SHEET INDEX

FIG.	CONTENTS	SHEET NO.	ISSUE NO. 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	OLD SHEET NO.
	SHEET INDEX SUPPORTING INFORMATION	A1	5	6	7	8	9														
	SHEET INDEX (CONT)	A2	5	6	7	8	9														
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														-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														-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														-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	5	5	5	5														-0102
26 Q R V	TOUCH-TONE CARD DIALER ZIP TONE CKT FOR AUX. TEL CKT ZIP TONE WITH OR WITHOUT BUSY TEST ZIP TONE CKT POS TEL & DIAL	B5			7	8	8														

DWG ISS	CD ISS	DWG ISS	CD ISS	DWG ISS	CD ISS
1	1	2D	2D	3B	3B
4D	4D				

DWG ISSUE	CD ISSUE	DATE ISSUED	DRAWN	APPD
5D	5D	5-21-63	CRA	PJH AFB PD
6D	5D APP 1D	7-8-64	LRG MR	EEM FNR TEB
7D	5D APP 2D	9-7-65	RBB JPK	JAY FNR PEG
8D	5D APP 3D	1-18-67	RBB RBB	CLD FNR PEG
9D	5D APP 4D	12-3-68	JDF RBB	JR FNR HW

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.
6. "OLD SHEET NO." REFERS TO SHEET NO. PRIOR TO ISSUE: 5D

SUPPORTING INFORMATION

CATEGORY	NO.
EQUIPMENT INFO	ED-65843-01

SD-65714-01 IJ05

PBX SYSTEMS

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

(CORD)(TEL)(AUX TEL)

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 3S

AT&TCO STANDARD

SD-65714-01-A1

17 SHEETS

HNDBK DWG

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SHEET INDEX (CONT)

FIG.	CONTENTS	SHEET NO.	ISSUE NO. 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	OLD SHEET NO.
	CIRCUIT NOTES 101 & 102	D1	5	6	7	8	8																-0103
	CIRCUIT NOTES 103 TO END	D2	5	6	7	7	7																-0104
	KEYTOP DIAGRAMS OPTIONS USED TABLE WORKING LIMITS	D3	5	6	7	7	9																-0105
	ELECTROLYTIC CAP. TEST REQT TABLE MIN. & MAX. ALLOWABLE FEEDER RESISTANCES	D4	5	5	5	5	5																-0108 -0106
	TRANSMISSION TEST REQT TABLE	D5	5	6	6	6	6																-0107
	CIRCUIT REQT TABLE	F1	5	5	7	7	7																-0109
51 52	FOR FIG. 6, 11, AND 15 FOR FIG. 3, 4, AND 11	G1	5	5	5	8	8																-0110
53 54	FOR FIG. 4 AND 6 BAT. AND GRD	G2	5	5	5	5	5																-0111
55 56 57	FOR FIG. C, 13, AND 16 FOR FIG. 7 AND 8 FOR FIG. 12	G3	5	5	5	5	5																-0112
58 59 60 61	BAT. AND GRD FOR FIG V FOR FIG 2 & R FOR FIG 4 & R	G4	5	5	5	8	8																-0113

DRAWING ISSUE	
5D	CRA PD
6D	LRG – TAB
7D	RBB JPK PEG
8D	RBB RBB PEG
9D	JDF RBB HJ

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

SD-65714-01-A2

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 3S

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DRAWING ISSUE	
5D	CRA PD
6D	LRG TEB
7D	R&B JRE PEG
8D	BDP RBB PEG

FIG. 3
AUXILIARY SIGNAL CKT.
SEE NOTE 109

TO CHG. & DISCHG. CKT. ARR. FOR V. CONT OR TO "K" LEAD OF FIG. 3 IN SUCC. POS.

TO FIG. 4

TO "CC" LEAD OF FIG. 3 IN PREC. POS.

B KS-13541 50 LF SEE NOTE 103

NL NA NB NC TOP

P-5100Ω S-5200Ω 8A TH.

TO FIG. 6 | TO SECR. LINES IN PANEL 1 | TO SECR. LINES IN PANEL 2 | TO FIG. 16 | TO OTHER FIGS. 3

TO FIG. B OR NON-MULT. TRK. CKT.

TO FIGS. D OR E

FIG. 16
AUXILIARY SIGNAL CKT. FOR MULTIPLE TRUNKS

TO FIRST FIG. 3

ND 3.8Ω

TO FIG. C OR TO MULT. TRK. CKTS.

TO FIG. 8, 24, 25 OR 26

TO FIG. 23

PART OF KS-8585, L18 PLUG

FIG. 2
ATTENDANTS TELEPHONE AND DIAL CKT. UNIT J59013D

P302GGT PLUG

TO FIG. T OR FIG. U

TO FIG. 24 OR 26

DE 446F DIODE

ON

B KS-13491, L1 510Ω

700Ω

SPLIT 498AC

SP

B 274AC INDR. 48Ω 48Ω

A 274L INDR. 2000Ω 2000Ω

A 2 LF

10000Ω

M 2000000Ω KS-13490, L1

C 1818 IND. COIL

SEE NOTE 105

173Ω 2.1Ω

B 38 VAR. 250Ω 520Ω

S 2 LF 15.8Ω

C 1 LF A 1200Ω KS-13491, L2

P 274L 274AJ INDR. 200Ω 12Ω 3 LF

3000Ω KS-13492, L1

13N

TO FIG. 7

PART OF KS-8585, L18 PLUG

TO FIG. M OR R TO FIG. 2

FIG. F

TO FIG. 2

TO FIG. F, G OR S

FIG. S MON

TO FIG. R

498AK

(MFR. DISC.) FIG. G MON 498F

FIG. H

AD4

2500Ω

FIG. J (MFR. DISC.)

TO FIG. 1

FIG. K (MFR. DISC.)

TO FIG. 1

TO FIG. H OR J

TO FIG. K

H 274U INDR. 150Ω

A 19CN 200Ω 100Ω

SEE NOTE 102

H KS-13491, L1 2000Ω KS-13492, L1 1300Ω

FIG. M
BUSY TEST CKT.

KS-13491, L1 5100Ω 620Ω 2500Ω

F D

FIG. 1
CORD. CKT. UNIT J59013E

TO FIG. P OR N

THRU POSITION GROUPING CKT. FIG. 17 OR 18

BAT. SUP FOR FIG. 2

348A PLUG PART OF FIG. 2

MULT. TO CORD CKTS. 9-15

B 212A CONN. PART OF FIG. 6

348A PLUG PART OF FIG. 1

BAT. SUP FOR FIG. 1

TO FIG. 4

FIG. 6
BAT. DISTRIBUTING, GEN. & BAT. KEY & PILOT LAMP CKT.

TO CENT. OFF. BAT. SUP. OR TO BLDG. BAT. OR LOC. BAT. CHG. AND DISCHG. CKT

TO FIG. 22

125 LF KS-14105

TO FIG. 3

PAN1 K2

PAN2 K2

TO FIG. 12

GEN 498M

AC 12L

TO FIG. 15

TO RINGDOWN TIE TRK. CKTS.

TRUNK & STATION LEFT 310

S3B CORD

RING LEFT 583A

TALK AND DIAL 580A

TOP

C K2

K 1200Ω KS-13492, L2

400B OR 400J DIODE

D 400B OR 400J DIODE

L 1200Ω KS-13492, L2

NIGHT & THRU DIAL 581A

T

5T 2500Ω 5B

G 430Ω

KS-13491, L1

CS

1 LF A 1 LF B

SEE NOTE 104

S

7T 2500Ω 7B

RING RIGHT 582A

STATION RIGHT 310

S3B CORD

P1 35Ω

AS A K2

FIG. 8
ROTARY DIAL

D5AJ CORD

D5AD CORD

5H TYPE OR 6R-3

5KB OR 6G

PART OF DIAL MTG.

TO FIG. 2

FIG. T

TO FIG 25

TO FIG 2

KS-8585, L15 PLUG

KS-8586, L9 SOCKET

IM 2M CD 1500Ω

PART OF KS-8586, L31 SOCKET

FIG. U

TO FIG. 2

RB

TO FIG. I

1TF 1BF 2TR 2BR P-520Ω S-520Ω

FIG. N (MFR. DISC.)

RB

TO FIG. I

P-520Ω S-520Ω

FIG. P
SEE NOTES 102, 107, 108

FIG. L

TO FIG. I

C 60 LFD KS-13486

PBX SYSTEMS NO. 557A CORD, TELEPHONE, DIAL, AUXILIARY SIGNAL, STATION LINE, POSITION GROUPING, RINGING AND BATTERY CIRCUITS	SD-65714-01-B1
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DRAWING ISSUE	
5D	CRA PD
60	LRG - TER
70	RRA LRC HEK

(MFR. DISC.)

FIG. 10
POSITION SPLITTING KEY CKT

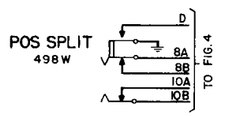
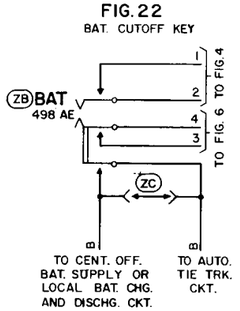


FIG. 22
BAT. CUTOFF KEY



TO CENT. OFF. BAT. SUPPLY OR TO BLDG. BAT. OR LOCAL BAT. CHG. AND DISCHG. CKT. SEE NOTE 109

FIG. 4
AUXILIARY TELEPHONE CKT.

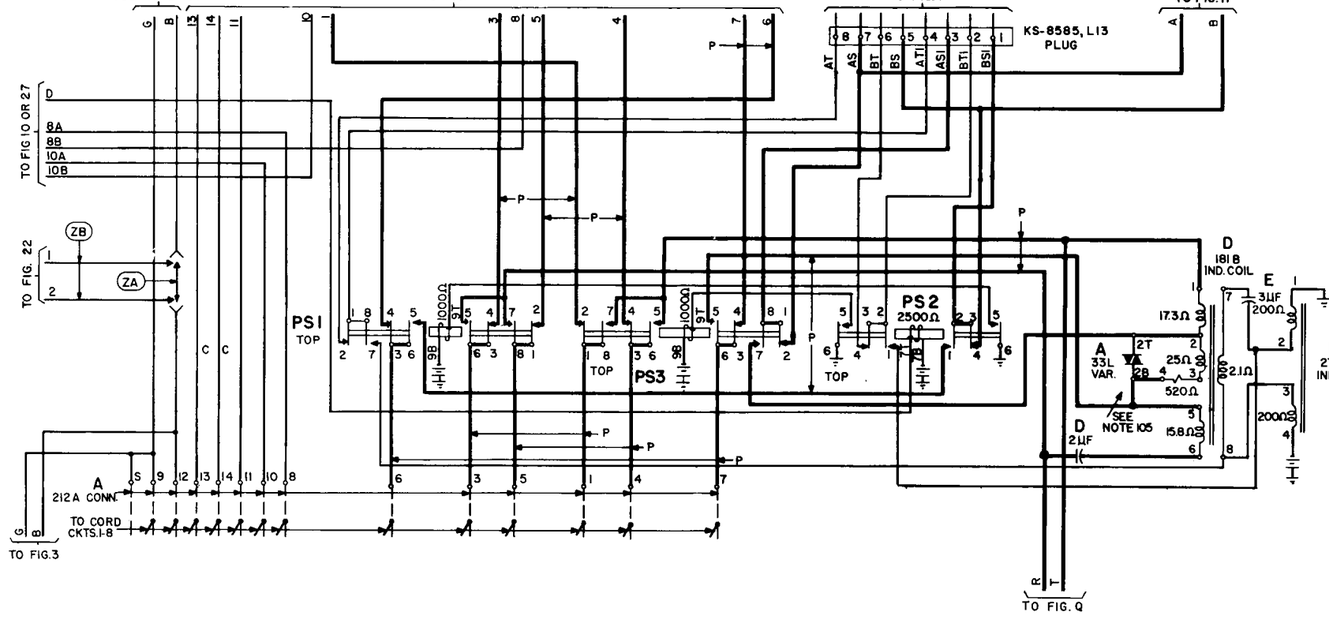


FIG. 11
SERVICE OBSERVING COIL

SO
189E REP. COIL

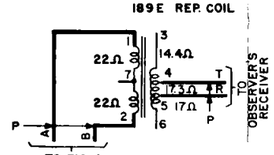


FIG. 24
TOUCH-TONE DIAL

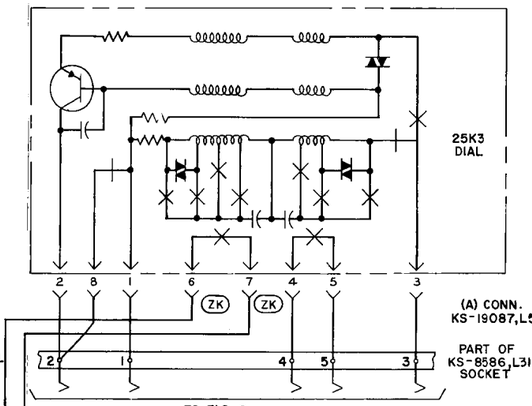


FIG. 23
TOUCH-TONE CALLING, DIAL AUX. CKT.

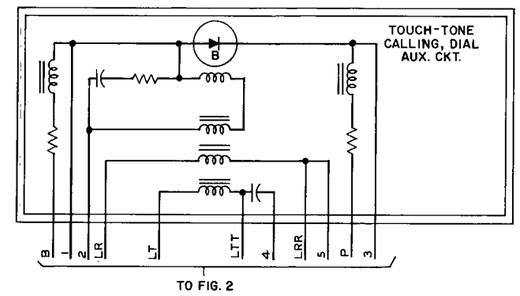


FIG. B

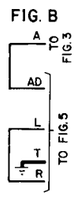


FIG. C
LINE RELAY

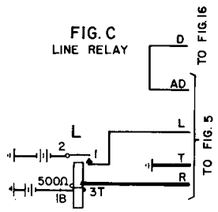


FIG. 5
STATION LINE CKT.

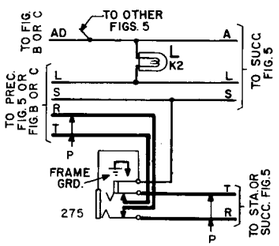


FIG. 27
POSITION SPLITTING KEY CKT.

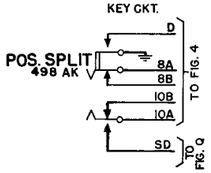


FIG. 7
TELEPHONE SET JACKS

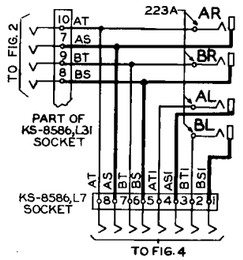
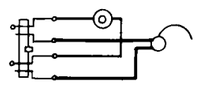
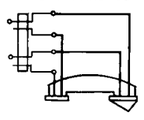


FIG. A
TELEPHONE SET
52A OR 53A HEAD TEL. SET



F2A3 HAND SET



PBX SYSTEMS NO. 557A CORD, TELEPHONE, DIAL, AUXILIARY SIGNAL, STATION LINE, POSITION GROUPING, RINGING AND BATTERY CIRCUITS	SD-65714-01-B2
BELL TELEPHONE LABORATORIES INCORPORATED — DWG SIZE 6S — PRINTED IN U. S. A.	

DRAWING ISSUE

5D	CRA PD
7D	R&S J.P.L. REG.
8D	BDC R&B PEG

FIG. 13
FUSE ALARM RELAY CKT.

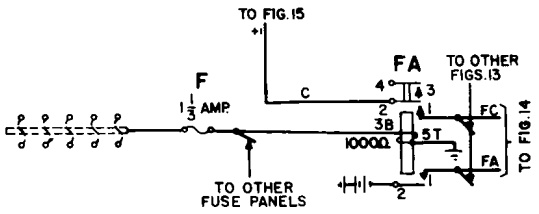


FIG. 14
FUSE ALARM CKT.

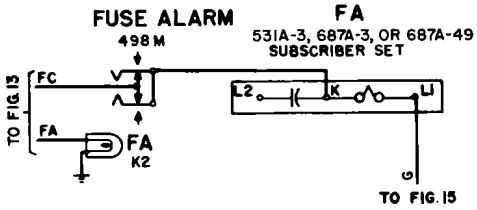


FIG. E
BUZZER FOOT SWITCH

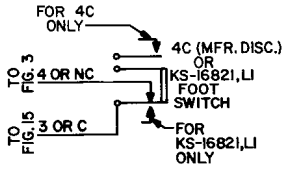


FIG. D

FIG. 15
RINGING SUPPLY & BUZZER

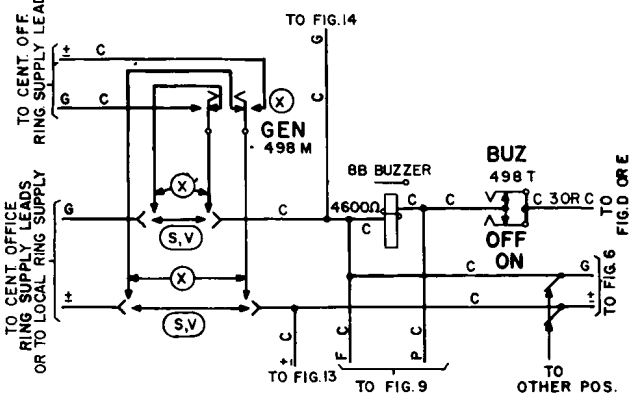


FIG. 12
HAND GENERATOR

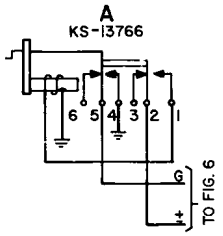


FIG. 9
AUXILIARY RINGER

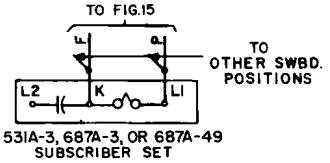


FIG. 25
ROTARY CARD DIALER

PBX SYSTEMS NO. 557A CORD, TELEPHONE, DIAL, AUXILIARY SIGNAL, STATION LINE, POSITION GROUPING, RINGING AND BATTERY CIRCUITS		SD-65714-01-B3
BELL TELEPHONE LABORATORIES INCORPORATED	DWG SIZE 3S	PRINTED IN U.S.A.

DRAWING ISSUE
5D CRA PD

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

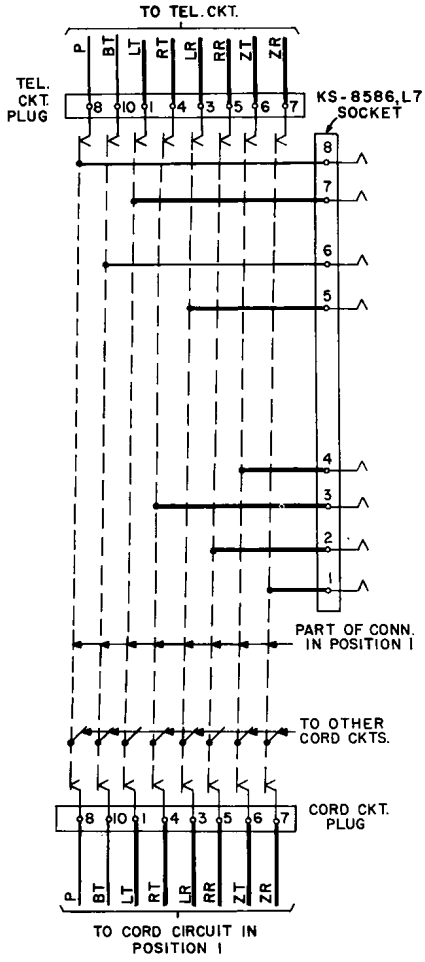


FIG. 18
POSITION GROUPING CIRCUIT
MODIFICATION OF TELEPHONE
CKT. IN POS. NO. 2

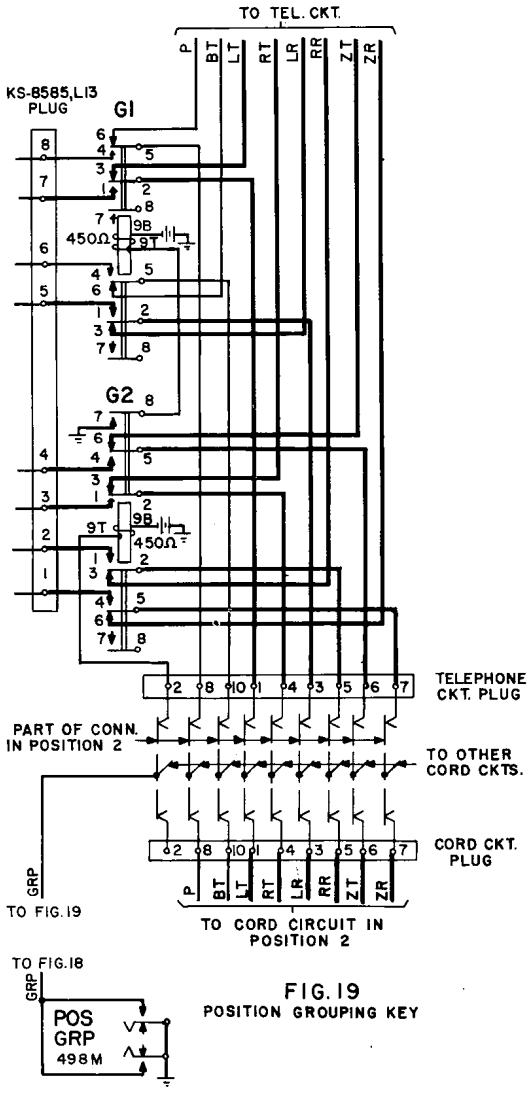


FIG. 19
POSITION GROUPING KEY

FIG. 20
TEAMWORK ANSWER JACK

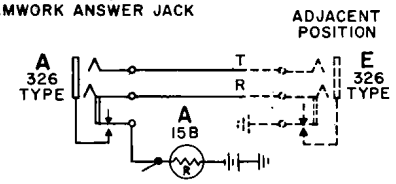
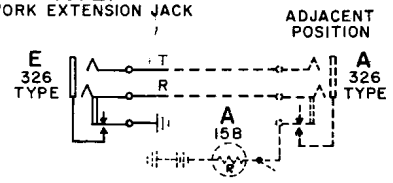


FIG. 21
TEAMWORK EXTENSION JACK



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

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 3S

SD-65714-01-B4

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FIG 26
TOUCH-TONE CARD DIALER

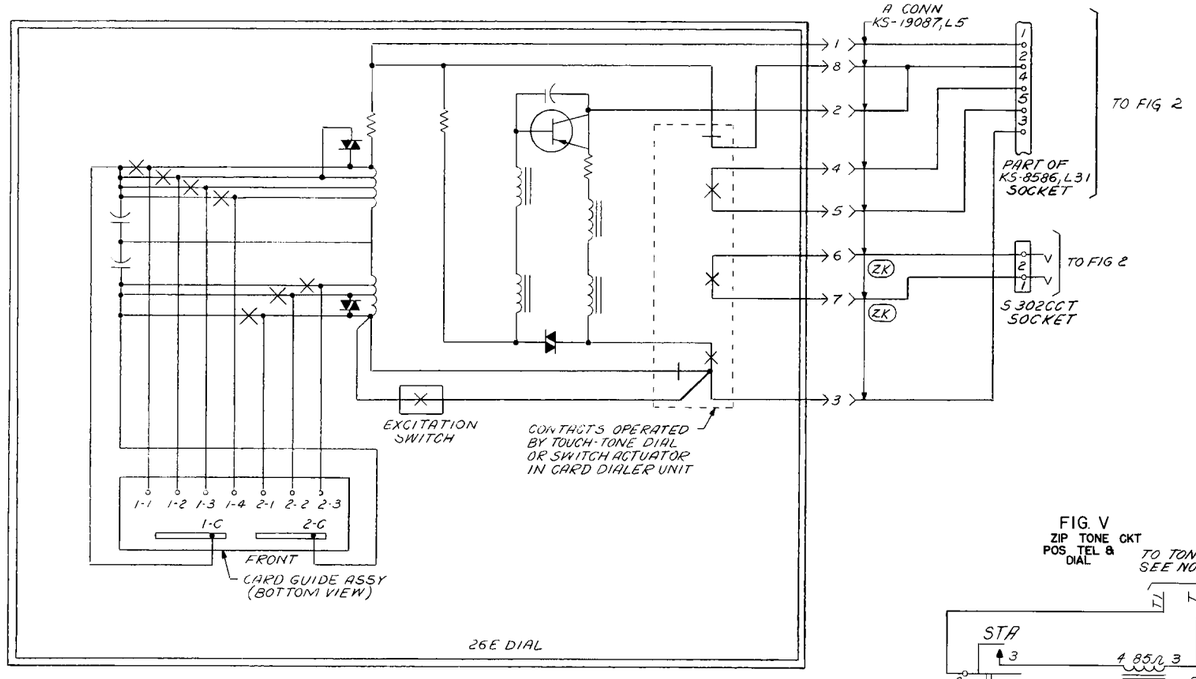


FIG. Q
ZIP TONE CKT
AUX TEL

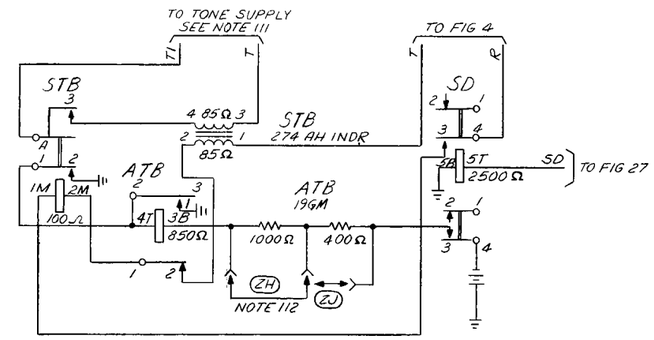


FIG. V
ZIP TONE CKT
POS. TEL & DIAL

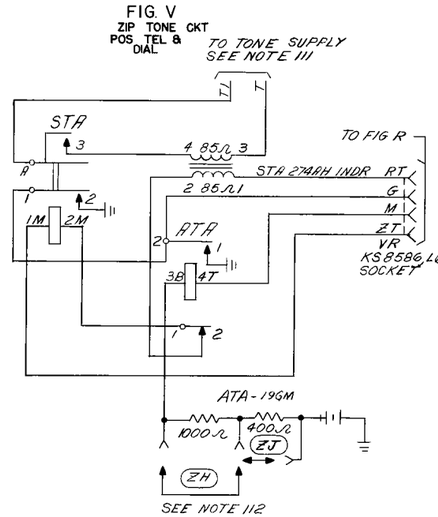
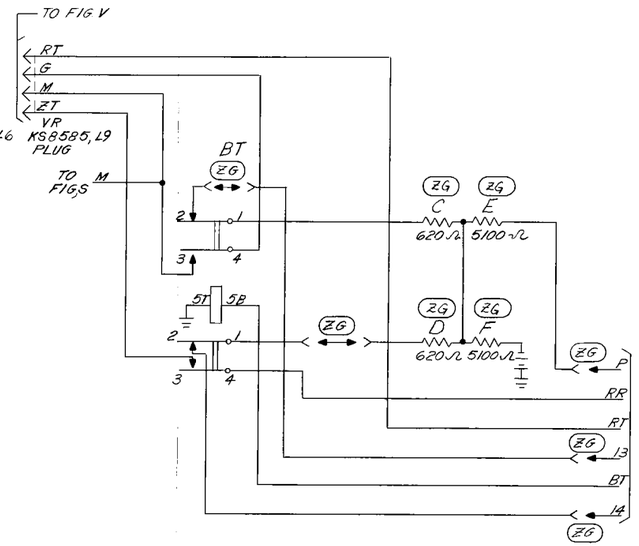


FIG. R
ZIP TONE WITH OR WITHOUT BUSY TEST



DRAWING ISSUE	
7D	UN UPK PEG
8D	RBB RBB PEG.

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

SD-65714-01-B5

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

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14 3/4

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	PROVIDE APP OR WIR	PROVIDE QUANTITY
CORD CIRCUIT					1		
SUPERVISION ON INC TRUNK CALLS & ATT DIALED OUT TRUNK CALLS	THRU ON OUT & NON-THRU ON IN * *				H		MAX 15 PER POS
	THRU * *					H	
	NON-THRU * *					J	
HOLDING BRIDGE RES. SEE WORKING LIMITS * *	TRUNK CONDUCTOR LOOP RES WHEN CENT OFF RANGE IS	635 Ω	885 Ω	1200 Ω			
	150Ω	500 Ω & OVER				F,G	
	250Ω	400 Ω TO 500 Ω	500 Ω & OVER			G	
	350Ω	200 Ω TO 400 Ω	400 Ω TO 500 Ω	900Ω TO 1150Ω		F	
	450Ω	0 TO 200 Ω	0 TO 400 Ω	0 TO 900 Ω			
SUPERVISORY RELAY SHUNT	WHEN CABLE PAIR TO ANY ONE STATION EXCEEDS 1000 FEET INCLUDING BRIDGED TAPS				L		
TELEPHONE AND DIAL CIRCUIT					2 & 7		
DIAL	NOT REQUIRED				8	* ZE	1 PER POS.
	ROTARY	10 P.P.S.			8	Y,ZE	
		20 P.P.S			8	Z,ZE	
	TOUCH-TONE				23;24	ZF	
	CARD DIAL	ROTARY	10 P.P.S.		25,T	ZE,Y	
			20 P.P.S.			ZE,Z	
		TOUCH-TONE			23,26	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	
TOUCH-TONE DIAL EXCLUSION						ZK	
AUX SIG. BAT DIST. AND GEN KEY CKT					3,6		
BUZZER FOOT SWITCH	REQUIRED				E		1 PER INSTAL
	NOT REQUIRED				D		
AUG. SIG. CKT. FOR MULT. TRUNKS					16		1 PER INSTAL
STATION LINE CIRCUIT					5		1 PER APPEARANCE MAX 4 (L) LAMPS
NON MULTIPLE					B		1 PER STA. LINE
MULTIPLE					C		
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		1 PER POS
	POS. GROUPING CKT. FOR POS. NO. 2				18,19		
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 PD
6D	LRG - TEB
7D	PBB LPK PEG
8D	PBB PBB PEG

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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DRAWING ISSUE	
5D	CRA PD
6D	LRG – TEB
7D	RPP JPK AEG

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-16821 L1		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 ZG	NONE		ZG			
7D	FIG Q	NONE		FIG Q			
7D	ZK	NONE		ZK			
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

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

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DWG SIZE 3S

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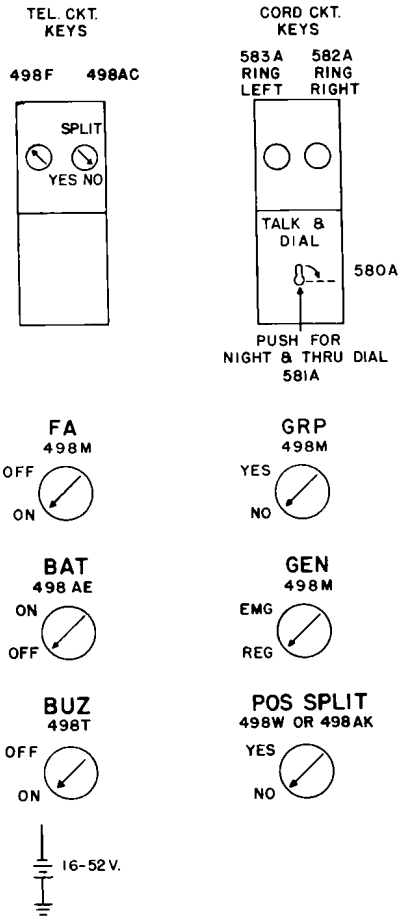
DRAWING ISSUE	
5D	CRA · PD
6D	LRG ~ TEB
7D	RPP WPK PEG
9D	JDF RBB HW

OPTIONS USED			
FIGS.		APP. OR WIRING	
1	A	Z	ZC
2	B	Y	ZD
3	C	X	ZE
4	D	W	ZF
5	E	V	ZG
6	F		ZH
7	G	T	ZJ
8	H	S	ZK
9	J	R	
10	K		
11	L	P	
12	M	N	
13	N	M	
14	P	K	
15	Q	J	
16	R	H	
17	S	G	
18	T	F	
19	U	E	
20		D	
21		B	
22		A	
23		ZA	
24		ZB	
25			
26			
27			



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).

PBX SYSTEMS
NO. 5-7A
CORD, TELEPHONE, DIAL, AUXILIARY SIGNAL, STATION LINE, POSITION GROUPING, RINGING AND BATTERY CIRCUITS

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DWG SIZE 3S

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DRAWING ISSUE

5D | CRA PC

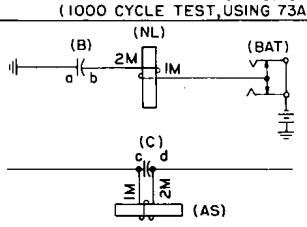
MINIMUM AND MAXIMUM ALLOWABLE FEEDER RESISTANCES FROM 45-52 VOLT BATTERY ONE HALF OF ONE POS.

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 600Ω LINES)



OVERALL LOSSES

TEST	TEST CONNECTIONS: TEST SET TERMINALS	TEST CONNECTIONS: 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 CONNECTIONS: TEST SET TERMINALS	TEST CONNECTIONS: CONNECT TO	+MIN. LOSS IN db	REMARKS
CAPACITOR	B	KS-13541				
CAPACITOR	C	KS-13486				

NOTES:
1. 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.

PBX SYSTEMS
NY-5-7A
CORD, TELEPHONE, DIAL, AUXILIARY SIGNAL, STATION LINE, SWITCHING GROUP RINGING AND BATTERY CIRCUITS

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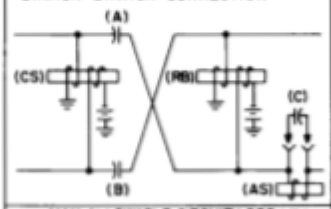
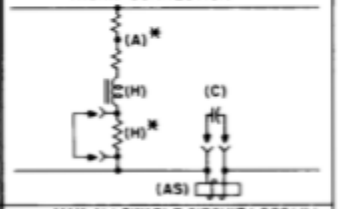
TRANSMISSION TEST REQUIREMENTS
(1000 CYCLE LOSS BETWEEN 600Ω LINES)

STATION-STATION CONNECTION



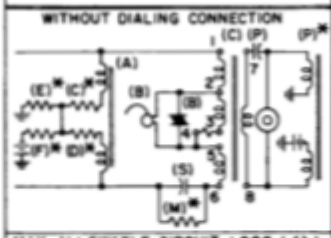
MAX. ALLOWABLE CIRCUIT LOSS (db)	
WITHOUT (C) CAPACITOR	1.0
WITH (C) CAPACITOR	0.5

TRUNK CONNECTION



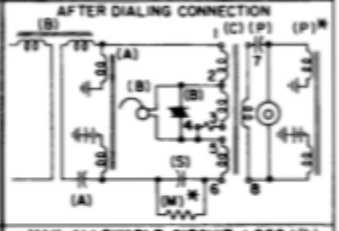
MAX. ALLOWABLE CIRCUIT LOSS (db)	
WITHOUT (C) CAPACITOR	0.7
WITH (C) CAPACITOR	0.2

WITHOUT DIALING CONNECTION



MAX. ALLOWABLE CIRCUIT LOSS (db)		
TEMP. °F	TRANS.	REC.
ANY	10.5	
70°		6.1
80°		6.3
90°		6.5
100°		6.6
110°		6.8

AFTER DIALING CONNECTION



MAX. ALLOWABLE CIRCUIT LOSS (db)		
TEMP. °F	TRANS.	REC.
ANY	11.4	
70°		7.0
80°		7.2
90°		7.4
100°		7.5
110°		7.7

INDIVIDUAL APPARATUS LOSSES (db)

APPARATUS	DESIG.	CODE	MAX LOSS	MIN LOSS	REMARKS
CAPACITOR	P	3 MF	17.2	15.1	
CAPACITOR	A,S	2 MF	13.7	11.7	
CAPACITOR	A,B	1 MF	8.3	6.6	
CAPACITOR	C	SEE ELECTROLYTIC CAPACITOR TEST REQUIREMENTS			
IND. COIL	C	1818	11.1	9.3	
RELAY	AS	B1177	0.6		
RELAY	CS	UA97	0.1		
RELAY	RB	UA98	0.1		
INDR.	A	274L	0.1		
		274AJ			
INDR.	B	274AC	1.0		TESTED AS REP COIL
INDR.	H	274U	0.1		
VARISTOR		38			SEE NOTE 1

NOTES:

1. FOR METHOD OF MAKING INDIVIDUAL APPARATUS LOSS TEST, SEE BSP IN "K" SERIES

REQUIREMENTS USING 12 db PAD

ROOM TEMPERATURE	70°	80°	90°	100°	105°
INDIVIDUAL LOSS (38 VAR)	0.4	0.5	0.6	0.7	0.8

LOSSES FOR TEMPERATURES OTHER THAN THOSE LISTED ABOVE MAY BE DETERMINED BY INTERPOLATION.

* INDICATES APPARATUS FOR WHICH INDIVIDUAL LOSSES ARE NOT REQUIRED.

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

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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: 5D CRA; 6D RPB JPK PEG; 7D PBB JPK PEG

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT.	APPARATUS FIG.		MECH REQT BSP FIG.	MECH REQT CONT PRES	MECH REQT ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	CIRCUIT PREPARATION TEST CLIP DATA CONN BAT.	CIRCUIT PREPARATION TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	DIRECT CURRENT FLOW REQT TEST FOR	DIRECT CURRENT FLOW REQT AFTER SOAK MA	DIRECT CURRENT FLOW REQT TEST MA	DIRECT CURRENT FLOW REQT READJ MA	REMARKS
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		1		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		1		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	U 841		2		192/192	H	29		3T (DE)	3B (DE)	B/G			O		10	9.5	
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:

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

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DRAWING ISSUE	
5D	CRA PD
8D	BDP RBB PEG

FIG. 51
(FOR FIG. 15, AND PARTS OF FIGS. 6 AND 11)

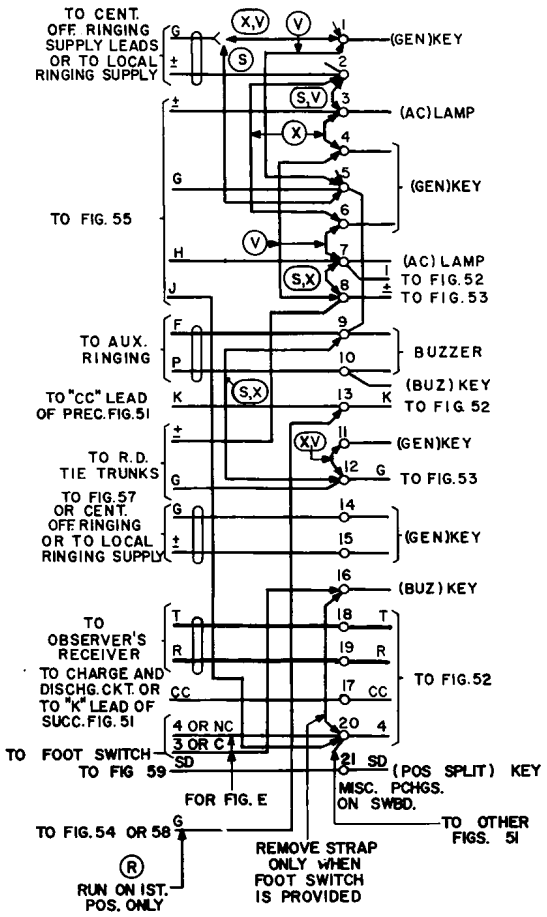
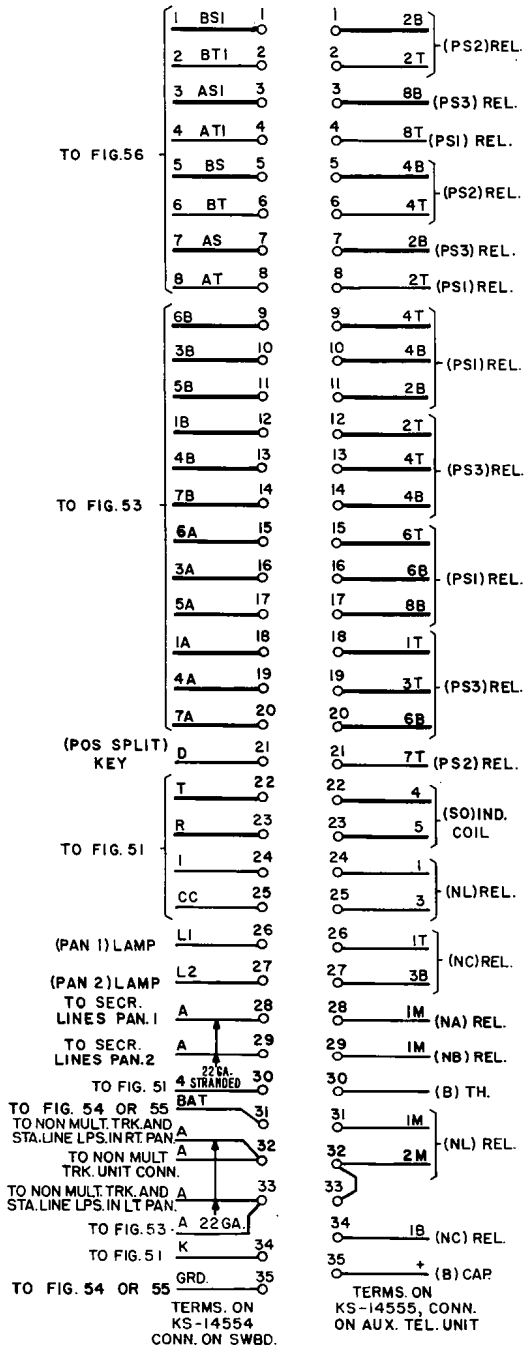


FIG. 52
(FOR FIGS. 3, 4 AND 11)



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

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DRAWING ISSUE
5D CRA PD

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

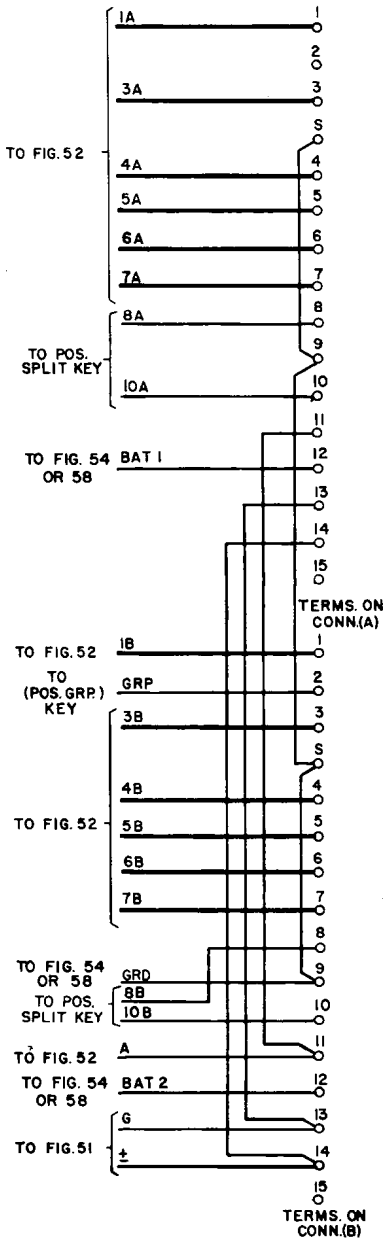
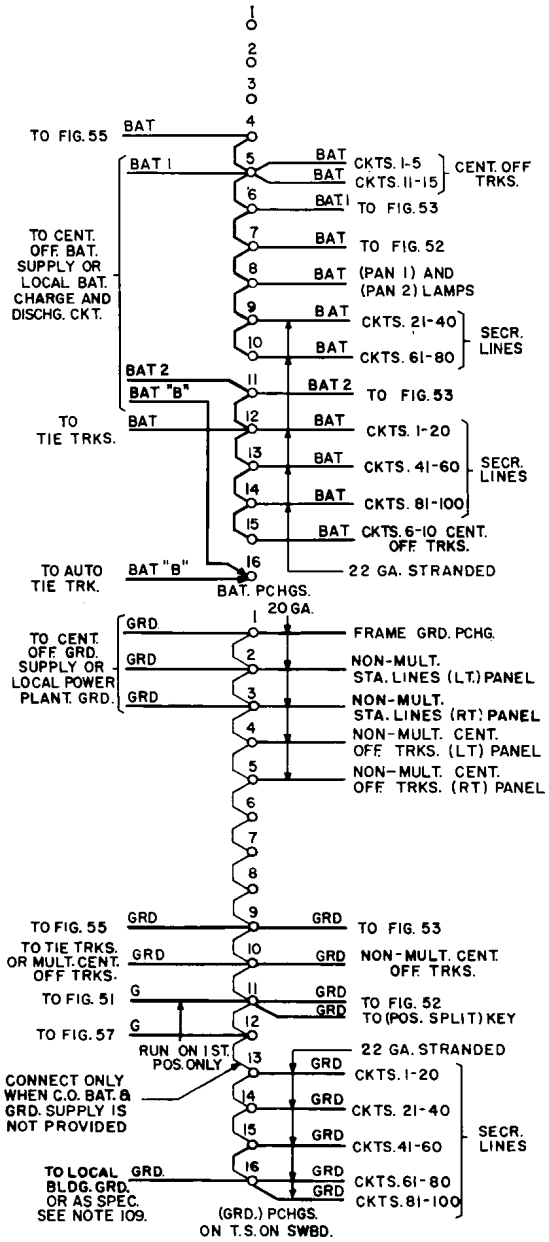


FIG. 54 (MFR DISC.)
BAT. AND GRD.



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

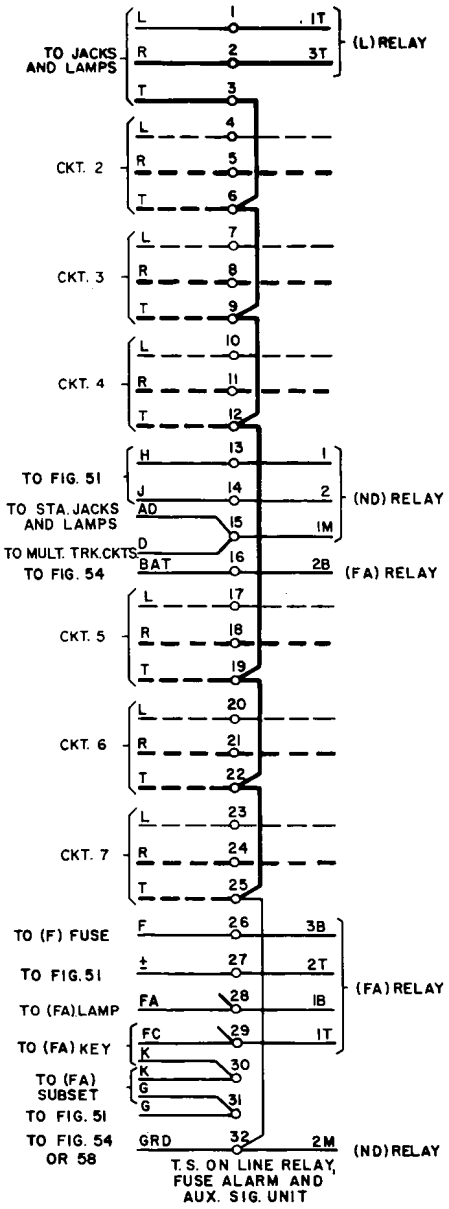

FIG. 56
(FOR FIGS. 7 AND 8)

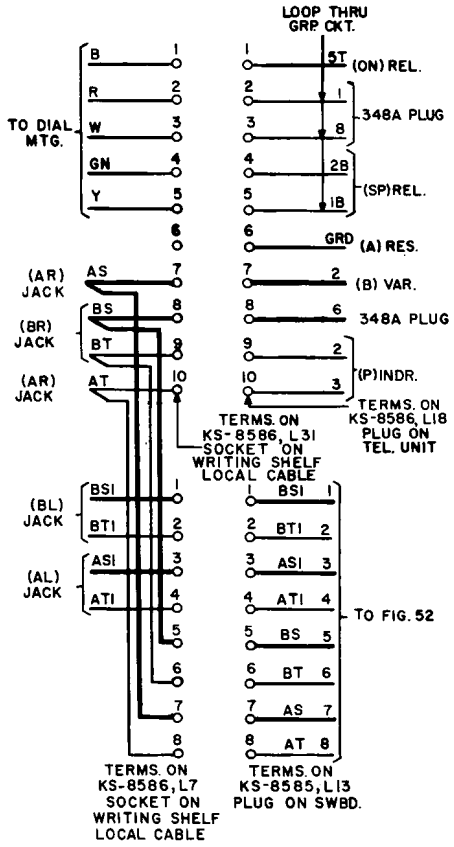

FIG. 57
(FOR FIG. 12)

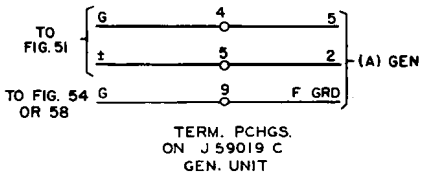

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FIG. 58
BAT. AND GRD

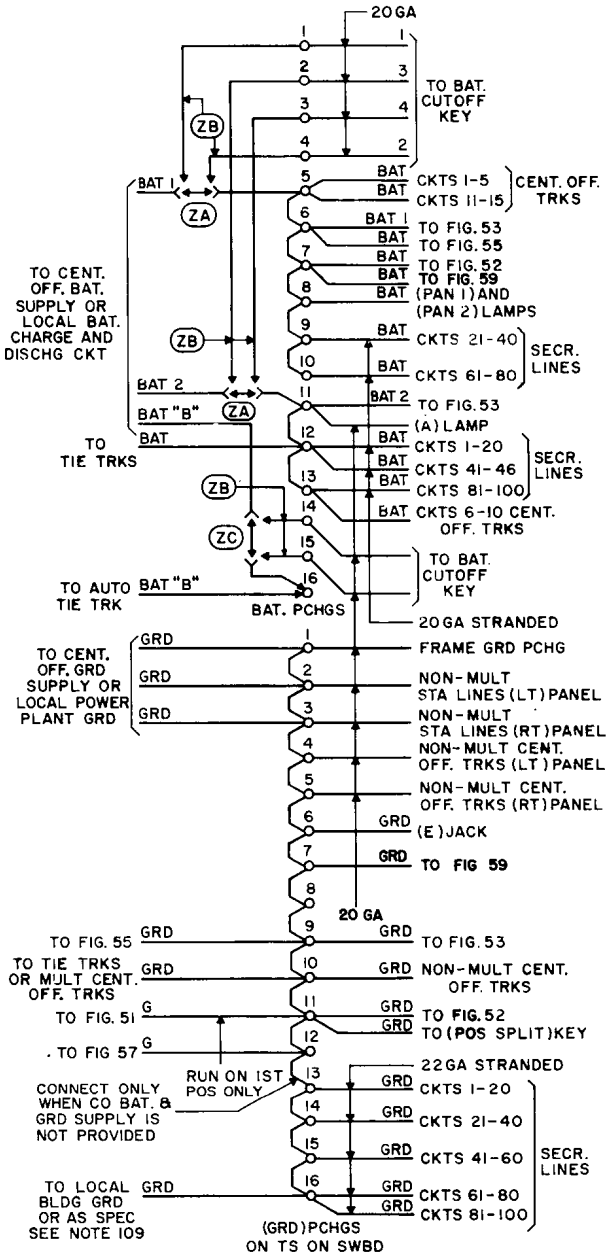


FIG 59
(FOR FIG V)

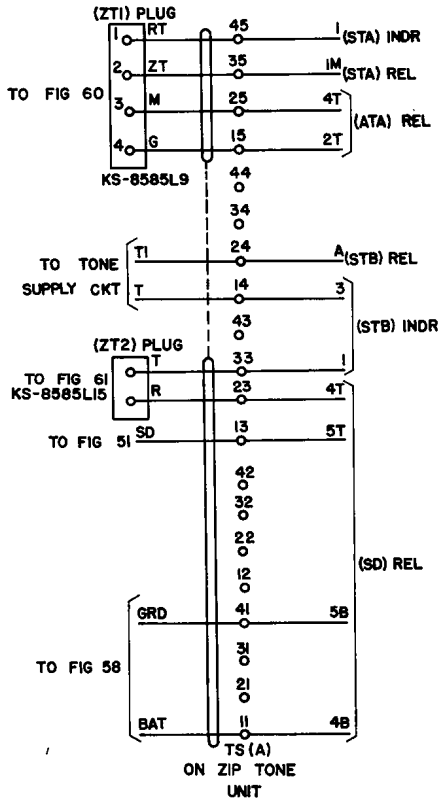


FIG 60
(FOR FIG 2 & R)

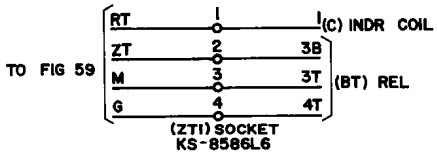
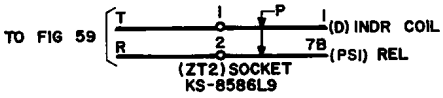


FIG 61
(FOR FIG 4 & Q)



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