

SD-65775-01

BELL TELEPHONE LABORATORIES, INCORPORATED

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PBX Systems

NO. 701B
KEY SHEET

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AT&TCO
STANDARD

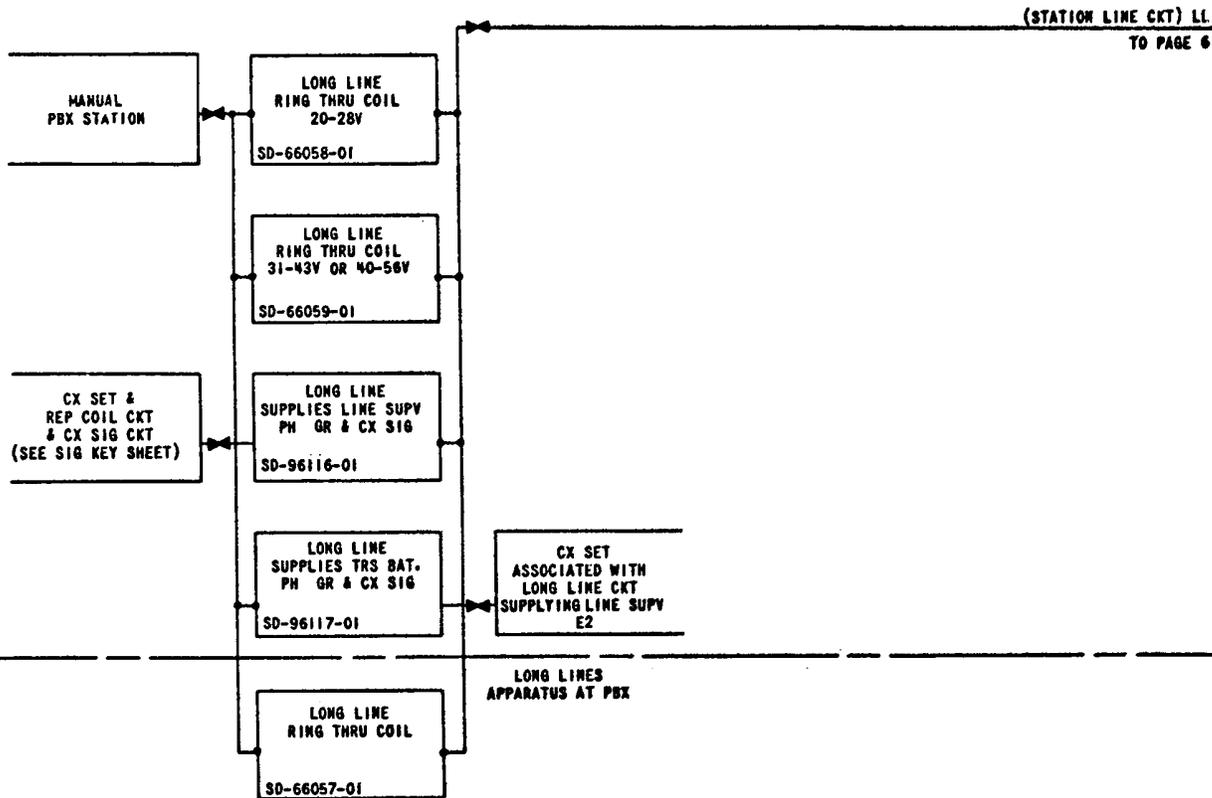
FOR CURRENT DRAIN DATA
SEE SD-65775-02

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

SD-65775-01

LONG LINES
APPARATUS AT CENTRAL OFFICE

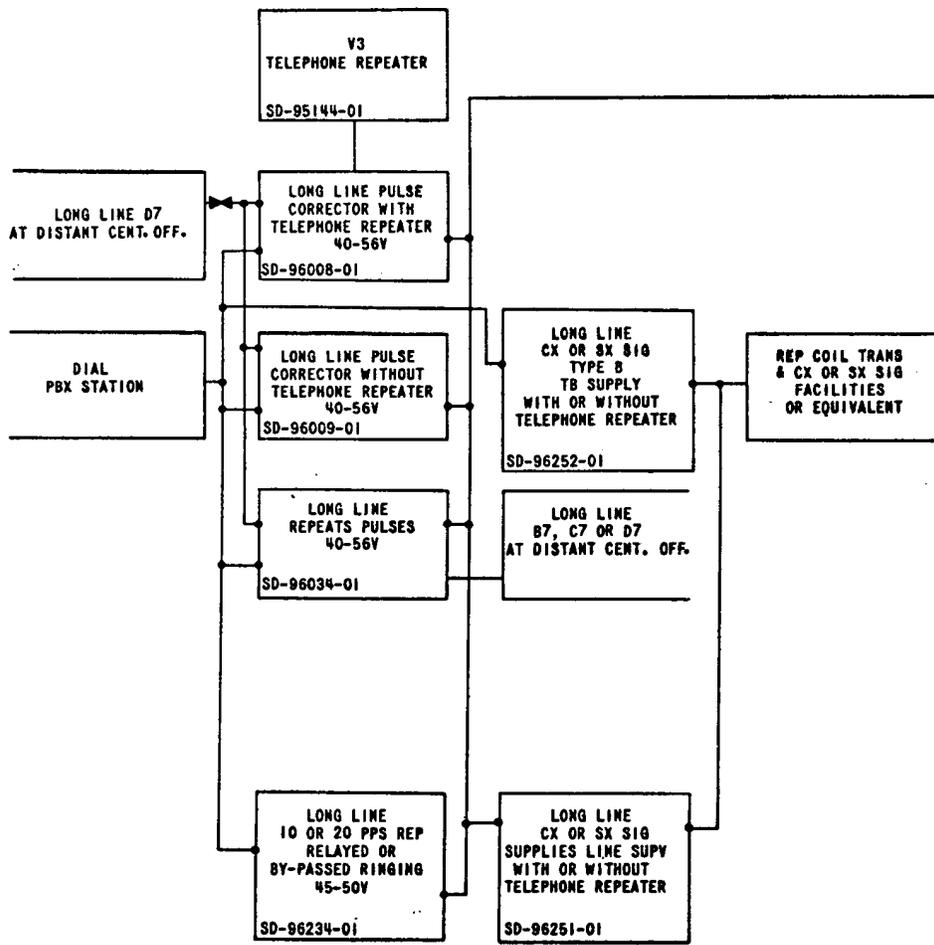
A
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K



LONG LINES FOR USE WITH MANUAL STATION

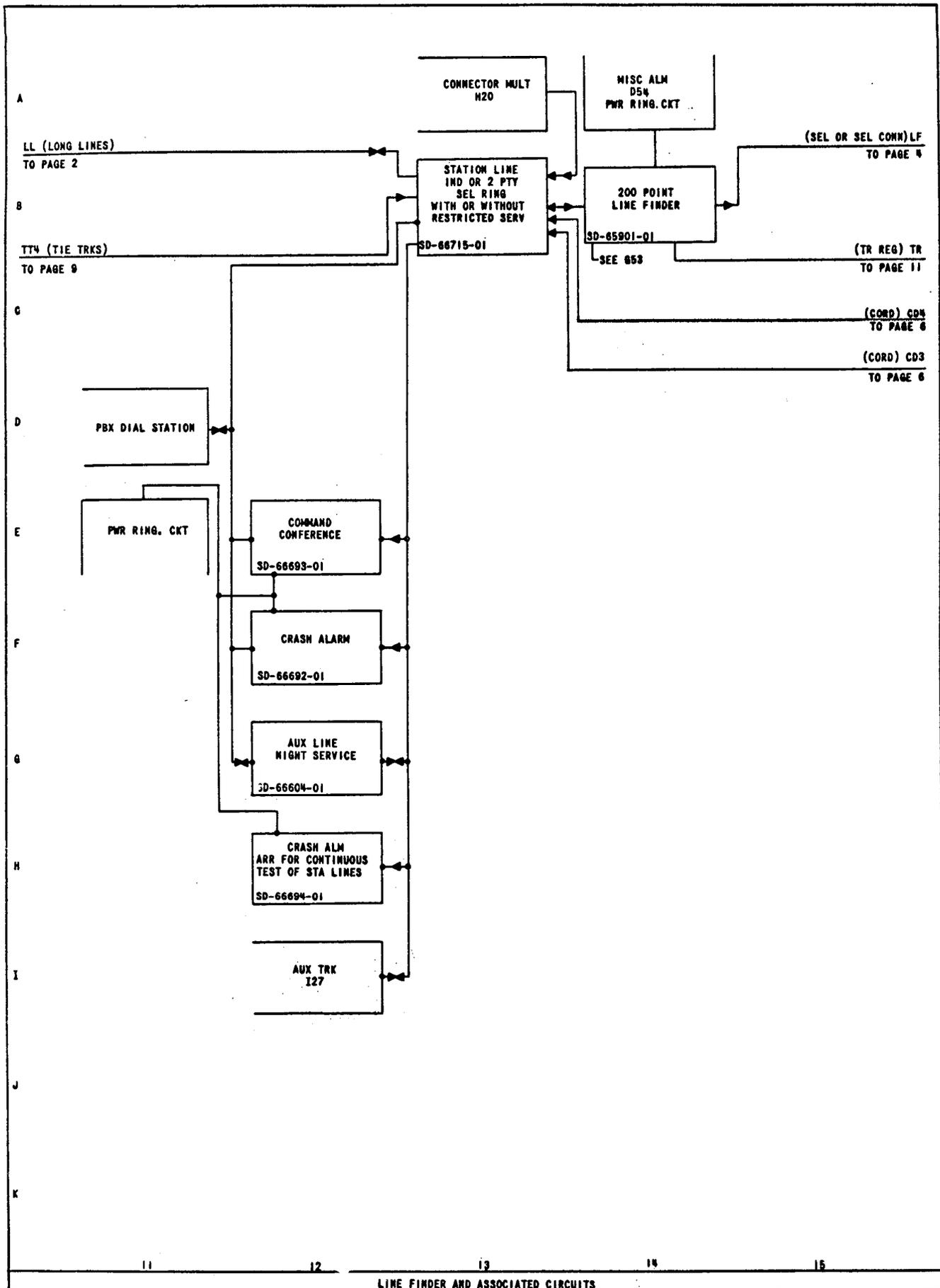
LONG LINES
APPARATUS AT CENTRAL OFFICE

(STATION LINE CKT) LL
TO PAGE 3



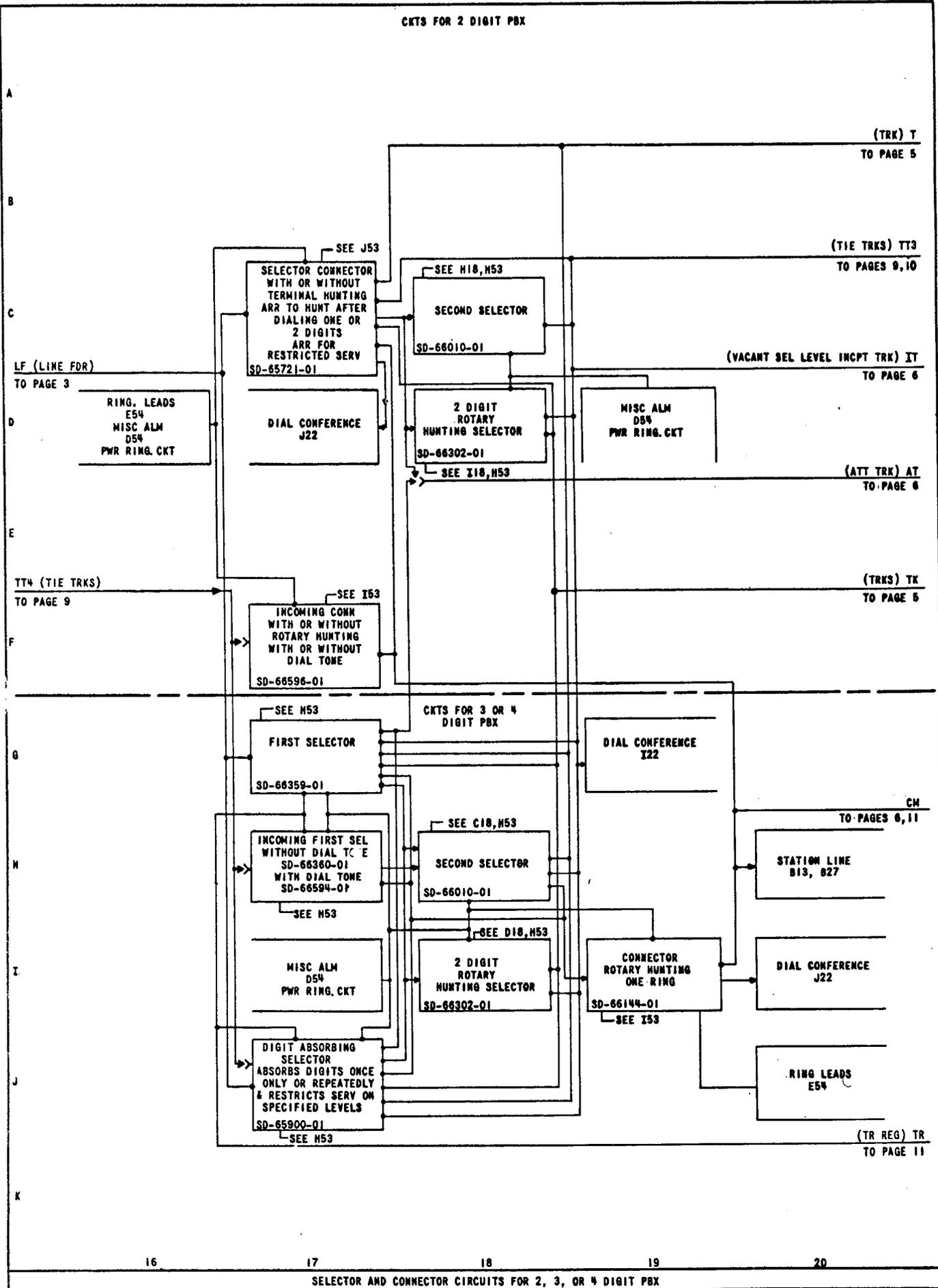
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6 7 8 9 10

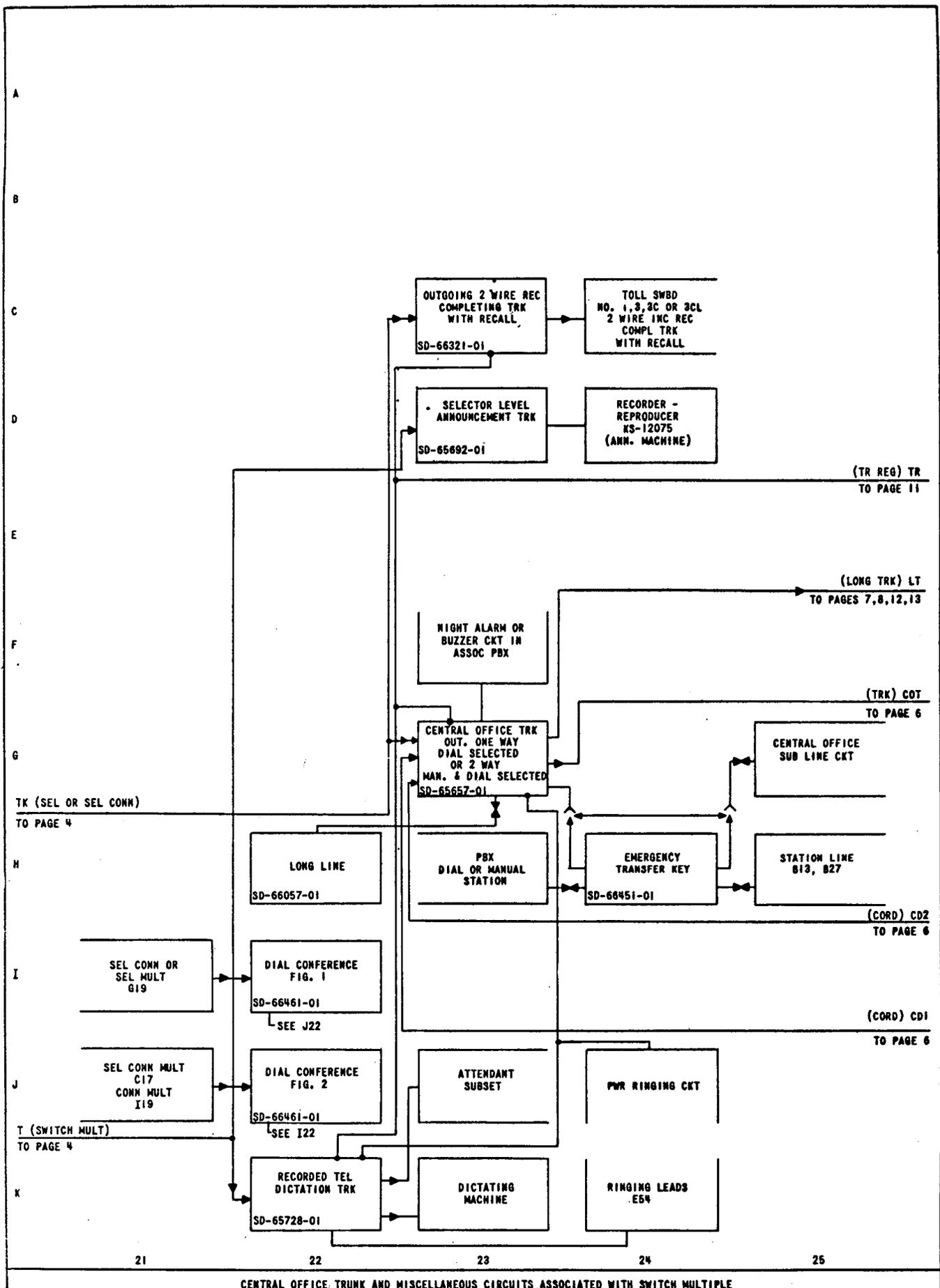


LINE FINDER AND ASSOCIATED CIRCUITS

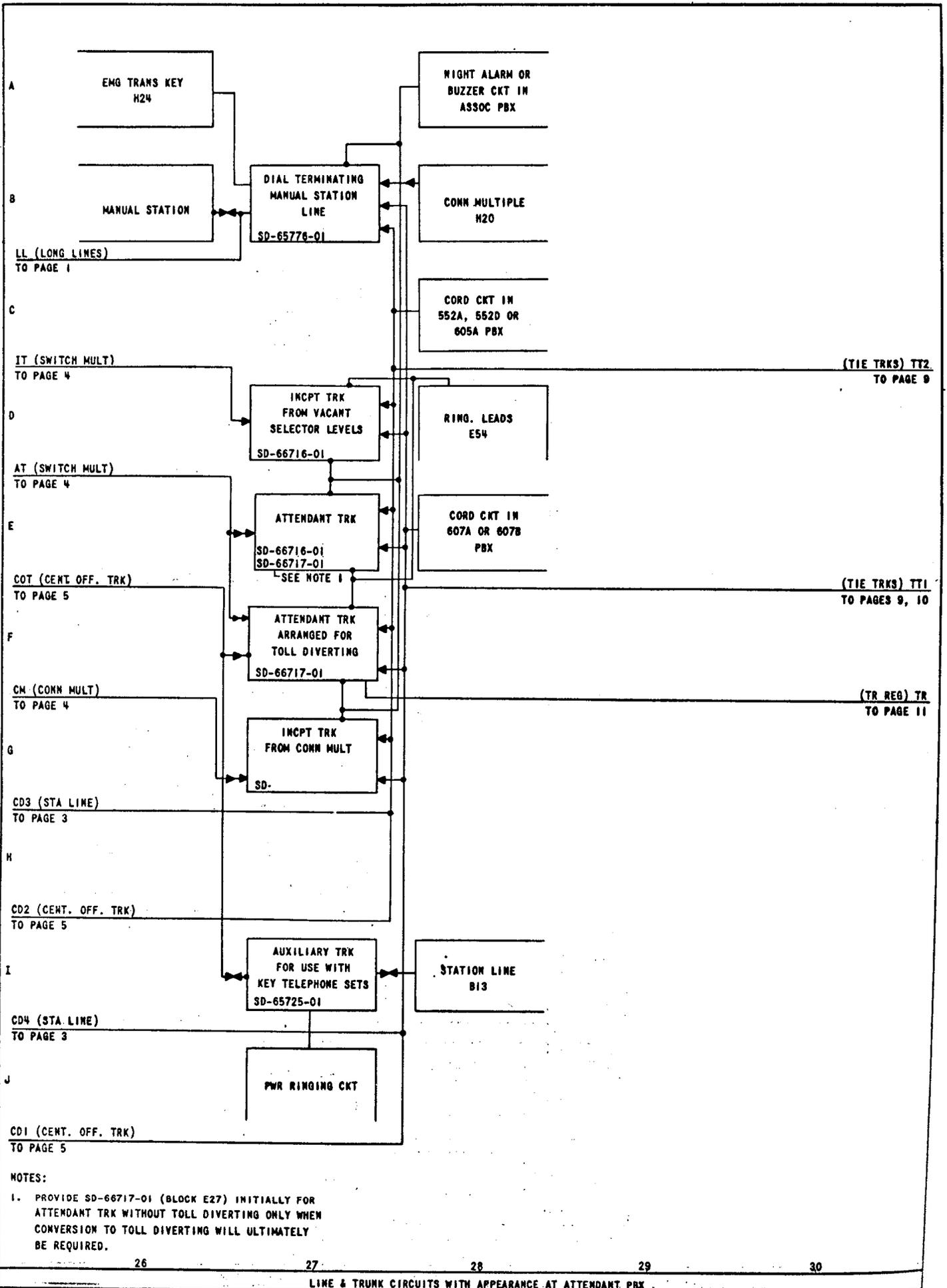
CKTS FOR 2 DIGIT PBX



SELECTOR AND CONNECTOR CIRCUITS FOR 2, 3, OR 4 DIGIT PBX

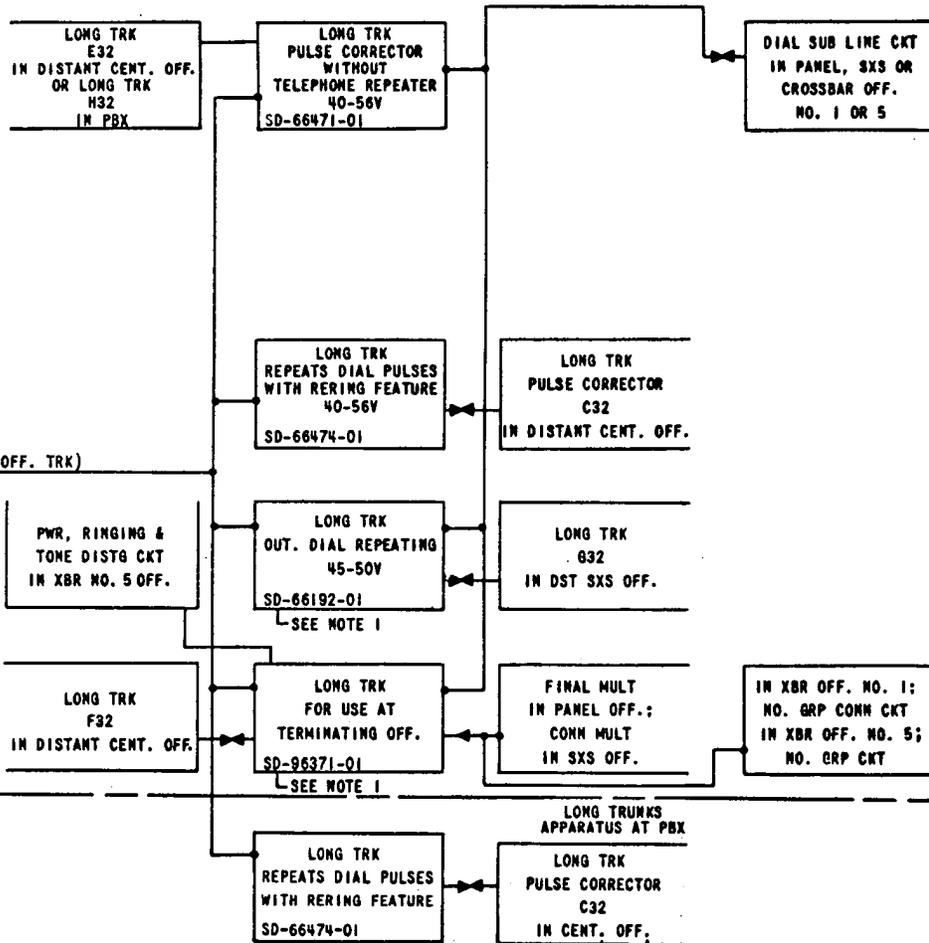


CENTRAL OFFICE TRUNK AND MISCELLANEOUS CIRCUITS ASSOCIATED WITH SWITCH MULTIPLE



LONG TRUNKS
APPARATUS AT CENTRAL OFFICE

A
B
C
D
E
F
G
H
I
J
K



NOTES:

- PROVIDE SD-96371-01 (BLOCK G32) FOR USE AT TERMINATING OFFICE, OTHERWISE PROVIDE SD-66192-01 (BLOCK F32).

31

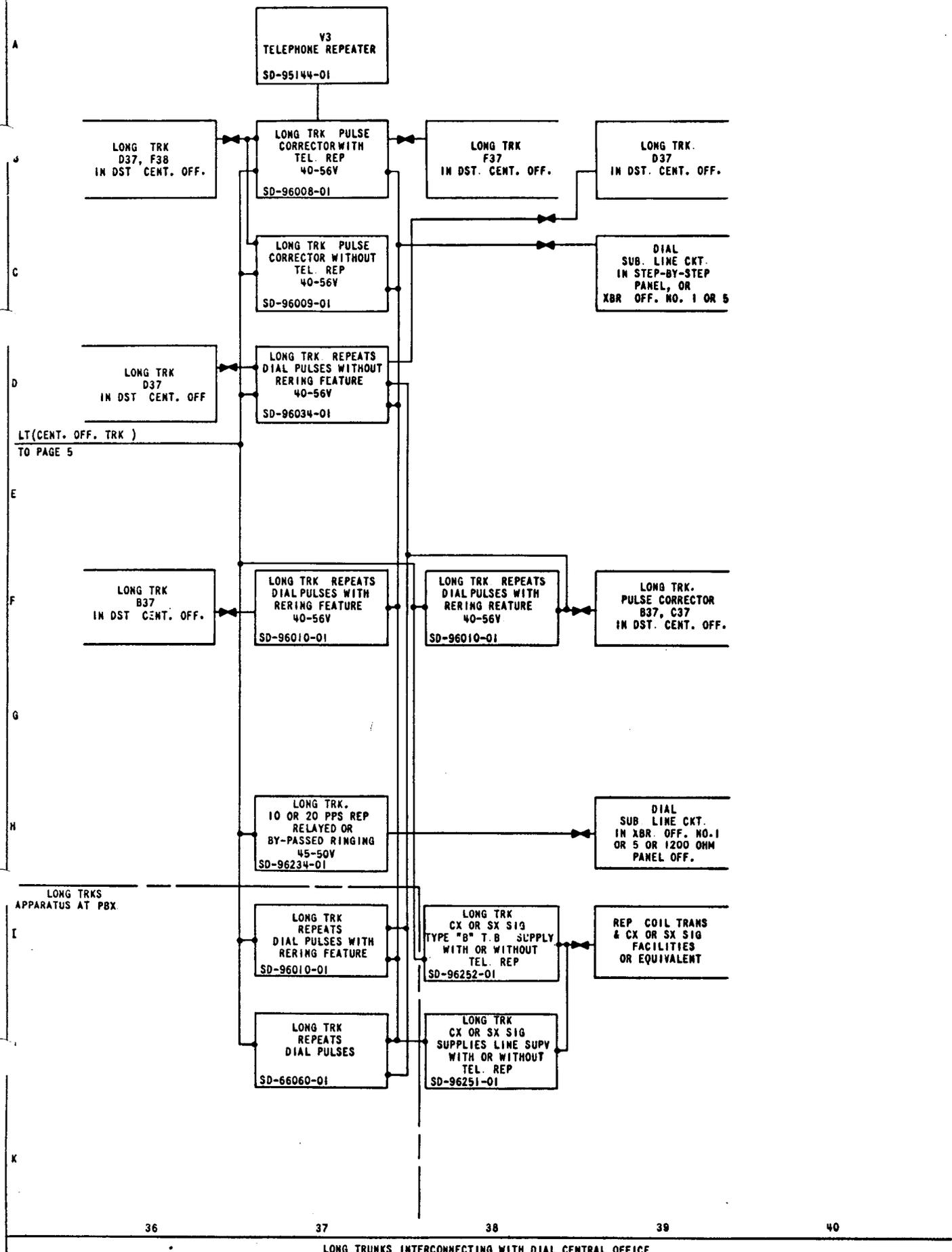
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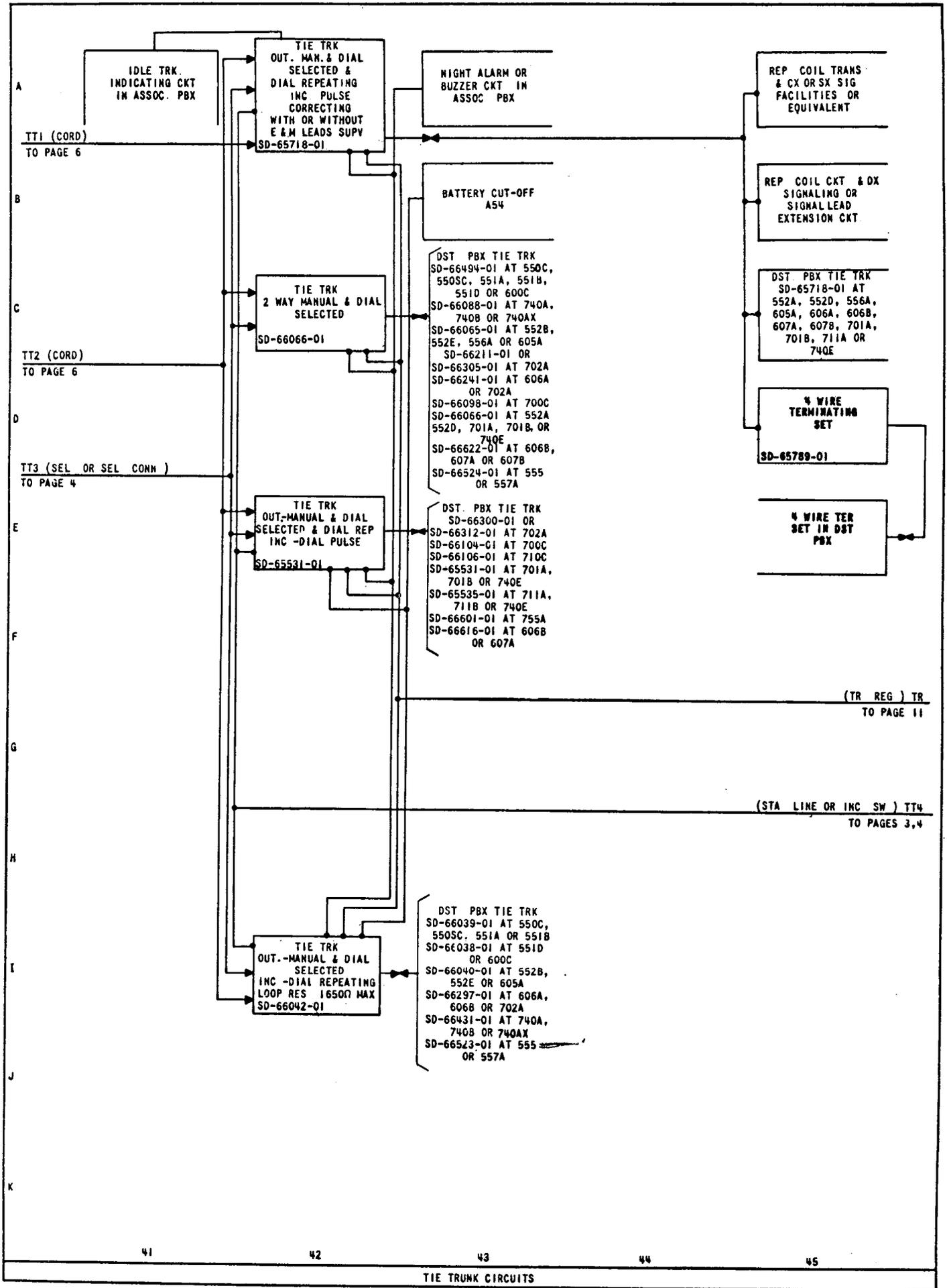
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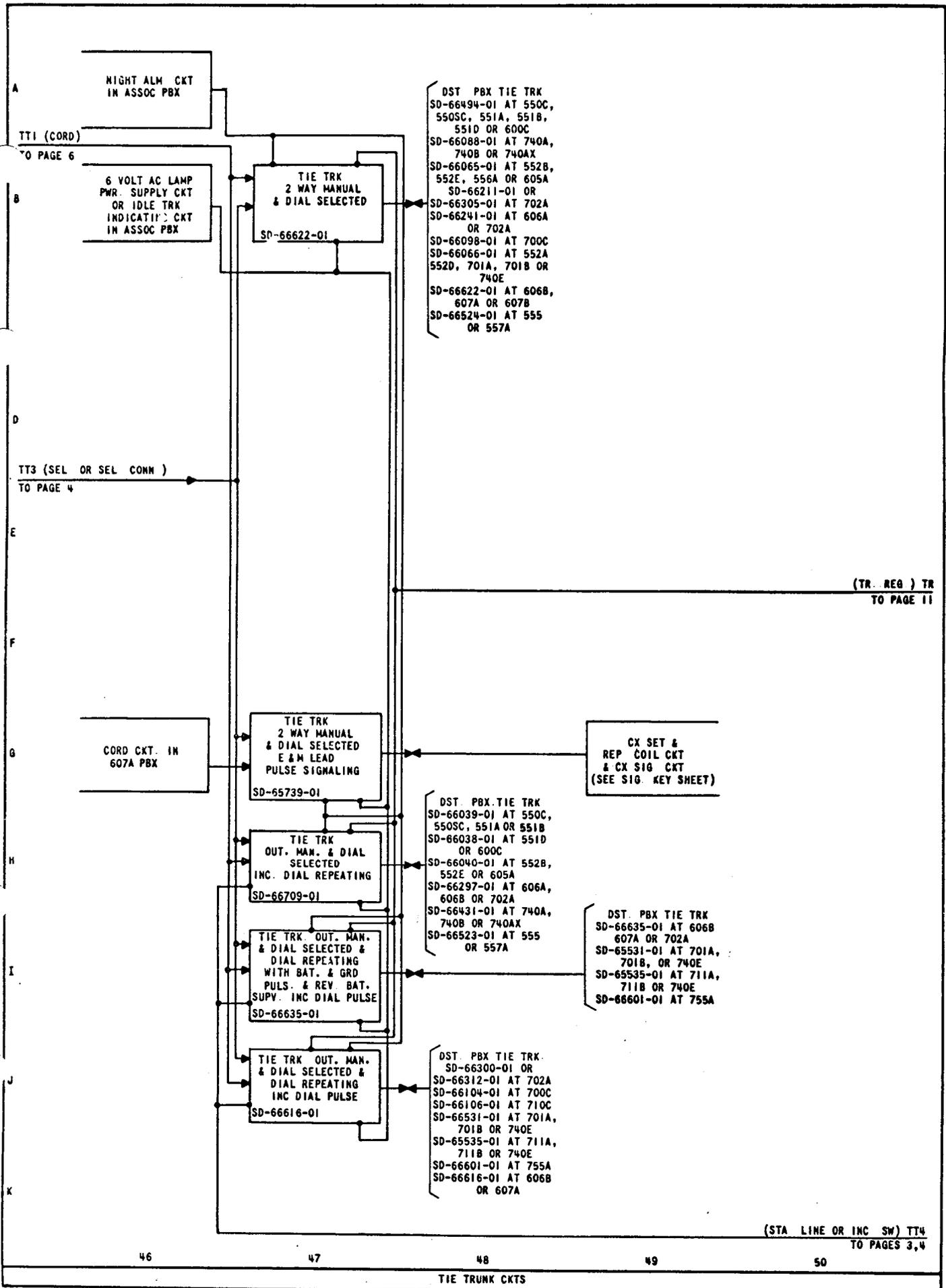
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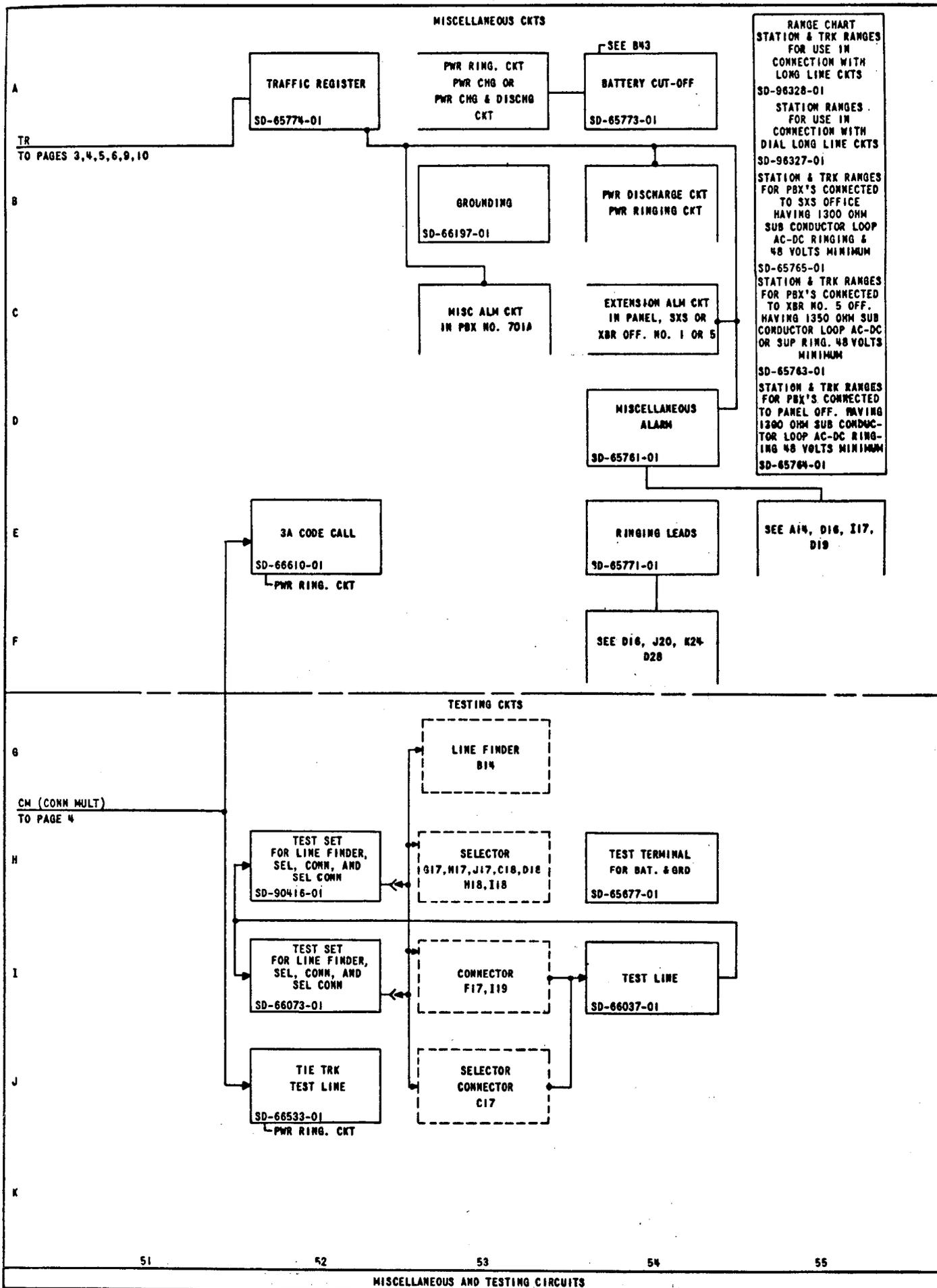
LONG TRUNKS
APPARATUS AT CENTRAL OFFICE



LONG TRUNKS INTERCONNECTING WITH DIAL CENTRAL OFFICE



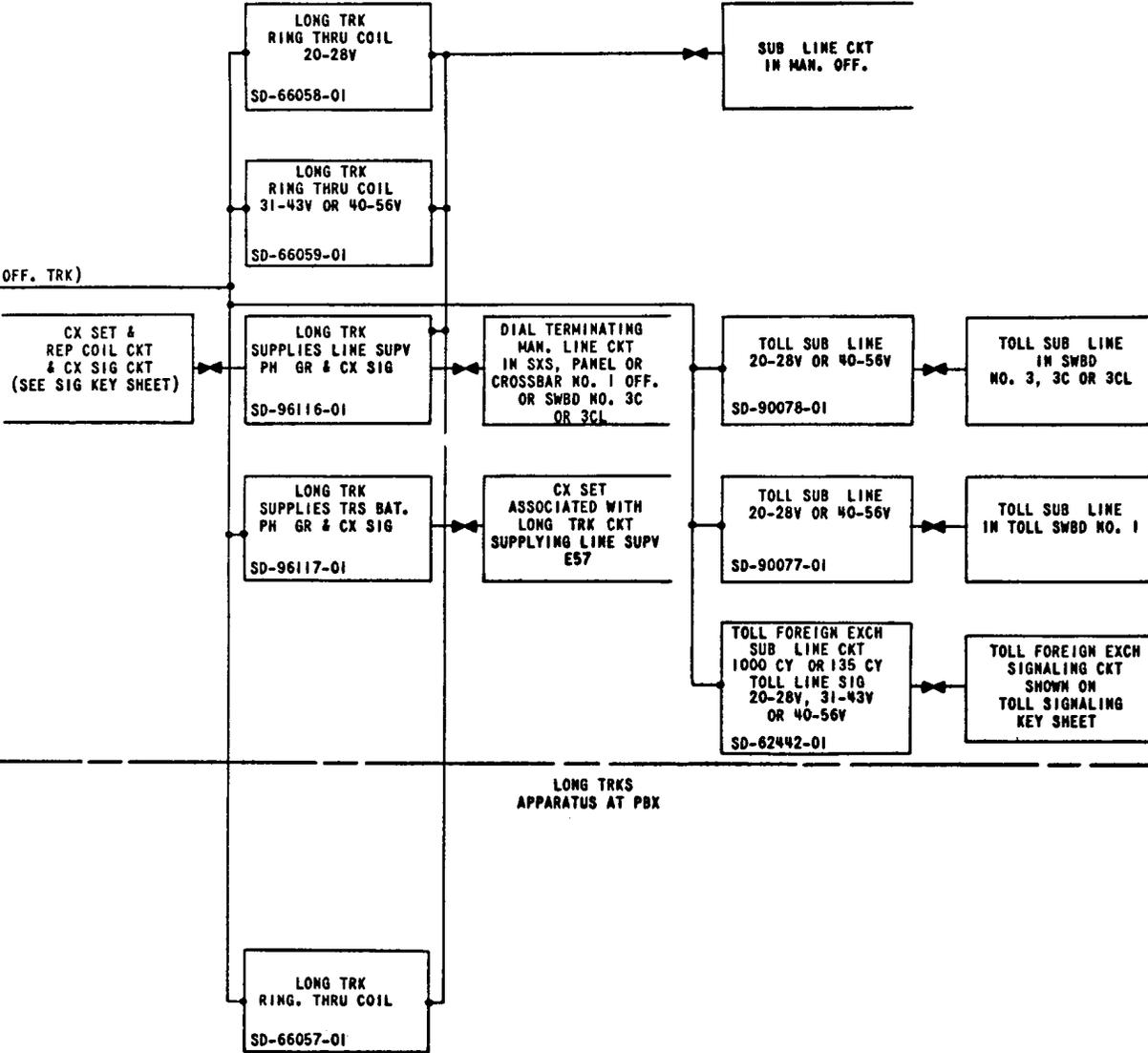




LONG TRUNKS
APPARATUS AT CENTRAL OFFICE

A
B
C
D
E
F
G
H
I
J
K

LT (CENT. OFF. TRK)
TO PAGE 5



LONG TRUNKS
APPARATUS AT CENTRAL OFFICE

A

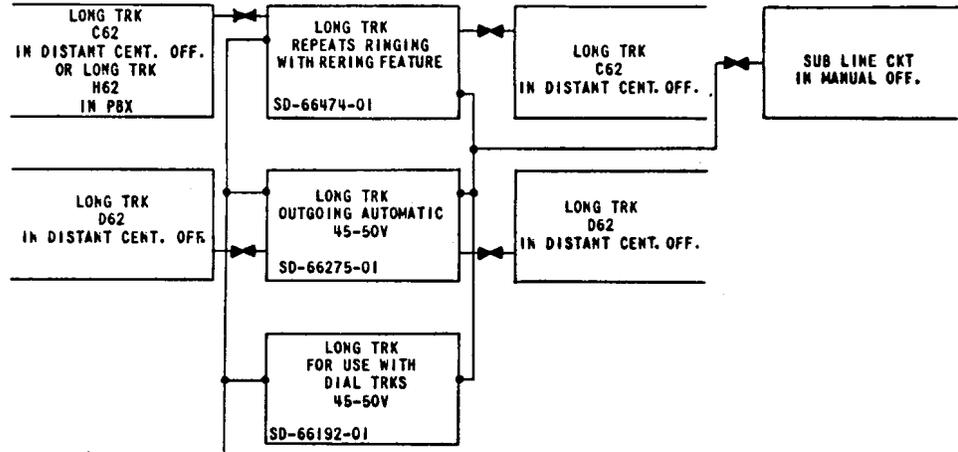
B

C

D

E

F



LT (CENT. OFF. TRK)
TO PAGE 5

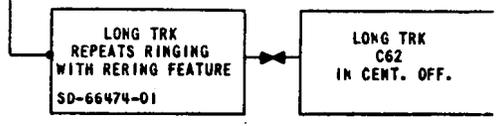
LONG TRUNKS
APPARATUS AT PBX

G

H

I

J



61

62

63

64

65

LONG TRUNKS INTERCONNECTING WITH MANUAL CENTRAL OFFICE

701B PBX
TIE TRK
OUT. MANUAL &
DIAL SELECTED &
DIAL REPEATING
INC PULSE
CORRECTING
WITH OR WITHOUT
E & M LEADS SUPY

SD-65718-01

5000Ω
MIN INS RES 30,000Ω

DISTANT PBX TIE TRK
SD-657'8-01 AT
552A, 552D, 556A,
605A, 606A, 606B,
607A, 607B, 701A, 701B
711A, 711B OR 740E

NOTES:

- ALL TIE TRK RANGES SHOWN ON THE RANGE CHART INCLUDE THE RESISTANCE OF THE OUTSIDE CABLING, THE WIRING AT THE PBX AND THE HEAT COILS. THE RESISTANCE OF THE PBX APPARATUS IS NOT INCLUDED. VALUES ARE SHOWN IN TERMS OF CONDUCTOR LOOP BETWEEN PBX'S. VALUES INCLUDE LOOP RESISTANCE OF BATTERY AND GROUND LEADS WHEN FURNISHED FROM CENTRAL OFFICE.

LOOP DESIG	MAX LOOP RES (OHMS)	MIN INS RES (OHMS)	BAT. SUPPLY REL (L) AT DST PBX	HIGH-LOW REL (S) AT LOCAL AND DST PBX	BAT. SUPPLY AT DST PBX
A	1420	20,000	G93	85-12,000	32-46V
	1720	30,000	G93	85-12,000	32-46V
	2270	20,000	G93	85-12,000	44-50V OR 44-52V
	2370	30,000	G93	85-12,000	44-50V OR 44-52V
	3220	30,000	G93	85-12,000 IN SERIES WITH 12,000Ω RES	32-46V
	4320	30,000	G93	85-12,000 IN SERIES WITH 12,000Ω RES	44-50V OR 44-52V

LOOP DESIG	MAX LOOP RES (OHMS)	MIN INS RES (OHMS)	BAT. SUPPLY REL (G) AT DST PBX	HIGH-LOW REL (S) AT LOCAL PBX	HIGH-LOW REL (IC) AT DST PBX	BAT. SUPPLY AT DST PBX
B	1940	20,000	221A	85-12,000	85-12,000	44-52V

LOOP DESIG	MIN LOOP RES (OHMS)	MAX LOOP RES (OHMS)	MIN INS RES (OHMS)	BAT. SUPPLY REL (L) AT DST PBX	HIGH-LOW REL (S) AT LOCAL AND DST PBX	BAT SUPPLY AT DST PBX
C		1290	20,000	B1067	85-12,000	14-26V
		1390	20,000	B1067	85-12,000	15-20V
		2070	20,000	B1067	85-12,000	20-28V
	1270	4320	30,000	B1067	85-12,000 IN SERIES WITH 12,000Ω RES	45-50V

LOOP DESIG	MAX LOOP RES (OHMS)	MIN INS RES (OHMS)	BAT. SUPPLY REL (L) AT DST PBX	HIGH-LOW REL (S) AT LOCAL AND DST PBX	BAT. SUPPLY AT DST PBX
D	920	30,000	B1165	85-12,000	16-52V
	1780	30,000	B1165	85-12,000	16-25V
	1120	30,000	B1165	85-12,000	18-52V
	2060	30,000	B1165	85-12,000	18-25V
	1290	30,000	B1165	85-12,000	20-52V
	2220	30,000	B1165	85-12,000	32-52V
	3320	30,000	B1165	85-12,000 IN SERIES WITH 12,000Ω RES	44-52V
	3420	30,000	B1165	85-12,000 IN SERIES WITH 12,000Ω RES	45-52V

701B PBX
TIE TRK
2 WAY MANUAL
AND DIAL SELECTED

SD-66066-01

A
SEE NOTE 1

DISTANT PBX TIE TRK
SD-66065-01 AT 552B
552E, 556A OR 605A
SD-66066-01 AT 552A,
552D, 701A, 701B OR 740E
SD-66098-01 AT 700C
SD-66211-01 OR
SD-66305-01 AT 702A
SD-66241-01 AT 606A
OR 702A
SD-66622-01 AT 606B,
607A OR 607B

B
SEE NOTE 1

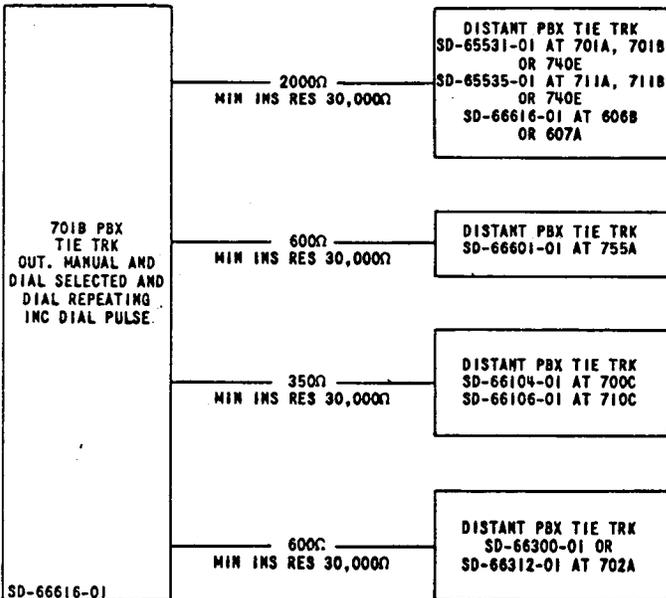
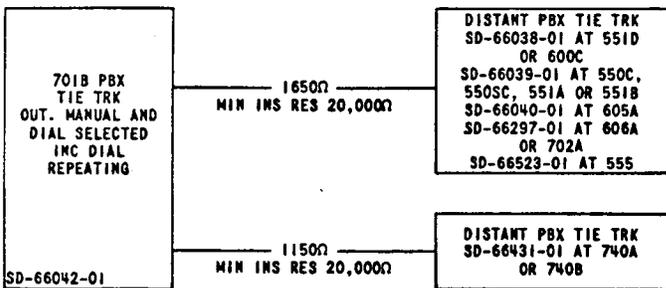
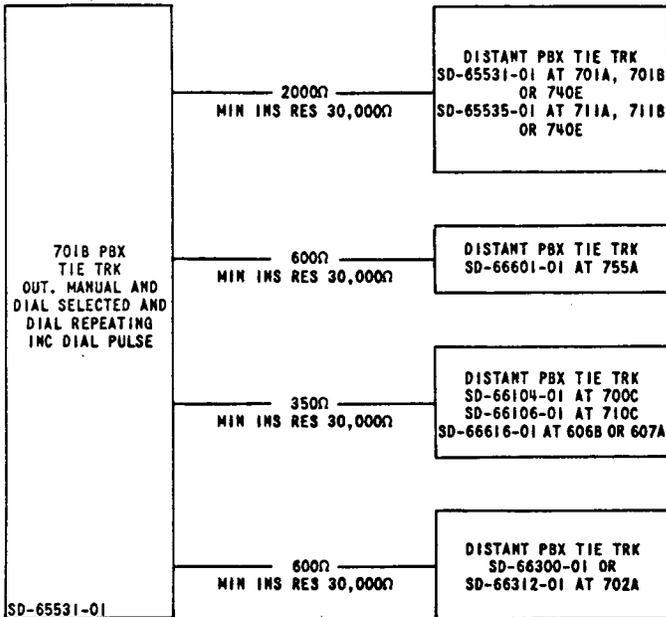
DISTANT PBX TIE TRK
SD-66088-01 AT 740A,
740B OR 740AX

C
SEE NOTE 1

DISTANT PBX TIE TRK
SD-66494-01 AT 550C,
550SC, 551A, 551B,
551D OR 600C

D
SEE NOTE 1

DISTANT PBX TIE TRK
SD-66524-01 AT 555
OR 557A



701B PBX TIE TRK
OUT. MANUAL AND DIAL SELECTED AND DIAL REPEATING WITH BAT. AND GRD PULSING AND REV BAT. SUPY INC DIAL PULSE
SD-66635-01

2000Ω
MIN INS RES 30,000Ω

DISTANT PBX TIE TRK
SD-65531-01 AT 701A, 701B OR 740E
SD-65535-01 AT 711A, 711B OR 740E
SD-66635-01 AT 606A 607A OR 702A

600Ω
MIN INS RES 30,000Ω

DISTANT PBX TIE TRK
SD-66601-01 AT 755A

701B PBX TIE TRK
2 WAY MANUAL AND DIAL SELECTED
SD-66622-01

A
SEE NOTE 1

DISTANT PBX TIE TRK
SD-66065-01 AT 552B, 552E, 556A OR 605A
SD-66066-01 AT 552A, 552D, 701A, 701B OR 740E
SD-66098-01 AT 700C
SD-66211-01 OR
SD-66305-01 AT 702A
SD-66241-01 AT 606A OR 702A
SD-66622-01 AT 606B, 607A OR 607B

B
SEE NOTE 1

DISTANT PBX TIE TRK
SD-66088-01 AT 740A, 740B OR 740AX

C
SEE NOTE 1

DISTANT PBX TIE TRK
SD-66494-01 AT 550C, 550SC, 551A, 551B, 551D OR 600C

D
SEE NOTE 1

DISTANT PBX TIE TRK
SD-66524-01 AT 555 OR 557A

701B PBX TIE TRK
OUT. MANUAL AND DIAL SELECTED INC DIAL REPEATING
SD-66709-01

1650Ω
MIN INS RES 20,000Ω

DISTANT PBX TIE TRK
SD-66038-01 AT 551D OR 600C
SD-66039-01 AT 550C, 550SC, 551A OR 551B
SD-66040-01 AT 552B, 552E OR 605A
SD-66297-01 AT 606A, 606B OR 702A
SD-66523-01 AT 555 OR 557A

1150Ω
MIN INS RES 20,000Ω

DISTANT PBX TIE TRK
SD-66297-01 AT 740A, 740B OR 740AX

NOTES:

- ALL TIE TRK RANGES SHOWN ON THE RANGE CHART INCLUDE THE RESISTANCE OF THE OUTSIDE CABLING, THE WIRING AT THE PBX AND THE HEAT COILS. THE RESISTANCE OF THE PBX APPARATUS IS NOT INCLUDED. VALUES ARE SHOWN IN TERMS OF CONDUCTOR LOOP BETWEEN PBX'S. VALUES INCLUDE LOOP RESISTANCE OF BATTERY AND GROUND LEADS WHEN FURNISHED FROM CENTRAL OFFICE.

LOOP DESIG	MAX LOOP RES (OHMS)	MIN INS RES (OHMS)	BAT. SUPPLY REL (L) AT DST PBX	HIGH-LOW REL (S) AT LOCAL AND DST PBX	BAT. SUPPLY AT DST PBX
A	1420	20,000	G93	85-12,000	32-46V
	1720	30,000	G93	85-12,000	32-46V
	2270	20,000	G93	85-12,000	44-50V OR 44-52V
	2370	30,000	G93	85-12,000	44-50V, OR 44-52V
	3220	30,000	G93	85-12,000 IN SERIES WITH 12,000Ω RES	32-46V
	4320	30,000	G93	85-12,000 IN SERIES WITH 12,000Ω RES	44-50V, OR 44-52V

LOOP DESIG	MAX LOOP RES (OHMS)	MIN INS RES (OHMS)	BAT. SUPPLY REL (G) AT DST PBX	HIGH-LOW REL (S) AT LOCAL PBX	HIGH-LOW REL (IC) AT DST PBX	BAT. SUPPLY AT DST PBX
B	1940	20,000	221A	85-12,000	85-12,000	44-52V

LOOP DESIG	MIN LOOP RES (OHMS)	MAX LOOP RES (OHMS)	MIN INS RES (OHMS)	BAT. SUPPLY REL (L) AT DST PBX	HIGH-LOW REL (S) AT LOCAL AND DST PBX	BAT. SUPPLY AT DST PBX
C		1290	20,000	B1067	85-12,000	14-26V
		1390	20,000	B1067	85-12,000	15-20V
		2070	20,000	B1067	85-12,000	20-28V
	1270	4320	30,000	B1067	85-12,000 IN SERIES WITH 12,000Ω RES	45-50V

LOOP DESIG	MAX LOOP RES (OHMS)	MIN INS RES (OHMS)	BAT. SUPPLY REL (L) AT DST PBX	HIGH-LOW REL (S) AT LOCAL AND DST PBX	BAT. SUPPLY AT DST PBX
D	920	30,000	B1165	85-12,000	16-52V
	1780	30,000	B1165	85-12,000	16-25V
	1120	30,000	B1165	85-12,000	18-52V
	2060	30,000	B1165	85-12,000	18-25V
	1290	30,000	B1165	85-12,000	20-52V
	2220	30,000	B1165	85-12,000	32-52V
	3320	30,000	B1165	85-12,000 IN SERIES WITH 12,000Ω RES	44-52V
	3420	30,000	B1165	85-12,000 IN SERIES WITH 12,000Ω RES	45-52V

General Description

The PBX No. 701B is a new dial PBX employing step by step switches for making connections between local stations, and from these stations to a manual or dial central office or another PBX. The associated PBX switchboard may be the non-multiple No. 552A or the multiple No. 552D, 605A, 607A or 607B. All calls from a central office are completed through the switchboard. Calls to the central office and also calls to and from another PBX may be completed either through the switchboard or by means of the dial switching equipment.

The type of switchboard used depends upon the number of lines and trunks required and also upon the amount of traffic to be handled through the switchboard.

The capacity of this PBX is as follows:

<u>Type of Operation</u>	<u>Type of Swbd.*</u>	<u>Station Lines**</u>
2 Digit	552A Non-Mult	90
3 Digit	552A Non-Mult	300
3 Digit	552D Multiple	600
3 Digit	605A, 607A, or 607B Multiple	999
4 Digit	605A Multiple 24 1/8-inch Jack Panel	2000

<u>Type of Operation</u>	<u>Type of Swbd.*</u>	<u>Station Lines**</u>
4 Digit	605A Multiple, 34 1/2-inch Jack Panel	3200
4 Digit	607A Multiple	5600
4 Digit	607B Multiple	5600

*The capacities are based on the use of one selector level for attendant trunks to the switchboard.

**When selector levels are used for central office trunks or for trunks to another PBX the capacity of the 2-digit PBX will be reduced by 10 and the 3-digit PBX by 100 per level used.

Ringing current, dial tone and busy tone and interrupters are supplied by the 806G power plant.

The circuits shown on this keysheet are arranged for 44-52 volt battery operation.

The conductor loop range between the PBX dial station line circuit and the station apparatus is 800 ohms allowing for a maximum of 200 ohms in the station apparatus. The minimum insulation resistance is 20,000 ohms.

ALARM			Toll Subscriber, to	SD-90077-01	F59
			Toll Swbd. No. 1		
Miscellaneous	SD-65761-01	D54	Toll Subscriber, to	SD-90078-01	E59
Crash	SD-66692-01	F12	Swbd. No. 3, 3C		
Crash, Arr. for Con-	SD-66694-01	H12	or 3CL		
tinuous Test of Sta.					
Lines					
			LEADS		
AUXILIARY LINE			Ringing	SD-65771-01	E54
Night Service	SD-66604-01	G12	LONG LINE, DIAL		
CALL			<u>Apparatus at Central Office</u>		
3A Code	SD-66610-01	E52	Pulse Corrector, with	SD-96008-01	B7
			Tel. Repeater 40-50V.		
CONFERENCE			Pulse Corrector,	SD-96009-01	C7
			without Tel. Repeater		
Dial	SD-66461-01	I22,	40-56V.		
		J22	Repeats Pulses 40-56V.	SD-96034-01	D7
Command	SD-66693-01	E12	10 or 20 P.P.S. Rep.,	SD-96234-01	F7
			Relayed or By Passed		
CONNECTOR			Ringing 45-50V.		
Selector, with or	SD-65721-01	C17	CX or SX Signaling,	SD-96251-01	F8
without Terminal			Supplies Line Supv.		
Hunting, Arr. to			with or without Tel.		
Hunt After Dialing			Repeater		
One or 2 Digits,			CX or SX Signaling,	SD-96252-01	C8
Arr. for Restricted			Type "B" TB Supply,		
Serv.			with or without Tel.		
Rotary Hunting, One	SD-66144-01	I19	Repeater		
Ring			LONG LINE, MANUAL		
Incoming, with or	SD-66596-01	F17	<u>Apparatus at Central Office</u>		
without Rotary			Ring Through Coil,	SD-66058-01	C2
Hunting, with or			20-28V.		
without Dial Tone			Ring Through Coil,	SD-66059-01	D2
CUT-OFF			31-43V. or 40-56V.		
Battery	SD-65773-01	A54	Ph. Group & CX Sig.,	SD-96116-01	E2
			Supplies Line Supv.		
FINDER			Ph. Group & CX Sig.,	SD-96117-01	F2
200 Point Line	SD-65901-01	B14	Supplies Trans-		
			mitter Battery		
GROUNDING	SD-66197-01	B53	<u>Apparatus at PBX</u>		
			Ring Through Coil	SD-66057-01	G2,
KEY					H22
Emergency Transfer	SD-66451-01	H24	LONG TRUNK, DIAL		
LINE			<u>Apparatus at Central Office</u>		
Auxiliary (See			Out., Dial Repeating	SD-66192-01	F32
Auxiliary Line)			45-50V.		
Long (See Long Line)			Pulse Corrector,	SD-66471-01	C32
Test (See Test Line)			without Tel. Repeater		
Toll Foreign Exchange	SD-62442-01	G59	40-56V.		
Subscriber, 1000			Repeats Pulses, with	SD-66474-01	E32
Cycle or 135 Cycle			Rering Feature		
Toll Line Signaling			40-56V.		
Dial Terminating	SD-65776-01	B27	Pulse Corrector, with	SD-96008-01	B37
Manual Station			Tel. Repeater,		
Station, Ind. or 2	SD-66715-01	B13	40-56V.		
Pty. Sel. Ring.,			Pulse Corrector, with-	SD-96009-01	C37
with or without			out Tel. Repeater,		
Restricted Serv.			40-56V.		

LONG TRUNK, DIAL (Cont'd.)

Repeats Pulses, with Rering Feature 40-56V. SD-96010-01 F37, F38
 Repeats Pulses, with-out Rering Feature 40-56V. SD-96034-01 D37
 10 or 20 P.P.S. Rep., Relayed or By Passed Ringing, 45-50V. SD-96234-01 H37
 CX or SX Signaling, Supplies Line Supv. with or without Tel. Repeater SD-96251-01 J38
 CX or SX Signaling, Type "B" TB Supply, with or without Tel. Repeater SD-96252-01 I38
 For Use at Terminating Office SD-96371-01 G32

Apparatus at PBX

Repeats Pulses SD-66060-01 J37
 Repeats Pulses, with Rering Feature SD-66474-01 H32
 Repeats Pulses, with Rering Feature SD-96010-01 I37

LONG TRUNK, MANUAL

Apparatus at Central Office

Ring Through Coil 20-28V SD-66058-01 C57
 Ring Through Coil 31-43V. or 40-56V. SD-66059-01 D57
 For Use with Dial Trunks SD-66192-01 E62
 Out. Automatic SD-66275-01 D62
 Repeats Ringing, with Rering Feature SD-66474-01 C62
 Ph. Group & CX Sig., Supplies Line Supv. SD-96116-01 E57
 Ph. Group & CX Sig., Supplies Transmitter Battery SD-96117-01 F57

Apparatus at PBX

Ring Through Coil SD-66057-01 I57
 Repeats Ringing with Rering Feature SD-66474-01 H62

RANGE CHART

For Stations and Trunks Used in Connection with Xbar. No. 5 Off. Having 1350 Ohm Sub. Conductor Loop AC-DC or Sup. Ring. 48 Volts Min. SD-65763-01 A55
 For Stations and Trunks Used in Connection with Panel Off. Having 1300 Ohm Sub. Conductor Loop AC-DC Ringing 48 Volts Min. SD-65764-01 A55

For Stations and Trunks Used in Connection with SXS Off. Having 1300 Ohm Sub. Conductor Loop AC-DC Ringing 48 Volts Min. SD-65765-01 A55
 For Stations Used in Connection with Dial Long Line Ckts. SD-96327-01 A55
 For Station and Trunks Used in Connection with Long Line Ckts. SD-96328-01 A55

REGISTER

Traffic SD-65774-01 A52

SELECTOR

Digit Absorbing, Absorbs Digits Once Only or Repeatedly and Restricts Service on Specified Levels SD-65900-01 J17
 Second SD-66010-01 C18, H18
 2 Digit Rotary Hunting SD-66302-01 D18, I18
 First SD-66359-01 G17
 Inc. First, without Dial Tone SD-66360-01 H17
 Inc. First, with Dial Tone SD-66594-01 H17

TELEPHONE REPEATER

V3 SD-95144-01 A7, A37

TERMINATING SET

4 Wire SD-65789-01 D45

TEST LINE

Connector SD-66037-01 I54
 Tie Trunk SD-66533-01 J52

TEST SET

Line Finder, Selector, Connector and Selector Connector SD-66073-01 I52
 Line Finder, Selector, Connector and Selector Connector SD-90416-01 H52

TEST TERMINAL

For Bat. and Grd. SD-65677-01 H54

TRUNK

Long Trunk (See Long Trunk)

