

SHEET INDEX

SHEET NO.	CONTENTS
1	SHEET INDEX APPARATUS INDEX LEAD INDEX OPTION INDEX SUPPORTING INFORMATION
2	CIRCUIT NOTES INFORMATION NOTES
3	FS 1 PULSE GENERATOR FS 2 PULSE COUNTING FS 3 PULSING CONTROL FS 4 TRUNK CONTROL LEADS
4	FS 5 ALARM AND TRANSFER
5	APP FIG. 1
6	CIRCUIT REQ'T TABLE TIMING REQ'T TABLE
7	CAD 1,2

APPARATUS INDEX

DESIG	LOCATION		
	FS	APP FIG.	EQPT
RELAYS			
A	4F4	I	
AL	4D0	I	
EP	3C0	I	
P	3A3	I	
FO	3D0	I	
P1	3A6	I	
P2	3B6	I	
P3	3C6	I	
PG	3A1	I	
ST	3F0	I	
TR	4C0	I	
W	4E0	I	
Z	4G0	I	
CAPACITORS			
PG	3A0	I	
PGC	3B3	I	
JACK			
PG	3B3	I	
	4F3	I	
KEYS			
AR	4E1, 4E2	I	
TR	4C2, 4E2	I	
LAMPS			
AL	4E4	I	
FG	4F4	I	
POTENTIOMETERS			
PG3	3A1	I	
PG4	3A1	I	
RESISTORS			
A	4B1	I	
P1	3B7	I	
P2	3B7	I	
PG1	3A0	I	
PG2	3A1	I	

LEAD INDEX

DESIG	FS LOC	CAD LOC
30, 60 AND 120 IPH INTERRUPTER CKT		
60 IPH	4G5	7H0
AUDIBLE ALARM CKT		
AC	4B0	7G0
AUDIBLE & VISIBLE ALARM CKT		
F	4B0	7F0
G	4D0	7F0
INTERRUPTER RELAY CKT		
60 IPH	4G5	7H0
MISC ALARM CKT		
60 IPH	4G5	7H0
MISC ALARM CKT (AISLE P LOT)		
PL	4E0	7G0
MISC ALARM CKT (ALM CONT)		
C	4A0	7F0
F	4A0	7F0
MISC ALARM CKT (ALM CONT & SDR)		
P	4B0	7G0
PILOT LAMP CKT		
C	4A0	7F0
F	4A0	7F0
PILOT LAMP & POWER ALARM CKT		
C	4A0	7F0
F	4A0	7F0

DESIG	FS LOC	CAD LOC
POWER RINGING CKT		
60 IPH BR3 MS	4G5	7H0
	4G5	7G0
POWER SHELF TERMINAL BLOCK CKT		
NDA RM ST	4AC	7F0
	4G5	7G0
TRUNK CKT		
C1-3	3F9	7C3, 7C5
PLSO-4	3F9	7D0
PH	3F9	7D0
ST	3F9	7C3

SUPPORTING INFORMATION

CATEGORY	NO.
EQUIPMENT DRAWING	J33013AU
EQUIPMENT DESIGN REQ'T	J33013
KEYSHEETS	
SXS NO. 1	SD-31359-01
SXS NO. 350A	SD-31364-01
SXS NO. 355A	SD-31780-01
SXS NO. 35E97	SD-32325-01
BSP INFORMATION	226-804-500

OPTION INDEX

APP OR WIRING	LOCATION
Z	4B1
Y	4B1
X	3F1, 5G1
W	3F1, 3G1

NOTICE—NOT FOR USE OR DISCLOSURE OUTSIDE THE BELL SYSTEM EXCEPT UNDER WRITTEN AGREEMENT.

ISSUE

5AC

SD-32310-01	ID99	AT&T CO STANDARD
Step By Step Systems NO. 1, 350A, 355A OR 35E97 PULSE GENERATOR AND COUNTING CIRCUIT		ASH ONLY FOR 350A AND 35E97
For Use With Intercepting Trunk Circuits Using E and M Lead Supervision (PLS GEN)		SD-32310-01-1 7 SHEETS
BELL TELEPHONE LABORATORIES INCORPORATED	6S	PRINTED IN U.S.A.

CIRCUIT NOTES:

DESIG	FUSE AMP	POTENTIAL	ONE PER
	1-1/3	-48V TB	CKT
BATTERY SYMBOL		VOLTAGE RANGE	
-48		45-50V	

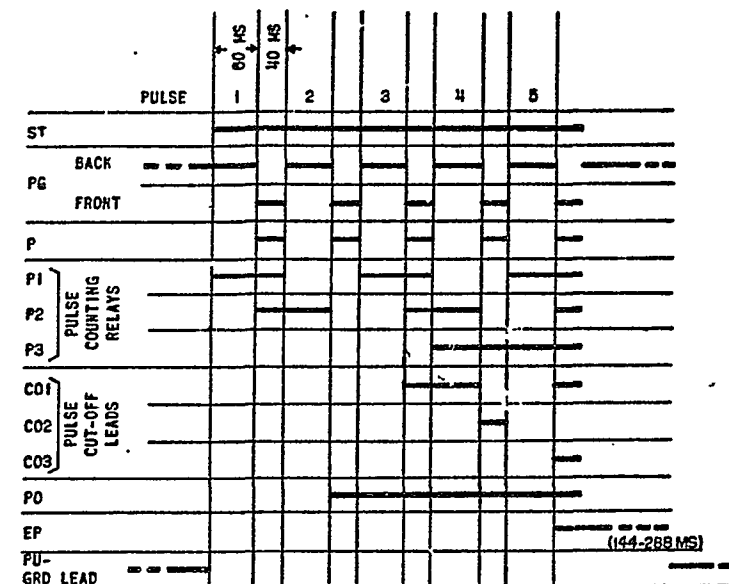
FEATURE OR OPTION		PROVIDE	
		APP FIG.	QUANTITY
PULSING CIRCUIT		1	2 PER 50 TRUNKS
WHERE CIRCUIT IS PROVIDED	IN 35E97 OFFICE		Y
	IN NO. 1, 350A, OR 355A		Z

NETWORK VALUES		
NETWORK NO.	RESISTANCE IN OHMS	CAPACITANCE IN UF
1	470	0.11
2	120	0.3

RECORD OF APP FIGURES, WIRING AND APPARATUS CHANGES						
CHANGED ON ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT		
				STD	A&M	HD
3D	Z,Y	NONE	102	Z,Y		
5AC	W,X	X		W		X

INFORMATION NOTES:

301. BAR DIAGRAM - BASED ON 10 PPS



1. NO. OF COUNTED PULSES - 2 = PULSE OUTPUT ON PLS LEAD.
2. 1ST 2 PULSES NOT SENT OUT TO PERMIT SLOW RELEASE RELAY IN INCOMING TRUNK AT FAR END TO RECEIVE SUFFICIENT SOAK.

302. ADJUST (PG3) POTENTIOMETER AS REQD TO OBTAIN PPS REQUIREMENT OF (PG) INTERRUPTER.
303. ADJUST (PG4) POTENTIOMETER AS REQD TO OBTAIN PER CENT BREAK REQUIREMENT OF (PG) INTERRUPTER.
304. CONNECT LEADS A THRU K OF ONE CKT TO LEADS A' THRU K' RESPECTIVELY OF OTHER CIRCUIT ON SAME EQUIPMENT UNIT.
305. EACH PULSE GENERATOR UNIT IS EQUIPPED WITH TWO PULSE GENERATOR CIRCUITS. TRUNKS ASSIGNED TO EACH UNIT SHALL BE DISTRIBUTED EVENLY BETWEEN THE CIRCUITS. FOR EACH CIRCUIT, THE TRUNKS SHALL BE DISTRIBUTED EVENLY AMONG PLSO-4 LEADS. EACH PULSE GENERATOR CIRCUIT PROVIDES CONNECTIONS FOR A MAXIMUM OF 25 TRUNK CIRCUITS.

DRAWING
ISSUE
1
2A
3D
4DISSUE
5ACNO. 1, 350A, 355A OR 35E97
PULSE GENERATOR
AND COUNTING CIRCUIT

2

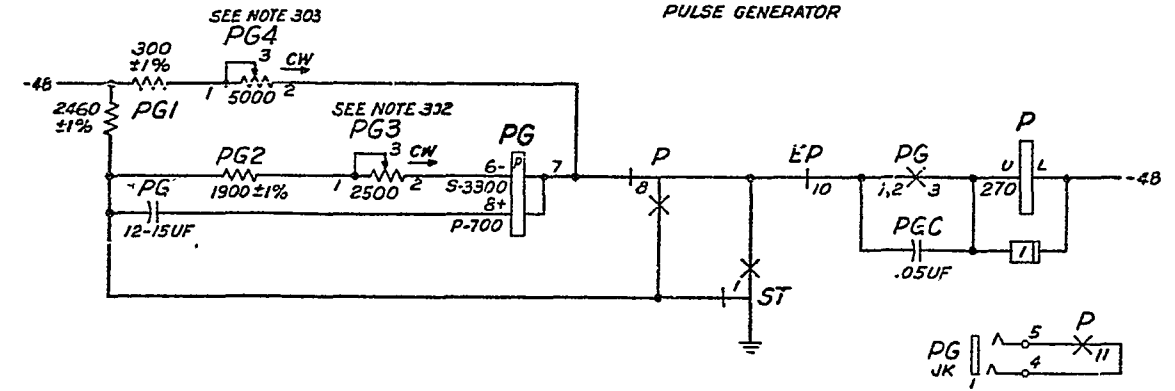
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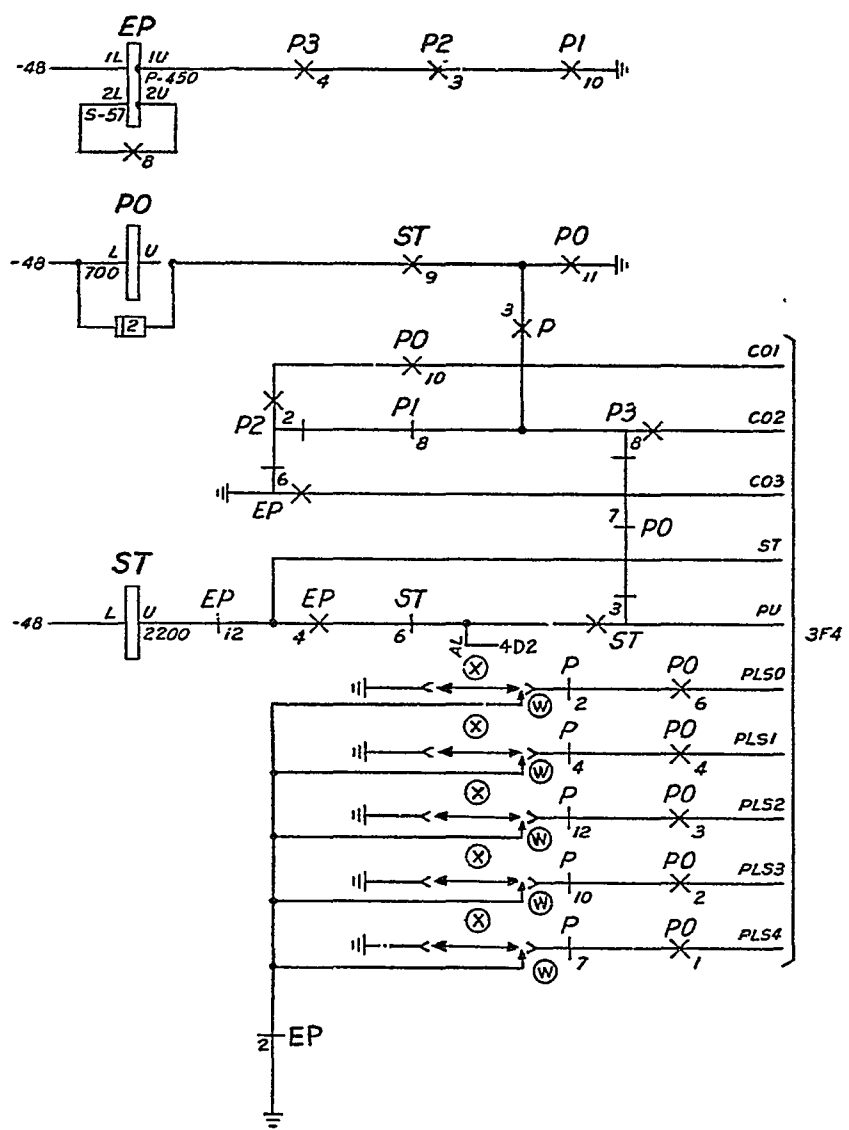
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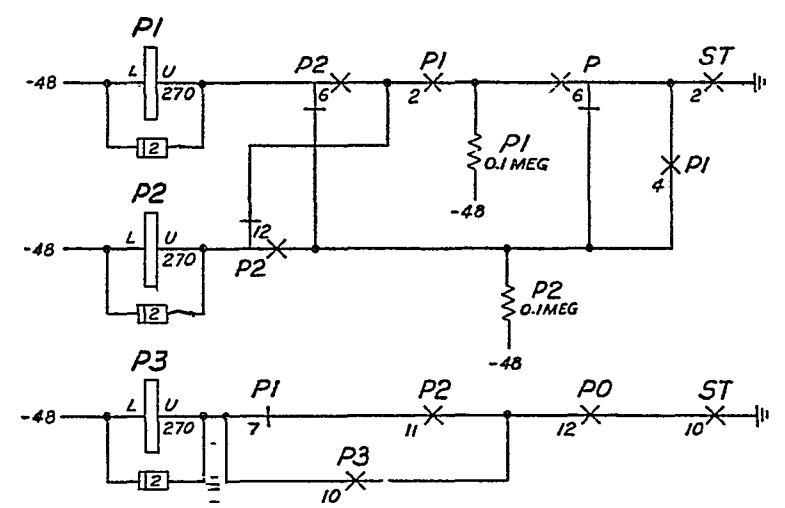
FS 1 PULSE GENERATOR



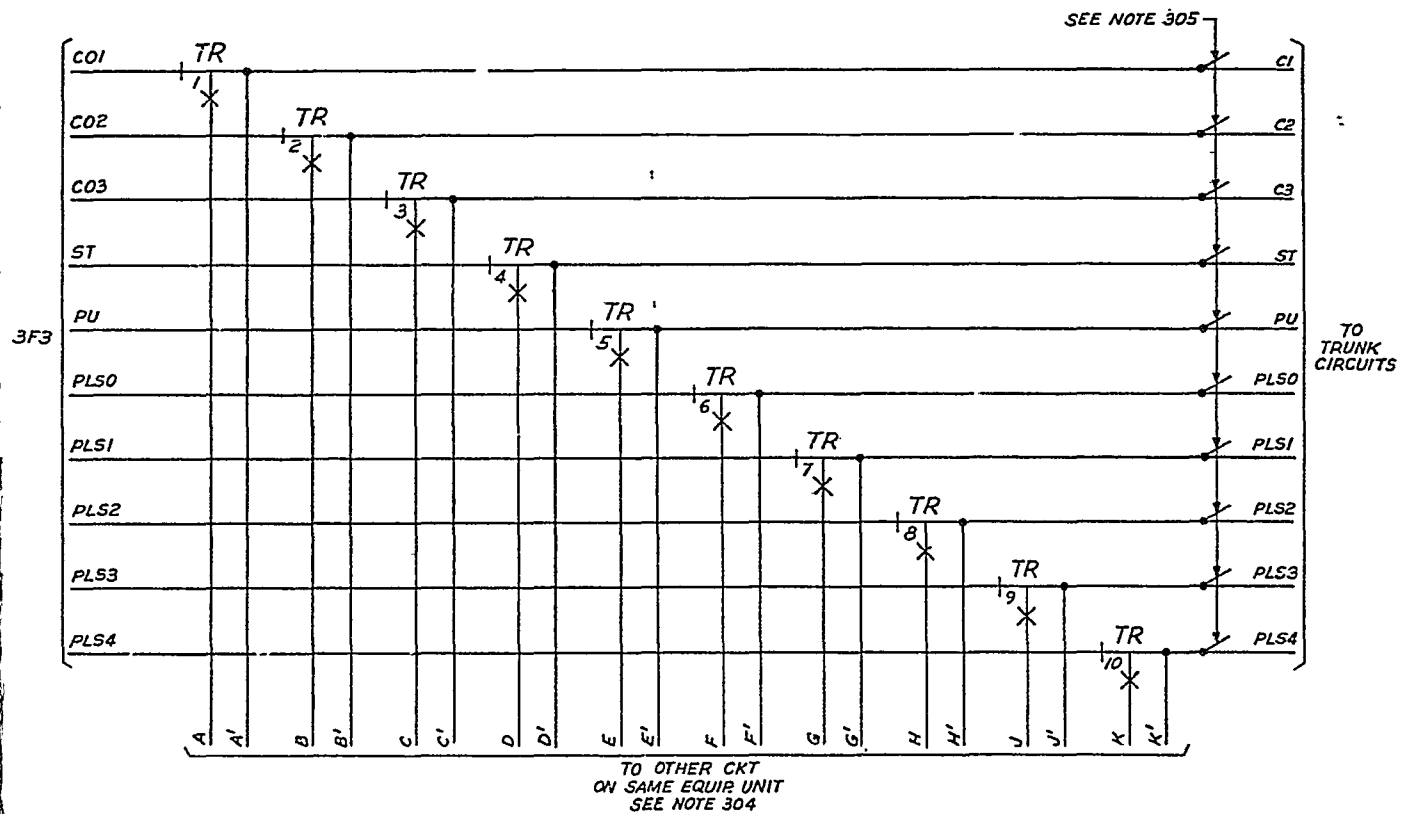
FS 3 PULSING CONTROL



FS 2 PULSE COUNTING



FS 4 TRUNK CONTROL LEADS



SD-32310-01-3

DRAWING	
1	ISSUE
2A	REV
3D	REV
4D	REV

ISSUE
5AC

FS 5 ALARM AND TRANSFER

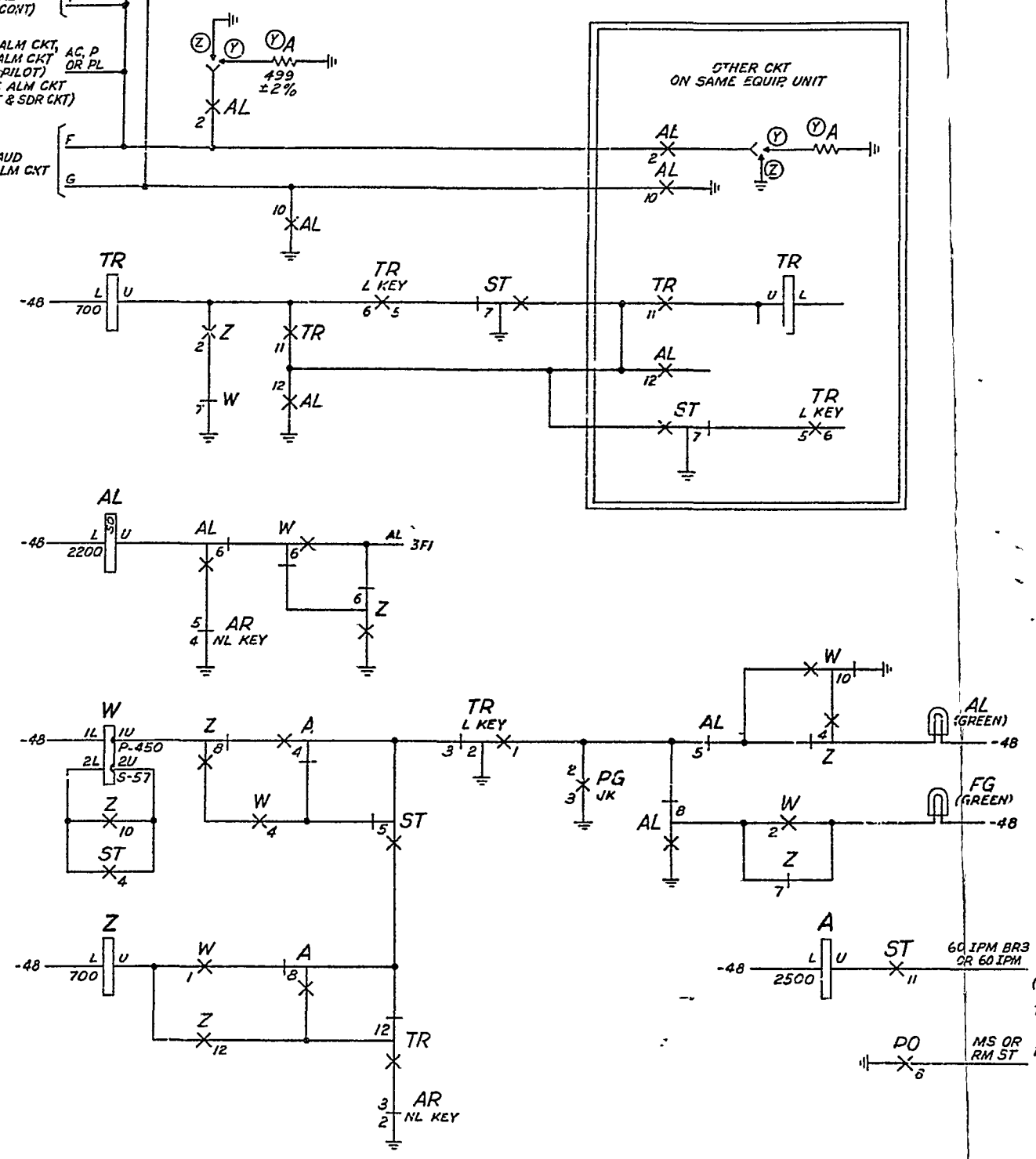
TO POWER SHELF NDA
TERMINAL BLOCK
(35E97)

TO PILOT LAMP CKT
TO PILOT LAMP
& PWR ALM CKT
OR TO MISC ALM CKT
(ALM CONT)

TO AUD ALM CKT
TO MISC ALM CKT
(AISLE PILOT)
OR TO MISC ALM CKT
(ALM CONT & SDR CKT)

TO AUD
& VIS ALM CKT

OTHER CKT
ON SAME EQUIP. UNIT



TO 30, 60 & 120 IPM
INTERRUPTER CKT
(NO. 1 & 3504),
TO PWR RING CKT
(355A), TO INTERRUPTER
RELAY CKT (355A) OR
TO MISC ALM CKT (35E97)

TO PWR RING CKT (355A)
OR TO PWR SHELF
TERM BLOCK (35E97)

NO. 1, 350A, 355A OR 35E97 PULSE GENERATOR AND COUNTING CIRCUIT		SD-32310-01-4
BELL TELEPHONE LABORATORIES INCORPORATED		

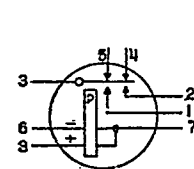
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APP FIG. 1

RELAY

DESIG	A	AL	EP	P	PD	PI	P2	P3	ST	TR	M	Z	DESIG
CODE	AF67	AJ27	AG22	AF518	AF34	AF519	AF518	AF105	AJ504	AJ12	AG49	AF16	CODE
OPTION	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	CONT	LOC	OPTION
12	EM	4D1	R	3F0	EMB	2F2	M	3C7	M		EMB	3B6	
11					M	3B4	M	3D2	M				
10			M	4C1	B	3A3	EBM	3G2	M	3D1	M	3C2	EBM
9													
8	EBM	4G1	EBM	4F3	M	3C0	EBM	3A2	M	4G4	BM	3E1	EBM
7			B		B	3G2	B	3E2	B	3C6	B		
6	EMB		EMB	4D1	BM	3E1	EMB	3A7	M	3F2	BM		
5			B	4E3									
4	EBM	4E1	EBM		M	3F1	EBM	3F2	M	3F2	M	3B8	EBM
3					M	3D2	M	3G2	M				
2			M	4B1	B	3G1	EBM	3F2	M	3G2	M	3A7	EBM
1													
COIL	4F4	4D0	3C0	3A3	3D0	3A6	3B6	3C6	3F0	4C0	4E0	4G0	COIL

RELAY

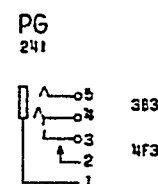


DESIG	FG
CODE	276R
OPTION	
8	3A1
7	3A1
6	3A1
5	
4	
3	3A3
2	3A3
1	3A3

CAPACITOR

DESIG	LOC	CODE
(3) PG	3A0	437A
PGC	3B3	441M

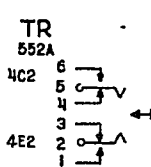
JACK



KEY



KEY



LAMP

DESIG	LOC	CODE
AL	4E4	2Y MI
FG	4F4	2Y MI

NETWORK

DESIG	LOC	CODE
P	3A3	185A
PO	3D0	186A
PI	3A6	186A
P2	3B6	186A
P3	3C6	186A

POTENTIOMETER

DESIG	LOC	CODE
PG3	3A1	KS-8680, 2500
PG4	3A1	KS-8680, 5000

RESISTOR

DESIG	LOC	CODE
(Y) A	4B1	KS-8512, L4B
P1	3B7	KS-13490, L1, 0.1 MEG
P2	3E7	KS-13490, L1, 0.1 MEG
PG1	3A0	19JL
PG2	3A1	18FN

NO. 1, 350A, 355A OR 35E87
PULSE GENERATOR
AND COUNTING CIRCUIT



SD-32310-01-5

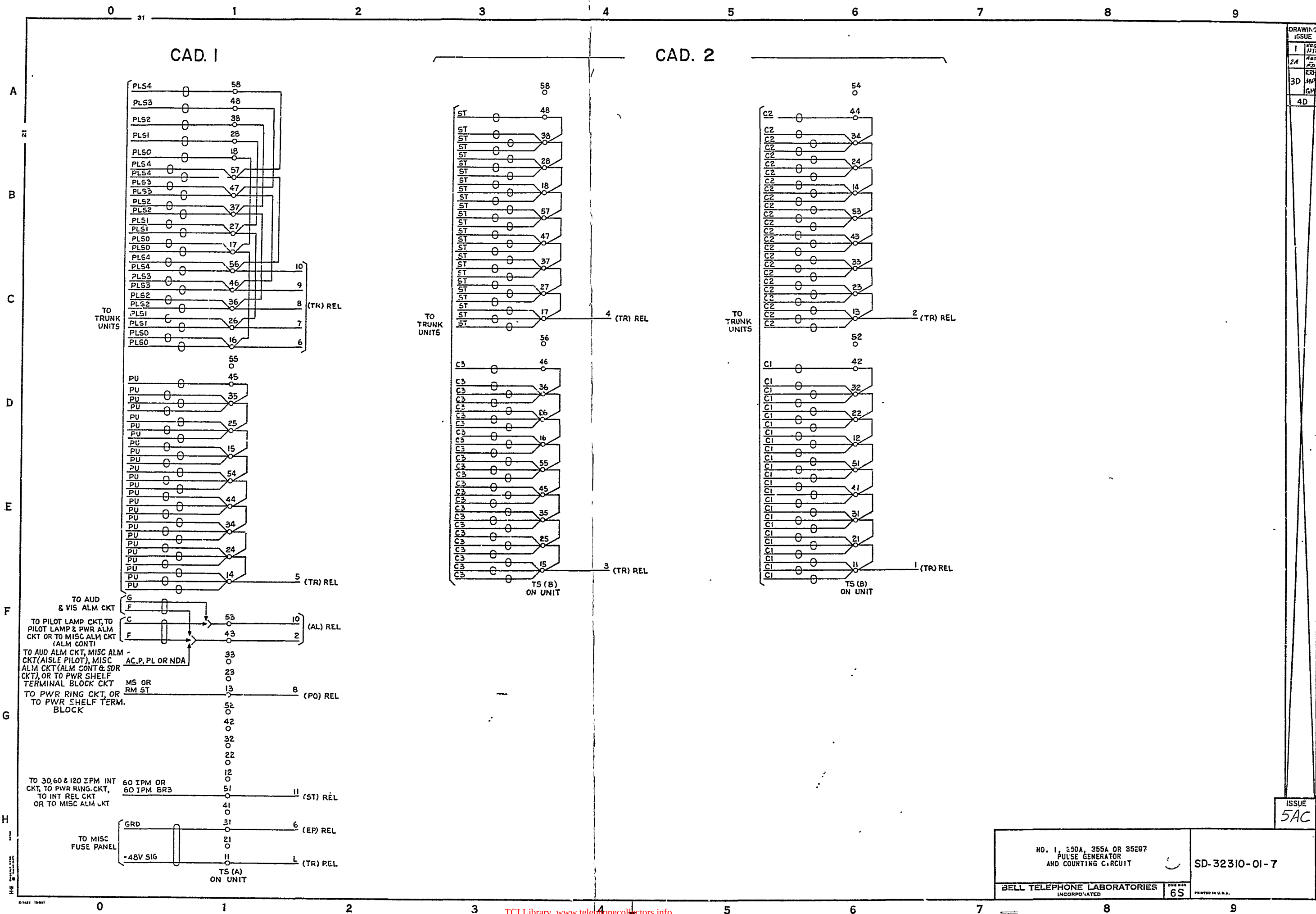
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SD-32310-01		2 PAGES		CIRCUIT REQUIREMENTS																		DRAWING ISSUE									
NO. 1, 350A, 355A OR 35E97 PULSE GENERATOR AND COUNTING CIRCUIT																				1		2									
APPARATUS				MECH. REQ.				CIRCUIT PREPARATION				TEST CLIP DATA				TEST SET PREP				SEE TEST NOTE				DIRECT CURRENT FLOW REQ.				REMARKS			
DESG	CODE	OPTION	FIG.	BSF FIG.	CONT. PRESS.	ARM. TRVL.	BLOCK OF INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG.	TEST FOR	AFTER SOAK	TEST	READJ.															
								CONN. BAT.		CONN. GRD.																					
RELAYS																															
A	AF67		1	207				U(A)		GRD	1		0		7.2	6.8															
AL	AJ27		1	213			6(AL)	U(AL)		GRD	1		0		15	14.2															
								U(AL)		GRD	1		NO		8.1	8.6															
EP	AG22		1	565				1U(EP)		GRD	1,2	P	0	FS	36	34															
								1U(EP)		GRD	1	P	H	FS	5.6	5.3															
								1U(EP)		GRD	1	P	R	FS	3.5	4.2															
							8(EP)	2L(EP)	2U(EP)	B/G	1	S	0	FS	45																
P	AF51B		1	224				U(P)		GRD	1		0		100	95															
PD	AF34		1	14				U(PD)		GRD	1		0		28	26.5															
P1	AF51B		1	27			6(P2)	U(P1)		GRD	1		0		73	69															
							6(P2)	U(P1)		GRD	1		R		16	17															
P2	AF51B		1	224			12(P2)	U(P2)		GRD	1		0		100	95															
P3	AF105		1	253				U(P3)		GRD	1		0		65.5	62															
								U(P3)		GRD	1		H		36.5	34.5															
PG	276K		1	4							1	P	0		5																
											1	F	R		-6																
											1	S	0		2.4																
											1	S	R		-2.4																
ST	AJ504		1	57			(TR)NO, (A)NO	U(ST)		GRD	1		0		11.5	11.2															
TR	AJ12		1	220			(P1)O	U(TR)		GRD	3		0		43	40.5															
W	AG49		1	416B				1U(W)		GRD	1	P	0	FS	59	56															
								1U(W)		GRD	1	P	H	FS	6.4	6															
								1U(W)		GRD	1	P	R	FS	5.9	6.6															
							2L(W)	2U(W)	B/G	1	S	0	FS	74																	
Z	AF16		1	204			(AL)NO, 12(TR)	U(Z)		GRD	1		0		30.5	29															
TEST NOTES:																															
1. OPERATE (TR) KEY.																															
2. ARM. BACK TENSION MAX 90 GRAMS READJ; 85 GRAMS TEST.																															
3. ALL INCOMING CALLS REQUIRING THE SERVICE OF THIS CIRCUIT WILL BE BLOCKED DURING THE TIME THAT THE (TR) RELAY IS BEING ADJUSTED.																															
NO. 1, 350A, 355A OR 35E97 PULSE GENERATOR AND COUNTING CIRCUIT																															
BELL TELEPHONE LABORATORIES INCORPORATED																															
SD-32310-01-6																															

SD-32310-01		TIMING REQUIREMENTS		DRAWING ISSUE	
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SD-32310-01-7

NO. 1, 350A, 355A OR 352B7 PULSE GENERATOR AND COUNTING CIRCUIT		SD-32310-01-7	
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DRAWING	ISSUE
1	1
2A	2
3D	3
4D	4

ISSUE
5AC