

BELL TELEPHONE LABORATORIES, INC.

NOV 21 1955

TOLL SYSTEMS SWITCHBOARD NO.3 AND TANDEM SWITCHBOARD NO.3 KEY SHEET

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FOR EXPLANATION OF CONVENTIONS SEE
MASTER KEY SHEET SD-90250-01

REPLACING SD-60465-01, SD-60533-01, SD-60608-01, &
SD-62440-02. REPLACED BY SD-63410-01 FOR TOLL OPR. ROOM
DESKS. REPLACING SD-64102-01 FOR TESTING AND MAINTENANCE

DWG ISS.	C.D. ISSUE	DATE ISSUED	APPROVED	
29	29	4-25-51	H.B.M. C.J.S.	A.H.L. R.L.L.
	31	6-20-60		

No. 3. SWBDS.

MIAMI

ORLANDO

W.P.B.

PENSACOLA

A & M ONLY

SD-62440-01

PRINTED IN U.S.A.

APPLICATION SCHEMATIC
COVERING TOLL CORD
MODIFICATION FOR
TEMPORARY SERVICE DURING
CUT-OVER OF COMBINED
TOLL & D.S.A. BDS.
SD-63672-01 C

JACK CKTS. A67

TO JACK CKTS
A67, 687 &
J67 & C68
SEE A7, I73, D78
J76, K76
TOLL CORD
SD-63556-01
TO NEXT HIGHER AND
NEXT LOWER
NUMBERED CORD

BUSY SIGNAL TEST CKT.
E111

POSITION
CIRCUIT
SD-62032-02
SEE B7,
C80

PEG COUNT CKT. B69
DIAL CKT. FOR EITHER
LOOP OR COMB. LOOP &
REPEATED DIALING
SD-62673-01
REPEATED DIALING ONLY
SD-62673-03
SEE NOTE 1

JK. CKT. A67
COIN CONTROL CORD
IN MULTI OFFICE AREA
SD-60402-01 C

TRANSFER CKT. IN
ADJ. TOLL
SWBD. NO.3
POSITION

NUMBER CHECKING
CORD FOR USE
IN PANEL AREAS
SD-63011-01 C
JACK CKT. A67

GROUPING
CIRCUIT
SD-63062-01 C
TO SIMILAR
GROUPING
CKT. IN
OTHER POS.
ADJ. K.L. TRK.
POS. A47

DIAL MON.
CKT. D68
OPERATOR'S
TEL. CKT. &
INC. CALL CKT.
SD-62118-01
SEE C80

TO MON. JK. ON
MON. & OBS. JKS. CKT.
SEE F70

PERM. SIG. CORD
B149

STEP BY STEP
INTER-CONNECTING
GROUPING
CIRCUIT
WHEN SPEC.

OUTGOING
CALL CIRCUIT
SD-62471-01 C
TO OTHER CALL
CKT KEYS

COIN CONTROL
CORD. IN SINGLE
OFFICE AREA
SD-60537-01 C
JACK CKT. A67

TOLL CABINET NO. 1B
CORD CKT.
TOLL CABINET NO. 2A
LAMP CONTROL RELAY
SEE KEY SHEET

TRANSFER AND INT. CKT.
FOR TRANSFERRING
CORD CKTS. TO
TOLL CABINET NO. 1B
SEE NOTE 2
SD-55507-01
INT. CKT. C197

SIGNAL CKT.
PNEUMATIC DIST. SYS.
FOR USE WITH TUBES
INC. FROM TICKET
DIST. DSK. SEE NOTE 2
SD-63464-01
TOLL DESK NO. 51

TOLL TANDEM
POSITION TRANSFER CKT.
SEE C84
OR TO TRANSFER CKT.
AT TOLL SWBD.
NO. 3B POSITION

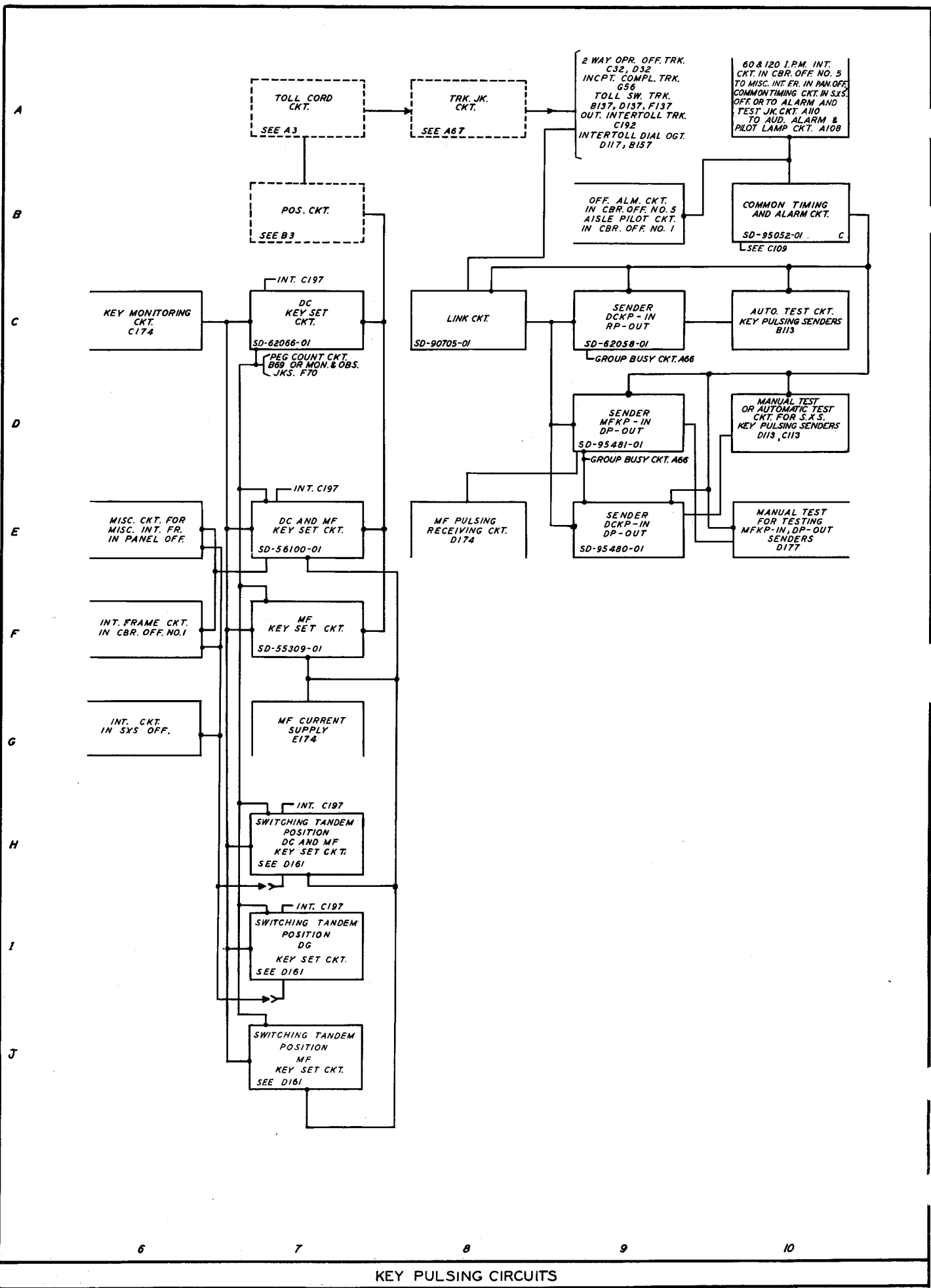
TIMING CKT. H116
TO OTHER
GROUP REL. KEYS
POSITION CLOCK CKT.
SECONDARY CLOCK CKT
SD-90409-01 C
TO FUSE ALARM BD.
TO DIST. MASTER CLK. G68
TO BLDG. MASTER CLK. A70

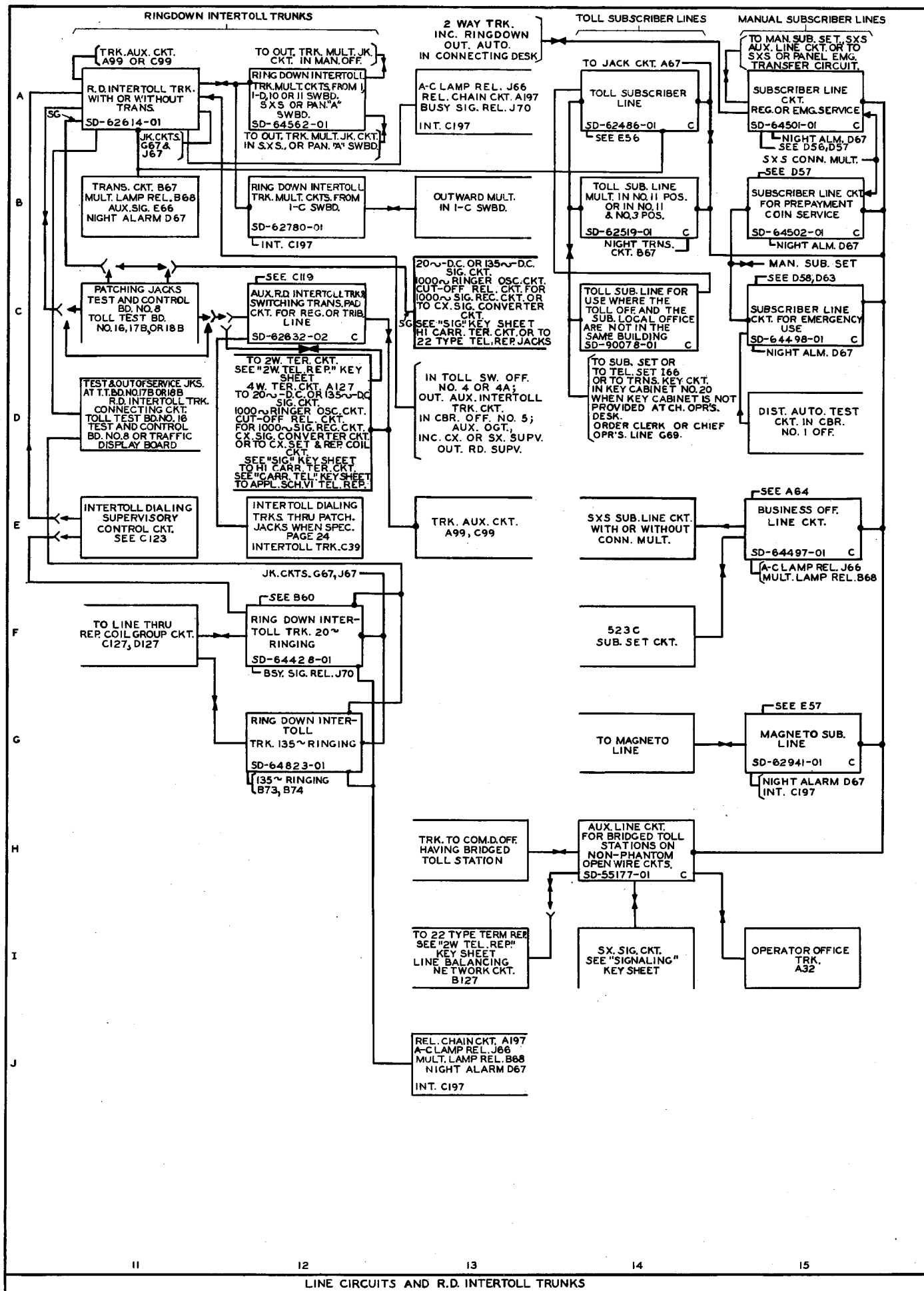
OPERATOR RECORDING
COMPLETING CORD
SD-56089-01

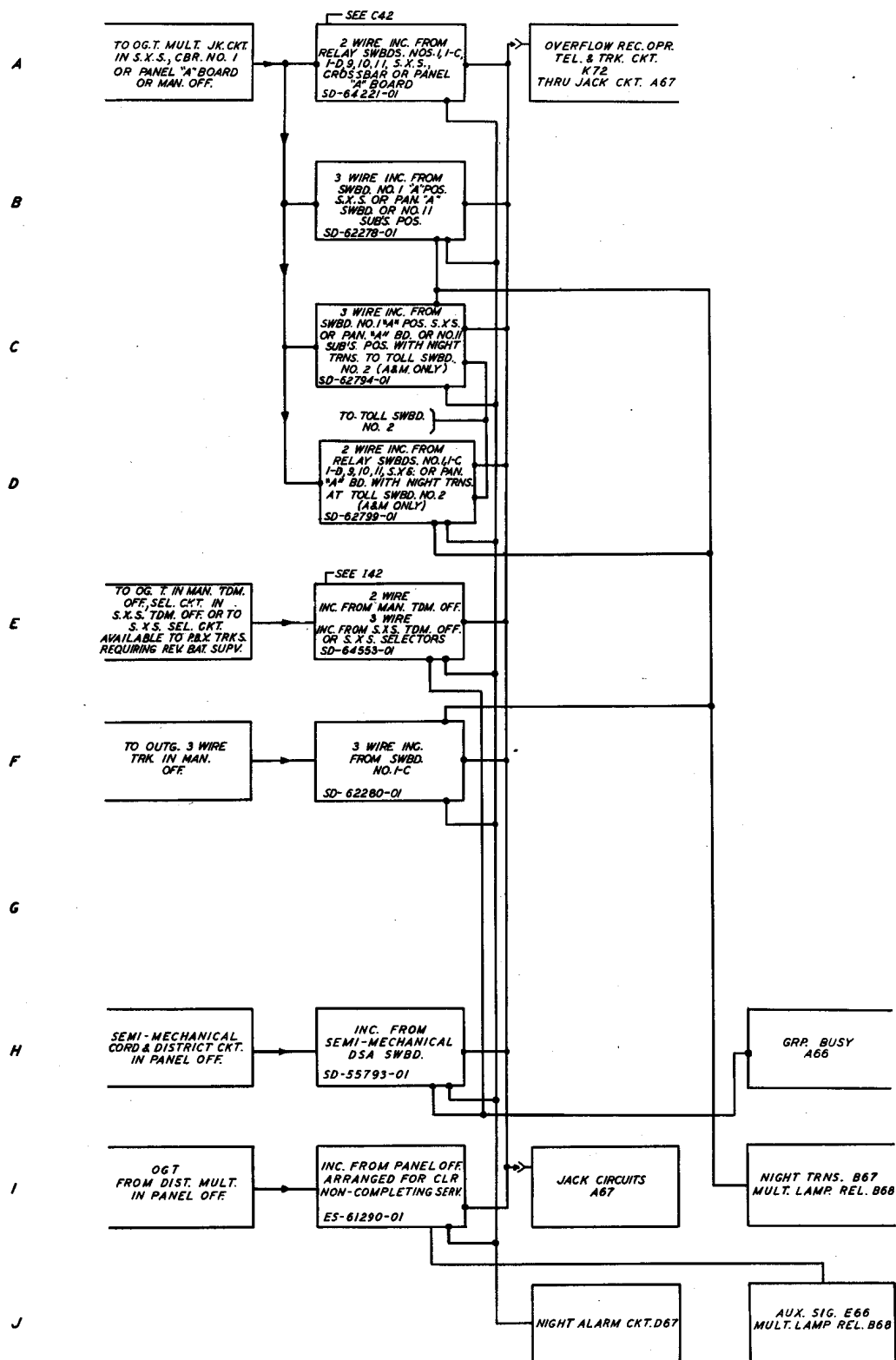
JACK CKTS.
A67

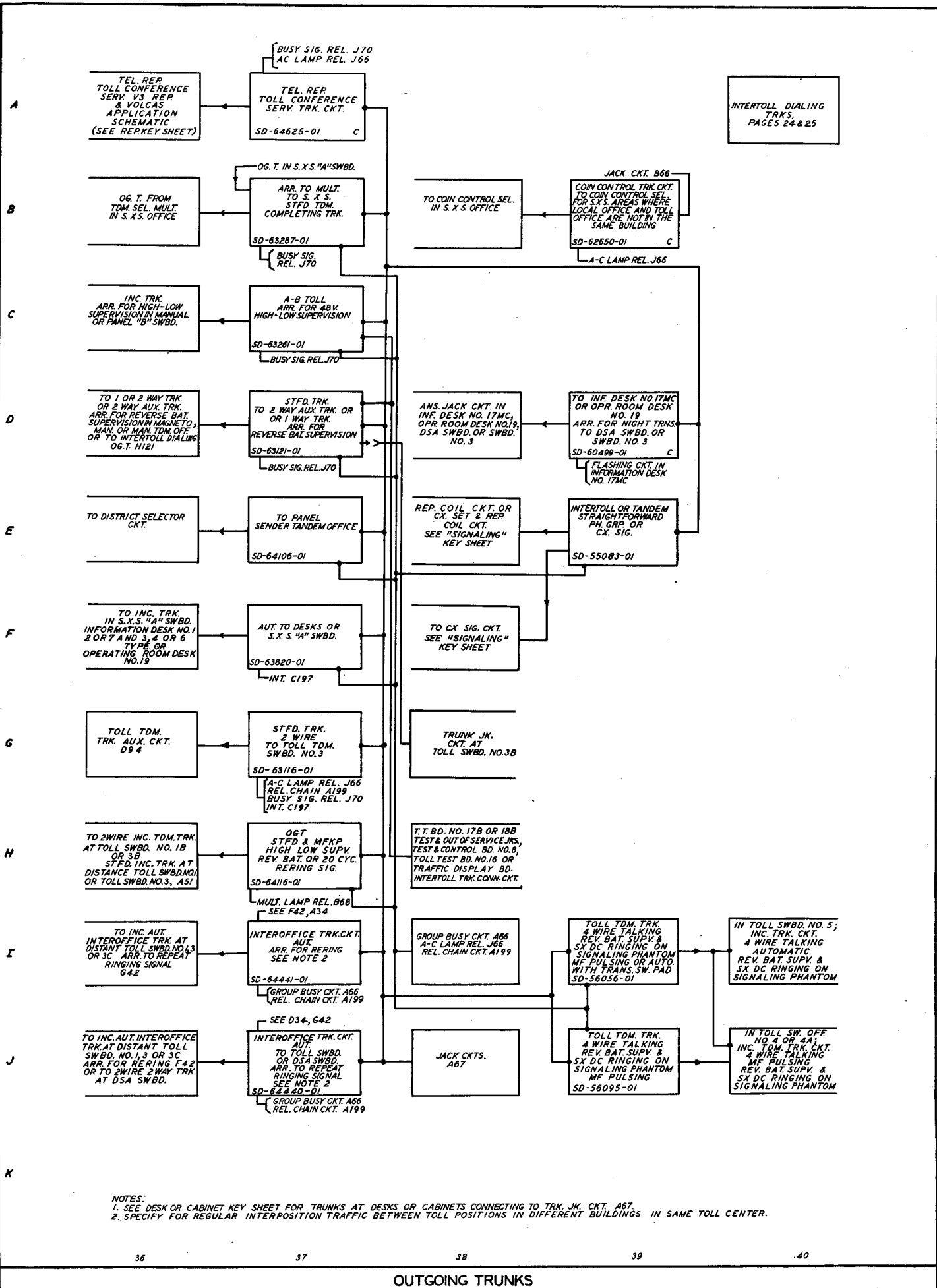
- NOTES:
1. SPECIFY ONLY ON INWARD OR OUTWARD POS.
 2. SPECIFY FOR OUTWARD POS. ONLY.
 3. OUTWARD POS. HANDLING CLR, ASSISTANCE AND S X S "A" TRAFFIC.

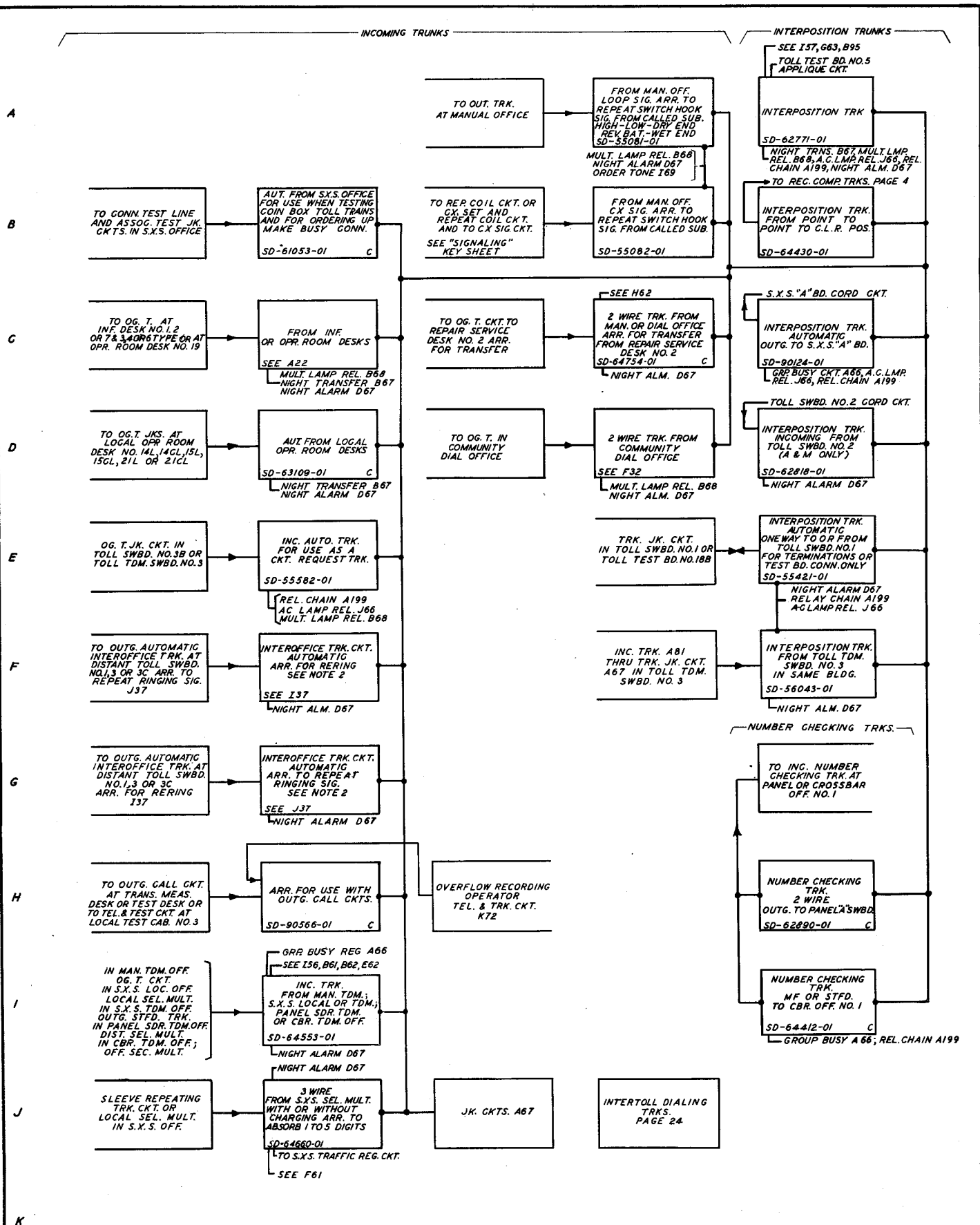
INWARD-OUTWARD AND THRU POSITIONS (SEE NOTE 3)











NOTES:
1. SEE DESK OR CABINET KEY SHEET FOR TRUNKS AT DESKS OR CABINETS CONNECTING TO TRUNK JACK CIRCUIT A67.

2. SPECIFY FOR REGULAR INTERPOSITION TRAFFIC BETWEEN TOLL POSITIONS IN DIFFERENT BUILDINGS IN SAME TOLL CENTER.

41

42

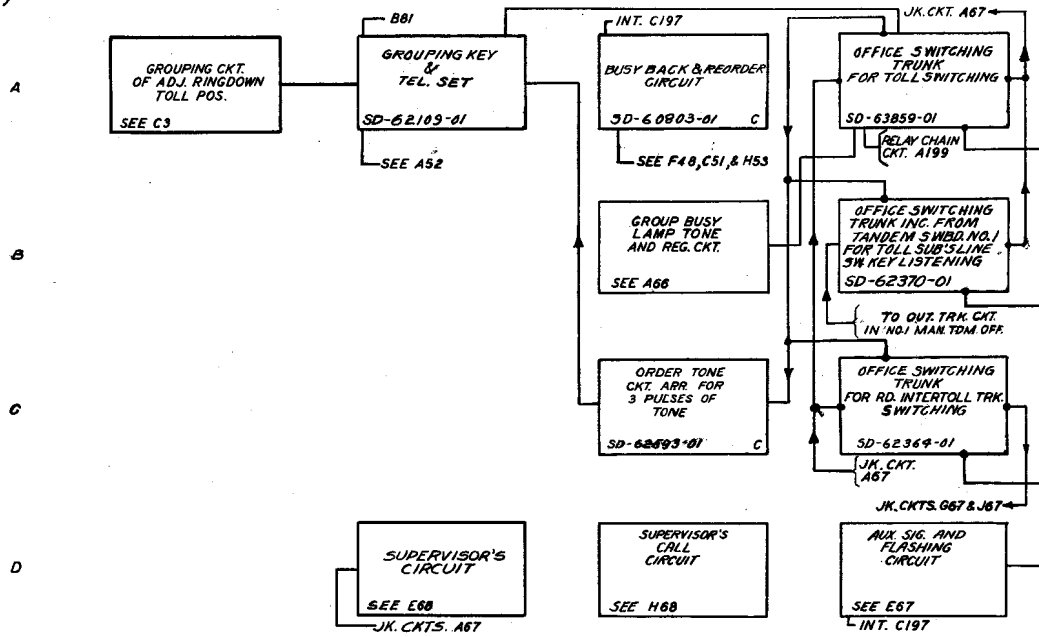
43

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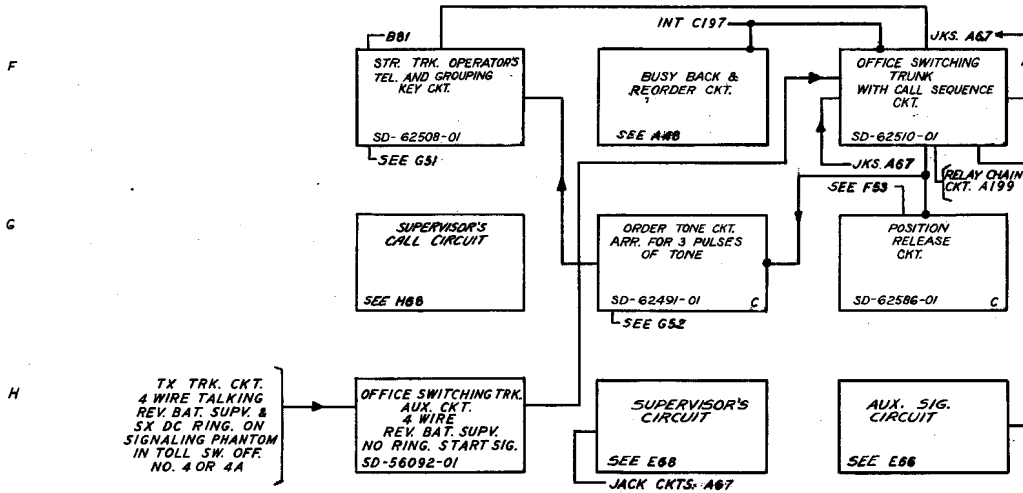
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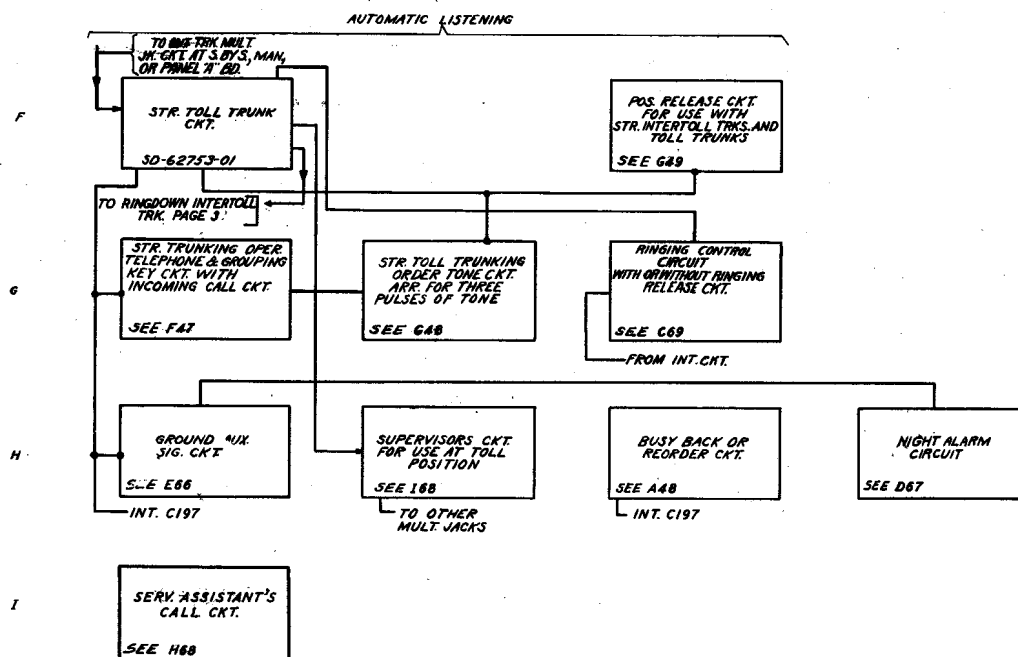
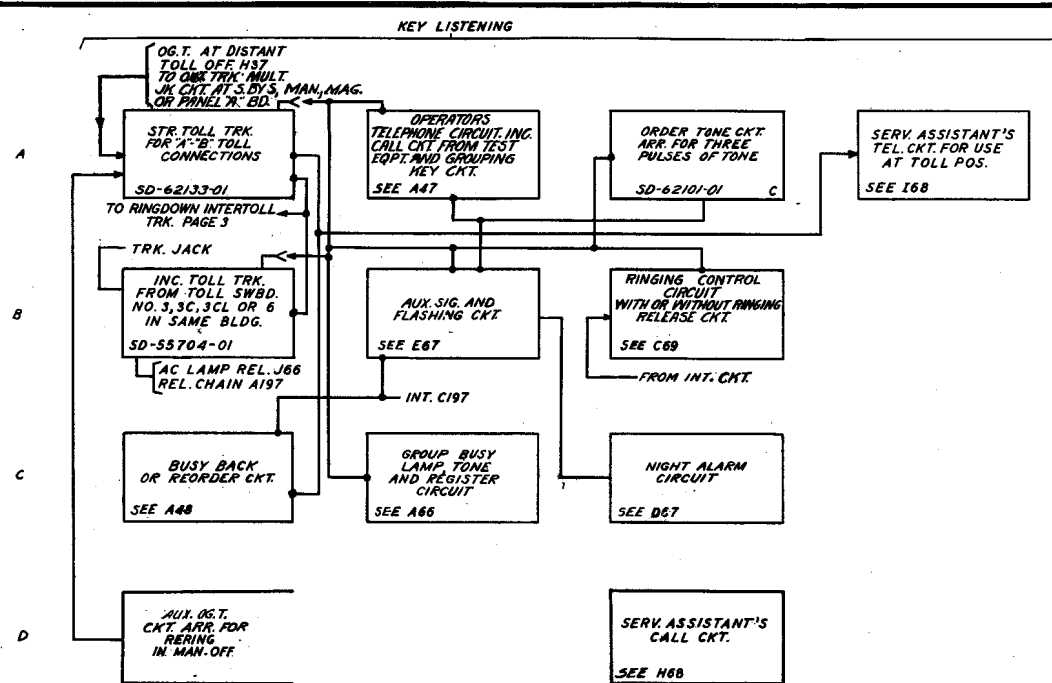
INCOMING, INTERPOSITION & NUMBER CHECKING TRUNKS

KEY LISTENING



AUTOMATIC LISTENING





51

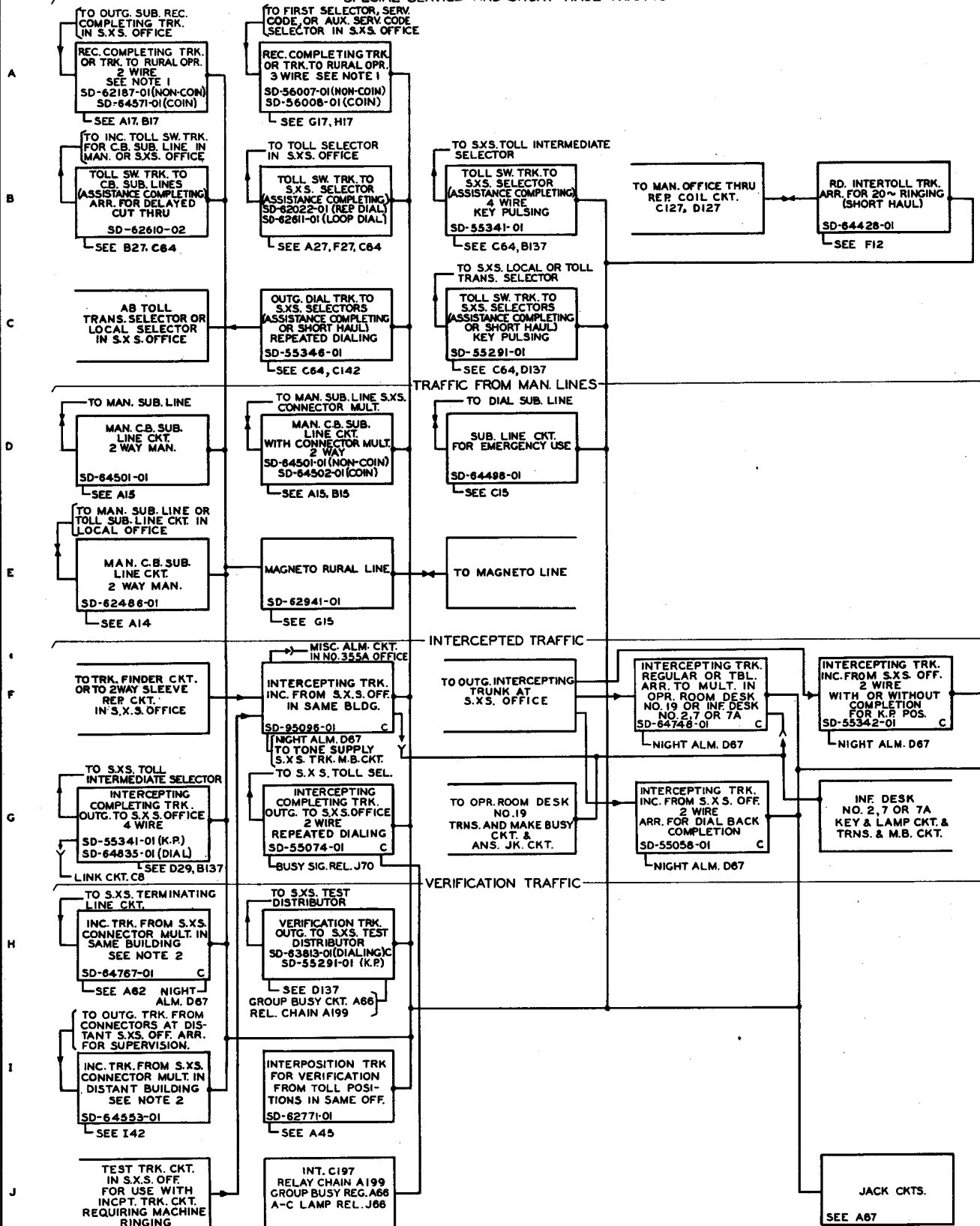
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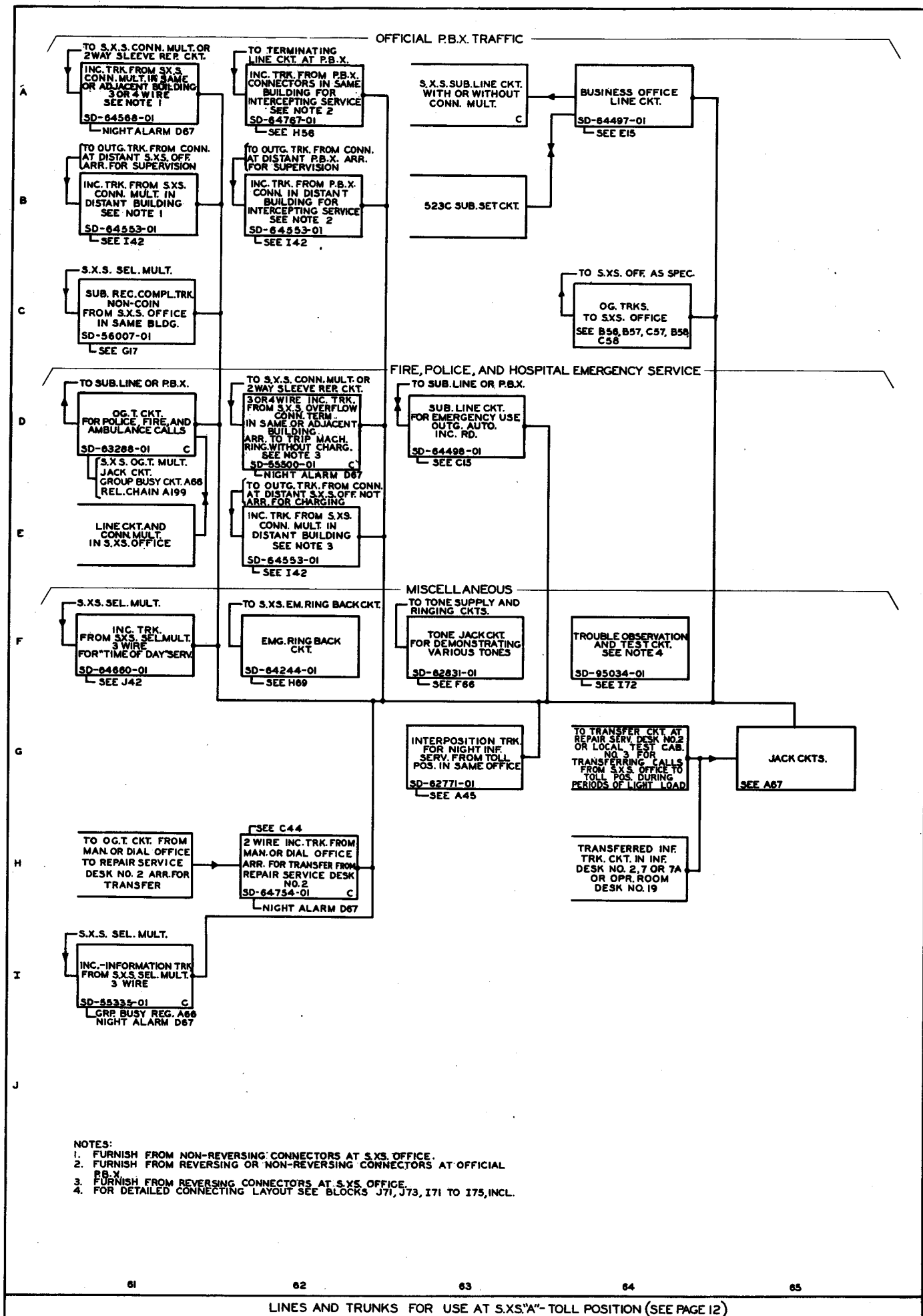
54

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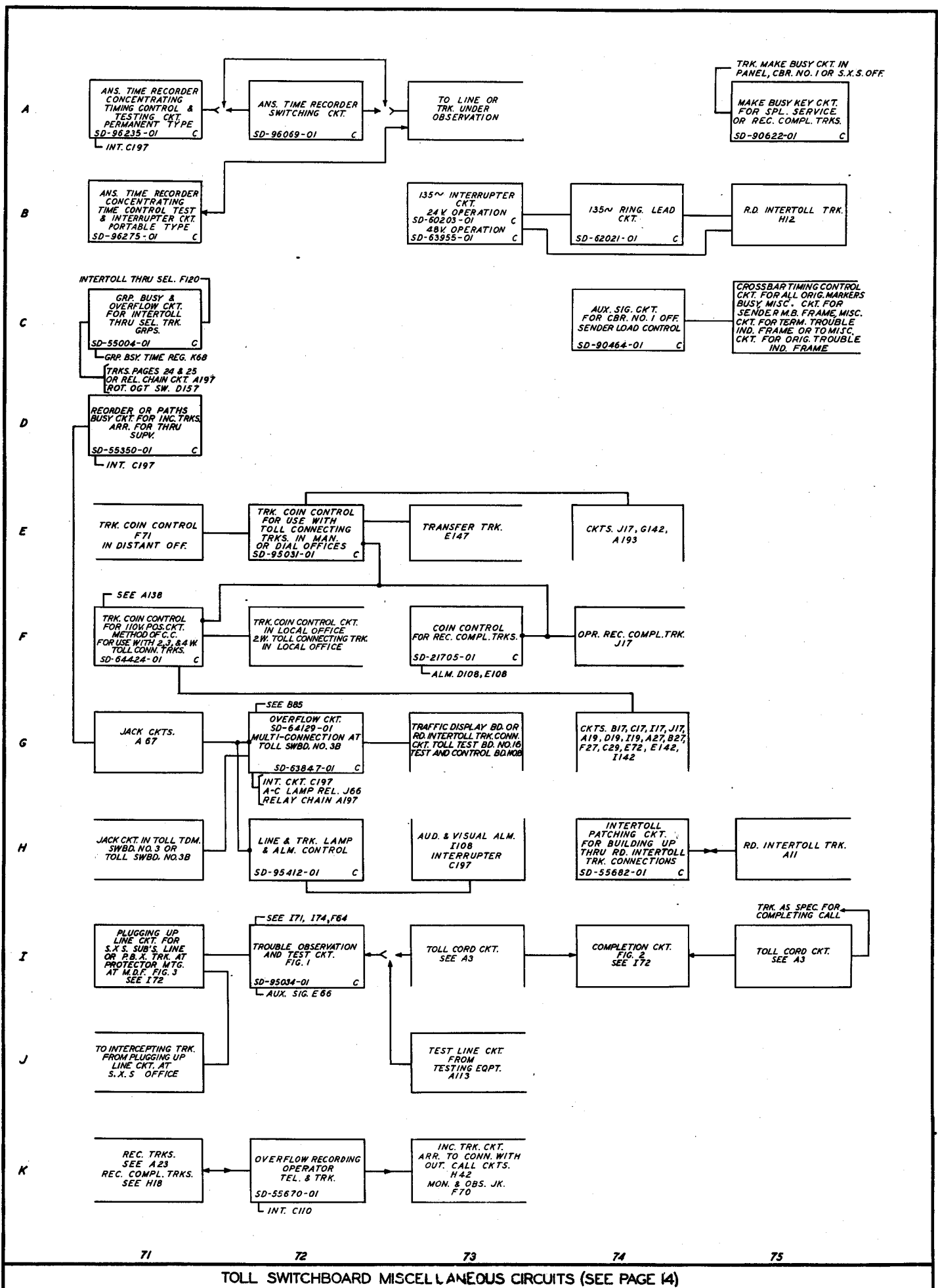
SPECIAL SERVICE AND SHORT HAUL TRAFFIC

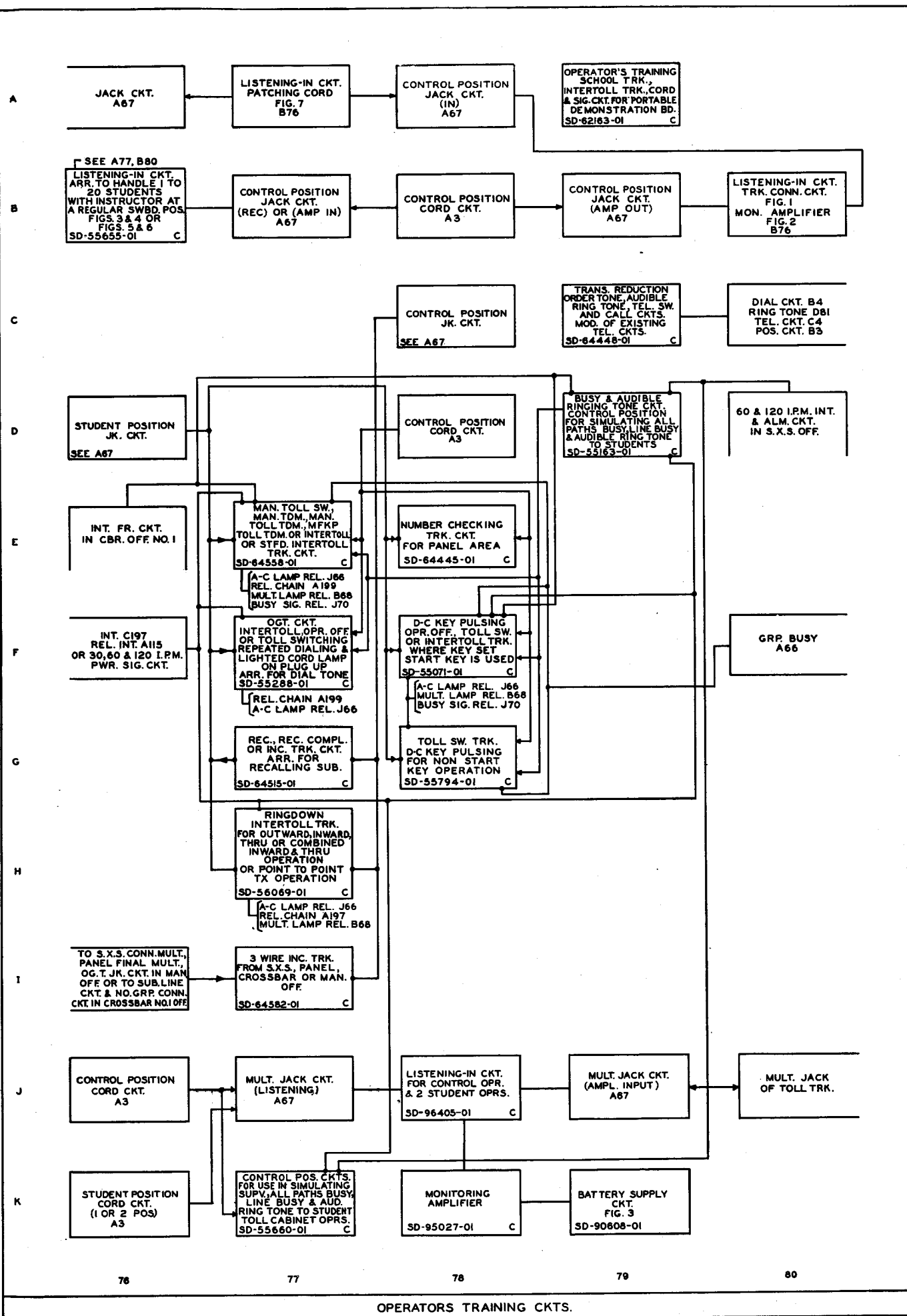


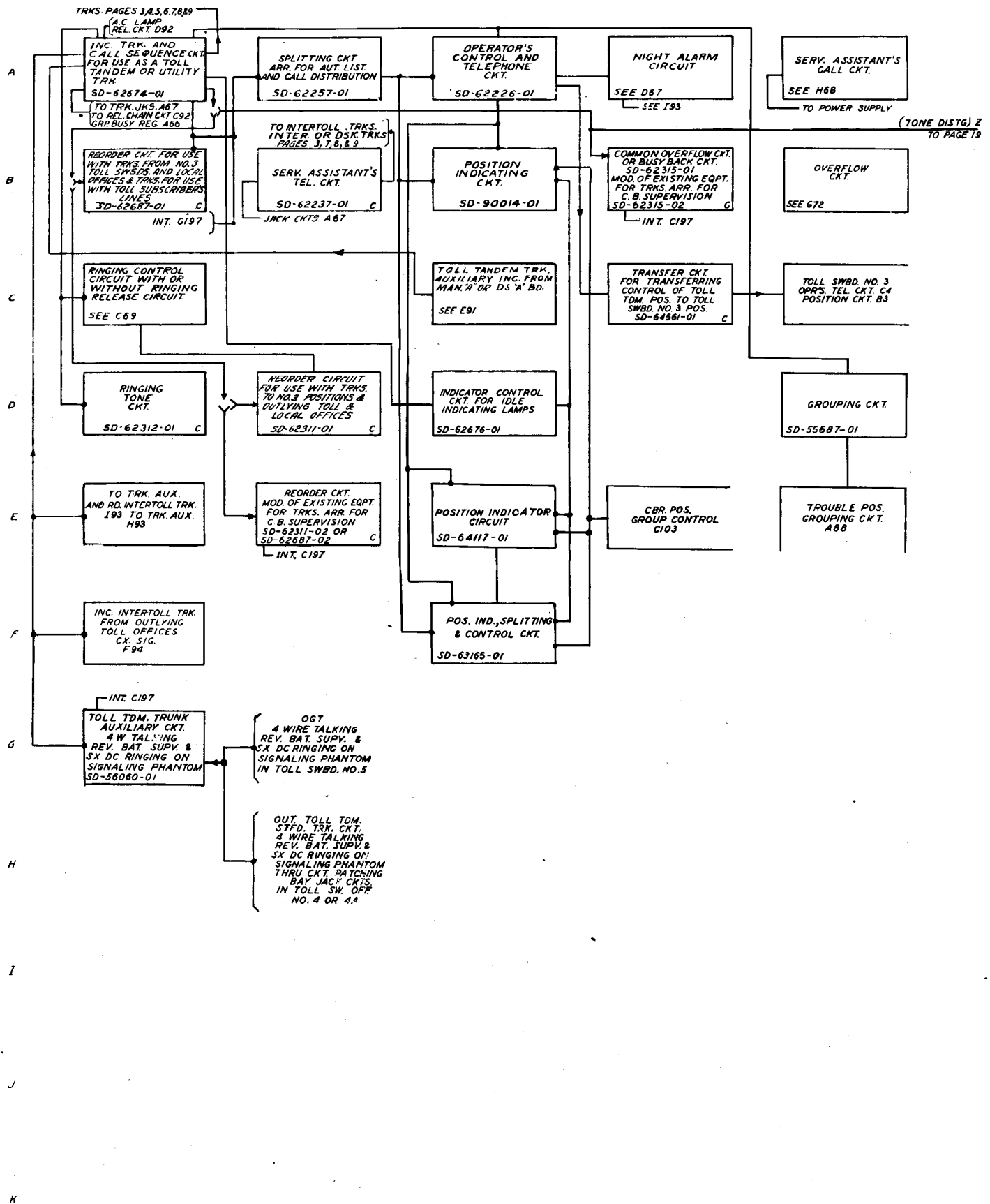
NOTES:
1. RURAL OPERATOR REACHED BY DIALING SPECIAL CODE.
2. FURNISH FROM REVERSING CONNECTORS AT S.X.S. OFFICE.

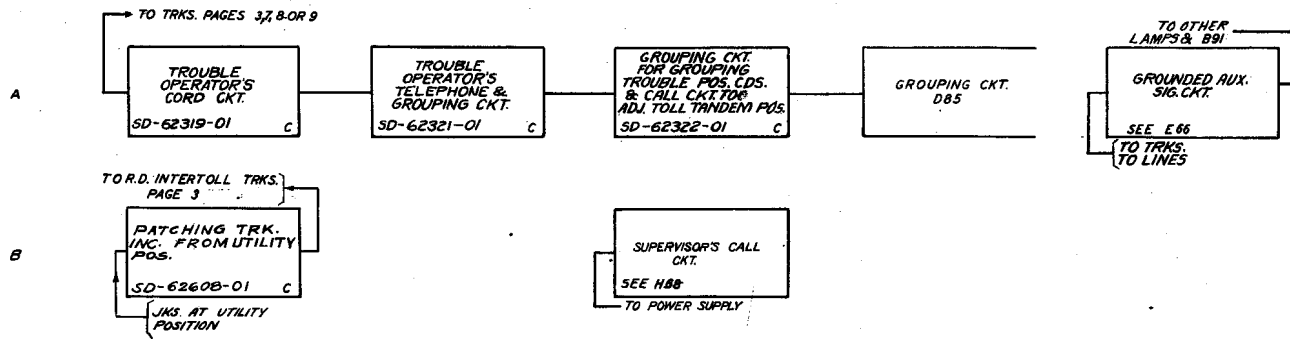




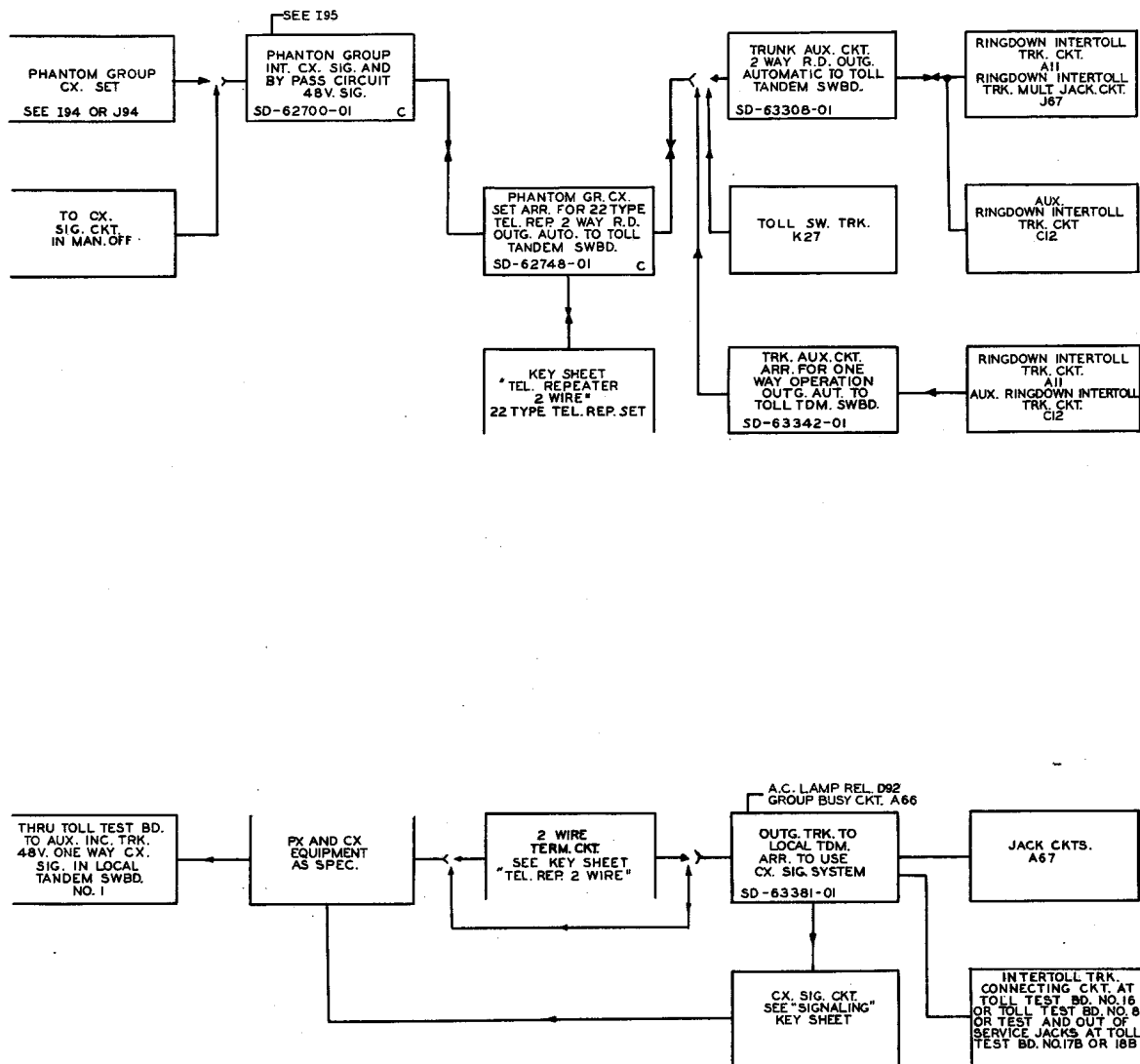








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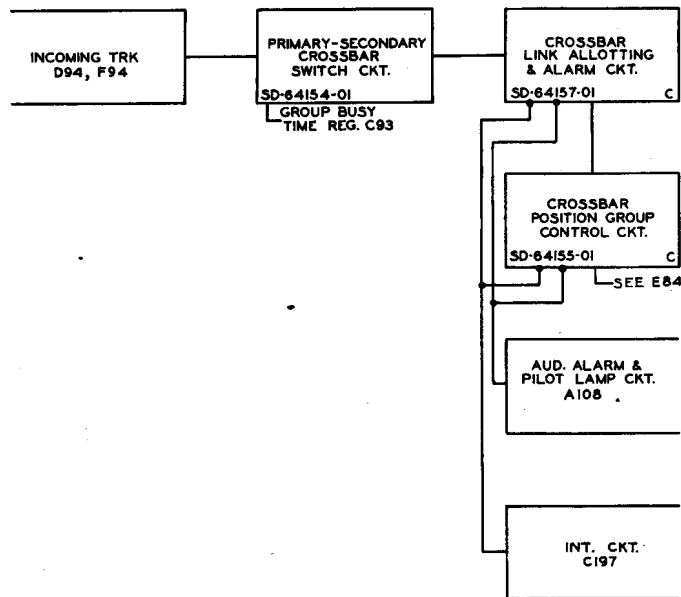
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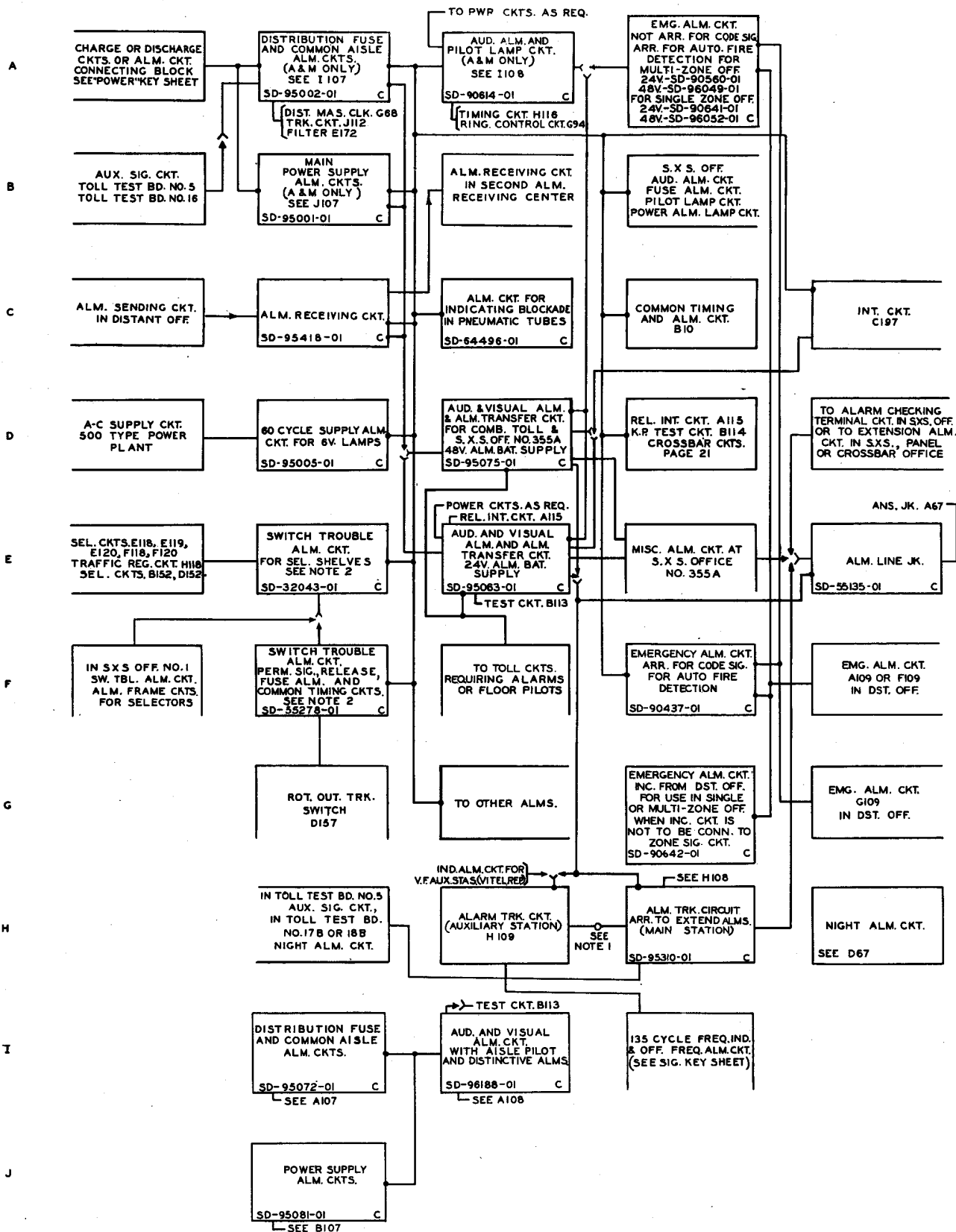
101

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NOTES:
 1. THRU TOLL TEST BD. PRIMARY JACK CKT.
 2. FOR USE IN OFFICES NOT EQUIPPED WITH S.X.S. EQUIPMENT.

106

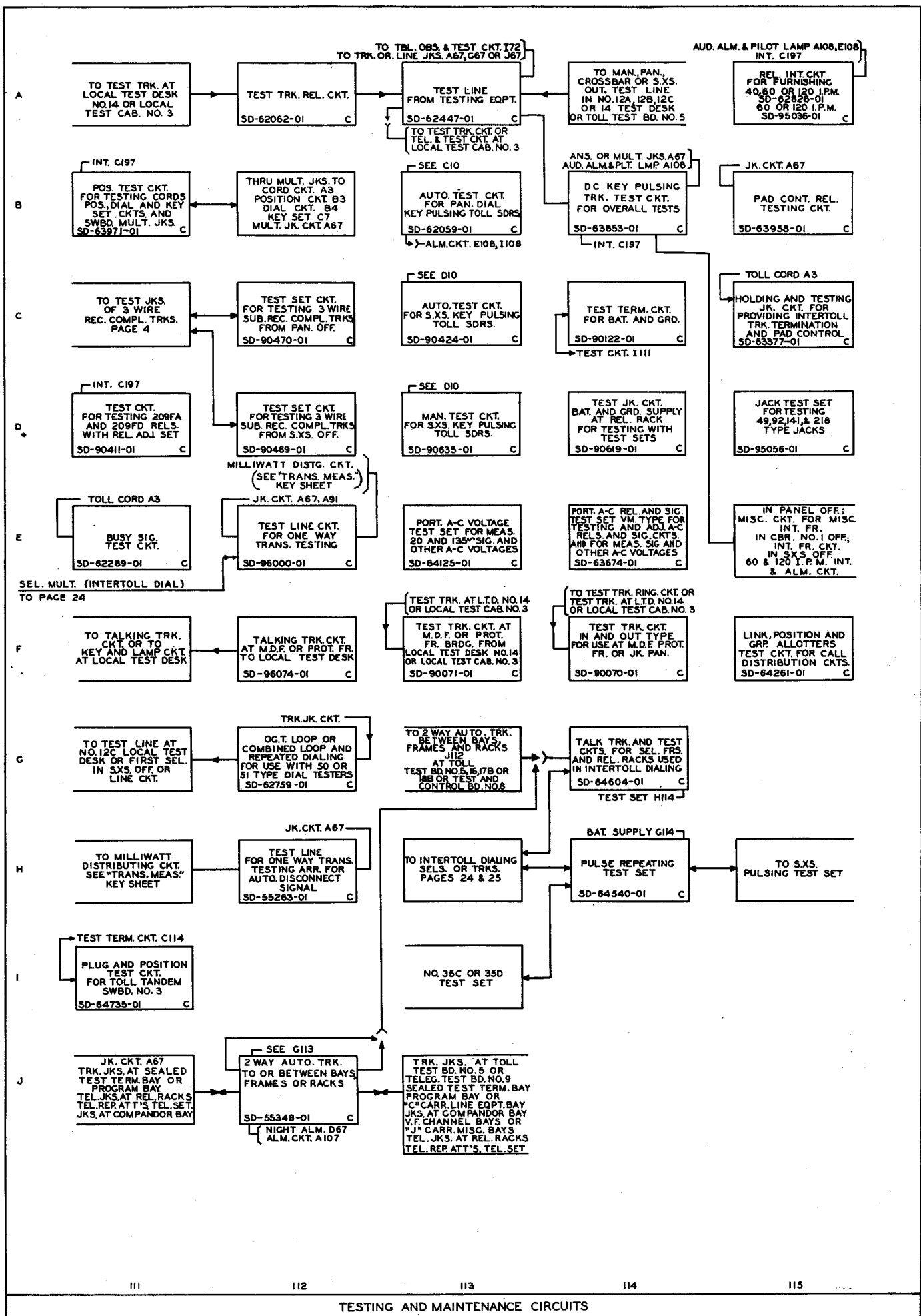
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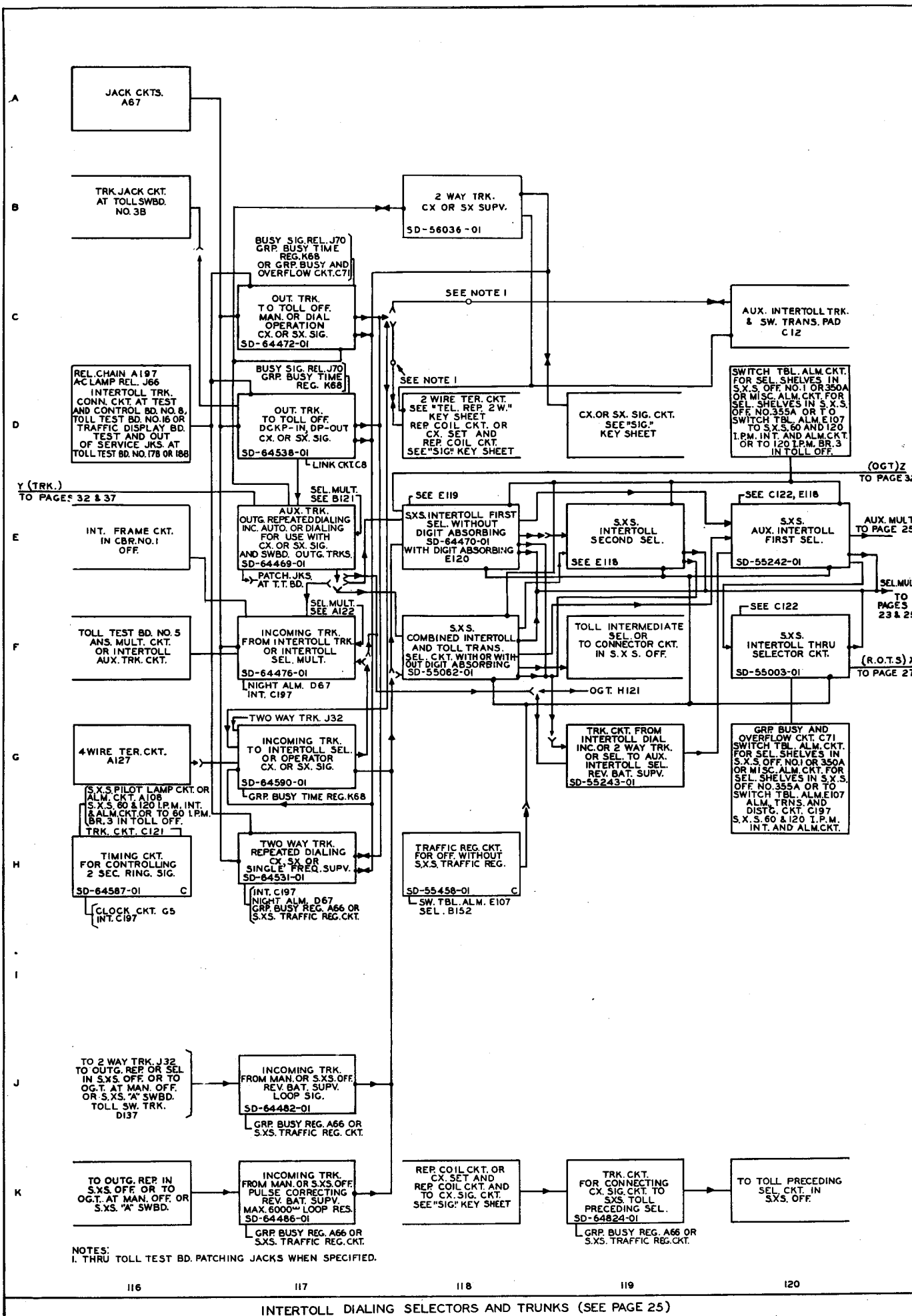
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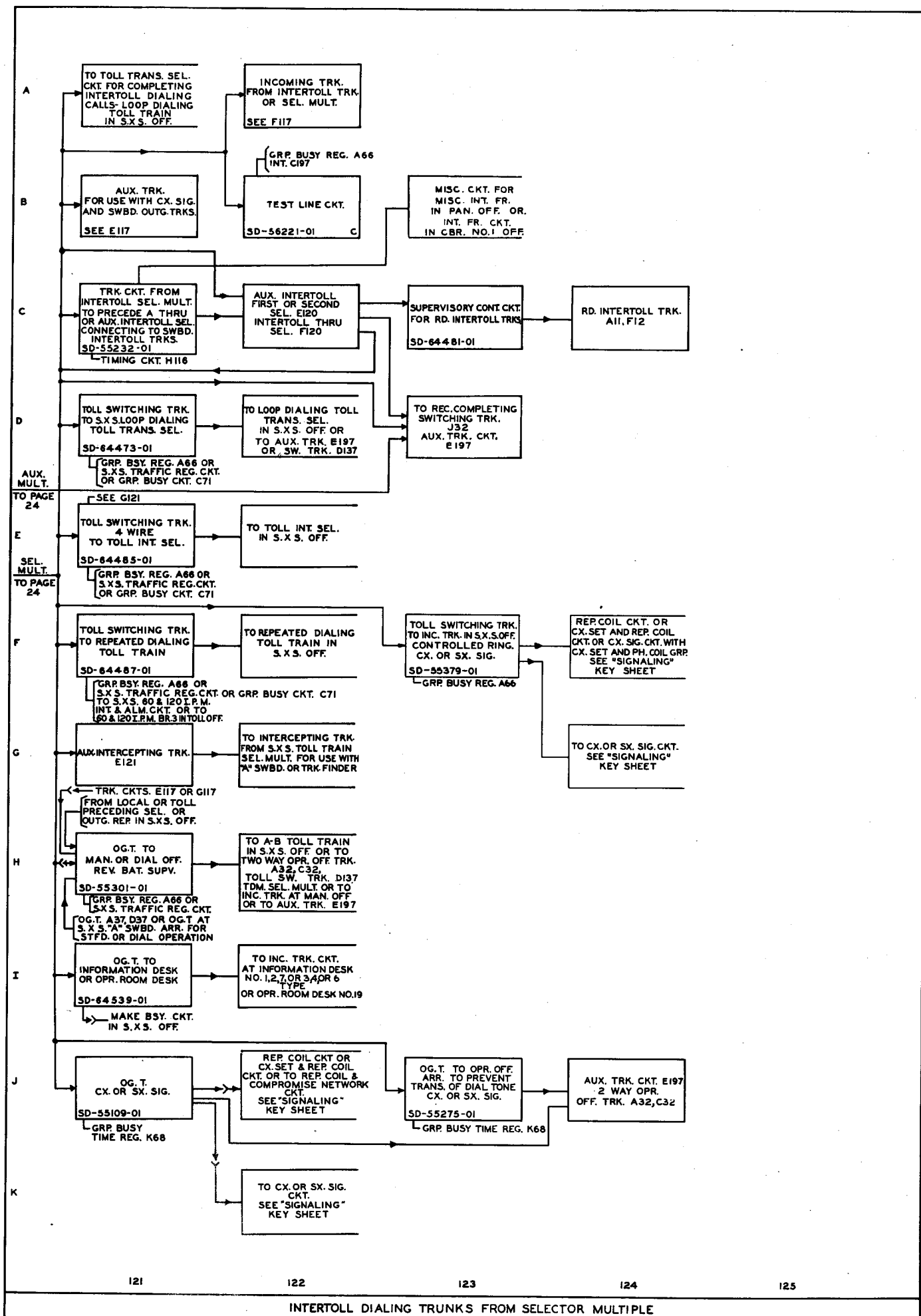
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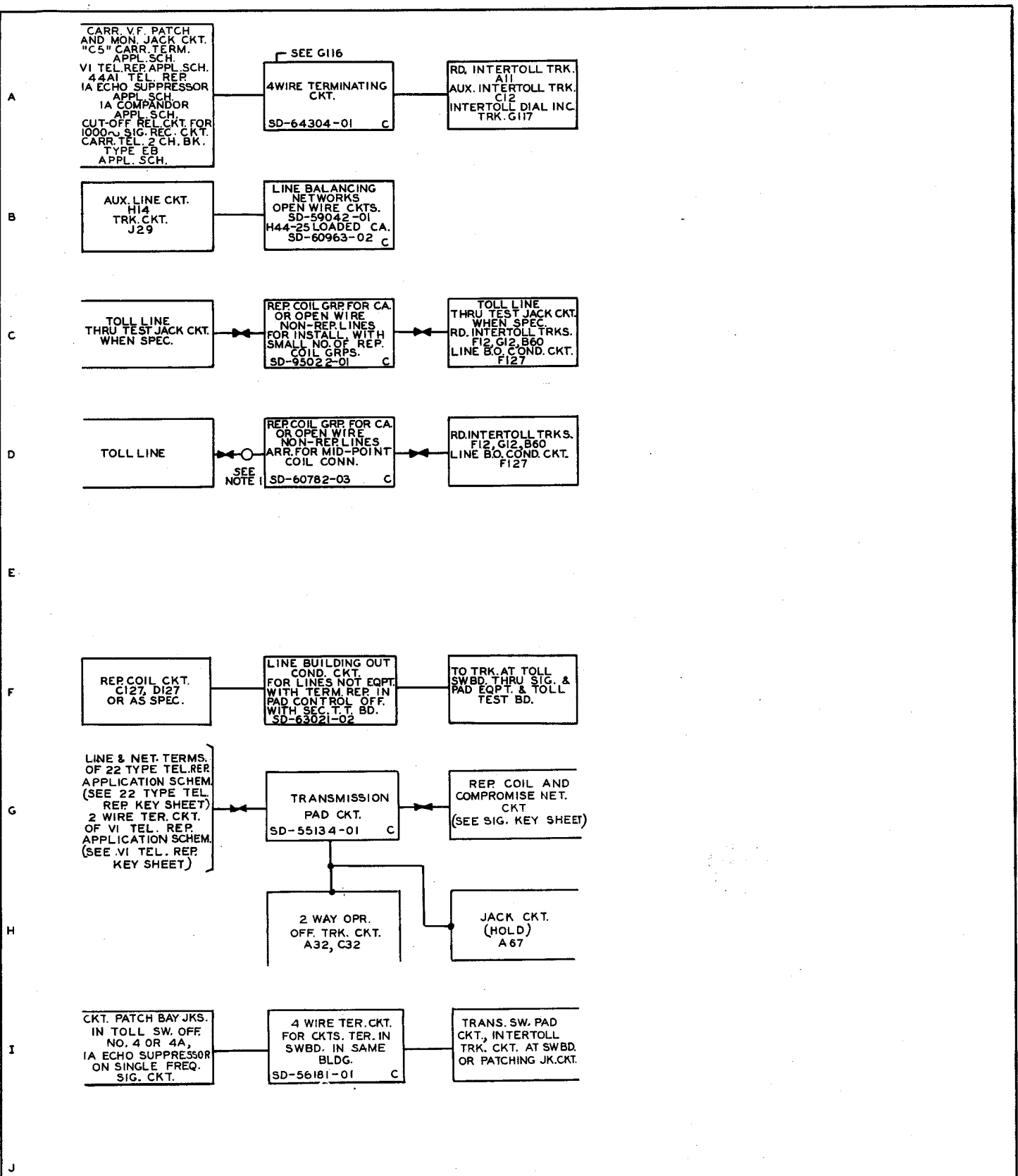
110

ALARM CIRCUITS

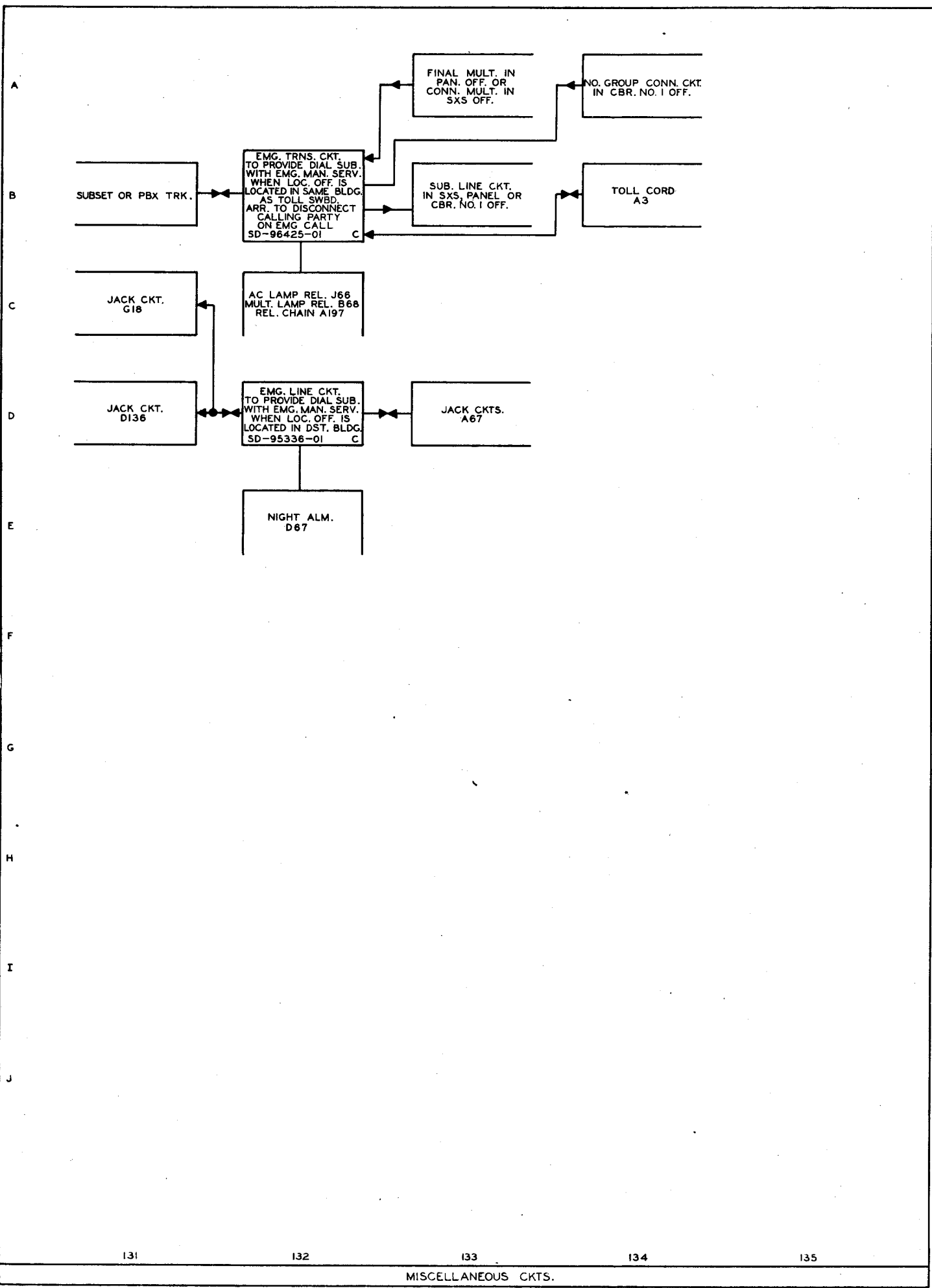


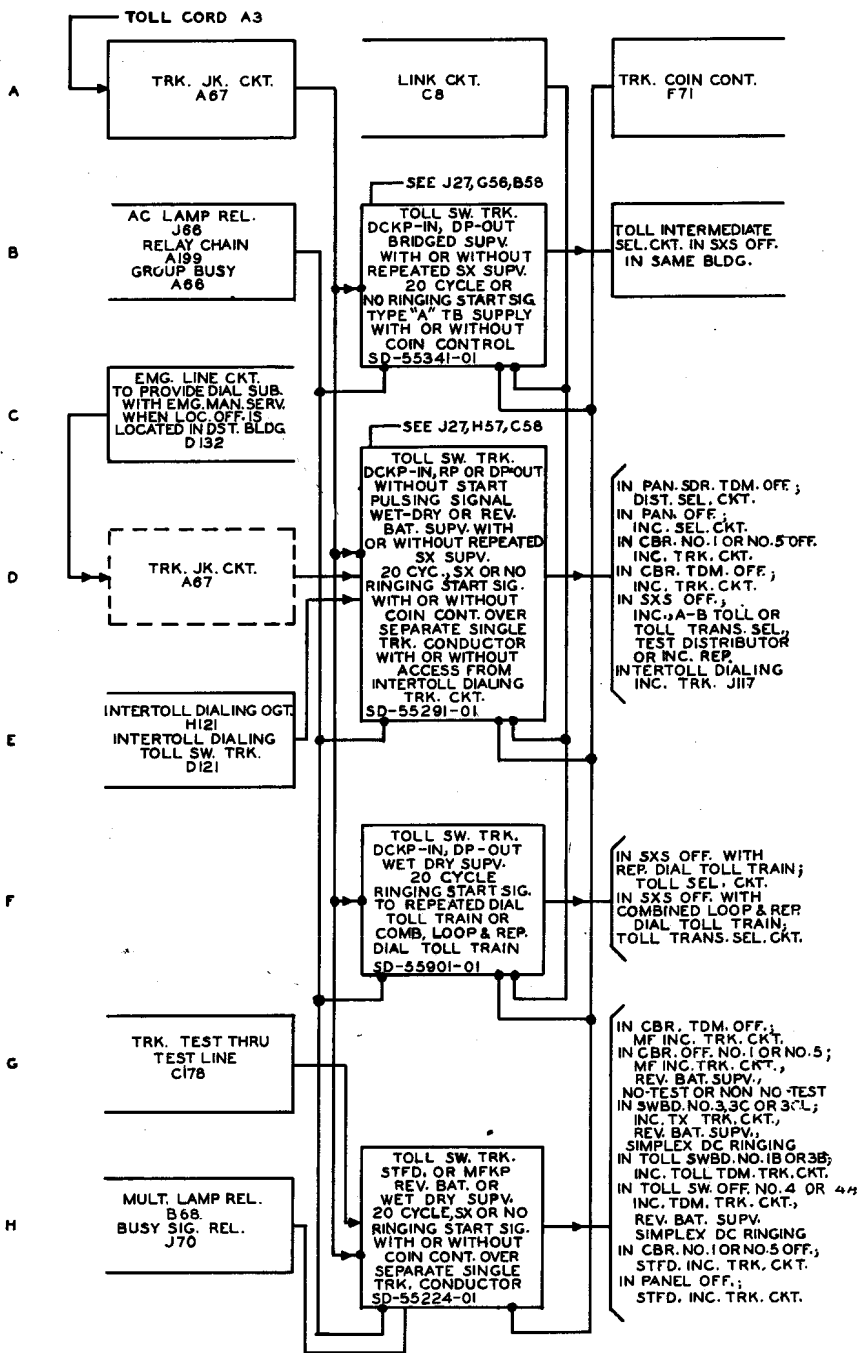




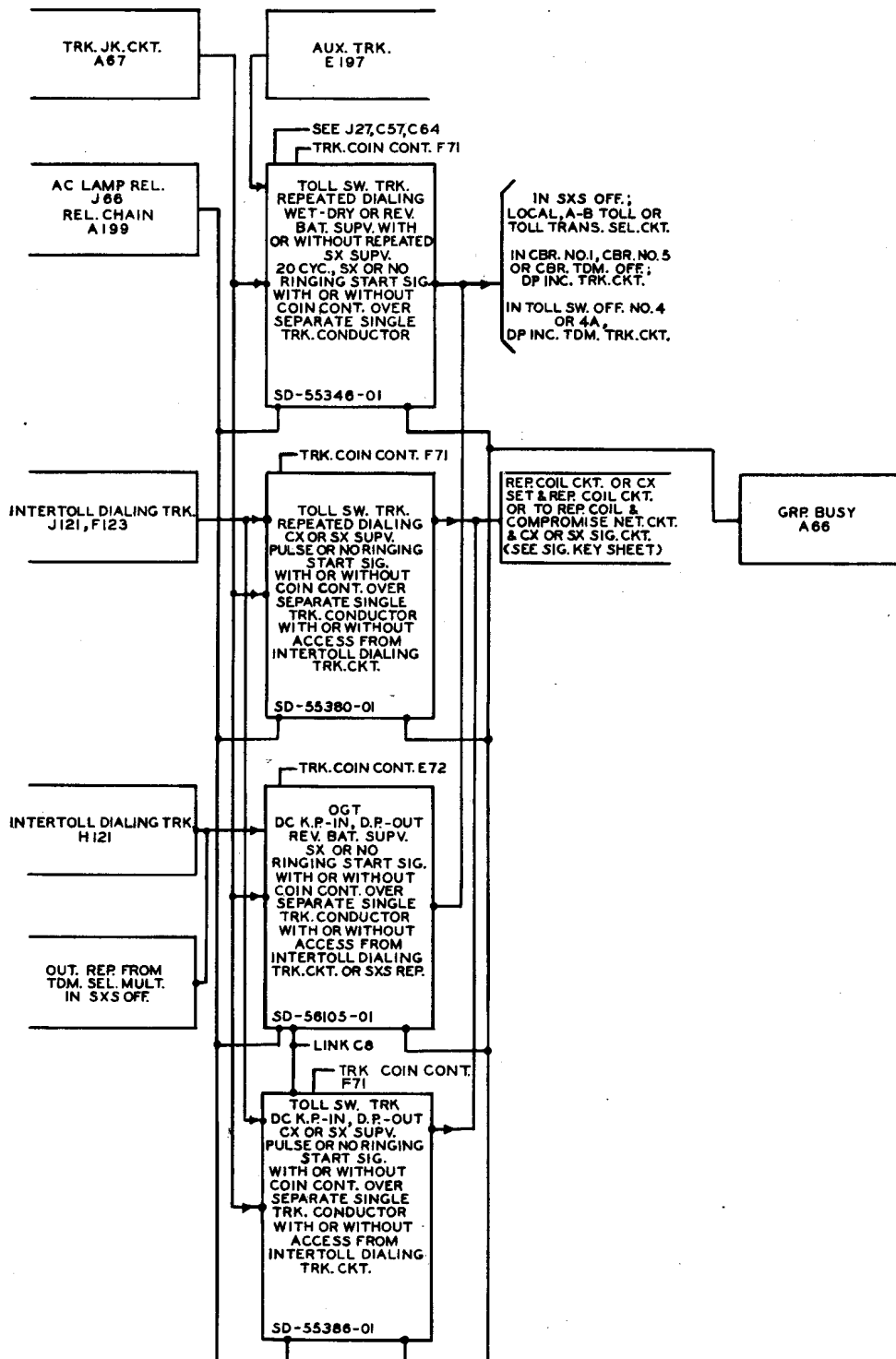


NOTES:
I. THRU TOLL TEST BD. PRIMARY JACKS WHEN SPEC.





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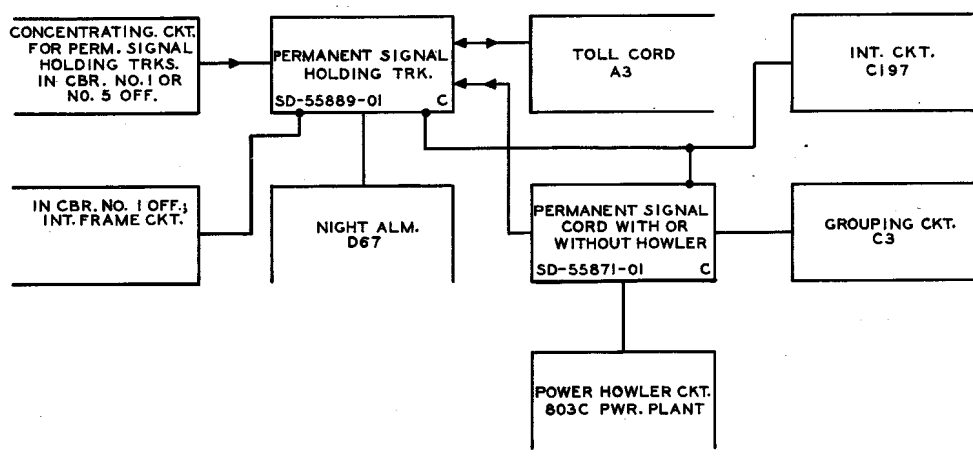
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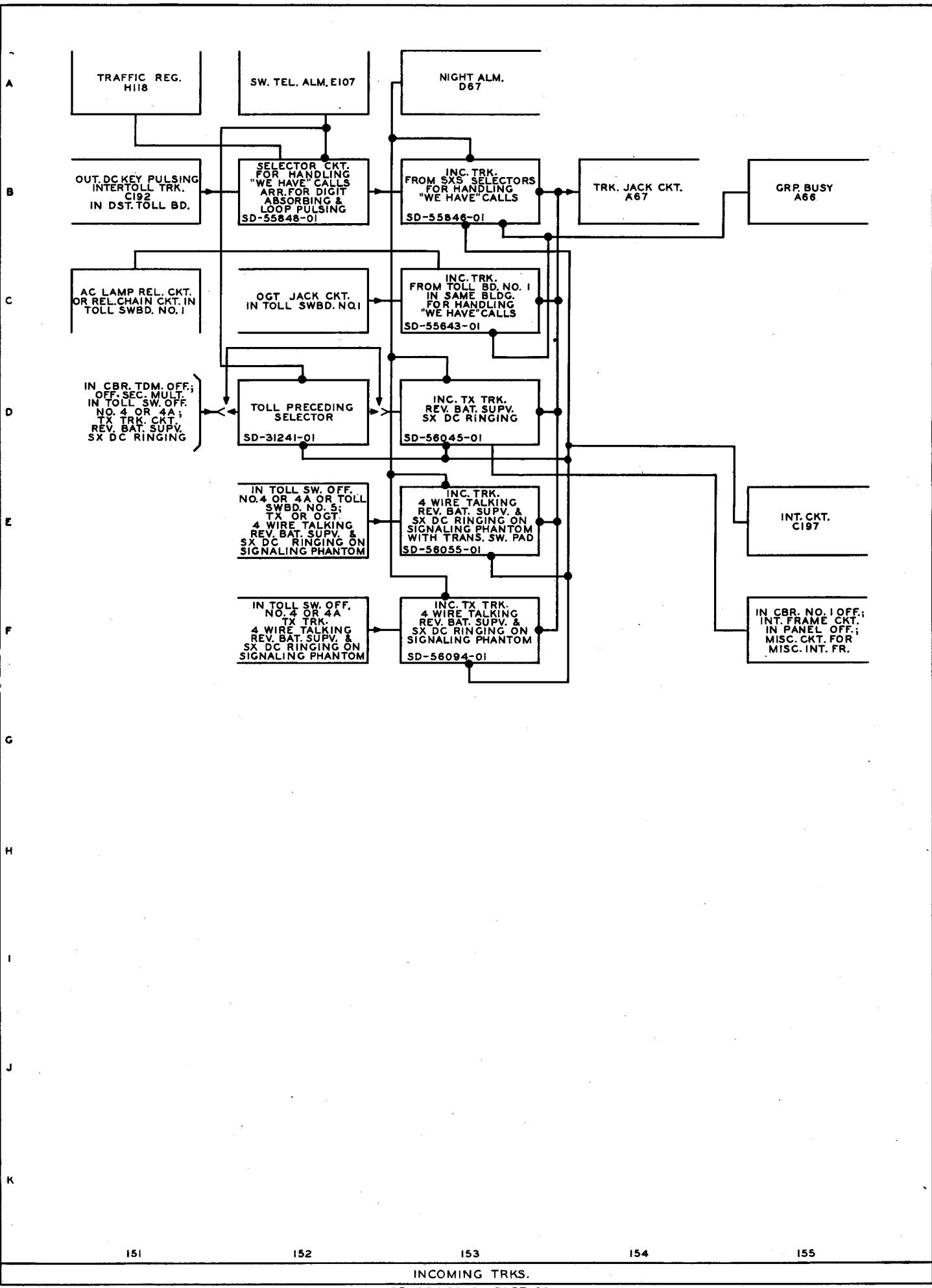
145

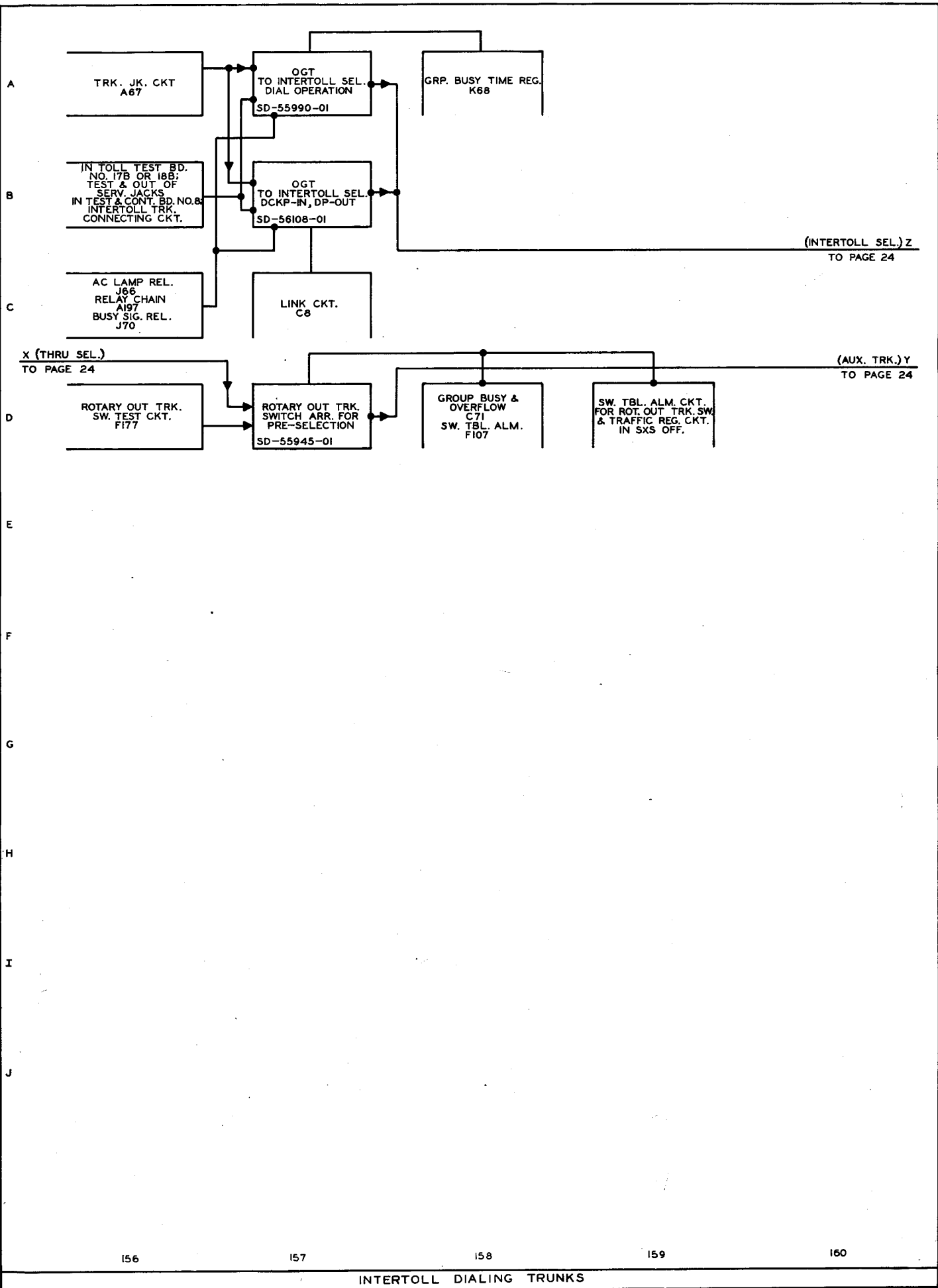
OUTGOING & TOLL SW. TRKS.

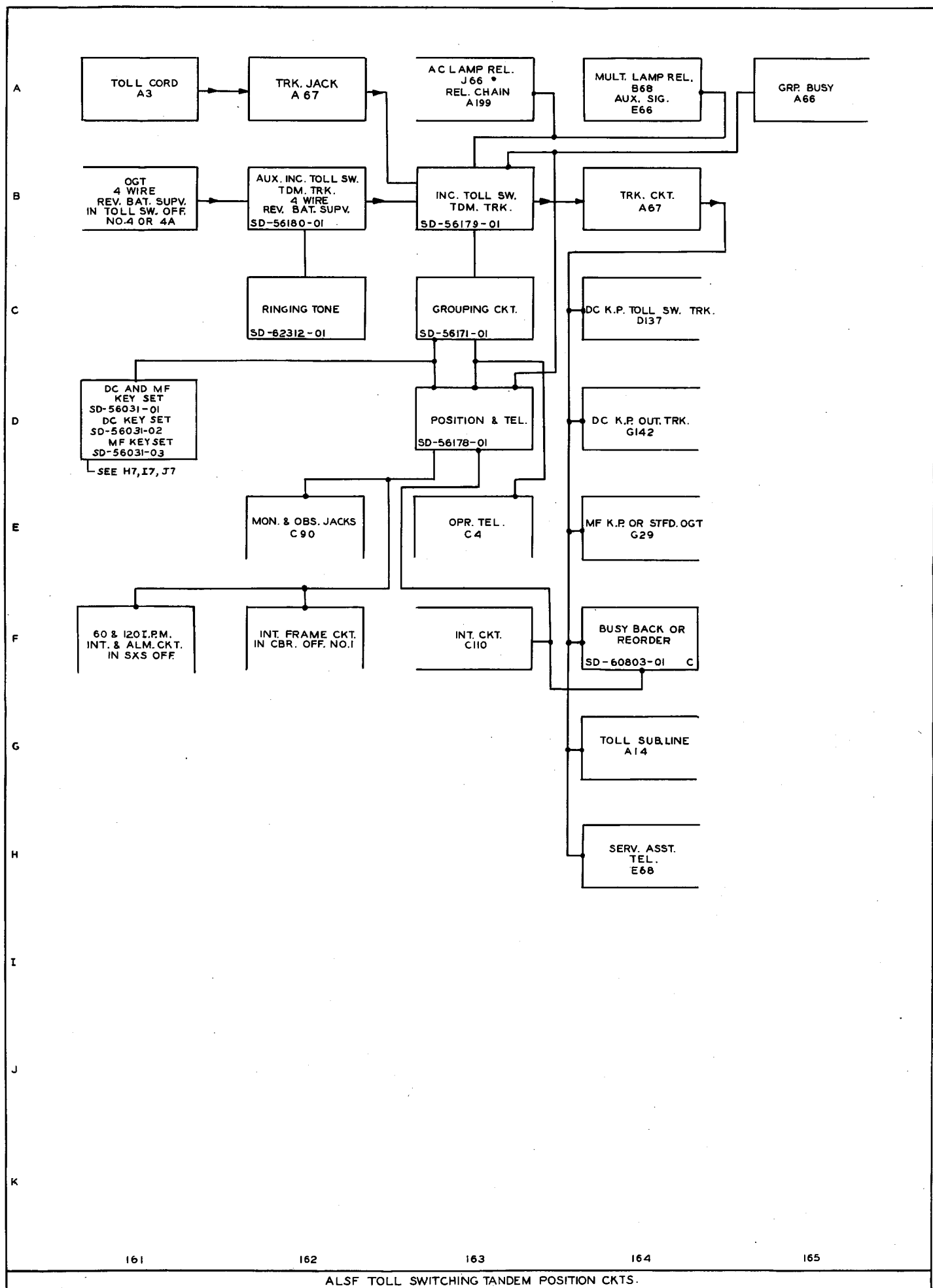
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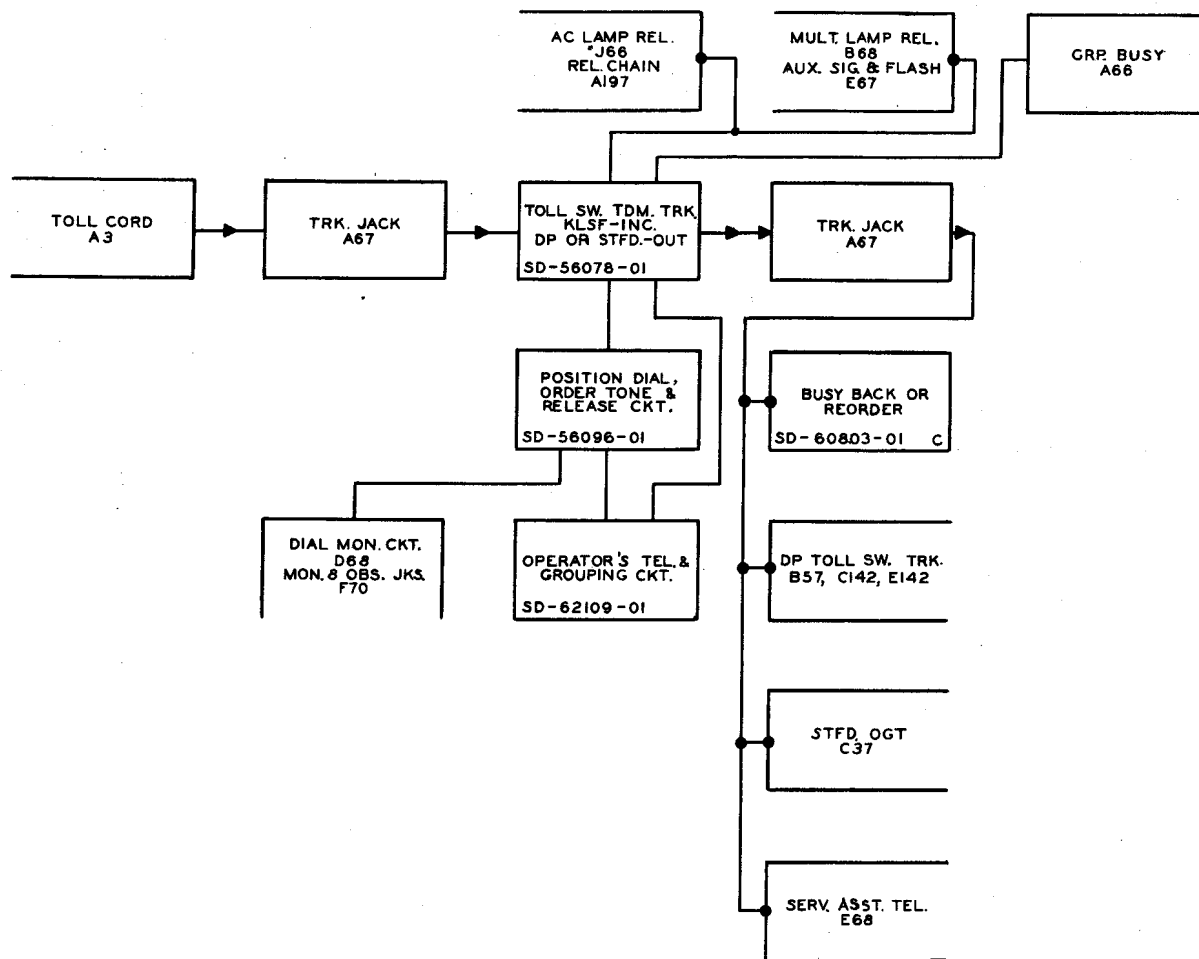
J.V.D.

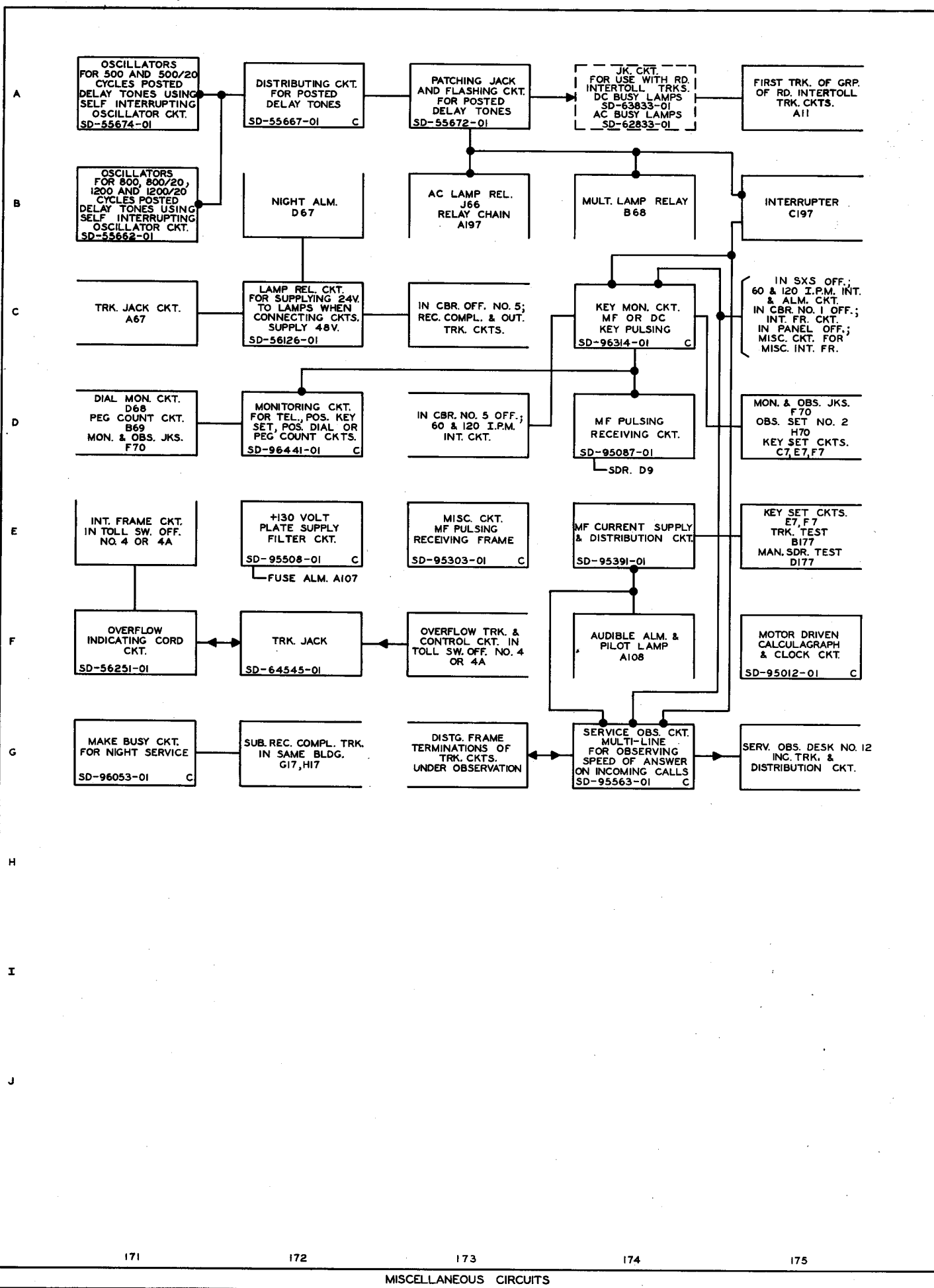


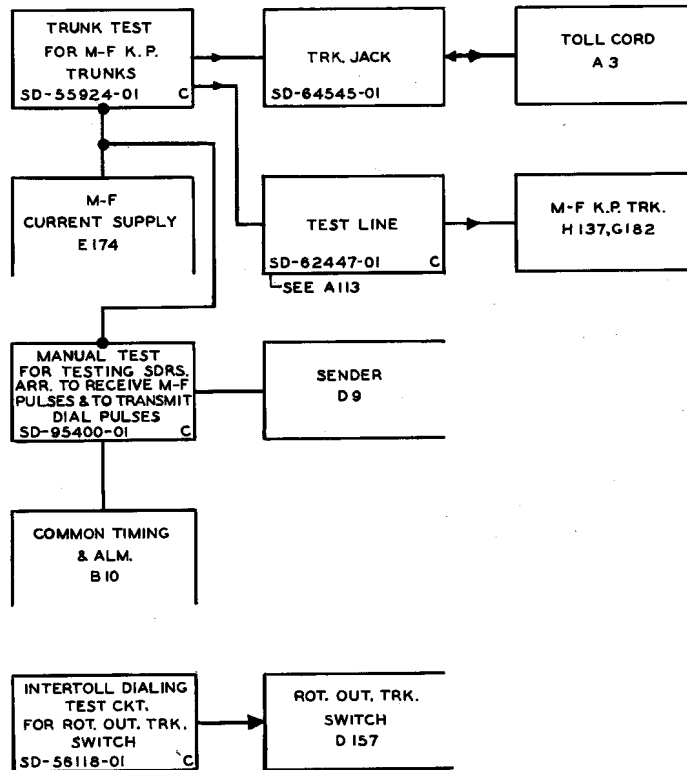


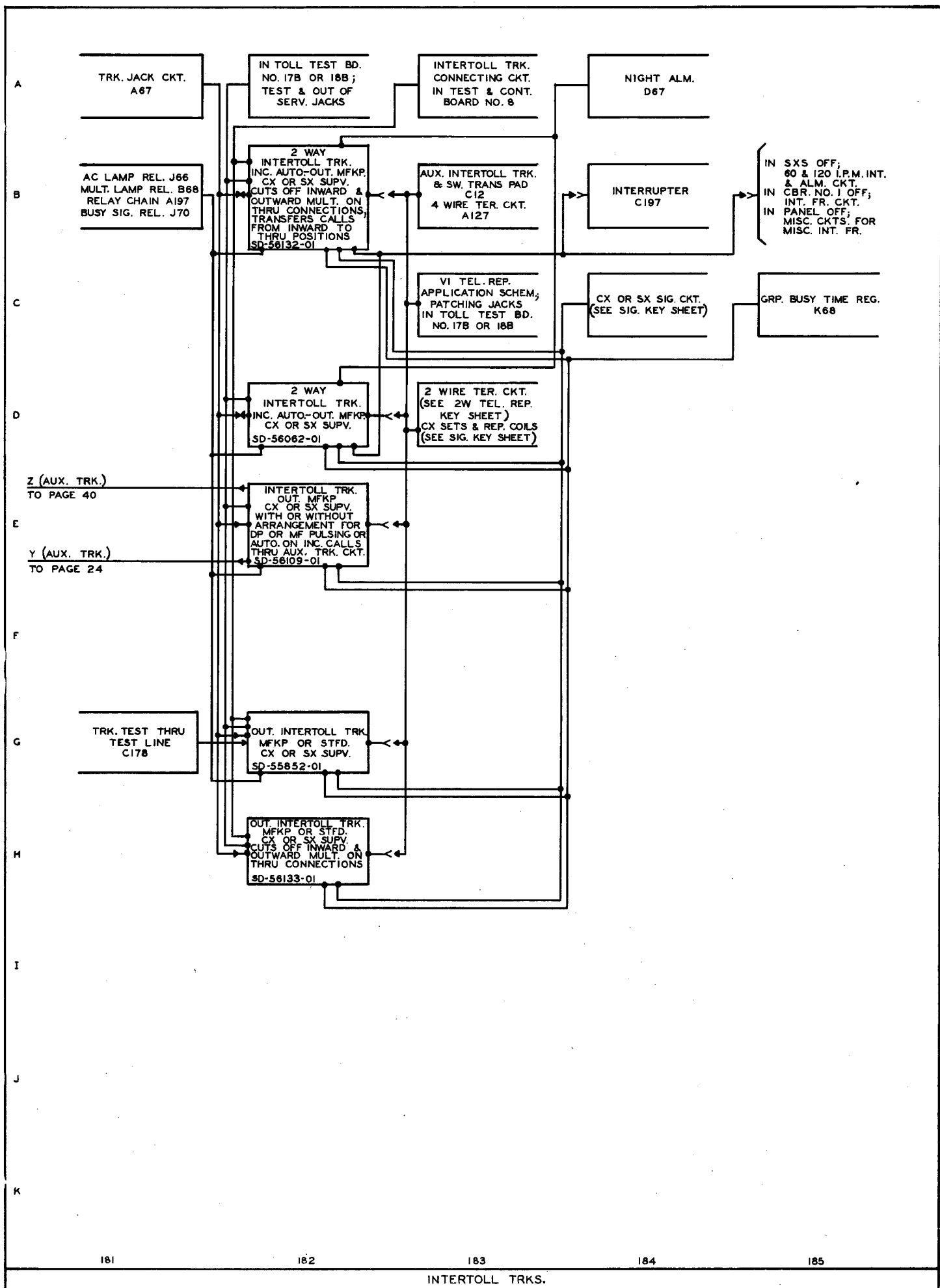


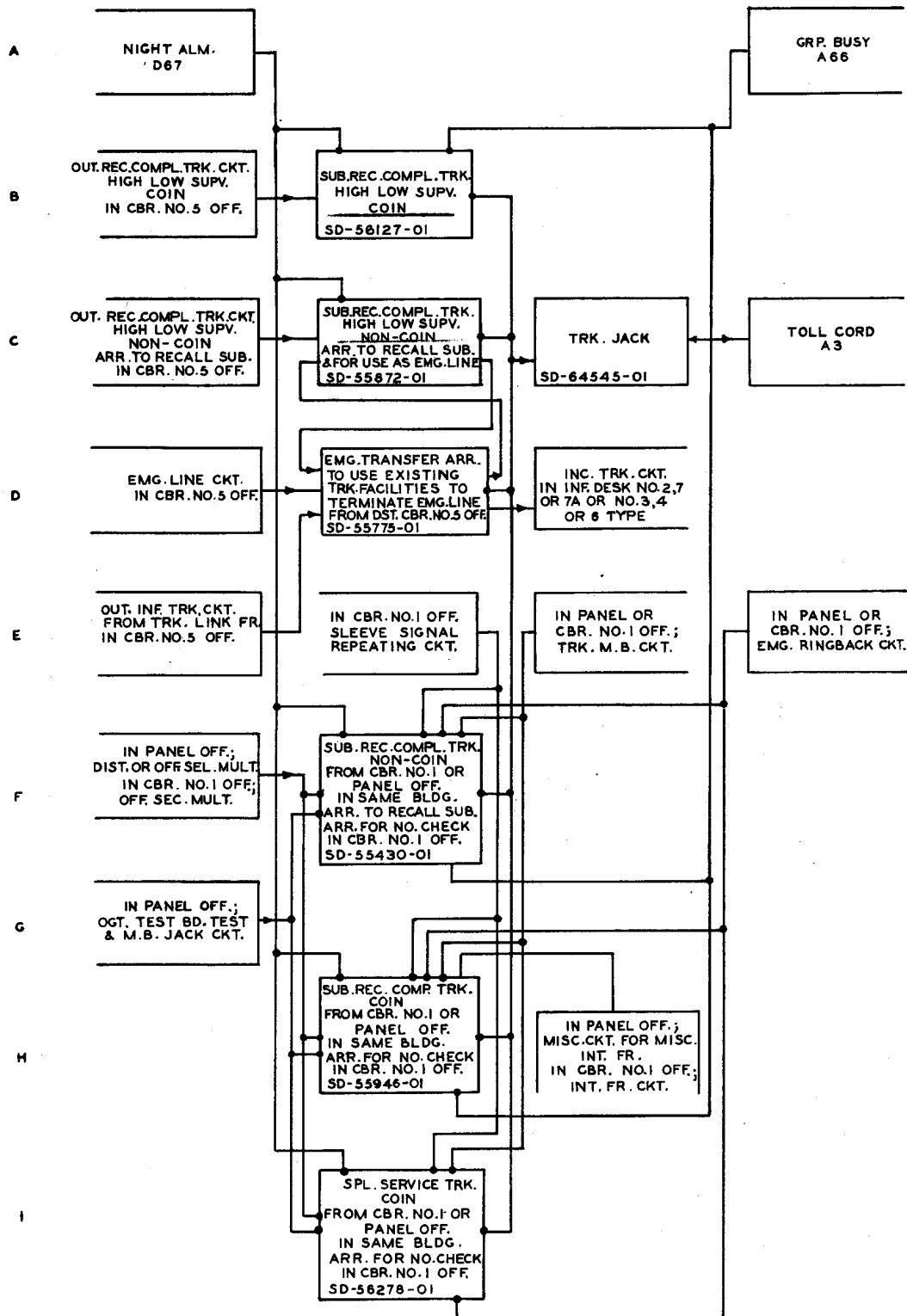
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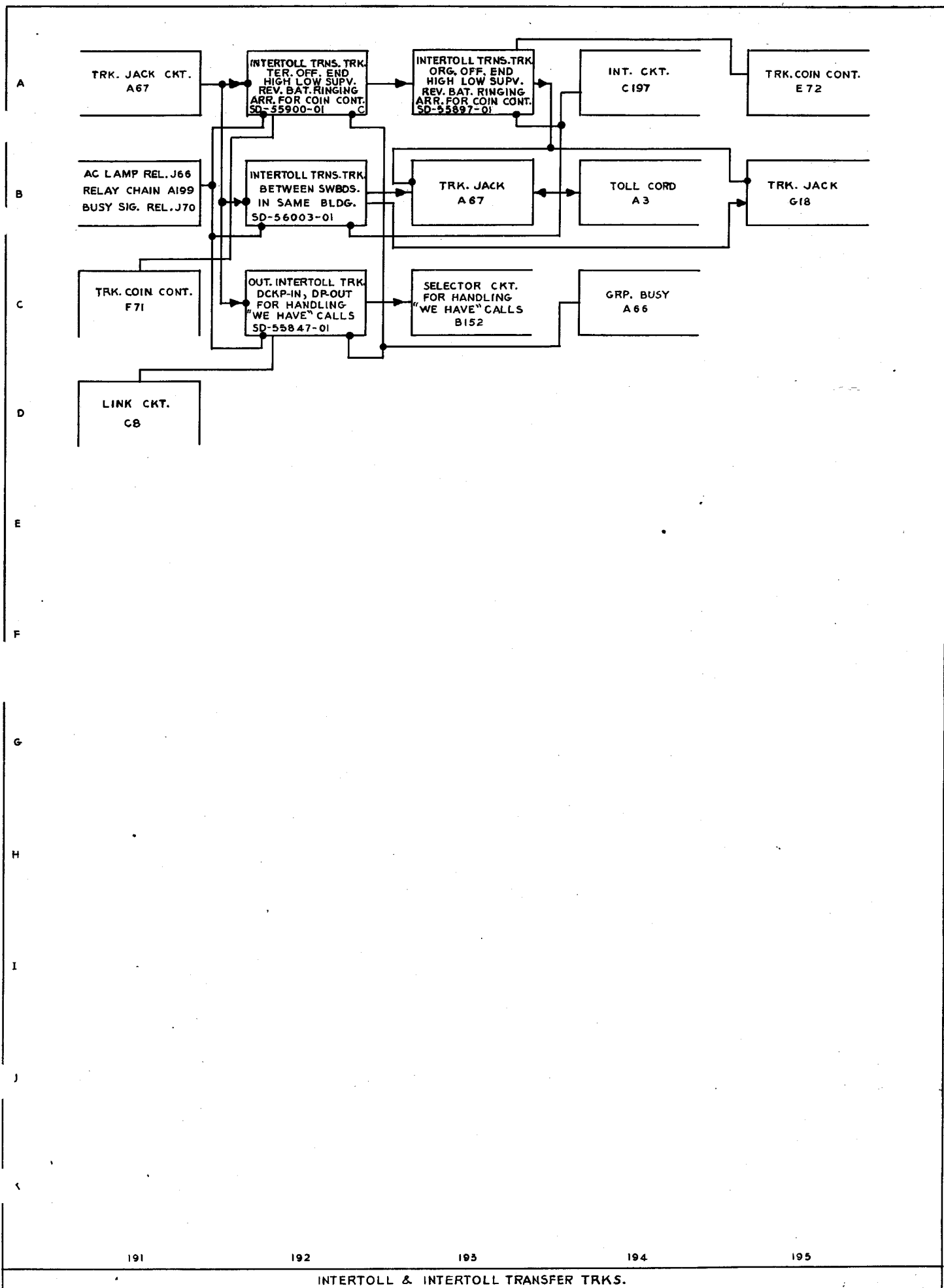


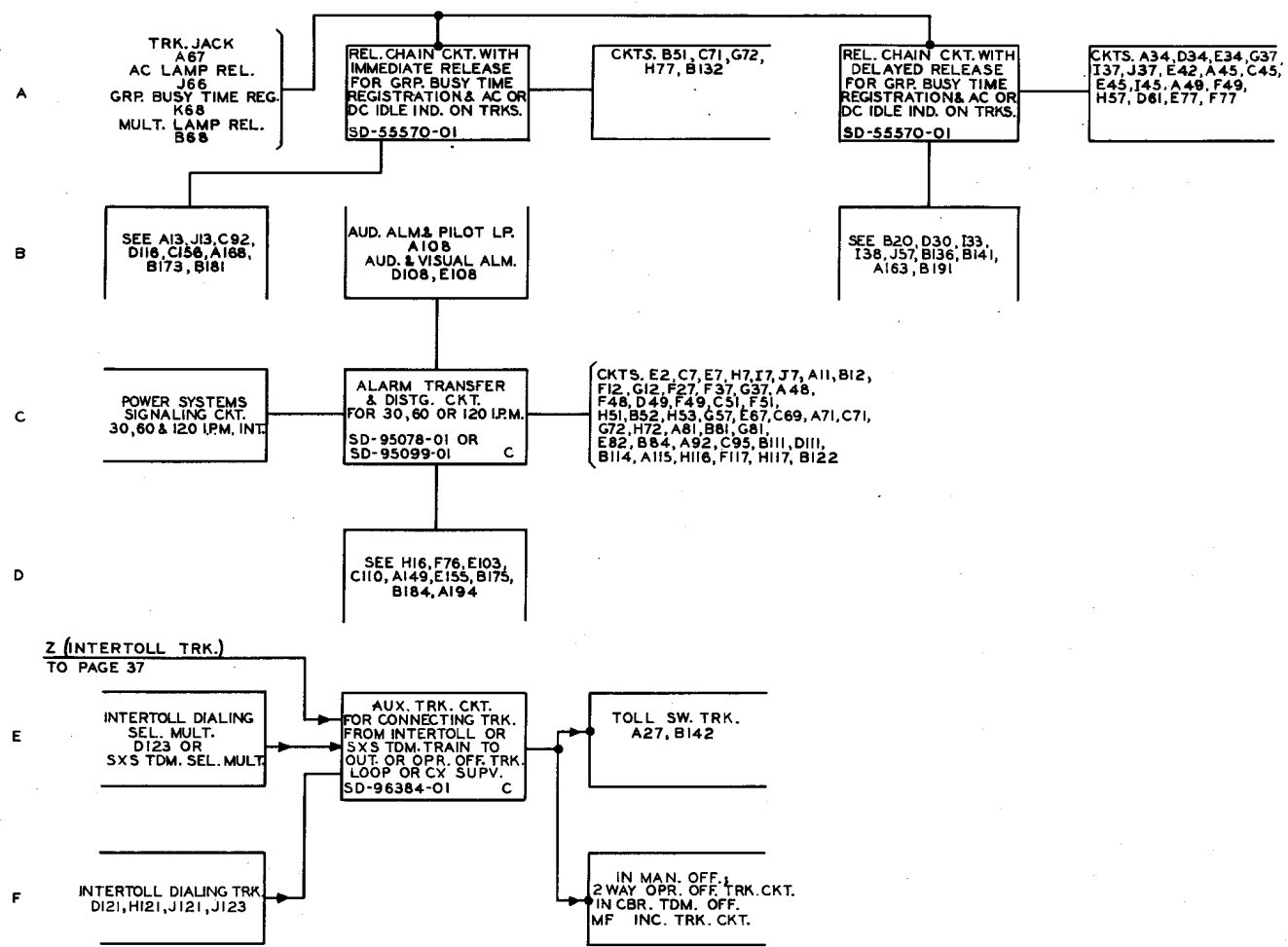












**CURRENT DRAIN
AMPERE HOURS PER BUSY HOUR**

CIRCUIT DRAWINGS		SEE NOTE NO.	DRAINS LIST 1 (SEE NOTE 1)									DRAINS LIST 2								
			48 VOLTS						24 VOLTS			48 VOLTS						24 VOLTS		
CIRCUIT TITLE	CIRCUIT NO.		SIG. BAT.	TALK BAT.	FR. GRD.	R.R. GRD.	F.B. GRD.	SIG. BAT.	R.R. GRD.	SWBD. GRD.	SIG. BAT.	TALK BAT.	FR. GRD.	R.R. GRD.	F.B. GRD.	SIG. BAT.	R.R. GRD.	SWBD. GRD.		
ALARM RECEIVING	SD-95418-01		.184			.216					.102			.120						
AMPLIFIER, MONITORING	SD-90575-01	2	A.006					.010	.010		A.006					.010	.010			
		3						.500	.500							.278	.278			
AMPLIFIER AND PAD	SD-95026-01	2,4,5	A.007					.500	.500		A.007					.278	.278			
BUSY SIGNAL RELAY	SD-63679-01	6,7,8						.055	.070							.047	.059			
CHAIN, RELAY	SD-55570-01	8,9,10,11						.007	.007							.006	.006			
		8,9,11,12	.013			.013					.011			.011						
		8,9,11,13						.059	.059							.049	.049			
		8,11,13,14	.075			.075					.056			.056						
CONTROL																				
INDICATOR	SD-62676-01	11						.034	.034							.038	.038			
SUPERVISORY	SD-64481-01		.008					.004	.007		.005					.003	.004			
DIAL																				
LOOP DIALING ONLY	SD-62673-01							.015	.017							.015	.017			
LOOP & REPEATED DIALING	SD-62673-01							.028	.026							.028	.026			
REPEATED DIALING ONLY	SD-62673-03							.023	.015							.023	.015			
CORD																				
OPR. REC. COMPL.	SD-56089-01		.018			.018		.007			.067			.067		.026				
TOLL, OUTWARD POS.	SD-63556-01							.033		.005						.071		.011		
TOLL, INWARD POS.	SD-63556-01							.057		.009						.071		.011		
KEY SET																				
MF	SD-55309-01		.093			.093					.093			.093						
DC & MF	SD-56100-01		.047			.047		.021	.021		.047			.047		.021	.021			
DC	SD-62066-01		.007			.007		.050	.050		.007			.007		.050	.050			
LINK	SD-90705-01	15,16	.084			.091					.166			.182						
MULTIPLE																				
RD. INTERTOLL TRK.	SD-62780-01	7						.031	.073							.062	.146			
RD. INTERTOLL TRK	SD-64562-01	7,17						.040	.123							.027	.082			
		7,17,18						.062								.041				
		7,19						.019	.059							.013	.039			
		7,18,19						.019								.013				

NOTES:

- GROUND DRAINS SHOWN IN LIST 1 ARE FOR USE WHERE ADDITIONS ARE MADE TO CENTRALIZED FUSE PANELS.
- "A" DENOTES 130 V. PLT. BAT. DRAIN.
- VALUES SHOWN ARE FOR FIL. OR ADDITIONAL SIG. BAT. AND FIL. OR ADDITIONAL R.R. GROUND.
- THIS DRAIN IS FIL. OR SIG. BAT. & GRD., 24 V. OR 48 V. AS SPEC.
- BAT. IS FUSED ON BAT. SUPPLY CKT.
- PER 34 GRPS. OF BUSY SIGNALS.
- DRAINS FOR LAMPS OR BUSY SIGNALS FUSED WITH TRK. CKTS., GRP. BUSY RELAY CKTS., OR MULTIPLE LAMP RELAY CKTS. ARE SHOWN ON CONNECTING JACK & LAMP CKT.
- BAT. DRAIN SHOWN FOR THIS CKT. IS FUSED ON CONNECTING CKT. AND MUST BE ADDED TO CONN. CKT. DRAIN.
- PER (LP) RELAY (NO DELAY FIGS. 1,2 OR 3).
- WHEN 24 V. FURNISHED BY CONNECTING TRK. IS SPECIFIED.
- WHEN THIS CKT. CONNECTS TO RELAY CHAIN CKT., AC LAMP RELAY CKT., MULT. LAMP RELAY CKT., BUSY SIGNAL RELAY CKT., JACK CKT., RD. INTERTOLL TRK. MULT. CKT., OR INDICATOR CONTROL CKT. DRAINS SHOWN THEREON AS BEING FUSED OR GROUNDED ON THIS CKT. MUST BE ADDED TO VALUES SHOWN.
- WHEN 48 V. DIRECT OR RES. BAT. FURNISHED BY TRUNK IS SPEC. PER (LP) RELAY (DELAY FIGS. 11, 12 OR 13).
- WHEN 48 V. RES. BAT. FURNISHED BY TRK. IS SPECIFIED.
- DRAINS ARE PER LINK.
- MAX. DRAIN ON ANY ONE POWER LEAD IS LIST 2 VALUE MULTIPLIED BY THE NUMBER OF KEY PULSING SENDERS IN THE OFFICE.
- WHEN FIG. E IS USED (WITH TIMED RECALL).
- ADDITIONAL DRAIN FOR BAT. FUSED ON CONNECTING TRUNK.
- WHEN FIG. D IS USED (WITHOUT TIMED RECALL).

CURRENT DRAIN AMPERE HOURS PER BUSY HOUR																			
CIRCUIT DRAWINGS		SEE NOTE NO.	DRAINS LIST 1 (SEE NOTE 19)										DRAINS LIST 2						
CIRCUIT TITLE	CIRCUIT NO.		48 VOLTS					24 VOLTS					48 VOLTS					24 VOLTS	
			SIG. BAT.	TALK BAT.	FR. GRD.	R.R. GRD.	F.B. GRD.	SIG. BAT.	R.R. GRD.	SWBD GRD.	SIG. BAT.	TALK BAT.	FR. GRD.	R.R. GRD.	F.B. GRD.	SIG. BAT.	R.R. GRD.	SWBD GRD.	
OSCILLATORS 800 ETC. CYCLES	SD-55662-01	2,3,8	P.048						F.685	.024	F.640	P.048					F.380	.013	F.356
500 ETC. CYCLES	SD-55674-01	2,4,8	P.048						F.900	.024	F.855	P.048					F.500	.013	F.475
		2,3,8	P.085						F.725	.024	F.640	P.085					F.405	.013	F.356
		2,4,8	P.085						F.940	.024	F.855	P.085					F.535	.013	F.475
PATCHING, INTERTOLL	SD-55682-01								.043	.023							.024	.013	
PATCHING JACK & FLASHING	SD-55672-01																.028	.028	
POSITION	SD-62032-02								.300		.270						.186		.167
POSITION & TEL., ALSF	SD-56178-01		.150				.150					.125			.125				
POSITION, CROSSBAR GRP. CONTROL	SD-64155-01	5																	
POSITION INDICATOR	SD-64117-01								.170		.045						.150		.040
POSITION INDICATOR	SD-90014-01	6							.152								.141		
		7							.022	.022							.020	.020	
POS. INDICATOR, SPLITTING & CONT.	SD-63165-01								.060	.008							.152	.020	
RECEIVING, MF	SD-95087-01		1.660				2.300					1.000			1.700				
REGISTER, GRP. BUSY	SD-62231-01								.076		.073						.065		.063
SELECTOR																			
FOR "WE HAVE" CALLS	SD-55848-01		.033		.006							.033		.006					
TOLL PRECEDING	SD-31241-01		.016		.002							.020		.002					
INTERTOLL THRU	SD-55003-01		.016		.003							.021		.005					
COMB. INTERTOLL & TOLL TRANS.	SD-55062-01		.122	.105	.300		.105					.097	.084	.240		.084			
INTERTOLL OR AUX. INTERTOLL WITH DIGIT ABSORBING	SD-55242-01		.027		.002							.019		.001					
INTERTOLL WITHOUT DIGIT ABSORBING	SD-64470-01		.027		.002							.019		.001					
SENDER																			
DCKP-IN, RP-OUT	SD-62058-01		.287					.320	.021			.376				.418	.028		
DCKP-IN, DP-OUT	SD-95480-01		.470				.470					.780			.780				
MFKP-IN, DP-OUT	SD-95481-01		.930				.490					1.550			.810				
SIGNAL GRD. AUXILIARY	SD-62466-01	21,25							.095	.095							.047	.047	
		22,25							.042	.042							.021	.021	
		23,25							.040	.040							.020	.020	
		24,26							.095	.095							.047	.047	
PNEUMATIC	SD-63464-01	6							.050		.050						.030		.030
SPLITTING, TOLL TDM.	SD-62257-01	6							.075	.053	.025						.042	.030	.014
SUPPLY, MF SIG. CURRENT	SD-95391-01	2,12,13	P.033	F.859				F.850	F1.275	F1.275		P.033	F.473			F.473	F.710	F.710	
SWITCH																			
CROSSBAR PRI.-SEC.	SD-64154-01	11	.034		.018							.046		.024					
ROTARY OUT. TRUNK	SD-55945-01	18	.049			.008						.042			.008				
SWITCHING TRANS. PAD	SD-62632-02	20							.020	.020							.013	.013	
TEL. & TRK. OVERFLOW REC. OPR.	SD-55670-01								.115		.070						.064		.056
TELEPHONE, OPERATORS	SD-62115-01								.076		.076						.042		.076
TEL. & CONT. TOLL TANDEM	SD-62226-01								.180	.200	.035						.105	.117	.020
TEL. & GROUPING, KEY LIST	SD-62109-01								.072		.072						.040		.040
TEL. & GROUPING, AUTO. LIST	SD-62508-01								.086		.086						.048		.048
TEST, MAN. FOR MFKP-IN, DP-OUT, SDRS.	SD-95400-01											.556			.556		.556	.556	
TEST LINE, INTERTOLL DIALING	SD-56221-01											.179			.109				
TRANSFER & INT.	SD-55507-01								.055		.055						.031		.031
TRUNK																			
INC. FROM MAN. OFF.	SD-55081-01	1,14	.141			.100		.019	.042		.170			.120		.023	.051		
INC. FROM MAN. OFF, CX SUPV.	SD-55082-01	1,15	.098			.056		.019	.042		.118			.069		.023	.051		
OUT. INTERTOLL OR TDM. STFD, CX SUPV.	SD-55083-01	1	.034			.024		.036	.054		.037			.027		.040	.060		
		1	.035			.035			.026		.037			.037			.028		
INTERTOLL DIALING OUT, CX SUPV.	SD-55109-01	1	.101			.057					.078			.039					
2 WAY, REC. COMPL. SW.	SD-55158-01	1,16	.050			.050		A.014	A.014		.067			.067		A.019	A.019		
INC. OR 2WAY WET-DRY SUPV.	SD-55184-01	1	.038			.038			.015		.075			.075			.030		
TOLL SW, MFKP OR STFD.	SD-55224-01	1					.015	.042								.015	.042		
INC. INTERTOLL, CX SUPV.	SD-55227-01	1	.120			.150					.096			.120					
INTERTOLL DIALING OUT. FROM SEL MULT. TO PRECEDE THRU OR AUX. SEL	SD-55232-01		.035			.011					.047			.015					
INTERTOLL DIALING OUT. REV. BAT. SUPV.	SD-55243-01		.100			.075					.139			.100					
		1,17	.051			.075		.019		.078				.107			.028		
		1,9	.061			.086		.019		.088				.122			.028		
		1,10	.040			.040				.059				.059					
NOTES:																			
1. WHEN THIS CKT. CONN. TO RELAY CHAIN CKT., A.C. LAMP RELAY CKT., MULT. LAMP RELAY CKT., BUSY LAMP TONE & REG. CKT., GROUP BUSY CKT., BUSY SIGNAL RELAY CKT., JACK CKT., R.D. INTERTOLL TRK. MULT. CKT. OR INDICATOR CONTROL CKT. DRAINS SHOWN THEREON AS BEING FUSED OR GROUNDED ON THIS CKT. MUST BE ADDED TO VALUES SHOWN.																			
2. "P" DENOTES 130 V. PLATE DRAIN.																			
3. WHEN REGULATED BAT. IS USED.																			
4. WHEN NON-REGULATED BAT. IS USED.																			
5. DRAIN FOR THIS CKT. IS INCLUDED WITH TRK. & LINK CKTS.																			
6. PER POSITION.																			
7. PER SUB-GROUP.																			
8. "F" DENOTES 24 V. FIL. BAT. & GRD. DRAINS.																			
9. CX, SX OR SF SUPERVISION.																			
10. ADDITIONAL DRAIN FOR REPEATED SX SUPV. (FIG. G).																			
11. PER LINK.																			
12. "F" DENOTES 24 V. OR 48 V. FIL. BAT. & GRD. DRAINS AS SPEC.																			
13. PER OSCILLATOR GROUP CKT.																			
14. REV. BAT. SUPERVISION.																			
15. HIGH-LOW SUPERVISION.																			
16. "A" ADDITIONAL DRAIN WHEN "J" OPTION IS USED.																			
17. HIGH-LOW REV. BAT. SUPERVISION.																			
18. DRAIN SHOWN IS PER INTERTOLL TRUNK.																			
19. GROUND DRAINS SHOWN IN LIST 1 ARE FOR USE WHERE ADDITIONS ARE MADE TO CENTRALIZED FUSE PANELS.																			
20. PER FIG. 2.																			
21. PER 2G AUX. SIG. LAMP																			
22. PER 2U AUX. SIG. LAMP																			
23. PER AI AUX. SIG. LAMP.																			
24. PER (P) RELAY.																			
25. GROUND DRAIN SHOWN HERE IS FURNISHED BY CONNECTING NIGHT ALM. CKT.																			
26. BAT. DRAIN IS FUSED ON CONNECTING LAMP OR TRK. CKT.																			
CURRENT DRAIN FOR CIRCUITS																			

NOTES:

1. WHEN THIS CKT. CONN. TO RELAY CHAIN CKT., A.C. LAMP RELAY CKT., MULT. LAMP RELAY CKT., BUSY LAMP TONE & REG. CKT., GROUP BUSY CKT., BUSY SIGNAL RELAY CKT., JACK CKT., R.D. INTERTOLL TRK. MULT. CKT. OR INDICATOR CONTROL CKT. DRAINS SHOWN THEREON AS BEING FUSED OR GROUNDED ON THIS CKT. MUST BE ADDED TO VALUES SHOWN.
2. "P" DENOTES 130 V. PLATE DRAIN.
3. WHEN REGULATED BAT. IS USED.
4. WHEN NON-REGULATED BAT. IS USED.
5. DRAIN FOR THIS CKT. IS INCLUDED WITH TRK. & LINK CKTS.
6. PER POSITION.
7. PER SUB-GROUP.
8. "F" DENOTES 24 V. FIL. BAT. & GRD. DRAINS.
9. CX, SX OR SF SUPERVISION.
10. ADDITIONAL DRAIN FOR REPEATED SX SUPV. (FIG. G).
11. PER LINK.
12. "F" DENOTES 24 V. OR 48 V. FIL. BAT. & GRD. DRAINS AS SPEC.
13. PER OSCILLATOR GROUP CKT.
14. REV. BAT. SUPERVISION.
15. HIGH-LOW SUPERVISION.

16. "A" ADDITIONAL DRAIN WHEN "J" OPTION IS USED.
17. HIGH-LOW REV. BAT. SUPERVISION.
18. DRAIN SHOWN IS PER INTERTOLL TRUNK.
19. GROUND DRAINS SHOWN IN LIST 1 ARE FOR USE WHERE ADDITIONS ARE MADE TO CENTRALIZED FUSE PANELS.
20. PER FIG. 2.
21. PER 2G AUX. SIG. LAMP.
22. PER 2U AUX. SIG. LAMP.
23. PER AI AUX. SIG. LAMP.
24. PER (P) RELAY.
25. GROUND DRAIN SHOWN HERE IS FURNISHED BY CONNECTING NIGHT ALM. CKT.
26. BAT. DRAIN IS FUSED ON CONNECTING LAMP OR TRK. CKT.

**CURRENT DRAIN
AMPERE HOURS PER BUSY HOUR**

CIRCUIT DRAWINGS		SEE NOTE NO.	DRAINS LIST 1 SEE NOTE 16									DRAINS LIST 2								
CIRCUIT TITLE	CIRCUIT NO.		48 VOLTS						24 VOLTS			48 VOLTS						24 VOLTS		
			SIG. BAT.	TALK BAT.	FR. GRD.	R.R. GRD.	F.B. GRD.	SIG. BAT.	R.R. GRD.	SWBD. GRD.	SIG. BAT.	TALK BAT.	FR. GRD.	R.R. GRD.	F.B. GRD.	SIG. BAT.	R.R. GRD.	SWBD. GRD.		
TRUNK - OPR. OFF., 2 WAY, DCKP-IN, DP OUT	SD-55256-01	1/13	.087			.087			.019		.096			.096			.028			
		1/2	.093			.086			.019		.134			.117			.028			
INTERTOLL DIALING OUT. FROM SEL. MULT. TO OPR. OFF. CX OR SX SUPV.	SD-55275-01	1	.141			.100					.189			.135						
TOLL SW., DCKP-IN, DP OR RP-OUT	SD-55291-01	1/3	.100			.100			.028		.100			.100			.028			
		1/4	.070			.070			.028		.070			.070			.028			
		1/5	.027			.027					.027			.027						
INTERTOLL DIALING OUT. REV. BAT. SUPV.	SD-55301-01	1/6	.060			.047					.081			.063						
		1/7	.015			.012					.081			.063						
TOLL SW., DCKP-IN, DP-OUT. TO S X S OFF. IN SAME BLDG.	SD-55341-01	1/8		.193			.340		.031		.175			.310			.028			
		1/9		.238			.385		.031		.216			.341			.028			
REC. COMPL. FROM S X S OFF. IN SAME BLDG. CONNECTING TO OPR. OFF. TRK. ARR. FOR ONE DIGIT TDM OPERATION	SD-55344-01	1		.070		.076	.007		.021		.094		.102	.010			.028			
TOLL SW., REPEATED DIALING	SD-55346-01	1/10	.060			.060			.031		.055			.055			.028			
		1/11	.193			.154			.031		.176			.141			.028			
		1/12	.048			.048			.031		.044			.044			.028			
TOLL SW., REPEATED DIALING TO S X S OFF. IN SAME BLDG.	SD-55352-01	1		.182		.248	.092		.031		.165		.226	.084			.028			
2 WAY AUTO. CX SUPV.	SD-55358-01	1	.173			.136		.020	.059		.121			.096		.014	.042			
INTERTOLL DIALING TOLL SW, CX. OR SX SUPV.	SD-55379-01	1	.190			.100					.139			.076						
TOLL SW., REPEATED DIALING, CX. OR SX SUPV.	SD-55380-01	1	.098			.068			.026		.106			.074			.028			
REC. COMPL. CX OR CX SUPV.	SD-55381-01	1	.045			.037			.022		.058			.048			.028			
TOLL SW., DCKP-IN, DP-OUT, CX OR SX SUPV.	SD-55386-01	1	.170			.160			.026		.184			.174			.028			
INTERPOSITION	SD-55421-01	1						.018	.038							.046	.095			
REC. COMPL. FROM PANEL OR CBR. NO. 1 OFF. IN SAME BLDG	SD-55430-01	1		.061		.086	.061	.127	.147		.084		.119	.084	.176	.204				
INC. AUTO FROM SWBD. NO.3B OR TDM. SWBD. NO.3	SD-55582-01	1						.025	.100						.025	.100				
INC. FROM TOLL SWBD. NO.1 IN SAME BLDG. FOR "WE HAVE" CALLS	SD-55643-01	1						.012	.044						.020	.073				
INC. KEY LIST FROM SWBD. NO.3, 3C, 3CL OR 6	SD-55704-01	1						.228	.200						.228	.200				
INC. REC. FROM SEMI-MECHAN- ICAL DSA SWBD.	SD-55793-01	1						.080	.100						.178	.222				
INC. FROM SXS SELECTORS FOR "WE HAVE" CALLS	SD-55846-01	1	.044			.053			.014		.086			.105			.028			
OUT. INTERTOLL DCKP FOR "WE HAVE" CALLS	SD-55847-01	1	.075			.075			.017		.125			.125			.028			
OUT. INTERTOLL MFKP OR STDF. CX OR SX SUPV.	SD-55852-01	1	.177			.122		.066	.066		.126			.088		.047	.047			
REC. COMPL. NON-COIN & FOR USE AS EMG. LINE CKT. FROM CBR. NO.5 OFF.	SD-55872-01	1	.018			.018			.021		.025			.025			.028			
TOLL SW., DCKP, WET-DRY SUPV. TO SXS, TOLL TRAIN	SD-55901-01	1	.133			.133			.028		.133			.133			.028			
INTERTOLL DIALING OUT TO INTERTOLL SEL. DIAL OPERATION	SD-55990-01	1	.437			.490		.050	.083		.307			.344		.033	.061			
REC. COMPL. FROM SXS OFF. IN SAME BLDG., NON-COIN	SD-56007-01	1		.180			.250		.023		.250				.348		.032			
REC. COMPL. FROM SXS OFF. IN SAME BLDG., COIN	SD-56008-01	1		.180			.250		.023		.250				.348		.032			
INTERTOLL DIALING, 2 WAY, CX OR SX SUPV.	SD-56036-01	1	.072			.046					.051			.032						
INTERPOSITION FROM TDM. SWBD. NO. 3 TO SWBD. NO.3 IN SAME BLDG.	SD-56043-01	1	.014			.014			.025		.031			.031			.056			
INC. TX, REV. BAT. SUPV.	SD-56045-01	1	.039			.039			.025		.043			.043			.028			
INC. 4 W TALK. REV. BAT. SUPV., WITH TRANS. SW. PAD	SD-56055-01	1	.044			.044			.015		.088			.088			.028			
OUT. TOLL TDM., 4 W TALK., REV. BAT. SUPV., MFKP OR AUTO. WITH TRANS. SW. PAD	SD-56056-01	1	.031			.031			.042		.021			.021			.038			
TOLL TDM. AUX., 4 W TALK., REV. BAT. SUPV., SX DC RING. ON SIG. PHANTOM	SD-56060-01	1	.050			.040					.042			.033						
2 WAY INTERTOLL, INC. AUTO., OUT. MFKP, CX OR SX SUPV.	SD-56062-01	1	.269			.247			.039		.193			.177			.028			
TOLL SW. TDM., KLSF TO & DP OR STDF. FROM SW. TRK. TDM. POS	SD-56078-01	1	.032			.032			.038		.032			.032			.038			
OPR. REC. COMPL. COIN	SD-56090-01	1		.160			.135	.025	.040			.215			.182	.034	.054			
INC. TX, 4 W TALK., REV. BAT. SUPV.	SD-56094-01	1	.034			.034			.014		.068			.068			.028			
OUT. TOLL TDM., 4 W TALK., REV. BAT. SUPV. MFKP	SD-56095-01	1	.056			.056			.042		.037			.037			.028			
OUT. DCKP-IN, DP-OUT, REV. BAT. SUPV.	SD-56105-01	1	.234			.234			.033		.168			.168			.024			
INTERTOLL DIALING OUT TO INTER- TOLL SEL., DCKP-IN, DP-OUT	SD-56108-01	1	.313			.384	.047		.081		.251			.308	.037		.065			
INTERTOLL, OUT. MFKP CX OR SX SUPV. ARR. FOR DP OR AUTO. OR INC. CALLS THRU AUX. TRK. CKT.	SD-56109-01	1/14	.261			.197			.021		.260			.211			.028			
		1/15	.187			.150			.021		.249			.200			.028			

NOTES:

- WHEN THIS CKT. CONNECTS TO RELAY CHAIN CKT., AC LAMP RELAY CKT., BUSY SIG. RELAY CKT., MULT. LAMP RELAY CKT., BUSY LAMP TONE & REG. CKT., JK CKT., RD. INTERTOLL TRK. MULT. CKT., GRP BUSY CKT., OR INDICATOR CONTROL CKT., DRAINS SHOWN THEREON AS BEING FUSED OR GROUNDED ON THIS CKT. MUST BE ADDED TO VALUES SHOWN.
- CX, SX OR SF SUPERVISION.
- REV. BAT. SUPV. WITH INTERTOLL MULTIPLE.
- REV. BAT. SUPV. WITHOUT INTERTOLL MULTIPLE.
- ADDITIONAL DRAIN FOR WET-DRY SUPERVISION.
- INTERTOLL ONLY.
- MIXED TRAFFIC.
- WITHOUT CONTROLLED START OF RINGING.
- WITH CONTROLLED START OF RINGING.
- WET-DRY SUPERVISION.
- REV. BAT. SUPV. WITH REPEATED SX SUPERVISION.
- REV. BAT. SUPV. WITHOUT REPEATED SX SUPERVISION.
- HIGH-LOW REV. BAT. SUPERVISION.
- WITH CONNECTION TO 2 WAY AUX. TRK.
- WITHOUT CONNECTION TO 2 WAY AUX. TRK.
- GROUND DRAINS SHOWN IN LIST 1 ARE FOR USE WHERE ADDITIONS ARE MADE TO CENTRALIZED FUSE PANELS.

CURRENT DRAIN FOR CIRCUITS

**CURRENT DRAIN
AMPERE HOURS PER BUSY HOUR**

CIRCUIT DRAWINGS		SEE NOTE NO.	DRAINS LIST 1 (SEE NOTE 15)									DRAINS LIST 2								
			48 VOLTS						24 VOLTS			48 VOLTS						24 VOLTS		
			SIG. BAT.	TALK. BAT.	F.R. GRD.	R.R. GRD.	F.B. GRD.	SIG. BAT.	R.R. GRD.	SWBD. GRD.	SIG. BAT.	TALK. BAT.	F.R. GRD.	R.R. GRD.	F.B. GRD.	SIG. BAT.	R.R. GRD.	SWBD. GRD.		
TRUNK-2WAY OPR.OFF, HIGH-LOW REV. BAT. SUPV. OUT., MFKP-IN, DP-OUT, WITH ACCESS FROM TDM, OR INTERTOLL SELS., INC. AUTO.	SD-56116-01	I	.106			.106			.019		.151			.151				.028		
REC. COMPL., HIGH-LOW SUPV., COIN	SD-56127-01	I	.047			.056		.041	.070		.065			.079		.058	.028			
TRUNK-2WAY INTERTOLL, INC. AUTO., OUT. MFKP, CX OR SX SUPV.	SD-56132-01	I	.256			.206			.028		.256			.206			.028			
TRUNK-OUT, INTERTOLL, MFKP OR STFD, CX OR SX SUPV.	SD-56133-01	I	.228			.159			.039		.163			.117			.028			
" INC. TOLL SW, TDM., ALSF TOLL SW, TDM, POS	SD-56179-01	I	.077			.100			.077					.100						
TRUNK-AUX. INC. TOLL SW, TDM., 4 WIRE, REV. BAT. SUPV., ALSF TOLL SW, TDM, POS.	SD-56180-01	I	.070			.025			.092					.034						
TRUNK-SPL. SERV., COIN, FROM PAN. OR CBR. NO.1 OFF. IN SAME BLDG.	SD-56278-01	I		.124			.167	.098	.104		.124				.167	.098	.104			
TRUNK-INC. REC. FROM PAN, OFF. ARR. FOR CLR. NON-COMPL. SERV.	ES-61290-01	I						.030	.035							.042	.043			
TRUNK-TOLL SW, TO SXS REPEATED DIALING TOLL TRAIN	SD-62022-01	I						.092	.100							.071	.077			
TRUNK-REC. COMPL. FROM PAN. OFF. IN SAME BLDG., COIN	SD-62086-01	I		.061		.018	.061	.173	.176		.094		.028	.094	.268	.272				
" INC. A-B TOLL, KLSF	SD-62133-01	I						.200	.195						.166	.161				
TRUNK-REC. COMPL. FROM PAN. OR SXS OFF., NON-COIN	SD-62187-01	I						.040	.045						.062	.070				
TRUNK-REC. FROM MAN. OR DIAL DSA SWBD. IN SAME BLDG.	SD-62278-01	I						.006	.046						.009	.069				
" REC. FROM SWBD. NO. IC IN SAME BLDG.	SD-62280-01	I						.035	.080						.051	.117				
" OFF. SWITCHING, KLSF	SD-62364-01	I						.065	.065						.065	.065				
TRUNK-OFF. SWITCHING FROM TDM, SWBD. NO.1, KLSF	SD-62370-01	I						.155	.150						.155	.150				
" INC. REC. FROM MAN. OFF.	SD-62437-02	I		.060				.084	.138		.083				.115	.190				
" OFF. SWITCHING, ALSF	SD-62510-01	I						.065	.056						.086	.074				
" AUX. TOLL TDM.	SD-62512-01	I	.015					.041	.038		.026				.071	.066				
" TOLL SW. TO LOCAL OFF.	SD-62610-02	I						.020	.075						.022	.084				
" TOLL SW. TO SXS OFF.	SD-62611-01	I						.070	.080						.070	.080				
" 2 WAY RD. INTERTOLL	SD-62614-01	I, 2, 10						.048	.059						.032	.039				
		I, 3						.052	.052						.034	.034				
		I, 4						.034	.034						.023	.023				
" INC. TOLL TDM. OR UTILITY	SD-62674-01	I						.285	.260						.237	.216				
" AUX. & RD. INTERTOLL	SD-62705-01	I, 5						.140	.160						.094	.107				
		I, 6						.090	.090						.060	.060				
		I, 7						.150	.150						.100	.100				
" INC. TOLL, ALSF	SD-62753-01	I						.145	.135						.145	.135				
" INTERPOSITION	SD-62771-01	I						.009	.012						.023	.030				
TRUNK-INC. REC. FROM MAN. "A" OR DSA SWBD. IN SAME BLDG.	SD-62794-01	I						.006	.075						.009	.107				
" INC. REC. FROM MAN. "A" OR DSA SWBD.	SD-62799	I						.022	.025						.031	.036				
" TOLL SW. TO SXS "B" SWBD.	SD-62817-01	I						.040	.055						.045	.061				
" INTERPOSITION, INC. FROM TOLL SWBD. NO.2	SD-62818-01	I						.005	.013						.009	.024				
TRUNK-REC. COMPL. FROM CBR. NO.1 OR PANEL OFF. WITH OR WITHOUT NUMBER CHECKING	SD-63013-01	I						.040	.041						.056	.057				
" TOLL SW. TO SXS OFF.	SD-63027-01	I						.122	.130						.122	.130				
" AUX. INC. TOLL TDM.	SD-63087-01	I						.075							.083					
" OUT. STFD. TO TDM. SWBD. NO. 3	SD-63116-01	I, 8						.034	.041						.029	.035				
		I, 9						.027	.027						.022	.022				
TRUNK-OUT. TO MAN., MAN. TDM. OR MAGNETO OFF., REV. BAT. SUPV.	SD-63121-01	I						.050	.053						.050	.055				
TRUNK-AUX. TOLL TDM. INC. FROM SWBD. NO. 3, MAN. "A" OR DSA SWBD.	SD-63164-01	I, 10, 11						.095	.090						.079	.075				
		I, 10, 12						.148	.141						.123	.117				
		I, 5	.044			.044		.026	.033		.045			.045	.027	.034				
" OUT. STFD., HIGH-LOW SUPV.	SD-63261-01	I, 13	.044			.044		.046	.055		.045			.045	.049	.056				
		I, 14	.044			.044		.070	.077		.045			.045	.071	.078				

1. WHEN THIS CKT. CONNECTS TO RELAY CHAIN CKT., A C LAMP RELAY CKT., BUSY SIG. RELAY CKT., MULT. LAMP RELAY CKT., BUSY LAMP, TONE & REG. CKT., GROUP BUSY CKT., JACK CKT., RD. INTERTOLL TRK. MULT. CKT., OR INDICATOR CONTROL CKT., DRAIN SHOW THEREON AS BEING FUSED OR GROUNDED ON THIS CKT. MUST BE ADDED TO VALUES SHOWN.
2. WITHOUT BUSY SIGNALS OR MULT. CUT-OFF (FIG. B)
3. ADDITIONAL DRAIN FOR FIG. B1 (MULT. CUTOFF).
4. ADDITIONAL DRAIN WHEN BUSY SIGNALS ARE USED.
5. WITHOUT BUSY SIGNALS.
6. ADDITIONAL DRAIN FOR UP TO 51 GRPS. OF BUSY SIGNALS.
7. ADDITIONAL DRAIN FOR OVER 51 GRPS. OF BUSY SIGNAL.
8. NO BUSY SIGNALS (FIG. I)
9. WITH BUSY SIGNALS (FIGS. 1 & 2).

10. SEE SD-64562-01 AND CIRCUIT NOTE 102 OF SAME DRAWING.
11. FIGS. 1 & A.
12. FIGS. 1 & B.
13. ADDITIONAL DRAIN WHEN LESS THAN 13 OR MORE THAN 26 GRPS. OF BUSY SIGNALS ARE USED.
14. ADDITIONAL DRAIN WHEN MORE THAN 12 & LESS THAN 27 GRPS. OF BUSY SIGNALS ARE USED.
15. GROUND DRAINS SHOWN IN LIST 1 ARE FOR USE WHERE ADDITIONS ARE MADE TO CENTRALIZED FUSE PANELS.

CURRENT DRAIN FOR CIRCUITS

**CURRENT DRAIN
AMPERE HOURS PER BUSY HOUR**

CIRCUIT DRAWINGS		SEE NOTE NO.	DRAINS LIST 1 (SEE NOTE 12)									DRAINS LIST 2								
CIRCUIT TITLE	CIRCUIT NO.		48 VOLT						24 VOLT			48 VOLT						24 VOLT		
			SIG. BAT.	TALK BAT.	FR. GRD.	R.R. GRD.	F.B. GRD.	SIG. BAT.	R.R. GRD.	SWBD GRD.	SIG. BAT.	TALK BAT.	FR. GRD.	R.R. GRD.	F.B. GRD.	SIG. BAT.	R.R. GRD.	SWBD GRD.		
TRUNK-OUT, ARR. TO MULT. TO SXS STFD. TDM. COMPL. TRK. CKT.	SD-63287-01	1							.026	.018							.035	.024		
" -AUX., 2 WAY RINGDOWN OR OUT AUTO. TO TOLL TDM. SWBD.	SD-63308-01								.105	.105							.117	.117		
" -OUT. TOLL SW. USING TEL. REP.	SD-63322-01	1							.027	.023							.029	.025		
" -OUT. AUX., AUTO. TO TOLL TDM. SWBD.	SD-63342-01		.004						.012			.005						.013		
" -OUT. TO LOC. TDM. OFF. CX SUPV.	SD-63381-01	1	.017						.034	.042		.013					.027	.033		
" -TOLL SW., PH. GRP. CX SUPV.	SD-63782-01	1/2							.080	.080							.063	.063		
" -TOLL SW., PH. GRP. CX SUPV.	SD-63782-01	1							.057	.050							.058	.051		
" -OUT. AUTO. TO DESKS OR SXS "A" SWBD.	SD-63820-01	1	.011			.011			.015	.028		.025			.025		.033	.062		
" -OFF. SWITCHING, KEY LIST. FOR TOLL SWITCHING	SD-63859-01	1							.042	.042							.042	.042		
" -TOLL SW. FOR MAGNETO RURAL LINES IN MAN. OR DIAL OFF.	SD-63860-01	1							.018	.028							.020	.031		
" -TOLL SW. FOR MAGNETO RURAL LINES IN MAN. OR DIAL OFF. ARR. FOR DELAYED CUT-THRU AFTER RINGING.	SD-63860-02	1							.035	.050							.039	.056		
" -OPR. REC. COMPL. INC. FROM SXS OFF. IN SAME BLDG.	SD-63864-01	1		.061			.061	.065	.065			.065			.065	.091	.091			
" -OUT. STFD. TO PANEL. SDR. TDM. OFF., REV. BAT. SUPV.	SD-64106-01	1							.051	.048							.055	.051		
" -OUT. TO TOLL SWBD. NO. 1, 1B, 3 OR 3B, HIGH-LOW SUPV.	SD-64116-01	1	.006			.006		.048	.057		.005			.005			.038	.045		
" -TOLL SW. TO MAN. OR SXS OFF. IN SAME BLDG.	SD-64120-01	1	.105	.055		.192	.055		.010		.141	.074		.258	.074		.013			
" -INC. REC. FROM MAN. OR DIAL OFF.	SD-64221-01	1						.017	.020								.038	.045		
" -2 WAY RD. INTERTOLL, 20 CYC. RING.	SD-64428-01	1						.112	.158								.067	.095		
" -INTERPOSITION FROM POINT TO POINT TO CLR. POSITION	SD-64430-01							.038	.039								.059	.080		
" -INC., OUT. OR 2 WAY AUTO. TO TOLL OR DSA SWBD.	SD-64440-01	1						.084	.087								.129	.135		
" -INC., OUT. OR 2 WAY AUTO. TO TOLL SWBD.	SD-64441-01	1						.053	.057								.082	.088		
" -INTERTOLL DIALING AUX., OUT. DIAL REPEATING, INC. AUTO. OR DIALING.	SD-64469-01	3 4	.135 .155			.085 .115					.095 .111			.061 .081						
" -INTERTOLL DIALING OUT. TO TOLL OFF., MAN. OR DIAL OPERATION, CX OR SX SUPV.	SD-64472-01	1/5 1/6 1/7 1/8	.350 .214 .475 .276			.295 .178 .420 .240		.054 .031 .054 .031	.093 .051 .093 .031		.246 .150 .334 .194			.207 .125 .295 .169			.038 .022 .038 .022	.065 .036 .065 .022		
" -INTERTOLL DIALING TOLL SW. TO SXS LOOP DIALING TOLL TRAIN	SD-64473-01	1	.075			.060					.101			.081						
" -INTERTOLL DIALING INC. FROM INTERTOLL TRK. OR INTERTOLL SEL. MULT.	SD-64476-01	1	.087			.070		.021			.089			.095			.028			
" -INTERTOLL DIALING INC. FROM MAN OR SXS OFF., REV. BAT. SUPV.	SD-64482-01	1		.092		.160	.017				.074			.128	.014					
" -INTERTOLL DIALING TOLL SW. TO SXS TOLL INTERMEDIATE SEL. IN SAME BLDG.	SD-64485-01	1		.106		.029	.063				.142			.039	.084					
" -INTERTOLL DIALING INC. FROM MAN OR SXS OFF., PULSE CORRECTING, REV. BAT. SUPV.	SD-64486-01	1		.230		.238	.013				.184			.190	.010					
" -INTERTOLL DIALING TOLL SW. TO SXS REPEATED DIALING TOLL TRAIN	SD-64487-01	1	.106			.077					.142			.103						
" -INTERTOLL DIALING 2 WAY REPEATED DIALING, CX SUPV.	SD-64531-01	1	.197			.197		.396	.431		.158			.158			.312	.340		
" -INTERTOLL DIALING 2 WAY TO MAGNETO OFF., INC. DIALING, OUT. AUTO. FROM SEL. MULT.	SD-64534-01	1/13 1/14	.122 .077	.014 .014		.088 .055	.014 .014	.033 .033	.037 .037		.095 .061	.011 .012		.068 .043	.011 .012		.026 .030			
" -INTERTOLL DIALING OUT. TO TOLL OFF., DCKP, CX OR SX. SUPV.	SD-64538-01	1/10 1/11	.450 .505			.410 .453		.049 .051	.114 .116		.311 .354			.285 .318			.043 .045	.090 .091		
" -INTERTOLL DIALING, OUT. TO INF. DESK OR OPR. ROOM DESK	SD-64539-01			.072		.031	.025					.097		.042	.034					
" -RECORDING OR INC., REV. BAT. SUPV.	SD-64553-01	1	.037			.062		.003	.010		.081			.137			.007	.022		
" -INC. FROM SXS CONN. MULT. IN SAME BLDG.	SD-64568-01	1/9	.040			.040		.015	.040		.047			.047			.017	.047		
" -REC. COMPL. FROM COIN OR NON-COIN LINES IN CBR. NO 1 OFF. OR FROM NON-LINES IN PANEL OFF. ARR. FOR NO. CHECKING	SD-64571-01	1						.021	.026								.028	.035		

NOTES:

1. WHEN THIS CKT. CONN. TO RELAY CHAIN CKT., A.C. LAMP RELAY CKT., BUSY SIGNAL RELAY CKT., MULT. LAMP RELAY CKT., BUSY LAMPSTONE & REG. CKT., GROUP BUSY CKT., JACK CKT., RD. INTERTOLL TRK. MULT. CKT., OR INDICATOR CONTROL CKT., DRAINS SHOWN THEREON AS BEING FUSED OR GROUNDED ON THIS CKT. MUST BE ADDED TO THE VALUES SHOWN.

2. ADDITIONAL DRAIN WHEN BUSY SIGNALS ARE USED.

3. USED AS 2 WAY AUX. TRUNK.

4. USED AS INC. AUX. TRUNK.

5. MANUAL OPERATION USED WITHOUT 2 WAY TRK.

6. " " " WITH " "

7. DIAL " " WITHOUT " "

8. " " " WITH " "

9. WHEN USED IN OFFICIAL PBX GROUP ONLY.

10. USED WITHOUT 2 WAY TRUNK.

11. USED WITH 2 WAY TRUNK.

12. GROUND DRAINS SHOWN IN LIST 1 ARE FOR USE WHERE ADDITIONS ARE MADE TO CENTRALIZED FUSE PANELS.

13. WITHOUT SWBD. MULTIPLE.

14. WITH " "

**CURRENT DRAIN
AMPERE HOURS PER BUSY HOUR**

CIRCUIT DRAWINGS		SEE NOTE NO.	DRAINS LIST 1 (SEE NOTE 9)									DRAINS LIST 2								
CIRCUIT TITLE	CIRCUIT NO.		48 VOLTS					24 VOLTS				48 VOLTS					24 VOLTS			
			SIG. BAT.	TALK. BAT.	F.R. GRD.	R.R. GRD.	F.B. GRD.	SIG. BAT.	R.R. GRD.	SWBD. GRD.	SIG. BAT.	TALK. BAT.	F.R. GRD.	R.R. GRD.	F.B. GRD.	SIG. BAT.	R.R. GRD.	SWBD. GRD.		
TRUNK-INTERTOLL DIALING INC. TO "INTERTOLL SEL. OR OPR.	SD-64590-01	1	.125			.090							.101			.075				
" TEL. REP. TOLL CONFERENCE SERVICE	SD-64625-01	6						.093	.106							.052	.059			
		7						.160	.166							.089	.104			
		8						.017	.030							.010	.017			
#TOLL CONNECTING TO LOCAL OFF. FOR ESTABLISHING CONN. WITH C.D.O. SUB.	SD-64626-01	1/2						.014	.019							.019	.026			
		1/3						.026	.029							.058	.064			
INC. FROM SXS SEL. MULT. IN SAME BLDG. ARR. TO ABSORB ONE TO 5 DIGITS	SD-64660-01	1		.115		.135	.060		.010			.153		.178	.081		.014			
2 WAY RD. INTERTOLL, 135 CYC. RINGING	SD-64823-01	1						.107	.121							.071	.080			
INTERTOLL DIALING INC. FOR CONNECTING CX SIG. CKT. TO SXS TOLL PRECEDING SEL.	SD-64824-01	1	.090			.163					.073		.130							
TOLL SW. REPEATED DIALING TO SXS TOLL INTERMEDIATE SEL. IN SAME BLDG.	SD-64835-01	1/4	.125	.092		.229	.092		.032		.114	.084		.209	.084		.029			
		1/5	.078	.092		.235	.092		.032		.072	.084		.214	.084		.029			
INTERPOSITION, AUTO., OUT. TO SXS "A" SWBD.	SD-90124-01	1						.010	.040							.056	.222			

NOTES:

1. WHEN THIS CKT. CONN. TO RELAY CHAIN CKT., AC LAMP RELAY CKT., BUSY SIG. RELAY CKT., MULT. LAMP RELAY CKT., BUSY LAMP, TONE & REG. CKT., GROUP BUSY CKT., RD. INTERTOLL TRK. MULT. CKT. OR INDICATOR CONTROL CKT., DRAINS SHOWN THEREON AS BEING FUSED OR GROUNDED ON THIS CKT. MUST BE ADDED TO VALUES SHOWN.
2. WHEN USED AS INCOMING TRUNK.
3. WHEN USED AS 2 WAY TRUNK.
4. BRIDGED SUPV. WITH REPEATED SX SUPERVISION.
5. BRIDGED SUPV. WITHOUT REPEATED SX SUPERVISION.
6. PER FIG. 1.
7. PER FIG. 2.
8. PER FIG. 5 OR 6.
9. GROUND DRAINS SHOWN IN LIST 1 ARE FOR USE WHERE ADDITIONS ARE MADE TO CENTRALIZED FUSE PANELS.

SWITCHBOARD NO. 3

ALARM (ALSO SEE EMERGENCY ALARM)

Alarm Line	See Line	
Alarm Trk.	See Trunk	
Switch Trouble		
For Sel.	SD-32043-01	E107
With Perm. Sig.,	SD-55278-01	F107
Release, Fuse Alm.		
& Common Timing		
Night	SD-62182-01	D67
Pneumatic Tube	SD-64496-01	C108
Blockade		
Aud. Alm. & Pilot	SD-90614-01	A108
Lamp		
Main Power Supply	SD-95001-01	B107
Distrib. Fuse &	SD-95002-01	A107
Common Aisle		
6 Volt Lamp-60-Cycle	SD-95005-01	D107
Supply		
Audible and Visual	SD-95063-01	E108
Alarm - 24V Alm.		
Bat.		
Distribution Fuse &	SD-95072-01	I107
Common Aisle		
Audible & Visual Alm.	SD-95075-01	D108
Toll & SXS No.355A		
48V Alm. Bat.		
Power Supply	SD-95081-01	J107
Audible & Visual	SD-96188-01	I108
Aux. Sig. & Flash.	SD-62100-01	E67
For K.L. Trks.		

ALARM RECEIVING	SD-95418-01	C107
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ANS. TIME RECORDER

Permanent Type	SD-96235-01	A71
Portable Type	SD-96275-01	B71
Switching Ckt.	SD-96069-01	A72

BATTERY SUPPLY

Amplifier	SD-90608-01	K79
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BUSY BACK

Off. Sw. & Strfrd.	SD-60803-01	A48
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CALL

Messenger		
Desk or Opr's. Sec-	SD-60868-01	C70
tion		
Desk or Service	SD-60869-01	D70
Asst's Div.		
Emg. - For Toll Sw.	SD-61025-01	F67
Trks.		
Incoming	SD-62115-01	C4
Service Asst's.	SD-62397-01	H68
Outgoing	SD-62471-01	D4

CALCULAGRAPH

Motor Driven	SD-95012-01	F175
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CLOCK

Position or Secondary	SD-90409-01	G5
District Master	SD-91018-01	G68
Building Master	SD-91019-01	A70
Motor Driven	SD-95012-01	F175
10 I.P.M. Int. &	SD-96343-01	C67
Impulse		

COIN CONTROL

Rec. Compl. Trk.	SD-21705-01	F73
Trk., Terminating	SD-64424-01	F71
End		
Trk., Org. End	SD-95031-01	E72

CONDENSER

Line Building Out	SD-63021-02	F127
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CONTROL

Crossbar Pos. Group	SD-64155-01	C103
Intertoll Dialing	SD-64481-01	C123
Supervisory		
Line & Trk. Lamp &	SD-95412-01	H72
Alarm		

CORD

Permanent Sig., with	SD-55871-01	B148
or without Howler		
Opr's. Rec. Comp.	SD-56089-01	H3
Overflow Indicating	SD-56251-01	F171
Coin Control - Multi-	SD-60402-01	B5
Off. Areas		
Number Checking	SD-63011-01	C2
Toll	SD-63556-01	A3
Appl. Sch. - Mod. of	SD-63672-01	A1
Cords for Cut-Over		
of Toll & DSA Bds.		

CX SET - Ph. Grp. - 2 Wy.	SD-62748-01	B98
RD - Outg. Auto. to		
Toll Tdm. Swbd. - Arr.		
for 22A1 Rep.		

CX SIG. - Ph. Grp. -	SD-62700-01	A97
Int.		
By Pass Ckt. - 2 Wy		
48V Sig. - Arr. for		
22A1 Rep. - Strfrd.		
Trk.		

DIAL

Position	SD-56096-01	C168
Loop or Loop & Rep.	SD-62673-01	B4
Dial		
Rep. Dial	SD-62673-03	B4

DISTRIBUTING

For Posted Delay Tones	SD-55667-01	J92
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DOOR OPENING	SD-90085-01	H66	JACK		
EMERGENCY ALARM			Patching, for Posted Delay Tones	SD-55672-01	A173
Arr. for Code Sig., Arr. for Auto. Fire Detection	SD-90437-01	F109	With Busy Sig. for C.C. Trks.	SD-62445-01	B66
Not Arr. for Code Sig., Arr. for Auto. Fire Detection in Multi-Zone Off., 24V	SD-90560-01	A109	TONE	SD-62831-01	F63, F66
Not Arr. for Code Sig., Arr. for Auto. Fire Detection in Single-Zone Off., 24V	SD-90641-01	A109	For RD. Intertoll Trks. - A-C Busy Lamp	SD-62883-01	J67
Inc. from Distant Off. for Use when Inc. Ckt. Is Not to be Connected to Zone Sig. Ckt.	SD-90642-01	G109	Holding & Testing For RD. Intertoll Trks. - D-C Busy Lamp	SD-63377-01	C115
Not Arr. for Code Sig., Arr. for Auto. Fire Detection in Multi-Zone Off., 48V	SD-96049-01	A109	For Trks. & Sub. Lines	SD-63833-01	G67
Not Arr. for Code Sig., Arr. for Auto. Fire Detection in Single Zone Off., 48V	SD-96052-01	A109	For Conference Service	SD-64545-01	A67
			Monitoring & Observing Test - Bat. & Grd. at Relay Rack	SD-64733-01	C66
			JACK SLEEVE - C.C.	SD-90564-01	F70
			KEY	SD-90619-01	D114
			M.B. for Spl. Serv. or Rec. Compl. Trks.	SD-63294-01	G66
			KEY SET		
FILTER			MF	SD-55309-01	F7
+130V Plate Supply	SD-95508-01	E172	DC & MF	SD-56031-01	D161
Talk Bat. Supply	SD-96211-01	I70	DC	SD-56031-02	D161
			MF	SD-56031-03	D161
FIRE DRILL	SD-90086-01	D66	DC	SD-62066-01	C7
FLASHING			LINE		
Flash. & Aux. Sig. - For K.L. Trks.	SD-62100-01	E67	Alarm	SD-55135-01	E110
For Posted Delay Tones	SD-55672-01	A173	Aux. For Bridged Toll Stations	SD-55177-01	H14
GROUP BUSY LAMP, TONE REGISTER	SD-62612-01	A66	Trans. Test, Arr. for Auto. Disconnect Sig.	SD-55263-01	H112
GROUP BUSY & OVERFLOW	SD-55004-01	C71	Intertoll Dialing, Test	SD-56221-01	B122
GROUPING			Test from Testing Eqpt.	SD-62447-01	A113
ALSF Toll Sw. Tdm. Pos.	SD-56171-01	C163	Toll Sub.	SD-62486-01	A14, E56
Off. Sw. & Stfd. - K.L. Pos.	SD-62109-01	A47	Toll Sub. - Mult. in No. 11 Swbd.	SD-62519-01	B14
Off. Sw. & Stfd. - A.L. Pos.	SD-62508-01	F47	Magneto Rural	SD-62941-01	G15, E57
Regular Toll Pos.	SD-63082-01	C3	Business Office	SD-64497-01	E15, A64
INTERRUPTER			Manual Sub. - Emg.	SD-64498-01	C15, D58, D63
135 Cycle - 24V Opr. Relay - For 40, 60 or 120 I.P.M.	SD-60203-01	B73	Manual Sub. - Reg. or Emg.	SD-64501-01	A15, D56, D57
135 Cycle - 48V Opr. Relay - For 60 or 120 I.P.M.	SD-62826-01	A115	Manual Sub. - Prepay Coin	SD-64502-01	B15, D57
30, 60 or 120 I.P.M. with Alarm, Transfer & Distributing Ckts.	SD-63955-01	B73	Toll Sub. - Toll Off. & Local Off. Not in Same Bldg.	SD-90078-01	C14
	SD-95036-01	A115			
	SD-95078-01	C197			
	SD-95099-01	C197			

LINE (Continued)			Listening-in Ckt. -	SD-55655-01	B76
Emg. - To Provide a	SD-95336-01	F107	Arr. to Handle 1 to		
Dial Sub. with			20 Students with		
Emg. Man. Serv.			Instructor at a		
When Local Off. is			Regular Swbd. Pos.	SD-64448-01	C79
Located in Dist.			Misc. Tones, Trans.		
Bldg.			Reduction, Tel. Sw.		
Trans. Test	SD-96000-01	E112	& Call Ckts. - Mod.		
Order Clerk or Ch.	SD-96262-01	G69	Ckt.	SD-64745-01	C64
Opr.			Misc. Tones, Trans.		
LINK	SD-90705-01	C8	Reduction, Mon.,		
LINK ALLOTING &			Talking & Start		
ALARM - CROSSBAR	SD-64157-01	B103	Dial Control	SD-96405-01	J78
MAKE BUSY			Listening-in Ckt.		
Trunk	SD-62367-01	D69	OSCILLATORS		
For Night Serv. for	SD-96053-01	G171	For 800, 800/20, 1200	SD-55662-01	K91,
Loc. Off. Trks.			& 1200/20 Cycles		B171
MAKE BUSY KEY			Posted Delay Tones		
For Spl. Serv. - or	SD-90622-01	A75	Using Self Inter-		
Rec. Compl. Trks.			rupting Oscillator	SD-55674-01	J91,
MISC. FRAME			Ckt.		A171
MFP Receiving Fr.	SD-95303-01	E173	For 500 and 500/20		
MONITORING			Cycles Posted Delay		
Dial	SD-90596-01	D68	Tones Using Self		
M-F or D-C Key Plsg.	SD-96314-01	C174	Interrupting Oscil-		
For Tel. Pos. Key	SD-96441-01	D172	lator Ckt.		
Set, Pos. Dial or			OVERFLOW		
Peg Count Ckts.			For Multi-Connec-	SD-63847-01	G72
MONITORING AMPLIFIER	SD-95027-01	K78	tion at Toll		
NETWORKS - LINE & BAL.			Swbd. No. 3B	SD-64129-01	G72
Open Wire	SD-59042-01	B127	For Uni-Connections		
H44-25 Cable	SD-60963-02	B127	PAD		
OBSERVING & SERVICE			Trans., for Opr.	SD-55134-01	G127
OBSERVING			Off. Trks.		
Central Office Set	SD-90448-01	H70	PATCHING		
No. 2			Intertoll, for	SD-55682-01	H74
Multi-Line For	SD-95563-01	G174	Building Up		
Observing Speed of			Thru RD.		
Answer on Incoming			Intertoll Trk.		
Calls			Connections		
OPERATOR'S TRAINING			PATHS BUSY		
Control Pos. Ckts.	SD-55163-01	D79	For Inc. Trks.	SD-55350-01	D71
for Simulating			Arr. for Thru		
All Paths Busy,			Supv.		
Line Busy & Aud.			PEG COUNT	SD-63290-01	B69
Ring. Tone to			POSITION		
Student Toll			ALSF Toll Sw.	SD-56178-01	D163
Operators			Tdm Pos.		
Control Pos. Ckts.	SD-55660-01	K77	For Inward, Outward	SD-62032-02	B3
for Simulating Supv.			& Thru Positions		
All Paths Busy, Line			POSITION RELEASE		
Busy & Aud. Ring.			For KLSF Sw. Trk.	SD-56096-01	C168
Tone to Student Toll			Tdm. Pos.		
Cabinet Operators					

POSITION RELEASE (Cont'd.)

For Stfd. Toll Lines SD-62586-01 G49
 And Stfd. Toll Trks.
 Arr. for AL With or
 Without MF or DC
 Key Pulsing

PRESS NEWS SD-63663-01 F69

RECEIVING

MF Pulsing SD-95087-01 D174

REGISTER

Traffic-Intertoll SD-55458-01 H118
 Dial
 Group Busy SD-62612-01 A66
 Group Busy Time SD-63313-01 K68

RELAY (Also see RELAY CHAIN)

Lamp, to Supply 24V SD-56126-01 C172
 to Lamps when
 Connecting Ckts.
 Supply 48V
 Test Trk. SD-62062-01 A112
 A-C Lamp SD-62848-01 J66
 Busy Signal SD-63679-01 J70
 D-C Lamp SD-63962-01 B68

RELAY CHAIN

With Immediate SD-55570-01 A197
 Release
 Delayed SD-55570-01 A199

REORDER

For Inc. Trks. Arr. SD-55350-01 D71
 for Thru Supv.
 Off. Sw. & Stfd. SD-60803-01 A48

REPEATING COIL GROUPS

Open Wire or Cable SD-60782-03 D127
 Non-Rep. Arr. for
 Mid.-Point Coil Conn
 Open Wire or Cable SD-95022-01 C127
 Non-Rep. for Small
 Offices

RINGBACK

Emergency SD-64244-01 F62,
 H69

RINGING LEAD

135 Cycle SD-62021-01 B74

RINGING CONTROL SD-62798-01 C69

SELECTOR

Toll Preceding SD-31241-01 D152
 SXS Intertoll Thru SD-55003-01 F120
 SXS Comb. Intertoll SD-55062-01 F118
 & Toll Trans.

SXS Intertoll - With SD-55242-01 E118
 Digit Absorbing
 SXS Aux. Intertoll SD-55242-01 E120
 SXS for Handling "We SD-55848-01 B152
 Have" Calls - Arr.
 for Digit Absorbing
 & Loop Plsg.
 SXS Intertoll - Without SD-64470-01 E118
 Digit Absorbing

SENDER

DCKP - In, RP-Out SD-62058-01 C9
 DCKP-In, DP-Out SD-95481-01 E9
 MFKP-In, DP-Out SD-95481-01 D9

SERVICE ASST.

Regular SD-62118-01 E68
 For Nos. 3 & 11 SD-62498-01 F68
 Swbds.
 For Toll & Strfd. SD-62775-01 I68
 Trk. Pos.
 Conn. to Toll Swbd. SD-62822-01 K67
 No. 2

SIGNAL

Grd. Auxiliary SD-62466-01 E66
 Pneumatic Distrib. SD-63464-01 F4
 System
 Aux. for Crossbar Sdr. SD-90464-01 C74
 Load Control
 Calling - For Operat- SD-96087-01 H67
 ing Room

SUPPLY

MF Current & SD-95391-01 E74
 Distribution

SWITCH

Intertoll Dial Rot. SD-55945-01 D157
 Out. Trk. - Arr.
 for Preselection
 Pri. Sec. Crossbar SD-64154-01 B102

TELEPHONE

Overflow Recording SD-55670-01 K72
 Opr. Tel. & Trk.
 For Off. Sw. & Stfd. SD-62109-01 A47
 K.L. Trks.
 Toll Operators SD-62115-01 C4
 For Off. Sw. & Stfd. SD-62508-01 F47
 A.L. Trks.
 Traffic Recorder at SD-63694-01 I66
 Traffic Reg. Rack

TERMINATING

4 Wire, for Ckts. SD-56181-01 I127
 Terminating in
 Same Bldg. with
 Toll Sw. Off. No. 4
 or 4A
 4 Wire, for Ckts. SD-64304-01 A127
 Not in Same Bldg.
 with Toll Sw. Off.
 No. 4 or 4A

TEST

Trunk - For M-F KP Trks.	SD-55924-01	B177
Intertoll Dialing Rot. Out Trk. Switch	SD-56118-01	F177
Auto., for KP Toll Senders	SD-62059-01	B113
Busy Signal	SD-62289-01	E111
DC Key Pulsing	SD-63853-01	B114
Trk. for Overall Tests		
Pad Control Relay	SD-63958-01	B115
Position for Cord, Dial, Key Set, Jacks	SD-63971-01	B111
Link, Pos. & Grp. Allotters for Call Distg. Ckts.	SD-64261-01	F115
Intertoll Dial-Sel. Fr. & Rel. Racks	SD-64604-01	G114
For Testing 209FA & FD Relay	SD-90411-01	D111
Auto., for DCKP Senders	SD-90424-01	C113
Man., for DCKP-In, DP-Out Senders	SD-90635-01	D113
Man., for MFKP-In, DP-Out Senders	SD-95400-01	D117
Bat. & Grd. Terminals	SD-90122-01	C114

TEST SETS

A.C. Rel. & Sig.- Meas. A.C. Volt	SD-63674-01	E114
A.C. Voltage	SD-64125-01	E113
Pulse Repeating	SD-64540-01	H114
For 3W SXS Sub.	SD-90469-01	D112
Rec. Compl. Trk.		
For 3W Panel Sub.	SD-90470-01	C112
Rec. Compl. Trk.		
Jack	SD-95056-01	D115

TIMING

For Controlling 2 Sec. Ringing Sig.	SD-64587-01	H116
Common & Alm.	SD-95052-01	B10

TONE - ORDER

Single, Double & Triple Tone	SD-55343-01	I69
1, 2 or 3 Pulses for KLSF Sw. Trk. Tdm. Pos.	SD-56096-01	C168
3 Pulses for K.L. "AB" Stfd. Trks.	SD-62101-01	A53
3 Pulses for A.L. Stfd. Trks.	SD-62491-01	G48
3 Pulses for K.L. Off. Sw. Stfd. Trks.	SD-62593-01	C48

TRAINING SCHOOL

Trks., Cord & Sig. Ckts. for Portable Demonstration Bd.	SD-62163-01	A79
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TRANSFER

For Transferring Cord Ckts. to Toll Cab. No. 1B	SD-55507-01	E2
Emg. - Arr. to Use Existing Trunk Facilities to Terminate Emg. Lines From Dst. Cbr. No. 5 Off.	SD-55775-01	D187
Night Emg. - To Provide Dial Sub. in SXS, Pan. or Cbr. No. 1 Off. with Emg. Man. Serv. When Local Off. is Located in Same Bldg. Arr. to Disconnect Calling Pty. on Emg. Call	SD-62110-01 SD-96425-01	B67 B132

TROUBLE OBSERVATION & TEST

	SD-95034-01	F64, I72
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TRUNK

Alarm

Arr. to Extend Alm. Indications	SD-95310-01	H109
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Auxiliary

2 Way Stfd. R.D. - Out. Auto. to Toll Tdm. - for CX Sig.	SD-63308-01	A99
1 Way Opr. - Out. Auto. to Toll Tdm. - for CX Sig.	SD-63342-01	C99
Conn. from Intertoll or SXS Tdm. Train to Out. or Opr. Off. Trk. - Loop or CX Sig.	SD-96384-01	E197

Incoming

Incpt. from SXS Off. Arr. for Dial Back Completion	SD-55058-01	G59
From Man. Off. - Loop Sig. - Thru Supv. - High-Low Dry End - Rev. Bat. Wet End	SD-55081-01	A44
From Man. Off. - CX Sig. - Thru Supv. Auto. - Wet Dry Supv.	SD-55082-01	B44
3 W Information from SXS Sel. Mult. (SXS "A")	SD-55184-01 SD-55355-01	E34 I61
Incpt. from SXS Off. With or Without Completion for DCKP Pos.	SD-55342-01	F60
3 or 4W from SXS Overflow Conn. Mult. - Trips Mach. Ring. Without Charging	SD-55500-01	D62

TRUNK (Cont'd.)

Incoming (Cont'd.)

Automatic from Swbd. No. 3B or Toll Tdm. Swbd. No. 3 for use as a Ckt. Request From Toll Swbd. No. 1 in Same Bldg. for Handling "We Have" Calls	SD-55582-01	E42
3W From Toll Swbd. No. 3, 3C or 6 in Same Bldg., Arr. for Key Listening, Stfd. From SXS Sel. for Handling "We Have" Calls	SD-55643-01	G153
Perm. Sig. Holding From Cbr. No. 5 Off.	SD-55704-01	B51
TX- Rev. Bat. Supv. Simplex DC Ring.	SD-55846-01	B153
4W Talk. - Rev. Bat. Supv. - SX DC Ring on Sig. PH. - Pad Cont.	SD-55889-01	A147
4W Off. Sw. Aux. Ckt. - AL - Inc. From No. 4 Toll Off. - Rev. Bat. Supv. With Auto. Start of Mach. Ring.	SD-56045-01	D153
TX - 4W Talk. - Rev. Bat. Supv. Simplex DC Ring. on Sig. PH	SD-56055-01	E153
Spl. Serv. - Coin - From Panel or Cbr. No. 1 In Same Bldg.	SD-56092-01	H47
From SXS Off. - For Testing Coin Toll Trains & Ordering Up M.B. Conn.	SD-56094-01	F153
2W K.L. "A-B" Stfd. From Man. "A", DSA, Toll or Magneto Swbd.	SD-56278-01	I187
3W Off. Sw. - K.L. - for RD Intertoll Trk. Sw.	SD-61053-01	B42
2W Off. Sw. - K.L. - From Local Tdm. Swbd. No. 1 For Toll Sub. Line Sw.	SD-62133-01	A51
3W Off. Sw. With Call Sequence Ckt.- A.L. - For Trks. & Toll Sub. Lines	SD-62364-01	C49
2W Off. Sw. With Call Sequence Ckt.- A.L. Stfd. - From Man. "A" or DSA Swbd.	SD-62370-01	B49
	SD-62510-01	F49
	SD-62753-01	F51

From Local Opr. Room Desks	SD-63109-01	D42
3W Off. Sw. - K.L. For Toll Sw.	SD-63859-01	A49
From Inf. Desks or Opr. Room Desk No. 19	SD-64221-01	C42
Interoffice From Distant Toll Swbd. Arr. to Repeat Ring. Sig.	SD-64440-01	G42
Interoffice from Distant Toll Swbd. Arr. to Rering	SD-64441-01	F42
2W from Man. Tdm. Off. 3W from SXS Tdm. Off. or SXS Sel.	SD-64533-01	I42
2W from SXS Conn. Mult. Off. P.B.X. Tr.	SD-64533-01	B61
2W from P.B.X. Conn. Mult. - Off. P.B.X. Tr.	SD-64533-01	B62
2W from SXS Conn. Mult. - Emg. Serv.	SD-64533-01	E62
Verification from SXS Sel. Mult. in Distant Building	SD-64553-01	I56
3 or 4W from SXS Conn. Mult. - Off. P.B.X. Tr.	SD-64568-01	A61
From Community Dial Off.	SD-64626-01	D44
From SXS Sel. Mult. - Arr. to Absorb 1 to 5 Digits	SD-64660-01	J42
Regular Traffic Time of Day Serv.	SD-64660-01	F61
Incpt. from SXS Off. With Mult. in No. 19 Opr. Room Desk	SD-64748-01	F59
From Man. or Dial Off. - Arr. for Trns. from Repair Service Desk No. 2	SD-64754-01	C44, H62
Official PBX from SXS Off. in Same Bldg.	SD-64767-01	A62
Verification from SXS Conn. Mult. in Same Bldg.	SD-64767-01	H56
Arr. for Use with Out. Call Ckts.	SD-90566-01	H42
Incpt. from SXS Off. in Same Bldg.	SD-95096-01	F57
<u>Interposition</u>		
Out. to or Inc. from Toll Swbd. No. 1 - For Terminations or Test Bd. Conn. Between Toll Positions	SD-55421-01	E45
From Tdm. Swbd. No. 3 In Same Bldg.	SD-56043-01	F45
Regular Interposition	SD-62771-01	A45, I57

TRUNK (Cont'd.)

Interposition (Cont'd.)

Night Inf. - (SXS "A")	SD-62771-01	G63
From Point to Point to	SD-64430-01	B45
C.L.R. Pos.		
Inc. from Toll Swbd.	SD-62818-01	D45
No. 2		
Outg. to SXS "A"	SD-90124-01	C45
Swbd.		

Intertoll Dialing

Out. from Sel. Mult.-	SD-55109-01	J121
CX or SX Sig.		
Out. from Sel. Mult.-	SD-55232-01	C121
to Precede a Thru		
or Aux. Intertoll		
Sel.		
Out. from Intertoll	SD-55243-01	G119
Dial Inc. or 2 Way		
Trk. or Sel. to Aux.		
Intertoll Sel.		
Out. from Sel. Mult.	SD-55275-01	J123
to Opr. Off. - CX		
or SX Sig.		
Out. from Sel. Mult.	SD-55301-01	H121
to Man. or Dial Off.		
Out. to Intertoll	SD-55990-01	A157
Sel., Dial Opera-		
tion		
2 Way, CX or SX Sig.	SD-56036-01	B118
Out. to Intertoll	SD-56108-01	B157
Sel. DCKP from		
Swbd. DP from Sdr.		
Aux. - Out. Dial - Inc.	SD-64469-01	E117
Auto. or Dial - For		
Use with CX or SX		
Sig. & Swbd. Out.		
Trks.		
Out. to Toll Off. -	SD-64472-01	C117
Man. or Dial Opr. -		
CX or SX Sig.		
Toll Sw. Trk. Out. to	SD-64473-01	D121
SXS Loop Dial Toll		
Trans. Sel.		
Inc. from Intertoll	SD-64476-01	F117
Trk. or Sel. Mult.		
Inc. from Man. or SXS	SD-64482-01	J117
Off. - Loop Sig.		
4W Toll Sw. Trk. to	SD-64485-01	E121
Toll Intermediate		
Sel.		
Aux. Intercepting	SD-64485-01	G121
Inc. from Man. or SXS	SD-64486-01	K117
Off. - Pulse Correct-		
ing		
Toll Sw. Trk. to SXS	SD-64487-01	F121
Rep. Dial Toll Train		
2 Way - Repeated Dial	SD-64531-01	H117
CX, SX or Single		
Frequency Sig.		
Out. to Toll Off. -	SD-64538-01	D117
DCKP-In, DP-Out,		
CX or SX Sig.		
Out. from Sel. Mult.	SD-64539-01	I121
to Inf. Desks or		
Opr. Room Desk		
No. 19		

Inc. to Intertoll Sel.	SD-64590-01	G117
or Operator - CX or		
SX Sig.		
Talk. Trk. - Test	SD-64604-01	G114
Ckts. for Sel. Fr.		
& Rel. Racks		
To Connect CX Sig.	SD-64824-01	K119
Ckt. to SXS Toll		
Preceding Sel.		

Intertoll

DCKP, for Handling	SD-55847-01	C192
"We Have" Calls		
MFKP or Stfd., CX	SD-55852-01	G182
or SX Supv.		
2 Way - Inc. Auto. -	SD-56062-01	D182
Out. MFKP - CX		
Supv.		
Out. MFKP -	SD-56109-01	E182
Inc. DP or Auto.		
CX Supv.		
2 Way - Inc. Auto.	SD-56132-01	B182
Out. MFKP -		
SX or CX Supv.		
Type B		
Out. - MFKP or Stfd.	SD-56133-01	H182
SX or CX Supv.		
Type B		
RD. - Regular - With	SD-62614-01	A11
or Without Trans-		
fer		
RD. - Aux. Intertoll	SD-62632-02	C12
& Sw. Trans. Pad		
RD. - Arr. for 20	SD-64428-01	F12,
Cycle Ringing		B60
RD. - Arr. for 135	SD-64823-01	G12
Cycle Ringing		

Operator's Training

D-C KP Toll Sw. or	SD-55071-01	F78
Intertoll Where		
Key Set Start Key		
is Used		
Intertoll Trk., Opr.	SD-55288-01	F77
Off. or Toll Sw. -		
Dial. - Arr. For		
Dial Tone		
Rd. Intertoll, for	SD-56069-01	H77
Outward, Inward,		
Thru or Combined		
Inward & Thru		
Operation or Point		
to Point TX		
Operation		
D-C KP Toll Sw. for	SD-55794-01	G78
Non-Start Key		
Operation		
Number Checking	SD-64445-01	E78
Recording, Rec. Compl.	SD-64515-01	G77
or Inc. Trk. - Arr.		
for Recall Sub.		
Inc. from SXS, Panel	SD-64553-01	C77
or Mar. Off 2W		
Man. Toll Sw., Man.	SD-64558-01	E77
Tdm., Man. Toll Tdm.,		
M-F KP Toll Tdm. or		
Intertoll or Stfd.		
Intertoll		

TRUNK (Cont'd.)

Operator's Training (Cont'd.)

Inc. from SXS, Panel, SD-64582-01 I77
Crossbar or Man.
Off. 3W

Outgoing

Incpt. Compl. to SXS SD-55074-01 G57
Off. - Repeated
Dialing
Tandem Stfd. - CX SD-55083-01 E39
or SX Supv.
To P.B.X. First Sels - SD-55291-01 C63
K.P. - Off. P.B.X.
Tr.
Verification to SXS SD-55291-01 H57
Test Distributor
DCKP
Incpt. Completing to SD-55341-01 G56
SXS Off. in Same
Bldg. - DCKP
To SXS Sels. - Dial. - SD-55346-01 C57
Spl. Service
To P.B.X. First Sels. - SD-55346-01 C63
Dial. - Off. P.B.X.
Tr.
Toll Tandem - 4W SD-56056-01 I39
Talk Rev. Bat.
Supv. - SX DC Ring.
on PH MFKP or
Auto. with Trans.
Sw Pad
Toll Tdm. Trk. 4W SD-56095-01 J39
Talk - Rev. Bat.
Supv. SX DC Ring
on Sig. PH
DCKP-IN, DP-OUT - SD-56105-01 G142
Rev. Bat. Supv. -
Simplex or No
Ringing Start Sig. -
With or Without Coin
Control over
Separate Single
Trk. Conductor -
With or Without
Access from Inter-
toll Dialing Trk.
Ckt. or SXS
Repeater
To Inf. Desk No. 17 SD-60499-01 D39
MC or Opr. Room
Desk No. 19 - Arr.
For Night Trns.
To DSA Swbd. or
Swbd. No. 3
Coin Control - to SD-62650-01 B39
SXS C.C. Sel. -
SXS & Toll Off.
Not in Same Bldg.
Loop or Comb. Loop SD-62759-01 G112
& Rep. Dial - For
50 or 51 Type Dial
Testers
Number Checking to SD-62890-01 H45
Panel "A" Swbd.
2W Stfd. to Toll SD-63116-01 G37
Tdm. Swbd. No. 3

To Man., Man. Tdm. SD-63121-01 D37
or Magneto Off. -
Rev. Bat. Supv.
To Man. or Panel SD-63261-01 C37
"B" Swbd. - A-B
Toll - 48V H.L.
Supv.
To SXS Off. - Arr. SD-63287-01 B37
Mult. to SXS
Stfd.
To Police, Fire and SD-63288-01 D61
Ambulance Subs.
Lines for Emg.
Use in Same Bldg.
with SXS Off.
To Local Tandem SD-63381-01 E99
Off. - CX Sig.
Verification to SXS SD-63813-01 H57
Test Distributor
Dial
To SXS "A" Swbd., SD-63820-01 F37
Inf. Desks or
Opr. Room Desk
No. 19
To Panel Sender SD-64106-01 E37
Tdm. Off.
Stfd. & MF Pulsing- SD-64116-01 H37
High Low Supv. -
Rev. Bat. or 20
Cycle Rering
Signal
Number Checking - SD-64412-01 I45
MF or Stfd. to
Cbr. Off. No. 1
Interoffice to SD-64440-01 J38
Distant Toll
Swbd. or DSA
Swbd. Arr. to
Repeat Ringing
Sig.
Interoffice To SD-64441-01 I37
Distant Toll
Swbd. Arr. for
Rering
Incpt. Completing SD-64835-01 G56
to SXS Off. in
Same Bldg. -
Repeated Dialing

Recording

2W Inc. from Semi- SD-55793-01 H22
Mech. DSA Swbd.
2W Inc. from Panel ES-61290-01 I22
Arr. for CLR Non-
Completing Serv.
3W Inc. from Panel SD-62278-01 B22
"A" or Man. Off.
3W Inc. from Swbd. SD-62280-01 F22
No. 1C
Inc. from Man. Off.
or SXS or Panel
"A" Swbd. - With
Night Transfer
to Toll Swbd.
No. 2
3W SD-62794-01 C22
2W SD-62799-01 D22
2W Inc. from Panel SD-64221-01 A22
"A" or Man. Off.

TRUNK (Cont'd.)

Recording (Cont'd.)

2W Inc. from Man. SD-64553-01 E22
Tdm. Off. - 3W from
SXS Tdm. Off. or
SXS Sel.

Recording Completing

3W Inc. from SXS SD-55344-01 C19
Local Sels. Conn.
to Opr. Off. Trks.
Arr. for 1 Digit
Tdm. Opr.
CX or SX Sig. - With SD-55381-01 A19
or Without V or 22
Type Tel. Rep. - Arr.
to Recall Sub.
3W Inc. from Panel SD-55430-01 F187
Off. 4W Inc. from
Cbr. Off. No. 1 -
Arr. to Recall
Sub. and for No.
Checking in Cbr.
Off. No. 1 - Non-
coin
Non-Coin Arr. to Re- SD-55872-01 C187
call Sub. & for
Use as Emg. Line
from Cbr. No. 5
Off.
3W Inc. from Panel SD-55946-01 H187
Off. 4W Inc. from
Cbr. Off. No. 1 -
Arr. for No. Check-
ing in Cbr. Off.
No. 1 - Coin
3W Inc. from SXS SD-56007-01 F17,
Off. Arr. to Recall C17,
Sub. & for Class of A57,
Service Tone - C61
Non-Coin
3W Inc. from SXS Off. SD-56008-01 H17,
Arr. for Coin Cont. A57
& for Class of Serv.
Tone
Operator's - 2 Wire SD-56090-01 J17
Coin - DSA to Toll
or Toll to Mobile
Serv. Pos.
Subscriber, High- SD-56127-01 B187
Low Supv. - Coin
3W Inc. from Panel SD-62086-01 C17
Off. - Coin Control
2W Inc. from Panel SD-62187-01 A17,
or SXS Off. - Non- A56
Coin
3W Inc. from SXS Off. SD-62320-01 G17,
Arr. to Recall Sub. A57
2W Inc. from Coin SD-63013-01 I17
or Non-coin Lines
in Crossbar Off. or
Non-coin Lines in
Panel Off. - Arr. to
Recall Sub. & for
Number Checking
3W Opr. from SXS Off. SD-63864-01 I19
2W Inc. from SXS SD-64571-01 B17,
Panel, Cbr. No. 1 A56

2W Inc. from SXS or SD-64626-01 D19
Community Dial
Off.

Toll Switching

Std. or MFKP - SD-55224-01 H137
Rev. Bat. or Wet-
Dry Supv. - 20
Cycle, SX or No
Ring. Start Sig. -
With or Without
Coin Control Over
Separate Single
Trk. Conductor
To Man. Off. - SD-55291-01 J27
Temp. Man. Opr.
DCKP-In, RP or SD-55291-01 C58,
DP-Out Without B137
Start Pulsing
Sig. - Wet-Dry
or Rev. Bat.
Supv. With or
Without Repeated
SX Supv. - 20
cyc., SX or No
Ringing Start
Sig. With or
Without Coin
Control Over
Separate Single
Trk. Conductor -
With or Without
Access From
Intertoll Dialing
Trk. Ckt.
To Man. Off. - SD-55341-01 J27
Temp. Man. Opr.
DCKP-In, DP-Out SD-55341-01 B58,
Bridged Supv. B137
With or Without -
Repeated SX
Supv., 20 Cycle
or No Ringing
Start Sig. Type
"A" TB Supply
With or Without
Coin Control
To Man. Off. - SD-55346-01 J27
Temp. Man. Opr.
Repeated Dialing - SD-55346-01 B142
Wet-Dry or Rev.
Bat. Supv. With
or Without
Repeated Simplex
Supv. - 20 Cycle,
Simplex or No
Ringing Start
Sig. - With or
Without Coin Cont.
Over Separate
Single Trk. Con-
ductor
To Man. Off. - SD-55352-01 J27
Temp. Man. Opr.
4W to SXS Toll SD-55352-01 C29
Intermediate
Sel. - Dial-
Controlled Ring. -
Coin Control

TRUNK (Cont'd.)

Toll Switching (Cont'd.)

Repeated Dialing - CX or SX Supv. - Pulse or No Ringing Start Sig. - With or Without Coin Cont. Over Separate Single Trk. Conduc- tor - With or With- out Access from Intertoll Dialing Trk. Ckt.	SD-55380-01	E142
DCKP-In, DP-Out - CX or SX Supv. - Pulse or No Ringing Start Sig. - With or With- out Coin Cont. Over Separate Single Trk. Conductor - With or Without Access from Inter- toll Dialing Trk. Ckt. and/or Swbd. No. 3B in Same Bldg.	SD-55386-01	H142
DCKP, Wet-Dry Supv., Controlled Ring., to Repeated Dial Toll Train or Combined Loop & Repeated Dial Toll Train	SD-55901-01	F137
To SXS Toll Sel. Rep. Dial	SD-62022-01	F27, B57
To Man., Panel or SXS Off. - Arr. for Delayed Cut Thru After Ring.	SD-62610-02	B27, B56
To SXS Off. - Loop Dial	SD-62611-01	A27, B57
To SXS "B" Swbd.	SD-62817-01	E27
To SXS Toll Trans. Sel. - Loop Dial. - With 22 Type Rep.	SD-63027-01	B29
To Man. Off. or Panel or Crossbar "B" Swbd. - With 22 Type Rep.	SD-63322-01	G27
Arr. for Ph. Grp CX Sig.	SD-63782-01	K27
To Man., Panel or SXS Off. - For Magneto Rural Lines	SD-63860-01	I27
To Man., Panel or SXS Off. - For Magneto Rural Lines & Arr. for Delayed Cut-thru After Ring	SD-63860-02	I27
4W to Man. Off. or SXS Toll Inf. Set - Loop Dial.	SD-64120-01	A29
To SXS Toll Inter- mediate Sel. - 4W - Dial. - Auto. Ring. - Thru Supv.	SD-64835-01	D29

*SD 56482 -
IN-BAND*

*SA 56245 - 482
SC 434 483
SE 481*

Toll Switching Tdm.

KLSF - Inc. DP or Stfd. Out.	SD-56078-01	B168
ALSF Toll Sw. Tdm. Pos. Inc.	SD-56179-01	B163
ALSF Toll Sw. Tdm. Pos. Aux. Inc. - 4 Wire - Rev. Bat. Supv. - from Toll Sw. Off. No. 4 or 4A	SD-56180-01	B162

Transfer - Intertoll

Orig. Off. End, High Low Supv. Rev. Bat. Ringing, Arr. for Coin Control	SD-55897-01	A193
Ter. Off. End, High Low Supv., Rev. Bat. Ringing, Arr. for Coin Control	SD-55900-01	A192
Between Swbds. in Same Bldg.	SD-56003-01	B192

2 Way

Rec. Compl. Sw. - Loop Sig. Wet End - or CX Sig.	SD-55158-01	J32
Auto. - Wet Dry Supv.	SD-55184-01	E34
Opr. Off., Repeated Dialing, High-Low Rev. Bat., CX, SX or SF Supv., With or Without Access From Intertoll Dialing, Chr. No. 5 or SXS Tdm. Off. With or Without V1 Tel. Repeater Termination	SD-55255-01	A32
Opr. Off. to Community Dial Office, DCKP, Loop, CX or SX Supv., With or Without Tel. Rep.	SD-55256-01	C32
Auto. - To or Between Bays, Frames or Racks	SD-55348-01	J112
CX Sig. - Auto. - Arr. to Repeat Switchboard Supv.	SD-55358-01	E32
Opr. Off. to Community Dial Off., MFKP, High Low Rev. Bat. Supv. Arr. for Out. Serv. from Tdm. or Intertoll Selectors	SD-55116-01	D32
To Repair Service Desk No. 2 or L.T.D. No. 12B, 12C, or 14	SD-60759-01	B34

TRUNK (Cont'd.)

2 Way (Cont'd.)

To L.T.D. No. 13	SD-62469-01	C34
Interoffice to	SD-64440-01	D34
Distant Toll or		
DSA Bd. - Auto. -		
Arr. to Repeat		
Ring Sig.		
Interoffice to	SD-64441-01	A34
Distant Toll Off. -		
Auto. - Arr. for		
Rering		
To Local Off. - Toll	SD-64626-01	F32
Conn. for Establish-		
ing Conn. with Com-		
munity Dial Sub.		

Miscellaneous

Tel. Rep. Toll	SD-64625-01	A37
Conference		
Test Trk., from	SD-90070-01	F114
L.T.D. No. 14 or		
L.T. Cab. No. 3 -		
In Out Type - For		
Use at M.D.F.,		
Prot. Frame or		
Jack Panel		
Test Trk. From	SD-90071-01	F113
L.T.D. No. 14 or		
L.T. Cab. No. 3 -		
Bridging - For		
Use at M.D.F.		
& Prot. Frame		
Talking Trk. at M.D.F.	SD-96074-01	F112
or Prot. Frame to		
L.T.D.		

Trunk Mult.

R.D. Intertoll from	SD-62780-01	B12
Swbd. No. 1C		
R.D. Intertoll from	SD-64562-01	A12
Swbd. No. 1, 1D,		
10 or 11 or DSA		
Swbd.		

TANDEM SWITCHBOARD NO. 3

BUSY BACK	SD-62315-01	B84
Mod. for C.B. Supv.		
Trks.		
CALL SEQUENCE	SD-62674-01	A81
CONTROL		
Ringling - For CX	SD-55027-01	G94
Sig. Intertoll		
Trks.		
Operator	SD-62226-01	A83
Indicator - For Idle	SD-62676-01	D83
Ind. Lamp		
Control Ckt.	SD-63165-01	F83

CORD

Trouble Operator's	SD-62319-01	A86
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GROUPING

Position	SD-55687-01	D85
Trouble Operators	SD-62321-01	A87
For Grouping Tbl.	SD-62322-01	A88
Pos. Cords &		
Call Ckt. to		
Adj. Pos.		

INDICATOR

Position	SD-63165-01	F83
Position	SD-64117-01	E83
Position	SD-90014-01	B83

INTERRUPTER

Relay	SD-62461-01	C95
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KEY

Make Busy	SD-63831-01	E93
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OVERFLOW

Arr. To Extinguish	SD-55754-01	A92
Idle Ind. Lamps		
Assoc. with		
Overflow Jacks		
Common	SD-62315-01	B84
Mod. for C.B. Supv.	SD-62315-01	B84
Trks.		

PHANTOM GROUP CX SET

Arr. for 22 Type	SD-62701-01	J94
Tel. Rep.		
Stfd. Toll Trunking	SD-90598-01	I79
48V Sig.		

REGISTER

Group Busy	SD-62612-01	A66
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REORDER

For Trks. from No. 3	SD-62311-01	D82
Toll & Outlying		
Toll & Local Off.		
Mod. for C.B. Supv.	SD-62311-02	E82
Trks.		
For Trks. from No. 3	SD-62687-01	B81
Toll & Local Off.		
& Trks. for Use		
with Toll Sub.		
Lines		
Mod. for C.B. Supv.	SD-62687-02	E82
Trks.		

SPLITTING

SD-62257-01	A82
SD-63165-01	F83

TELEPHONE

Operator's	SD-62226-01	A83
Serv. Assist.	SD-62237-01	B82
Tbl. Operator's	SD-62321-01	A87

TEST

Plug & Position	SD-64735-01	I111
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TONE			Inc. Patching from	SD-62608-01	B86
			Utility Pos.		
Ringing	SD-62312-01	D81	Inc. Toll Tdm. or	SD-62674-01	A81
TRANSFER			Utility		
Transfer Control of	SD-64561-01	C84	2W R.D. Intertoll	SD-62705-01	I93
Toll Tdm. Pos. to			OG. Auto to Key	SD-63712-01	G91
No. 3 Toll Pos.			Cab. No. 20		
TRUNK			Aux. from Man.	SD-62512-01	E91
			or DSA		
Inc. Intertoll from	SD-55227-01	F94	Aux. - Stfd. - For	SD-63087-01	H93
Toll Office - CX			Use With Ph. Grp.		
Sig.			CX Sets		
4W Rev. Bat. Supv.	SD-56060-01	G81	Aux. From No. 3 Toll,	SD-63164-01	D94
& SX DC Ring. on			Man. "A" or DSA Swbd.		
Sig. Ph.					