

INDEX

CIRCUIT NAME	DRAWING NUMBER	BLOCK LOC	CIRCUIT NAME	DRAWING NUMBER	BLOCK LOC	CIRCUIT NAME	DRAWING NUMBER	BLOCK LOC	CIRCUIT NAME	DRAWING NUMBER	BLOCK LOC
ALARM			LINE			LONG TRUNK, DIAL			TIE TRUNK (CONT.)		
AUX SIG, FUSE ALARM, BATTERY CUTOFF	SD-66722-01	2D2, 2E7	AUXILIARY (SEE AUXILIARY LINE)			EQUIPMENT AT CENTRAL OFFICE			SELECTIVE SIG SS-1 SYSTEM 600-1500 CYCLE SENDING OR 600-1500 CYCLE OR 20-CYCLE RECEIVING	SD-65652-01	4F2
FUSE	SD-65779-01	2G3, 2H8	LONG (SEE LONG LINE)			REPEATS PULSES, WITHOUT RERING FEATURE	SD-96034-01	3D6	2-WAY MANUAL RINGDOWN THRU & TERMINATING ARRANGED FOR OPERATION ON CX OR NCH-CX LINES WITH OR WITHOUT REPEATERS	SD-65681-01	4D2
AMPLIFIER			TOLL FOREIGN EXCHANGE SUB, 1000-CY OR 135-CY TOLL LINE SIGNALING	SD-62442-01	3G3	10 OR 20 PPS REP, RELATED OR BYPASSED RINGING 45-50V	SD-96234-01	3F6	2-WAY MANUAL RINGDOWN FOR USE IN MULTIPLE & NONMULTIPLE SUBD	SD-66025-01	4H2
VF	SD-95112-01	2F0, 2H4	MANUAL STATION	SD-66718-01	2A1	CX OR SX SIGNALING, SUPPLIES LINE SUPV WITH OR WITHOUT TEL REPEATER	SD-96251-01	3H7	LUI-DIAL TRANSMITTING INC-MANUAL & DIAL SELECTED	SD-66040-01	4A2
			TOLL SUB, TO TOLL SUBD NO. 1	SD-90077-01	3F3	CX OR SX SIGNALING, TYPE B TO SUPPLY, WITH OR WITHOUT TEL REPEATER	SD-96252-01	3G7	OUTGOING-MANUAL, INCOMING-MANUAL & DIAL SELECTED	SD-66065-01	4G2
			TOLL SUB, TO SUBD NO. 3, 3C, OR 3CL	SD-90078-01	3E3	LONG TRUNK, MANUAL			2-WAY MANUAL AND DIAL SELECTED	SD-66066-01	4E2
			LONG LINE, DIAL			EQUIPMENT AT CENTRAL OFFICE			2-WAY AUTOMATIC E & M LEADS SUPV	SD-67009-01	4J2
			EQUIPMENT AT CENTRAL OFFICE			RING THRU COIL 20-20V	SD-66058-01	3C1	TRANSFER		
			10 PPS REPEATING 40-56V	SD-96034-01	1D5	RING THRU COIL 31-43V OR 40-56V	SD-66059-01	3D1	EMERGENCY KEY	SD-66451-01	2C1
			10 OR 20 PPS REP, RELATED OR BYPASSED RINGING 45-50V	SD-96234-01	1E5	PH GROUP & CX SIG, SUPPLIES LINE SUPV	SD-96116-01	3E1			
AUXILIARY TRUNK			CX OR SX SIGNALING, SUPPLIES LINE SUPV WITH OR WITHOUT TEL REPEATER	SD-96251-01	1E6	PH GROUP & CX SIG, SUPPLIES TRANSMITTER BATTERY	SD-96117-01	3F1	TRUNK		
ARRANGED FOR 20-CYCLE SIMPLER SIGNALING FOR USE WITH 4-WIRE 2-WAY RINGDOWN TIE TRUNK	SD-66679-01	4F3	CX OR SX SIGNALING TYPE B TO SUPPLY, WITH OR WITHOUT TEL REPEATER	SD-96252-01	1B6	MESSAGE WRITING	SD-65794-01	2A2, 2A5	AUXILIARY (SEE AUXILIARY TRUNK)		
			EQUIPMENT AT PBX			OSCILLATOR	SD-66725-01	2E2, 2H7	LONG (SEE LONG TRUNK)		
			10 PPS REPEATING	SD-66060-01	1F5	PER COUNT	SD-65774-01	2E3, 2J7	TIE (SEE TIE TRUNK)		
			LONG LINE, MANUAL			POSITION	SD-66721-01	2C2, 2D7	2-WAY MANUAL TO CENTRAL OFFICE	SD-66719-01	2D1, 2C5
			EQUIPMENT AT CENTRAL OFFICE			SUPPLY			OFFICIAL PBX TRUNK	SD-66326-01	2J5
			RING THRU COIL, 20-20V	SD-66058-01	1B1	AC POWER FOR AC LAMPS	SD-80770-01	2F3, 2F8			
			RING THRU COIL, 31-43V OR 40-56V	SD-66059-01	1C1	POWER, BATTERY-LESS	SD-81496-01	2C3			
			PH GROUP AND CX SIG, SUPPLIES LINE SUPV	SD-96116-01	1B1	POWER, WITH BAT. RESERVE	SD-81497-01	2D3			
			PH GROUP AND CX SIG, SUPPLIES TRANSMITTER BATTERY	SD-96117-01	1E1	TIE TRUNK					
			EQUIPMENT AT PBX			2-WAY MANUAL RINGDOWN	SD-65682-01	4B2			
			REPEATED RINGING	SD-66060-01	1F1	OUT. MANUAL SELECTED & DIAL REPEATING	SD-66298-01	4C2			
						2-WAY MANUAL RINGDOWN ARR FOR OPERATION ON COMPOSITED AND NONCOMPOSITED LINES	SD-66649-01	4E2			
						OUT. MAN. & DIAL SELECTED & DIAL REPEATING INCOMING-PULSE CORRECTING WITH OR WITHOUT E & M LEADS SUPERVISION	SD-65718-01	4C5			
						OUT. MANUAL & DIAL SELECTED & DIAL REPEATING INCOMING-DIAL PULSE	SD-66042-01	4D5			
CONFERENCE											
MANUAL, WITH VOICE REPEATER, ARR FOR A MAX OF 4 OR 5 SIMULTANEOUS CONNECTIONS	SD-65719-01	2H1, 2E4									
MANUAL, 6-WAY, 4-WIRE WITH VF AMPLIFIER	SD-65738-01	2F1, 2G4									
MANUAL, FOR A MAX OF 4, 5, OR 6 SIMULTANEOUS CONNECTIONS	SD-66434-01	2G1, 2J4									
MANUAL ARR FOR A MAX OF 4 OR 5 SIMULTANEOUS CONNECTIONS	SD-66462-01	2F4, 2J1									
CORD	SD-66720-01	2B2, 2C7									
INTERRUPTER											
RELAY - 30 IPR	SD-66728-01	2C8									
JACK											
FOR ATTENDANT SUBD	SD-65778-01	2B1, 2C6									
LAMP											
AC LAMP RELAY	SD-66724-01	2F2, 2F7									
DC BSY LAMP RES	SD-66722-01	2E1, 2E6									

DRAWING ISSUE
1
2

INTERPOSITION SD-66307-01

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PBX SYSTEMS
NO. 608A
KEY SHEET

SD-66729-01-A2

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SD-66729-01-A2

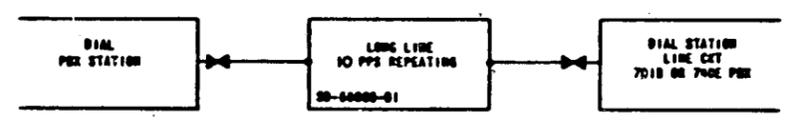
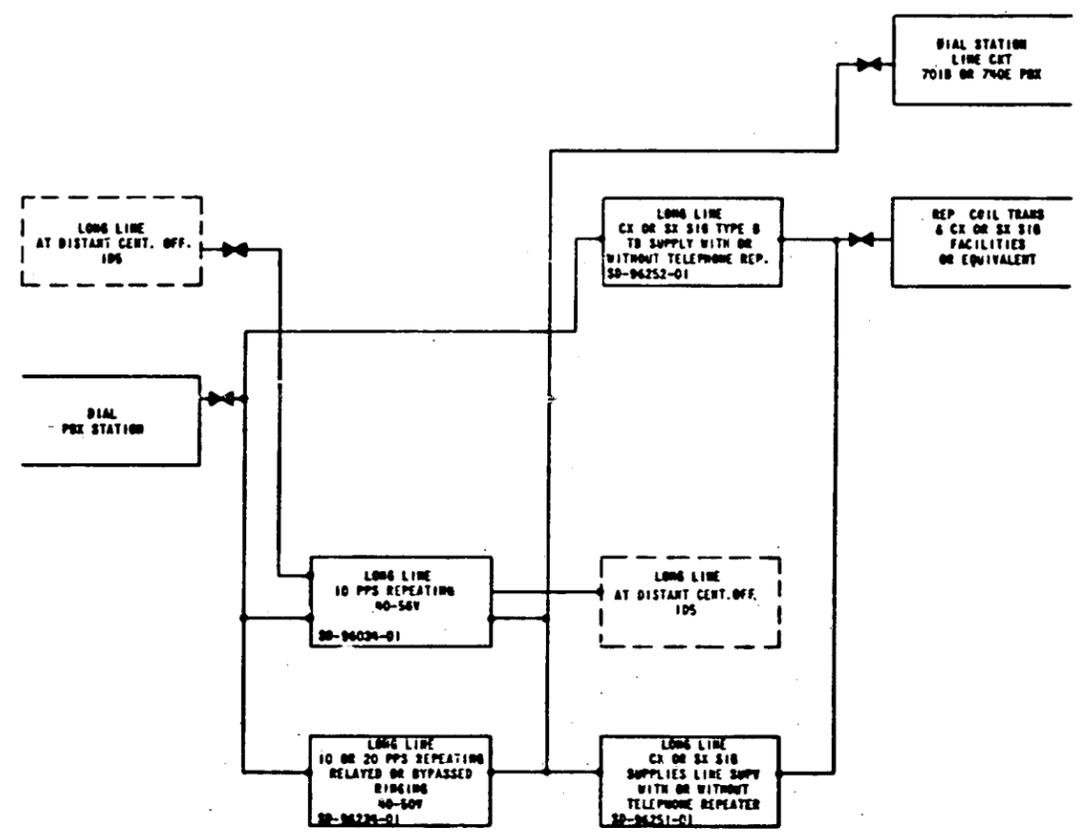
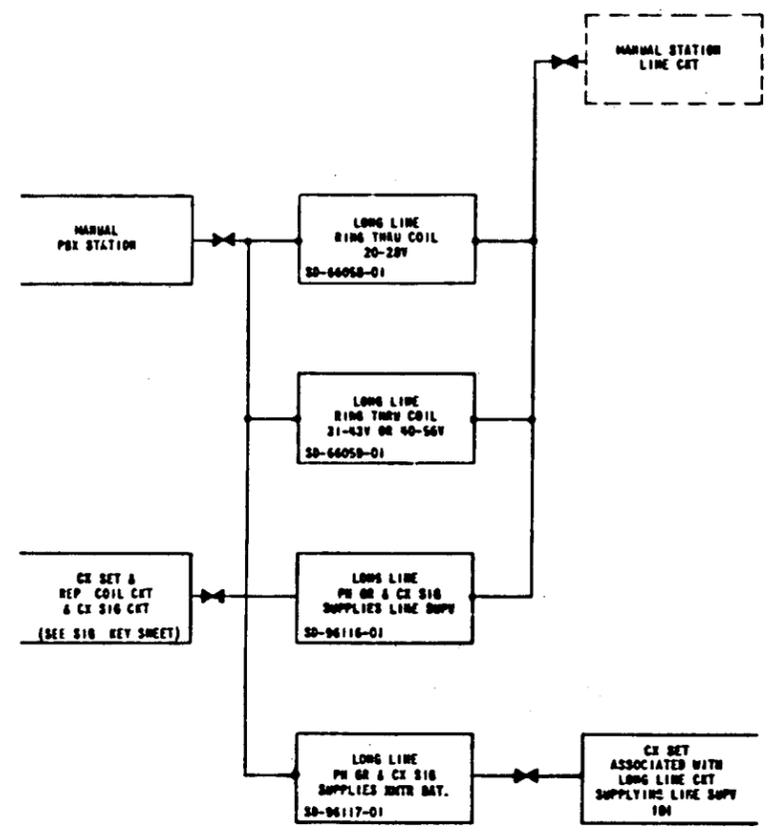
DRAWING ISSUE	
1	REVISED
2	REVISED

EQUIPMENT AT CENTRAL OFFICE

EQUIPMENT AT PBX

A
B
C
D
E
F
G
H
J

A
B
C
D
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J



LONG LINES FOR USE WITH MANUAL STATION

LONG LINES FOR USE WITH DIAL STATION

SD-66729-01-B1

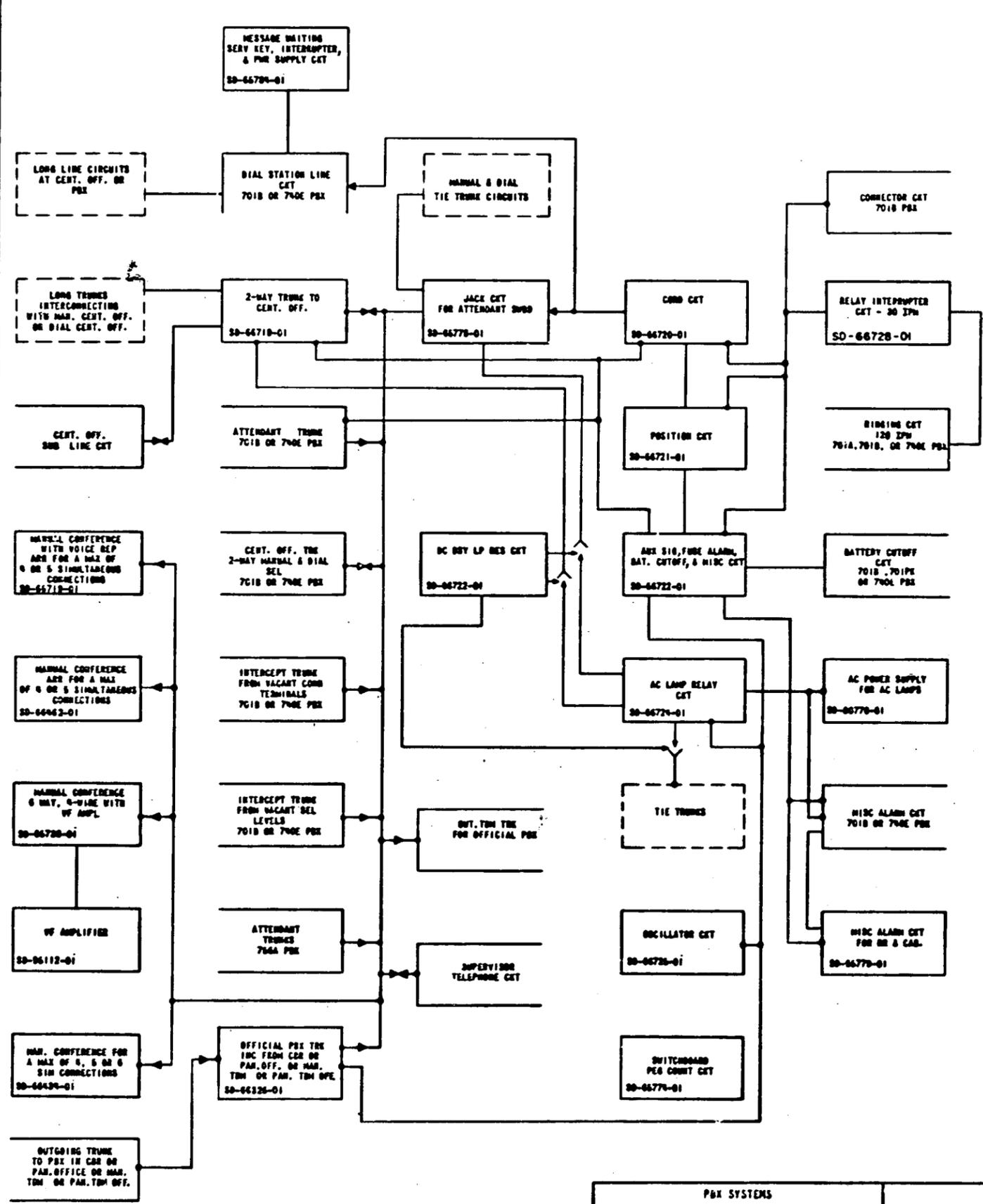
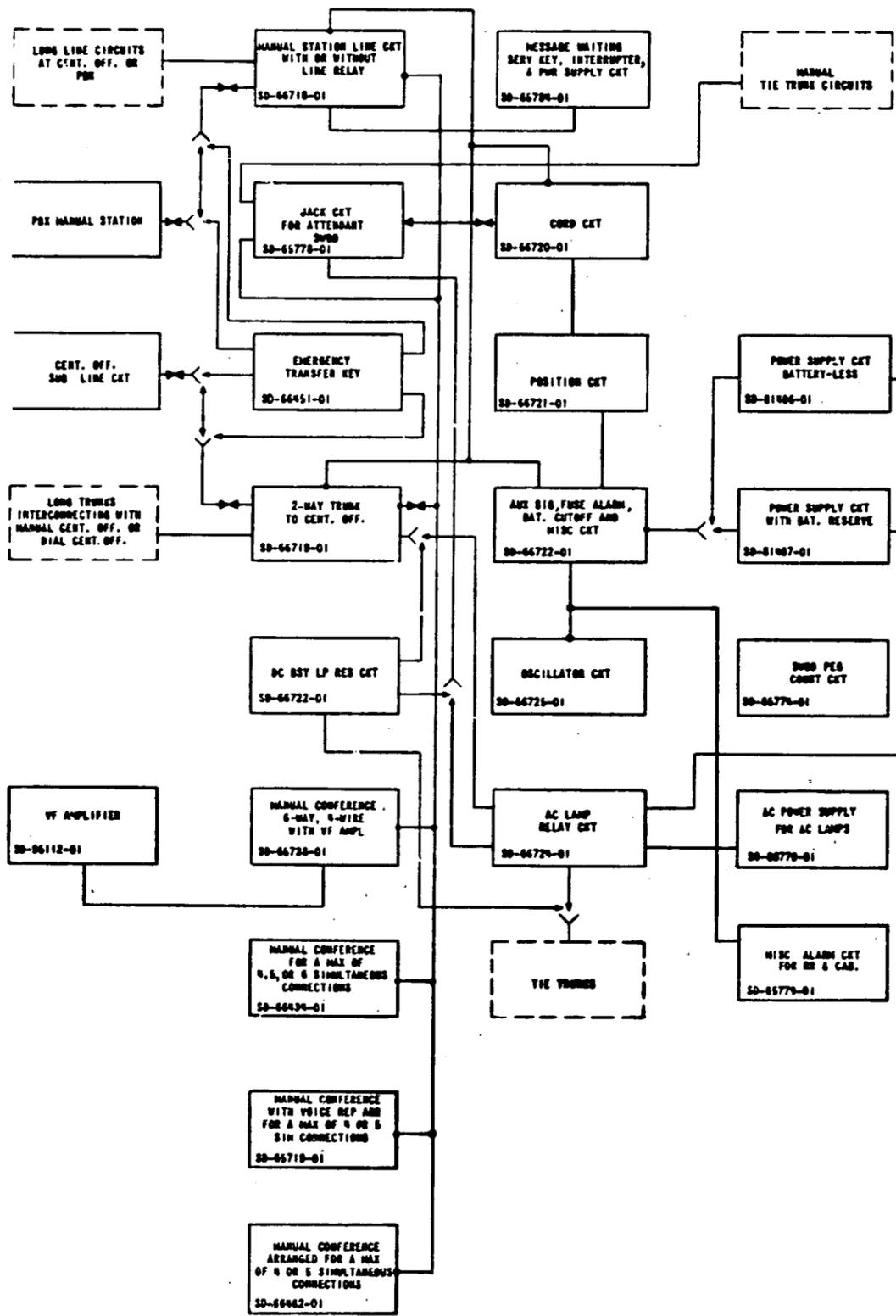
PBX SYSTEMS NO. 600A KEY SHEET	SD-66729-01-B1
BELL TELEPHONE LABORATORIES INCORPORATED	65

MANUAL SWITCHBOARD CIRCUITS

DIAL ATTENDANT SWITCHBOARD CIRCUITS

A
B
C
D
E
F
G
H
J

B
C
D
E
F
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J



SD-66729-01-B2

Pbx SYSTEMS
NO. 608A
KEY SHEET

2 SD-66729-01-B2

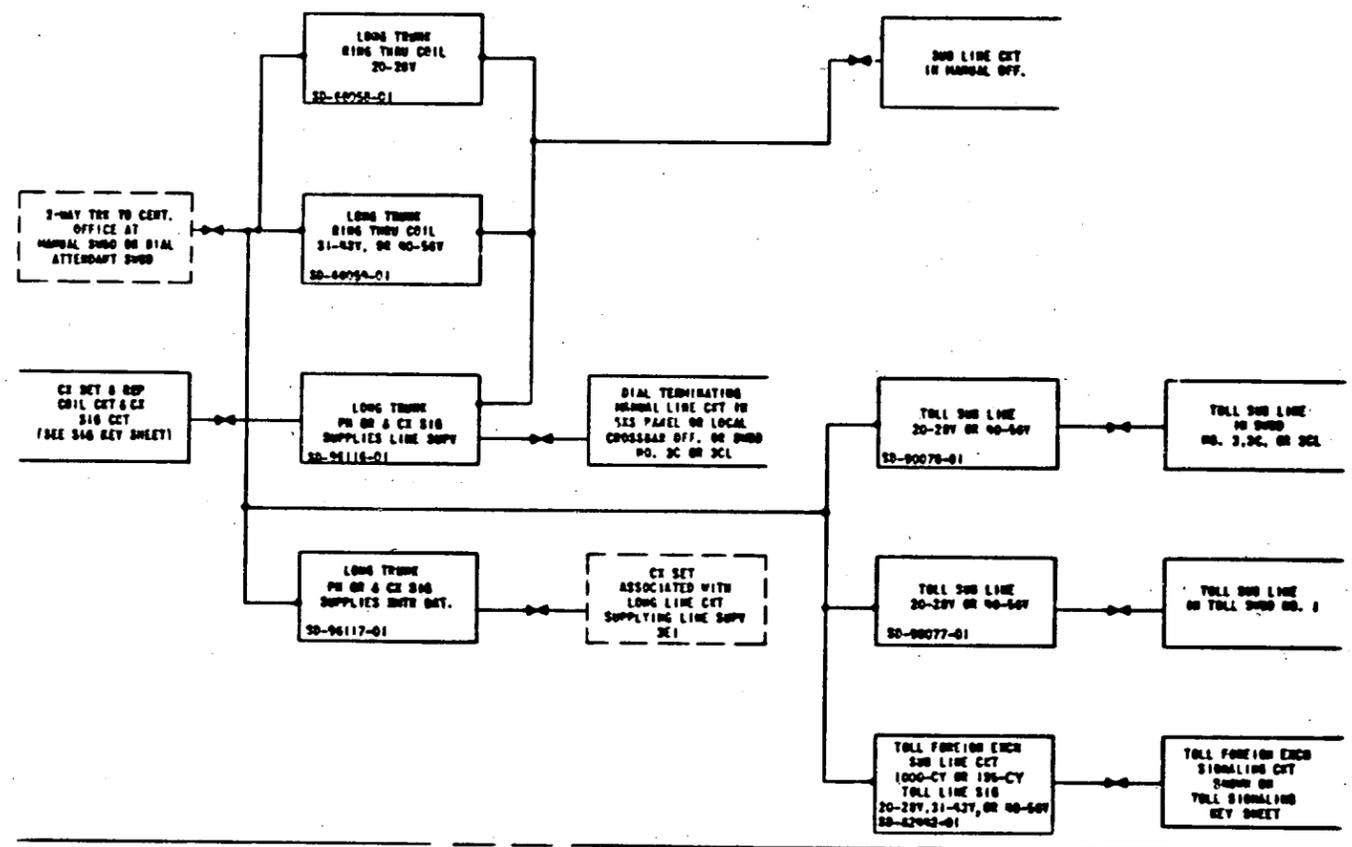
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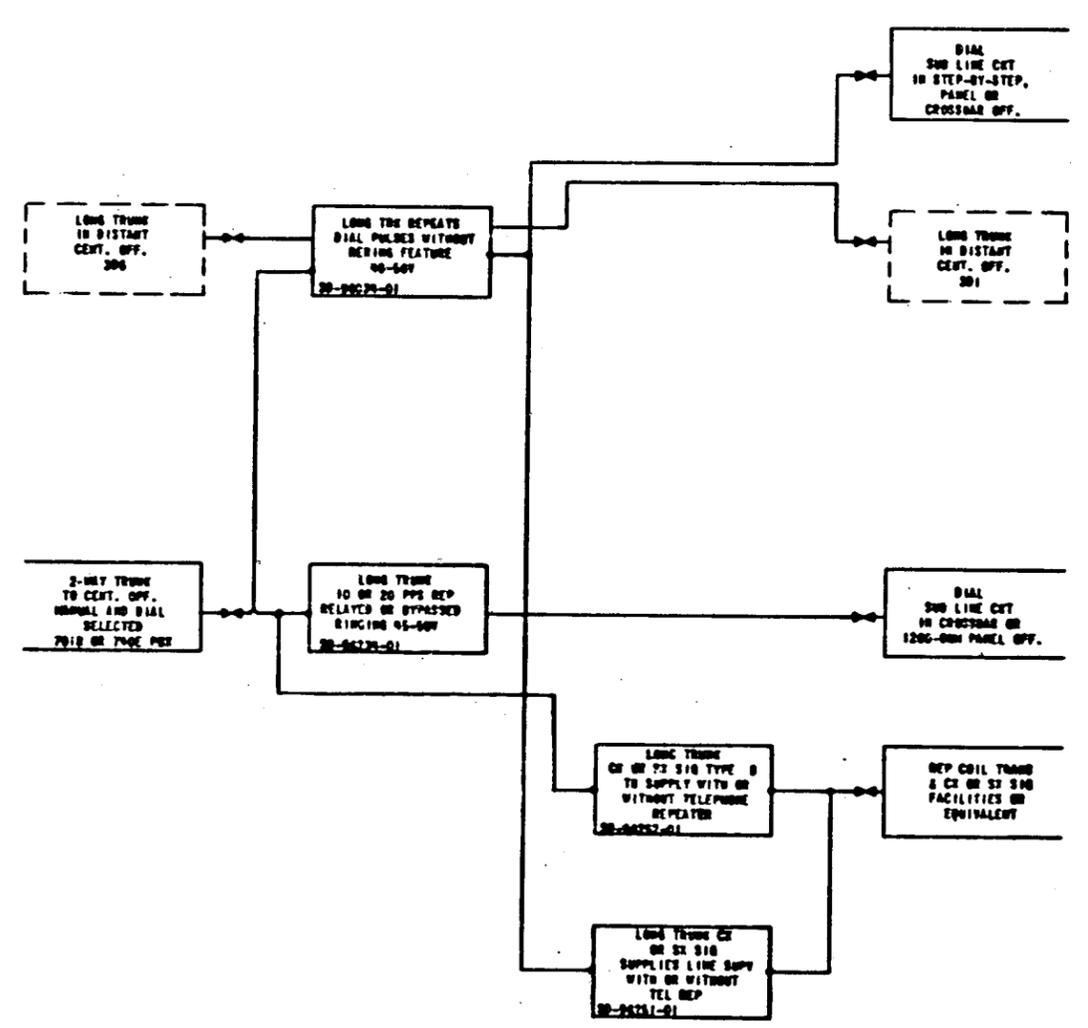
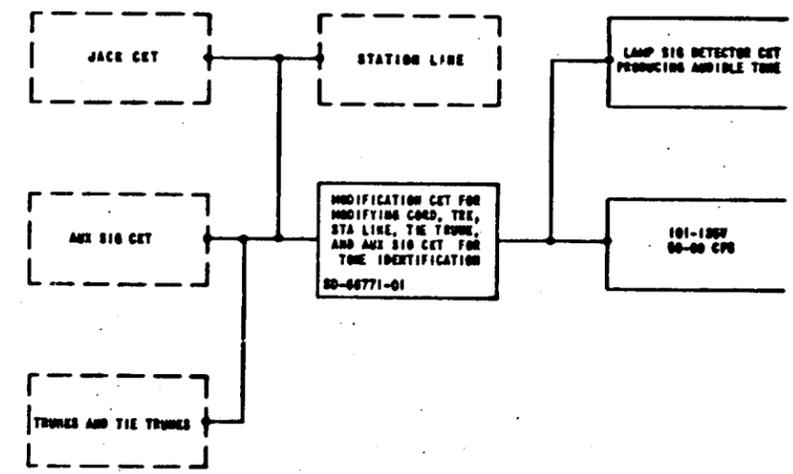
LONG TRUNKS INTERCONNECTING 2 WAY MANUAL CENTRAL OFFICE TRUNKS WITH MANUAL CENTRAL OFFICE OR TOLL SWITCHBOARD (EQUIPMENT AT CENTRAL OFFICE)

LONG TRUNKS INTERCONNECTING 2 WAY MANUAL CENTRAL OFFICE TRUNK WITH DIAL CENTRAL OFFICE WITH DIAL CENTRAL OFFICE (EQUIPMENT AT CENTRAL OFFICE)

DRAWING ISSUE 1 2

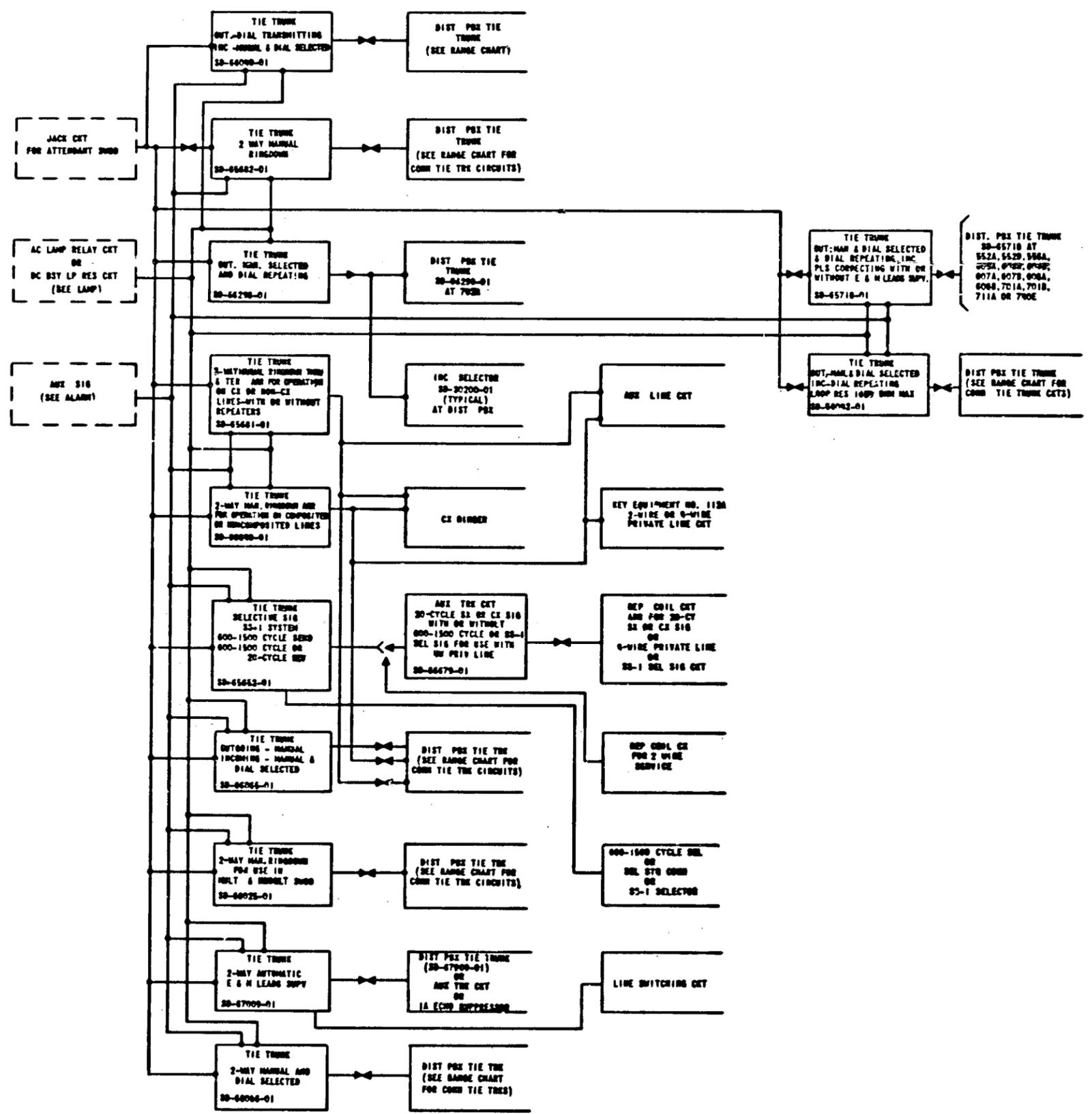


MODIFICATION FOR BLIND ATTENDANT



SD-66729-01-B3

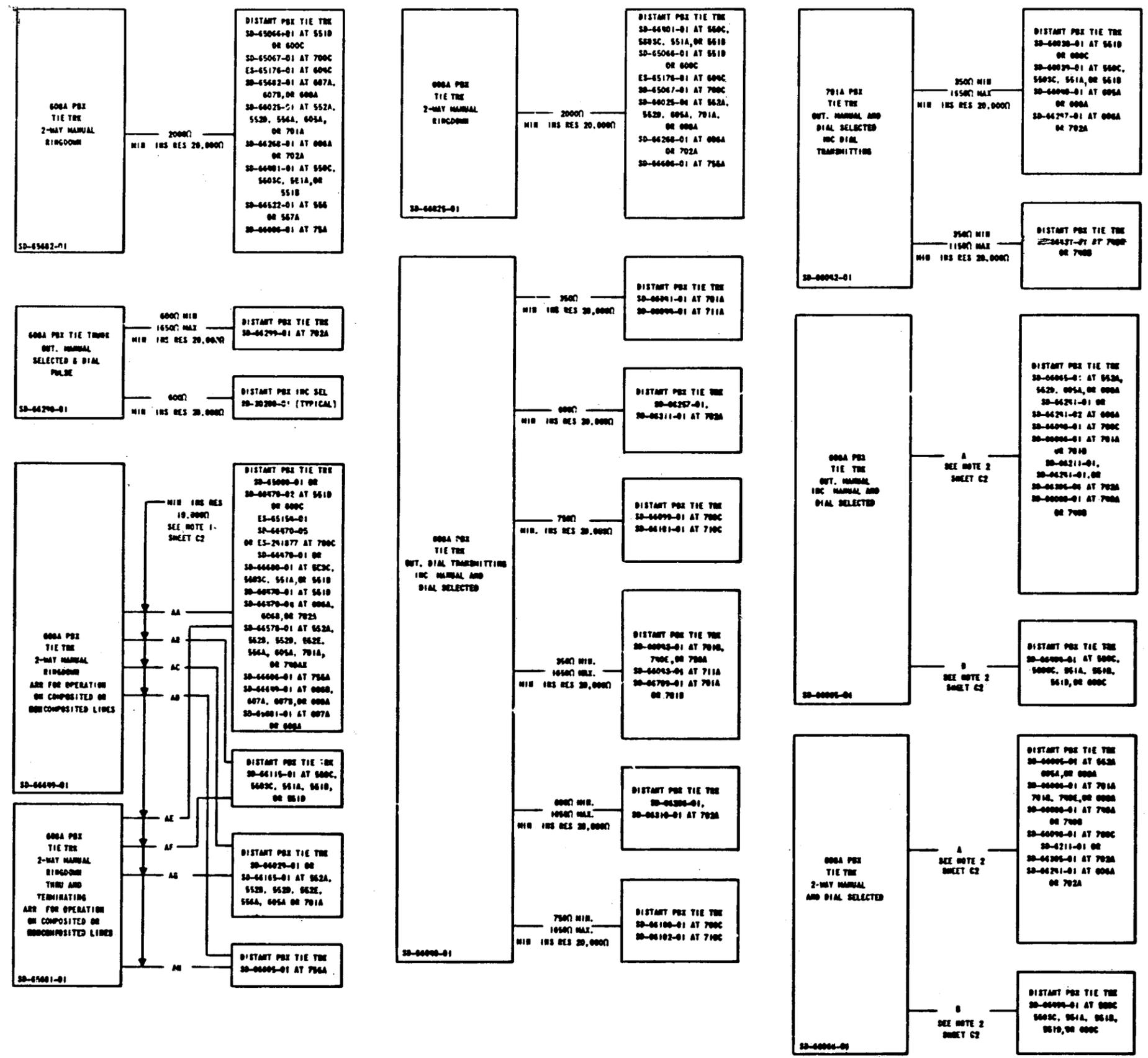
TIE TRUNK CIRCUITS



SD-66729-01-B4

PBX SYSTEMS NO. 608A KEY SHEET		2	SD-66729-01-B4
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RANGE CHART FOR TIE TRUNKS



SD-66729-01-C1

PBX SYSTEMS
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NOTES:

1. ALL THE TIE TRK RANGES ARE SHOWN IN TERMS OF CONDUCTOR LOOP BETWEEN PBX'S AND ARE BASED ON VOLTAGES AT RINGING MACHINE THRU RESISTANCE LAMP OR LAMPS IN SERIES WITH RINGING SUPPLY LEADS AND INCLUDES THE RESISTANCE OF THE RINGING SUPPLY LEADS WHEN FURNISHED FROM CENTRAL OFFICE.

RANGE CHART FOR TIE TRUNKS

2. (CONT)

LOOP DESIG	MIN LOOP RES (OHMS)	MAX LOOP RES (OHMS)	MIN INS RES (OHMS)	HIGH-LOW REL (S) AT DIST PBX	MIN BAT. SUPPLY AT NO. 608A PBX	BAT. SUPPLY AT DIST PBX	SEE NOTE NO.	REMARKS
A	1400	20,000	20,000	85-12,000	32V	14-26V		
B	1500	20,000	20,000	85-12,000	32V	15-20V		
B	2180	20,000	20,000	85-12,000	32V	20-28V	3	
B	1740	4500	30,000	160-24,000	45V	45-50V	3	

3. VALUES INCLUDE LOOP-RESISTANCE OF BATTERY FEEDER OVER WHICH BATTERY AND GROUND ARE FURNISHED FROM CENTRAL OFFICE.

LOOP DESIG	TYPE OF LINE	MIN RING. VOLT. (20 CY)	WITHOUT MORSE THUMP PROTECTION OPTION		WITH MORSE THUMP PROTECTION OPTION					
			WITHOUT RINGER AT LOC AND DIST PBX (OHMS)	WITH RINGER AT LOC OR DIST PBX (OHMS)	WITHOUT RINGER AT LOC OR DIST PBX (OHMS)	WITH RINGER AT LOC OR DIST PBX (OHMS)				
AA	CX	75	2600	2500	1500	1400				
		95	4000	3900	2300	2200				
	NON-CX	75	2600	2500						
		95	4000	3900						
AB	CX	75	880	880	880	880				
		95	1800	1800	1800	1800				
	NON-CX	75	2000	2000						
		95	2700	2700						
AC	CX	75	880	880	880	880				
		95	1800	1800	1800	1800				
	NON-CX	75	2600	2500						
		95	3800	3000						
AD	CX OR NON-CX	75		NO. OF RINGERS AT DIST PBX	1 2300	2 2100	3 1900	4 1600		
				NO. OF RINGERS AT DIST PBX	1 2300	2 2100	3 1900	4 1600		
				NO. OF RINGERS AT DIST PBX	1 2300	2 2100	3 1900	4 1600		
				NO. OF RINGERS AT DIST PBX	1 2300	2 2100	3 1900	4 1600		
	NON-CX	95		NO. OF RINGERS AT DIST PBX	1 3100	2 2900	3 2600	4 2300		
				NO. OF RINGERS AT DIST PBX	1 3100	2 2900	3 2600	4 2300		
				NO. OF RINGERS AT DIST PBX	1 3100	2 2900	3 2600	4 2300		
				NO. OF RINGERS AT DIST PBX	1 3100	2 2900	3 2600	4 2300		

LOOP DESIG	TYPE OF LINE	MIN RING. VOLT. (20 CY)	WITHOUT RINGER AT LOC AND DIST PBX (OHMS)	WITH RINGER AT LOC OR DIST PBX (OHMS)
AE	CX OR NON-CX	75	2600	2500
		95	4000	3900
AF	CX	75	880	880
		95	1800	1800
	NON-CX	75	2000	2000
		95	2700	2700
AG	CX	75	880	880
		95	1800	1800
		75	2600	2500
AH	CX OR NON-CX	75		NO. OF RINGERS AT DIST PBX
				NO. OF RINGERS AT DIST PBX
				NO. OF RINGERS AT DIST PBX

2. ALL TIE TRUNK RANGES SHOWN ON THE RANGE CHART INCLUDE THE RESISTANCE OF THE OUTSIDE CABLEING THE WIRING AT THE PBX AND THE HEAD COILS. THE RESISTANCE OF THE PBX APPARATUS IS NOT INCLUDED. VALUES ARE SHOWN IN TERMS OF CONDUCTOR LOOP BETWEEN PBX'S.

LOOP DESIG	MAX LOOP RES (OHMS)	MIN INS RES (OHMS)	MIN BAT. SUPPLY AT NO. 608A PBX	BAT. SUPPLY REL (V) AT NO. 608A PBX	HIGH-LOW REL (S) AT DIST PBX	MIN BAT. SUPPLY AT DIST PBX	SEE NOTE NO.	REMARKS
A	1520	20,000	32V	693	85-12,000	32V		
A	1830	30,000	32V	693	85-12,000	32V		
A	2380	20,000	44V	693	85-12,000	44V		
A	2480	30,000	44V	693	85-12,000	44V		
A	3250	30,000	32V	693	160-24,000	32V		
A	4350	30,000	44V	693	160-24,000	44V		

SD-66729-01-C2

PBX SYSTEMS
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BELL TELEPHONE LABORATORIES
INCORPORATED

SD-66729-01-C2

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LIST 1 CURRENT DRAINS FOR POWER PLANT AMPERE BUSY HOUR DRAIN PER CIRCUIT

TYPE OF EQUIPMENT OR CIRCUIT TITLE	CIRCUIT NUMBER	SEE NOTE NO.	48V BAT.	48V CRD	
				FR	SWBD
ALARM AUX SIG FUSE ALARM, BAT. CUTOFF AND MISC CKT	SD-66722-01		.188		
CORD MAN. PBX ONLY	SD-66720-01		.110		
MAN. AND DIAL PBX			.110		
INTERRUPTER, RELAY	SD-66728-01		.095		
LAMP AC LAMP RELAY	SD-66724-01		NEG		
LINE, LONG DIAL	SD-96251-01		.010		
POSITION	SD-66721-01		.145		
TRUNK LONG		1	.050		
LONG	FOR FIG. 1 OR 2 FIG. 3	SD-96034-01	.016		
			.033		
LONG	SD-96234-01		.016		
LONG, DIAL	SD-96251-01		.050		
LONG, DIAL	WITHOUT REPEATER	SD-96252-01	.020		
	WITH REPEATER		.031		
	ADD FOR HI CARRIER		.009		
TIE	SD-65682-01		.011		
		2	.004		
		3	.002		
TIE	SD-66798-01		.044		
		2	.004		
		3	.002		
TIE	SD-66649-01		.031		
		2	.004		
		1	.002		
CENTRAL OFFICE	SD-66719-01		.013		
		3	.002		
		4	.009		
		5	.033		

NOTES:
 1. SEE NOTE 301.
 2. ADD PER IDLE INDICATING LAMP GROUP.
 3. ADD PER 2Y LAMP.
 4. ADD PER TRUNK DC BUSY LAMP.
 5. ADD PER AC BUSY LAMP RELAY OR AC IDLE INDICATING RELAY.

LIST 2 CURRENT DRAINS FOR DISTRIBUTING EQUIPMENT AMPERES PER CIRCUIT

TYPE OF EQUIPMENT OR CIRCUIT TITLE	CIRCUIT NUMBER	SEE NOTE NO.	48V BAT.	48V CRD	
				FR	SWBD
ALARM AUX SIG FUSE ALARM, BAT. CUTOFF AND MISC CKT	SD-66722-01		.140	.140	
CORD MAN. PBX ONLY	SD-66720-01		.364	.232	
MAN. AND DIAL PBX			.130	.065	
INTERRUPTER, RELAY	SD-66728-01		.071	.057	
LAMP AC LAMP RELAY	SD-66724-01		NEG	.028	
LINE, LONG DIAL	SD-96251-01		100	100	
POSITION	SD-66721-01		.110	.110	
TRUNK LONG		1	.050	.050	
LONG	DRAIN TOWARD DIAL STATION; FIG. 1 OR 2 DRAIN TOWARD PBX DIAL LONG LINE; FIG. 3	SD-96034-01	.031	.031	
			.075	.065	
LONG	SD-96234-01		.022	.022	
LONG, DIAL	SD-96251-01		.100	.100	
LONG, DIAL	WITHOUT REPEATER	SD-96252-01	.057	.057	
	WITH REPEATER		.089	.089	
	ADD FOR HI CARRIER		.019		
TIE	SD-65682-01		.031	.011	
		2	.012		
		3	.007	.007	
TIE	SD-66298-01		.125	.223	
		2	.012		
		3	.007	.007	
TIE	SD-66649-01		.089	.062	
		2	.012		
		3	.007	.007	
CENTRAL OFFICE	SD-66719-01		.011		
		3	.004		
		4	.018		
		5	.028		

NOTES:
 1. SEE NOTE 301.
 2. ADD PER IDLE INDICATING LAMP GROUP.
 3. ADD PER 2Y LAMP.
 4. ADD PER TRUNK DC BUSY LAMP.
 5. ADD PER AC BUSY LAMP RELAY OR AC IDLE INDICATING RELAY.

CIRCUITS FOR WHICH BOTH LIST 1 & LIST 2 DRAINS ARE NEGLIGIBLE

- SD-62442-01
- SD-65719-01
- SD-65738-01
- SD-65774-01
- SD-65778-01
- SD-65779-01
- SD-65784-01
- SD-66660-01
- SD-66634-01
- SD-66451-01
- SD-66679-01
- SD-66718-01
- SD-66725-01
- SD-90077-01
- SD-90078-01
- SD-95112-01
- SD-96116-01
- SD-96234-01

INFORMATION NOTE:
 301. THE LISTED DRAIN APPLIES TO THE FOLLOWING CIRCUITS

- SD-66057-01
- SD-66058-01
- SD-66059-01
- SD-96009-01
- SD-96010-01
- SD-96117-01

SD-66729-02

PBX Systems NO. 608A CURRENT DRAIN DATA	AT&T STANDARD
	SD-66729-02
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