5	85	70	59	49	41	34	29	23	19	15
6	80	66	55	46	39	32	27	22	18	14
7	73	60	50	42	35	29	24	20	16	13
8	67	57	47	40	33	28	23	18	15	12
9	62	51	43	35	30	25	21	17	14	
10	59	49	40	34	28	24	20	16		
11	56	47	39	32	27	23	19			
12	54	45	37	31	26	22	18			

PLEASE NOTE AND RETURN:

BURNS, J. G.

DIVINS, G. C.

JACK ON, G. C.

KLAISS, M. J.

FERRIN, A. B.

ELECTROLYTIC CAPACITOR TEST REQUIREMENTS (1000 CYCLE TEST, USING 73A TEST SET. BETWEEN 600~ LINES)																																																
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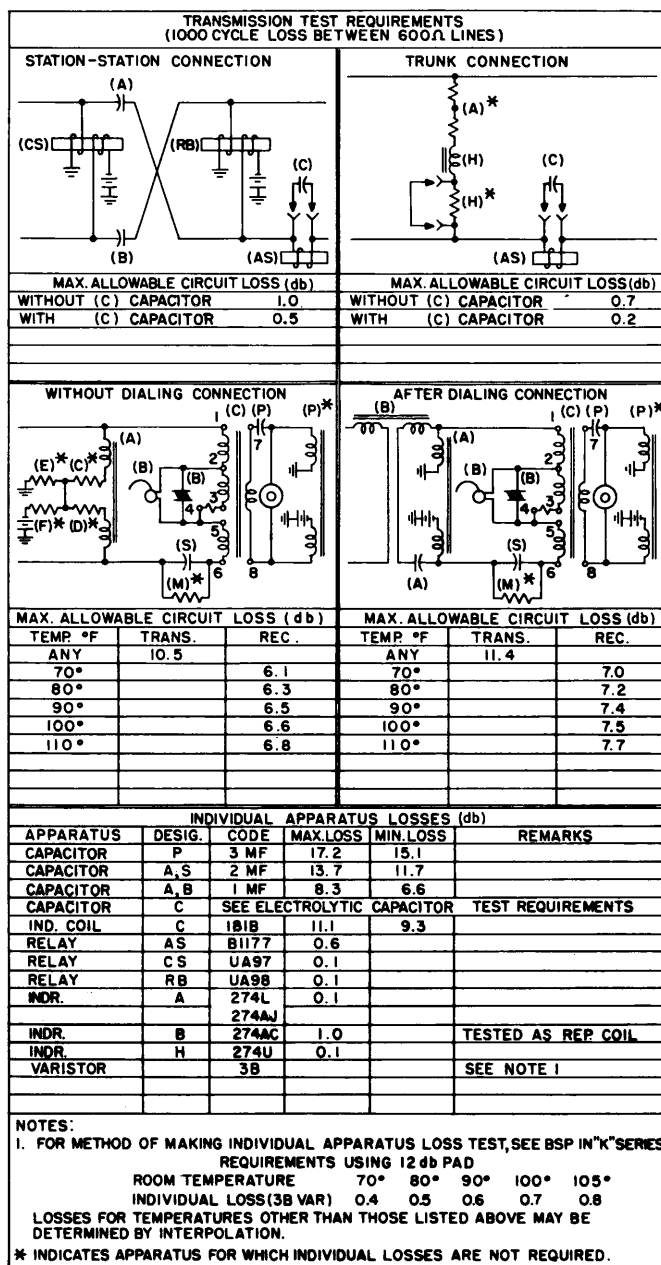
PBX SYSTEMS
NO. 557A
CORD, TELEPHONE, DIAL,
AUXILIARY SIGNAL,
STATION LINE, POSITION GROUPING,
RINGING AND BATTERY
CIRCUITS

BELL TELEPHONE LABORATORIES
INCORPORATED

2
3S

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PLEASE NOTE AND RETURN:

BURNS, J. G.

DIVINS, G. C.

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FERRIN, A. B.

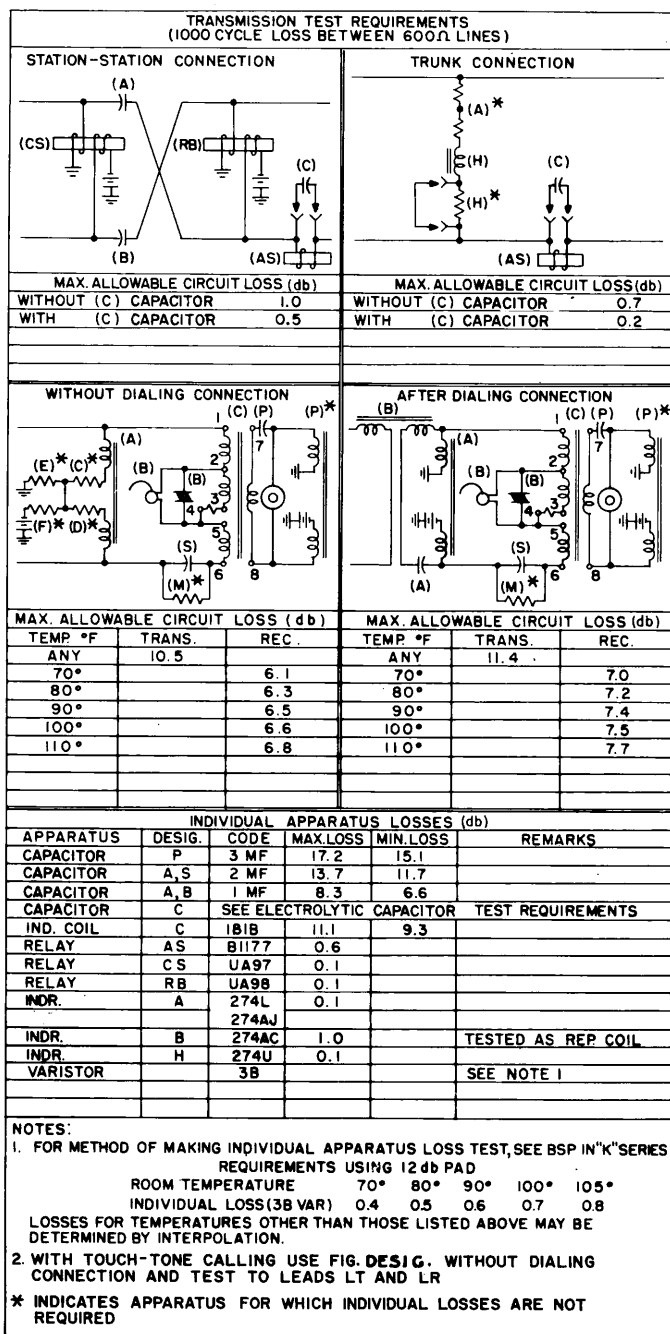
PBX SYSTEMS
NO. 557A
CORD, TELEPHONE, DIAL,
AUXILIARY SIGNAL,
STATION LINE, POSITION GROUPING,
RINGING AND BATTERY
CIRCUITS

BELL TELEPHONE LABORATORIES
INCORPORATED

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35

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SD-65714-01															CIRCUIT REQUIREMENTS										DRAWING ISSUE	
NO. 557A CORD, TELEPHONE, DIAL, AUX SIGNAL, STATION LINE, POS GRP, RING. & BAT. CKT (CORD)(TEL)(AUX TEL)																										
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										
RELAYS																										
AD	UA15		H	110/101	H	35	(T) O		(T)AD	GRD	4		O		5.3	5										
							(T) O		(T)AD	GRD	4		R		0.8	0.9										
AS	B1177		I	16		SPL				GRD	1,2,3		O	FS	8.6	7.7										
										GRD	1,2,3		NO	FS	4.8	5.4										
										GRD	1,2,3		R	FS	2.9	3.3										
BT	UA93		M	110/110	H	35		B(BT)		BAT.			O		5.2	4.9										
CS	UA97		I	110/144	H	35		BF(CS)	TR(CS)	M		P/S	O		10	9.5										
								BF(CS)	TR(CS)	M		P/S	R		2.6	2.8										
FA	U1254		13	111/101	H	29		B(FA)		BAT.			O		9.4	8.9										
G1,2	U235		18	118/118	H	50			T REL TST	GRD			O		24	22.5										
L	U6102		C	115/136	H	29			T(L)	GRD					12.5	11.7										
									T(L)	GRD					3.7	3.9										
PLEASE NOTE AND RETURN:																										
NA,B	B1166		3	9		30		IM REL TST		BAT.	6		O	100	14.5	13.2										
NC	U723		3	111/110	H	35	1T(NC)		TF(NC)	GRD		P	O		21	20										
							3B(NC)		TR(NC)	GRD					21	20										
ND	B1166		16	9		30		IM(ND)		BAT.	6		R	100	7.4	8.3										
								IM(ND)		BAT.	6		R	100	7.4	8.3										
NL	B1166		3	9		30			2M(NL)	GRD	6		O	100	14.5	13.2										
									2M(NL)	GRD	6		R	100	7.4	8.3										
ON	UA95		2	111/101	H	29			T(ON)	GRD	5,7		O		8.5	8										
PS1	U573		4	151/151	H	41			T(PS1)	GRD			O		13.9	13.2										
PS2	UA94		4	181/181	H	35			T(PS2)	GRD			O		5.7	5.4										
PS3	U573		4	151/151	H	41			T(PS3)	GRD			O		13.9	13.2										
RB	UA98		N	NONE		O																				
RB	UA150		P	111/111	H	29					8	P/S	O			11.3										
S	UA94		1	181/181	H	35	(T)(CS)O		T(S)	GRD			O		5.7	5.4										
SP	U1338		2	134/120	H	35	7T(SP)		T(SP)	GRD			O		11.2	10.6										
T	UA93		1	110/110	H			B(T)		BAT.			O		5.2	4.9										
MISC																										
TALK & DIAL	580A KEY										9															

TEST NOTES:

1. CONNECT GRD TEST CLIP TO RING TERM. OF SPARE STA LINE CKT, INSERT RIGHT PLUG OF CORD CKT IN ASSOCIATED LINE JACK.
2. ARM. TRVL 20
3. TEST CONT MAKE MIN 3. TEST CONT SEPARATION MIN 3
4. OPERATE (NIGHT & THRU DIAL) KEY
5. REMOVE DIAL FROM DIAL MOUNTING. REMOVE ATTENDANT'S TEL SET FROM TEL SET JACKS OR WITH FIG. C, DISCONNECT TRANSMITTER CORD.
6. TEST CONT FOLLOW MIN 3. TEST CONT SEPARATION MIN 3.
7. CONN DIRECT BAT. B (ON).
8. AFTER ADJUSTING RELAY, TIGHTEN ADJUSTING NUT AGAINST ARMATURE UNTIL AT LEAST ONE STOP DISC TOUCHES THE CORE. REQUIREMENT IS FOR USE IN SHOP ONLY.
9. CONTACTS 3B-4B, 5B-6B, 7T-8T, AND 9T-10T SHALL MAKE BEFORE CONTACTS 3T-4T AND 5T-6T BREAK, CONTACTS 1T-2T SHALL MAKE AFTER CONTACTS 3T-4T AND 5T-6T BREAK.

PBX SYSTEMS
 NO. 557A
 CORD, TELEPHONE, DIAL,
 AUXILIARY SIGNAL,
 STATION LINE, POSITION GROUPING,
 RINGING AND BATTERY
 CIRCUITS

BELL TELEPHONE LABORATORIES
 INCORPORATED

SD-65714-01-FI
 3S

SD-65714-01

CIRCUIT REQUIREMENTS

NO. 557A CORD, TELEPHONE, DIAL, AUX SIGNAL, STATION LINE, POS GRP, RING. & BAT. CKT (CORD)(TEL)(AUX TEL)

DRAWING
ISSUE

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																		
AD	UA15		H	110/101	H	35	(T) O		(T)AD	GRD	4		O		5.3	5		
							(T) O		(T)AD	GRD	4		R		0.8	0.9		
AS	B1177		I	16		SPL				GRD	1,2,3		O	FS	8.6	7.7		
										GRD	1,2,3		NO	FS	4.8	5.4		
										GRD	1,2,3		R	FS	2.9	3.3		
ATA	Y 187		R	175/131	H	47		3B (ATA)	4T (ATA)	B/G			O	FS	19	18		
ATB	Y 187		Q	175/131	H	47	2B (ATB)	3B (ATB)	4T (ATB)	B/G			O	FS	19	18		
BT	UA93		M,R	110/110	H	35		B(BT)		BAT.			O		5.2	4.9		
CD	B 68		T	3		30		1M (CD)	2M (CD)	B/G			O		1.3	1.2		
CS	UA97		I	110/144	H	35		BF(CS)	TR(CS)	M		P/S	O		10	9.5		
								BF(CS)	TR(CS)	M		P/S	R		2.6	2.8		
DE	316AG		28	1				9 (DE)	1 (DE)	B/G			O		+ .25			
								9 (DE)	1 (DE)	B/G			R		-.25			
FA	U1254		13	111/101	H	29		B(FA)		BAT.			O		9.4	8.9		
G1,2	U235		18	118/118	H	50			T REL TST	GRD			O		24	22.5		
L	U6102		C	115/136	H	29			T(L)	GRD			O		12.3	11.7		
									T(L)	GRD			R		3.7	3.9		
NA,B	B1166		3	9		30		1M REL TST		BAT.	6		O	100	14.5	13.2		
								1M REL TST		BAT.	6		R	100	7.4	8.3		
NC	U723		3	111/110	H	35	1T(NC)		TF(NC)	GRD		P	O		21	20		
							3B(NC)		TR(NC)	GRD		S	O		21	20		
ND	B1166		16	9		30		1M(ND)		BAT.	6		O	100	14.5	13.2		
								1M(ND)		BAT.	6		R	100	7.4	8.3		
NL	B1166		3	9		30			2M(NL)	GRD	6		O	100	14.5	13.2		
									2M(NL)	GRD	6		R	100	7.4	8.3		
ON	UA95		2	111/101	H	29			T(ON)	GRD	5,7		O		8.5	8		
PS1	U573		4	151/151	H	41			T(PS1)	GRD			O		13.9	13.2		
PS2	UA94		4	181/181	H	35			T(PS2)	GRD			O		5.7	5.4		
PS3	U573		4	151/151	H	41			T(PS3)	GRD			O		13.9	13.2		
RB	UA98		N	NONE		0											NO ADJ REQ	
RB	UA150		P	111/111	H	29					8	P/S	O			11.3		
S	UA94		1	181/181	H	35	(T)(CS)O		T(S)	GRD			O		5.7	5.4		
SD	UA93		Q	110/110	H	35		5T(SD)		BAT			O		5.2	4.9		
SP	U1338		2	134/120	H	35	7T(SP)		T(SP)	GRD			O		11.2	10.6		
STA	B1083		R	7		35		1M(STA)	2M(STA)	B/G			O		4.9	4.7		
STB	B1083		Q	7		35		1M(STB)	2M(STB)	B/G			O		4.9	4.7		
T	UA93		1	110/110	H			B(T)		BAT.			O		5.2	4.9		
MISC																		
TALK & DIAL	580A KEY										9							

TEST NOTES:

- CONNECT GRD TEST CLIP TO RING TERM. OF SPARE STA LINE CKT, INSERT RIGHT PLUG OF CORD CKT IN ASSOCIATED LINE JACK.
- ARM. TRVL 20
- TEST CONT MAKE MIN 3. TEST CONT SEPARATION MIN 3
- OPERATE (NIGHT & THRU DIAL) KEY
- REMOVE DIAL FROM DIAL MOUNTING. REMOVE ATTENDANT'S TEL SET FROM TEL SET JACKS OR WITH FIG. C, DISCONNECT TRANSMITTER CORD.
- TEST CONT FOLLOW MIN 3. TEST CONT SEPARATION MIN 3.
- CONN DIRECT BAT. B (ON).
- AFTER ADJUSTING RELAY, TIGHTEN ADJUSTING NUT AGAINST ARMATURE UNTIL AT LEAST ONE STOP DISC TOUCHES THE CORE. REQUIREMENT IS FOR USE IN SHOP ONLY.
- CONTACTS 3B-4B, 5B-6B, 7T-8T, AND 9T-10T SHALL MAKE BEFORE CONTACTS 3T-4T AND 5T-6T BREAK, CONTACTS 1T-2T SHALL MAKE AFTER CONTACTS 3T-4T AND 5T-6T BREAK.

NO. 557A
CORD, TELEPHONE, DIAL,
AUXILIARY SIGNAL,
STATION LINE, POSITION GROUPING,
RINGING AND BATTERY
CIRCUITS

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
3S

PRINTED IN U.S.A.

SD-65714-01-FI

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BURNS, J. G......

DIVINS, G. C......

JACKSON, G. C......

KLASS, M. J.

PERRIN, A. B. 61

FIG. 51

(FOR FIG. 15, AND PARTS
OF FIGS. 6 AND 11)

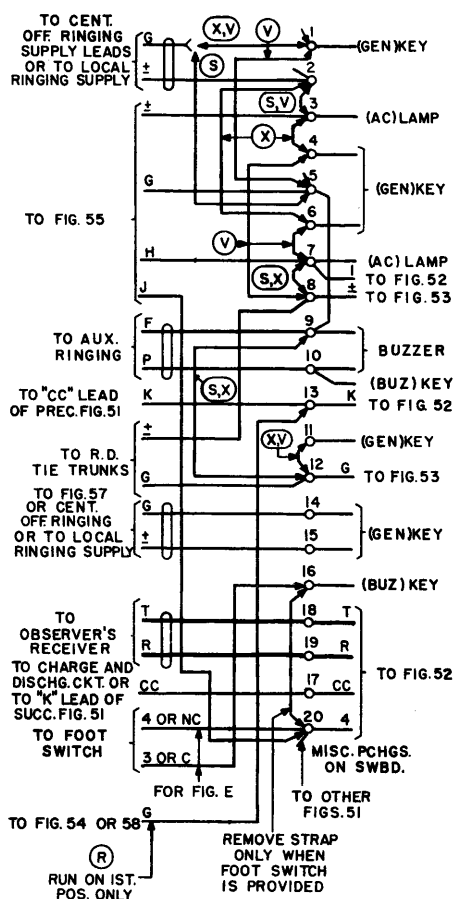
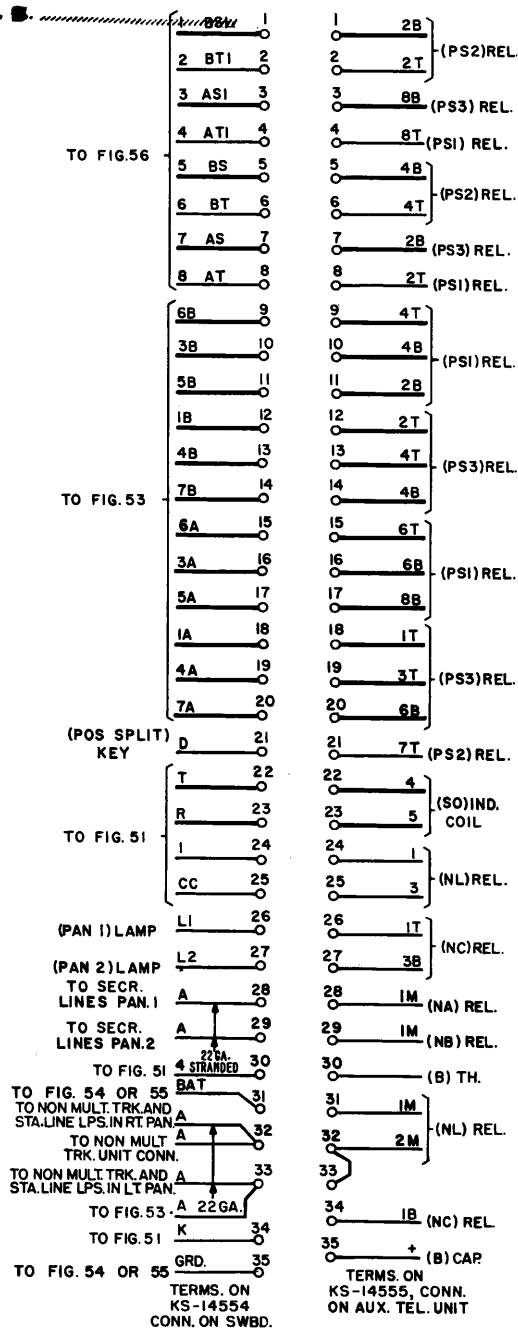


FIG. 52

(FOR FIGS. 3, 4 AND 11)



PBX SYSTEMS
NO. 557A
CORD, TELEPHONE, DIAL,
AUXILIARY SIGNAL,
STATION LINE, POSITION GROUPING,
RINGING AND BATTERY
CIRCUITS

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE
35

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② SD-65714-OI-GI

FIG. 51

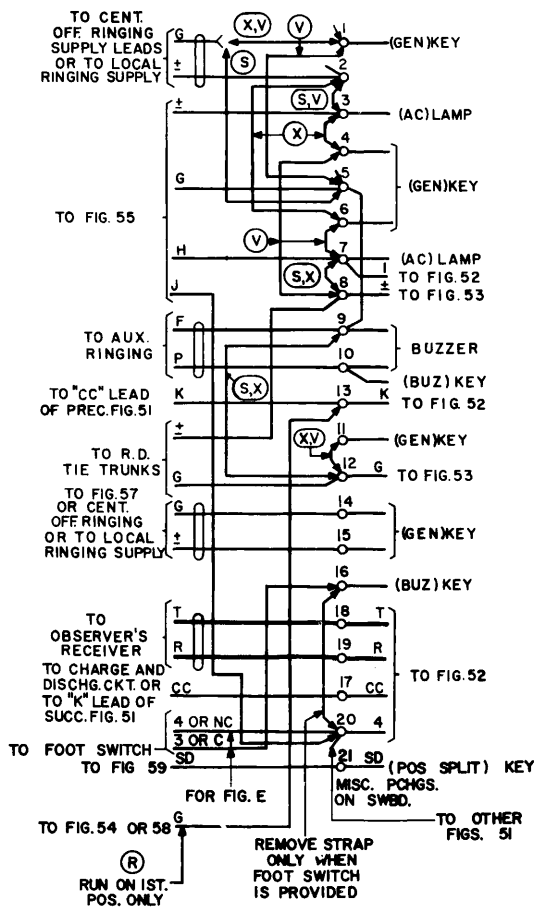


FIG.52

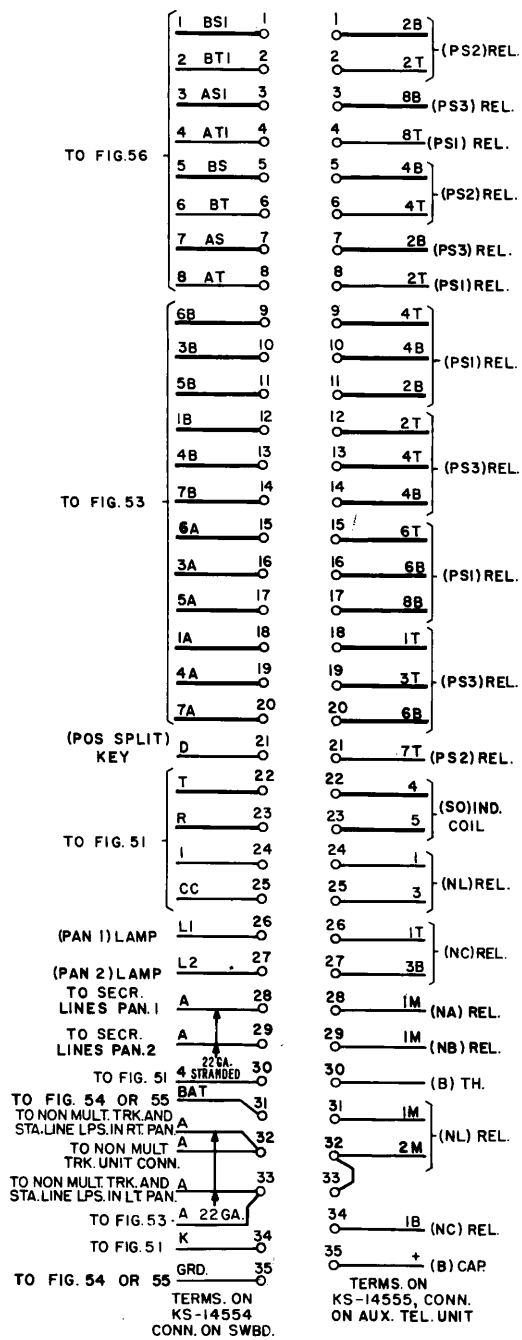


FIG. 53
(FOR PART OF FIGS. 4 AND 6)

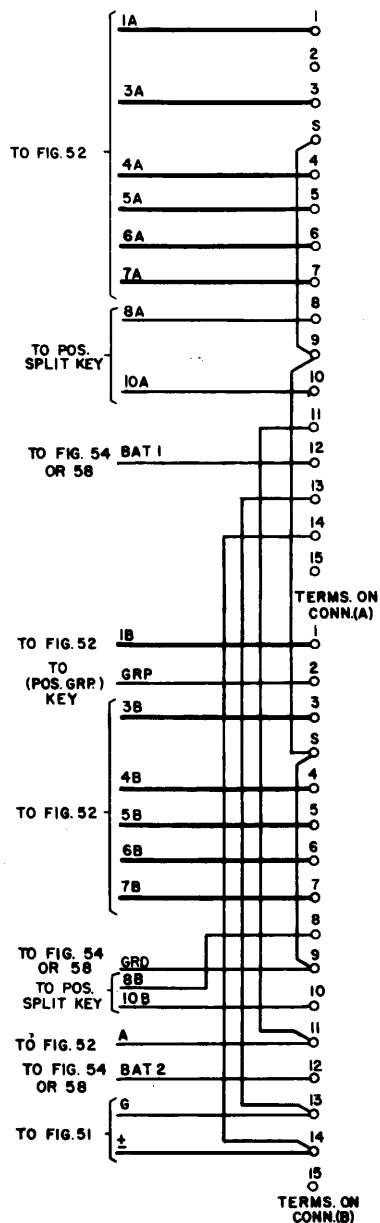


FIG. 54 (MFR DISC.)
BAT. AND GRD.

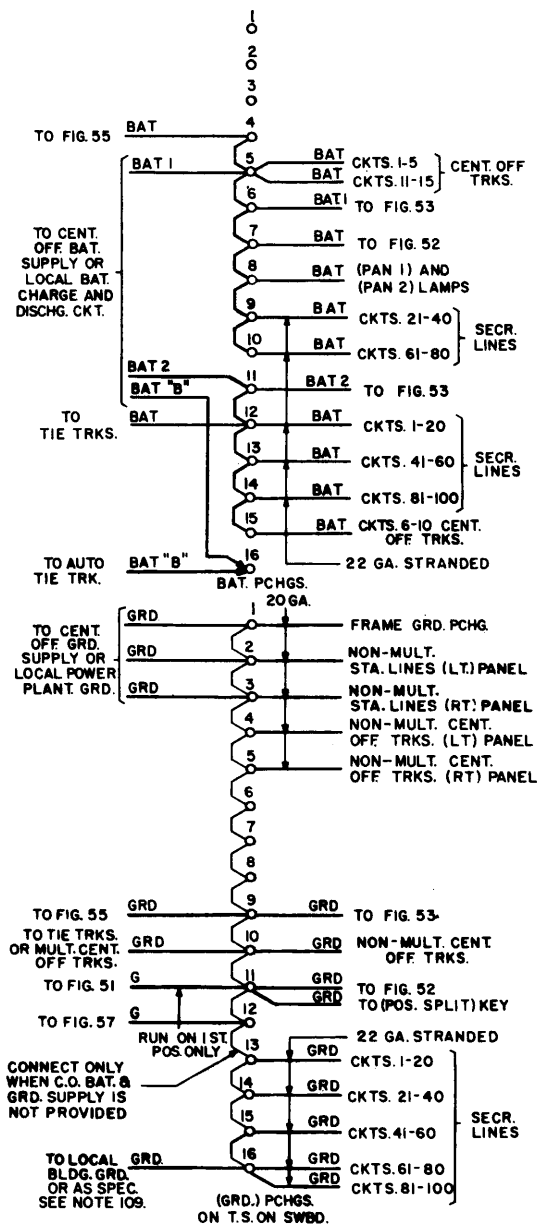


FIG. 55
(FOR FIGS. C, 13 AND 16)

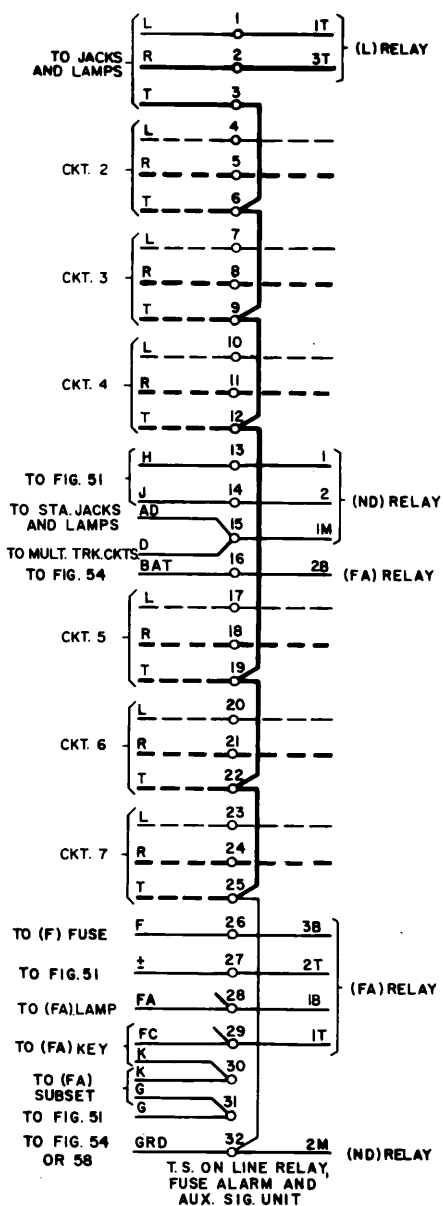


FIG. 56
(FOR FIGS. 7 AND 8)

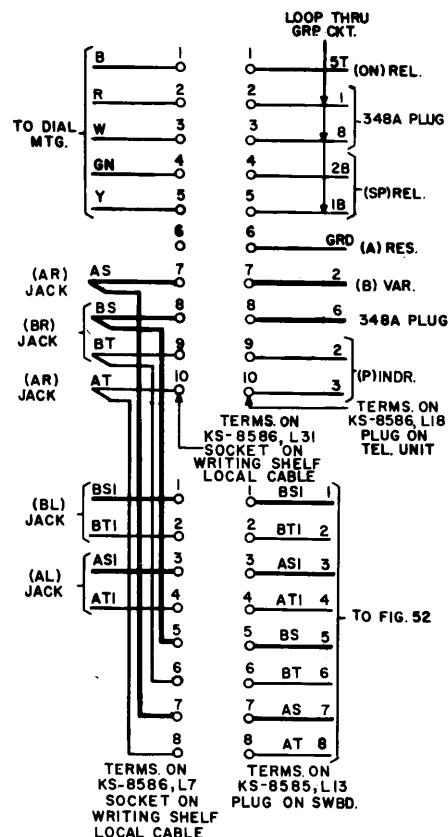


FIG. 57
(FOR FIG. 12)

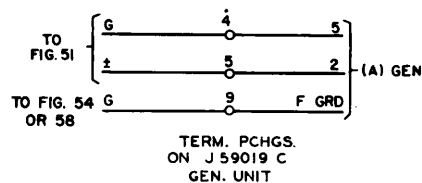


FIG. 58
BAT. AND GRD

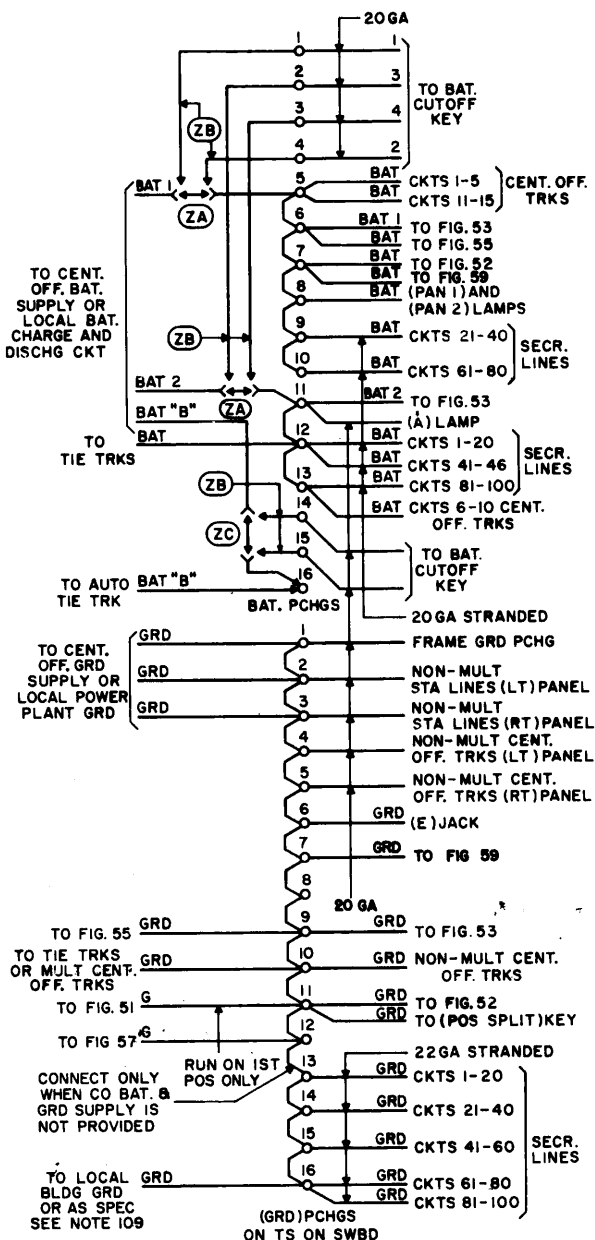


FIG 59
(FOR FIG V)

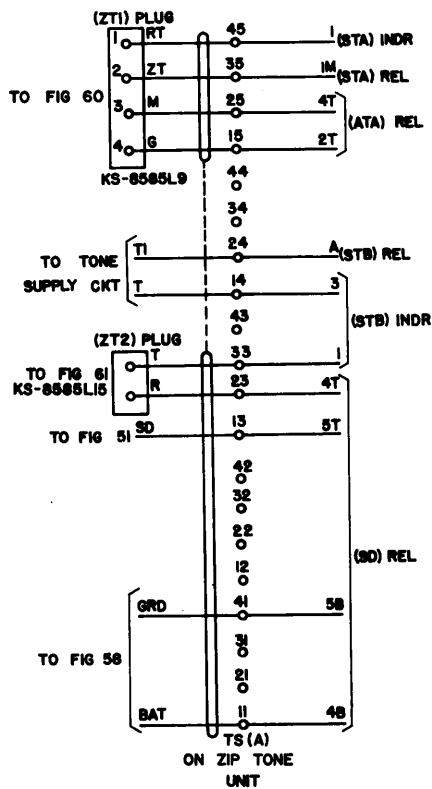


FIG 60
(FOR FIG 2 & R)

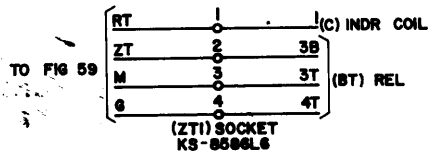
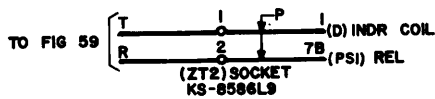


FIG 6I
(FOR FIG 4 & Q)



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DI INS. G. C.

JACK ON, G. C.

KLAISS, M. J.

PERRIN, A. B.

FIG. 53
(FOR PART OF FIGS. 4 AND 6)

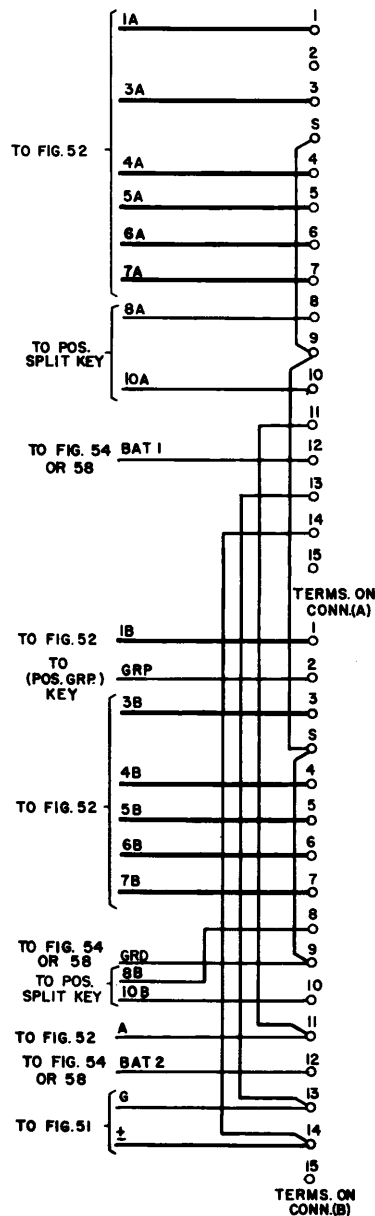


FIG. 54 (MFR DISC.)
BAT AND GRD.

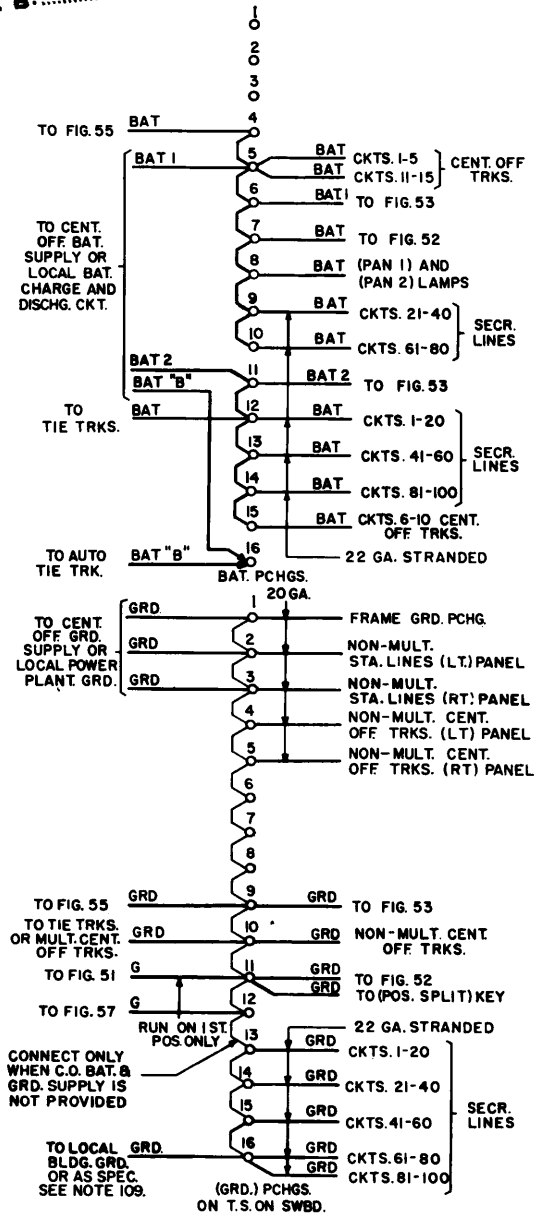
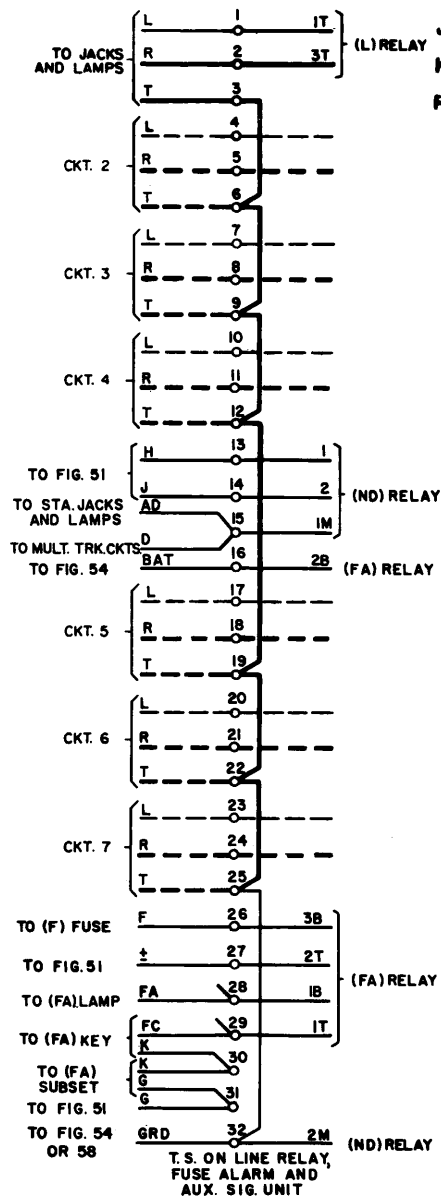


FIG. 55
(FOR FIGS. C, 13 AND 16)



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BURNS, J. G.
DININS, G. C.
JACK ON, G. C.
KEISS, M. J.
FERRIN, A. B.

FIG. 56
(FOR FIGS. 7 AND 8)

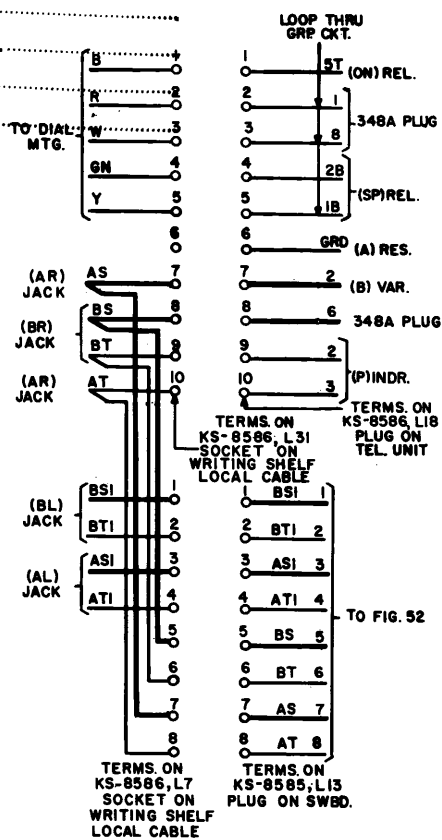


FIG. 57
(FOR FIG. 12)

