SHEET INDEX

FIG.	CONTENTS	SHEET NO.	ISSUE NO. 20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	OLD SHEET NO.
	SHEET INDEX SUPPORTING INFORMATION	A1	20	21	22	23	24														
1 2 5 6 D F G L P Q	CORD CKT ATTENDANTS TELEPHONE AND DIAL CKT STATION LINE CKT BATTERY, BUZZER, AND RINGING SUPPLY CKT	B1	20	21	22	23	24														-011
7 A B C E H J K M N O	TELEPHONE SET JACKS HEAD TELEPHONE SET HANDSET BRACKET TRANSMITTER AND HEADSET BUZZER FOOTSWITCH BUSY TEST CKT	B2	20	21	22	22	24														-011
3 4 9	CENTRAL OFFICE TRK CKT TRK CABLE CKT CENTRAL OFFICE TRK CKT	B3	20	21	22	22	22														-016
8 12	FOR ROTARY DIAL FOR TOUCH-TONE DIAL	B4		21	22	22	22														
13	FOR TOUCH-TONE DIAL	B5			22	22	22														
	CIRCUIT NOTES 101 & 102 OPTIONS USED TABLE KEYTOP DIAGRAMS	D1	20	21	22	23	24														-012
	CIRCUIT NOTES 103 TO END EQUIPMENT NOTES	D2	20	21	22	23	24														-012 -015
	MIN & MAX FEEDER RES TABLES WORKING LIMITS	D3	20	20	20	20	20														-012
	TRANSMISSION TEST REQT TABLE	D4	20	21	21	21	24														-015
	TRANSMISSION TEST REQT TABLES ELECTROLYTIC CAP. TEST REQT TABLE	D5	20	20	20	20	20														-015
	CIRCUIT REQT TABLE	F1	20	20	20	20	20														-013
51 52 53	FOR FIG. 1 & 2 FOR FIG. 3 & 4 FOR FIG. 5	G1	20	21	22	22	22														-014
54 55 56	FOR FIG. 6 FOR FIG. E FOR FIG. 4 & 9	G2	20	21	21	21	21														-014
57 58 59	FOR FIG. 12 CONN FOR TOUCH-TONE DIAL FOR FIG 13	G3		21	22	22	22														

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: 20D

SUPPORTING INFORMATION

CATEGORY	NO.
EQUIPMENT INFO	ED-65659-01 ED-65665-01 ED-65663-01 ED-65667-01

DWG ISS	CD ISS	DWG ISS	CD ISS	DWG ISS	CD ISS
1	1	2A	2A	3A	3A
4A	4A	5D	5D	6A	6A
7D	7D	8D	8D	9B	9B
10D	10D	11D	11D	12D	12D
13D	13D	14D	14D	15B	15B
16B	16B	17B	17B	18D	18D
19D	19D				

DWG ISSUE	CD ISSUE	DATE ISSUED	DRAWN	APPD
20D	19D APP1D	6-4-63	CRA	LEV Evol PD
21D	19D APP 2D	4-28-64	S.P HP	EEM FNR TEB
22B	19D APP 3B	2-21-66	P.B.B. J.P.K.	E.E.M. F.N.R. PEG
23B	19D APP 4B	6-16-66	JK JPK	EEM FNR PEG
24D	19D APP 5D	8-16-72	AGV	RT RVL AFR

SD-66520-01 2J05

PBX SYSTEMS

NO. 555
CORD, TELEPHONE, DIAL, CENTRAL OFFICE TRUNK, STATION LINE, BUZZER, RINGING, AND BATTERY CIRCUITS

A&M ONLY

(2) SD-66520-01-AI

15 SHEETS

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 3S

PRINTED IN U.S.A.

HNDBK DWG

FIG. 6 (MFR DISC.)
BATTERY, BUZZER, AND RINGING SUPPLY CKT.

FIG. 2
ATTENDANTS TELEPHONE AND DIAL CKT

FIG. 1
CORD CKT

FIG. Q
SEE NOTES 102, 108 & 109

FIG. P (MFR DISC)

FIG. F

FIG. G

FIG. L

FIG. 5 (A & M ONLY)
STATION LINE CKT.

DRAWING ISSUE	
20D	CRA PD
21D	SP HF TEA
22B	GGG JPK PEG
23B	JK JPK PEG
24D	

NO. 555 CORD, TELEPHONE, DIAL, CENTRAL OFFICE TRUNK, STATION LINE, BUZZER, RINGING, AND BATTERY CIRCUITS	SD-66520-01-B1
BELL TELEPHONE LABORATORIES INCORPORATED	DWG SIZE 6S

DRAWING ISSUE	
20D	CRA PD
21D	S.P. T.E.B.
22B	R.B.B. J.P.K. R.E.G.
24D	

FIG. 7 (MFR DISC.)
TELEPHONE SET JACKS

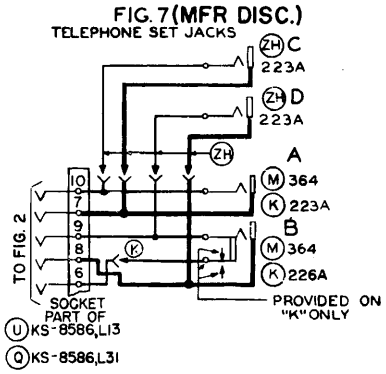


FIG. A
HEAD TELEPHONE SET
(MFR. DISC.) 52A
52S OR 53A
HEAD TELEPHONE SET

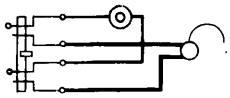


FIG. C
(SPECIAL)
BRACKET TRANSMITTER & HEAD SET
(MFR DISC.) 289B

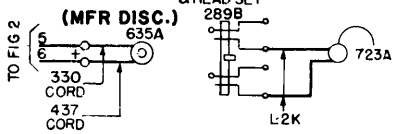


FIG. B
HAND SET
F2A3 HAND SET

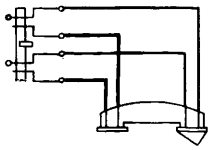


FIG. E (A & M ONLY)
BUZZER FOOT SWITCH

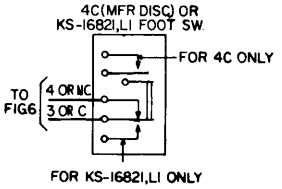


FIG. H

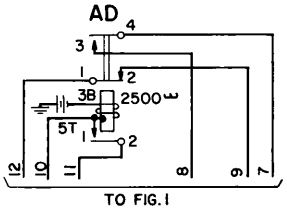


FIG. J
(MFR DISC.)

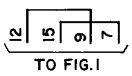


FIG. K
(MFR DISC)

FIG. M
BUSY TEST CKT

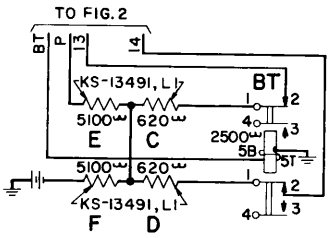


FIG. N
(MFR. DISC.)
C
178D
IND. COIL

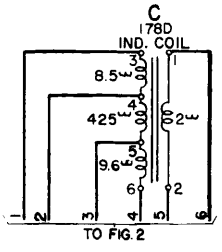
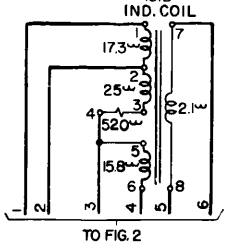


FIG. O
C
1818
IND. COIL



24

NO. 555 CORD, TELEPHONE, DIAL, CENTRAL OFFICE TRUNK, STATION LINE, BUZZER, RINGING, AND BATTERY CIRCUITS		SD-66520-01-B2
BELL TELEPHONE LABORATORIES INCORPORATED	DWG SIZE 3S	PRINTED IN U.S.A.

DRAWING ISSUE	
20D	CRA PD
21D	S.P. JWP T.E.B.
22B	R.B.B. J.R.K. R.E.G.

FIG. 4 (MFR DISC.)

TRUNK CABLE CKT.

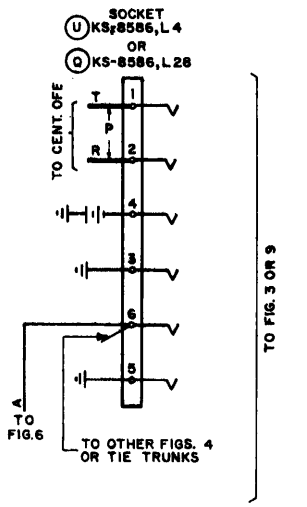


FIG. 3 (MFR. DISC)

CENTRAL OFFICE TRK. CKT.

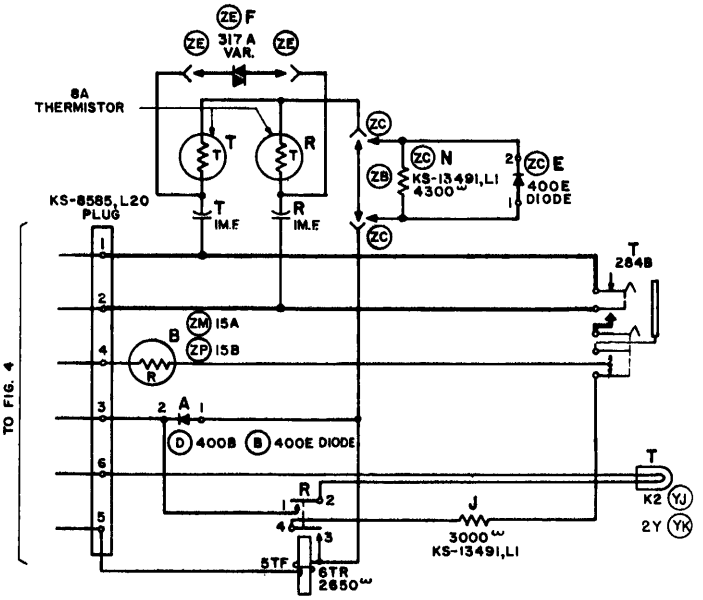
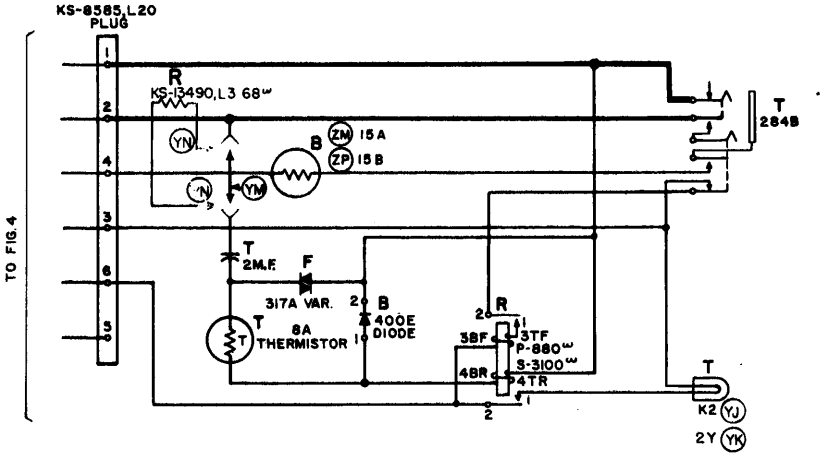


FIG. 9

CENTRAL OFFICE TRK. CKT.



PBX SYSTEMS
NO. 555
CORD, TELEPHONE, DIAL, CENTRAL OFFICE TRUNK, STATION LINE, BUZZER, RINGING, AND BATTERY CIRCUITS

SD-66520-01-B3

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 3S

PRINTED IN U.S.A.

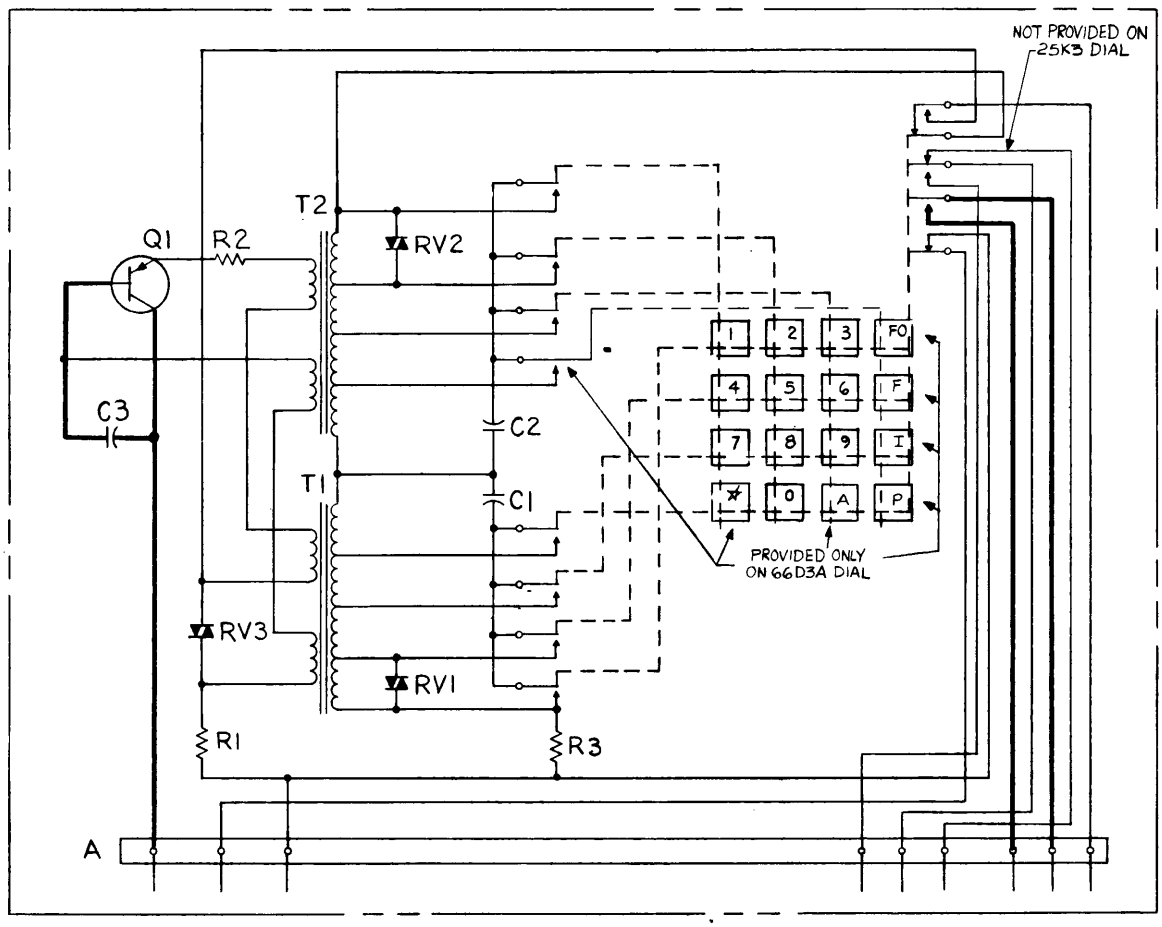
SD-66520-01-B3

14 3/4

21

FIG. 12 (MFR DISC.)

FOR TOUCH-TONE DIAL OPTION (YG)
25K3, 2553 OR 66D3A TOUCH-TONE DIAL



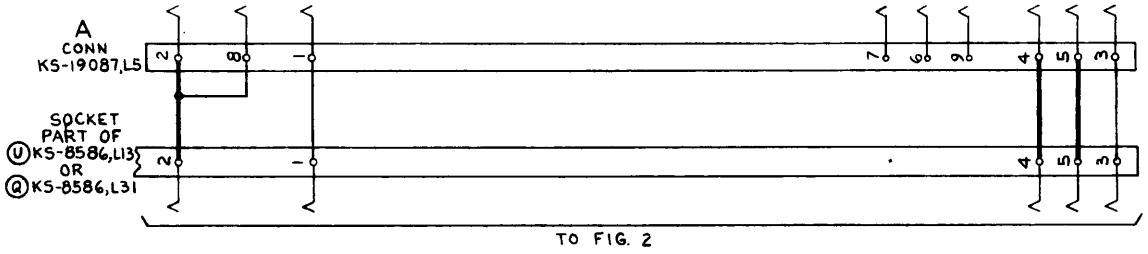
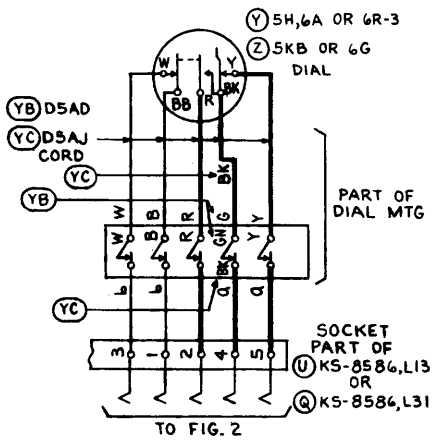


FIG. 8 (MFR DISC.)

FOR ROTARY DIAL



DRAWING ISSUE	
21D	S.P. ~~W~~ T.E.B
22B	R.B.B. J.P.K. A.E.G.

22

PBX SYSTEMS
NO. 555
CORD, TELEPHONE, DIAL, CENTRAL OFFICE TRUNK, STATION LINE, BUZZER, RINGING, AND BATTERY CIRCUITS

(2)

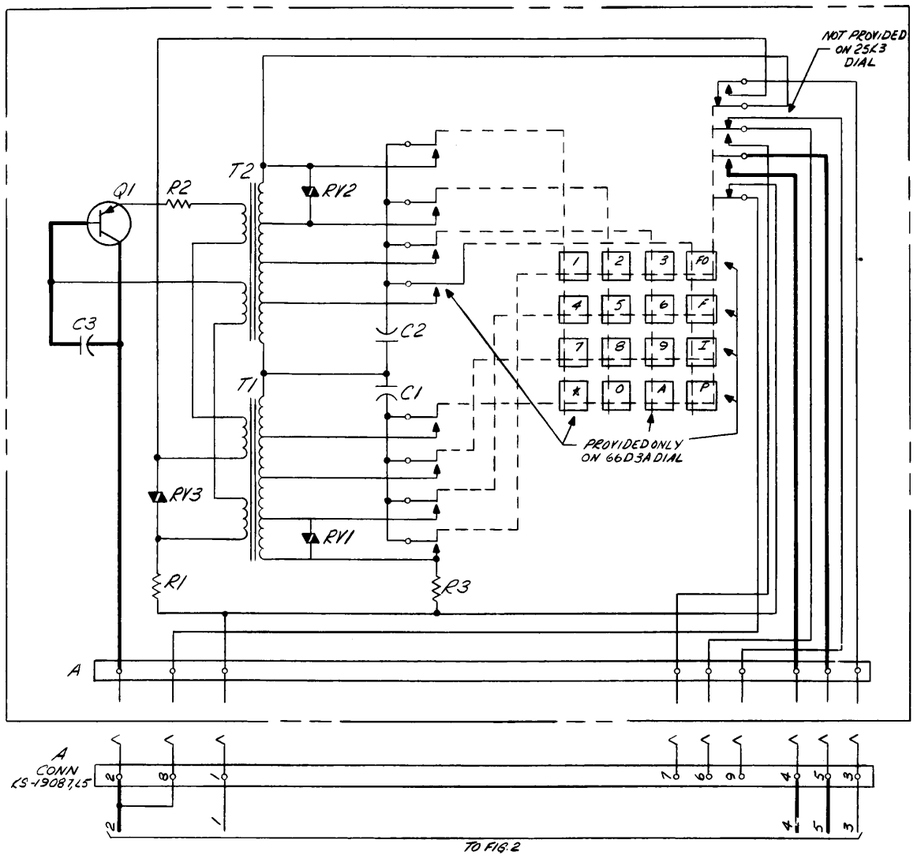
SD-66520-01-B4

BELL TELEPHONE LABORATORIES
INCORPORATED

DWG SIZE 3S

PRINTED IN U.S.A.

FIG.13 (MFR DISC.)
FOR TOUCH-TONE DIAL OPTION (YH)
25K3-2553 OR 66D3A TOUCH-TONE DIAL



DRAWING ISSUE
22B EGA JPK PEG

32

PBX SYSTEMS
NO. 555
COMB. TELEPHONE, DIAL, CENTRAL OFFICE TRUNK, STATION LINE, BUZZER, RINGING, AND BATTERY CIRCUITS

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 6S

SD-66520-01-B5

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14 3/4

CIRCUIT NOTES:

101. PROVIDE ONE FUSE PER POSITION IN BATTERY SUPPLY LEAD IN:
1. LOCAL PBX BATTERY CHARGE AND DISCHARGE CIRCUIT 1 1/3 AMP. FUSE.
2. BUILDING PBX BATTERY CHARGE AND DISCHARGE CIRCUIT 1 1/3 AMP. FUSE.
3. CENTRAL OFFICE BATTERY SUPPLY CIRCUIT FOR PBX'S 1 1/3 AMP. FUSE.

102.

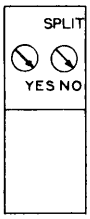
FEATURE OR OPTION					PROVIDE FIGS.	PROVIDE APP OR WIR.	PROVIDE QUANTITY
CORD CIRCUIT					J		MAX. 15 PER POS.
SUPERVISION ON INC. TRUNK CALLS & ATT	THRU ON OUT & NON-THRU ON IN				H		
	THRU					ZX†	
	NON-THRU					ZW†	
DIALED OUT TRUNK CALLS							
HOLDING BRIDGE RES. SEE WORKING LIMITS	TRUNK CONDUCTOR LOOP RES. WHEN CENT. OFF. RANGE IS	635~	885~	1200~			
	150~	500~ & OVER				ZY,ZZ†	
	250~	400~ TO 500~	500~ & OVER		*	ZY†	
	350~	200~ TO 400~	400~ TO 500~	900~ TO 1150~		ZZ†	
	450~	0 TO 200~	0 TO 400~	0 TO 900~			
SUPERVISORY RELAY SHUNT	WHEN CABLE PAIR TO ANY ONE STATION EXCEEDS 1000 FEET INCLUDING BRIDGED TAPS. (SEE NOTE 107)				L		
TELEPHONE AND DIAL CIRCUIT					2		1 PER POSITION
DIAL	~~NONE REQUIRED~~				~~8~~	~~* YF~~	
	~~ROTARY~~	~~10 PPS.~~			~~8~~	~~Y, YF~~	
		~~20 PPS.~~			~~8~~	~~, YF~~	
	~~TOUCH-TONE~~				~~12~~	~~YG~~	
	ROTARY AND TOUCH-TONE	ROTARY 10 PPS				YH	Y
		ROTARY 20 PPS					Z
~~MONITORING~~					~~s~~		
WITHOUT MONITORING					r		
HEAD SET					~~m~~		
HAND SET					~~n~~		
~~BRACKET TRANSMITTER AND HEAD RECEIVER~~					~~p~~		
BUSY TEST ON IDLE CORD CIRCUIT					~~w~~		
TRUNK CIRCUIT					4,9		1 PER TRK
STATION LINE CIRCUIT	ARRANGE FOR MESSAGE WAITING CIRCUIT				5	ZS	1 PER STA. LINE
	NOT ARRANGED FOR MESSAGE WAITING SERVICE					ZT	
~~BATTERY BUZZER AND RINGING SUPPLY CIRCUIT~~					~~6~~		1 PER POS.
BUZZER FOOT SWITCH					E		
~~OTHERWISE~~					~~11~~		
WHEN CONNECTION TO CRASH ALARM CKT. IS REQUIRED						A	
WHEN CONNECTION TO EMERGENCY REPORTING LINE CKT IS REQUIRED						ZA	
~~TELEPHONE SET JACKS~~		~~ONE REQ.~~			~~7~~		~~1 PER POS.~~
		~~TWO REQ.~~			~~3~~	~~ZH~~	
HAND GENERATOR		REQ				ZK	1 PER POS.
		NOT REQ.				ZJ	
SWD. LAMPS WHEN PBX VOLTAGE IS	16-52V					YJ	AS REQ.
	44-52V AND TEL. CO. APPROVES					YK	

† SEE NOTES 108 & 109.

* SPLICE LEADS a & b.

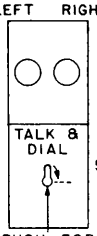
TEL. CKT. KEYS

498F 498AC



CORD CKT. KEYS

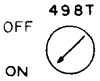
583A RING LEFT 582A RING RIGHT



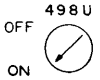
PUSH FOR NIGHT & THRU DIAL 581A

(MFR. DISC.)

BUZ 498T



BAT 498U



BAT 498AN

OPTIONS USED				
FIGS.		APP OR WIRING		
1	A	Z	ZC	YH
2	B	Y		YJ
3	C	X	ZE	YK
4	D	W	ZF	
5	E	V	ZG	YM
6	F	U	ZH	YN
7	G	T	ZJ	
8	H	S	ZK	YQ
9	J	R		YR
10	K	Q	ZM	
11	L	P	ZN	
12	M	N	ZO	
13	N	M	ZP	
	O	K	ZQ	
	P	J	ZR	
	Q	H	ZS	
		G	ZT	
		F	ZU	
		E	ZV	
		D	ZW	
		B	ZX	
		A	ZY	
		ZA	ZZ	
		ZB		
			YB	
			YC	
			YD	
			YE	
			YF	
			YG	

DRAWING ISSUE	
20D	CRA PD
21D	S.P. AMP T.E.B.
22B	PBB UPK PEG
23B	JK UPK PEG
24D	

24

NO. 555
CORD, TELEPHONE, DIAL, CENTRAL OFFICE TRUNK, STATION LINE, BUZZER, RINGING, AND BATTERY CIRCUITS

SD-66520-01-D1

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 3S

PRINTED IN U.S.A.

CIRCUIT NOTES (CONTINUED):

103.

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.	SPL
5-D	V OR S	V		S		V	
5-D	R	NONE		R			
5-D	U OR Q	U		Q		U	
7-D	P OR N	P		N		P	
7-D	M OR K	M		K		M	
7-D	H OR J	J		H		J	
7-D	G OR F	G		F		G	
9B	B OR D	D		B		D	
10D	E OR X	X		E		X	
10D	LOCAL BATTERY, BUILDING BATTERY FUSE			1 1/3 AMP.		2 AMP.	
11D	FIG.N OR FIG.O	FIG. N		FIG. O		FIG.N	
11D	A	NONE		A			
11D	ZA	NONE		ZA			
12B	ZB OR ZC	ZB		ZC		ZB	
13D	DIALS			6A		5H	
				6G		5K8	
13D	ZF OR ZG	ZF		ZG		ZF	
14D	ZH	NONE	102	ZH			
14C	ZJ OR ZK	ZK	102	ZJ, ZK			
15B				ZB		ZC	
15B	ZE	NONE		ZE			
16B	ZN OR ZQ	ZO		ZO		ZN	
16B				FIG.9,10,11		FIG.3	
16B	ZM OR ZP	ZM		ZP		ZM	
18D	ZU OR ZV	ZU		ZV		ZU	
18D	ZS OR ZT	ZT		ZS, ZT			
19D	ZQ OR ZR	ZQ		ZR		ZQ	
19D	ZW, ZX	FIG. H, J, OR K		ZW, ZX		J, K	
19D	ZY OR ZZ	W, T OR NONE		ZY, ZZ		W, T	
19D	FIG.P OR FIG.Q	FIG. P		FIG. Q		FIG.P	
19D	DIALS			6R-3		6A	
19D	YB OR YC	YB		YC		YB	
19D	YD OR YE	YD & S OR V		YE		YD,S	
19D	FOOT SWITCH			KS-1682 L1		4C	
21D	YF OR YG	YF		YF, YG			
21D					FIG. 5,E	FIG. 4,6, 7 & 12,D	
22B	YJ OR YK	YJ	110	YJ			YK
22B	YH	YG OR YF	102	YG,YF			YH
22B	YM OR YN	YM		YN		YM	
23B	YQ	NONE		YQ			
24D	H OR YR	H		YR		H	

NOTES:

104. TO PROVIDE SATISFACTORY BALANCE THE DIFFERENCE IN CAPACITY BETWEEN CAPACITOR (A) AND (B), FIG.1, SHALL NOT EXCEED .055MF.

105. (MFR DISC.) RUN SEPARATE WIRES IN EACH DIRECTION FROM VARISTER (B) FIG.2, AS INDICATED.

106. THE MAXIMUM RESISTANCE OF THE BATTERY AND GROUND LEADS BETWEEN CAPACITOR (B) AND LAST STATION LINE CIRCUIT SHALL NOT EXCEED 0.25Ω PER LEAD.

107. PRIOR TO ISSUE 9D, THIS SUPERVISORY RELAY SHUNT WAS SPECIFIED FOR CABLE PAIRS EXCEEDING 7000 FEET INCLUDING BRIDGE TAPS.

108. THE CONTACTS OF RELAY (RB), FIG.Q ARE PERMANENTLY OPERATED BY A MECHANICALLY LOCKED ARMATURE. IN THIS CONDITION ZW, ZX, ZY AND ZZ OPTIONS ARE PROVIDED WHEN AN OPTION IS NOT USED. OPEN ASSOCIATED CONTACT BY PLACING PLASTIC SLEEVING PER P3289.0 ON SPRINGS 1T, 3T, 1B OR 3B.

109. WHEN EXISTING CIRCUITS EQUIPPED WITH FIGS. J OR K OR OPTIONS T OR W ARE MODIFIED TO PROVIDE FIG. Q, THESE FIGS. AND OPTIONS MUST BE REMOVED.

110. THE TELEPHONE COMPANY MAY SUBSTITUTE 2Y LAMPS, OPTION YK FOR K2 LAMPS, OPTION YJ, WHEN THE BATTERY VOLTAGE IS 44 TO 52V.

DRAWING ISSUE

20D	CRA PD
21D	SP MKP TEB
22B	RBB JPK PEG
23B	JK JPK PEG
24D	

EQUIPMENT NOTES:

201. ON ISSUE 19D, 20GA CONDUCTORS AT TERM. 35, FIG.54 FOR C.O. TRKS. WERE ADDED.

NO. 555
CORD, TELEPHONE, DIAL, CENTRAL OFFICE TRUNK, STATION LINE, BUZZER, RINGING, AND BATTERY CIRCUITS

SD-66520-01-D2

BELL TELEPHONE LABORATORIES INCORPORATED

DWG SIZE 3S

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MINIMUM AND MAXIMUM ALLOWABLE FEEDER RESISTANCES FROM 45-52 VOLT BATTERY

NUMBER OF CORDS	MAXIMUM FEEDER RESISTANCE IN OHMS	MIMIMUM FEEDER * RESISTANCE IN OHMS
4	112	0
5	99	0
6	94	0
7	89	0
8	80	3
9	77	5
10	69	9
11	66	11
12	63	12
13	59	14
14	57	16
15	52	18
16	50	19
17	48	21
18	47	22
19	44	23
20	43	23

*WHERE MINIMUM FEEDER LIMIT CANNOT BE MET BY A SINGLE PAIR USE 24 VOLT SUPPLY.

P.B.X. VOLTAGES OBTAINED WITH VARIOUS FEEDER RESISTANCES

NUMBER OF CORDS	16V.	18V.	20V.	22V.	24V.	26V.	28V.	30V.	32V.	34V.
4	112	93	78	65	54	46	38	31	25	19
5	99	82	68	57	48	40	33	27	22	18
6	94	78	65	54	45	38	31	26	21	17
7	89	74	61	51	43	36	30	25	20	16
8	80	66	55	46	39	32	27	22	18	14
9	77	63	53	44	37	31	26	21	17	13
10	69	57	47	40	33	27	23	19	15	12
11	66	55	45	38	32	27	22	18	14	11
12	63	52	43	36	30	25	21	17	13	
13	59	49	41	34	29	24	20	16		
14	57	47	40	33	27	23	19			
15	52	43	37	30	25	21				
16	51	42	35	29	24	20				
17	48	40	33	28	23					
18	47	39	32	27	22					
19	44	37	30	26						
20	43	32	29							

16-52 V.

WORKING LIMITS

	STATION SUPERVISION FIG. 1 (CS) RELAY RANGE			STATION SIGNALING † FIG. 5					FIG. 6
	MIN. VOLTAGE			MIN. VOLTAGE					
	16V.	18V.	20V.	16V.	18V.	20V.	22V.	24V.	26V.
MAX. EXT. CKT LOOP RES.	450Ω	600Ω	780Ω	150Ω	240Ω	330Ω	420Ω	510Ω	600Ω
MIN. INS. RES.	30,000Ω	30,000Ω	30,000Ω	*	*	*	*	*	*	**8000Ω

	CENT. OFF. TRUNK SUPERVISION FIG. 1	CENT. OFF. TRUNK SIGNALING FIG. 3
MAX. CONDUCTOR RES.	***	1200Ω

FIG. 9

	72V.	80V.	84V.	95V.
FOR RING UP	1700Ω	2200Ω	2400Ω	
FOR RE-RING				
WITH 274U INDUCTOR				800Ω
WITH 274U INDUCTOR +100Ω				885Ω
WITH 274U INDUCTOR +200Ω				1200Ω
MIN. INS. RES.				
MANUAL, PANEL OR CROSSBAR		20,000Ω		
STEP BY STEP		30,000Ω		

* LIMITED BY FIG.6

** COMBINED INSULATION RESISTANCE OF ALL STATION LINES WITHOUT LINE RELAYS (FIG.5) COMMON TO ONE (NL) RELAY (FIG.6)

*** THE TRUNK CONDUCTOR LOOP RES. PLUS THE MAXIMUM STATION LOOP RES. SHALL NOT EXCEED THE CENTRAL OFFICE SUB LOOP RES. LESS 35Ω

+ WHERE THE MESSAGE WAITING LIGHT IS PROVIDED, THE MAXIMUM EXTERNAL CIRCUIT LOOP FOR STATION SIGNALING IS REDUCED 35 OHMS.

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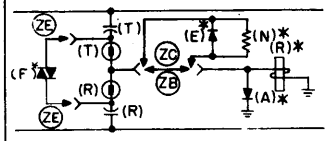
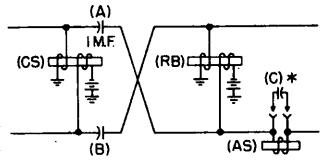
DRAWING ISSUE	
20D	CRA PD
21D	S.F. MP T.E.B.
24D	

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



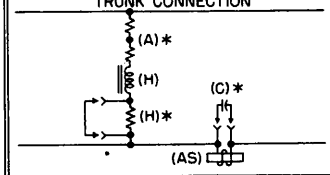
MAX. ALLOWABLE CIRCUIT LOSS (db)	
ZB OR ZC	0.1

STA.-STA. CONNECTION



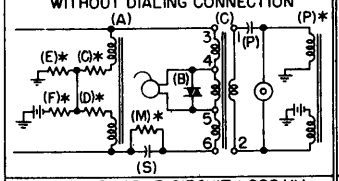
MAX. ALLOWABLE CIRCUIT LOSS (db)	
WITHOUT (C) CAPACITOR	1.0
WITH (C) CAPACITOR	0.5

TRUNK CONNECTION



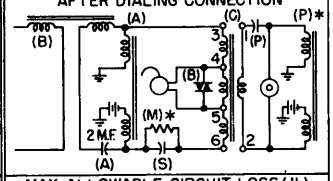
MAX. ALLOWABLE CIRCUIT LOSS (db)	
WITHOUT (C) CAPACITOR	0.7
WITH (C) CAPACITOR	0.2

WITHOUT DIALING CONNECTION



MAX. ALLOWABLE CIRCUIT LOSS (db)				
SEE NOTE	VAR.	REC.	BRDG.	TRANS.
2,5	3A	9.4	3.4	11.6
4,5	3B	6.4	3.2	11.5

AFTER DIALING CONNECTION



MAX. ALLOWABLE CIRCUIT LOSS (db)				
SEE NOTE	VAR.	REC.	BRDG.	TRANS.
2	3A	10.1	3.2	12.5
4	3B	7.1	3.0	12.4

ALLOWABLE INDIVIDUAL APPARATUS LOSSES (db)

APPARATUS	DESIG.	CODE	MAX. LOSS.	MIN. LOSS	REMARKS
CAPACITOR	P	3 M.F.	17.2	15.1	
CAPACITOR	A,S,T	2 M.F.	13.7	11.7	
CAPACITOR	A,B,T,R	1 M.F.	8.5	6.6	
IND. COIL	C	178D	11.5	8.8	
IND. COIL	C	181B	11.1	9.3	
INDUCTOR	A	274L	0.1		
INDUCTOR	B	274AC	1.0		TESTED AS REP. COIL
INDUCTOR	H	274U	0.1		
RELAY	AS	B1177	0.6		TESTED IN SERIES
RELAY	CS	UA97	0.1		
RELAY	RB	UA98,UA150	0.1		
THERMISTOR	T,R	8A	0.2		
VARISTOR	B	3A OR 3B (MFR DISC.)			SEE NOTE 1
VARISTOR	B	104A			SEE NOTE 1

NOTES:

1. FOR METHOD OF MAKING INDIVIDUAL APPARATUS LOSS TEST, SEE BSP ON TRANSMISSION TEST OF VARISTORS SECTION 032-171-501.
2. TEMPERATURE 85° FOR EACH INCREASE OR DECREASE OF 10° IN TEMPERATURE, ADD OR SUBTRACT, RESPECTIVELY, 0.1 db FOR BRIDGING LOSS AND 0.7 db RECEIVING LOSS.
3. * INDICATES APPARATUS FOR WHICH INDIVIDUAL LOSSES ARE NOT REQUIRED.
4. TEMPERATURE 85° FOR EACH INCREASE OR DECREASE OF 10° IN TEMPERATURE, ADD OR SUBTRACT, RESPECTIVELY, 0.3 db FOR RECEIVING LOSS.
5. WITH TOUCH-TONE CALLING USE RT AND RR TERMINALS.

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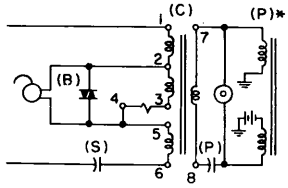
DWG SIZE 3S

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

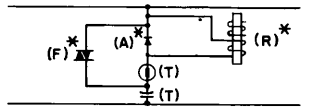


MAX. ALLOWABLE CIRCUIT LOSS(db)		
TEMP. °F	TRANS.	REC.
ANY	10.4	
70°		6.0
80°		6.2
90°		6.4
100°		6.5
110°		6.7

INDIVIDUAL APPARATUS LOSSES (db)

APPARATUS	DESIG.	CODE	MAX. LOSS	MIN. LOSS	REMARKS

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



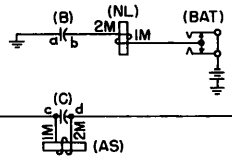
MAX. ALLOWABLE CIRCUIT LOSS(db)
0.2

ALLOWABLE INDIVIDUAL APPARATUS LOSSES (db)

APPARATUS	DESIG.	CODE	MAX. LOSS	MIN. LOSS	REMARKS

* INDICATES APPARATUS FOR WHICH INDIVIDUAL LOSSES ARE NOT REQUIRED.

ELECTROLYTIC CAPACITOR TEST REQUIREMENTS
(1000 CYCLE TEST, USING 73A TEST SET, BETWEEN 600~ 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	

ALLOWABLE INDIVIDUAL APPARATUS LOSSES

APPARATUS	DESIG.	CODE	TEST CONNECTIONS: TEST SET TERMINALS	TEST CONNECTIONS: CONNECT TO	MIN. LOSS IN db	REMARKS
CAPACITOR	B	KS-13541	3-7	a-b	7.8	(BAT) KEY (OFF)
CAPACITOR	C	KS-13486	3-6	c-d	5.4	DISCONNECT CAPACITOR FROM CIRCUIT

NOTES:

CAUTION DISCHARGE CAPACITORS IN ACCORDANCE WITH THE A200 SECTION BSP COVERING THE TESTING OF ELECTROLYTIC CAPACITORS DO NOT SHORT CIRCUIT CAPACITORS.

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CIRCUIT REQUIREMENTS

NO. 555 CORD, TELEPHONE, DIAL, CENTRAL OFFICE TRUNK, STATION LINE, BUZZER, RINGING, AND BATTERY CIRCUITS

DRAWING ISSUE: 20D CRA PD

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	TEST CLIP DATA CONN BAT.	TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA	TEST MA	READJ MA	REMARKS
RELAYS																	
AD	UA15		H	110/101	H	35	T(0)		T(AD)	GRD			0		5.3	5	OPR (NIGHT & THRU
							T(0)		T(AD)	GRD			R		0.8	0.9	DIAL) KEY
AS	B1177		1	16		SPL				GRD	1,3		0	FS	8.6	7.7	ARM. TRVL 20
										GRD	1,3		NO	FS	4.8	5.4	
										GRD	1,3		R	FS	2.9	3.3	
BT	UA93		M	110/110	H	35		B(BT)		BAT.			0		5.2	4.9	
CS	UA97		1	110/144	H	35		BF(CS)	TR(CS)	M		P/S	0		10	9.5	
								BF(CS)	TR(CS)	M		P/S	R		2.6	2.8	
NC	B1166	X	2	9		30			11 CONN	GRD	11		0	100	14.5	13	OPR ALL (NIGHT &
									11 CONN	GRD	11		R	100	6.8	7.6	THRU DIAL) KEYS
NL	B1166		6	9		30			2M(NL)	GRD	11		0	100	14.5	13..	OPR ALL (NIGHT &
									2M(NL)	GRD	11,12		R	100	7.4	8.3	THRU DIAL) KEYS
ON	UA95	X	2	111/101	H	29			T(ON)	GRD	10		0		8.5	8	CONN DIRECT BAT. B(ON)
R	UA4		3	111/136	SPL	SPL		TERM. 3	TERM. 5	B/G	7,8,9		0			3.1	ARM. TRVL 23 MAX
								TERM. 3	TERM. 5	B/G	7,8,9		NO			2.3	
								TERM. 3	TERM. 5	B/G	7,8,9		H			1.7	
										AC	6		0		AC	AC	
R	UA144		9	101/101	H	29	1T(R)	BF(R)	TF(R)	B/G		P	0		9.2	8.7	DISCONNECT TRK UNIT
							1T(R)	BF(R)	TF(R)	B/G		P	NO		5.8	6.2	CABLE FROM TRK UNIT
								BF(R)	TF(R)	B/G		S	0		4.4		
										AC	13				AC	AC	
RB	UA98		P	NONE		0											NO ADJ REQD
RB	UA150		Q	111/111	H	29		TF(RB)	BR(RB)	M	14	P/S	0			11.3	FOR USE IN SHOP ONLY
S	UA94		1	181/181	H	35	(T)O, (CS)O		T(S)	GRD			0		5.7	5.4	
SP	U1338	X	2	134/120	H	35	5T(SP)		T(SP)	GRD			0		11.2	10.6	
T	UA93		1	110/110	H	SPL		B(T)		BAT.	4,5		0		5.4	5.1	
MISCELLANEOUS																	
TALK & DIAL	580A KEY										2						

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. CONT 3B-4B; 5B-6B, 7T-8T AND 9T-10T SHALL MAKE BEFORE CONT 3T-4T AND 5T-6T BREAK, CONT 1T-2T SHALL MAKE AFTER CONT 3T-4T AND 5T-6T BREAK.
3. TEST CONT MAKE MIN 3. TEST CONT SEPARATION MIN 3.
4. PRIOR TO ISSUE 17D ARMATURE TRAVEL WAS 35 AND NOTE 5 WAS NOT SHOWN.
5. ARMATURE TRAVEL 41, CONT 1-2T SHALL BREAK BEFORE 3-4T MAKE.
6. TEST & READJUST REL (R) IN CKT COMB. FOR OPR ON RINGING CURRENT AS FOLLOWS:
   (A) BY PLUGGING A TRK CORD IN THE TRK CKT JK & MANUALLY RINGING AT THE CENTRAL OFFICE, OR
   (B) BY APPLYING MIN 95 V (1100-1200 RPM) RINGING CURRENT IN SERIES WITH ONE 13B RES LAMP (OR EQUIVALENT) & 13,000Ω NON-INDUCTIVE RES TO THE TIP OF THE TRK AT THE PBX. REPEAT TEST B TO THE RING OF THE TRK AT THE PBX.
7. FRONT CONT MAKE - 6 READJUST, 4 TEST.
8. DISCONNECT SHUNT OF VARISTOR (A) BY REMOVING TRUNK UNIT CABLE. CONNECT TEST SET CLIPS TO TRK UNIT TERM. AS SPECIFIED IN TEST CLIP DATA.
9. REQ FOR RELAY ALONE OR CKT COMB OF RELAY (R) & VARISTOR (A) IN SERIES.
10. REMOVE DIAL FROM DIAL MOUNTING. REMOVE ATTENDANT'S TEL SET FROM TEL SET JACKS OR WITH FIG. C, DISCONNECT TRANSMITTER CORD.
11. TEST CONT FOLLOW MIN 3 TEST CONT SEPARATION MIN 3.
12. PRIOR TO ISSUE 10 D THE RELEASE ADJUSTMENT WAS AS FOLLOWS: TEST 6.8, READJ 7.6.
13. TEST & READJUST REL (R) IN CKT COMB. FOR OPR ON RINGING CURRENT AS FOLLOWS:
   (A) BY PLUGGING A TRK CORD IN THE TRK CKT JK & MANUALLY RINGING AT THE CENTRAL OFFICE, OR
   (B) DISCONNECT TRK UNIT CABLE FROM TRK UNIT & TEST BY APPLYING MIN 95 V (1100-1200 RPM) RINGING CURRENT IN SERIES WITH 13B RES LAMP (OR EQUIVALENT) & 7000Ω NON-INDUCTIVE RES ACCROSS TERM. 1 & TERM. 2 OF THE TRK UNIT.
14. AFTER ADJUSTING RELAY, TIGHTEN ADJUSTING NUT AGAINST ARMATURE UNTIL AT LEAST ONE STOP DISC TOUCHES THE CORE.

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DRAWING ISSUE	
20D	CRA PD
21D	S.P. XP TEA
22B	P.B.B. J.P.K. P.E.G.

FIG. 51
CORD TEL. AND DIAL CKTS.
(FOR FIGS. 1 & 2)

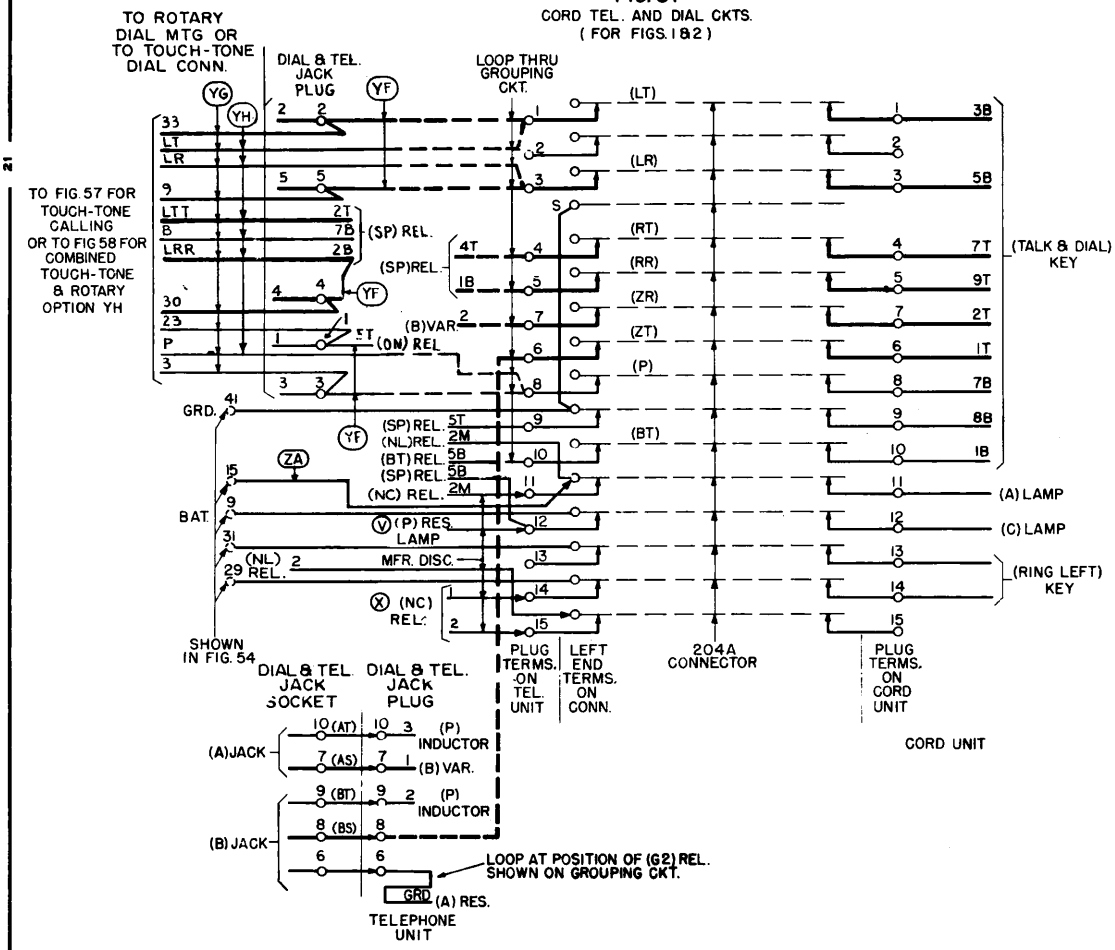

FIG. 52 (MFR. DISC)
TRUNK CKT.
(FOR FIGS. 3 & 4)

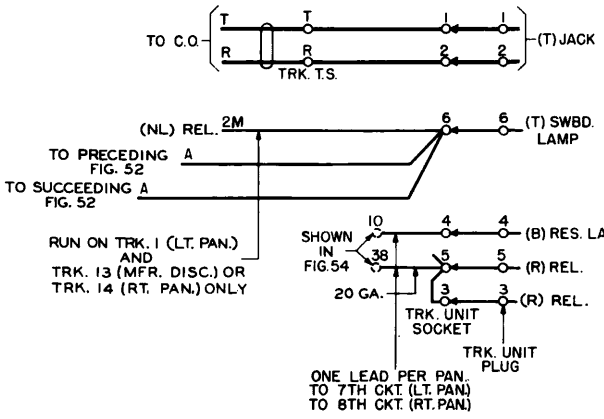

FIG. 53 (A & M ONLY)
STATION LINE CIRCUIT
(FOR FIG. 5)

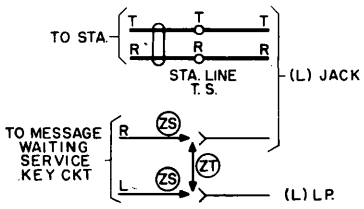

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FIG. 54 (MFR DISC.)

BATTERY, BUZZER AND RING. SUPPLY
(FOR FIG. 6)

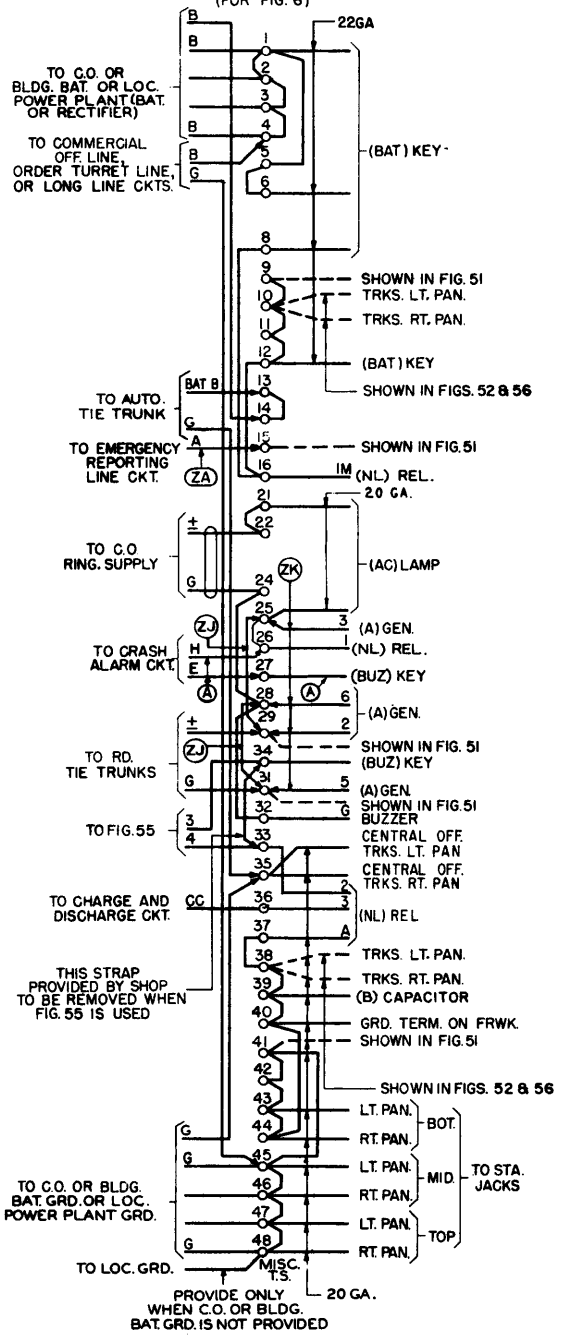


FIG. 55

(FOR FIG. E)

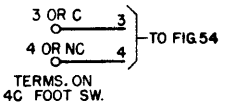
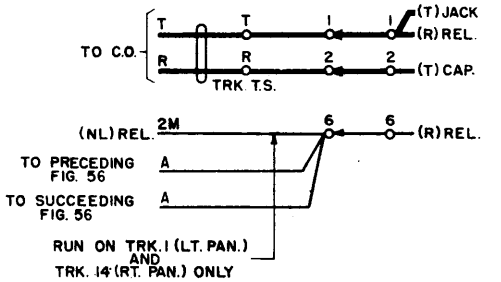
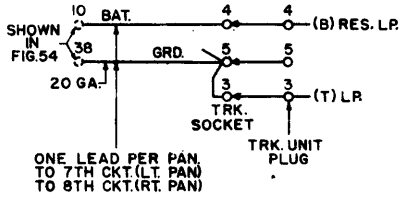


FIG. 56

TRUNK CKT.
(FOR FIGS. 4 & 9)





PBX SYSTEMS
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(2)

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DRAWING ISSUE	
21D	S.P. MP TEB
22B	PBB JPK REG

FIG. 57 (MFR DISC.)
(FOR FIG. 12)

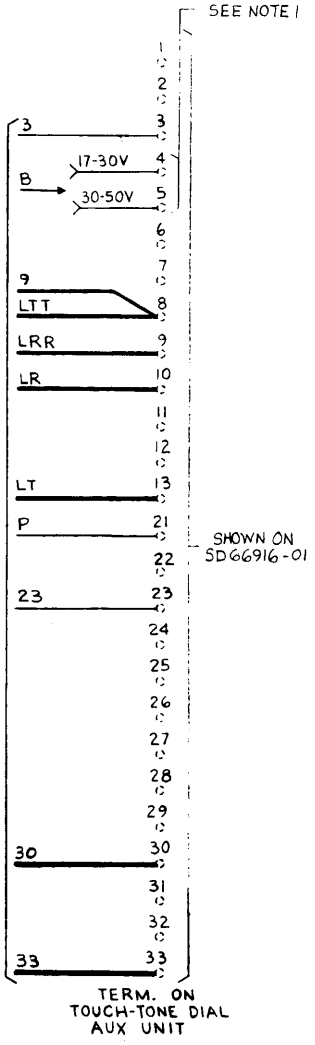


FIG. 58
CONN. FOR TOUCH-TONE DIAL AND OPTION YH

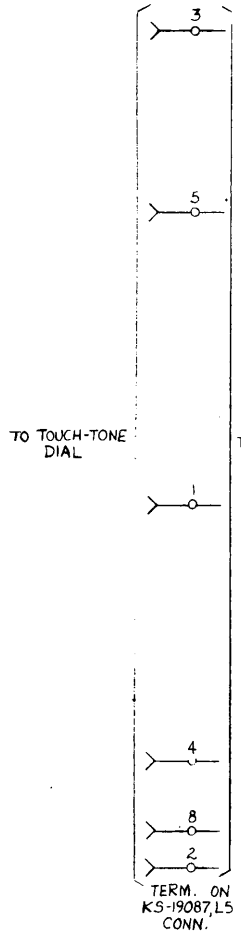
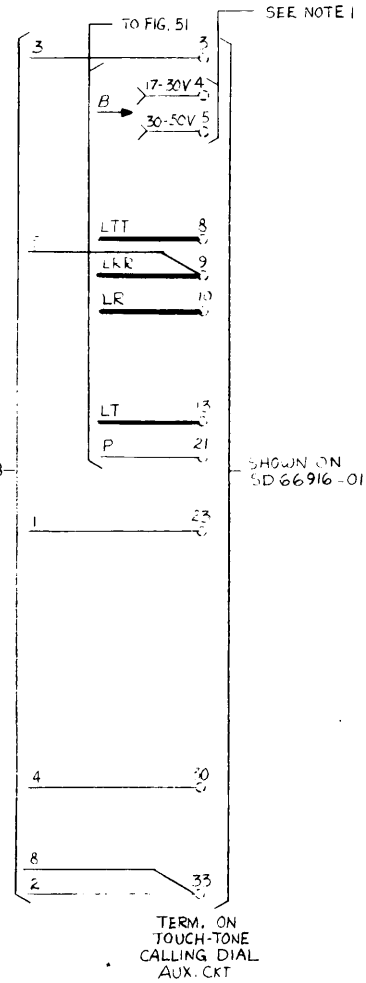


FIG. 59
FOR FIG 13 AND OPTION YH



SHEET NOTES:

1. IF DIAL AUX. UNIT HAS A 426T DIODE IN LOC OF VR1 CONNECT LEAD B TO TERM 5 FOR VOLTAGES 17-53.

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