SHEET INDEX

CONTENTS	SHEET NO. PRIOR TO ISSUE 26	SHEET NO. CURRENT ISSUE	ISSUE NO. 31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	SHEET NO.
SHEET INDEX SUPPORTING INFORMATION SHEET INDEX NOTES	00	41	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61																					41
SHEET INDEX (CONT)	00	42	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61																					42
		43	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61																					43
APPARATUS INDEX	-	44	31	31	33	34	34	34	34	38	39	39	41	41	43	43	45	46	46	46	46	46	51	52	52	52	55	55	55	55	55	55	55																					44
		45	31	31	31	34	34	34	34	38	39	39	41	41	43	44	45	46	46	46	46	50	51	52	53	53	55	55	55	55	55	55	55																					45
APPARATUS INDEX (CONT) LEAD INDEX CONNECTING CIRCUITS	- -	46	31	31	31	31	31	31	37	37	37	37	41	41	41	41	45	46	47	48	48	48	52	52	52	52	52	52	52	59	59	59	59																					46
LEAD INDEX	01	47	31	31	31	34	34	34	34	34	39	39	41	41	41	41	41	41	47	48	48	50	51	51	51	51	55	55	55	55	59	59	59																					47
		48	31	31	33	33	35	35	35	38	39	39	41	41	41	41	41	41	41	41	41	41	51	51	51	51	55	55	55	58	58	58	58																					48
		49	31	31	31	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	41	41	51	51	51	51	51	51	51	51	51	51	51																					49
		410	31	31	31	31	31	31	37	37	39	39	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41																					410
OPTION INDEX	-	All	31	31	33	34	35	35	37	38	39	40	*41	41	43	43	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	60																					All
FS 1 TIME PULSES TO RECORDER	02,03	B1	31	31	31	31	31	31	31	38	39	39	41	41	43	44	44	44	47	47	47	47	47	52	53	53	53	53	53	53	53	53	53																					B1
FS 2 CONTROL OF TIMING SWITCHES	04,08, 06,10	B2A*	31	31	33	33	33	33	33	33	33	33	41	42	43	44	44	46	47	47	49	49	49	52	52	52	52	52	52	52	52	52	52																					B2A*
		B2B											41	41	41	44	44	46	47	48	48	51	52	52	52	52	52	52	52	52	52	52	52																					B2B
		B3	31	31	31	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41																					B3
FS 3 RECORDING OF HOUR ENTRY	02,03, 06	B4A*	31	31	31	31	31	31	37	38	39	40	41	41	41	41	41	46	46	48	48	48	51	52	52	52	55	55	55	55	55	55	55																					B4A*
		B4B											41	41	41	41	41	41	41	41	41	41	51	52	52	52	52	52	52	52	52	52	52																					B4B
FS 4 6 ROUNDS PER MONTH	10	B5	31	31	31	31	31	31	37	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31																					B5
FS 5 10 ROUNDS PER MONTH	10	B6	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31																					B6
FS 6 CHECK SELECTOR SYNCHRONIZATION	02,03, 04,08	B7	31	31	31	31	31	31	31	31	31	31	41	41	41	44	44	44	47	47	47	47	52	52	52	55	55	55	55	55	55	55	55																					B7
		B8A*	31	31	31	31	31	31	31	31	31	31	41	41	43	44	44	44	44	44	44	44	52	52	52	52	52	52	58	58	58	58	58																					B8A*
		B8B											41	41	41	41	41	41	41	41	49	49	49	52	52	52	52	52	52	52	52	52	52																					B8B
		39	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	49	49	49	49	49	49	49																					39
FS 7 SYNCHRONIZING TIMERS FS 8 CHECK LAMP TRANSFER FS 9 TIMER TRANSFER CONTROL	02,03, 04,08	810	31	31	31	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41																					810
FS 10 END OF TAPE START CONTROL HOUR 03	02,03, 06	B11	31	31	31	31	31	31	31	31	31	31	41	41	41	44	44	44	48	48	48	48	48	48	48	48	48	48	57	57	57	57	57																					811
FS 11 RECORDER SELECTION, SEIZURE, 3ND CONTROL	05,07	B12	31	31	31	31	31	31	37	37	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	60	60																					812
FS 12 END OF TAPE PATTERN START CONTROL AND TROUBLE RECORDER IDLE CHECK CKT	05,06, 08	B13	31	31	31	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41																					813
FS 13 STANDING TEST AND CONTROL	08	B14	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31																					B14
		B15	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	51	51	51	51	51	51	51	51	51	51	51																					B15
FS 14 END OF TAPE DAY AND MONTH TIME CONTROL FS 15 RECORDER CONNECTOR OPERATION AND CONTROL.	02,03, 05,06, 10	B16	31	31	31	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	41	41	51	51	51	51	51	51	51	51	51	51	51																					B16
FS 16 END OF TAPE, LINE PERFORATION CONTROL LOCAL CONTROL AND CHECKING	06	B17	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	51	51	51	51	51	51	51	51	51	51																					B17
		B18	31	31	31	31	31	31	31	31	31	31	41	41	41	41	45	45	45	45	45	45	51	51	51	51	51	56	56	56	56	56	56																					B18
FS 17 CUT-IN OF INFORMATION TO RECORDERS	02,03, 10	B19	31	31	31	31	31	31	31	38	38	40	41	41	41	41	45	45	45	45	45	45	51	51	51	51	51	51	51	51	51	51	51																					B19
		B20	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	51	51	51	51	51	51	57	57	57	57	57																					B20
		B21	31	31	31	31	31	31	31	31	31	31	41	41	41	41	45	45	45	45	45	45	51	51	51	51	51	51	51	51	51	51	51																					B21
FS 18 SEIZURE OF MASTER TIMER BY RECORDER AND MASTER TIMER RECORDER PREFERENCE CONTROL	05,07	B22	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	58	58	58	58																					B22
FS 19 LONG PERIOD TROUBLE TIMING RELAYS	06,09	B23	31	31	31	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	41	50	50	50	50	50	50	50	50	50	50	50	50																					B23
FS 20 TIME OUT AND TROUBLE RELEASE	06,09	B24	31	31	31	31	31	31	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	59	59	59																					B24
		B25	31	31	31	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	41	41	51	51	51	51	51	56	56	56	56	60	60																					B25
FS 21 RECORDER TRANSFER AND MAKE BUSY	06	B26	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	51	51	51	51	51	51	51	51	51	51	51																					B26
FS 22 MAKE BUSY AND RECORDER GROUPING	02,03, 05	B27	31	31	31	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	49	49	49	49	49	49	49	49	49	49	49	49	49																					B27
FS 23 MASTER TIMER TIME AND PROGRESS INFORMATION FOR TROUBLE CIRCUITS	10	B28	31	31	31	31	31	31	31	31	31	31	41	41	41	41	41	46	46	48	48	48	51	51	51	51	51	51	51	51	51	51	51																					B28
FS 24 SYNCHRONIZE TIMERS	02	B29	31	31	31	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	41	41	41	52	52	52	52	52	52	52	52	52	52																					B29
FS 25 EXERCISE SELECTORS	04,08, 10	B30	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	57	57	57	57	57																					B30
FS 26 ALARM CIRCUITS	09,10	B31	31	31	31	34	35	35	37	37	39	39	41	41	41	41	41	41	47	47	47	47	47	47	47	47	55	56	56	56	59	59	59																					B31
FS 27 RECORDER TEST CONTROL	-	B32	31	31	31	31	31	31	37	37	37	37	37	37	37	37	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45																					B32
		B33	31	31	31	31	31	31	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37																					B33
		B34	31	31	31	31	31	31	31	31	31	31	31	31	31	31	45	45	45	45	50	50	50	50	54	54	54	54	54	54	54	54	54																					B34
		B35	31	31	31	31	31	31	37	37	37	37	37	37	37	37	37	37	37	37	37	37	51	51	51	51	51	51	51	51	51	51	51																					B35
		B36	31	31	31	31	31	31	37	37	37	37	37	37	37	37	45	45	45	45	45	50	51	51	51	51	51	51	51	51	51	51	51																					B36
		B37	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	47	48	48	48	48	48	48	48	48	48	48	48	48	48																					B37
		B38	31	31	31	31	31	31	31	31	38	38	40	40	40	40	40	40	46	46	46	46	50	51	51	51	51	51	51	51	51	51	51																					B38
FS 28 TEST DISTRICT OR TRUNK NO. PATTERN CUT-IN RELAYS	11	B39	31	31	31	31	31	31	31	37	37	37	37	37	37	37	37	37	37	37	37	37	51	51	51	51	51	51	51	51	51	51	51																					B39
FS 29 PULSE SUPPLY TO TRUNK TEST CIRCUITS FS 30 CALL COUNT REGISTER CONTROL CKT	02	B40	31	31	31	31	31	31	31	37	37	37	37	37	37	37	43	43	43	43	47	47	47	47	47	47	47	47	47	47	47	47	47																					B40

* SHEETS WITH THE SUFFIX A WERE FORMERLY WITHOUT A SUFFIX LETTER.

SUPPORTING INFORMATION

CATEGORY	NO.
EQUIPMENT DESIGN REQUIREMENT NO. 5 XBAR NO. 1 XBAR TDM & NO. 4A OR 4M & SXS NO.1	J22451
SXS INTERTOLL	J38909
EQUIPMENT DRAWINGS	
NO. 5	J22451C( )
NO. 1, TDM, 4A, 4M	J22451D( )
SXS NO.1	J22451E( )
SXS INTERTOLL	J38909A( ) J38909AA( ) J38909B( ) ED-94823-G435

SHEET INDEX NOTES

1. WHEN CHANGES ARE MADE IN THIS DRAWING ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.
2. THIS SHEET INDEX WILL BE REISSUED AND BROUGHT UP TO DATE EACH TIME ANY SHEET OF THE DRAWING IS REISSUED, OR A NEW SHEET IS ADDED.
3. THE ISSUE NUMBER ASSIGNED TO A CHANGE OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE SHEET INDEX.
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER.
5. THE LAST ISSUE NUMBER OF THE SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.
6. ON ISSUE 26 THIS DRAWING WAS CHANGED FROM THE ATTACHED TO THE DETACHED CONTACT ARRANGEMENT INCREASING THE NO. OF SHEETS FROM 21 TO 127.
7. ASSOCIATION OF CADS WITH SWITCHBOARD CABLE DETAIL DRAWINGS: CAD NUMBERS IN THE DETACHED ARRANGEMENT CORRESPOND TO THE CROSS CONNECTION FIGURE NUMBER OF THE FORMER ATTACHED FORM LESS FIFTY AND FORMER CADS 1,2,&3 NOW APPEAR IN THE DETACHED ARRANGEMENT AS CADS 6,7,&8.

DWG ISS	CD ISSUE	DWG ISS	CD ISSUE	DWG ISS	CD ISSUE
1	1	2A	2A	3A	3A
4A	4A	5A	5A	6AR	6AR
78	6AR APP 1B	80	6AR APP 2D	98	6AR APP 3B
100	70	118	88	128	98
138	108	148	108 APP 1B	150	110
180	120	178	138	188	138 APP 1B
190	140	200	150	210	150 APP 1D
220	160	230	170	240	180
258R	180 APP 1AR	260	180 APP 2D	270	180 APP 3D
28AC	180 APP 4AC	29AC	180 APP 5AC	300	180 APP 6D
310	190	32AR	190 APP 1AR	33A	190 APP 2A
348	190 APP 3B	350	190 APP 4D	36A	190 APP 5A
378	190 APP 6B	388	190 APP 7B	390	190 APP 8D
40A	190 APP 9A	418	208	42A	208 APP 1A
438	208 APP 2B	44A	208 APP 3A	458	208 APP 4B
46A	208 APP 5A	47A	208 APP 6A	488	208 APP 7B
498	208 APP 8B	50A	208 APP 9A	518	208 APP 10B

DWG ISSUE	CD ISSUE	DATE ISSUE	DRAWN	APP'D
528	208 APP 11B	7-6-77	CDI	DLK GDP ABVL RCA
538	208 APP 12B	11-17-77	CDI	DLK WLF ABVL RCA
54AC	208 APP 13AC	11-17-77	CDI	DLK WLF ABVL RCA
558	208 APP 14B	9-25-78	CDI	JTT NSC SSK RCA
568	208 APP 15B	7-31-79	CDI	JTT JC DAV RW
57A	208 APP 16A	10-20-80	CDI	JTT LG DAV RW
58AC	208 APP 17AC	10-20-80	CDI	JTT LG DAV RW
598	208 APP 18B	6-19-81	CDI	JTT DAV RW
60A	208 APP 19A	6-19-81	CDI	JTT DAV RW
61B	208 APP 20B	7/21/82	PRN OEM PVS	ASM NAR DCJ

ISSUE 61B

IN99

COMMON SYSTEMS

MASTER TIMING CIRCUIT

FOR USE WITH
AUTOMATIC MESSAGE ACCOUNTING
CROSSBAR NO. 1 OR 5
CROSSBAR TANDEM
STEP BY STEP NO. 1
STEP BY STEP INTERTOLL DIALING
OR TOLL SWITCHING NO. 4A OR 4M OFFICE (2)
(MTO),(MTE),
(MT COM),(RCDR TST)

AT&TCO STANDARD

A&M ONLY FOR NO. 4M

SD-25633-01-A1

146 SHEETS

BELL TELEPHONE LABORATORIES

SHEET INDEX (CONT.)

CONTENTS	SHEET NO. PRIOR TO ISSUE 26	SHEET NO. CURRENT ISSUE	ISSUE NO. 31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	SHEET NO.
FS 31 PROVIDE "DAY CHANGE" AND "RATE CHANGE" PULSES TO RATE CALENDAR CKT	04,08	B41	31	31	33	33	35	35	37	37	37	37	41	41	43	43	43	46	47	47	49	49	49	49	49	49	49	49	49	49	49	49	49																			B41
APP FIG. 1		C1	31	31	31	31	31	31	31	38	38	38	41	41	43	43	45	46	47	47	47	47	51	52	52	52	55	55	55	55	55	55	55																			C1
APP FIG. 2		C2	31	31	31	31	31	31	31	38	38	38	41	41	43	44	44	46	47	47	47	47	51	52	52	52	55	55	55	55	55	55	55																			C2
APP FIG. 3, PART OF APP FIG. 4		C3	31	31	33	33	35	35	35	35	35	35	41	42	43	44	44	46	47	47	47	47	47	52	52	52	52	52	52	52	52	52	52																			C3
PART OF APP FIG. 4		C4	31	31	33	34	35	35	37	38	38	40	41	41	41	44	44	46	47	47	47	47	51	52	52	52	55	55	55	55	55	55	55																			C4
PART OF APP FIG 4, APP FIG 5,6		C5	31	31	31	31	31	31	31	38	38	38	41	41	41	41	41	46	46	46	46	46	51	52	52	52	55	55	55	55	55	55	55																			C5
APP FIG. 7,9		C6	31	31	31	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	58	58	58	58																			C6
PART OF APP FIG. 8		C7	31	31	31	31	31	31	31	31	31	31	41	41	41	41	45	45	45	45	45	45	51	52	52	52	52	52	52	52	52	52	52																			C7
		C8	31	31	31	31	31	31	31	31	31	31	41	41	41	41	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45																			C8
PART OF APP FIG. 8, APP FIG. 10-16		C9	31	31	31	31	31	31	31	31	31	31	41	41	41	41	45	45	45	45	45	45	45	45	45	45	45	56	56	56	56	56	56																			C9
APP FIG. 17		C10	31	31	31	31	31	31	31	31	31	31	41	41	41	41	45	45	45	45	45	45	45	45	45	45	45	56	56	56	59	59	59																			C10
APP FIG. 18,19		C11	31	31	31	31	31	31	31	31	31	31	41	41	41	41	45	46	46	46	46	46	46	46	46	46	55	56	56	56	56	56	56																			C11
APP FIG. 20		C12	31	31	31	31	31	31	31	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38																			C12
		C13	31	31	31	31	31	31	31	38	38	38	41	41	41	41	41	41	41	41	41	50	50	50	50	50	50	50	50	50	50	50	50																			C13
APP FIG 21, PART OF APP FIG. 22		C14	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31																			C14
PART OF APP FIG. 22		C15	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	54	54	54	54	54	54	54	54																			C15
APP FIG. 23-29		C16A*	31	31	31	34	34	34	34	34	34	34	41	41	44	44	45	46	47	47	47	47	47	52	52	52	55	55	55	55	55	55	55																			C16A
APP FIG. 30,31,32		C16B				34	35	35	35	38	39	39	39	39	39	39	39	39	39	39	39	39	51	51	53	53	53	53	53	53	53	53	53																			C16B
APP FIG. A		C17	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31																			C17
APP FIG. B,C,D		C18	31	31	31	31	31	31	31	31	31	31	41	41	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43																			C18
CIRCUIT NOTES 101,102	01	D1A*	31	32	32	34	35	35	35	38	39	39	39	39	43	43	45	46	47	48	48	50	51	52	53	54	55	56	56	56	59	59	59																			D1A
		D1B																	47	48	48	48	51	52	52	52	52	52	52	52	52	52	52																			D1B
CIRCUIT NOTES 103,104	01-04	D2A*	31	31	31	34	35	35	37	38	39	39	41	41	43	43	45	46	47	48	49	50	51	52	53	54	55	56	56	58	59	59	59																			D2A
CIRCUIT NOTES 105-118		D2B																							53	54	54	54	54	54	54	54	54																			D2B
CIRCUIT NOTES 119 TO END	01,04																																																			
EQUIPMENT NOTES 201 TO END	17																																																		
INFORMATION NOTES 301, 303	-	D3	31	31	31	31	31	31	37	38	38	38	41	41	43	43	45	46	47	48	49	49	51	52	52	54	55	56	56	58	59	59	61																			D3
INFORMATION NOTE 302	-	D4A*	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	52	52	52	52	52	52	52	52	52	52																			D4A
CROSS CONNECTING INFORMATION	18-20	D4B	31	31	31	31	31	31	37	38	38	38	41	41	43	43	45	46	47	48	48	49	51	52	52	52	52	52	52	52	52	52	52																			D4B
SC 1 TIME PULSES		E1A	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	49	55	55	55	55	55	55																			E1A
		E1B																			49	49	49	49	49	49	49	55	55	55	55	55	55																			E1B
SC 2 CONTROL OF TIMING SWITCHES HOUR, DAY, AND MONTH INFORMATION		E2	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	49	49	49	49	49	49	49																			E2
		E3	31	31	31	31	31	31	31	38	38	38	38	38	38	38	38	38	38	38	49	49	49	49	49	49	55	55	55	55	55	55	55																			E3
		E4A	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E4A
		E4B																			49	49	49	52	52	52	52	52	52	52	52	52	52																			E4B
		E4C																			49	49	49	49	49	49	55	55	55	55	55	55	55																			E4C
		E4D																			49	49	49	49	49	49	55	55	55	55	55	55	55																			E4D
SC 3 RECORDING OF HOURLY ENTRY - SIX SECOND TIMING ACCURACY		E5	31	31	31	31	31	31	31	31	31	31	31	31	31	31	45	46	46	46	49	49	49	49	49	49	55	55	55	55	55	55	55																			E5
		E6	31	31	31	31	31	31	31	38	38	38	38	38	38	38	38	46	46	46	49	49	49	49	49	49	55	55	55	55	55	55	55																			E6
		E7	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	46	46	46	49	49	49	49	49	49	55	55	55	55	55	55	55																			E7
SC 4 RECORDING OF END OF TAPE PATTERN 3 A.M.		E8	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E8
		E9	31	31	31	31	31	31	31	31	31	31	31	31	31	31	45	45	45	45	49	49	49	49	49	49	55	55	55	55	55	55	55																			E9
	-	E10	31	31	31	31	31	31	31	31	31	31	31	31	31	31	45	45	45	45	49	49	49	49	49	49	55	55	55	55	55	55	55																			E10
		E11	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E11
		E12	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E12
SC 5 RECORDING OF END OF PATTERN WINDOW SPLICE OR MAKE BUSY		E13	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E13
		E14	31	31	31	31	31	31	31	31	31	31	31	31	31	31	45	46	46	46	49	49	49	49	49	49	55	55	55	55	55	55	55																			E14
		E15	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E15
		E16	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E16
		E17	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E17
		E18	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E18
SC 6 TIMEOUT FAILURE TO COMPLETE END OF TAPE RECORD		E19	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E19
		E20	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E20

* SHEETS WITH SUFFIX A WERE FORMERLY WITHOUT A SUFFIX LETTER.

DRAWING ISSUE	
31D	WPR, WEC, AMH
32AR	WPR, WEC, AMH
33A	WPR, WEC, AMH
34B	OMC, PGH, AMH
35D	WPR
36A	
37B	
38B	

ISSUE 61B

MASTER TIMING CIRCUIT (2) SD-25633-01-A2

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-A2

STABILO

SHEET INDEX

CONTENTS	SHEET NO. PRIOR TO ISSUE 26	SHEET NO. CURRENT ISSUE	ISSUE NO. 31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	SHEET NO.
SC 7 RECORDING OF END OF TAPE PATTERN RECORDER TRANSFER		E21	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E21
		E22	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	45	45	45	49	49	49	49	49	49	55	55	55	55	55	55	55																			E22
		E23	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E23
		E24	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E24
SC 8 TIME TO MASTER TEST FRAME OR TROUBLE RECORDER FRAME		E25A*	31	31	31	31	31	31	37	37	37	37	37	37	37	37	37	37	37	37	49	49	49	52	52	52	52	52	52	52	52	52	52																			E25A
SC 9 SHORT AND LONG TIMERS AND SEIZURE OF TROUBLE RECORDER (TIME OUT AND TROUBLE)		E25B																			49	49	49	49	49	49	49	49	49	49	49	49	49																			E25B
SC 10 TRANSFER OF TIMERS AND GENERATION OF PULSES		E26A*	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	49	49	49	49	49	49	49																			E26A
		E26B																			49	49	49	49	49	49	49	49	49	49	49	49	49																			E26B
SC 11 MASTER TIMING RECORDER CONTROLLER CIRCUIT MAKE BUSY SC 12 MASTER TIMER MAKE BUSY, PULSE ALARMS AND RECORDER GROUPING SC 13 MASTER TIMER, RECORDER TIMING CHECK PATHS, & SELECTOR SYNCHRONIZATION SC 14 PULSE FAILURE ALARM SC 15 EXERCISE THE SELECTORS		E27	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	52	52	52	52	52	52	52	52	52	52																			E27
SC 16 AMA RECORDER TEST RECORDER OF TEST GROUP ENTRY		E28	31	31	31	31	35	35	37	37	37	37	37	37	37	37	37	45	45	45	49	50	50	50	50	50	55	55	55	55	55	55	55																			E28
		E29	31	31	31	31	35	35	35	35	35	35	35	35	35	35	35	35	35	35	49	49	49	49	49	49	55	55	55	55	55	55	55																			E29
		E30	31	31	31	31	35	35	37	37	37	37	37	37	37	37	37	45	45	45	49	49	49	49	49	49	55	55	55	55	55	55	55																			E30
		E31	31	31	31	31	35	35	35	35	35	35	35	35	35	35	35	45	45	45	49	49	49	49	49	49	49	49	49	49	49	49	49																			E31
		E32	31	31	31	31	35	35	35	35	35	35	35	35	35	35	35	35	35	35	49	49	49	49	49	49	55	55	55	55	55	55	55																			E32
		E33	31	31	31	31	35	35	35	35	35	35	35	35	35	35	35	35	35	35	49	49	49	49	49	49	55	55	55	55	55	55	55																			E33
		E34	31	31	31	31	35	35	35	35	35	35	35	35	35	35	35	35	35	35	49	49	49	49	49	49	55	55	55	55	55	55	55																			E34
		E35	31	31	31	31	35	35	35	35	35	35	35	35	35	35	35	35	35	35	49	49	49	49	49	49	55	55	55	55	55	55	55																			E35
		E36	31	31	31	31	35	35	35	35	35	35	35	35	35	35	35	45	45	45	49	49	49	49	49	49	49	49	49	49	49	49	49																			E36
SC 17 AMA RECORDER REQUESTS THE MASTER TIMER WHILE IT IS BUSY MAKING A RECORDER TEST		E37	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	49	49	49	49	49	49	55	55	55	55	55	55	55																			E37
SC 18 NO PAPER ALARM RECORDING OF TAPE FEED ENTRY		E38	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	46	46	46	49	49	49	49	49	49	55	55	55	55	55	55	55																			E38
SC 19 PAPER - TAKE UP ALARM		E39				34	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	55	55	55	55	55	55	55																			E39
SC 20 RECORDING OF TEN MINUTE ENTRY		E40																			49	49	49	49	49	49	55	55	55	55	55	55	55																			E40
SC 21 RECORDING OF HOURLY ENTRY ONE SECOND TIMING		E41																			49	49	49	49	49	49	55	55	55	55	55	55	55																			E41
SC 22 BILLING DATA TRANSMITTER TYPICAL RECORDING OPERATION WITH PERFORATOR REMOVED SC 23 CAMA-C SYSTEM TYPICAL RECORDING OPERATION WITH PERFORATOR REMOVED		E42																								55	55	55	55	55	55	55																			E42
CKT REQT TABLES DT MEG TO BT REL		F1	31	31	31	34	35	35	35	35	35	35	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41																			F1
CKT REQT TABLES CA TO DL1 REL		F2	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31																			F2
CKT REQT TABLES DLR TO HE REL		F3	31	31	33	33	33	33	33	33	33	33	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41																			F3
CKT REQT TABLES HH TO OST REL		F4	31	31	31	31	31	31	31	38	39	39	41	41	41	41	41	46	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47																			F4
CKT REQT TABLES P TO RS REL	12-16	F5	31	31	31	31	31	31	31	31	31	31	41	41	43	43	45	45	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47																			F5
CKT REQT TABLES RSC TO TDO1 REL		F6	31	31	31	31	31	31	31	31	31	31	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41																			F6
CKT REQT TABLES TDO2 TO UD REL		F7	31	31	31	31	31	31	31	31	31	31	41	41	41	44	44	46	46	46	46	46	51	51	51	51	51	51	51	51	51	51	51																			F7
CKT REQT TABLES UH TO END TIMING REQT TABLES		F8	31	31	31	34	35	35	37	37	37	37	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	56	56	56	56	56	56																			F8
PART OF CAD 1	18	G1	31	31	33	33	33	33	33	33	39	39	41	41	43	43	43	43	43	43	43	43	43	43	43	43	55	55	55	58	58	58	58																			G1
		G2	31	31	31	31	35	36	36	36	39	39	39	39	43	43	43	43	43	43	43	43	51	51	53	53	53	53	53	53	53	53	53																			G2
PART OF CAD 1 AND 2	18,19	G3	31	31	31	31	31	31	31	38	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39																			G3
PART OF CAD 2	19	G4	31	31	33	33	33	33	37	38	38	38	41	41	43	43	43	46	46	47	47	47	47	47	47	47	55	55	55	58	58	58	58																			G4
		G5	31	31	31	31	35	36	36	36	39	39	39	39	43	43	43	43	47	48	48	50	51	51	53	53	53	53	53	53	59	59	59																			G5
CAD 3	20	G6	31	31	31	31	31	31	31	31	31	31	31	31	31	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45																			G6
CAD 4	20	G7	31	31	31	31	35	35	35	38	38	38	38	38	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43																			G7
CAD 5,6,7,8,9	18-20	G8	31	31	31	34	35	35	35	38	39	39	39	39	39	39	39	39	39	39	39	39	39	52	52	52	52	52	52	52	52	52	52																			G8
CAD 10	-	G9											41	41	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43																			G9

* SHEETS WITH SUFFIX A WERE FORMERLY WITHOUT A SUFFIX LETTER.

DRAWING ISSUE

31D	HPF, MEG, AMB
32AR	RPS, NC, AMB
33A	RPS, NC, AMB
34B	DMC, BM, AMB
35D	NF
36A	
37B	
38B	

ISSUE 61B

MASTER TIMING CIRCUIT (2) SD-25633-01-A3

BELL TELEPHONE LABORATORIES INCORPORATED — SIZE 6S

SD-25633-01-A3

STABILO

APPARATUS INDEX

DESIG	LOCATION FS	APP FIG.	EQUIP.
RELAYS			
043A	41C0	4	
043B	41E0	4	
1CL	11C6	8	
2R	32B6	20	
2R1	32B0	20	
2R2	32E0	20	
3AM	11G0	4	
3E	11E0	23	
18A	41C0	4	
18B	41D0	4	
20A	41D0	4	
21B	41F0	4	
30	41C5	4	
32	34E0	20	
37	34F0	20	
233	34B0	22	
234	33A7	22	
235	34C0	22	
238	34G0	22	
239	34G0	22	
A	26B0	8	
A1	13F7	8	
ACO	31G3	19	
AD	38D0	20	
AD1	38D0	20	
ADL	32B2	20	
ADV	2A/D1	4	
AL	31G2	30	
ALM	31E3	19	
AP1	33B1	22	
AP2	33G1	22	
AP3	34A2	22	
AP4	33C1	22	
AP5	33D1	22	
AP6	33E1	22	
AP7	33F1	22	
AP8	34A4	22	
AP9	33F5	22	
AP10	33E4	22	
AP11	3384	22	
AP12	33G4	22	
AP13	33C4	22	
AP14	34C7	22	
AP15	34A7	22	
AP16	33C7	22	
APR	36D3	20	
APT	36E3	20	
B	26A0	8	
B1	13F7	8	

DESIG	LOCATION FS	APP FIG.	EQUIP.
RELAYS			
BE1	10F6	1	
BE2	10F6	1	
BLK	36F2	22	
BO1	10G6	2	
BO2	10G6	2	
BT	35B5	20	
CA	32E2	20	
CA1	32C2	20	
CAS	37A3	20	
CC	1684	8	
CCRT-	40E6	27	
CCT	40E1	29	
CE	7B7	1	
CE1	7B7	1	
CK	23F4	8	
CKC	36G3	22	
CKE	7B0	1	
CKO	7C0	2	
CKR	24A1	17	
CO	7B7	2	
CO1	7C7	2	
CO1E	14A7	21	
CO10	14A7	21	
CO2E	1487	21	
CO20	14C7	21	
CO3E	1487	21	
CO30	14C7	21	
CO4E	14D7	21	
CO40	14D7	21	
CO5E	14E7	21	
CO50	14F7	21	
CO6E	14F7	21	
CO60	14G7	21	
COM	1301	21	
COP	18F2	8	
CSE	7B0	1	
CSO	7A0	2	
CSY	10H5	26	
CTS	10D7	26	
D1	26C0	8	
DA	18E0	8	
DAT	383	4	
DC	18E0	8	
DH	3D3	4	
DL	24G6	17	
DL1	24D2	17	
DLR	24A1	17	
DR1	5A0	A	
DR1	6A0	B	

DESIG	LOCATION FS	APP FIG.	EQUIP.
RELAYS			
DR2	5B0	A	
DR2	6B0	B	
DR3	5C0	A	
DR3	6C0	B	
DR4	5D0	A	
DR4	6D0	B	
DR5	5E0	A	
DR6	5F0	A	
DRL	17H4	8	
DRP	10E7	26	
DT	9F4	4	
DTH	3C3	4	
DTN	35C5	20	
DTNP1-4	34D0	22	
DU	9C4	4	
E	2600	8	
ECH	7A4	1	
ECHA	7A4	1	
EPG	2A/G5	1	
ER	38F0	20	
ERD	16E2	1	
ERE	27F6	9	
ERO	27E6	7	
ESE	12H7	9	
ESO	12H6	7	
ESP	18C3	8	
EST P	22E1	13	
S	12H3		
ET	11A8	8	
ET1	11D8	8	
ETE	11C0	1	
ETM	32E4	20	
ETO	1100	2	
ETS	11E8	8	
EXA	30C0	4	
EXD	3080	4	
EXH	30A0	4	
EXM	3080	4	
EXR	30C0	A,B	
FA	3187	24	
FA1	31C5	24	
FA2	31A6	24	
GEO	27B6	7	
GOE	27C6	9	
GR	27F2	9	
GR1	27F2	9	
GRE	27A6	7	
GRO	27C6	9	
GU	38A5	20	

DESIG	LOCATION FS	APP FIG.	EQUIP.
RELAYS			
H	88/B5	4	
HA	28/D2	4	
HAA	28/E2	4	
HE	4A/F4	1	
HH	2A/E6	4	
HHR	41F0	4	
HL	7C4	3	
HO	4A/H3	2	
HRE	4A/G9	8	
HRN	4A/H9	8	
HRT	2A/F1	4	
HRT1	28/E7	23	
HRTA	4A/B6	31	
HRTB	4A/B6	31	
HRTC	4A/B6	31	
HT	984	4	
HTH	28/C2	4	
HU	9A4	4	
HUA	28/G2	4	
HUH	28/C1	4	
ICK	35C5	20	
KRB	22E6	20	
LC1	17D5	8	
LC2	17C5	8	
LC3	17A6	8	
LC4	17A4	8	
LOK	36H1	20	
LT1	2300	17	
LT2	23C1	17	
LT3	23C2	17	
LT4	23C2	17	
LT5	23C3	17	
LT6	23C4	17	
LT7	23C4	17	
LT8	23C5	17	
LT9	23C5	17	
LTA	25C3	17	
LTB	23C6	17	
LTR	24H6	17	
M	9G4	4	
MA P	388	A	
S	5G0		
MA P	388	B	
S	6E0		
MA1	5G6	A	
MA1	6A5	B	
MBE	27F1	1	
MBO	27F1	2	
MC	18G0	8	
MD	3F8	A,B	
MDA	28/F3	4	
MGE	18H0	8	
MGN	18H0	8	
MO	18G0	8	
MOH	3F6	4	
MT1	28F7	3	
MT4	28G7	3	
MU2	28/G8	3	

DESIG	LOCATION FS	APP FIG.	EQUIP.
RELAYS			
NS	1845	8	
OC	11C8	8	
OCH	7A4	2	
OCHA	7A4	2	
OME	28G4	23	
OMO	28H4	23	
ON	3202	20	
OPG	2A/G5	2	
ORD	16G2	2	
ORE	27D6	9	
ORO	27D6	7	
ORP	10E6	26	
OST	12C1	20	
P	10F0	4	
P'	32F4	20	
P1	1781	8	
P1'	3640	20	
P1A	1786	8	
P1A'	3605	22	
P1E	1060	1	
P10	1060	2	
P2	1781	8	
P2A	1786	8	
P2E	10E0	1	
P20	10E0	2	
P3	1781	8	
P3A	17C6	8	
P4	1701	8	
P4A	17D6	8	
P5	17E1	8	
P5A	17E6	8	
P6	17F1	8	
P6A	17E6	8	
P7	17F1	8	
P7A	17F6	8	
P8	17G1	8	
P8A	17G6	8	
PC	17G4	8	
PE	1A0	1	
PF	31F2	18	
PF1	31G5	18	
PFA	31C2	18	
PH	32C4	20	
PLXE	15A6	21	
PLXO	15C6	21	
PN1,2,6,8,13,15	33A0	22	
PN3	33D4	22	
PN4	33C0	22	
PN5	33F0	22	

DESIG	LOCATION FS	APP FIG.	EQUIP.
RELAYS			
PN7	3300	22	
PN9	33E0	22	
PN10	34A0	22	
PN11	33A7	22	
PN12	3480	22	
PN14	33F7	22	
PN15	3383	22	
PO	1A0	2	
PRE	27F6	9	
PRO	27G6	7	
PSA	40B8	3	
PSB	40C8	3	
PTO	18G2	8	
PTR	18C7	8	
PTRA	18H4	8	
RA	3106	19	
RC	707	4	
RC'	38E2	20	
RCCK	24E7	17	
RCE	16A8	8	
RCE1	38A0	20	
RCE2	38A0	20	
RCE3	3880	20	
RCK	36C0	20	
RCO	1608	8	
RCO1	3880	20	
RCO2	3880	20	
RCO3	38C0	20	
RCT	18G4	8	
RDO	5A8	A	
RDO	6A9	B	
RD1	5B8	A	
RD1	6A9	B	
RD2	5B8	A	
RD2	689	B	
RD3	5C8	A	
RD3	6B9	B	
RD4	5C8	A	
RD4	6C9	B	
RD5	5D8	A	
RD5	6C9	B	
RD6	6C9	B	
RD7	6D9	B	
RD8	6E9	B	
RD9	6F9	B	
RET	11C6	8	
RET1	3C9	8	
RH	5F3	A	
RH	6E3	B	
RK	25F1	17	
RKA	25G3	17	

DRAWING ISSUE
30 GTA KEC ARO
33A RPS KC PO
34B CMC PM ARO
38B

ISSUE 55B

MASTER TIMING CIRCUIT (2) SD-25633-01-A4

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-A4

STABILO

APPARATUS INDEX (CONT)

DESIG	LOCATION FS	APP FIG.	EQUIP.
RELAYS			
RKO	25A0	17	
RLS	37G1	8	
RN	18F0	8	
ROS	18H5	8	
RS	13F5	8	
RSC	18A2	8	
RTS	38D0	20	
RW	37E1	20	
RW1	37D1	20	
RW2	38H0	20	
RWC	37C3	20	
SA	10D0	3	
SC	18E0	8	
SC1	18E0	8	
SCE	13A3	9	
SCO	13B3	7	
SE	10B0	1	
SFA	31H5	19	
SKA	18D0	8	
SKP	18D0	8	
SLO	37B3	20	
SO	10C0	2	
SP	18G5	8	
SPA	18C0	8	
SPT	18C0	8	
SR	2A/G1	4	
SRC	88/E5	2	
SS	17G4	8	
SSF	31B0	19	
ST- P	22G1	10	
S	12H5		
ST- P	22G1	11	
S	12H5		
ST- P	22H1	12	
S	12H4		
ST- P	22E1	14	
S	12H3		
ST- P	22D1	15	
S	12H2		
ST- P	22C1	16	
S	12H1		
STC	88/D5	4	
STE	12C0	20	
STH	2A/D6	4	
STL	7C5	3	
SY	18B6	8	
T	8E6	4	
T(0,1,2,4,7)E	48/F4	5	
T(0,1,2,4,7)O	48/F4	6	
TA	2A/A6	4	
TAP	34E0	20	
TBE	13E1	7	
TBO	13F1	9	
TBR	24A5	8	

DESIG	LOCATION FS	APP FIG.	EQUIP.
RELAYS			
TC	38F4	20	
TCE	16A2	1	
TCO	16B2	2	
TDE	16C2	1	
TDE1	16D0	1	
TDE2	16G0	23	
TDO	16D2	2	
TDO1	16E0	2	
TDO2	16G0	23	
TE	32B6	20	
TEA	1C0	1	
TEB	1C0	2	
TER	16F2	1	
TFE	27A0	1	
TFO	27C0	2	
TFT	16C5	7	
TGT	17C1	8	
TH	2A/C6	4	
TIB	24B6	17	
TL	7C4	3	
TLCP	41C3	4	
TLK	32A2	20	
TM1	25C0	17	
TM2	25F6	17	
TM3	2583	17	
TM4	25A3	17	
TM5	2580	17	
TM6	2580	17	
TME	16C2	1	
TMEI	16E0	1	
TMH	2B/C7	3	
TMO	16E2	2	
TMO1	16F0	2	
TMP	23E2	17	
TMR	24E2	17	
TMT	2A/G6	4	
TMTE	28/D5	1	
TMTO	28/E5	2	
TOA	1D0	2	
TOB	1D0	1	
TOK	3505	20	
TOR	16G2	2	
TPC	37E1	20	
TRI	2A/B1	23	
TRTE	4A/G0	1	
TRTO	4A/H0	2	
TS	10A5	2	
TSI	10B5	2	
TSC	29A0	26	
TSF	3185	19	
TSP	1883	8	
TSPP	7A0	1	
TST1	38E0	20	
TST2	38H0	20	
TT	10E5	C,D	
TTE	1B0	1	
TTO	1B3	2	
TTOA	1B4	2	
TTS	1004	26	
TVM	3200	20	
TW	4001	28	
TZ	4001	28	
U	8A/C6	4	
U(0,1,2,4,7)E	48/B4	5	
U(0,1,2,4,7)O	48/B4	6	
UA	28/B7	4	
UB	28/C8	4	
UC	28/A4	4	
UD	28/A8	4	

DESIG	LOCATION FS	APP FIG.	EQUIP.
RELAYS			
UH	2A/A2	4	
UL	7B4	3	
UW	28/F5	4	
UZ	28/G5	4	
WHR	41G0	4	
W	31E1	30	
XPE	14D2	21	
XPE1	15D2	21	
XPO	14D5	21	
XPO1	1504	21	
Z	31E1	30	
COMPOENENT ASSEMBLIES			
CAO		3	
CA1		4	
PTU1	SEE	30	
PTU2	APP	30	
PTU3	FIG	30	
RIO		32	
RI1		32	
RI2		32	
CAPACITOR			
PF	31D1	18	
PF1	31D0	18	
T	18A1	8	
TI	1880	8	
TM	25G9	17	
TM1	25G8	17	
DIODE			
C0	1B8	32	RIO
C1	1B7	32	RIO
C2	1B8	32	RIO
C3	1B7	32	RIO
C4	1B8	32	RI1
C5	1B7	32	RI1
C6	1B8	32	RI1
C8	1B8	32	RI2
C9	1B7	32	RI2
C20	1B8	32	RIO
C21	1B7	32	RIO
C22	1B8	32	RIO
C23	1B7	32	RIO
C24	1B8	32	RI1
C25	1B7	32	RI1
C26	1B8	32	RI1
C27	1A8	32	RI1
C28	1B8	32	RI2
C29	1B7	32	RI2
D1	2B/B7	4	CA1
D2	2B/A7	4	CA1
D3	2B/C5	4	CA1
D4	2B/C7	4	CA1
DHE	3G2	3	CA0
DHO	3G2	3	CA0
EMER	1A8	32	RI1
PTU0-29	31H2	30	
PTUEM	31H2	30	
STA	23A7	20	
STB	23B7	20	
TMT	2A/G6	4	
TMTE	2A/G6	4	CA0
TMTO	2A/G6	4	CA0
TRE	2A/B6	3	CA0
TRO	2A/B6	3	CA0

DESIG	LOCATION FS	APP FIG.	EQUIP.
KEYS			
CKL		3	
CLT		3	
CMBE		3	
CMBO		3	
EXD	SEE	3	
EXH	APP	3	
EXM	FIG.	3	
EXR		3	
MSE		26	
MSO		26	
S		3	
T		26	
LAMPS			
CMBE	27G1	3	
CMBO	27G1	3	
DR1-6	7E4	3	
DTO-3	9F3	3	
DUO	9D1	3	
DU1-5	9C1	3	
DU6-9	9D1	3	
ECH	7E7	3	
ET	1B0,E0	3	
ETFE	11C0	3	
ETFO	11E0	3	
HO-5	8B/B2	3	
HRTA	4A/G4	31	
HRTB	4A/H4	31	
HRTC	4A/H4	31	
HTO-2	9C1	3	
HUO-9	9A1	3	
M1-12	9H3	3	
OCH	7E7	3	
OS	7F4	4	
OT	1B3	3	
PE	7G6	3	
PF	3102	18	
PO	7H6	3	
PTU0-9	31H1	30	
PTU10-19	31H1	30	
PTU20-29	31H1	30	
PTUEM	31H1	30	
RDO-9	7D4	3	
SE	10A0	3	
SO	10C0	3	
SSF	31D3	19	
STO-5	88/C2	3	
TO-9	8A/F2	3	
TSF	3105	19	
UO-9	8A/C2	3	
RESISTORS			
A	14A1	21	
AA	14G1	21	
AB	14G1	21	
AC	14H1	21	
AD	14H1	21	
AE	14H1	21	
AF	14A4	21	
AG	14A4	21	
AH	14A4	21	
AI	14B4	21	
AJ	14B4	21	
AK	14B4	21	
AL	14B4	21	
AM	14C4	21	
AN	14C4	21	
AO	14C4	21	

DESIG	LOCATION FS	APP FIG.	EQUIP.
RESISTORS			
AP	14C4	21	
APT	36E4	20	
AQ	14D4	21	
AR	14D4	21	
AS	14D4	21	
AT	14E4	21	
AU	14E4	21	
AV	14E4	21	
AW	14E4	21	
AX	14F4	21	
AY	14F4	21	
AZ	14F4	21	
B	14A1	21	
BA	14G4	21	
BB	14G4	21	
BC	14G4	21	
BD	14G4	21	
BE	14H4	21	
BF	14H4	21	
BG	14H4	21	
BT	35B5	20	
C	14A1	21	
CA	32E3	20	
CB	22E5	20	
D	1481	21	
DTK	38F4	20	
E	1481	21	
F	1481	21	
FA	3147	24	
FAE	3186	24	
FAO	3186	24	
G	1481	21	
GC1	38F4	20	
GU	38A6	20	
H	14C1	21	
IR	3885	20	

DESIG	LOCATION FS	APP FIG.	EQUIP.
RESISTORS			
J	14C1	21	
K	14C1	21	
L	14C1	21	
M	14D1	21	
MJ	31F5	19	
N	14D1	21	
ON	32D2	20	
OP	18F2	8	
OT	39C1	22	
OT1	39C0	22	
OT2	39C3	22	
P	14D1	21	
PCK	36G4	22	
PF1	3101	18	
PF2	3100	18	
PF3	3100	18	
R	14E1	21	
RC	38F2	20	
RC1	38F2	20	
RC2	38F3	20	
RCK	3506	20	
RK	25F0	17	
RW	37E1	20	
RW1	37E5	20	
S	14E1	21	
SE	12C0	20	
SLO	37B2	20	
SO	12C1	20	
T	14E1	21	
T1	18A1	8	
T2	18A0	8	
T4	18A0	8	
TA	24E1	17	
TB1	2486	17	
TF	26E0	18	
TLA,B	41D3	4	
TLC	41E3	4	
TLD	41F3	4	
TLE	41F3	4	
TM	25F8	17	
TM2	25F8	17	
TM3	25F9	17	
TM4	25F9	17	
TP	22C1	17	

DRAWING ISSUE
31D (67M, KEC, AHO)
34B (CMC, RMM, AE)
38B

ISSUE 55B

STABILO

SD-25633-01-A5

MASTER TIMING CIRCUIT (2)

BELL TELEPHONE LABORATORIES INCORPORATED

SIZE 6S

SD-25633-01-A5

APPARATUS INDEX (CONT)

DESIG	LOCATION FS	APP FIG.	EQUIP.
RESISTORS (CONT)			
TR	18C8	8	
TS	35G5	20	
TT	10F5	26	
TWTZ	4000	28	
U	14E1	21	
UW	2B/F4	4	
UZ	2B/G4	4	
V	14F1	21	
W	14F1	21	
X	14F1	21	
XPE	14E2	21	
XPO	14E5	21	
Y	14G1	21	
Z	14G1	21	

DESIG	LOCATION FS	APP FIG.	EQUIP.
TUBES, ELECTRON			
PF	3100	18	
SP	18A0	8	
TM	25F8	17	

SELECTORS			
DT	SEE APP FIG.	4	
DU		4	
H		4	
HT		4	
HU		4	
M		4	
RD		A,B	
ST		4	
T		4	
TS		20	
U		4	

TEST POST			
MTCE	24F3	3	

TIMERS			
TE	SEE APP FIG.	1	
TO		2	

LEAD INDEX CONNECTING CIRCUITS

CIRCUIT TITLE	LEAD INDEX TABLE LOC	SYSTEM: NO. 1 CROSSBAR	NO. 5 CROSSBAR	TANDEM CROSSBAR	NO. 4A OR 4M TOLL	SXS NO. 1	SXS IT. DIALING OFF WITH CAMA	
22 VOLT, 60 CYCLE POWER SUPPLY CKT	7A0	✓	✓	✓	✓	✓	✓	
ALARM CKT	7B0		✓			✓	✓	
AUTOMATIC INCOMING TRUNK TEST CKT	7C0				✓			
AUTOMATIC TRUNK TEST CKT	7D0					✓		
BILLING DATA TRANSMITTER CKT	7G8	✓	✓	✓	✓	✓	✓	✓
CALL COUNT PROCESS CONTROL STORAGE AND REGISTER CKT	7E0	✓	✓			✓	✓	
COMMON RELEASE CONTROL CKT	7F0					✓		
DECODER MARKER TEST AND TROUBLE RECORDER CKT	7G0				✓			
FLOOR ALARM FRAME, FUSE AND TIME ALARM CKT	7A1	✓		✓	✓			
JACK, KEY, AND LAMP CKT FOR TROUBLE RECORDER FRAME	7B1					✓		
JACK, KEY, AND LAMP CKT FOR TROUBLE TICKETER FRAME	7G1						✓	
MASTER TEST FRAME CONNECTOR CKT	7D2		✓					
MASTER TEST FRAME - JACK, LAMP, AND KEY CKT	7H5		✓					
MASTER TEST FRAME PLANT REGISTER CKT	7E6		✓					
MASTER TEST FRAME TRUNK TEST CKT	7G7		✓					
MESSAGE REGISTER PULSE JUNCTOR CKT	7G7		✓					
MISC CKT FOR ALL FRAMES	7F6		✓					
MISC CKT FOR MASTER TIMING FRAME	7A7	✓		✓	✓	✓	✓	
MISC CKT FOR PERFORATOR CABINET	7E7	✓		✓	✓	✓	✓	
MISC CKT FOR RECORDER FRAME	7A8	✓		✓	✓	✓	✓	
MISC CKT FOR TV TROUBLE INDICATOR FRAME	7B8	✓		✓				
MISC CKT FOR TROUBLE RECORDER FRAME	7F8			✓	✓			
OFFICE TEST FR TROUBLE INDICATOR AND CONNECTOR CKT	10A1		✓					
PLANT REGISTER CKT FOR TROUBLE RECORDER FRAME	7B1					✓		
PLANT REGISTER CKT FOR TROUBLE TICKETER FRAME	7G1						✓	
RATE CALENDAR CKT	8E0			✓				
RECORDER AND RECORDER CONNECTOR CKT	8G0	✓	✓	✓	✓	✓	✓	
TIMER LINK CKT	10A2			✓				
TRAFFIC SERVICE POSITION	10B2							
TROUBLE RECORDER CONNECTOR CKT	9A2			✓		✓		
TROUBLE RECORDER CONTROL CKT	9F5		✓					
TROUBLE RECORDER CONTROL AND TEST CKT	9G5		✓	✓		✓		
TROUBLE TICKETER CKT	9A6						✓	
TRUNK AND OUTPULSER TEST CKT	10C2					✓		
TV GROUP TROUBLE RECORDER CONNECTOR CKT	8A5				✓			
TV TROUBLE INDICATOR CKT	8A9	✓		✓				

DRAWING ISSUE
310
378

ISSUE 59B

SD-25633-01-A6

MASTER TIMING CIRCUIT (2)

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-A6

LEAD INDEX

(SEE LEAD INDEX CONNECTING CIRCUITS-A6)

DESIG	FS LOC	CAD LOC
22 VOLT, 60 CYCLE POWER SUPPLY CKT		
GRD	29E1	8F0, 8H0
MTE±	29E1	8F0
MTO±	29F0	8H0

ALARM CKT		
AL	31G7	2G8
FA	31G7	2C3, 2G8
MA	31G7	2G8
MJ	31G7	2G3, 2G8
MN	31E7	

AUTOMATIC INCOMING TRUNK TEST CKT		
TM	40A3	4C5

AUTOMATIC TRUNK TEST CKT		
1IPM	40B3	4C5
C19	1G7	5A2

CALL COUNT PROCESS CONTROL STORAGE AND REGISTER CKT		
CC	40E0	8A0

COMMON RELEASE CONTROL CKT		
C17	1D8	5C2
C18	1D8	2D7

DECODER MARKER TEST AND TROUBLE RECORDER CKT		
DT0,1,2,4,7	20E1	2B0
DU0,1,2,4,7	21E4	2B0
HT0,1,2,4,7	4A/B8	5F2
HU0,1,2,4,7	4A/B8	5F2
MT0,1,2,4,7	28D3	2B0
MU0,1,2,4,7	28D3	2B0
TML	2A/B0	2D2
TMS	16B1	2D2

DESIG	FS LOC	CAD LOC
FLOOR ALARM FRAME, FUSE AND TIME ALARM CKT		
AL	31G7	2C3, 2G8
FA	31G7	2G8
MA	31G7	2C3, 2G8
MJ	31G7	2G8

JACK, KEY, AND LAMP CKT, PLANT REGISTER CKT FOR TROUBLE RECORDER FRAME		
CMBE	27H0	5F5
CMB0	27H0	5F5
DL		2D0,
DLB	24G8	
ETSR	1281	5F5
LK	24D1	
MJ	24D1	
MTE	24A7	2E0
MTO	24A7	5F5
MTTRE	24H1	2H2
MTTRO	24H1	5A5
R	37A6	5F5
RIT	37D7	5F5
RUT	37C7	5F5
RW	37C7	5F5
T	37B5	5F5
TSR0,2,--,28	1281	2E0
TSR1,3,--,29	1281	5F5
TSSE	1280	5F5
TSSO	1281	5F5

JACK, KEY, AND LAMP CKT, PLANT REGISTER CKT FOR TROUBLE TICKETER FRAME		
CMBE	27H0	
CMB0	27H0	
DL	24G8	2D0
DLB	24G8	
LK	24D1	

DESIG	FS LOC	CAD LOC
JACK, KEY, AND LAMP CKT, PLANT REGISTER CKT FOR TROUBLE TICKETER FRAME		
MJ	24D1	
MTE	24A7	2E0
MTO	24A7	
MTTRE	24H1	2H2
MTTRO	24H1	5A5
R	37A6	
RIT	37D7	
RUT	37C7	
RW	37C7	
T	37B5	

MASTER TEST FRAME CONNECTOR CKT		
A	23B9	1B7, 4B7
A'0,1,2		1A0, 4A0
ASP	28E0	1B7, 4B7
B	28B9	1B7, 4B7
B'0,1,2,4,7		1H4, 4H3
BSP	28A0	1B7, 4B7
CO	13D8	5C5
C'0,1,2,4,7		1H4, 4H3
CI	13D8	5C5
D	28A0	1B7, 4B7
D'0,1,2,4,7		1A0, 4A0
DA	28E0	1C7, 4B7
DL	24E8, 24E6	
DS		1H4, 4H5
DT0,1,2,4,7	20E1	2B0
DU0,1,2,4,7	21F4	2B0
E	28B9	1B7, 4B7
E'0,1,2,4,7		1A0, 4A0
ET	28A0	1C7, 4B7
F'0,1,2,4,7		1A0, 4A0

MASTER TEST FRAME CONNECTOR CKT		
HD	13C8	
HR	28A0	1C7, 4B7
HT0,1,2,4,7	4A/A8	2A7, 5F2
HU0,1,2,4,7	4A/A8	2A7, 5F2
MA0,1,2		1A0, 4A0
MB0,1,2,4,7		1H4, 4H3
MC0,1,2,4,7		1H4, 4H3
MD0,1,2,4,7		1A0, 4A0
ME0,1,2,4,7		1A0, 4A0
MF0,1,2,4,7		1A0, 4A0
MG	28E0	1C7, 4B7
MO	28E0	1C7, 4B7
MT0,1,2,4,7	28E0	2B0
MTCE		1A0, 4A0, 4B7
MTP		2F2, 5C5
MU0,1,2,4,7	28E0	2B0
NS	28D9	1B7, 4B7
P		1H4, 4H3
P1		1A0, 4A0
PCN	13C7	2F2
PT		1A0, 4A0
PT1		1H4, 4H3
PTS		1H4, 4H5
RCCK	24E7	2F2, 5C5
RD		1A0, 4A0
RG	28E0	
RN	28E0	1C7, 4B7
RST-EMG	28B9	5D7

MASTER TEST FRAME CONNECTOR CKT		
RST0,2,--,28	28B9	2E2
RST1,3,--,29	28D9	5D7
RT1E	15H6	1G0
RT10	15H6	1G0, 4G0
RT3E	15G8	1G0, 4G0
RT30	15G8	1G0, 4G0
RTI		1A0, 4A0
SC	28E0	1C7, 4B7
SKP	28E0	1C7, 4B7
SP	28A0	1B7, 4B7
SPA	28E0	1B7, 4B7
SY	28E0	1B7, 4B7
T0,1,2,4,7		1H4, 4H5
TBL		1H4, 4H3
TEN	28E0	5D7
TPR	13E8	2F2
TRB	24D7	2F2, 5C5
TRST	24D7	2F2, 5C5
TV		1H4, 4H3
U0,1,2,4,7		1H4, 4H5
XPL	15D7	2E2, 5D7
XTC		1H4, 4H5

MASTER TEST FRAME JACK, LAMP, AND KEY CKT		
CMBE	27H0	5F5
CMB0	27H0	5F5
DL	24G8	2D0, 5F5

MASTER TEST FRAME JACK, LAMP, AND KEY CKT		
DLB	24G8	5F5
ETSR	1281	5F5
F	27A3	
FG		5F5
LK	24D1	5F5
MJ	24E1	5F5
MN	24E1	5H5
MTE	24A7	2E0
MTO	24A7	5F5
R	37A6	5F5
RIT	37D7	5F5
RUT	37C7	5F5
RW	37C7	5F5
T	37B5	5F5
TSR0,2,--,28	1281	2E0
TSR1,3,--,29	1281	5F5
TSSE	1280	5F5
TSSO	1281	5F5

MASTER TEST FRAME PLANT REGISTER CKT		
MTTRE	24H1	2H2
MTTRO	24H1	5A5

MISC CKT FOR ALL FRAMES		
+130	31A7	
2R	37E7	
ACO	31G4	
B	27B5	
FG	27A4	
MJ	31F7	
PTU--	31H2	8C4
PTUE	31H2	8C4
RET	11C5	
RIT	37C9	
RUT	37C9	
RW	37C9	

MISC CKT FOR MASTER TIMING FRAME		
2R	37E7	
ACO	31G4	
AR	31D7	
DB	27A2	
FA	31B7, 31C7	
FAI	31B7	
LTA	25C6	
R	37C9	
RIT	37C9	
RA	31D7	
RET	11C5	
RUT	37C9	
RW	37C9	
T	37C9	
TA	2401	

MISC CKT FOR PERFORATOR CABINET		
CCR-1	40F1	8C0
CCR-2	40G1	8C0
PTU--	31H2	8C4, 8G4
PTUE	31H2	8D4
R	37C9	5C5
RIT	37C9	5C5
RUT	37C9	5C5
RW	37C9	5C5
T	37C9	5C5

MASTER TEST FRAME TRUNK TEST CKT		
MTC	1C8	2A5

MESSAGE REGISTER PULSE JUNCTOR CKT		
MTI	1F1	
MT2	1G1	

DESIG	FS LOC	CAD LOC
MISC CKT FOR RECORDER FRAME		
R	37C9	5D5
RIT	37C9	5D5
RUT	37C9	5D5
RW	37C9	5D5
T	37C9	5D5

MISC CKT FOR TV TROUBLE INDICATOR FRAME		
CMBE	27H0	
CMB0	27H0	
ETSR	1281	
MR	24G1	
MTE	24B7	
MTO	24B7	
R	37A6	
RIT	37D7	
RUT	37C7	
RW	37C7	
T	37B5	
TIA	24F1	
TAP	24F1	
TSR-	1281	
TSSE	1280	
TSSO	1281	

MISC CKT FOR TROUBLE RECORDER FRAME		
CMBE	27H0	5F5
CMB0	27H0	5F5
LK	24H8	1C7

BILLING DATA TRANSMITTER CKT		
R	37A8	
RIT	37D8	
RUT	37D8	
STP	2388	5B7
STPG	2388	5B7
T	37A8	

DRAWING ISSUE

	GTM #6 AND
31D	
34B	GTM #4 AND

ISSUE 59B

MASTER TIMING CIRCUIT (2) SD-25633-01-A7

BELL TELEPHONE LABORATORIES INCORPORATED SHEET NUMBER 65

SD-25633-01-A7

STABILOKE

LEAD INDEX (CONT)

(SEE LEAD INDEX CONNECTING CIRCUITS - A6)

DESIG	FS LOC	CAD LOC
MISC CKT FOR TROUBLE RECORDER FRAME		
MTE	24B7	2E0
MTLRE	24M7	1C7
MTLRO	24M7	4A7
MTO	24B7	5F5
MTTRE	24H1	2H2
MTTRO	24H1	5A5
R	37A6	5F5
RIT	37D7	5F5
RUT	37C7	5F5
RW	37C7	5F5
T	37B5	5F5
TSR0,2,--,18	12A1	2E0
TSR1,3,--,19		5F5
TSSE	12B0	5F5
TSSO	12B1	5F5

DESIG	FS LOC	CAD LOC
RATE CALENDAR CKT		
DCPE	41A0	1B2
DCPO	41A0	4A2
EH	41B0	2B7, 5B7
H	41B0	2B7, 5A7
HH	41B0	2B7, 5A7
MBE	41A0	1B2
MBO	41A0	4A2
RCPE	41C9	1B2
RCPO	41C9	4A2
SF	31B5	8D0

DESIG	FS LOC	CAD LOC
RECORDER AND RECORDER CONNECTOR CKT		
A0,1,2	19A0	1H0, 4H0
AL	7F1	1E2, 4D2
AT	26B5	1E2, 4D2
B	26A5	1E2, 4D2
B0,1,2,4,7	19A1	1E2, 4D2

DESIG	FS LOC	CAD LOC
RECORDER AND RECORDER CONNECTOR CKT		
BT	35B7	1B0, 4B0
C0,1,2,4,7	19A3	1E2, 4D2
C-	19B, 1C8	2E5, 5E0
CC-	40G7	2G0, 5E7
CHL	7H3	4C5
CK	36F7	1B0, 4B0
COI	16F8	1B0, 4B0
D	26C5	1E2, 4D2
D0,1,2,4,7	19A6	1B0, 4B0
DL	24C1	1E2, 4D2
DTK	3B07	1E5, 4E5
DTK1	3B87	1E5, 4E5
DTN	35C7	1E5, 4E5
DS	3507	1E5, 4E5
E	2605	1B0, 4B0
E0,1,2,4,7	20A0	1E0, 4E0
EMER	13B	
ERT	12F5	
EST	22E0	
EXT	39A7	1E5, 4E5
F0,1,2,4,7	2180	1E0, 4E0
GCC-	40F5	8B0
GU	38A7	1E5, 4E5
H	10G2	1E2, 4D2
HL	4A/F0	
HR0-10	4A/H6	8C7
HR11-19	4A/H6	8C7
HR20-29	4A/H6	8C7
HRA0-29	4B/A9	9D0
HRAE	4B/A9	9D0
HREM	4A/H6	8C7
HT0,1,2,4,7	4A/E9	2E5, 5E0
HU0,1,2,4,7	4A/E9	2E5, 5E0

DESIG	FS LOC	CAD LOC
RECORDER AND RECORDER CONNECTOR CKT		
ICK	36C7	1F5, 4J5
IR	38B7	1E0, 4E0
IR1	3807	1E5, 4E5
LS	1082	4C5
MB	26H5	1E0, 4E0
MM0-5	88/B2	4B5
MT0-9	8A/G2	4F7
MTCE		1H0, 4H0
MTP	2296	1E2, 4D2
MTR	26F5	1E2, 4D2
MTT	2286	1E2, 4D2
MU0-9	5E2	3F7
NPA	18M5	1E0, 4E0
NS	18A8	1E2, 4D2
OT	3907	1E2, 4D2
P	17C9	1E2, 4D2
P1	17C9	1B0, 4B0
PA	1803	1E0, 4D0
PT	18C8	1E0, 4E0
PT1	18F9	1E2, 4D2
PTS	36E7	1E5, 4E5
R0	17A9	1H0, 4H0
RC	38E7	1E0, 4E0
RO	39A7	1B0, 4B0

DESIG	FS LOC	CAD LOC
CORDER AND RECORDER CONNECTOR CKT		
ROL	3987	1E2, 4D2
RG	2183	1H0, 4H0
RK	25F8	1B0, 4B0
RL	26E5	1E2, 4D2
RM	1888	1B0, 4B0
RMT	2665	1E2, 4D2
RT-	12F8	2E5, 5E0
RTI	15F8	1B0, 4B0
SP	1808	1E2, 4D2
ST-	22E0	2E5, 5E0
SY	1888	1B0, 4B0
SYC	8A/A2	1E2, 4D2
SYCA	8A/A2	1E2, 4B5
T	10F2	1E2, 4D2
T0,1,2,4,7	39F7	1E5, 4E5
TSL	36E7	1E2, 4D2
TCO	38F7	1H0, 4H0
TCT	3607	1E5, 4E5
TL	35A7	1E5, 4E5
TLI	35F7	1E5, 4E5
TM	22H0	1C5
TST	2206	1E2, 4D2
TV	1608	1E2, 4D2,
U	10E2	1E2, 4D2
U0,1,2,4,7	3907	1E5, 4E5
XT	36G7	1E5, 4E5
XTC	36G7	1E5, 4E5

DESIG	FS LOC	CAD LOC
TV GROUP TROUBLE RECORDER CONNECTOR CKT		
1	2889	1B7, 4B7
ASP	29EO	1B7, 4B7
B	2889	1B7, 4B7
BSP	29AO	1J7, 4B7
CO	1308	5F7, 5A5
C1	1308	5F7
CMBE		5F5
CMBO		5F5
D	29AO	1B7, 4B7
DA	29EO	1C7, 4C7
DL8		5F5
DS		1H4, 4H4
E	2889	1B7, 4B7
ET	29AO	1C7, 4B7
HO	1308	5A5, 5F7
HR	29AO	1C7, 4B7
HT0,1,2,4,7	4A/H8	2A7, 5F2
HU0,1,2,4,7	4A/H8	2A7, 5F2
MA0,1,2		1A0, 4A0

DESIG	FS LOC	CAD LOC
TV GROUP TROUBLE RECORDER CONNECTOR CKT		
MB0,1,2,4,7		1A0, 4H3
MC0,1,2,4,7		1H4, 4H3
MD0,1,2,4,7		1A0, 4A0
ME0,1,2,4,7		1A0, 4A0
MF0,1,2,4,7		1A0, 4A0
MG	29EO	1C7, 4B7
MJ	24E1	4B7, 5F5
MO	29EO	1C7, 4B7
MT0,1,2,4,7	29EO	
MTCE	24F4	1A0, 4A0, 4B7
MTE		2E0
MTO		5F5
MTPE	24C7	
MTPO	24C7	
MU0,1,2,4,7	29EO	
NS	2809	1B7, 4B7
P		1H4, 4H3
P1		1A0, 4A0
PCN	13C7	2H8
PT		1A0 4A0
PT1		1H4, 4H3
PTS		1H4, 4H5
RCCEE		24E8
RCCKO		24E8
RG	29EO	1A0, 4A0
RM	29EO	1C7, 4B7
RST-	2889, 2809	5D7, 2E2
RST EMG	2889	5D7
RSTO-19		2E3 5B7

DESIG	FS LOC	CAD LOC
TV GROUP TROUBLE RECORDER CONNECTOR CKT		
RTI	15F5	1A0, 4A0
RT1E	15H7	
RT10	15H7	
RT3E	15H7	
RT30	15H7	
SC	29EO	1C7, 4B7
SKP	29EO	1C7, 4B7
SP	29AO	1J7, 4B7
SPA	29EO	1B7, 4B7
SY	29EO	1B7, 4B7
TO,1,2,4,7		1H4, 4H5
TBL		1H4, 4H3
TEN	29EO	5D7 5A5 2G3, 5A5
TIS	2437	2G3, 5A5
TPR	13E8	2H8
TR8E	24C7	
TR8O	24C7	
TS	37F7	5A5
TS0,2,--,18		2E0
TS1,3,--,19		5F5
TV		1H4, 4H3
UO,1,2,4,7		1H4, 4H5
XPL	1507	2E2, 5D7
XTC		1H4, 4H5

DESIG	FS LOC	CAD LOC
TV TROUBLE INDICATOR CKT		
A	2889	1B7, 4B7
A'0,1,7		1A0, 4A0
ASP	29EO	1B7, 4B7
B	2889	1B7, 4B7
B'0,1,2,4,7		1H4, 4H3
BSP	29EO	1B7, 4B7
C0	1308	5F7, 5A5
C'0,1,2,4,7		1H4, 4H3
C1	1308	5F7
CMBE		5F5
CMBO		5F5
D	29EO	1B7, 4B7
D'0,1,2,4,7		1A0, 4A0
DA	2800	1C7, 4B7
DL	24F8	2G3, 5A5, 5F5
DS		1H4, 4H4
E	2889	1B7, 4B7
E'0,1,2,4,7		1A0, 4A0
ET	29AQ	1C7, 4B7
ETSR		5F5
F'0,1,2,4,7		1A0, 4A0
HO	1308	5A5, 5F7
HR	29AO	1C7, 4B7
MA0,1,2		1A0, 4A0

DRAWING ISSUE

31D	57C AAC AAD	
33A	RPS A4C A4D	
350	NLF	C
388		C

ISSUE 58AC

MASTER TIMING CIRCUIT (2) SD-25633-01-A8

BELL TELEPHONE LABORATORIES INCORPORATED 6S

K&E

LEAD INDEX (CONT)

(SEE LEAD INDEX CONNECTING CIRCUITS -A6)

DESIG	FS LOC	CAD LOC
TV TROUBLE INDICATOR CKT		
MBO,1,2,4,7		1H4, 4H3
MCO,1,2,4,7		1H4, 4H3
MDO,1,2,4,7		1A0, 4A0
MEO,1,2,4,7		1A0, 4A0
MFO,1,2,4,7		1A0, 1A0
MG	28E0	1C7, 4B7
MJ	28E0	1C7, 4B7
MR		2G3, 5A5
MTO,1,2,4,7	28E0	
MTCE		1A0 4A0, 4B7
MTE		2E0
MTP		5F5
MUO,1,2,4,7	28E0	
NS	2809	1B7, 4B7
P		1H4, 4H3
P1		1A0, 4A0
PCN	13C8	2G3
PT		1A0, 4A0
PT1		1H4, 4H3
PTS		1H4, 4H5
R		5F5
R1T		5F5
RD		1A0, 4A0
RG	28E0	
RN	28E0	1C7, 4B7
RST-	2889, 2809	5D7, 2E2, 2E0, 2H8
RST EMG	2889	5D7

DESIG	FS LOC	CAD LOC
TV TROUBLE INDICATOR CKT		
RT1	15F5	1G0, 4G0
RTI		1A0, 4A0
RUT		5F5
RW		5F5
SC	28E0	1C7, 4B7
SKP	28E0	1C7, 4B7
SP	28A0	1B7, 4B7
SPA	28E0	1B7, 4B7
SY	28E0	1B7, 4B7
T		5F5
TO,1,2,4,7		1H4, 4H5
TAP		5A5
TBL		1H4, 4H3
TEN	28E0	5D7
T1A		5A5
T1B	24B7	2G3, 5A5
T1S	24B7	2G3, 5A5
TPR	13E8	2G3
TS	37F7	5A5
TS0,2,--,18		2E0
TS1,3,--,19		5F5
TSSE		5F5
TSSO		5F5
TV		1H4, 4H3
UO,1,2,4,7		1H4, 4H5
XPL	1507	2E2, 5D7
XTC		1H4, 4H5

DESIG	FS LOC	CAD LOC
TROUBLE RECORDER CONNECTOR CKT		
A	2889	1B7 4B7
A'0,1,2		1A0, 4A0
ASP	28E0	1B7, 4B7
B	2889	1B7, 4B7
B'0,1,2,4,7		1H4, 4H3
BSP	28A0	1B7, 4B7
CO	13D8	5C5, 5F7
C'0,1,2,4,7		1H4, 4H3
C1	13D8	5C5, 5F7
D	28A0	1C7, 4B7
D'0,1,2,4,7		1A0, 4A0
DA	28E0	1C7, 4B7
DL	24E8, 24E5	2F0, 5H5
DS		1H4, 4H5
DTO,1,2,4,7	20E1	2B0
DUO,1,2,4,7	21F4	2B0
E	2889	1B7, 4B7
E'0,1,2,4,7		1A0, 4A0
ET	28A0	1C7, 4B7
F'0,1,2,4,7		1A0, 4A0
HD	13D8	5F7
HR	28A0	1C7, 4B7
HTO,1,2,4,7	4A/A8	2A7, 5F2
HUO,1,2,4,7	4A/A8	2A7, 5F2
MAO,1,2		1A0, 4A0
MBO,1,2,4,7		1H4, 4H3
MCO,1,2,4,7		1H4, 4H3
MDO,1,2,4,7		1A0, 4A0

DESIG	FS LOC	CAD LOC
TROUBLE RECORDER CONNECTOR CKT		
MEO,1,2,4,7		1A0, 4A0
MFO,1,2,4,7		1A0, 4A0
MG	28E0	1C7, 4B7
MJ		5D5
MO	28E0	1C7, 4B7
MTO,1,2,4,7	28D3	2B0
MTCE		1A0, 4A0
MTP		2F2, 5C5
MUO,1,2,4,7	28D3	2B0
NS	28D9	1B7, 4B7
P		1H4, 4H3
P1		1A0, 4A0
PCN	13C7	2F2
PT		1A0, 4A0
PT1		1H4, 4H3
PTS		1H4, 4H5
RCCK	24E7	5C5, 1A0, 4A0
RD		
RG	28E0	
RN	28E0	1C7 4B7
RST-	2889, 2809	2E2, 5D7
RST EMG	2889	5D7
RTIE	15H7	1F0
RTI		1A0, 4A0
RT10	15H7	4F0
RT3E	15H7	1C0
RT30	15H7	4C0
SC	28E0	1C7, 4B7
SKP	28E0	1C7, 4B7
SP	28A0	1B7, 4B7

DESIG	FS LOC	CAD LOC
TROUBLE RECORDER CONNECTOR CKT		
SPA	28E0	1B7, 4B7
SY	28E0	1B7, 4B7
TO,1,2,4,7		1H4 4H5
TBL		1H4, 4H3
TEN	28E0	5D7
TPR	13E8	2F2
TRB	24D7	2F2, 5C5
TRST	24D7	2F2, 5C5
TV		1H4, 4H3
UO,1,2,4,7		1H4, 4H5
XPL	1507	2E2, 5D7
XTC		1H4, 4H5

TROUBLE RECORDER CONTROL CKT

TML	280	2D2
TMS	16B1	2D2

TROUBLE RECORDER CONTROL AND TEST CKT

TML	280	
TMS	16B1	

DESIG	FS LOC	CAD LOC
TROUBLE TICKETER CKT		
A	28B9	1B7, 4B7
A'0,1,2		1A0, 4A0
ASP	28E0	1B7, 4B7
B	28B9	1B7, 4B7
B'0,1,2,4,7		1H4, 4H3
BSP	28A0	1B7, 4B7
CO	13D8	5C5
C'0,1,2,4,7		1H4, 4H3
C1	13D8	5C5
CMBE		5F5
CMBO		5F5
D	28A0	1B7, 4B7
D'0,1,2,4,7		1A0, 4A0
DA	28E0	1C7, 4B7
DL	24E8	5F5
DLB		5F5
DS		1H4, 4H5
E	28B9	1B7, 4B7
E'0,1,2,4,7		1A0, 4A0
ET	28A0	1C7, 4B7
ETSR	12B1	5F5
F'0,1,2,4,7		1A0, 4A0
FG		5F5
HD	13D8	
HR	28A0	1C7, 4B7
HTO,1,2,4,7	4A/A8	2A7, 5F2
HUO,1,2,4,7	4A/A8	2A7, 5F2
MAO,1,2		1A0, 4A0

DESIG	FS LOC	CAD LOC
TROUBLE TICKETER CKT		
MBO,1,2,4,7		1H4, 4H3
MCO,1,2,4,7		1H4, 4H3
MDO,1,2,4,7		1A0, 4A0
MEO,1,2,4,7		1A0, 4A0
MFO,1,2,4,7		1A0, 4A0
MG	28E0	1C7, 4B7
MJ		5F5
MO	28E0	1C7, 4B7
MTO,1,2,4,7	28E0	
MTCE		1A0, 4A0, 4B7
MTO		5F5
MTP		2F2, 5C5
MUO,1,2,4,7	28E0	
NS	2809	1B7, 4B7
P		1H4, 4H3
P1		1A0, 4A0
PCN	13C7	2F2
PT		1A0, 4A0
PT1		1H4, 4H3
PTS		1H4, 4H5
R		5F5
R1T		5F5
RCCK	24E7	2F2, 5C5
RD		1A0, 4A0
RG	28E0	
RN	28E0	1C7, 4B7
RST-	2889, 2809	2E2, 5G7
RST EMG	2889	5D7
RTIE	15G7	1F0

DESIG	FS LOC	CAD LOC
TROUBLE TICKETER CKT		
RT10	15G7	4F0
RT3E	15G7	1C0
RT30	15G7	4C0
RTI		1A0, 4A0
RUT		5F5
RW		5F5
SC	28E0	1C7, 4B7
SKP	28E0	1C7, 4B7
SP	28A0	1B7, 4B7
SPA	28E0	1B7, 4B7
SY	28E0	1B7, 4B7
T		5F5
TO,1,2,4,7		1H4, 4H5
TBL		1H4, 4H3
TEN	28E0	5C7
TML	280	2D2
TMS	16B1	2D2
TPR	13E8	2F2
TRB	24D7	2F2, 5C5
TRST	24D7	2F2, 5C5
TSR-	12A1, 12B1	5F5
TSSE	12B1	5F5
TSSO		5F5
TV		1H4, 4H3
UO,1,2,4,7		1H4, 4H5
XPL	1507	2E2, 5D7
XTC		1H4, 4H5

DRAWING ISSUE

	DJN	MEC	MRB
3JD			

ISSUE 51B

MASTER TIMING CIRCUIT (2) SD-25633-01-A9

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-A9

LEAD INDEX (CONT.)

DESIG	FS LOC	CAD LOC
OFFICE TEST FR TROUBLE INDICATOR AND CONN CKT		
A	28B9	1A7, 4A7
B	28B9	1A7, 4A7
BSP	28A0	1A7, 4A7
CO,1	1308	5C5
D	28A0	1A7, 4A7
DL	24E8	
E	28B9	1A7, 4A7
ET	28A0	1A7, 4A7
HD	1308	
HR	28A0	1A7, 4A7
MTP		2F3, 5C5
PCN	13C8	2F3
RCCK	24E8	2F3, 5C5
RST-	28B9	2C3, 5E7
RST EMG	28B9	5E7
RT1E		1G0
RT3E		1G0
RT30		1G0
SP		1A7, 4A7
TPR	13E8	2F3
TRB	24D8	2F3, 5C5
TRST	24D8	2F3, 5C5

DESIG	FS LOC	CAD LOC
TIMER LINK CKT		
CO-3	41E4	1B5, 4A5
C4,5	41E4	1B5, 4F2
C6,7	41E4	1B5, 4A2
C8,9	41E4	1B5, 5B7

TRAFFIC SERVICE POSITION CKT		
PGE	7D3	1B5
PGO	7A3	1B5

TRUNK AND OUTPULSER TEST CKT		
IIPM	40C3	4D4

DRAWING ISSUE
310 PP CB
378 CB

ISSUE 41B

MASTER TIMING CIRCUIT (2) SD-25633-01-A10

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-A10

STABILO

OPTION INDEX

APP OR WRG	LOCATION
1	APP FIG. 1
2	APP FIG. 2
5	APP FIG. 5
6	APP FIG. 6
7	APP FIG. 7
9	APP FIG. 9
10	APP FIG. 10
11	APP FIG. 11
12	APP FIG. 12
13	APP FIG. 13
14	APP FIG. 14
15	APP FIG. 15
16	APP FIG. 16
23	APP FIG. 23
24	APP FIG. 24,31C6,31D6
25	27C2
27	APP FIG. 27
28	APP FIG. 28
29	APP FIG. 29
30	APP FIG. 30
31	APP FIG. 4,19,31,48S,4C4, 4G2
32	APP FIG. 32
FIG. A	APP FIG. A
FIG. B	APP FIG. B
FIG. C	APP FIG. C
FIG. D	APP FIG. D
Z	3E1
Y	11E5,E6,11F6
X	11E5,E6,11F6
W	15F7,24D2
V	APP FIG. 17,15F6,F7, 24D2
T	12C4
S	12C4
R	12C5
Q	12D2
N	2A/D3,4A/G2,H2,7A0, A1, C2, D2, E1, E2, H1, 31A0, A1
M	12D3
K	12D7,12E6,E8,17C4, 17D4,18B5
J	12D7,12E6,E7,17B4, 18B5

APP OR WRG	LOCATION
H	11D5
G	11D5
F	35G5
E	23D6,25C3,31E6,31F6, 36F4
B	11D1,23C6,23D7,25B4, 25B6,25C2,31E5,E6, 36F4
A	31C4,C7,31D3,D4,D6
ZA	31C4,C6,C7,31D3,D4, D6
ZB	37F7
ZC	35A6,A7
ZD	2A/D3,G2, 7A1,7B1, 7B2,7C2,7D2,7E2, 31A0,A1
ZE	APP FIG. 8
ZF	13D3,D5
ZG	13C3,C5
ZH	38E4,36B1,B3,36C1,C2, 36C4,36D1,D2,D4,39A2
ZI	38D4,36B1,B4,36C1-C4
ZJ	APP FIG. 1,2,3 AND 4, 2B/F2,3B7,B8,3C7,3F7, F8,5F4,F5,5G4,7E7, 25D7,25E7
ZK	2B/F2,3F7,19D8,D9,E7, E8,21E6,E8,E9
ZL	APP FIG. 8
ZM	17A2,17B2,17B8,17C8, 18D1
ZN	APP FIG. 24
ZO	13D2
ZP	13D7
ZQ	13E7
ZR	13E2
ZS	12C6,12D6
ZT	12C6,12D6
ZU	25D6,25E6
ZV	25D6
ZW	27C8,C9,35F1,37C4
ZX	27C8,35G1,37C4
ZY	18F6,19F4,19G4,20B7, 21B3,21C2
ZZ	18F6,19F4,21B3

APP OR WRG	LOCATION
XA	17D3
XB	17D3,D4
XC	24F1,
XE	3F7,F8,23D7,25E7
XF	3C7,3E7
XG	APP FIG. 8
XH	40E3,E5
XI	APP FIG. 8
XJ	40A6,40B6,40C6
XM	APP FIG. 17,15F6,F7, 24E6
XN	SEE NOTE 205
XO	APP FIG.3,17,24D2, 25C5,40A4,A6,40C6
XP	12C3
XQ	12C3
XR	11B2,B3,11D4
XS	APP FIG. 4,11B1-B3, 41A0,A1,B5,C0
XT	12D3
XU	APP FIG. 4
XV	APP FIG. 4
XX	41D1
XY	7B0,B2,C2
XZ	7A2,7B1
WA	7A2,7B0-B3
WB	23E2
WC	APP FIG. 4, 31B5 41A0, A1,B2,B5,C0, C1,C6,C7,G1
WD	41C0
WE	41C0,41D6
WF	APP FIG. 30
WG	31F1
WH	APP FIG. 4, 41B1
WI	APP FIG. 4
WJ	4A/F1
WK	19C6,D7,D8,E7,E8
WL	19C6-E7
WM	19C6
WN	APP FIG. 20
WO	APP FIG. 20
WP	1D1,1D2
WQ	1D1
WR	APP FIG. 31
WS	APP FIG. 30
WT	APP FIG. 31
WW	18B2
WX	18B2

APP OR WRG	LOCATION
WY	APP FIG 1,2,3,4,1A1,E2 2A/B2,E8,F5,4A/F0,48/A1-H3,7C5,D5,8A/A5,8B/B2, 10H8,13B5,C5,18A6,19D5, G5,21D9,25G4,27F8,28A1, C8,29B1,41C4,C7
WZ	APP FIG 1,2,3,4,8, 1B1,B3,2A/E2,F8,H7, 2B/B2,D9,E7,F3,G3,3B2, G6,4A/C4,7A1,C0,8A/C6, 8B/B7,18A6,19D5,G5, 29B7,31B4,H6,41B5
VA	18C1
VB	APP FIG. 8
VC	2A/G7
VD	2A/G6,41B4,C4,C7
VE	40A5,A7,C4,C7
VF	40B5,B7,C4,C7
VG	10B,F6,40A7,C7
VH	APP FIG 3, 40B7,C7
VI	APP FIG. 19,4A/F1,F2
VJ	41B0,D7,G0
VK	41B0,D7,G0
VL	31G4
VM	31G3
VN	7A2,C2,C3
VO	7A2,C2,C3,40B8,C8,D9
VP	APP FIG. 2, 1C7,F0
VQ	APP FIG. 2, 1G0
VR	11D8
VS	11A8,C2,D2,D8,12D7,E6, 25D5,30A8,C8,D8
VT	23B7,36A2,38G1
VU	3486
VV	4A/A8,B8,G1
VW	APP FIG. 1,2,4A/F2,G1, 4B/A1-G1
VX	2B/D9,G9,28F5,G5
VY	4A/B5
VZ	APP FIG. 4, 2B/A5-G7, F3,G3

APP OR WRG	LOCATION
UA	APP FIG. 3,4, 2A/H5, 2B/A4-G7,7E8,H8
UB	APP FIG. 1,2,1A1
UC	APP FIG. 1,2
UD	1A8,B8,C8
UE	34E8
UF	7F2,F5,G0,31A1,B1,B5
UG	7D2,F2,31B1
UH	7D2,F2,31B1,C1
UJ	7H2,H5
UK	APP FIG 8,17,18
UL	APP FIG 8,17,18
UM	22H2
UN	8A/C3,E3
UO	8A/C3
UP	24E1,31F6
UQ	24E1,31F6

DRAWING ISSUE

310	HH, WG, AM, CB
33A	HH, WG, AM
348	CW, PK, AM
350	NF
378	
388	

CB

ISSUE 60A

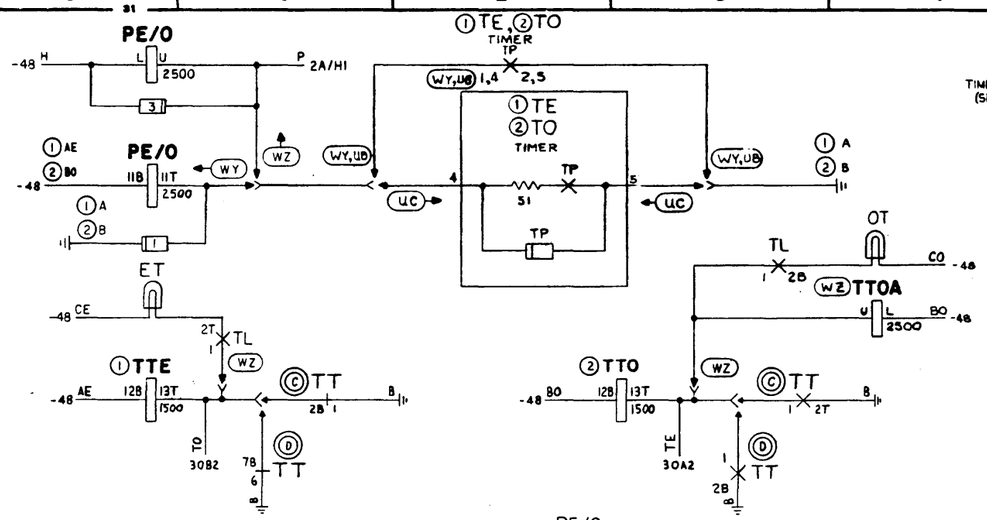
MASTER TIMING CIRCUIT	2	SD-25633-01-A11
BELL TELEPHONE LABORATORIES INCORPORATED	6S	

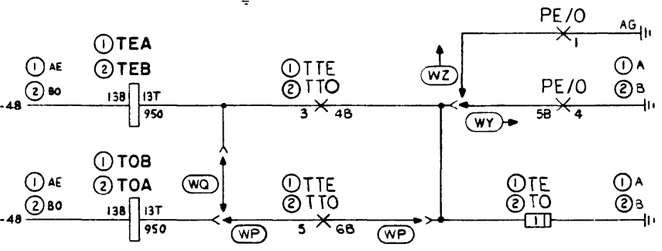
SD-25633-01-A11

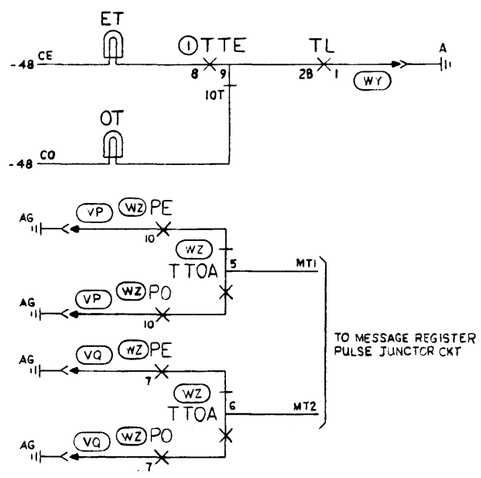
STABILO

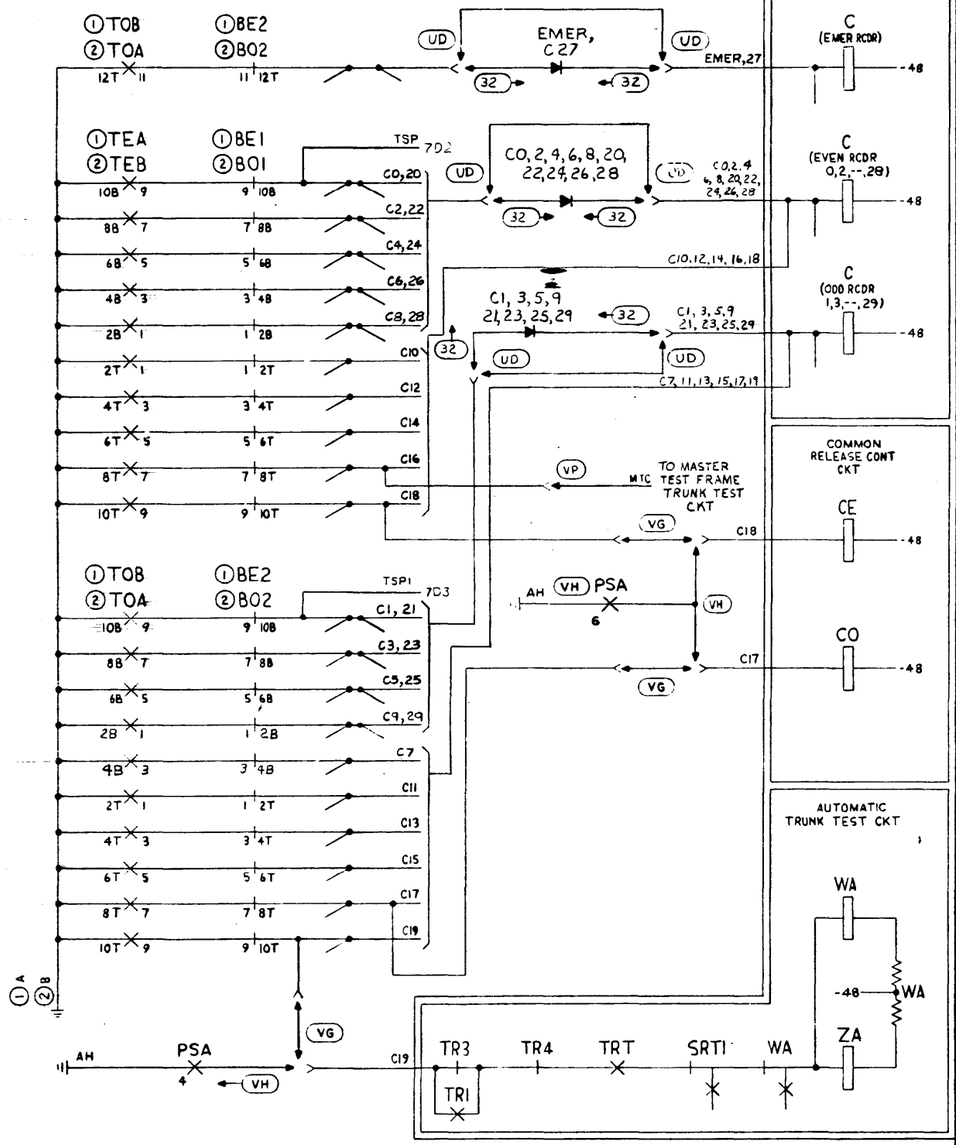
FS1

TIME PULSES TO RECORDER (SIX SECOND INTERVALS)









DRAWING ISSUE

31D	
38B	

ISSUE 53B

MASTER TIMING CIRCUIT (2)

SD-25633-01-B1

BELL TELEPHONE LABORATORIES INCORPORATED

FIRST USE 6S

PRINTED IN U.S.A.

SD-25633-01-B1

STABILO

PART OF FS 2

CONTROL OF TIMING SWITCHES

TO TROUBLE RECORDER CONTROL CKT, TROUBLE RECORDER CONTROL & TEST CKT, DR MARKER TEST & TROUBLE RECORDER CKT, OR TROUBLE TICKETER CKT

TIME SWITCH POSITIONS

IND POS (U)&(T) SEL			U'S DIGIT	IND POS (H)&(ST) SEL			H DIGIT
	21	22	-			22	-
10	20		9	7	14	21	-
9	19		8	6	13	20	5
8	18		7	5	12	19	4
7	17		6	4	11	18	3
6	16		5	3	10	17	2
5	15		4	2	9	16	1
4	14		3	1	8	15	0
3	13		2				
2	12		1				
1	11		0				

TIME COUNTERS
00-599 1/10 MINUTE INTERVALS

ISSUE 52B

MASTER TIMING CIRCUIT (2)

SD-25633-01-B2A

BELL TELEPHONE LABORATORIES INCORPORATED

SYS CODE 6S

SD-25633-01-B2A

PART OF FS 2

CONTROL OF TIMING SWITCHES

TABLE A		
CONT NO.	OPTION VZ	UA
a	7	8
b	1	5
c	3	6

TABLE B										
RELAY	(WZ) SECONDS UNITS COUNTER									
	0	1	2	3	4	5	6	7	8	9
UA	–	–	–	X	X	X	X	–	–	–
UB	–	X	X	X	X	X	X	X	X	–
UC	–	–	–	–	–	X	X	X	X	X
UD	X	X	–	–	X	X	–	–	X	X
UZ	–	X	–	X	–	X	–	X	–	X

X = DENOTES RELAY OPERATED
– = DENOTES RELAY NORMAL

MASTER TIMING CIRCUIT

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-B2B

ISSUE 52B

SD-25633-01-B2B

PART OF FS 2
CONTROL OF TIMING SWITCHES

DU SEL ARC 3 NBG
DT SEL ARC 1 BDG
DT SEL ARC 2 NBG
DU SEL ARC 2 NBG
DU SEL INTER.
DT SEL INTER.
M SEL ARC 1 BDG
M SEL ARC 4 NBG
M SEL INTER.
DAT
DH
MDA
DTH
HA
TRI
DHE
DHO
DT
P
MA
MD
RET
RET1
ETS
ET
MOH
EXA
TBR
RSC
2B/F2
2B/F3
12E7
3086
MOH 25D9
MOH 30A6
DTH 30F6
DH 30E0

DRAWING ISSUE
SID GTM WE1 AM4

ISSUE 4IB

MASTER TIMING CIRCUIT (2)
SD-25633-01-B3
BELL TELEPHONE LABORATORIES INCORPORATED
6S

SD-25633-01-B3

PART OF FS 3
RECORDING OF HOUR ENTRY

HU SEL ARC 5 NBG
HU SEL ARC 4 NBG
HT SEL ARC 5 NBG
HT SEL ARC 4 NBG
HUA 4 58
HUA 1 2T
HA 7T 6
HU SEL INTER. HUH 28/C1
HT SEL INTER. HTH 28/C2
HUH
HTH
108 88 68 48 28 EXH
4T 10T 8T 6T 12T EXH
U0 U1 U2 U4 U7
T0 T1 T2 T4 T7
U(0,1,2,4,7)E/O 48/B0
T(0,1,2,4,7)E/O 48/F0
(WT) HRTC, (WR) HRTB, (31) HRTA
HRT 4 5B
SSF 38 2
TMTE, TMTO
(WZ)
1.5kΩ
(1) A, (2) B
(1) HE, (31) (2) HO
10T 9
HE 28/E7
HO 28/E7
HE 13T 13B 2.5kΩ AE -48
HO 13T 13B 2.5kΩ 80 -48
(1) TTE 2B
TO CORRESPONDING TERMINAL OF LIKE DESIG RELAY IN OTHER TIMER
P3 7 8B
P4 5T 4
P4A 2T 1
(2) TTO 9 10T 8
TTO 11B 10
10E3
TTOA 8
TRTE 3
TRTO 3
TCE 4T A
TCO 4T B
TO OTHER RECORDERS
HS
RCDR & RCDR CONN CKT
HL
(WY)
(VV)
(VW)
(VI)
(WJ)
31,N
(N)
(EVEN)
(ODD)
SEE TABLE A
TRTE
TRTO
T(0,1,2,4,7)E
T(0,1,2,4,7)O
U(0,1,2,4,7)E
U(0,1,2,4,7)O
(5) U(C, 1, 2, 4, OR 7)E,
(6) U(0, 1, 2, 4, OR 7)O
(5) T(0, 1, 2, 4, OR 7)E,
(6) T(0, 1, 2, 4, OR 7)O
(5) T, U(0,1, 2, 4, 7)E
(6) T, U(0,1, 2, 4, 7)O
K 2T 1
M 4T 3
P 6T 5
S 8T 7
U 10T 9
J 2B 1
L 4B 3
N 6B 5
R 8B 7
T 10B 9
V 12B 11
1, 11, 21
3, 13, 23
5, 15, 25
7, 17
9, 19, 29
0, 10, 20
2, 12, 22
4, 14, 24
6, 16, 26
8, 18, 28
EMER, 27
TO RECORDERS
HTO, 1, 2, 4, 7 21A4
HTO, 1, 2, 4, 7 20G8
HUO, 1, 2, 4, 7
HTO, 1, 2, 4, 7 TO MASTER TEST FR CONN CKT, TROUBLE RECORDER CONN CKT, TRANSVERTER GROUP TROUBLE RECORDER CONN CKT, OR TROUBLE TICKETER CKT
HTO, 1, 2, 4, 7 TO DECODER MKR TEST & TROUBLE RECORDER CKT
PROVIDE ONLY ON FIRST CKT IN OFFICE
HR F- F- 48
HTO, 1, 2, 4, 7
RCDR & RCDR CONN CKT
HR E- E- 48
HRE 13T 13B 950 J -48
HRN 13B 13T 950 J -48
HR2
RCDR & RCDR CONN CKT
(31) HRTA R -48 T
(WR) HRTB R -48 T
(WT) HRTC R -48 U
1, 3, 5, 7, 9, 11, (2, 4, 6, 8, 10, 12)T, (2, 4, 6, 8, 10, 12)B
1, 3, 5, 7, 9, 11, (2, 4, 6, 8, 10, 12)T, 1, 3, 5 (2, 4, 6)B
1, 3, 5, 7, 9, 11, (2, 4, 6, 8, 10, 12)T, 1, 3, 5, 7 (2, 4, 6, 8)B
HR(EM), HR(0-10)
HR(11-19)
HR(20-29)

TABLE A

TRTE		TRTO	
LEAD	CONT a	LEAD	CONT b
U0	1	U0	1
U1	2	U1	2
U2	3	U2	3
U4	4	U4	4
U7	5	U7	5
T0	6	T0	6
T1	7	T1	7
T2	8	T2	8
T4	9	T4	9
T7	10	T7	10

ISSUE 55B

MASTER TIMING CIRCUIT

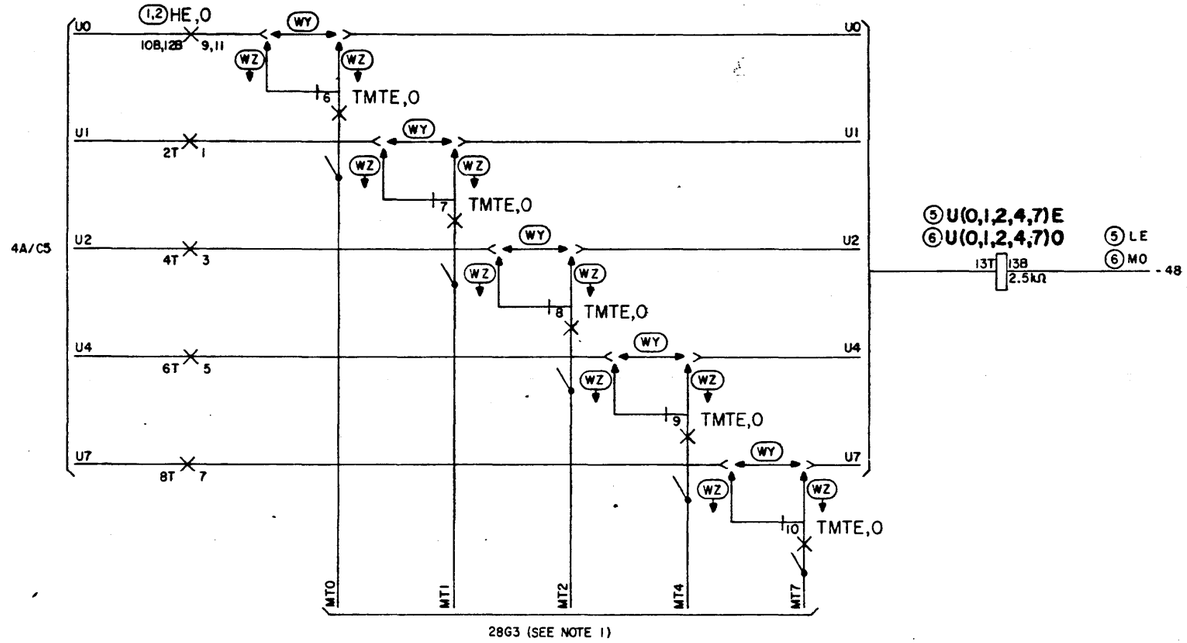
SD-25633-01-B4A

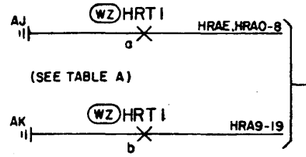
BELL TELEPHONE LABORATORIES INCORPORATED

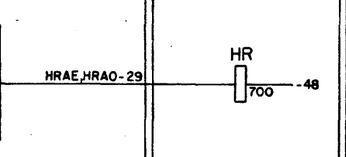
6S

PART OF FS 3

RECORDING OF HOUR ENTRY







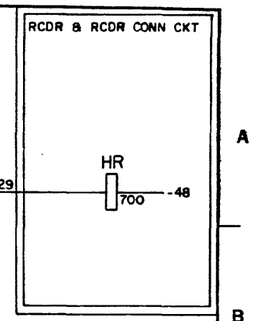
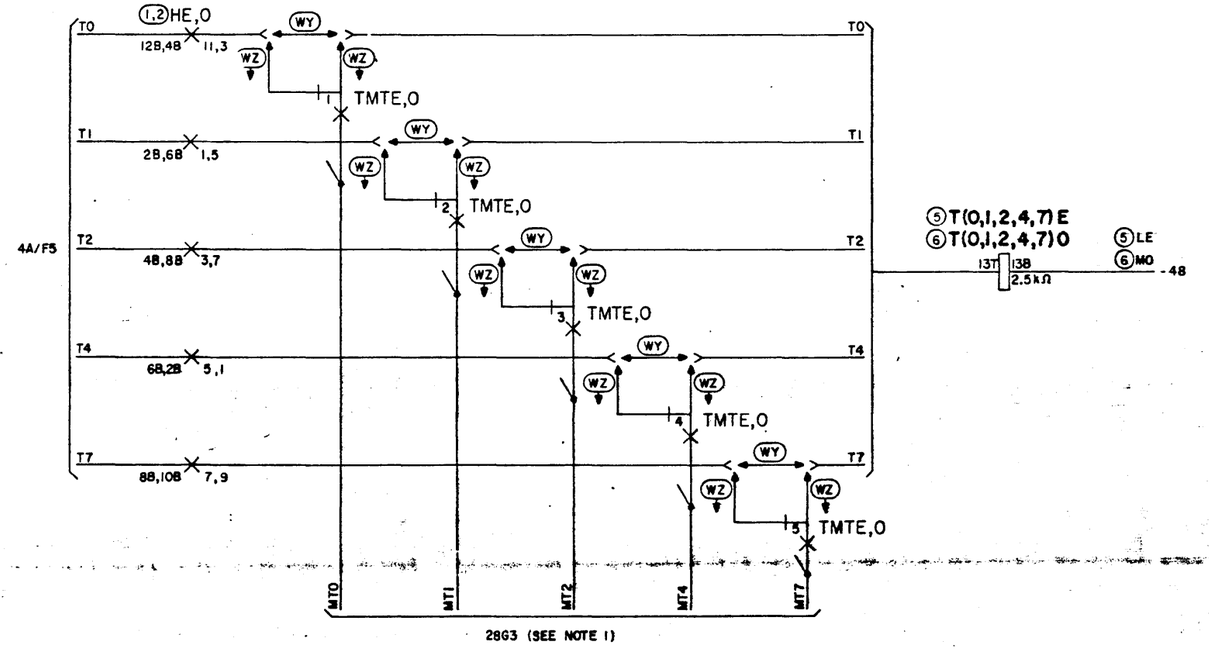


TABLE A

CONT a	HRA— LEAD	CONT b	HRA-- LEAD
2	E	13	10
3	0	14	11
4	1	15	12
5	2,22	16	13
6	3,23	17	14
7	4,24	18	15
8	5,25	19	16,26
9	6	20	17,27
10	7	21	18,28
11	8	22	19,29
12	9	23	20
		24	21



NOTES:

1. (TMTE) GOES TO EVEN TIMER
   (TMTO) GOES TO ODD TIMER

ISSUE 52B

MASTER TIMING CIRCUIT

SD-25633-01-848

BELL TELEPHONE LABORATORIES INCORPORATED

SIZE 6S

SD-25633-01-848

FS 4

6 POLES PER MONTH

DRAWING ISSUE

310

DR1

DR2

DR3

DR4

DR5

DR6

MA

MAI

RD SEL ARC 2 BDG

RD SEL ARC 3 BDG

RD SEL ARC 5 NBG

RD SEL ARC 6 NBG

RD SEL INTER.

RD0

RD1

RD2

RD3

RD4

RD5

RH

RD

MD

MA

MAI

EXR

RET

RC

TCE

TCO

TS

TC

29G6

29A6

ALL

COMMON SYSTEMS
MASTER TIMING CIRCUIT

SD-25633-01-B5

BELL TELEPHONE LABORATORIES
INCORPORATED

6S

31

FS 5
10 ROUNDS PER MONTH

DRAWING ISSUE
310 DLS REL AWJ

DR1
DR2
DR3
DR4
MD
MA
MAI
RD SEL ARC 2 BDG
RD SEL ARC 3 BDG
RD SEL ARC 5 N3G
RD SEL ARC 6 N8G
RDO
RD1
RD2
RD3
RD4
RD5
RD6
RD7
RD8
RD9
ALL
29F6 RD
EXR
RH
RD SEL INTER
RET
RC
P
VID
TCE
TCO
TS
UL
5F4
5E6

COMMON SYSTEMS
MASTER TIMING CIRCUIT

SD-25633-01-B6

BELL TELEPHONE LABORATORIES INCORPORATED

6S

31

SD-25633-01-B6

PART OF FS 6

CHECK SELECTOR SYNCHRONIZATION

PGO

TRAFFIC SERVICE POSITION CKT NO.100

PGE

TO CORRES TERMINALS OF LIKE DESIG SEL IN OTHER TIMER

TO OTHER ODD OR EVEN NO. RECORDERS N3

RCDR AND RCDR CONN CKT

TO OTHER RECORDERS NS

RCDR AND RCDR CONN CKT

MISC. CKT MASTER TMG FR OR NO.5 MISC CKT FOR ALL FRAMES

MASTER TIMING CIRCUIT (2)

SD-25633-01-B7

BELL TELEPHONE LABORATORIES INCORPORATED

6S

ISSUE 55B

DRAWING ISSUE 310

SD-25633-01-B7

PART OF FS 6
CHECK SELECTOR SYNCHRONIZATION

RECORDER AND RECORDER CONNECTOR CKT

SYCA -48

SYC -48

TO OTHER ODD OR EVEN NO. RECORDERS

SYCA

SFA

SYC

SY

SE SO CE CO SCE SCO

BE2 BO2

CKE CKO

TO LIKE DESIGNATED LEADS IN OTHER TIMER

UA UC UB UD

MU0 MU1 MU2 MU3 MU4 MU5 MU6 MU7 MU8 MU9

TO CORRESPONDING TERMINALS OF LIKE DESIGNATED SELECTOR IN OTHER TIMER

U SEL ARC 6 NBG

T SEL ARC 6 NBG

U SEL ARC 5 NBG

T SEL ARC 5 NBG

U0-9

T0-9

UL TL

MU0-9 MT0-9

MTO MT1 MT2 MT3 MT4 MT5 MT6 MT7 MT8 MT9

TO OTHER RECORDERS

TO CORRESPONDING TERMINALS OF LIKE DESIGNATED SELECTOR IN OTHER TIMER

CE1 CO1 TS

ALL

DRAWING ISSUE

31D	NSC Rec Ad

ISSUE 58AC

MASTER TIMING CIRCUIT (2) SD-25633-01-88A

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-88A

STABILOHM

PART OF FS 6

RECORDER AND RECORDER CONNECTOR CKT

H SEL ARC 6 NBRDG

-48 H SYC ALL 1,8,15 1,8,15 MH0
2,9,16 2,9,16 MH1
3,10,17 3,10,17 MH2
4,11,18 4,11,18 MH3
5,12,19 5,12,19 MH4
6,13,20 6,13,20 MH5
H
SYCA
TO OTHER RECORDERS

CHECK SELECTOR SYNCHRONIZATION

TO CORRESPONDING TERMINALS OF LIKE DESIGNATED SELECTOR IN OTHER TIMER

HL
HO-5 -48 CE 0-5
0 1 2T MH0
1 3 4T MH1
2 5 6T MH2
3 1 2B MH3
4 3 4B MH4
5 5 6B MH5
MH0-5 (WY) (WZ)

STL
STO-5 -48 CE 0-5
0 6 MH0
1 5 MH1
2 4 MH2
3 3 MH3
4 2 MH4
5 1 MH5

H SEL ARC 6 NBRDG
1,8,15 1,8,15 21,22 21,22
2,9,16 2,9,16 ALL
3,10,17 3,10,17
4,11,18 4,11,18
5,12,19 5,12,19
6,13,20 6,13,20

ST SEL ARC 6 NBRDG
1,8,15 1,8,15 21,22 21,22 (WZ)
2,9,16 2,9,16 ALL
3,10,17 3,10,17
4,11,18 4,11,18
5,12,19 5,12,19
6,13,20 6,13,20

8A/F6 SRC

(EVEN) ②CO1 5 6B 4 ②TS 9T 8 A
(ODD) ①CE1 5 6B 4 ②TS 10 11B B
H -48 D 5B 5T 2.5kΩ
(ODD) 3B 2 ②CO1 (ODD)
(EVEN) 3B 2 ①CE1 (EVEN)
(WZ) (WZ)

H SEL ARC 5 NBRDG
ALL 1-6 1-6 H1
8-13 8-13 H2
15-20 15-20 H3

(EVEN)
(ODD)

STC -48 H L U 700
(ODD) 3T 1 ②CO (ODD)
(EVEN) 3T 1 ①CE (EVEN)
2

ST SEL ARC 5 NBRDG
ALL 1-6 1-6 ST1
8-13 8-13 ST2
15-20 15-20 ST3

TO CORRESPONDING TERMINALS OF LIKE DESIGNATED SELECTOR IN OTHER TIMER

②SRC TO 7B 5B 10T 1.2kΩ
(EVEN) 6T 5 ②TSI
(ODD) 4
TT 4 3 5B
TT 5 6T 4
②CO 11T 10 B
①CE 11T 10 A

ISSUE 52B

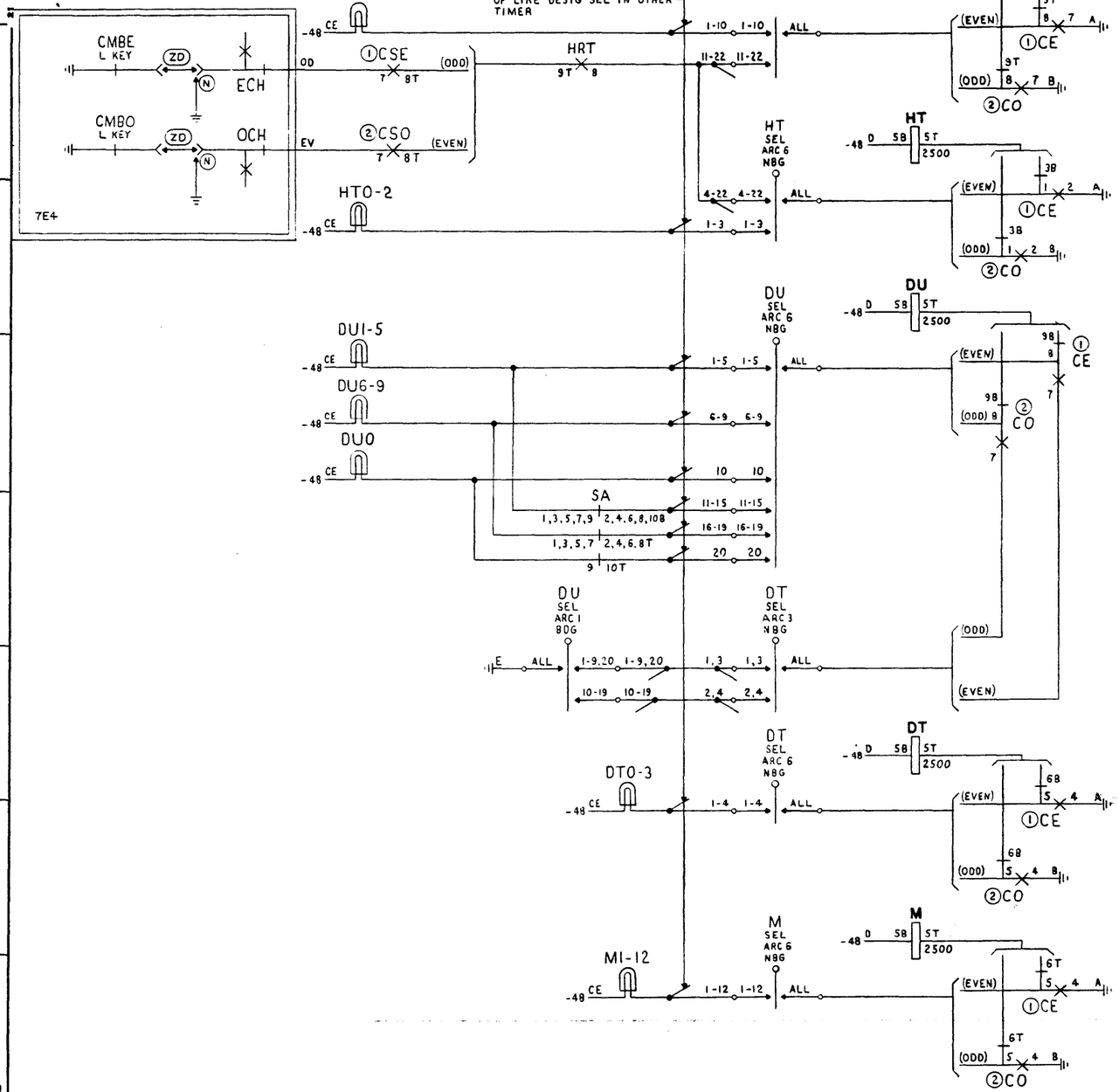
MASTER TIMING CIRCUIT ② SD-25633-01-888

BELL TELEPHONE LABORATORIES INCORPORATED SIZE 6S

SD-25633-01-888

PART OF FS 6

CHECK SELECTOR SYNCHRONIZATION



DRAWING ISSUE	
310	E,J,B MAC AWO

ISSUE 49B

MASTER TIMING CIRCUIT (2)

SD-25633-01-B9

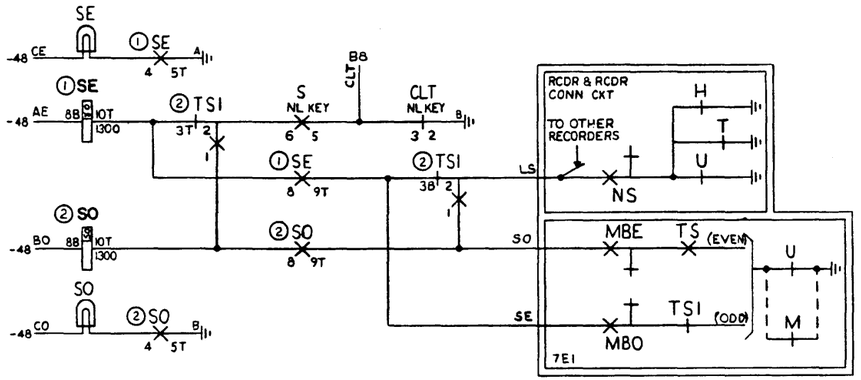
BELL TELEPHONE LABORATORIES INCORPORATED

6S

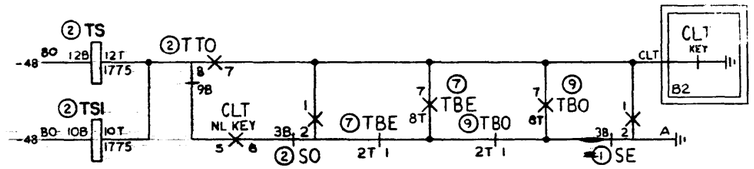
PRINTED IN U.S.A.

STABILO K&E

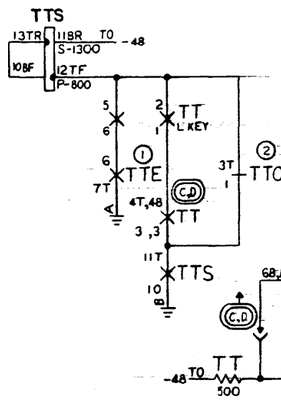
FS 7
SYNCHRONIZING TIMERS

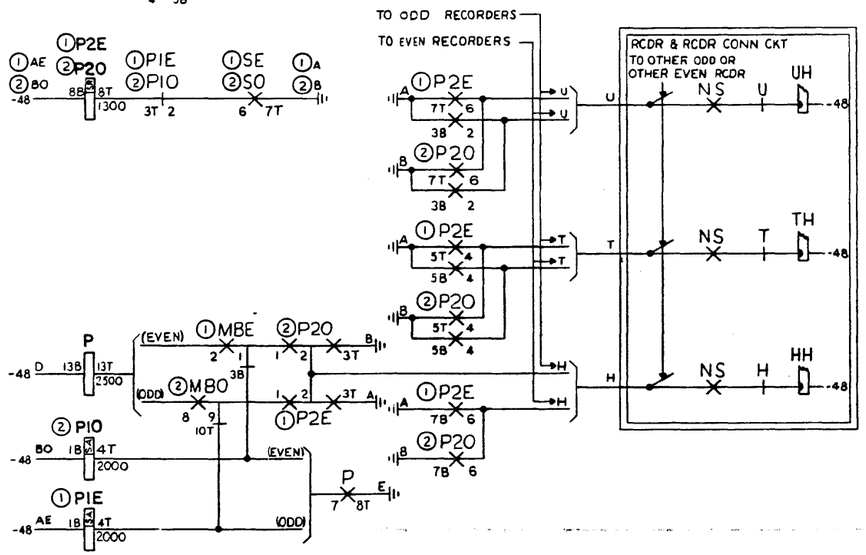


FS 8
CHECK LAMP TRANSFER



FS 9
TIMER TRANSFER CONTROL





FS 10

END OF TAPE START CONTROL
HOUR 03

HT SEL ARC 2 NBG
HU SEL ARC 2 NBG
H SEL ARC 2 NBG
T SEL ARC 2 NBG
U SEL ARC 2 NBG
ST SEL ARC 2 NBG
HA
2B/B3
ETFE
ETFO
ETE
ETO
MBE (ODD)
MBO
TME
OC
RET
ICL
ET
GOE
GEO
TBO
TBE
ESE
ESO
ETI
ETS
NO. 5 MISC CKT FOR ALL FRAMES OF MISC CKT. MASTER TMG FRAME
RETE OR RETO
3E
3AM
TTOA
EPG
OPG
GRI
RLS
TMT

DRAWING ISSUE 31D

ISSUE 57A

MASTER TIMING CIRCUIT (2)

SD-25633-01-811

BELL TELEPHONE LABORATORIES INCORPORATED

6S

STABILO K&E

SD-25633-01-B12

STABILO K&E

FS 11
RECORDER SELECTION, SEIZURE, AND CONTROL

MISC CKT FOR TV TBL IND FR; MA TST FR - JK, LP, & KEY CKT; JK, KEY, & LP CKT, TBL RCDR FR; MISC. CKT FOR TBL RCDR FR; OR JK, KEY, AND LP CKT, TBL TICKETER FR.

PC 6 7T H

(EVEN) (ODD)

⑦GEO 1 3T — RW2 6T 5 — KRB 1 2B — TPC 4 5B B

SLO 8 9B

STE 5T 5B 4000 SE 1350 1350 TSSE → TST EVEN 0,2,---,28

ON 10B 9

ON 6T 5 TSSO → TSO ODD 1,3,---,29

OST 5T 5B 4000 SO 1350 1350

TE 10 11B — RW2 8B 7 X

⑦GRE 9T 7 8

TSTI 5 6B X

ETSR OR TSR- → D2

TSR- → E4

⑯ST- -48 MO 10BR 13TR S-740

⑮ST- -48 MO 10BR 13TR S-740

⑭ST- -48 MO 10BR 13TR S-740

⑬EST -48 MO 10BR 13TR S-740

⑫ST- -48 LE 10BR 13TR S-740

⑪ST- -48 LE 10BR 13TR S-740

⑩ST- -48 LE 10BR 13TR S-740

-16 -15 -14 -12 -11

TSR- TSR-A1 ETSR ETSR OR TSR- B1

⑯ST- 7 8 9T

⑮ST- 7 8 9T

⑭ST- 7 8 9T

⑬EST 7 8 9T

⑫ST- 7 8 9T

⑪ST- 7 8 9T

⑩ST- 7 8 9T

⑨GRI 6B 5

⑨GRI 9B 8

⑨GR 6T 5 4

⑫ST- 6T 4 5

⑪ST 6T 4 5

⑩ST- 6T 5 4

⑮ST- 6T 4 5

⑭ST- 6T 4 5

⑬EST 6T 4 5

⑨GRO 2 1 3T

⑨ESE 7 8T

⑦ESO 7 8T

⑨GR 3T 2 1

ESO G6

⑯ST- 1 2 3B

⑮ST- 1 2 3B

⑭ST- 1 2 3B

⑬EST 1 2 3B

⑫ST- 1 2 3B

⑪ST- 1 2 3B

⑩ST- 7 9T 8 1 2B

⑨GRO ESE G7

⑦GRE (ODD) 5 6T 4

PC 5T 4 6 7B H — OC 11C7

XP XQ XT

Q M T S R

⑦ESO -48 MO 9B 9T 700 — ESO B4

⑦ESO 4T 3 (ODD)

⑦ESO K 6T 5 K J

ZS ZT ⑨GRO 6B 5 4 ZT ZS ZT ZS ⑨GRO 4 5 6T

VS 3D8 5T RETI ETS 4 (ODD)

TBR 6 7T H

ETS 1 2T VS H

RSC 7B TBR 6 H RSC 3 4T H (EVEN)

J RSC 8B 7 H — K RSC 17D5

TM6 5 6B E (ODD) (EVEN)

⑨ESE -48 LE 9B 9T 700 — ESE B6

⑨ESE 4T 3 (EVEN)

⑨ESE K 6T 5 K J (EVEN)

RT -48 — ONE PER RECORDER — RT- → TO EVEN RECORDERS / TO ODD RECORDERS

RT1 -48

RT EMER -48

RT1 EMER -48

ERT

RCDR & RCDR CONN CKT

RT- ⑩ST- 4 5 — ⑨GRO 8 9B — ⑨TBO 10 11B (EVEN)

RT- ⑪ST- 6B 4 5

RT- ⑫ST- 6B 4 5 6B — ⑨GR 7 8 9B — ⑦TBE 10 11B (ODD)

PC 3T 1 H

RT- ⑬EST 6B 4 5

RT- ⑭ST- 6B 4 5

RT- ⑮ST- 6B 4 5

RT- ⑯ST- 6B 4 5B

BELL TELEPHONE LABORATORIES INCORPORATED

MASTER TIMING CIRCUIT

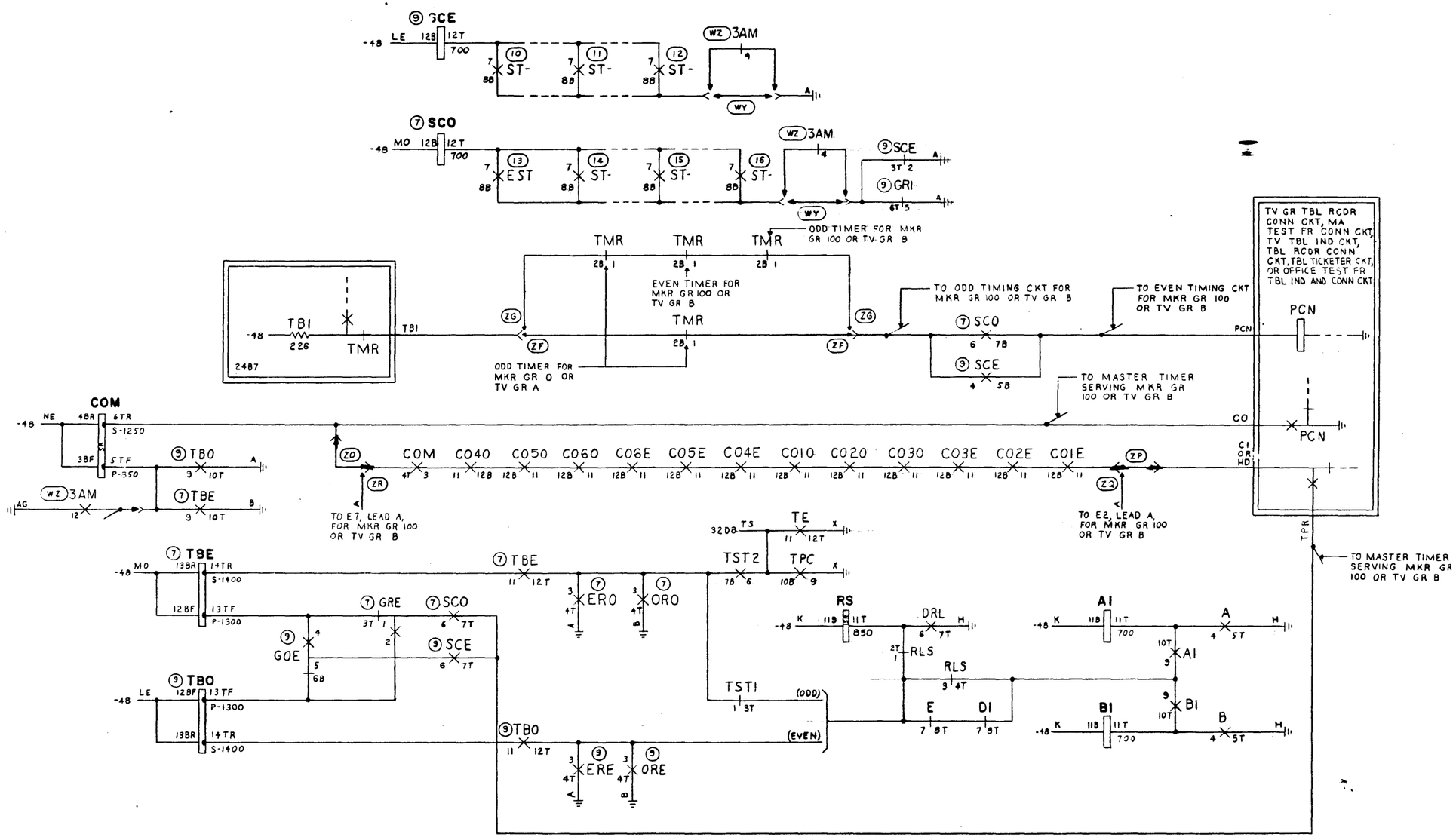
65 ② SD-25633-01-B12

ISSUE 60A

37B 38D DRAWING ISSUE

FS 12

END OF TAPE PATTERN START CONTROL
AND TROUBLE RECORDER IDLE CHECK CKT



DRAWING ISSUE
3ID COP MFG ARG

ISSUE 4IB

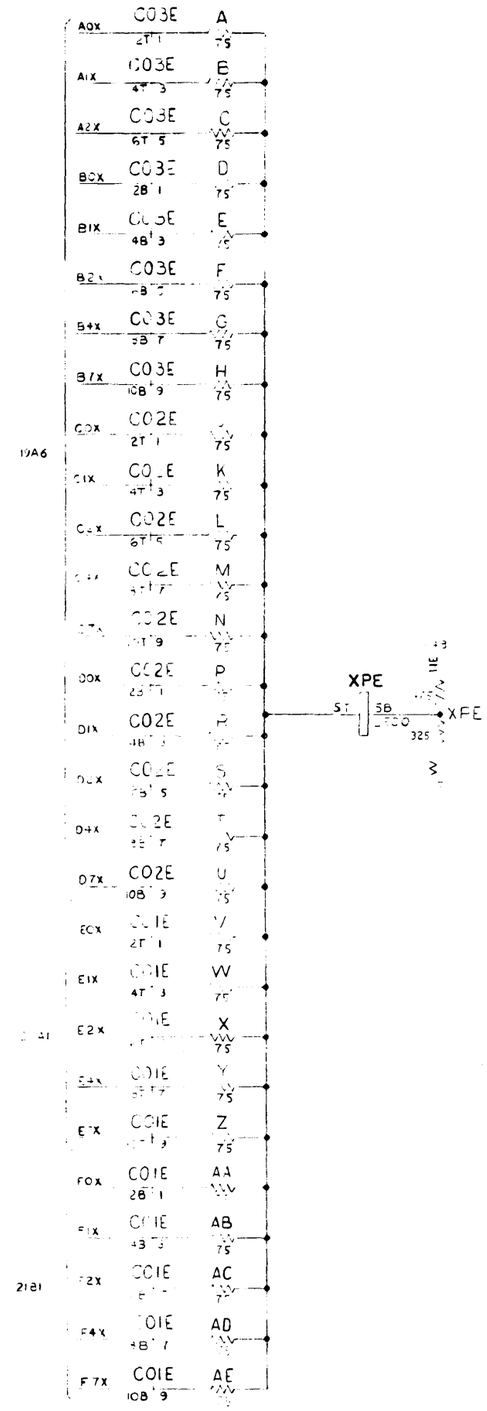
MASTER TIMING CIRCUIT (2) SD-25633-01-813

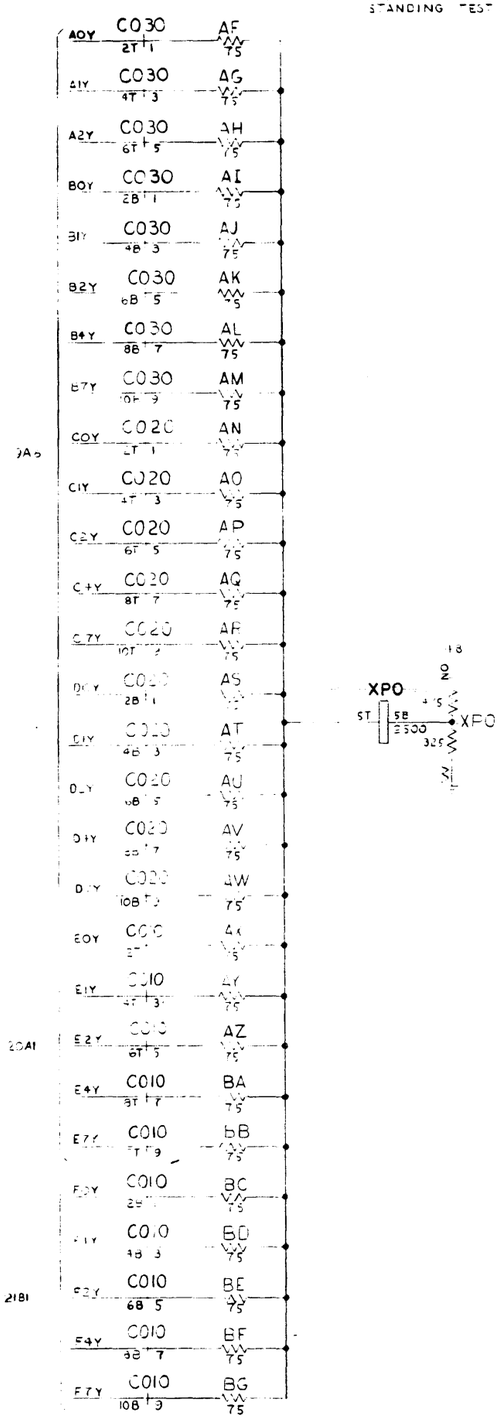
BELL TELEPHONE LABORATORIES INCORPORATED 6S

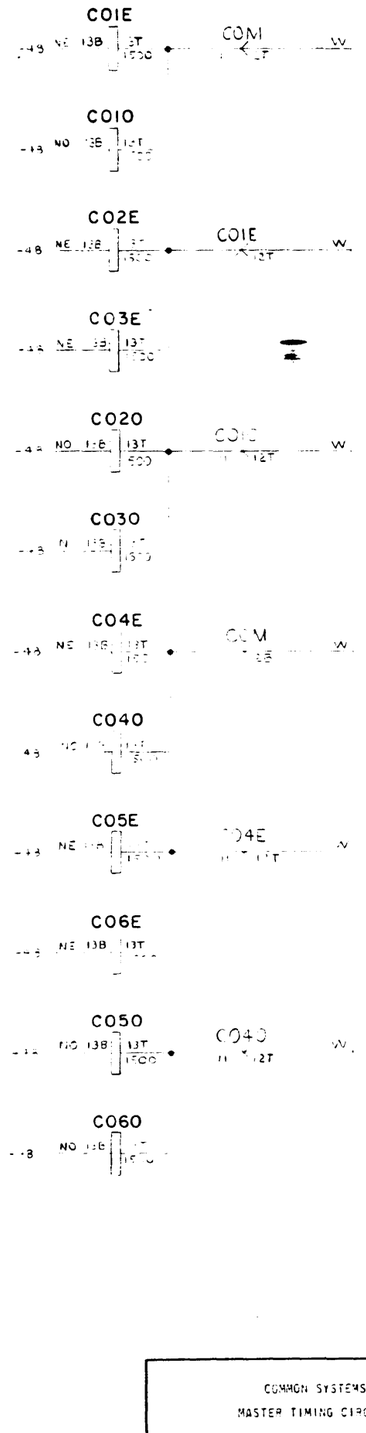
SD-25633-01-813

STABILO

PART OF FS 13
STANDING TEST AND CONTROL







DRAWING ISSUE
310 RMS MAC MRD

31

COMMON SYSTEMS MASTER TIMING CIRCUIT 2	SD-25633-01-B14
BELL TELEPHONE LABORATORIES INCORPORATED	6S

SD-25633-01-B14

PART OF FS 13
STANDING TEST AND CONTROL

19H0 — A0E C06E 2T 1; A1E C06E 4T 3; A2E C06E 6T 5
19H1 — B0E C06E 2B 1; B1E C06E 4B 3; B2E C06E 6B 5; B4E C06E 8B 7; B7E C06E 10B 9
19H3 — C0E C05E 2T 1; C1E C05E 4T 3; C2E C05E 6T 5; C4E C05E 8T 7; C7E C05E 10T 9
19H5 — D0E C05E 2B 1; D1E C05E 4B 3; D2E C05E 6B 5; D4E C05E 8B 7; D7E C05E 10B 9
20A2 — E0E C04E 2T 1; E1E C04E 4T 3; E2E C04E 6T 5; E4E C04E 8T 7; E7E C04E 10T 9
2182 — F0E C04E 2B 1; F1E C04E 4B 3; F2E C04E 6B 5; F4E C04E 8B 7; F7E C04E 10B 9

XPE1: 8BR 8TR S-2900; TTF 7BF NE P-1000 -48

19H0 — A00 C060 2T 1; A10 C060 4T 3; A20 C060 6T 5
19H1 — B00 C060 2B 1; B10 C060 4B 3; B20 C060 6B 5; B40 C060 8B 7; B70 C060 10B 9
19H3 — C00 C050 2T 1; C10 C050 4T 3; C20 C050 6T 5; C40 C050 8T 7; C70 C050 10T 9
19H5 — D00 C050 2B 1; D10 C050 4B 3; D20 C050 6B 5; D40 C050 8B 7; D70 C050 10B 9
20A2 — E00 C040 2T 1; E10 C040 4T 3; E20 C040 6T 5; E40 C040 8T 7; E70 C040 10T 9
2182 — F00 C040 2B 1; F10 C040 4B 3; F20 C040 6B 5; F40 C040 8B 7; F70 C040 10B 9

XPO1: 8BR 8TR S-2900; TTF 7BF NO P-1000 -48

PLXE: -48 NE 7B 8T 700; 1 2T XPE1, 3 4T XPE1, 1 2T XPE, 3 4T XPE W; 7T 6 PLXE; ZA A ZA RA; PLX; 31C4; 6 7T PLXO

PLXO: -48 NO 7B 8T 700; 1 2T XPO1, 3 4T XPO1, 1 2T XPO, 3 4T XPO W

TV GR TBL RCDR CONN CKT, OR MA TST FOR CONN CKT, OR TV TBL IND CKT, OR TBL RCDR CONN CKT, OR TBL TICKETER CKT.

XPL; T1F; XPL; -48

4 5T PLXE; 4 5T PLXO

TV TBL IND CKT: TIG -48; TPO/E; TPO/E

RTI

TO CORRESPONDING TERMINALS OF LIKE DESIG REL IN OTHER TIMER

RCE 25; RCO 25

W TO EVEN RECORDERS; VXM; TO ODD RECORDERS

RTI

TO OTHER ODD OR EVEN NO. RECORDERS: TIA W RT TI -48

RCDR. AND RCDR CONN CKT

(EVEN) PLXE 4B 3; (ODD) PLXO 4B 3

RT3E RT3O RT1E RT1O

TO TV GR TBL RCDR CONN CKT, OR TBL RCDR CONN CKT, OR TBL TICKETER CKT

RT3E/O: MTE/O RTE/O -48; RTE1/01 -48

MASTER TST FR CONN CKT

RT1E RT1O

TO MASTER TST FR CONN CKT

DRAWING ISSUE: 31D RHS MEC MAO

ISSUE 51B

COMMON SYSTEMS
MASTER TIMING CIRCUIT
(2) SD-25633-01-B15

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-B15

STABILO

FS 14
END OF TAPE DAY AND MONTH TIME CONTROL

TBL RCDR CONT CKT, TBL RCDR CONT & TST CKT, DECODER MKR TST & TBL RCDR CKT, OR TBL TICKETER CKT

STR2 TMS 2 1 3T ① TTE H P3 2T 1 (EVEN) (ODD)

① TCE 7T 7B AE 950 -48
② TCO 7T 7B BO 950 -48
① TDE 13T 13B AE 950 -48
① TME 13T 13B AE 950 -48
② TDO 13T 13B BO 950 -48
② TMO 13T 13B BO 950 -48
① TDEI 13T 13B AE 950 -48
① TMEI 13T 13B AE 950 -48
② TDOI 13T 13B BO 950 -48
② TMOI 13T 13B BO 950 -48
① ERD 13T 13B AE 950 -48
① TER 13T 13B AE 950 -48
23 TDE2 13T 13B AO 950 -48
23 TDO2 13T 13B BO 950 -48
② ORD 13T 13B BO 950 -48
② TOR 13T 13B BO 950 -48

① TCE 2T 1 ① TTE 5T 4
① TME 2T 1 ② TCO 2T 1 ② TTO 5T 4
① TME 9B 7 ② TMO 8B 7
ZJ ① TME 10B 9 ZJ
① TME 2T 1 WZ TMTE 12 AG
② TMO 2T 1 WZ TMTO 12 AG
ZJ ② TMO 10B 9 ZJ

FS 15
RECORDER CONNECTOR OPERATION AND CONTROL

RSC 28 1 13T CC 14T 13B K 700 -48
CK 12 CC 5B 4
RSC 3 48
OC 10B 9 8
RS 7 8T
RLS 8T 7
TBR 2 3T CC 9 10B CK 11T 10
TM6 9B 8
TST2 11 12T

⑨ ERE 6T 5 (EVEN)
⑦ ERO 6T 5 (ODD)
⑦ TFT MO 5B 4T 700 ⑦ TBE 3 4T (EVEN) -48
⑦ ORO 6T 5 (ODD)
⑨ ORE 6T 5 (EVEN)
⑦ TFT 1 2T B

A 7T 6
E 2 1 3B B 1 2B
B E 6 7T 11T 10 6T 5 4 B1
DI 9 10T AI 5 6T A 2B 1

RCE T 275 B T 275 B K -48
2 H
7 RCE
7 RCO RCO T 275 B T 275 B K -48
2 RCO

P' X 10 11T BT 48 3 P TVM 48 3 9T CK 8 12B ET 11
38GG
PROVIDE ON ODD TIMER ONLY

RCO, RCE 39 COI TIB TVMI -48
TVM -48
TIA
CH -48
TV
SEE NOTE 1
RCDR & RCDR CONN CKT
TO OTHER ODD OR EVEN NO. RECORDERS

X (EVEN)
X AD (ODD) 1 3B
RCO, RCE 57
TO CORRESPONDING TERMINALS OF LIKE DESIG REL IN OTHER TIMER

NOTES:
1. REL (RCE) CONNECTS TO EVEN RECORDERS AND REL (RCO) TO ODD RECORDERS.

DRAWING ISSUE 31D

ISSUE 51B

MASTER TIMING CIRCUIT
SD-25633-01-B16
BELL TELEPHONE LABORATORIES INCORPORATED
6S

SD-25633-01-B16

STABILO K+E

PART OF FS 16

END OF TAPE, LINE PERFORATION CONTROL
LOCAL CONTROL AND CHECKING

DRAWING ISSUE
SAL 310 WEC AWF

P1 -48 J 98 9T 950 7 8T
P1 H 12
PIA 58 4 3 ZM ZL
P2 -48 J 98 9T 950 7 8T ZL
P2A 58 4 3 ZL ZM
P3 -48 J 98 9T 950 7 8T
TGT 4 5T H
TGT -48 K 58 6T 950
P3A 58 4 3
P4 -48 J 98 9T 950 7 8T
P4A 58 4 3
P5 -48 J 98 9T 950 7 8T
P5A 58 4 3
P6 -48 J 98 9T 950 7 8T
P6A 58 4 3
P7 -48 J 98 9T 950 7 8T
P7A 58 4 3
P8 -48 J 98 9T 950 7 8T
P8A 58 4 3
ESP 5T 4
SS 7 8T
LC2 9 10B 8 3 LC4 4 5B
LC2 8 9 10T SS 10T 9
LC2 1 38 2 3T LC3
LC2 1 2 3T COP
LC4 10T 8B K 700 -48
LC2 11 12B 78 ESP 28 1 6 LC4
SP 18C0
2 3T PTR
LC2 11 12T J COP 18F1 K
OC 12B 11 CK 13T 12
RK 2 3B 1 4 68 5 H RK
SS 3 4B
LC2 -48 K 13B 13T 1500 8 9T H LCI
LCI 12T 11B K -48 2500
XA XB TM3 3T 2 XB CKR 3T 2 1
LCI 10 11T
RS H 7 8B K RSC 12D7 J RSC 8B 7
SY 5 6T 4 NS 5 6T
AI 3B 2 1 BI
NS 1 2 3T
LC2 6 7B
RS H 6T 5 PC 6 7B
PC 8T 8B K 1000 -48
PC 27A9
SS 13T 12B K 1500 -48
SS 7 8B 12T 11
RSC H 6T 5 RLS 6T 5 CC 4 5B
DRL 8T 8B K 600 -48
LC4 LCI RSC SP ET RLS
CK 9 8 10B RLS 37H3
RCT 3T 4T
TM3 11T 10 9 ESP 25B6
SS 3 4T
RCE, RCO 6 H
SY 1885
BSP 2881

LC3 -48 K 48 4T 700
LCI 9 10B
SS 5 6T
RCE, RCO 44 H
ETI 11T 10
RCE, RCO 0 R8
ESP 6 7 8T
RECORDER AND RECORDER CONNECTOR CKT
P1A -48 J 98A 10TR S-1750 88F 9TF P-850 8T 7
P2A -48 J 98A 10TR S-1750 88F 9TF P-850 8T 7 ZL
P3A -48 J 98A 10TR S-1750 88F 9TF P-850 8T 7
P4A -48 J 98A 10TR S-1750 88F 9TF P-850 8T 7
P5A -48 J 98A 10TR S-1750 88F 9TF P-850 8T 7
P6A -48 J 98A 10TR S-1750 88F 9TF P-850 8T 7
P7A -48 J 98A 10TR S-1750 88F 9TF P-850 8T 7
P8A -48 J 98A 10TR S-1750 88F 9TF P-850 8T 7
PA H 2
P1 1 2B ZM ZL
P2 38 1 2
P3 38 1 2 ZL ZM
P4 38 1 2
P5 38 1 2
P6 38 1 2
P7 38 1 2
P8 38 1 2
LC2 3T 1
RCE, RCO 55 P
32F6
SEE NOTE 2
SEE NOTE 1
TO OTHER EVEN OR ODD NO. RECORDERS
TIA
TVM
PTC
PRI
PA
PTO
TBL
PR2
TIA
3606 RCK
PROVIDE ON ODD TIMER ONLY
SEE NOTE 2
TGT 2B 1
LCI 7 8B 6
RCE, RCO 36 P1
3T 2 PTO
SEE NOTE 1
TO OTHER EVEN OR ODD NO. RECORDERS

NOTES:
1. RELAY (RCE) CONNECTS TO EVEN RECORDERS AND RELAY (RCO) TO ODD RECORDERS.
2. TO CORRESPONDING TERMINALS OF LIKE DESIG RELAY IN OTHER TIMER.

ISSUE 5IB

COMMON SYSTEMS
MASTER TIMING CIRCUIT
2
SD-25633-01-BI7

BELL TELEPHONE LABORATORIES INCORPORATED
6S

SD-25633-01-BI7

STABILOK

PART OF FS 16

END OF TAPE, LINE PERFORATION CONTROL
LOCAL CONTROL AND CHECKING

RCDR & RCDR CONN CKT

TO CORRESPONDING TERMINALS OF LIKE DESIG RELAY IN OTHER TIMER

TO OTHER ODD OR EVEN NO. RECORDERS

PROVIDE ON ODD TIMER ONLY

SEE NOTE 1

NOTES:
1. REL (RCE) CONNECTS TO EVEN RECORDERS AND REL (RCO) TO ODD RECORDERS.

MASTER TIMING CIRCUIT (2) SD-25633-01-B18

BELL TELEPHONE LABORATORIES INCORPORATED 65

DRAWING ISSUE 31D PNP WEC AMD

ISSUE 56B

SD-25633-01-819

STABILO K+E

PART OF FS 17
CUT-IN OF INFORMATION TO RECORDERS

-48 XPE1/XPO1

CO-

CO-

CO-

15(A-E)0 OR 15(A-E)3

3409 A0 A1 A2 — PROVIDE ON ODD TIMER ONLY

A0E/A00
A1E/A10
A2E/A20

3464 B0 B1 B2 B4 B7 — PROVIDE ON ODD TIMER ONLY

B0E/B00
B1E/B10
B2E/B20
B4E/B40
B7E/B70

3404 C0 C1 C2 C4 C7 — PROVIDE ON ODD TIMER ONLY

C0E/C00
C1E/C10
C2E/C20
C4E/C40
C7E/C70

3466 D0 D1 D2 D4 D7 — PROVIDE ON ODD TIMER ONLY

D0E/D00
D1E/D10
D2E/D20
D4E/D40
D7E/D70

RCE,0 2 3 4 — A0 A1 A2 — A0X/A0Y A1X/A1Y A2X/A2Y

RCE,0 50 51 52 53 54 — B0 B1 B2 B4 B7 — B0X/B0Y B1X/B1Y B2X/B2Y B4X/B4Y B7X/B7Y

RCE,0 40 41 42 43 44 — C0 C1 C2 C4 C7 — C0X/C0Y C1X/C1Y C2X/C2Y C4X/C4Y C7X/C7Y

RCE,0 30 31 32 33 34 — D0 D1 D2 D4 D7 — D0X/D0Y D1X/D1Y D2X/D2Y D4X/D4Y D7X/D7Y

SEE NOTE 1

RECORDER & RECORDER CONNECTOR CKT

TIA A- A- -48 — TO OTHER ODD OR EVEN NUMBER RECORDERS

TIA B- B- -48

TIA C- C- -48

TIA D- D- -48

TO CORRESPONDING TERMINALS OF LIKE DESIGNATED RELAY IN OTHER TIMER

XPE/O CO- CO- -48 — 14C0 OR 14C3

MGE RN SC HRE DA MO (ZL)SKP SPT

SPT

MGE RN SC HRE DA MO SPT (ZL)SKP

MGE RN SC HRE DA MO SPT (ZL)SKP

(ZY) (ZZ) (ZY) (ZZ)

7 MGE 8B

9 MGE 10B

DA 8B 7 HRE 8B 7 SPT 8B 7

SC 8B 7 MO 10B 9 SPT 10B 9

(ZL)SKP 8B 7 MO 10B 9 HRE 10B 9 DA 10B 9

(ZL)SKP 10B 9 RN 8B 7 DA 10B 9 SC 10B 9

9 RN 10B

MO 1 2T MO 3 4T MO 5 6T MO 7 8T MO 9 10T — M00 M01 M02 M04 M07 — 21D9

RN 1 2T SPA 9 10T (ZL)SKA 1 2B

4T DA 3 4T HRE 3 — 2T DA 1 2T HRE 1 — WY WZ

SY (WY) SCI 10T 9 — (WZ) 2 3B — NS 4 5 6B — 8B 7 8T 7

NS 8B 7 6T 5

SY NS 2 3B 10B 9 4T 3

NS 4 5 6B 5 6B — 10B 9 5 6B 2T 1

(ZL)SKA 4B 3 SPA 2B 1

H A1 B1

RD- 29G9 — (B) 3 — (ZJ) — (A) RD3 4T 3 RD3 2T 1 RD2 4T 3 RD2 2T 1

RDO,7,8,9 (B) C 2T 1 4T 3 — (A) RDO 2T 1 4T 3 C

(EVEN) ①TER (ODD) 8T 7 — ②TOR 8B 7 8T 7

(EVEN) ①TER (ODD) 12T 11 — ②TOR 4B 3 12T 11

(EVEN) ①TER (ODD) 3 4T 11 12B — ②TOR 11 12B 3 4T

(EVEN) ①TER (ODD) 5 6T 9 10B — ②TOR 9 10B 5 6T

(EVEN) TER (ODD) 9 10T 5 6B — ②TOR 5 6B 9 10T

(ZJ) (ZK) (WK) (WL)

9 10T 7 8T 5 6T 3 4T 1 2T MGN — (WL,WK,WM) — J0 J1 J2 J4 J7 — G H (WL) G

E0 E1 E2 E4 E7 — 20D1

(B) RD- (A) RD- — 2909

NOTES:
1. REL (RCE) CONNECTS TO EVEN RECORDERS AND REL (RCO) TO ODD RECORDERS.

MASTER TIMING CIRCUIT

BELL TELEPHONE LABORATORIES INCORPORATED

6S ② SD-25633-01-819

ISSUE 51B

CB

DRAWING ISSUE 5D1 MJC PMF 38B

SD-25633-01-820

STABILO K-E

PART OF FS 17
CUT-IN OF INFORMATION TO RECORDERS

M SEL ARC 2 NBG
EXM ALL 10-12 10-12 M11
1-9 1-9 M10
3OF8

DT SEL ARC 4 NBG
2,3 2,3 D:7
DAT ALL
1 1 D3
4 4 D1
DT SEL ARC 5 NBG
2 2
3,4 3,4 D2
DAT ALL
1 1 D4
3OF7

(EVEN) ①TME 48×3 (EVEN)
①TME1 48×3 (ODD)
(ODD) ②TMO1 48×3
② TMO 48×3

(EVEN) ① TME 68×5 (EVEN)
①TME1 68×5 (ODD)
(ODD) ②TMO1 68×5
② TMO 68×5

(EVEN) ① TDE 108×9 (EVEN)
①TDE1 108×9 (ODD)
(ODD) ②TDO1 108×9
② TDO 108×9

(EVEN) ① TDE 48×3 (EVEN)
①TDE1 48×3 (ODD)
(ODD) ②TDO1 48×3
② TDO 48×3

(EVEN) ① TDE 88×7 (EVEN)
①TDE1 88×7 (ODD)
(ODD) ②TDO1 88×7
② TDO 88×7

(EVEN) ① TDE 68×5 (EVEN)
①TDE1 68×5 (ODD)
(ODD) ②TDO1 68×5
② TDO 68×5

(EVEN) ① TDE 28×1 (EVEN)
①TDE1 28×1 (ODD)
(ODD) ②TDO1 28×1
② TDO 28×1

4F8
T(0,1,2,4 OR 7)E,O
10T×9 (ODD)
T(0,1,2,4,OR 7)E,O
10B×9 (EVEN)

TO MTFC, DR MKR TEST & TBL RCDR CKT, OR TO TBL RCDR CONN CKT

DTO (EVEN) (ODD)
DT4 (EVEN) (ODD)
DT1 (EVEN) (ODD)
DT2 (EVEN) (ODD)
DT7 (EVEN) (ODD)

PROVIDE ONLY ON FIRST CKT IN OFFICE

19E9: C3 E4 E1 E2 E7
3406: C0 E1 E2 E4 E7
ODD TIMER ONLY

DC 8T×7 2T×1 4T×3 6T×5 2B×1

MC 6T×5 8T×7
MC 2T×1 4T×3

RCE,O 20 21 22 23 24

TO CORRESPONDING TERMINALS OF LIKE DESIG RELAY IN OTHER TIMER

E0X/E0Y E1X/E1Y E2X/E2Y E4X/E4Y E7X/E7Y
E0E/0 E1E/0 E2E/0 E4E/0 E7E/0

SEE NOTE 1
E0 E1 E2 E4 E7

RCDR & RCDR CONN CKT
TIA E- E- 48
TO OTHER ODD OR EVEN NO. RECORDERS

CO- CO- XPE/0 48
14FO OR 14F3

CO- XPEI/XPOI 48
15FO OR 15F3

HRN
HT0 8T×7
HT1 6T×5
HT2 2T×1
HT4 4T×3
HT7 2B×1

3 4B 5 68 SPA G

(ZL) SKA 68×5 SCI 68×5 G
(ZL) SKA 88×7 SCI 88×7 G

(ZY) E0 E1 E2 E4 E7

A (ZY) MGN 5×68 7×88 G
B

NOTES:
1. (RCE) REL CONNECTS TO EVEN RECORDERS & (RCO) REL TO ODD RECORDERS.

BELL TELEPHONE LABORATORIES INCORPORATED
COMMON SYSTEMS
MASTER TIMING CIRCUIT
SD-25633-01-820
ISSUE 57A
DRAWING ISSUE 310

SD-25633-01-821

PART OF FS 17
CUT-IN OF INFO TO RECORDERS

M SEL ARC 4 NBG — 30C8

M SEL ARC 5 NBG — 30E1

DU SEL ARC 4 NBG — 30E1

DU SEL ARC 5 NBG — 30E1

DAT — ALL

MI2 — (EVEN) ①TME 4T×3 (EVEN); ①TMEI 4T×3 (ODD); (ODD) ②TMOI 4T×3; ②TMO 4T×3

MI3 — (EVEN) ①TME 6T×5 (EVEN); ①TMEI 6T×5 (ODD); (ODD) ②TMOI 6T×5; ②TMO 6T×5

MI4 — (EVEN) ①TME 8T×7 (EVEN); ①TMEI 8T×7 (ODD); (ODD) ②TMOI 8T×7; ②TMO 8T×7

MI5 — (EVEN) ①TME 10T×9 (EVEN); ①TMEI 10T×9 (ODD); (ODD) ②TMOI 10T×9; ②TMO 10T×9

MI6 — (EVEN) ①TME 12T×11 (EVEN); ①TMEI 12T×11 (ODD); (ODD) ②TMOI 12T×11; ②TMO 12T×11

D5 — (EVEN) ①TDE 4T×3 (EVEN); ①TDEI 4T×3 (ODD); (ODD) ②TDOI 4T×3; ②TDO 4T×3

D6 — (EVEN) ①TDE 6T×5 (EVEN); ①TDEI 6T×5 (ODD); (ODD) ②TDOI 6T×5; ②TDO 6T×5

D7 — (EVEN) ①TDE 8T×7 (EVEN); ①TDEI 8T×7 (ODD); (ODD) ②TDOI 8T×7; ②TDO 8T×7

D8 — (EVEN) ①TDE 10T×9 (EVEN); ①TDEI 10T×9 (ODD); (ODD) ②TDOI 10T×9; ②TDO 10T×9

D9 — (EVEN) ①TDE 12T×11 (EVEN); ①TDEI 12T×11 (ODD); (ODD) ②TDOI 12T×11; ②TDO 12T×11

MC 4B×3 — RCE, RCO 10×11×12×13×14 — TO CORRESPONDING TERMINALS OF LIKE DESIG RELAY IN OTHER TIMER

MC 6B×5 — RCE, RCO 10×11×12×13×14

MC 8B×7 — RCE, RCO 10×11×12×13×14

MC 10B×9 — RCE, RCO 10×11×12×13×14

MC 12B×11 — RCE, RCO 10×11×12×13×14

F0 F1 F2 F4 F7 — SEE NOTE 1 — FOX/FOY; F1X/F1Y; F2X/F2Y; F4X/F4Y; F7X/F7Y

34F9 — F0 F1 F2 F4 F7 — ODD TIMER ONLY

F0E/O F1E/O F2E/O F4E/O F7E/O

(ZY) F0 F1 F2 F4 F7

TO CORRESPONDING TERMINALS OF LIKE DESIG RELAY IN OTHER TIMER — D C (ZY) — (ZZ) RCE, RCO 8 — RG — 9 10B; 11 12B MGN — SEE NOTE 1

HRN 3×4B HU0; 5×6B HU1; 7×8B HU2; 9×10B HU4; 11×12B HU7

TO MTFC, TBL RCDR CONN CKT, OR DECODER MKR TEST AND TBL RCDR CKT

DU0 DU1 DU2 DU4 DU7 — PROVIDE ONLY ON FIRST CKT IN OFFICE

3 4B; 5 6B; 7 8B; 9 10B; 11 12B DC

(ZK) (ZJ)

(ZL) SKA 10B×9; SCI 10B×9; SPA 8B×7

(ZL) SKA 11×12B; SCI 11×12B; SPA 9×10B

②ORD 3×4T (ODD); 11×12B; ①ERD (ODD) 11×12B; (EVEN) 3×4T (EVEN) (ZJ) 6

②ORD 5×6T (ODD); 9×10B; ①ERD (ODD) 9×10B; (EVEN) 5×6T (EVEN) (ZJ) 7

②ORD 7×8T (ODD); 7×8B; ①ERD (ODD) 7×8B; (EVEN) 7×8T (EVEN) (ZJ)

②ORD 9×10T (ODD); 5×6B; ①ERD (ODD) 5×6B; (EVEN) 9×10T (EVEN) (ZJ) 9

DR2 1×2T; 3×4T

DR3 1×2T; 3×4T; C

DR4 3×4T; 1×2T; C

DR6 3×4T; 1×2T; C

(A) (B)

DR- 29B9

DR- 29A9

(WZ) (WY) MT0 MT1 MT2 MT4 MT7 — ..0G2

(ZK) (ZJ) MO0 MO1 MO2 MO4 MO7 — 19E5

RCDR AND RCDR CONN CKT

TIA × F- F- (SCRF) -48 — TO OTHER ODD OR EVEN NO. RECORDERS

CO- CO- XPE/O -48 — 14H0 OR 14H3

CO- XPEI/XPOI -48 — 15H0 OR 15H3

RCDR AND RCDR CONN CKT

TIB RG -48

U(0,1,2,4,0R 7)E,0 (ODD) 9×10T; (EVEN) 9×10B — 4D8

NOTES:
1. (RCE) RELAY CONNECTS TO EVEN RECORDERS AND (RCO) RELAY TO ODD RECORDERS.

BELL TELEPHONE LABORATORIES INCORPORATED — MASTER TIMING CIRCUIT — SD-25633-01-821 — 6S — 51B

FS 18

SEIZURE OF MASTER TIMER BY RCDR
AND MASTER TIMER RCDR PREF CONT

RCDR & RCDR CONN CKT

DRAWING ISSUE 3ND

TO OTHER EVEN OR ODD RECORDERS

(EVEN) ⑨ERE 9 10T (EVEN)
⑨ORE 10T
⑦ORO 10T
(ODD) ⑦ERO 9 10T (ODD)

MTT — RT — MTP TPO — TPO

TP 226 — TM6 1 2B — 8 9 10B ET

(EVEN) ⑨TBO 5 6T — ⑨ERE 11 12T (EVEN)
⑨ORE 12T
⑦ORO 12T
(ODD) ⑦ERO 11 12T (ODD)

MTP — RT — RNT
EMER RT

ADI ⑦TBE 11T 10 5 6T — TST1 1 2B

TP TP — TV CKT — R5 48

TP TP — HP HP — HS B 48

IP

⑯ST- ST- 9BF 12TF P-800
⑯ST- 1 2 3T
⑮ST- ST- 9BF 12TF P-800
⑭ST- ⑮ST- 1 2 3T ST- 9BF 12TF P-800
⑭ST- 1 2 3T
⑬EST 9BF 12TF P-800
⑬EST 1 2 3T

⑦GRE 8 9B 7 — 10T 9 TST1

9 8 — 58 TST2 4T LOK 3 — 8T 7 6 ADI

28 1 ⑦PRO

6 7T TSTI

⑦TFT 1 2B (ODD)
⑨PRE 1 2B (EVEN)

RLS 10F 9 — OC 3B 1 H
AI 9 10B
BI 9 10B

(EVEN) (ODD)

TSF — NS — RT — TI 43

KRB 3F 3B 8T 4000

-48 PO — CB <26 — 2 1 KRB

ON 28 — TST2 28 2B 1

3 48 TSTI

TO ODD RECORDERS
EST TO EMER RECORDERS
TO EVEN RECORDERS
EST/ST

⑨GR 4 5 6B
3B 1 2 ⑨GR
3T 2 ⑨GRI 1 3T
⑦GEO 3B 1 — TSTI 11 12T — TST

⑩ST- 10 ST- ST- 9BF 12TF P 800
⑪ST- ST- 9BF 12TF P-800
⑫ST- 12 ST- ST 9BF 12TF P-800

MBR
MB
XRB — MTR
U 48

RCDR & RCDR CONN CKT

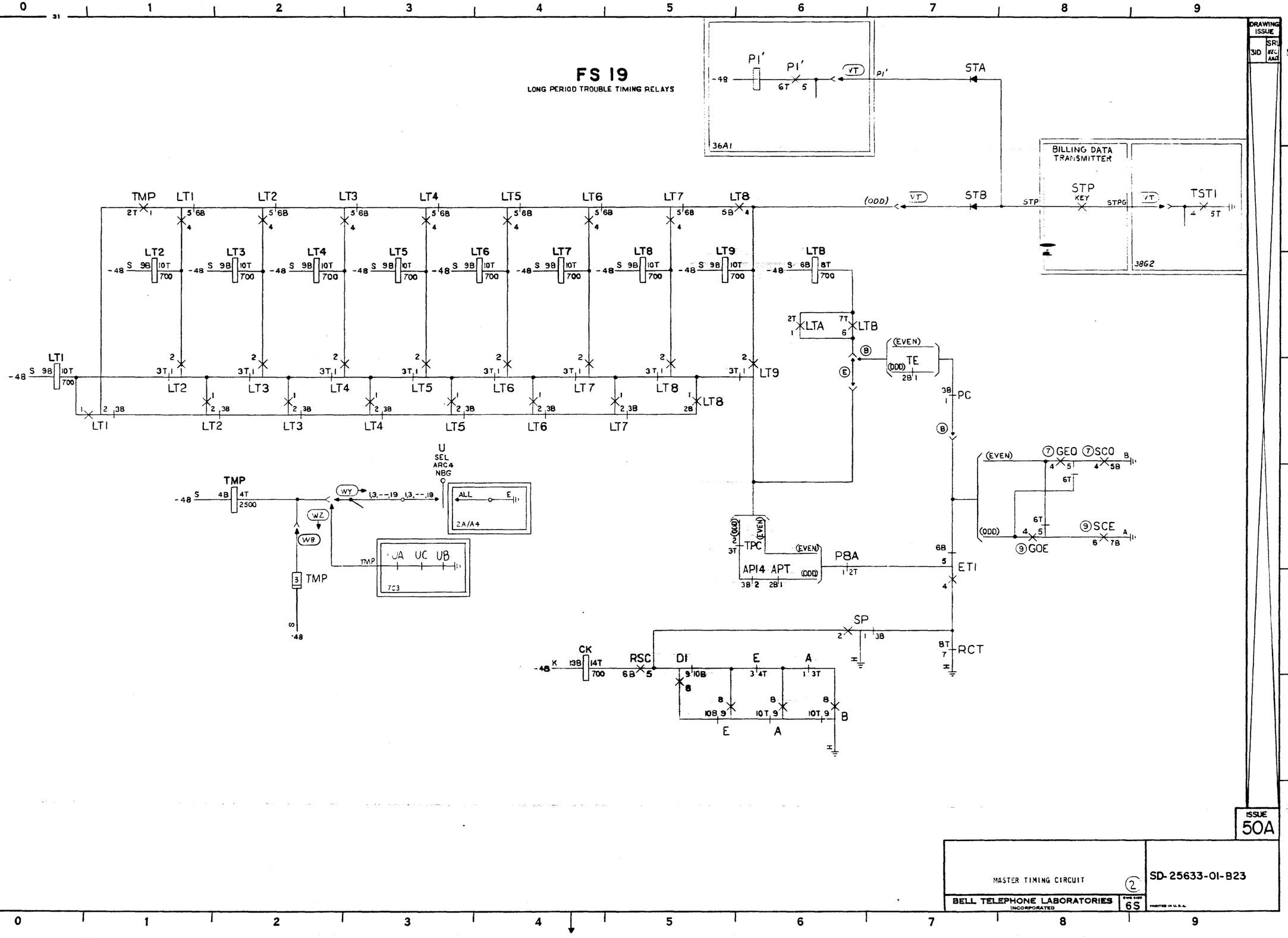
31

COMMON SYSTEMS
MASTER TIMING CIRCUIT 2
SD-25633-01-B822
BELL TELEPHONE LABORATORIES INCORPORATED
6S

SD-25633-01-B822

FS 19

LONG PERIOD TROUBLE TIMING RELAYS



PART OF FS 20
TIME OUT AND TROUBLE RELEASE

DRAWING ISSUE
SID 378

DLR
-48 S 6B 6T 1500
(EVEN) (EVEN)
(ODD) CAS (ODD)
6B 5
37FZ CAS 4
TM3 4 5B E

CKR
-48 S 6B 6T 1500
(ODD) 6B 5 SLO 9B 8 TST1 (ODD)
(EVEN) (EVEN)
TIB 4 5T
TMR 4 5T E

RCDR & RCDR CONN CKT
DL -48
RT
TO OTHER ODD OR EVEN NO. RECORDERS
DL

(TO EVEN RECORDERS) ⑨ERE 8T 7 (EVEN)
(TO ODD RECORDERS) ⑨ORE 8T 7
⑦ORO 8T 7 (ODD)
⑦ERO 8T 7
DLR 4 5B E

MISC CKT MA TMG FR
TAE/TAO RED
-48 TA
TM16 4 5T E

JK, LP & KEY CKT, TBL RCDR FR, OR TO JK, LP & KEY CKT, TBL TICKETER FR
MJ -48
LK
TO OTHER TIMER CKT
TMR (V) 6 7T (W) (XO) E
TA 1700 S -48

MA TEST FR JK, LP & KEY CKT
MN -48
MJ -48
LK
MN (UQ)
MJ (UP)

DLI
-48 S 5B 5T 830
DLR 3T 2 1
TM1 5 6B E

TMR
-48 S 8B 10T 700
DLI 2B 1
DLI 4B 3
(EVEN) PLXE 1 2B W
(ODD) PLXO 1 2B W
BLK 6B 5 X

TV GR TBL RCDR CONN CKT
MJ -48
MJ

MISC CKT FOR TV TBL IND FR
CD -48
CE (Z)
TIA

TT -48 (X)
TAP (XC)
TO CORRESPONDING TERMINAL OF LIKE DESIG RELAY IN OTHER TIMER
TM6 3 4B E

MTTRE/O -48
MR
TMR 7B 6
(EVEN) X
(ODD) ON 2T 1 X
6 RW2 7B

MA TEST FR PLT REG CKT, SYS PLANT REG CKT, MISC CKT FOR TBL RCDR FR, OR JACK, KEY, & LAMP CKT
MTTRE/O -48
MTTRE/O

(XO) MTCE TEST POST
MTCE TO TV GRP TBL RCDR CONN CKT

TBR
-48 K 8B 10T 950
RS 2T 1
CK 12B 11
(ODD) (ODD)
(EVEN) (EVEN)
⑦ERO, ORO 2T 1 A,B
⑨ERE, ORE 2T 1 A,B
TBR 37GO
TM6 11B 10 E
MTE/O

-48 S TBI 226 TMR 4 9B TBI 13D2
TIB E 7TR 7BR S-1750 1 2 3T TIB TIS
-48 S 6BF 6TF P-850 3 TIB
TM5 28 E

TO MA TEST FR CONN, TBL RCDR CONN CKT, OR TBL TICKETER CKT
-48
DLTE/O
DL

RCCK
-48 S 1B 4T 2500
(V) DL 2T 1 E DL
RCCK
MTE/O

(XO) (XM) TIB 2B 1 (XO,XM,V) RCCK 3T 2 1 RCCK E/O
(V)
(X),XM,V)
TMR E 9T 8 DL

(V) DL 2B 1 E
(V) DL 3T 3B 2500
TO OTHER TIMER CKT
DLB -48

(XO) LTR 3TF 3BF P-850 S -48
E 4TR 4BR 3-1750
(XO) LTR 2T 1
TO ALL OTHER (LTR) RELAYS
(XO) LTR 2B 1 E
MTLR E/O -48
LK LTRL -48

MA TEST FR JK, LP & KEY CKT, OR JK, KEY & LP CKT, TBL RCDR FR, OR JK, KEY & LP CKT, TBL TICKETER FR
MTE/O -48

MISC CKT, TBL RCDR FR AND MISC CKT, TV TBL IND FR
MTE/O
BATT L KEY -48

TV TBL IND CKT
TPE/O
RM1(E)
RM2(O)

TV GR TBL RCDR CONN CKT
MTPE/O
MTPE/O
TRB E/O
TRB/C

MA TEST FR CONN CKT, TBL RCDR CONN CKT, TBL TICKETER CKT, OR OFFICE TEST FR TBL IND AND CONN CKT
TPE/O
TRST
TRB
DL-MTE/O

MA TEST FR JK, LP & KEY CKT
TRMB - MTE/O (JACK)

TV GR TBL RCDR CONN CKT
MTE/O

TV TBL IND CKT
DLTE/O -48

MA TEST FR JK, LP & KEY CKT, OR JK, KEY & LP CKT, TBL RECORDER FR, OR JK, KEY & LP CKT, TBL TICKETER FR
DLB -48

MISC CKT TBL RCDR FR
MTLR E/O

ISSUE 59B

MASTER TIMING CIRCUIT (2)
SD-25633-01-B24
BELL TELEPHONE LABORATORIES INCORPORATED
SHEET NUMBER 6S

SD-25633-01-B24

STABILO

PART OF FS 20

TIME OUT & TROUBLE RELEASE

RKO -48 S 4B 6T 950 — TM4 2T 1 — RKA 6 7T — TM2 3 4B E

TM4 -48 S 6B 8T 700 — TM3 6 7T

RKO 4 5T — TM4 6 7T — TM2 3T 2 1

TM5 -48 S 5B 7T 700 — TM5 4T 3 — TM1 1 2T — TM5 6T 5

TM4 3 4 5T — TM3 5T 4

TM6 -48 S 12B 13T 700 — RKA 5T 4

TM3 -48 S 6B 8T 700 — (B) RN 7 8T — LCI 1 2B — COP 4B 3 (B) TM3

9 11T 10 ESP — RCE,RCO 6 H

17H0

TM6 12T 11 — (EVEN) RA 2T 1 A — (ODD) RA 2B 1 A

LT4 8B 7 — ETI 3T 1 E

T SEL ARC I BDG — ALL E — 2C4

TM1 -48 S 7B 7T 2500 — (EVEN) PLXE 1 2T — ①TFE 3T 2 B — (ODD) PLXO 1 2T — ②TFO 3T 2 A

(B) LTB 4 5B — LTA 5T 4 3 — 1 2T LTB — 2,5,8,11,14,17 — 2,5,8,11,14,17

LTA -48 S 6B 6T 2500 — (XO)

LTA FA FA FAL -48 — MISC CKT MA TMG FR

(EVEN) RW 1 2B — TPC 2B 1 (ODD) — ETI 11B 10 — LT9 7 8B E

ETI 9T 8 7 — LC2 1 3B — TM6 3T 1 2 TBR 37H2 — SP 5 6T — ETS 4 5B (VS)

10B 9 H — RSC 1 2T E — PTO

(ODD) ⑦ESO 6B 5 (ZV) (ZU) — ⑦GRE 6B 5 A (ZJXE) (ODD)

(EVEN) ⑨ESE 6B 5 (ZV) (ZU) — ⑨GOE 3T 1 A (ZJXE) (EVEN)

OC 10T 9 — RET 1 2T — (ODD TO EVEN) (EVEN TO ODD) — MDH 3F8

ETI 7 8 9B — SS 2T 1 — TSP 6B 5

RCT 1 2B

(ODD) ⑦GEO 11B 10 — TST1 9T 8 7 — ⑦SCO 4 5T B

(EVEN) 9T 8 7 — ⑨SCE 4 5T A — ⑨GOE

TM1 -48 S 5 6T — (EVEN) (ODD) P' 2T 1 — ETI 4 6T 5

RCE 37 — (TO EVEN RECORDERS) — RCO 37 — (TO ODD RECORDERS)

TO CORRESPONDING TERMINALS OF LIKE DESIGNATED RELAYS IN OTHER TIMERS

RK

RCDR & RCDR CONN CKT — T1A — TO OTHER EVEN OR ODD NO. RECORDERS

RK -48 S 500 — 10B 11T 700 — 3B 2 — TM3 1

RKA 4 5B — RKO 1 2B — TM5 2T 1 E — RK 9 10T — TM4 4 5B

TM2 E 5B 4T 2500 3 — 3B 2 1 RKA — 6 8T 7 RK — 3 4,5T RK

RKA 1 2 3T — TM1 1000 — TM 1 — TM2 .1 MEG — TM3 1.5 MEG — TM4 TM4 1 2B 1.5 MEG

TM1 1000 UUF — MTE OR MTO +130 — (UK,UL) TM 4.26-4.54

RKO 3T 2 — TM1 3 4T — (ODD) TST2 10B 9 (EVEN) — DRL 5B 4 H

RKA -48 S 8B 10T 1300 — RK 2T 1 — (WY) — TMI 3 4B E — (WZ) 3AM 2

DRAWING ISSUE — BID — HKY WEC AMC

ISSUE 60A

MASTER TIMING CIRCUIT (2) SD-25633-01-B25

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-B25

STABILO K+E

FS 21

RECORDER TRANSFER AND MAKE BUSY

RECORDER AND RECORDER CONNECTOR CIRCUIT

TO EVEN RECORDERS

TO ODD RECORDERS

TO CORRESPONDING TERMINALS OF LIKE DESIG REL IN OTHER TIMER

TO OTHER ODD OR EVEN NO. RECORDERS

RTI RNT TNS TNS RT MBR MBJ TN RNT MB MBR TIB RT TN TNS MBR TNS TN MTR RT MTR -48 TN RNT RTI MB TIB TN MBR MB -48

DRAWING ISSUE 310 SRL

ISSUE 5IB

COMMON SYSTEMS

MASTER TIMING FRAME (2)

SD-25633-01-B26

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-B26

STABILO

FS 22
MAKE BUSY AND RCDR GROUPING

DRAWING ISSUE 31D — FHS, WEC, AMC

MISC CKT MSTR TMG FR — FA, MTE

MTFG — MA TST FR JK, LP, AND KEY CKT

FGO/E — NO. 5 MISC CKT FOR ALL FRAMES

TO FUSF ALM CKT IN OT... TIMER

①TFE 2TF P-350 / 7BF / 9TR S-1750 — (EVEN) (ODD) — DB — F — FA1 4 5T — FA1 6 7T FG — B — MTE/O -48

CMBE L KEY B 2 1 — 11G7 ETS1

(24) FA1 — (EVEN) B — (ODD) A — FA 1 2T — FA 2T 1

②TFO 8TF P-850 / 7BF / 9TR S-1750 — (EVEN) (ODD)

(24) FA1 4 3 — MTE/O -48 — 3B — (25) — (EVEN) AO -48 — (ODD) 3E -48

CMBO L KEY A 5 6 — 11G8 ETS2

①TFE 3 4B — PLXE 5 6B — (EVEN) — TIB 4 5B — TMR 1 2T E

PLXO 5 6B — (ODD) — ②TFO 3 4B A

88 ⑦ESO 7 (ODD) — 88 ⑨ESE 7 (EVEN)

6 TM6 T E

①MBE ②MBO ①TFE B — ⑦GR ⑦GRE A

②MBO ①MBE ②TFO A — ⑨GRI ⑨GRO B

MISC CKT, FOR TBL IND FR; MTF JK, LP, & KEY CKT; JK, KEY & LP CKT TBL RCDR FR; MISC CKT FOR TBL RCDR FR; OR JK KEY & LP CKT TBL TICKETER FR

CMBE CO — ①TFE 1 2B

CMBO CE — ②TFO 1 2B — ⑨GRI 4 5T A

CMBO — CMBO

CMBE — CMBE

⑦GRE ME 12B 12T 1775 — ⑦GRE 11T 10 — ⑨ESE 2B 1 — (EVEN) (ODD) — ET 1 3T PC — PC PC — RS — 734

⑦GEO ME 12B 12T 1775 — ⑦GEO 11T 10 — ②MBO 6 7B A

⑨TBO 4B 3

⑦TBE (COD) 1 2B — OC 1 2T — (ODD)

⑨TBO (EVEN) 1 2B — (EVEN) ①MBE 6 7B B

⑦TBE 3 4B

⑨GRO LO 12B 12T 1775 — ⑨GOE 11B 10 — (ZX) — RW2 (ZW) 1 2T (ZW) — ER 1 2B X

⑨GOE LO 12B 12T 1775 — ⑨GRO 11T 10 — ⑦ESO 2B 1

⑦ORO MO 13B 13T 950 — ⑦GRE 3B 1 2 — ⑦SCO 8 9B — ⑦GEO 5 6B 4 — ⑦TBE 7 8 9B B

⑨ORE LO 13B 13T 950

⑦ERO ME 13B 13T 950 — ⑨GRO 2 3B — ⑨SCE 1 2B — 2 1 — ⑨GOE 3B — ⑨TBO 7 8 9B A

⑨ERE LE 13B 13T 950

EPG 1 — (WZ) — (WY) (EVEN) (WY) (ODD)

⑨PRE LE 5B 4T 700 — (WZ) — (EVEN) (WY) — ⑨PRE 3 4B — SR 5B 4

⑦PRO MO 5B 4T 700 — (WY) (ODD) — (WZ) — OPG 1

⑦PRO 3 4B — (EVEN) (ODD)

3 4T E — ADV — 4T 3 C — DH — 4T 3 C — DTH — 4T 3 C — MOH

ISSUE 49B

MASTER TIMING CIRCUIT (2) — SD-25633-01-B27

BELL TELEPHONE LABORATORIES INCORPORATED — DWG SIZE 6S

STABILO

SD-25633-01-B27

FS 23

MASTER TIMER TIME AND PROGRESS INFORMATION FOR TROUBLE CIRCUITS

TO TRANSVERTER TROUBLE INDICATOR, MASTER TEST FR CONN, TRANSVERTER GROUP TROUBLE RECORDER CONN, TROUBLE TICKETER OR OFFICE TEST FR TROUBLE INDICATOR AND CONN CKT

HR HRE H 5 6T
P4A H 6 7B
ET ET 2B 1 (WZ) 3AM AG 5 (WY)
SP SP H 8 9B
BSP TSP 3T 2 BSP RCE.0 6 17H1
D DI H 6 7B

MU0,1,2,4,7

SPA SPA G 1 2T
P1A H 6 7B
SKP (ZL) SKP H 1 2T
P2A H 6 7B
DA DA H 5 6T
P3A H 6 7B
ASP TSP H 4 5T

TO TRANSVERTER TROUBLE INDICATOR, MASTER TEST FRAME CONN, TROUBLE RCDR CONNECTOR, TV GROUP TROUBLE RECORDER CONNECTOR, OR TROUBLE TICKETER CKT

TEN ON X 3 4T
SC SC H 1 2T
P5A H 6 7B
RN RN H 3 4T
P6A H 6 7B

MTO,1,2,4,7

MO MC H 1 2B
P7A H 6 7B
MG OR RG MGE H 1 2T
P8A H 6 7B
SY SY 1 2 3T SY 18A4
RCE.0 6 (J) (K)

TO DECODER MKR TEST & TROUBLE RECORDER CKT OR TROUBLE RECORDER CONN CKT

MU0 MU1 MU2 MU4 MU7

(23) TD(E,0)2 3 4T
MU0 2,3,5,8,12,13,15,18 → T SEL ARC 3 NBG ALL E
MU1 4,6,9,14,16,19 → T SEL ARC 4 NBG ALL E
MU2 7,10,17,20 → H SEL ARC 3 NBG ALL E
1,11,21,22 → H SEL ARC 4 NBG ALL E

(23) TD(E,0)2 5 6T
(23) TD(E,0)2 7 8T
ADV 8T 7
(23) OME,0 2 3B
MU4 (23) TD(E,0)2 9 10T
2,12 → T SEL ARC 4 NBG ALL E
3,4,13,14 → H SEL ARC 3 NBG ALL E
5-7,15-17 → H SEL ARC 4 NBG ALL E
ADV (23) OME,0 1 2T 3 4T A
MU7 (23) TD(E,0)2 11 12T
1,8-11,18-22 → T SEL ARC 3 NBG ALL E
1,8-11,18-22 → T SEL ARC 4 NBG ALL E

MT0 (23) TD(E,0)2 9 10B
MT1 (23) TD(E,0)2 7 8B
ADV 10B 9
2,3,5,9,10,12,16,17,19 → H SEL ARC 3 NBG ALL E
4,6,11,13,18,20 → H SEL ARC 4 NBG ALL E
1,7,8,14,15,21,22 → T SEL ARC 3 NBG ALL E
1,7,8,14,15,21,22 → T SEL ARC 4 NBG ALL E

(23) OME,0 2T 1
2,9,16 → H SEL ARC 4 NBG ALL E

MT2 (23) TD(E,0)2 5 6B
MT4 3 4B
MT7 1 2B
3,4,10,11,17,18 → H SEL ARC 3 NBG ALL E
5,6,12,13,19,20 → H SEL ARC 4 NBG ALL E
1,7,8,14,15,21,22 → T SEL ARC 3 NBG ALL E
1,7,8,14,15,21,22 → T SEL ARC 4 NBG ALL E

MT7 MT4 MT2 MT1 MT0
PROVIDE ONLY ON FIRST CKT IN OFFICE

(23) ADV 1 2B
5 6T OME,0 4

MTO,1,2,4,7 → (WZ) → 2IE9 MTO,1,2,4,7
4B/D2, 4B/H2

(23) OME -48 AO 6B 7T 950 (EVEN) (ODD) ADV 7 8B E
4 (23) OME 5B (EVEN)
(23) OMO -48 BO 6B 7T 950 (23) OMO 4 5B (ODD) SR 4 5T D

VX (WZ) (EVEN) (ODD) 1 TTOA MT1 1U 2U 2450 3 -48
VX (WZ) (EVEN) (ODD) 7 TTOA MT4 1L 2L 2450 3 -48

AI H 8T 7 A
BI H 8T 7 B
E H 12B E
(WZ) 3AM AG 9 (WY) 13 EST RST EMG 11T 10
(WY) 16 ST- RST- 11T 10
(WY) 15 ST- RST- 11T 10
(WY) 14 ST- RST- 11T 10
(WZ) 3AM AG 9 (WY) 10 ST- RST- 11T 10
(WY) 11 ST- RST- 11T 10
(WY) 12 ST- RST- 11T 10
(WY) NS H 10T 9 NS

TO TRANSVERTER TROUBLE INDICATOR, MASTER TEST FRAME CONN, TROUBLE RCDR CONNECTOR, TV GROUP TROUBLE RECORDER CONN, TROUBLE TICKETER CKT, OR OFFICE TEST FRAME TROUBLE INDICATOR AND CONNECTOR CKT

TO TRANSVERTER GROUP TROUBLE RECORDER CONN, TRANSVERTER TROUBLE INDICATOR, MASTER TEST FRAME CONNECTOR, TROUBLE RECORDER CONN, OR TROUBLE TICKETER CKT

DRAWING ISSUE
310 HWS HYC AMZ

ISSUE 51B

MASTER TIMING CIRCUIT (2) SD-25633-01-B28

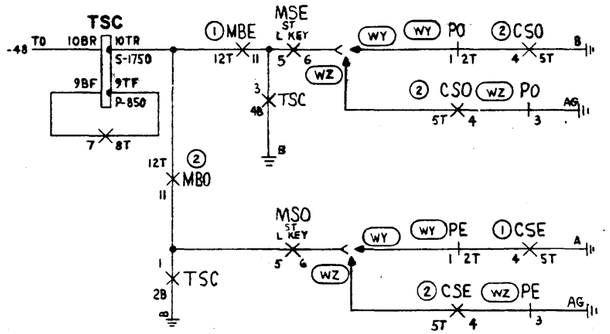
BELL TELEPHONE LABORATORIES INCORPORATED 6S

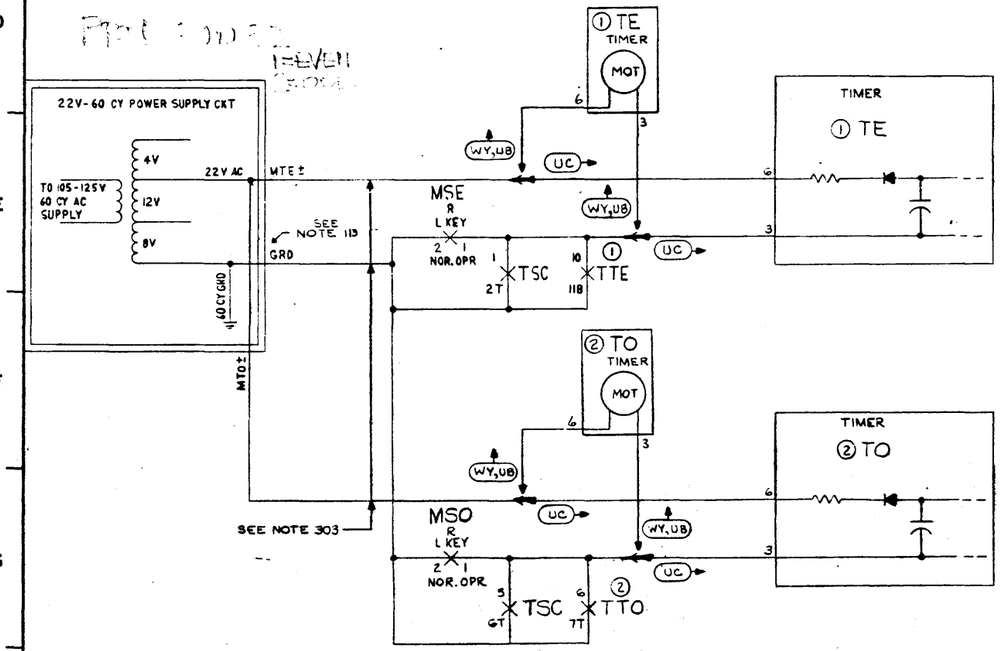
SD-25633-01-B28

STABILO

FS 24

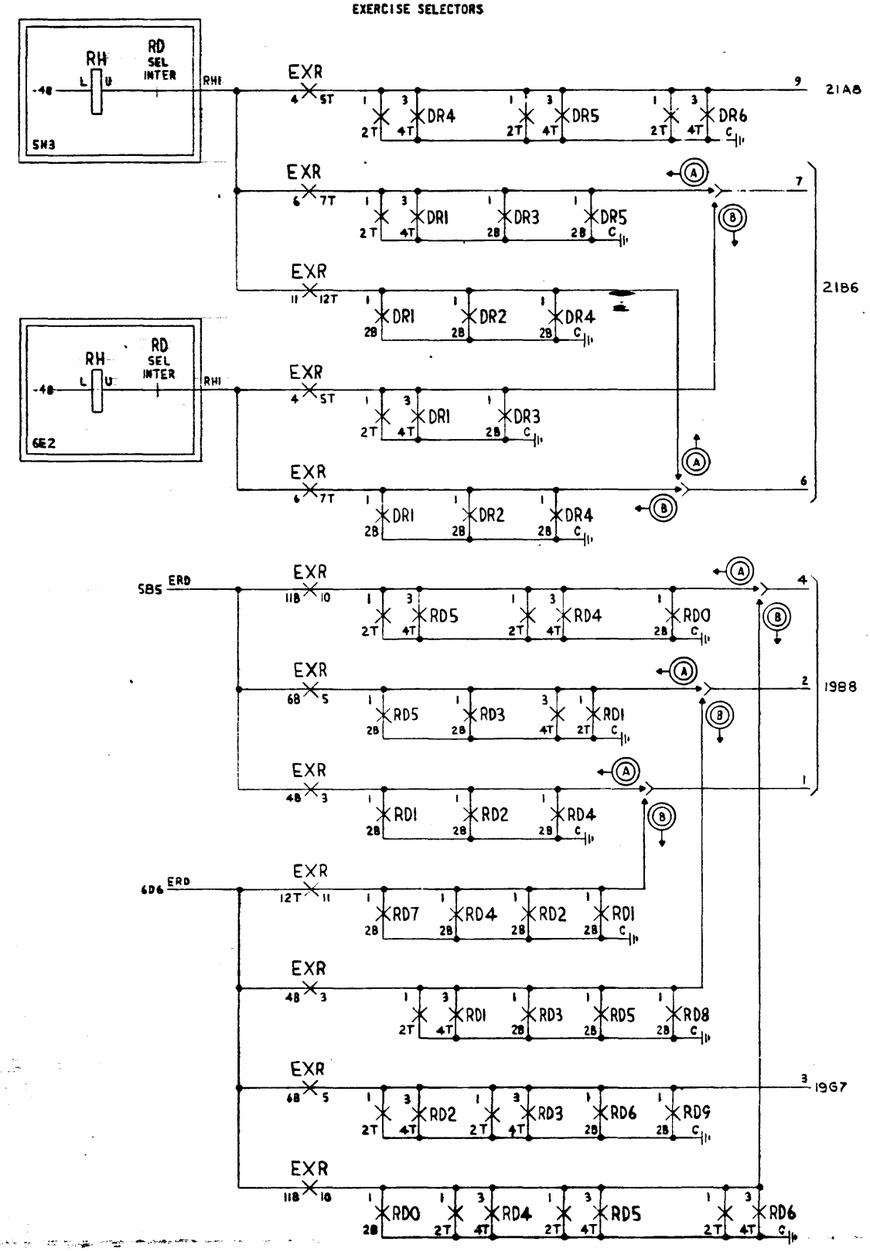
SYNCHRONIZE TIMERS





PART OF FS 25

EXERCISE SELECTORS



DRAWING ISSUE 31D

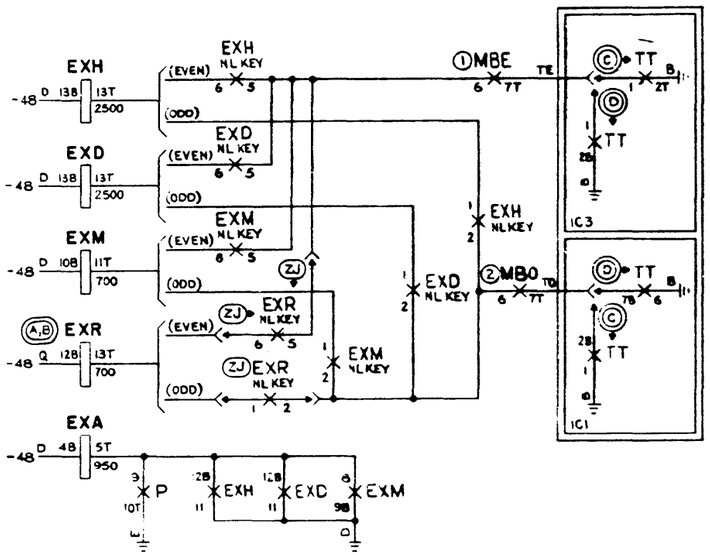
ISSUE 52B

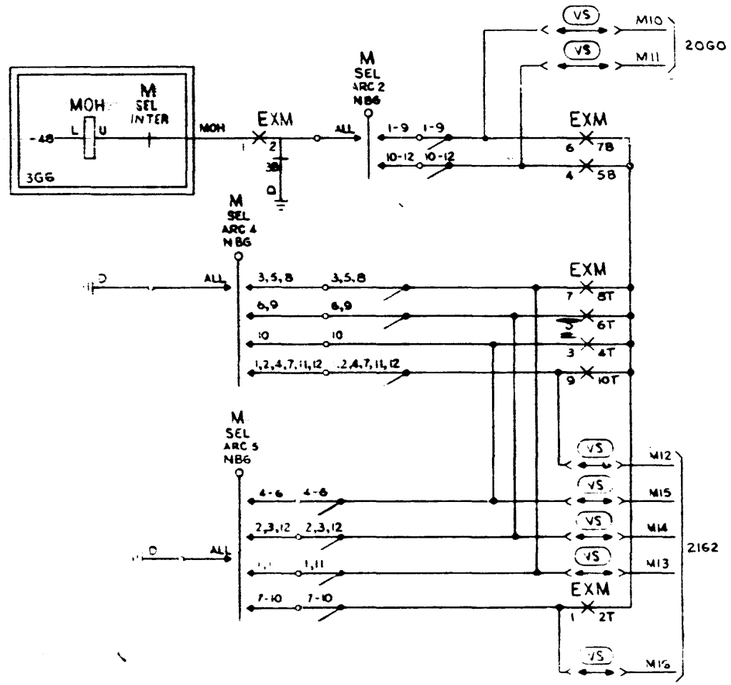
MASTER TIMING CIRCUIT (2) SD-25633-01-829

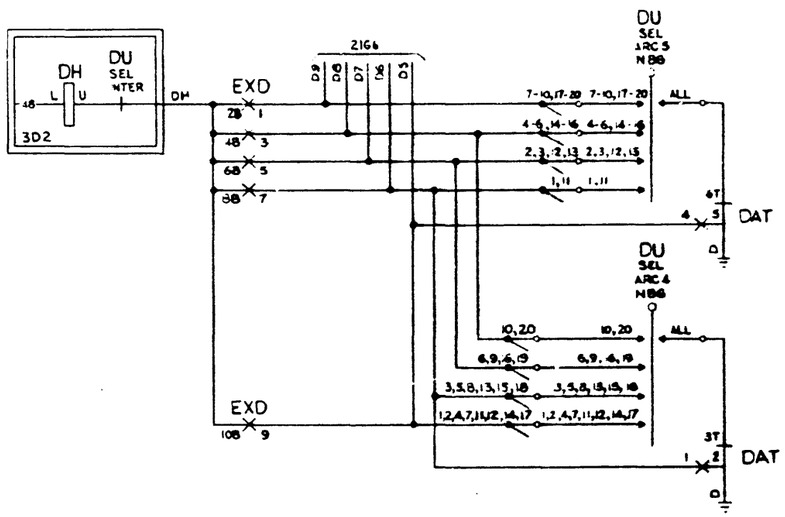
BELL TELEPHONE LABORATORIES INCORPORATED 6S

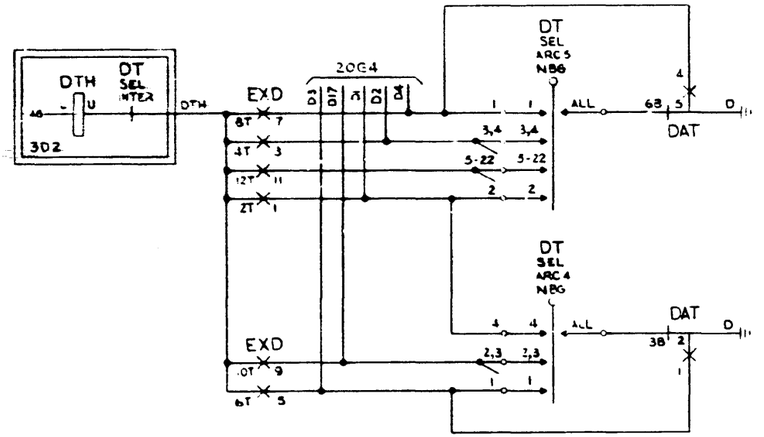
SD-25633-01-829

PART OF FS25
EXERCISE SELECTORS









DRAWING ISSUE 310 PM2 REC AH.27

ISSUE 57A

COMMON SYSTEMS
MASTER TIMING CIRCUIT

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-830

SIZE 6S

SD-25633-01-830

STABILO K&E

FS 26
ALARM CIRCUITS

NO. 5 MISC CKT FOR ALL FRAMES

MISC CKT FOR MASTER TIMING FR

NO 5 ALARM CKT

NO.5 MISC CKT FOR ALL FRAMES

NO.5 ALARM CKT

ALARM TRANSFER CKT

NO.5 MISC CKT FOR ALL FRAMES OR MISC CKT FOR MA TM6 FR

NO 5 CROSSBAR-MISC CKT FOR ALL FRAMES ALL OTHER SYSTEMS-MISC CKT FOR PERFORATOR CABINETS

TO NO.1 OR TDM CROSSBAR FUSE AND TIME ALARM CKT, SXS NO.1 OR INTERTOLL ALARM CKT, NO.1A OR NO.4M FLOOR ALARM FUSE AND TIME ALARM CKT, OR SXS INTERTOLL DIALING OFFICE WITH GAMA ALARM CKT

TO OTHER PTU-- DIODES

TO OTHER (TM6) RELAY

PTU0-9, PTUEM, (WF) PTU10-19, (WS) PTU20-29

PTU-- OR PTUE

PTU-- MICRO SWITCH

DRAWING ISSUE	
310	TLC WEC AMC
548	CMC BKW AMC
550	NJF
378	

ISSUE 59B

MASTER TIMING CIRCUIT (2)

SD-25633-01-B31

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-B31

STABILO

PART OF FS 27
RECORDER TEST CONTROL

TLK ON 12B 11 3 48 33E7 10
TLK -48 PO 13B 14T 2500
32 7 8T x
13T TLK 12
2R 8 8 9T
ADL 9T 8
2R2 10 11B 7
RWI 3 4T
CAI 5 6T
ON 7 88 x
2RI -48 PO 12B 13T 700
2RI 1 2 3T 2 CAI 1 3B
32 11 12T x
ADL -48 PO 9B 10T 2500
TVM 12T 11
RWI 5 6T
37 3 4T
37 1 2T
2RI 10 11B
ADL 2 3B 1
LOK 8T 7
68 CA 5
2B CAI 1
TST2 6 7T x
PH -48 PO 4B 6T 1000
TS SEL INTER. 1 2
10 2R 11T
TE 3 4B x
2R 2 12T 11B PO -48 700
1 3T
TE 2R2 6T 5 4 13T 12B PO -48 700
TS SEL ARC 2 BDG 44 44
4 2R GB 5 6T
CAI -48 PO 7B 7T 700
SLO 9 10T x
ON -48 PO 500
ON 13B 13T 500
ON 12T 11 x
2T CA 1 4
2R2 5 6B
P' 9T 8
TVM -48 PO 13B 13T 950
CA 8 7
AD 9B 1 3T
TE 4 5T
PH 1 2T x
2R2 8 7 9B
10T 10 CA 11B
2R2 -48 PO 12B 12T 1775
2R2 1 3T
8 9 CA
TST2
4 2RI 5T x
2 2T TST2 1 x
CA -48 PO 13BR 14TR S-1400
CA 12T 11
CA 1000 PO -48
12BF 13TF P-1300
3T TE
ETM -48 PO 6B 6T 1300
CA 7 8T x
3B 1 2R2 6B 5
4 CAI 5
43 43
23-41 23-41
6B BT 5
6 AD
P' -48 PO 11BR 13TR S-1400
PI' 6B 5
PI' 7T
10BF 12TF P-1300
PI' 4B 3
LOK 6T 5
TVM 6T 5
P' 1708
PROVIDE ON ODD TIMER ONLY
7B P' 6
AD 2B 1 x
8B TVM 7 x
TS SEL ARC 3 BDG
2-22 2-22
ALL
1 1 2R CO
42 42
ALL
TS
TPC
TE
TST2
⑦ERO
⑦ORO
13E5
4 58 37
ADL 5 6B
CAS 9 10T
TPC 4 5T x
1 2B 2R
3B
3666 CAS 1 2 P'
CAS x 2T 1
6T 5 233
234
6T CKC 4 5 2T 1
234
3388

DRAWING ISSUE
31D ANKY ANEC ABJI
37B

ISSUE 45B

MASTER TIMING CIRCUIT (2)
BELL TELEPHONE LABORATORIES INCORPORATED
SD-25633-01-B32
6S

SD-25633-01-B32

STABILO

PART OF FS 27
RECORDER TEST CONTROL

PN1,6,8,13,15 -48 PO 13B 13T 950 — 101,106,108,112,113 — 35A1, 35C1, 35E1

PN2 -48 PO 13B 13T 950

PN4 -48 PO 13B 13T 950

PN7 -48 PO 13B 13T 950

PN5 -48 PO 13B 13T 950

AP1: 7BR 9TR S-1400 — 403 — 35G1; 6BF 8TF P-1300 — 402

AP4: 6BF 8TF P-1300 — 412 — 35G1; 7BR 9TR S-1400 — 413

AP5: 7BR 9TR S-1400 — 417 — 35G1; 6BF 8TF P-1300 — 416

AP6: 6BF 8TF P-1300 — 418 — 35G1; 7BR 9TR S-1400 — 419

AP7: 7BR 9TR S-1400 — 420 — 35G1; 6BF 8TF P-1300 — 421

AP2: 6BF 8TF P-1300 — 406 — 35G1; 7BR 9TR S-1400 — 407

AP14 4 5T X

510 — 35A1

AP11: 7BR 9TR S-1400 — 509 — 35E1; 6BF 8TF P-1300 — 508 — 35H1

AP13: 7BR 9TR S-1400 — 516 — 35F1; 6BF 8TF P-1300 — 515

AP3 4 5T X

AP8 4 5T

PN3 -48 PO 13B 13T 950 — 514 — 35A1

505 — 35A1

AP10: 6BF 8TF P-1300 — 506 — 35H1; 7BR 9TR S-1400 — 507

504 — 35A1

AP9: 7BR 9TR S-1400 — 503 — 35G1; 6BF 8TF P-1300 — 502

501 — 35D1

511 — 35B1

AP12: 6BF 8TF P-1300 — 512 — 35F1; 7BR 9TR S-1400 — 513

PN11 -48 PO 13B 13T 950

234: 11BF 11TF P-1300 — 304 — 35E1; 12BR 12TR S-1400

234 4 5 6T — 32H3

CKC 2T 1 X — 35D5

AP16 6 7T

AP16: 6BF 8TF P-1300; 7BR 9TR S-1400

AP16 5B 4 — CKC 6 7B X — 9CA2

2R 6 7 8B

32 9 10T — TLK 12B 11 10 — ON 3 48 X — 32A1

PN9 -48 PO 13B 13T 950

PN14 -48 PO 13B 13T 950 — 2R 3 4 5B — 37 1 2B X

DRAWING ISSUE
31D CLK
37B

C8

37

MASTER TIMING CIRCUIT (2)

BELL TELEPHONE LABORATORIES INCORPORATED — 6S

SD-25633-01-B33

SD-25633-01-B33

PART OF FS 27
RECORDER TEST CONTROL

DRAWING ISSUE
3ID

PNIO
-48 PO 13B 13T 950 301 35D1
9 10T X 233
233
11BF 11TF P-1.3K 302 35E1
12BR 12TR S-1.4K 233 9 X 108 LOK 28 1 ON 7 X 8T X
235
12BR 12TR S-1.4K 235 9 X 108
ON 38F1
11BF 11TF P-1.3K 305 35F1
10T X 235 9
PNI2
13B 13T 950 API5 4 X 5T X
306 35D1
DTNP1-4
13B 13T 950 201-204
TAP
8B 10T 205
35C1
32
10B 13T 700 206
37
7B 8T 700 207
238
13B 13T 950 307
35E1
239
13B 13T 950 308
12T X 239 11
P1A 1 2T X P1A X
36H5

AP3
P0 8BF 8TF P-1.3K 409
7BR 9TR S-1.4K 410
35G1
PNI,7,9,10,11 4T X 3 C0
PN2,3,8,12,14,15 4T X 3 C1
PNI,7 2T X 1
PN5,6,13 4T X 3 C2
PN2,3,9 2T X 1
AP5 5T X 4
19G3
7T X AP3 6 58 X AP3 4
C4
PN5,6,8,14 2T X 1
PN4 4T X 3 2 3T AP4
PNI1 2T X 1
PN4,10,12,13,15 2T X 1 C7
PN5,8,10,11 8T X 7 B0
PN3,4,9,12,13,15 8T X 7 B1
PN5 6T X 5
PN6,7,14 8T X 7 B2
PN3,4,10 6T X 5
AP2 5T X 4
B4 19G1
PN6,7,9,13 6T X 5
PNI 8T X 7
PN2 8T X 7 2 3T API
PNI1 6T X 5
PNI,2,8,12,14,15 6T X 5 B7

AP8
-48 PO 6BF 8TF P-1.3K 422
7BR 9TR S-1.4K 425
35G1
7T X AP8 6 58 X AP8 4
PNI,7,9,10,11 6B X 5 E0
PN2,3,8,12,14 6B X 5 E1
PNI,7 8B X 7
PN5,6,13 6B X 5 E2
PN2,3,9 8B X 7
API0 5T X 4
20E7
E4
PN5,6,8,14 8B X 7
PNI5 6B X 5 2 3T AP9
PN4 6B X 5
PNI1 8B X 7
PN4,10,12,13,15 8B X 7 E7
PN5,8,10,11 2B X 1 D0
PN3,4,9,12,13 2B X 1 D1
PN5 4B X 3
PN6,7,14 2B X 1 D2
PN3,4,10 4B X 3
AP7 5T X 4
13G4
D4
PNI,15 2B X 1
PN6,7,9,13 4B X 3 2 3T AP6
PNI1 4B X 3
PN2 2B X 1
PNI,2,8,12,14,15 4B X 3 D7

AP15
-48 PO 6BF 8TF P-13K 523
7BR 9TR S-14K 521
35F1
VU
7T X AP15 6
VU
A0
PNI,4,7,9 10T X 9
PNI1 10T X 9 2 3T API3
AP14
-48 DO 6BR 8TR P-1.3K 517
7BR 9TR S-14K 520
35F1
19G0
58 X AP14 4 7T X AP14 6
A1
PN2,5,8,12,14 10T X 9
A2
PN3,6,10,13,15 10T X 9
API5 2T X 1
UE API6 2B 1 UE
PN5,8,10,11 10B X 9 F0
PN3,4,9,12,13 10B X 9 F1
PN5 12B X 11
PN6,7,14 10B X 9 F2
PN3,4,10 12B X 11
API2 5T X 4
PNI,15 10B X 9 F4
PN6,7,9,13 12B X 11
API3 5T X 4 2 3T API1
PN2 10B X 9
PNI1 12B X 11
PNI,2,8,12,14,15 12B X 11 F7
21C1

ISSUE 54AC

MASTER TIMING CIRCUIT (2)
SD-25633-01-B34
BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-B34

STABILO

PART OF FS 27
RECORDER TEST CONTROL

RECORDER AND RECORDER CONNECTOR CKT

CALL IDENTITY INDEXER

DRAWING ISSUE
3ID MSP REC ARCH
37B

TS SEL ARC 1 NBG
TS SEL ARC 4 NBG
TS SEL ARC 6 NBG
TS SEL ARC 5 NBG

33A2	101	1	1	ALL
	106	5,11,17	5,11,17	
33E6	504	3,9,15,21	3,9,15,21	
33D6	505	6,12,18	6,12,18	
33A6	510	7,13,19	7,13,19	
33G6	511	4,10,16,22	4,10,16,22	
33D6	514	2,8,14,20	2,8,14,20	
		23,29	23,29	ALL
		27	27	
		24,30	24,30	
		25	25	
		28	28	
		26	26	
33A2	108	31	31	
	112	36	36	
	201,202	38,39	38,39	
34E1	203,204	40,41	40,41	
	205	42	42	
	206,207	32,37	32,37	
34A1	301	33	33	
34D1	306	35	35	
33F6	501	34	34	
		36	36	ALL
		40,41	40,41	
		32,37	32,37	
33A2	113	42,43	42,43	
34B1	302	33	33	
33A8	304	34	34	
34G1	307,308	38,39	38,39	
33B6	509	23	23	
33G6	512,513	24,26	24,26	
33C6	515,516	25,31	25,31	
34C8	517,520	27,28	27,28	
34A8	521,523	29,30	29,30	
34C1	305	35	35	
		1,2	1,2	ALL
33B2	402	3	3	
	403	4,6	4,6	
33G2	406,407,	5,10	5,10	
34B3	409,410	7,8	7,8	
33C2	412,413	9	9	
33D2	416	11	11	
	417	12-14,16	12-14,16	
33E2	418-421	15,20	15,20	
34A6	422,425	17,18	17,18	
33F6	502,503	19,21	19,21	
33E6	506,507,	22	22	
33B6	508			

RC(E,0)1 10T 9 — TL — T1B — TNG

BT 11T 9B 750 — TLK 7T 6 — RCE,RCO 27 — BT — T1B — RD T — -48

BT 500 — PROVIDE ON ODD TIMER ONLY

ICK 6B 6T 4000 — BT 2B 1 — RC(E,0)1 10B 9 — ICK — T1A TVMI — TVMI

-48 PO

ICK 4 5B

DTN 9TF 7BF P-500 — DTN 8T 7 — RC(E,0)1 6B 5 — DTN — T1A — DTKA

-48 PO 8BR 10TR S-300 10T 9 — 234

CKC X 1 2T — CKC — 3388

DTN — IPA — M — -48

TOK 3B 4T 400 — APT 3 4T — RC(E,0)3 4B 3 — DS — T1A RCK XPI DS — -48

-48 PO

TOK 1 2B — APT 6 7B

DS

BT 10T 9 — ICK 5T 4 — P1' 10T 9 — RC(E,0)1 4B 3

3 4B TC

2R2 9T 8 7

RTS 5B 4 — P' 4T 3 — TLK 8 7 — RC(E,0)1 4T 3 — TLI — T1B TL RD TVMI

2 P'

AD 4 — X32 8 9B — 9B

TS B F 5T 136 — P' 6T 5

-48 PO

2 — 40 — RW1 8 9B — CA 2B 1

PH 5T 4 — TS — 40

234 2B 1 — ICK 1 2T — BT 8B 7 — RC(E,0)1 6T 5 — XT — T1A

DTN 2B

TO OTHER ODD OR EVEN NO. RECORDERS

(RCE1) REL CONNECTS TO EVEN RECORDERS, AND (RCO1) REL TO ODD RECORDERS

ISSUE 51B

MASTER TIMING CIRCUIT (2)

SD-25633-01-835

BELL TELEPHONE LABORATORIES INCORPORATED — FORM 6S

SD-25633-01-835

STABILO

PART OF FS 27
RECORDER TEST CONTROL

DRAWING ISSUE
31D JGS MCC AMT
37B

SEE NOTE 1

TO OTHER ODD OR EVEN NO. RECORDERS

TO CORRESPONDING TERMINALS OF LIKE DESIG RELAYS IN OTHER TIMER

ODD TIMER ONLY

TV CKT

RCDR & RCDR CONN CKT

NOTES:
1. RELAYS (RCE), (RCE1,2,3) CONNECT TO EVEN RECORDERS AND (RCO), (RCO1,2,3) TO ODD RECORDERS.

MASTER TIMING CIRCUIT (2)

SD-25633-01-836

BELL TELEPHONE LABORATORIES INCORPORATED

ISSUE 51B

SD-25633-01-836

PART OF FS 27
RECORDER TEST CONTROL

CAS
-48 PO 118 11T 700
CAS ETM X
108 9 5T 4
2B ON
1
2B RW2
5T
4
SLO
3
SLO
-48 PO SLO 500
108 11T 700
2 3B SLO
SCE 8 9B A
SCO 8 9T B
2B TMI ODD TIMER ONLY
1
4T 3 CA
3B 2 PH
STE 3 4T
ER 4 5T
OST 3 4T ZX ZW
RWC
2 3B
1
RWC
-48 PO 6B 6T 700
10T 9 RW1
1
2T RW
9T
8 X
RW2
7
RW 3 4T
RWC 4 5B X
118 10 RW1
RW1
-48 PO 12BF 13TF P-850
13BR 14TR S-1750
RW 4B 3
RW1 PO -48
500
RW
22F3 TST RW 1000
5B 5T 4000
ON 5 6B X
TPC
-48 PO 11B 12T 2500
TPC 11T 10
5T 4 RWC 3
CAS
TM3
CAS
24A2
ODD TIMER ONLY
RLS
-48 K 13B 13T 2000
PC 2T 1 H
24B5 TBR
TBR 9T 8
RLS 11 12T
TBR 4 5T
RS 3 4B H
7
8T RSC
H
RS .3 4T
RLS 108 9
1 3B CK
8
RLS 17F4
TBR
25E3

TO BILLING DATA TRANSMITTER CKT
T
R
R
T
T
R
RED KEY
WHITE KEY
32A TEST SET
TO MISC CKT, MASTER TIMING FRAME; MISC CKT, PERFORATOR CABINET; AND MISC CKT, RCDR FR
RW
-48 RW RW1 11 12T X
RUT
-48 RUT KRB 6 7T X
RIT
-48 RIT TPC 8 9T X
RW
RUT
RIT
RIT RUT
TO BILLING DATA TRANSMITTER CKT
MISC CKT FOR TV TBL IND FR; MA TEST FR-JK, LP, AND KEY CKT; JK, KEY, & LP CKT FOR TBL RCDR FR; MISC CKT FOR TBL RCDR FR; OR JK, KEY, & LP CKT FOR TBL TICKETER FR
2R
-48 2R 2R 9 10B X
NO. 5 MISC CKT FOR ALL FRAMES OR MISC CKT FOR MA TMG FR
RR
-48 TIG R TS ZB TST2 12B 11 X
TO ALL OTHER (TIG) RELAYS
TO MKR GR 100
TV TBL IND CKT

DRAWING ISSUE
31D GTM NEC AMA
ISSUE 48B

COMMON SYSTEMS
MASTER TIMING CIRCUIT 2
SD-25633-01-B37
BELL TELEPHONE LABORATORIES INCORPORATED
SHEET SIZE 6S
PRINTED IN U.S.A.

SD-25633-01-B37

STABILOK-E

PART OF FS 27
RECORDER TEST CONTROL

RCE1 PI' ADI RCE
RCE2
RCE3
RCO1 PI' ADI RCO
RCO2
RCO3
PROVIDE ON ODD TIMER ONLY
TLK 32
AD TVM LOK
ADI AD ADL
RTS RW1 RTS PI'
TSTI SLO RW2 ER ON
ER STE OST
TST2 KRB TSTI
RW2 RW1
STPG 2388
DTNP1 DTNP2 DTNP3 DTNP4 238
RC' APR GU
RC RCK RC1 RC2
CKC 233 CKC
TC 32 RCK 3000
TLK AD ADI DTN TVM
GCI DTK 895 125 TLK
GU 3500 500 RC(E,0)2 RC(E,0)1
PROVIDE ON ODD TIMER ONLY
IR P' AD RCE,0 TLK 32
RC(E,0)1
RCE,0 RC TCO
PROVIDE ON ODD TIMER ONLY
RCE,0 239 BT P 16F6 P'
SEE NOTE 1
TO OTHER ODD OR EVEN NO. RECORDERS
GU TIB UL ON RD
IR TIB VM1 IP PTS TCI N
IR1 TIA TC- TC-B
DTK TIA ON Q
RC TIB TEC TVM RCK DTKA AN TE K IPA DS C
TCO TIB TVM DTK
RCDR & RCDR CONN CKT

NOTES:
1. REL (RCE) CONNECTS TO EVEN RECORDERS AND REL (RCO) TO ODD RECORDERS.

DRAWING ISSUE
310 EARLY REC ADD
388

ISSUE 51B

MASTER TIMING CIRCUIT (2) SD-25633-01-B38
BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-B38

STABILO K+E

FS 28

TEST
DISTRICT OR TRUNK
NO. PATTERN CUT-IN RELAYS

239 9 10T — PI' 12T 11 — (ODD TIMER) 1 / (EVEN TIMER)
ZH — 238 11 12T — TC 10 11T — 23F 8T 7 — 32 5 6B — TLK. 1 2T
TST2 1 3T — TO ODD RECORDERS
TO EVEN RECORDERS 1 3B
ER 2 3B
RCE,0 29 — TO CORRESPONDING TERM. OF LIKE DESIG REL IN OTHER TIMER
DTN 2 3B — 32 3 4T — TLK 11T 10 — TVM 4T 3 — RC' 28 1
RCE,0 49
RCE,0 47 — PROVIDE ON ODD TIMER ONLY
TAP 1 2T — APR 2T 1 — DTNP1 11 12T — DTNP2 11 12T
-48 PO — OT1 2000
234 2T 1 5 — PIA 6B
-48 PO — OT 1000 1000
239 10B 9
DTNP3 11 12T — OT2 750
DTNP4 11 12T
APIG 5T 4
DTNP1 28 1 — 238 8T 7 — TAP 9T 8 — RC(E,0)2 10B 9
DTNP1 48 3 — DTNP2 28 1 — RC(E,0)2 8B 7
DTNP2 48 3 — DTNP3 28 1 — 238 10T 9 — RC(E,0)2 6B 5
DTNP3 48 3 — RC(E,0)2 48 3
DTNP4 28 1 — DTNP4 48 3 — RC(E,0)2 28 1
DTNP1 4T 3 — RC(E,0)2 10T 9 — TAP 4 5T
DTNP1 2T 1 — DTNP2 3 4T — 238 3 4T — RC(E,0)2 8T 7
DTNP2 2T 1 — DTNP3 3 4T — 238 5 6T — RC(E,0)2 6T 5
DTNP3 2T 1 — DTNP4 3 4T — RC(E,0)2 4T 3
DTNP4 2T 1 — TAP 6 7T — RC(E,0)2 2T 1

EXT — RT — EXT0-9 — EXT -48 — TRANSVERTER CKT
RD — TIA — RD -48
RDL — TIA — RD
RECORDER AND RECORDER CONNECTOR CKT
OT — TIB — DS — OTK TP — HPA — OTO 1K2 -48 — M
UO — TI — DTN
U1
U2 — F- F- 1K2 -48
U4
U7
TO
T1
T2 — E- E- 1K2 -48
T4
T7
TO OTHER ODD OR EVEN NO. RECORDERS
SEE NOTE 1

NOTES:
1. (RCE) AND (RCE2) RELAYS CONN TO EVEN RECORDERS AND (RCO) AND (RCO2) RELAYS TO ODD RECORDERS.

DRAWING ISSUE
3ID TLC REC AND
378

ISSUE 5IB

MASTER TIMING CIRCUIT (2) SD-25633-01-B39

BELL TELEPHONE LABORATORIES INCORPORATED — SYS SIZE 6S

SD-25633-01-B39

STABILO

AUTO. INC TRK TEST CKT

SXS AUTO. TRK TEST CKT

SXS TRK AND OUTPULSER TEST CKT

TMI TM3 AL ST, BTR SIMW

TM

IIPM

IIPM

FS 29
PULSE SUPPLY TO TRUNK TEST CIRCUITS

FS 30
CALL COUNT REGISTER CONTROL CKT

CALL COUNT PROCESS CONT STORAGE & REG CKT

MISC CKT FOR PERF CAB.

CCR1

CCR2

CCR-1

CCR-2

GCC-

RCDR & RCDR CONN CKT

NO. 4A OR 4M OR TANDEM TV CKT

MASTER TIMING CIRCUIT

DRAWING ISSUE
310
378
ISSUE 47A

SD-25633-01-B40

BELL TELEPHONE LABORATORIES INCORPORATED
6S
SD-25633-01-B40

FS 31

PROVIDE "CHANGE" AND "RATE CHANGE" PULSES TO RATE CALENDAR CKT

TO EVEN OR ODD RATE CALENDAR CKT

MBE/0 — (1) MBE (2) MB0 — XS,WC — (1) B (2) A

OCPE/0 — H4A — XS,WC — C

EH — VJ,VK HHR — WI — 68 5 — WI — WC TH — TA — E

HH — WH — WHR

WD — WHR — WD — WC 30S — WE — 30HH — WE — TSP — WZ — G1

HU SEL ARC 3 NBG — ALL — E — 2B/A0

043A — 68 8T 2.5K — XS — 5 5

18A — 68 8T 2.5K — XS — 8 8

XS 20A — 68 8T 2.5K — XX — 10 10 — HRT 2 3T — XS — 1 1

HT SEL ARC 1 BDG — ALL — E — 2B/D3

043B — 68 8T 2.5K — XS — 1 1

18B — 68 8T 2.5K — XS — 2 2

HT SEL ARC 2 NBG — ALL — 2B/B3 — E

21B — 68 8T 2.5K — XS — 3 3

T SEL ARC 2 NBG — 10,20 10,20 — XS — 18A 5B 4 — C — XS — ALL — 1181

043A 5B 4 — XS — XS — 20A 5B 4 — XY — XX

XR — ALL — XS — XS — XR — 1183

WZ (EVEN) ECHA 3 — WZ (ODD) OCHA 3 — WZ TTOA — MG

(1) BEI (2) B01 — VD — 12T 11 — (1) TEA (2) TEB — XS,WC — (1) A (2) B — WY — 11 12T

TLCP 13B 13T 2.5K — XS,WC — 3 — -48 U

(1) BEI (2) B01 — 12T 11 — (1) TEA (2) TEB — WY — 11 12B — VD

WZ (EVEN) ECHA 4 — WZ (ODD) OCHA 4 — WZ TTOA — MG

425 TLA — TLCP 8T 7 — C0 — TLCP 6T 5 — C1

425 TLB — TLCP 4T 3 — C2 — TLCP 2T 1 — C3

TO ODD OR EVEN CONTROL UNIT OF TIMER LINK CKT

425 TLC — TLCP 2B 1 — C4 — TLCP 4B 3 — C5

425 TLD — TLCP 8B 7 — C6 — TLCP 10B 9 — C7

425 TLE — TLCP 6B 5 — C8 — TLCP 12B 11 — C9

H SEL ARC 2 NBG — 6,13,20 6,13,20 — XS — 18A 6 7T — XS — XX 20A 6 7T — XS

6 21B 7T — XW — XS — 6 18B 7T

3,10,17 3,10,17 — XS — 043A 6 7T — 043B 6 7T — 18A 1 2B

U SEL ARC 3 NBG — ALL — UH — E — 2A/C4

RCPE/0 — TO EVEN OR ODD RATE CALENDAR CKT

WC 30S — 3B 4T 700 — 3 — -48 D

WC — WHR 1 2B — WC — WY — 5,15 5,15

WE — VJ,VK HHR 1 2T — WE — WC — VD

WZ STH 8 — VD — 3,10,17 3,10,17

(WZ) 3T SEL ARC 3 NBG — ALL — 2 — (WZ) U3 — 2 — (WZ) U4

7B2

U SEL ARC 2 NBG — XR — XR — 5,15 5,15 — ALL

XS — XS — 1104

A — 5T 4 — 20A 3 — B — 5T 4 — 18A 3

XS — XV UH — E — 5 6T

3 043A 4T

XS — 10,20 10,20

VJ,VK HHR — 38,10B 4T,10T 700,1.5K — 3 — WY — WZ UA 4 8 — WZ — WC — HHR — 3,10,17 — 2A/F1

VK HHR 4 5T — 5T TSP C2

WH,WI WHR — WI WHR — WZ UA 4 7 — WZ — WC — WHR — 6,13,20 — ALL — TA — E — 2A/FG

WH,WI WHR — 38,10B 4T,10T 700,1.5K — 3 — WY

H SEL ARC 1 BDG

SD-25633-01-B41

DRAWING ISSUE	
30D	JRH NEG AND
33A	XC NEG
35D	NF
37B	

ISSUE 49B

MASTER TIMING CIRCUIT (2) — SD-25633-01-B41

BELL TELEPHONE LABORATORIES INCORPORATED — SIZE 6S

STABILO

APP FIG. I

RELAY

DESIG	BE1			BE2			CE			CE1			CKE			CSE			ECH		
CODE	U314			U314			U1112			U692			U891			Y231			Y109		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	B	4IB4	12,11	B	1A6							12,11	M	7D1						
	10,9	B	1A6	10,9	B	1D6							10,9	M	—						
	8,7	B	1A6	8,7	B	1D6	11,10	M	8B/F8				8,7	M	—						
	6,5	B	1A6	6,5	B	1D6	9,8,7	BM	9B5	9,8,7	BM	8E7	6,5	M	31A1	8,7	M	9B1			
	4,3	B	1A6	4,3	B	1D6	6,5,4	BM	9H5	6,5,4	BM	9D7	4,3	M	8A/B5	6,5,4	BM	29B2	4,3	M	7A2
	2,1	B	1A6	2,1	B	1D6	2,1,3	MB	a	3,2,1	BM	9C7	2,1	M	7C5	3,2,1	BM	7C0	2,1	M	2A/E2
BOT.	2,1	B	1A6	2,1	B	1D6	2,1,3	MB	9C5	3,2,1	BM	8B/B7	3,2,1	BM	—	3,2,1	BM	4086	3,2,1	BM	792
	4,3	B	1A6	4,3	B	1D6	6,5,4	BM	9G5	6,5,4	BM	8B/A7	5,4	M	788	6,5,4	BM	31A5	5,4	M	10F8
	6,5	B	1A6	6,5	B	1D6	9,8,7	BM	9D5	9,8,7	BM	9E7	7,6	M	31A2	8,7	M	7D1			
	8,7	B	1A6	8,7	B	1D6	11,10	M	8B4				9,8	M	—						
	10,9	B	1A6	10,9	B	1D6							11,10	M	—						
	12,11	B	4IC4	12,11	B	3A/B5															
COIL			10F6			10F6			7B7			7B7			7B0			7B0			7B4

a (WY) 707 (WZ) 8B/D7

RELAY

DESIG	ERD			ETE			HE			HBE			P1E			P2E			PE		
CODE	U148			U300			U695			U188			U476			Y185			U318		
OPTION	ZJ																		HY		
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	—				12,11	M	—												
	10,9	M	21C9				10,9	M	4A/B4	12,11	M	29A1									
	8,7	M	21C8	9,8	M	11C0	8,7	M	4B/A1	10,9,8	BM	11C3							10,9	M	31A2
	6,5	M	21C7	7,6	M	11C0	6,5	M	4B/A1	7,6	M	30A2				7,6	M	10E2	8,7,6	BM	40C5
	4,3	M	21C6	5,4	M	31F4	4,3	M	4B/A1	5,4	M	41A1				5,4	M	10F2	5,4,3	BM	10H6
	2,1	M	—	3,2,1	BM	—	2,1	M	4B/A1	2,1,3	MB	27F1	3,2,1	BM	10E0	3,2,1	MM	10G1	2,1	B	29B2
BOT.	2,1	M	—	2,1	B	11E6	2,1	M	4B/E1	2,1,3	MB	10F1				3,2,1	MM	10E2	3,2,1	BM	—
	4,3	M	—	5,4,3	BM	11F6	4,3	M	4B/E1	5,4	M	—				5,4	M	10F2	5,4	M	10D2
	6,5	M	21C9	7,6	M	11F7	6,5	M	4B/E1	7,6	M	27B7				7,6	M	10G2	8,7,6	BM	a
	8,7	M	21C8				8,7	M	4B/E1	10,9,8	BM	7D1							10,9	M	2A/B3
	10,9	M	21C7				10,9	M	4B/A1	12,11	M	—									
	12,11	M	21C6				12,11	M	4B/E1												
COIL			16E2			11C0			4A/F4			27F1			10G0			10E0			1B0

a 10E9 31F3

RELAY

DESIG	SE			TCE			TDE			TDE1			TEA			TER			TFE		
CODE	U660			U1391			U148			U148			U148			U148			U90		
OPTION																ZJ					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP							12,11	M	21F8	12,11	M	21F8	12,11	M	4IB4	12,11	M	19F8			
							10,9	M	21F7	10,9	M	21F7	10,9	M	1A6	10,9	M	19C9			
	9,8	M	1081				8,7	M	21F6	8,7	M	21F7	8,7	M	1A6	8,7	M	19F7			
	7,6	M	10E1	6,5	M	—	6,5	M	21F5	6,5	M	21F6	6,5	M	1A6	6,5	M	19C8	7,6	M	—
	5,4	M	1080	4,3	M	4A/H1	4,3	M	21F4	4,3	M	21F5	4,3	M	1A6	4,3	M	19C7	5,4	M	31F4
	3,2,1	BM	—	2,1	M	16C1	2,1	M	20/B1	2,1	M	—	2,1	M	1A6	2,1	M	—	3,2,1	BM	a
BOT.	3,2,1	B4	1088	2,1	M	5F6	2,1	M	20F6	2,1	M	20F6	2,1	M	1A6	2,1	M	—	2,1	M	27G1
	5,4	M	1000	4,3	M	5E6	4,3	M	20F3	4,3	M	20F3	4,3	M	1A6	4,3	M	19F8	4,3	M	27D1
	7,6	M	3B3	6,5	M	—	6,5	M	20F5	6,5	M	20F5	6,5	M	1A6	6,5	M	19C9	6,5	M	—
							8,7	M	20F4	8,7	M	20F8	8,7	M	1A6	8,7	M	19F7			
							10,9	M	20F2	10,9	M	20F2	10,9	M	1A6	10,9	M	19C8			
							12,11	M	—	12,11	M	—	12,11	M	41C4	12,11	M	19C7			
COIL			1080			16A2			15C2			16D0			1C0			16F2			27A0

a 25C1 27F1

RELAY

DESIG	TME			TME1			TOB			TTE			TSPP								
CODE	U144			U148			U144			U991			U611								
OPTION													XZ								
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	21F3	12,11	M	21F3	12,11	M	1A6												
	10,9	M	21F2	10,9	M	21F2	10,9	M	1D6	12,11	M	1008									
	8,7	M	21F1	8,7	M	21F2	8,7	M	1D6	10,9,8	BM	b									
	6,5	M	21F0	6,5	M	21F1	6,5	M	1D6	7,6	M	10E4	9,8,7	BM	7C2						
	4,3	M	21F0	4,3	M	21F0	4,3	M	1D6	5,4	M	16C1	6,5,4	BM	40A9						
	2,1	M	16G0	2,1	M	—	2,1	M	1D6	2,1,3	MB	16B1	3,2,1	BM	7C1						
BOT.	2,1	M	—	2,1	M	—	2,1	M	1D6	2,1	M	4A/G3	3,2,1	BM	7A3						
	4,3	M	20F0	4,3	M	20F0	4,3	M	1D6	4,3	M	1C1	6,5,4	BM	40D9						
	6,5	M	20F1	6,5	M	20F1	6,5	M	1D6	4,3	M	1D1	9,8,7	BM	7B3						
	8,7	M	16D0	8,7	M	—	8,7	M	1D6	9,8,7	BM	7B1									
	10,9	M	16F1	10,9	M	18D5	10,9	M	1D6	11,10	M	29E2									
	12,11	M	—	12,11	M	18E5	12,11	M	—												
COIL			16C2			16E0			1D0			13B			7A0						

b (WY) 1E1 (WZ) 2B/C8

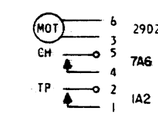
RELAY

DESIG	ECHA			EPG			PE			TMTE			TRTE		
CODE	AJ15			AJ83			AF509			AJ83			AJ83		
OPTION	WZ			WZ			WZ			WZ			VW		
	CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC	
12	EBM	7C0		EBM	2A/H5		EMB			EBM	16G0		EBM		
11	EBM	31F3		EBM			M	31A6		EBM	4A/C4		EBM		
10	EBM	7E8		EBM			M	1F1		EBM	48/D4		EBM	4A/A7	
9	EBM	31A5		EBM			BM	10G6		EBM	48/C3		EBM	4A/A7	
8	EMB			EMB	2A/G3		M	31B2		EMB	48/B3		EMB	4A/A7	
7	EBM	10E9		EBM			BM	1G1		EBM	48/B2		EBM	4A/A7	
6	EMB	7A2		EMB			EMB	2B/F7		EMB	48/A1		EMB	4A/A7	
5	EMB	40C7		EMB			BM	7H7		EMB	48/G4		EMB	4A/A8	
4	EBM	41C5		EBM			M	10E9		EBM	48/G3		EBM	4A/A8	
3	EBM	41B5		EBM			BM	29C2		EBM	48/F2		EBM	4A/A8	
2	EBM	31B2		EBM	11F1		M	2A/B3		EBM	48/F3		EBM	4A/A8	
1	EBM	10G7		EBM	27F7		M	1C2		EBM	48/E1		EBM	4A/A8	
COIL		7A4			2A/G5			1A0			2B/D5			4A/G0	185A

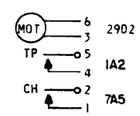
NETWORK

OPT		DESIG	LOC	CODE
	[1]	CE	7C1	177C
	[1]	PE	1A0	
	[1]	ECH	7A5	
	[1]	TE	1D2	
		SY	8B2	177A
		TSPP	7A0	185A
WZ		PE	1A0	185A
WZ		EPG	2A/G5	185A
WZ		TMTE	2B/D5	185A
VW		TRTE	4A/G0	185A

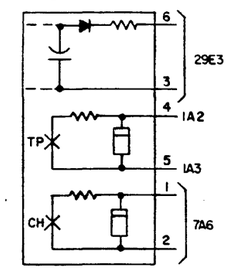
TIMER (WY) TE (SEE NOTE 125) 4A



TIMER (U8) TE (SEE NOTE 125) 4B



TIMER (UC) TE (SEE NOTE 125) 4E



DRAWING ISSUE

SID	ATC	ABT
388		

ISSUE 55B

MASTER TIMING CIRCUIT (2) SD-25633-01-CI

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-CI

STABILO

APP FIG. 2

RELAY

DESIG	801			802			CKO			CO			CO1			CSO			ETO		
CODE	U314			U314			U891			U1112			U692			Y231			U300		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	B	4IB4	12,11	B	1A6	12,11	M	7C1												
	10,9	B	186	10,9	B	1D6	10,9	M	—												
	8,7	B	186	8,7	B	1D6	8,7	M	—	11,10	M	88/E7							9,8	M	11D0
	6,5	B	186	6,5	B	1D6	6,5	M	31B0	9,8,7	BM	9B5	9,8,7	BM	8E7	8,7	M	9B1	7,6	M	11E0
	4,3	B	186	4,3	B	1D6	4,3	M	8A/B6	6,5,4	BM	9H5	6,5,4	BM	8A6	6,5,4	BM	29A2	5,4	M	31F4
	2,1	B	186	2,1	B	1D6	2,1	M	7B5	2,1,3	MB	a	3,2,1	BM	8C7	3,2,1	BM	7A1	3,2,1	BM	—
BOT.	2,1	B	186	2,1	B	1D6	3,2,1	BM	—	2,1,3	MB	9C5	3,2,1	BM	88/B6	3,2,1	BM	4086	2,1	B	11F6
	4,3	B	186	4,3	B	1D6	5,4	M	788	6,5,4	BM	9G5	6,5,4	BM	88/A6	6,5,4	BM	31A5	5,4,3	BM	11E6
	6,5	B	186	6,5	B	1D6	7,6	M	31A2	9,8,7	BM	9D5	9,8,7	BM	8F7	8,7	M	7E1	7,6	M	11F8
	9,7	B	186	8,7	B	1D6	9,8	M	—	11,10	M	884									
	10,9	B	186	10,9	B	1D6	11,10	M	—												
	12,11	B	41C4	12,11	B	8A/B6															
COIL			10G6			10G6			7C0			7B7			7C7			7A0			11D0

a (WY) 7D5, (WZ) 88/D6

RELAY

DESIG	HO			M80			OCH			ORD			P10			P20			P0		
CODE	U695			U188			Y109			U144			U476			Y185			U318		
OPTION										ZJ									WY		
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	—							12,11	M	—									
	10,9	M	4A/B4	12,11	M	2981				10,9	M	21C8									
	8,7	M	48/A1	10,9,8	BM	10G1				8,7	M	21C7							10,9	M	3182
	6,5	M	48/A1	7,6	M	3082				6,5	M	21C6				7,6	M	10E2	8,7,6	BM	40A5
	4,3	M	48/A1	5,4	M	41A1	4,3	M	7A2	4,3	M	21C5				5,4	M	10F2	5,4,3	BM	10H6
	2,1	M	48/A1	2,1,3	MB	27F1	2,1	M	2A/E3	2,1	M	—	3,2,1	BM	10E0	3,2,1	M	10F1	2,1	B	29A2
BOT.	2,1	M	48/E1	2,1,3	MB	1103	3,2,1	BM	7C2	2,1	M	—				3,2,1	M	10E2	3,2,1	BM	—
	4,3	M	48/E1	3,4	M	—	5,4	M	10F8	4,3	M	—				5,4	M	10F2	5,4	M	1D2
	6,5	M	48/E1	7,6	M	2747				6,5	M	21C8				7,6	M	10G2	8,7,6	BM	a
	8,7	M	48/E1	10,9,8	BM	7E1				8,7	M	21C7							10,9	M	2A/B3
	10,9	M	48/E1	12,11	M	—				10,9	M	21C6									
	12,11	M	48/A1							12,11	M	21C5									
COIL			4A/H3			27F1			7A4			16G2			10G0			10E0			1A0

a 10F9, 31F3

RELAY

DESIG	SO			SRC			TCO			TDO			TDO1			TEB			TFO		
CODE	U660			Y91			U1391			U144			U144			U144			U90		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP										12,11	M	21F9	12,11	M	21F9	12,11	M	4IB4			
										10,9	M	21F8	10,9	M	21F8	10,9	M	186			
	9,8	M	10C1	9,3,7	BM	—				8,7	M	21F7	8,7	M	21F7	8,7	M	186			
	7,6	M	10E1	6,5	B	19A7	6,5	M	—	6,5	M	21F6	6,5	M	21F6	6,5	M	186	7,6	M	—
	5,4	M	10C0	4,3	B	1887	4,3	M	4A/H1	4,3	M	21F5	4,3	M	21F5	4,3	M	186	5,4	M	31F4
	3,2,1	BM	—	2,1	B	19A7	2,1	M	1601	2,1	M	2A/B1	2,1	M	—	2,1	M	186	3,2,1	BM	a
BOT	3,2,1	BM	1086	3,2,1	BM	18A7	2,1	M	5F7	2,1	M	20F7	2,1	M	20F6	2,1	M	186	2,1	M	27H1
	5,4	M	1000	6,5,4	BM	—	4,3	M	5E6	4,3	M	20F4	4,3	M	20F3	4,3	M	186	4,3	M	27D1
	7,6	M	883				6,5	M	—	6,5	M	20F6	6,5	M	20F5	6,5	M	186	6,5	M	—
										8,7	M	20F5	8,7	M	20F4	8,7	M	186			
										10,9	M	20F2	10,9	M	20F2	10,9	M	186			
										12,11	M	—	12,11	M	—	12,11	M	41C4			
COIL			10C0			88/E5			16B2			16D2			16E0			1C0			27C0

a 25C1, 27F1

RELAY

DESIG	TMO			TMO1			TOA			TOR			TS			TS1			TTO		
CODE	U144			U144			U144			U144			U1112			U692			U991		
OPTION										ZJ											
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	21F4	12,11	M	21F4	12,11	M	1A6	12,11	M	19F8									
	10,9	M	21F3	10,9	M	21F3	10,9	M	1D6	10,9	M	19C9							12,11	M	1008
	8,7	M	21F2	8,7	M	21F2	8,7	M	1D6	8,7	M	19F7	11,10	M	701				10,9,8	BM	4A/F3
	6,5	M	21F1	6,5	M	21F1	6,5	M	1D6	6,5	M	19C8	9,8,7	BM	88/A8	9,8,7	BM	7E1	7,6	M	29G2
	4,3	M	21F0	4,3	M	21F0	4,3	M	1D6	4,3	M	19C7	6,5,4	BM	8F7	6,5,4	BM	88/E6	5,4	M	1601
	2,1	M	16G0	2,1	M	—	2,1	M	1D6	2,1	M	—	2,1,3	MB	8D7	3,2,1	BM	1081	2,1,3	MB	10E5
BOT.	2,1	M	—	2,1	M	—	2,1	M	1D6	2,1	M	—	2,1,3	MB	8A/D8	3,2,1	BM	1082	2,1	M	7B2
	4,3	M	20F0	4,3	M	20F0	4,3	M	1D6	4,3	M	19F8	6,5,4	BM	8F8	6,5,4	BM	7B8	4,3	M	101
	6,5	M	20F1	6,5	M	20F1	6,5	M	1D6	6,5	M	19C9	9,8,7	BM	5F6	9,8,7	BM	7H3	6,5	M	1D1
	8,7	M	16F0	8,7	M	—	8,7	M	1D6	8,7	M	19F7	11,10	M	88/A8				9,8,7	BM	1086
	10,9	M	16G1	10,9	M	18D5	10,9	M	1D6	10,9	M	19C8							11,10	M	4A/H2
	12,11	M	—	12,11	M	18E5	12,11	M	—	12,11	M	19C7									
COIL			16E2			16F0			1D0			16G2			10A5			1085			1B3

RELAY

DESIG																					
CODE																					
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																					
BOT.																					
COIL																					

RELAY

DESIG	OCHA			OPG			PO			TMTO			TTOA			TRTO		
CODE	AJ15			AJ83			AF509			AJ83			AJ83			AJ83		
OPTION	WZ			WZ			WZ			WZ			WZ			VW		
	CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC		CONT ARR	LOC	
12	EBM	7A1		EBM	2A/H5		EMB			EBM	16H0		EBM	11H1		EBM		
11	EBM	31G3		EBM			M	31A6		EBM	44/C4		EBM	11G1		EBM		
10	EBM	7E8		EBM			M	1F1		EBM	48/D4		EBM	2B/D7		EBM	4A/A7	
9	EBM	31A5		EBM			BM	1066		EBM	48/C3		EBM	2B/D9		EBM	4A/A7	
8	EMB			EMB	2A/G3		M	3132		EMB	48/B3		EMB	4A/G0		EMB	4A/A7	
7	EBM	10F8		EBM			BM	1G1		EBM	48/B2		EBM	28G6		EBM	4A/A7	
6	EMB	7A3		EMB			EMB	2B/F9		EMB	48/A1		EMB	a		EMB	4A/A7	
5	EMB	4087		EMB			BM	7M7		EMB	48/G4		EMB	b		EMB	4A/B8	
4	EBM	41D5		EBM			M	10F8		EBM	48/G3		EBM	2B/G8		EBM	4A/B8	
3	EBM	4185		EBM			BM	29A2		EBM	48/F2		EBM	2B/E8		EBM	4A/B8	
2	EBM	31B2		EBM	11F1		M	2A/C3		EBM	48/F3		EBM	11F0		EBM	4A/B8	
1	EBM	10G7		EBM	27G7		M	1C2		EBM	48/E1		EBM	28G6		EBM	4A/B8	
COIL		7A4			2A/G5			1A0			2B/E5			184			4A/H0	

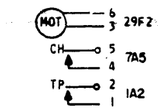
a (VD) 41D5, (VQ) 1G1

b (VD) 4185, (VP) 1F1

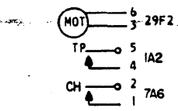
NETWORK

OPT		DESIG	LOC	CODE
	[1]	AL	7D1	177C
		TO	1D2	
	[1]	CO	7D1	177C
		PO	1A0	
		OCH	7A5	177C
WZ		OPG	2A/G5	185A
WZ		PO	1A0	185A
WZ		TMTO	2B/E5	185A
VW		TRTO	4A/H0	185A

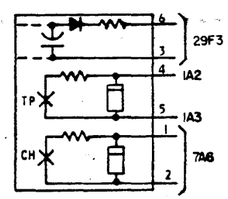
TIMER (WY) TO (SEE NOTE 125) 4A



TIMER (UB) TO (SEE NOTE 125) 4B



TIMER (UC) TO (SEE NOTE 125) 4E



DRAWING ISSUE

SID	PNF REC'D AMS
388	

ISSUE 55B

MASTER TIMING CIRCUIT (2)	SD-25633-01-C2
BELL TELEPHONE LABORATORIES INCORPORATED	6S

SD-25633-01-C2

STABILO

APP FIG 3

RELAY

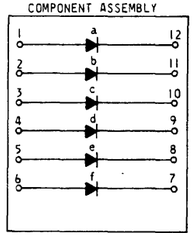
DESIG	HL			SA			TL			UL												
CODE	U207			U826			U695			U695												
OPTION																						
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP				12,11	M	-	12,11	M	8E3	12,11	M	8C3										
				10,9	B	9E2	10,9	M	8E3	10,9	M	8C3										
				8,7	B	9E2	8,7	M	8E3	8,7	M	8C3										
	6,5	M	8B/A3	6,5	B	9E2	6,5	M	8E3	6,5	M	8C3										
	4,3	M	8B/A3	4,3	B	9E2	4,3	M	8E3	4,3	M	8C3										
	2,1	M	8B/A3	2,1	B	9E2	2,1	M	a	2,1	M	5F7										
BOT	2,1	M	8B/A3	2,1	B	9E2	2,1	M	b	2,1	M	7C5										
	4,3	M	8B/A3	4,3	B	9E2	4,3	M	8E3	4,3	M	8C3										
	6,5	M	8B/A3	6,5	B	9E2	6,5	M	8E3	6,5	M	8C3										
				8,7	B	9E2	8,7	M	8E3	8,7	M	8C3										
				10,9	B	9E2	10,9	M	8E3	10,9	M	8C3										
				12,11	M		12,11	M	8E3	12,11	M	8C3										
COIL			7C4			1000			7C4			7B4										

(WZ) 1B1
a (ZJ) 7E7
(WY) 1E1
b (WZ) 1B3

RELAY

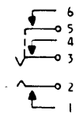
DESIG	PSA		PSB		STL		MT1		MT4		TMH		MU2	
CODE	AG2		AF63		AJ15		AK49				AK49			
OPTION	VF,VH,VO		VF,VH,VO		WZ		WZ				WZ			
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC
12	-		-		EBM		M	2B/E8			M	2B/D7		
11	-		-		EBM		EBM				EBM			
10	M	40C8	-		EBM		EMB				EMB			
9	B		B	40A8	EBM	7H7	EMB				EMB			
8	M	7C3	M	7C8	EMB		EMB				EMB	2B/D7		
7	B		B	4088	EBM	7E8								
6	M	1D8	EMB		EMB	8B/C3								
5	B		B		EMB	8B/C3			EMB				EMB	
4	M	1G6	M	40C8	EBM	8B/C3			EMB				EMB	
3	-		-		EBM	8B/C3			EMB				EMB	
2	M	4087	-		EBM	8B/C3			EBM				EBM	2B/E8
1	-		-		EBM	8B/C3			M	2B/E8			M	
COIL	4088		40C8		7C5		2BF7		28G7		28/C7		28/G8	

COMPONENT ASSEMBLY



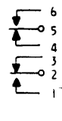
DESIG	CAO		
CODE	ED-94823-( ) G477		
OPTION			
COMPONENT	DESIG	LOC	CODE
DIODE a	DHE	3G2	446K
DIODE b	DHO	3G2	
DIODE c	TRE	2A/B6	
DIODE d	TRO	2A/B6	
DIODE e	TMTE	2A/G6	
DIODE f	TMTO	2A/G6	

KEY
CKL
552B



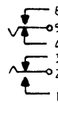
KEYTOP
CKL

KEY
576A



CLT	EXD	EXH	EXM	(ZJ) EXR	S
1086	3081	3041	3081	30C1	1081
1082					
	3082	3082	30C1	30C1	

KEY
552A



CMBE	CMBO
	2700
	7C2
7B2	
2740	

KEYTOP
CMBE,O

LAMP

OPT	DESIG	LOC	CODE
	CMBE	27G1	2Y
	CMBO	27G1	
ZJ	[6]DR1-6	7E4	
	[4]DTO-3	9F3	
	[10]DUO-9	9D1	
UA	ECH	7E7	MI
	ET (WY)	1E1	
	(WZ)	1B0	
	ETFE	11C0	2Y
	ETFO	11E0	
	[6]HO-5	8B/B2	
	[3]HTO-2	9C1	
	[10]HUO-9	9A1	
	[12]MI-12	9H3	
UA	OCH	7E7	MI
	OT (WY)	1E0	
	(WZ)	1B4	2Y
UA	PE	7G6	MI
UA	PO	7H6	

LAMP

OPT	DESIG	LOC	CODE
ZJ	[10]RDO-9	7D4	2Y
	SE	10A0	
	SO	10C0	
WZ	[6]STO-5	8B/C2	
	[10]TO-9	8A/F2	
	[10]UO-9	8A/C2	

NETWORK

OPT	DESIG	LOC	CODE
WZ	MT1	28F7	185A
	MT4	28G7	
	MU2	2B/G8	
	TMH	2B/C7	
VF,VH	PSA	4088	
VF,VH	PSB	40C8	

PART OF APP FIG 4

RELAY

DESIG	3AM		STC		STH		TMT		UA		UB		UC		UD		UW		UZ		DESIG
CODE	AJ15		AJ15		AJ15		AJ83		AJ501		AJ501		AJ501		AJ501		AJ501		AJ501		CODE
OPTION	WZ		WZ		WZ		WZ		WZ		WZ		WZ		WZ		WZ		WZ		OPTION
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	
12	EBM	13E0	EBM	2A/D6	EBM		EBM		EBM	8A/C6	EBM	8A/C7	EBM	8A/C7	EBM	8A/B6	EBM		EBM		12
11	EBM		EBM		EBM		EBM		EBM	8A/A6	EBM	8A/B7	EBM	8A/B6	EBM		EBM		EBM		11
10	EBM		EBM		EBM		EBM		EBM	8A/A6	EBM		EBM	8A/A6	EBM		EBM		EBM		10
9	EBM	28B7	EBM		EBM		EBM		EBM	2B/A7	EBM	2B/B9	EBM		EBM	2B/A8	EBM		EBM	2B/F4	9
8	EMB		EMB		EMB	41D7	EMB		EMB	41G1	EMB		EMB		EMB		EMB		EMB	a	8
7	EBM		EBM		EBM		EBM		EBM	41H1	EBM		EBM	2B/B6	EBM	2B/C8,D8	EBM		EBM	b	7
6	EMB		EMB		EMB	2A/D6	EMB	2A/E2	EMB		EMB		EMB	2B/B9	EMB	2B/B7	EMB		EMB	c	6
5	EMB	28A1	EMB		EMB	2B/H1	EMB	11G2,H2	EMB	2B/B6	EMB	2B/B5	EMB	2B/C9,D9	EMB	2B/C6	EMB	2B/F7	EMB	d	5
4	EBM	13A5,B5	EBM		EBM		EBM	2A/E1	EBM	2B/C8,D8	EBM		EBM	2A/G2	EBM	2B/E7	EBM	2B/G7	EBM		4
3	EBM		EBM		EBM		EBM	2A/H6	EBM	2A/F4	EBM		EBM	2A/F3	EBM	2B/C8,D8	EBM		EBM	2B/B7	3
2	EBM	25H4	EBM	7H5	EBM		EBM	2B/D6	EBM	7C3	EBM	7C3	EBM	7C3	EBM	2A/E3	EBM		EBM	2B/C6	2
1	EBM	11G0	EBM	7H2	EBM		EBM	2A/G6	EBM	2A/E3	EBM	2A/F5	EBM	2A/E5	EBM	2A/E2	EBM		EBM	2B/A8	1
COIL		11G0		88/D5		2A/D6		2A/H5		2B/B7		2B/C8		2B/A4		2B/A8		2B/F5		2B/G5	COIL

(UA) 2B/C9
a (VZ) 2B/A5
(UA) 2B/A5
b (VZ) 2B/C9
(UA) 2B/B7
c (VZ) 2B/G6
(UA) 2B/A8
d (VZ) 2B/F6

RELAY

DESIG	HAA		WHR		WHR		HHR									
CODE	U188		U422		U177		U177									
OPTION	XS,WC		WH		WI		VK									
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	-															
	10,9,8	BM	-															
	7,6	M	-				9,8,7	BM	-	9,8,7	BM	-						
	5,4	M	41A1				6,5,4	BM	41H1	6,5,4	BM	41G1						
	2,1,3	MB	-	3,2,1	BM	41C1	3,2,1	BM	41C1	3,2,1	BM	41D6						
BOT	2,1,3	MB	-	2,1	M	41C7	3,2,1	BM	41C7	3,2,1	BM	41B1						
	5,4	M	-				6,5,4	BM	41B1	6,5,4	BM	-						
	7,6	M	-				9,8,7	BM	-	9,8,7	BM	-						
	10,9,8	BM	-															
	12,11	M	-															
COIL			2B/E2			41H0			41H0			41G0						

52B

MASTER TIMING CIRCUIT

(2) SD-25633-01-C3

BELL TELEPHONE LABORATORIES INCORPORATED

6S

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PART OF APP FIG. 4

RELAY	043A			043B			19A			18B			ADV			DAT			DN		
DESIG																					
CODE	U122			U122			U122			U122			U588			U1289			U1228		
OPTION	XS			XS			XS			XS									XU		
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP													12,11	M	2B/C1						
													10,9	M	–						
	7,6	M	41C7	7,6	M	41C9	7,6	M	41A9	7,6	M	41B9	8,7	M	23B5	10,9	M	382			
	5,4,3	BM	41A6	5,4,3	BM	–	5,4,3	BM	41F6	5,4,3	BM	–	6,5	M	–	8,7	M	–			
	2,1	B	–	2,1	B	–	2,1	B	–	2,1	B	–	4,3	M	27H7	6,5,4	BM	30F3	4,3	M	27H7
BOT.	2,1,3	MB	–	2,1,3	MB	–	2,1,3	MB	–	2,1,3	MB	–	2,1	B	28C5	3,2,1	BM	30G3	2,1	M	3F0
	5,4	M	41B6	5,4	M	–	5,4	M	41A6	5,4	M	–	2,1	B	28F5	3,2,1	BM	30G8	2,1	M	3B1
													4,3	M	28/A1	6,5,4	BM	30F8			
													6,5	M	–	8,7	M	3C2			
													8,7	M	29G5						
													10,9	M	28D5						
													12,11	M	28/A1						
COIL			41C0			41E0			41D0			41E0			2A/D1			3B3			3D3

RELAY	DH			DT			DTH			DU			EXA			EXD			EXH		
DESIG																					
CODE	U340			U164			U1228			U164			U151			U695			U695		
OPTION	XV																				
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																12,11	M	30F6	12,11	M	4A/D2
																10,9	M	30G6	10,9	M	4A/D2
																8,7	M	30F6	8,7	M	4A/D2
																6,5	M	30G6	6,5	M	4A/D2
	4,3	M	27H7	4,3	B	3C3	4,3	M	27H8	4,3	B	3E3	4,3	B	28/F3	4,3	M	30F6	4,3	M	4A/D2
	2,1	M	3F0	2,1	B	–	2,1	M	3C3	2,1	B	–	2,1	B	41A1	2,1	M	30F3	2,1	M	–
BOT.	2,1	M	3B1	2,1	B	7H2	2,1	M	3B2	2,1	B	7H2	3,2,1	BM	–	2,1	M	30E1	2,1	M	4A/B2
	4,3	M	–	4,3	B	7E2				4,3	B	7E2				4,3	M	30E1	4,3	M	4A/B2
																6,5	M	30E1	6,5	M	4A/B2
																8,7	M	30E1	9,7	M	4A/B2
																10,9	M	30G1	10,9	M	4A/B2
																12,11	M	30D1	12,11	M	3001
COIL			3D3			9F4			3C3			9C4			30C0			3080			30A0

RELAY	EXM			H			HA			HH			HRT			HT			HTH		
DESIG																					
CODE	U809			U164			U188 OR U199			U897			U660			U164			U1228		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																					
	10,9	M	3088				12,11	M	2B/E2												
	8,7	M	3088				10,9,8	BM	2B/B1				9,8	M	98Z						
	6,5	M	3088				7,6	M	4A/F1				7,6	M	a						
	4,3	M	3088	4,3	B	2A/F6	5,4	M	4A/F1	5,4	M	2A/F5	5,4	M	c	4,3	B	2B/C2	4,3	M	2B/B3
	2,1	M	3009	2,1	B	–	2,1,3	MB	2B/G1	2,1,3	MB	31G3	3,2,1	BM	2A/G6	2,1	B	–	2,1	M	2B/H2
BOT	3,2,1	BM	3047	2,1	B	7G2	2,1,3	MB	2B/G2	2,1	M	2A/H3	3,2,1	BM	2A/G4	2,1	B	7H2	2,1	M	–
	5,4	M	3048	4,3	B	7D2	5,4	M	2B/C3	4,3	M	–	5,4	M	b	4,3	B	7E2			
	7,6	M	30A8				7,6	M	3D2				7,6	M	2A/F1						
	9,8	M	30D1				10,9,8	BM	3C1												
							12,11	M	3E2												
COIL			3080			88/B5			2B/D2			2A/E6			2A/F1			9B4			2B/C2

(N) 4A/G1
a (WZ) 2A/F8
(31) 4A/B5
b (WJ) 4A/F2
c 2B/C9,09

RELAY	HU			HUA			HUH			M			MDA			MOH			P		
DESIG																					
CODE	U164			U268			U1228			U164			U699			U1228			U695		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																			12,11	M	5G5
																			10,9	M	3000
				9,8	M	28/G2							8,7	M	3E0				8,7	M	10G1
				7,6,5	BM	2B/C1							5,5	M	3C2				6,5	M	3F6
	4,3	B	2B/D1	4,3	B	–	4,3	M	2B/D1	4,3	B	3F6	4,3	M	3F3	4,3	M	27H8	4,3	M	3D3
	2,1	B	–	2,1	B	4A/C0	2,1	M	2B/G4	2,1	B	–	2,1	M	3F3	2,1	M	3G5	2,1	M	3E2
BOT.	2,1	B	7G2	2,1	M	4A/C1	2,1	M	–	2,1	B	7H2	2,1	M	2B/F2	2,1	M	3G6	2,1	M	2A/H2
	4,3	B	7D2	5,4,3	BM	a				4,3	B	7E2	4,3	M	3F6				4,3	M	2A/C7
				7,6	M	4A/C1							6,5	M	3B2				6,5	M	2A/F6
													8,7	M	3B8				8,7	M	2B/D1
																			10,9	M	2B/C2
																			12,11	M	2B/D6
COIL			9B4			2B/G2			2B/C1			9D4			2B/F3			3F6			10F0

a 2B/E3
4A/A0

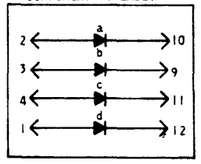
RELAY	RC			SR			T			TA			TH			U			U		
DESIG																WT					
CODE	U164*			U108			U164			U158			U897			U164			Y224		
OPTION	ZJ																		WZ		
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																			6,5	M	
	4,3	B	5G4	6,5,4	BM	29H5	4,3	B	2A/C7				5,4	M	2A/F5	4,3	B	2A/H2	4,3	B	2A/H2
	2,1	B	–	3,2,1	BM	2A/F1	2,1	B	–	3,2,1	BM	a	2,1,3	MB	31G0	2,1	B	–	2,1	B	7F3
BOT.	2,1	B	7H2	3,2,1	BM	2A/D1	2,1	B	7G2	2,1	M	2A/F4	2,1	M	2A/B5	2,1	B	7F5	2,1	B	7F5
	4,3	B	7E2	5,4	M	a	4,3	B	7D2	4,3	M	41B2	4,3	M	4182	4,3	B	7F3	4,3	M	
COIL			7D7			2A/G1			8E6			2A/J6			2A/C6			8C6			8A/C6

a 2A/E4
27F8

a (WY) 2A/F6
(WZ) 2A/F8

RELAY	UH			UH			20A			21B			30S			HHR			TLCP		
DESIG																					
CODE	U897			U198			U122			U122			U422			U422			U115		
OPTION	XU			XV			XS			XS			WC			VJ			XS,WC		
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																			12,11	M	–
																			10,9	M	–
																			8,7	M	41D3
				6,5	M	41F7	7,6	M	41B8	7,6	M	41B8				9,8,7	BM	–	6,5	M	41D3
	5,4	M	2A/F5	4,3	M	2A/F5	5,4,3	BM	–	5,4,3	BM	–				6,5,4	BM		4,3	M	41D3
	2,1,3	MB	2A/D5	2,1	M	2A/D5	2,1	B	–	2,1	B	–	3,2,1	BM	–	3,2,1	BM	41D6	2,1	M	41E3
BOT	2,1	M	2A/H1	2,1	M	2A/A1	2,3,1	EBM	–	2,3,1	EBM	–	2,1	M	41B1	3,2,1	M	41B1	2,1	M	41E3
	4,3	M	2A/B2	4,3	M	2A/B2	5,4	M	41B6	5,4	M	–				6,5,4	BM	–	4,3	M	41E3
																9,8,7	BM	–	6,5	M	41E3
																			8,7	M	41F3
																			10,9	M	41F3
																			12,11	M	41F3
COIL			2A/A2			2A/A2			41D0			41F0			41C6			41F0			41C3

COMPONENT ASSEMBLY



OPTION	CA1		
CODE	ED-94859-( ) G199		
OPTION	WZ		
COMPONENT	DESIG	LOC	CODE
DIODE a	D1	2B/B7	446K
DIODE b	D2	2B/A7	
DIODE c	D3	2B/C5	
DIODE d	D4	2B/C7	

DIODE

OPT	DESIG	LOC	CODE
VZ	TMT	2A/H5	446K

NETWORK

OPT	DESIG	LOC	CODE
WC	30S	41C6	185A
	DT	3C5	177A
	DU	3F1	
	H	2A/H3	

NETWORK

OPT	DESIG	LOC	CODE
[1]	HH	2A/F6	177C
	TH	2A/C6	
WC	HHR	41F0	185A
WZ	HRT	2A/F1	
	HT	2B/H2	177A
	HU	2B/G3	
	M	3G5	
WZ	ST	2B/H5	
WZ	STH	2A/D6	185A
	T	2A/B4	177A
XS,WC	TLCP	41C3	185A

NETWORK

OPT	DESIG	LOC	CODE
	U	2A/H1	177A
WZ	UA	2B/37	
WZ	UB	2B/C8	186B
WZ	UC	2B/A5	
WZ	UD	2B/A8	
	UH	2A/A2	177C
WZ	UW	2B/F5	185A
WZ	UZ	2B/G5	185A
WC	WHR	41G0	185A

LAMP

OPT	DESIG	LOC	CODE
	OS	7F4	2Y

RESISTOR

OPT	DESIG	LOC	CODE
	TLA	41D3	
	TLB	41D3	
XS,WC	TLC	41E3	19GH
	TLD	41F3	
	TLE	41F3	
UA	UW	2B/F4	18AM
UA	UZ	2B/G4	18AM

DRAWING ISSUE

31D	W.U.	REC AUM
33A	RPS	ACC AAP
34B	CMC	ZAJ AHS
35D	NJF	
37B		
38B		

ISSUE 55B

MASTER TIMING CIRCUIT (2)

SD-25633-01-C4

BELL TELEPHONE LABORATORIES INCORPORATED

6S

SL-25633-01-C4

STABILO

PART OF APP FIG. 4

SELECTOR

DESIG	OPTION	CODE	BANK CODE	ARC 1 TERM.	ARC 1 LOC	ARC 2 TERM.	ARC 2 LOC	ARC 3 TERM.	ARC 3 LOC	ARC 4 TERM.	ARC 4 LOC	ARC 5 TERM.	ARC 5 LOC	ARC 6 TERM.	ARC 6 LOC	STEP MAG LOC	INTER CONT LOC
DT		206AF	26A	1,2 3,22	- 3A5	1,2 3,4 5-22	- 3B5 -	1-4 5-22	9E3 -	1-4 5-22	30G8 -	1-22	30E8	1-4 5-22	9F3 -	3C5	3C3
DU		206AF	26A	1-20 21,22	9E2 -	1-7 8-22	- 3D1	1 2-8 9 10-18 19 20-22	3A1 - 3A1 - 3A1 -	1-20 21,22	30F3 -	1-20 21,22	30E3 -	1-20 21,22	9C3 -	3F1	3D2
H		206AF	26A	1-22 3 10 17	2A/E7 41F2 41F2 41F2	1 2 3 4,5 6 7 8 9 10 11,12 13 14 15 16 17 18,19 20 21,22	11A1 - 41C7 - 41A7 - 11A1 - 41C7 - 41A7 - 11A1 - 41C7 - 41A7 -	1-22	28D7	1-22	28E7	1-6 7 8-13 14 15-20 21,22	88/B8 - 88/B8 - 88/B8 -	1-6 7 8-13 14 15-22	88/A4 - 88/A4 - 88/A4	2A/H3	2A/E6
HT		206AF	26A	1,2 3-22	41E1 28/D3	1 2 3 4-22	28/B3 - 41F1 28/B3	1,2 3 4-22	- 28/A3 -	1-3 4 5-22	4A/E0 28/E3 -	1-3 4-22	4A/C0 -	1-22	9B3	2B/H2	2B/C2
HU		206AF	26A	1-22	28/F0	1-3 4 5-22	- 11A1 28/B0	1 2-3 4 5 6 7 8 9 10 11-22	41D1 - 28/A0 41C1 - 41B1 41D1 - 28/A0 -	1-10 11-22	4A/B0 -	1-10 11-22	4A/A0 -	1-22	9A3	2B/G3	2B/C1
M		206AF	26A	1-12 13-22	3E5 -	1-12 13-22	30A7 -	1-22	-	1-12 13-22	30B6 3F5	1-12 13-22	30C6 -	1-12 13-22	9G3 -	3G5	3F6
T		206AF	26A	1 2 3 4 5 6,7 8 9 10 11 12 13 14 15,16 17 18 19 20-22	- 25C5 2B/G9 - 25C5 - 25C5 2B/E9, 2A/A7 25C5 - 2B/G9 25C5 - 25C5 - 2B/E9 2A/A7	1 2-9 10 11 12-19 20 20- 21,22	11A3 - 41A4 11A3 - 41D3 41A4 -	1-22	28A7	1-22	2887	1-20 21,22	9E8 -	1-22	9E5	2A/B4	2A/C6
U	WY	206AF	26A	1 2-9 9-11 12-18 19-22	2A/F3 - 2A/F3 - 2A/F3	1,2 3-6 7-12 13-16 17-22	- 11A4 - 11A4 -	1-4 5 6-8 9,10 11-14 15 16-18 19,20 21,22	- 41C8 - 2A/C4 41C8 - 2A/C4 -	1,3,--,19 2,4 6 8 10 12,14 16 18 20 21,22	2303 - 3183 - 782 - 3183 - 782 2A/A4	1-20 21,22	8C8 -	1-22	8B5	2A/H1	2A/A3
ST	WZ	206AF	26A	1-5 6,7 8-12 13,14 15-19 20-22	- 2A/D7 - 2A/D7 - 2A/D7	1 2-4 5-8 9-11 12-15 16-18 19-22	- 11C3 - 11C3 - 11C3 -	1,2,3 4 5 6 7-10 11 12 13 14-17 18 19 20 21,22	- 3183 - 782 - 3183 - 782 - 3183 - 782 -	1-5 6 7-12 13 14-19 20 21,22	- 2A/G6 - 2A/G6 - 2A/G6 -	1-6 7 8-13 14 15-20 21,22	88/C8 - 88/C8 - 88/C8 -	1-6 7 8-13 14 15-22	88/B4 - 88/B4 - 88/B4	2B/H1	2A/E6

APP FIG. 5

RELAY

DESIG	[5]T(0,1,2,4,7)E			[5]U(0,1,2,4,7)E																	
CODE	U695			U695																	
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	4A/G7	12,11	M	4A/G7															
	10,9	M	4A/D7	10,9	M	4A/B7															
	8,7	M	4A/D7	8,7	M	4A/B7															
	6,5	M	4A/D7	6,5	M	4A/B7															
	4,3	M	4A/D7	4,3	M	4A/B7															
	2,1	M	4A/D7	2,1	M	4A/B7															
BOT.	2,1	M	4A/D7	2,1	M	4A/B7															
	4,3	M	4A/D7	4,3	M	4A/B7															
	6,5	M	4A/D7	6,5	M	4A/B7															
	8,7	M	4A/D7	8,7	M	4A/B7															
	10,9	M	4A/D7	10,9	M	4A/B7															
	12,11	M	4A/D7	12,11	M	4A/B7															
COIL			48/F4			48/B4															

APP FIG. 6

RELAY

DESIG	[5]T(0,1,2,4,7)D			[5]U(0,1,2,4,7)D																	
CODE	U695			U695																	
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	4A/G7	12,11	M	4A/G7															
	10,9	M	4A/D7	10,9	M	4A/B7															
	8,7	M	4A/D7	8,7	M	4A/B7															
	6,5	M	4A/D7	6,5	M	4A/B7															
	4,3	M	4A/D7	4,3	M	4A/B7															
	2,1	M	4A/D7	2,1	M	4A/B7															
BOT.	2,1	M	4A/D7	2,1	M	4A/B7															
	4,3	M	4A/D7	4,3	M	4A/B7															
	6,5	M	4A/D7	6,5	M	4A/B7															
	8,7	M	4A/D7	8,7	M	4A/B7															
	10,9	M	4A/D7	10,9	M	4A/B7															
	12,11	M	4A/D7	12,11	M	4A/B7															
COIL			48/F4			48/B4															

DRAWING ISSUE

	TLC REC ARR
310	
388	

ISSUE 55B

MASTER TIMING CIRCUIT (2)

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-C5

6S

SD-25633-01-C5

APP FIG. 7

RELAY

DESIG	ERO			ESO			GEO			GRE			ORO			PRO			SCO		
CODE	U144			U979			U1112			U1112			U144			U299			U940		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	22C6										12,11	M	22C5						
	10,9	M	22B4										10,9	M	22F1				11,10	M	–
	8,7	M	24C3	8,7	M	12C4	11,10	M	27A7	11,10	M	27A6	8,7	M	24C3				9,8	M	39C3
	6,5	M	16B5	6,5	B	12E5	9,8,7	3M	25E5	9,8,7	3M	12F1	6,5	M	1606				7,6	M	13F3
	4,3	M	13E4	4,3	M-B	12F6	6,5,4	3M	2308	6,5,4	3M	12A2	4,3	M	13E4				5,4	M	25E6
	2,1	M	24A6	2,1		1137	2,1,3	MB	1:E0	2,1,3	MB	15F2	2,1	M	2386	3,2,1	3M	22H2	3,2,1	3M	–
BOT.	2,1	M	26C3	4,3	M-B	–	2,1,3	MB	22F2	2,1,3	MB	2706	2,1	M	2683	2,1	B	2203	3,2,1	3M	905
	4,3	M	26D3	2,1		2707	6,5,4	3M	2707	6,5,4	3M	2507	4,3	M	2603	4,3	M	2706	5,4	M	2358
	6,5	M	26A3	6,5	B	2506	9,8,7	3M	1187	9,8,7	3M	2202	6,5	M	2683				7,6	M	13C6
	8,7	M	26F3	8,7	M	27E0	11,10	M	40E4	11,10	M	27F3	8,7	M	2603				9,8	M	2707
	10,9	M	26H3										10,9	M	2603				11,10	M	–
	12,11	M	26E3										12,11	M	26E3						
COIL			27E6			1246			2706			2706			2706			2706			1383

RELAY

DESIG	TBC			TFT																	
CODE	U643			U299																	
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	13E3																		
	10,9	M	13E1																		
	8,7	M	10B7																		
	6,5	M	22C3																		
	4,3	B	16C6																		
	2,1	B	1027	3,2,1	3M	16E6															
BOT.	2,1	B	2796	2,1	B	22E3															
	4,3	B	27C6	4,3	M	–															
	6,5	B	1187																		
	9,8,7	3M	2708																		
	11,10	M	1286																		
COIL			13E1			16C5															

APP FIG. 9

RELAY

DESIG	ERE			ESE			GOE			GR			GR1			SRO			SRE		
CODE	U144			U979			U1112			U177			U177			U1112			U144		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	22B5																12,11	M	22C5
	10,9	M	22A4																10,9	M	2234
	8,7	M	24C3	8,7	M	12C6	11,10	M	4CE4							11,10	M	2706	8,7	M	24C3
	6,5	M	16A3	6,5	B	12E7	9,8,7	3M	25F6	9,8,7	3M	12C4	9,8,7	3M	1283	9,8,7	3M	1286	6,5	M	1606
	4,3	M	1304	4,3	M-B	12F7	6,5,4	3M	23E8	6,5,4	3M	1204	6,5,4	3M	a	6,5,4	3M	1286	4,3	M	1304
	2,1	M	2446	2,1		1187	2,1,3	MB	2507	3,2,1	3M	1284	3,2,1	3M	22F1	2,1,3	MB	1206	2,1	M	2446
BOT.	2,1	M	2583	4,3	M-B	–	2,1,3	MB	27E7	3,2,1	3M	22F2	3,2,1	3M	1101	2,1,3	MB	27E6	2,1	M	2683
	4,3	M	2603	2,1		2707	6,5,4	3M	13F2	6,5,4	3M	22E3	6,5,4	3M	1251	6,5,4	3M	1206	4,3	M	2603
	6,5	M	2633	6,5	B	2506	9,8,7	3M	1187	9,8,7	3M	1208	9,8,7	3M	12F8	9,8,7	3M	1238	6,5	M	2683
	8,7	M	26F3	8,7	M	27E1	11,10	M	27C7							11,10	M	2703	8,7	M	26F3
	10,9	M	2603																10,9	M	2603
	12,11	M	26E3																12,11	M	26E3
COIL			27F6			12H7			27C6			27F2			27F2			27C6			2796
													a		1383 27M2						

RELAY

DESIG	PRE			SCE			T90														
CODE	U299			J940			U643														
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP							12,11	M	13F3												
				11,10	M	–	10,9	M	1701												
				9,8	M	–	8,7	M	1088												
				7,6	M	13F3	6,5	M	2295												
				5,4	M	25E6	4,3	B	–												
	3,2,1	3M	22H2	3,2,1	3M	a	2,1	B	1087												
BOT.	2,1	B	22E7	3,2,1	3M	27E7	2,1	B	2796												
	4,3	M	2796	5,4	M	1106	4,3	B	2796												
				7,6	M	25E3	6,5	B	1187												
				9,8	M	3783	9,8,7	3M	27E9												
				11,10	M	–	11,10	M	1293												
COIL			2796			1383			13F1												
						a 884 1385															

ISSUE 58AC

MASTER TIMING CIRCUIT (2) SD-25633-01-C6

BELL TELEPHONE LABORATORIES INCORPORATED 6S

DRAWING ISSUE 310 TLC Acc AAG

PART OF APP FIG. 8

RELAY																													
DESIG	1CL			A			A1			B			B1			CC			CK										
CODE	U113			U639			U1113			U639			U1113			U953			U953										
OPTION																													
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC								
TOP				12,11	M	26C1				12,11	M	26B1				13,12	M	16B4	13,12	M	17C3								
				10,9,8	BM	23G6	10,9	M	13F7	10,9,8	BM	23G6	10,9	M	13F7	11,10	M	26C1	11,10	M	16D4								
				7,6	M	16A7	8,7	M	28A8	7,6	M	16B7	8,7	M	28A8	9,8	M	26A1	10,9,8	BM	16F7								
				5,4	M	13F7	6,5,4	BM	16C7	5,4	M	13F7	6,5,4	BM	16B7	7,6	M	26B1	7,6	M	16G5								
	3,2,1	BM	11C5	2,1,3	MB	23F6	3,2,1	BM	-	2,1,3	MB	-	3,2,1	BM	-	5,4	B	17H4	5,4	B	16B4								
BOT.	2,1	M	-	2,1	B	16C7	3,2,1	BM	17E2	2,1	B	16B7	3,2,1	BM	17F2	3,2,1	MB	18G5	2,1,3	MB	-								
				4,3	M	-	6,5,4	BM	19H6	4,3	M	-	6,5,4	BM	19H6	2,1	B	16B7	2,1,3	MB	17A3								
				6,5	M	-	3,7	M	-	6,5	M	-	3,7	M	-	7,6	M	-	7,6	M	-								
				9,8,7	BM	26E0	10,9	M	22F4	9,8,7	BM	26F1	10,9	M	22F4	10,9,8	BM	16D4	10,9,8	BM	37H2								
				11,10	M	-				11,10	M	-				12,11	M		12,11	M	24A6								
COIL			11C6			26B0			13F7			26A0			13F7			16B4			23F4								

RELAY																													
DESIG	COP			D1			DA			DC			DRL			E			ESP										
CODE	U293			U642			U144			U144			Y219			U642			U1047										
OPTION																													
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC								
TOP							12,11	M	18D4	12,11	M	18D6				11,10,9	BM	16B7											
				11,10,9	BM	16C6	10,9	M	-	10,9	M	18E1				8,7	B	13F6	11,10,9	BM	17H0								
				8,7	B	13F5	8,7	M	-	9,7	M	20D2				6,5	B	-	8,7,6	BM	17B8								
				6,5	B	-	6,5	M	28D1	6,5	M	20D2	7,6	PM	13F6	4,3	B	23F6	8,7,6	BM	18B1								
	3,2,1	BM	17C3	4,3	B	-	4,3	M	19D5	4,3	M	20D2	5,4,3	BM	26C1	4,3	B	23F6	5,4	B	17C2								
	2,1	B	18C1	2,1,3	MB	26D1	2,1	M	19D1	2,1	M	20D2	2,1	M	18H1	2,1	B	-	2,1,3	MB	18B1								
BOT.	4,3	M	25B5	5,4	M	26E1	4,3	M	19D2	4,3	M	21D4	5,4,3	BM	a 18G4	5,4	M	26F1	5,4	B	18G2								
				7,6	M	28B1	6,5	M	19D3	6,5	M	21D4	7,6	PM	26D1	7,6	M	26E1	8,7,6	BM	17H3								
				10,9,8	BM	23F5	8,7	M	19F4	8,7	M	21D4				10,9,8	BM	23G5	11,10,9	BM	18G6								
				12,11	M	-	10,9	M	19E4	10,9	M	21D4				12,11	M	28B8											
							12,11	M	18D4	12,11	M	21D4																	
COIL			19F2			26C0			18E0			19E0			17H4 a 25H2 26E1			26D0			18C3								

RELAY																													
DESIG	ET			ET1			ETS			HRE			HRN			LC1			LC2										
CODE	U188			U1324			U67			U144			U144			U58			U188										
OPTION																													
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC								
TOP										12,11	M	18C5	12,11	M	18C6														
	12,11	M	11A6							10,9	M	-	10,9	M	18D2	11,10	M	17D4	12,11	M	17B4								
	10,9,8	BM	17F4	11,10	M	17A8				9,7	M	-	8,7	M	20F7	9,9	M	17C5	10,9,8	BM	17B2								
	7,6	M	11C9	9,9,7	BM	25D3	7,6	M	11D7	6,5	M	28A1	6,5	M	20F7	7,6	M	17F2	7,6	M	19A5								
	5,4	M	a	6,5,4	BM	25F3	5,6	M	12E7	4,3	M	19D5	4,3	M	20F7	5,4	M	18D2	5,4	M	18H1								
	2,1,3	MB	27A8	2,1,3	MB	a	3,2,1	BM	12D7	2,1	M	19C5	2,1	M	20F7	3,2,1	BM	18C7	2,1,3	MB	17C6								
BOT	2,1,3	MB	29A1	2,1,3	MB	18A1	3,2,1	BM	3E7	2,1	M	19D1	2,1	M	20F7	2,1	B	25B5	2,1,3	MB	25D3								
	5,4	M	18B6	6,5,4	BM	23E7	5,4	M	25D5	4,3	M	19E2	4,3	M	21B4	5,4,3	BM	18F7	5,4	M	18D1								
	7,6	M	3F8	9,8,7	BM	25E2				6,5	M	19D3	6,5	M	21B4	8,7,6	BM	17G8	7,6	M	17E3								
	10,9,8	BM	22C2	11,10	M	25D2				8,7	M	19F4	8,7	M	21B4	10,9	M	17A7	10,9,8	BM	17A2								
	12,11	M	16F7							10,9	M	19E4	10,9	M	21B4				12,11	M	17A3								
										12,11	M	19C5	12,11	M	21B4														
COIL			11A8 a (H) 11D5 (WZ) 11E1			11D8 a 25C3 40E5			11E8			44/G9			44/H9			17D5			17C5								

RELAY																													
DESIG	LC3			LC4			MC			MGE			MGN			MO			NS										
CODE	U735			U1317			U144			U144			U144			U144			U1113										
OPTION																													
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC								
TOP							12,11	M	18C6	12,11	M	18F5	12,11	M	18F6	12,11	M	18C5											
							10,9	M	18E2	10,9	M	19D1	10,9	M	19D6	10,9	M	19F5											
				9,8	M	-	8,7	M	20D0	8,7	M	-	8,7	M	19D6	8,7	M	19F5	10,9	M	28D8								
				7,6	M	-	6,5	M	20D0	6,5	M	-	6,5	M	19D6	6,5	M	19F5	8,7	M	18B6								
				5,4	M	18G2	4,3	M	20D1	4,3	M	18D4	4,3	M	19D6	4,3	M	19F5	6,5,4	BM	17E2								
	3,2,1	BM	-	3,2,1	BM	-	2,1	M	20D1	2,1	M	28G1	2,1	M	19D6	2,1	M	19F5	3,2,1	BM	17F3								
BOT.	3,2,1	BM	17C3	2,1	B	17F2	2,1	M	28G1	2,1	M	19F1	2,1	M	-	2,1	M	19D1	3,2,1	BM	19H6								
				5,4,3	BM	17B2	4,3	M	21E0	4,3	M	19F2	4,3	M	-	4,3	M	19D2	6,5,4	BM	19H6								
				7,6	M	17A4	6,5	M	21E0	6,5	M	19E3	6,5	M	20A7	6,5	M	19D3	8,7	M	19G6								
							8,7	M	21E1	8,7	M	19G4	8,7	M	20A7	8,7	M	19E4	10,9	M	19G6								
							10,9	M	21E2	10,9	M	19F4	10,9	M	21B3	10,9	M	19E4											
							12,11	M	21E3	12,11	M	19F5	12,11	M	21B3	12,11	M	18C5											
COIL			17A6			17D4			18G0			19H0			19H0			18G0			18A5								

RELAY																													
DESIG	OC			P1			P1A			P2			P2A			P3			P3A										
CODE	U642			U98			U111			U98			U111			U98			U111										
OPTION										ZL			ZL																
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC								
TOP	11,10,9	BM	25D8																										
	8,7	B	18A6				8,7	M	17B7				8,7	M	17B7				8,7	M	17C7								
	6,5	B	19B2	9,7	M	17A1	6,5	B	-	9,7	M	17B1	6,5	B	-	9,7	M	17B1	6,5	B	-								
	4,3	B	11D3	6,5,4	BM	18C6	4,3	B	-	6,5,4	BM	-	4,3	B	-	6,5,4	BM	-	4,3	B	-								
	2,1	B	27B7	3,2,1	BM	18G3	2,1	B	36E6	3,2,1	BM	-	2,1	B	-	3,2,1	BM	16B1	2,1	B	-								
BOT.	2,1,3	MB	a	3,2,1	BM	17B7	2,1	B	18C0	3,2,1	BM	17C8	2,1	B	19D0	3,2,1	BM	17C8	2,1	B	18E0								
	5,4	M	11D5	6,5,4	BM	19C1	5,4,3	BM	17A1	6,5,4	BM	18D1	5,4,3	BM	17B2	6,5,4	BM	18E1	5,4,3	BM	17D2								
	7,6	M	12A3	8,7	M	36F6	7,6	M	28C1	8,7	M	-	7,6	M	28D1	8,7	M	4A/F3	7,6	M	29D1								
	10,9,8	BM	16C4																										
	12,11	M	17C3																										
COIL			11C9 a 11F8 22E5			17A1			17B6			17B1			17B6			17B1			17C6								

RELAY																													
DESIG	P4			P4A			P5			P5A			P6			P6A			P7										
CODE	U99			U111			U99			U111			U99			U111			U99										
OPTION																													
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC								
TOP																													
				8,7	M	17D7				8,7	M	17E7				8,7	M	17E7											
	8,7	M	17D1	6,5	B	-	8,7	M	17E1	6,5	B	-	8,7	M	17F1	6,5	B	-	8,7	M	17F1								
	6,5,4	BM	4A/G2	4,3	B	4A/G9	6,5,4	BM	-	4,3	B	-	6,5,4	BM	-	4,3	B	-	6,5,4	BM	-								
	3,2,1	BM	4A/G8	2,1	B	4A/G2	3,2,1	BM	-	2,1	B	-	3,2,1	BM	18B7	2,1	B	18B7	3,2,1	BM	-								
BOT	3,2,1	BM	17D8	2,1	B	13E2	3,2,1	BM	17E8	2,1	B	18F0	3,2,1	BM	17F8	2,1	B	16F0	3,2,1	BM	17F9								
	6,5,4	BM	18E1	5,4,3	BM	17D2	6,5,4	BM	18F1	5,4,3	BM	17E2	6,5,4	BM	18F1	5,4,3	BM	17F2	6,5,4	BM	18G1								
	8,7	M	-	7,6	M	28A5	8,7	M	-	7,6	M	29F1	8,7	M	-	7,6	M	29F1	8,7	M	-								
COIL			17D1			17D6			17E1			17E6			17F1			17E6			17F1								

ISSUE 52B

	MASTER TIMING CIRCUIT (2)	SD-25633-01-C7
BELL TELEPHONE LABORATORIES INCORPORATED	6S	

SD-25633-01-C7

CB

PART OF APP FIG. 8

RELAY

DESIG	P7A			P8			P8A			PC			PTO			PTR			RCT		
CODE	U111			U98			U111			U1173			U293			U293			YB2		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
																			12,11	M	18G4
																			10,9	M	18H6
TOP	8,7	M	17F7				8,7	M	17G7										8,7	B	23F7
	6,5	B	-	8,7	M	17G1	6,5	B	-	7,6	PM	12G0							6,5	B	-
	4,3	B	-	6,5,4	BM	-	4,3	B	18D4	5,4	M	12A3							4,3	B	17G3
	2,1	B	-	3,2,1	BM	-	2,1	B	23E6	2,1,3	MB	a	3,2,1	BM	a	3,2,1	BM	17B3	2,1	B	18C4
	2,1	B	18G0	3,2,1	BM	17G8	2,1	B	18H0	2,1,3	MB	23D7	2,1	B	19F1	2,1	B	18G1	2,1	B	25E4
BOT.	5,4,3	BM	17G2	6,5,4	BM	18H1	5,4,3	BM	17H1	5,4	M	-	4,3	M	18G1	4,3	M	18H4	5,4,3	BM	-
	7,6	M	28G1	8,7	M	-	7,6	M	28H1	7,6	PM	17G4							8,7,6	BM	-
																			10,9	M	18A1
COIL			17F6			17G1			17G6			17G4			18D2			18C7			18G4
										a		1288 3763		a	17G8 2505						

RELAY

DESIG	RET			RET1			RLS			RN		
CODE	U333			U586 XB			U80			U144		
OPTION												
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
							12,11	M	37G1	12,11	M	18F7
							10,9	B	22E4	10,9	M	13D2
TOP	10,9	M	18B2				8,7	B	16D4	8,7	M	25B5
	8,7,6	BM	3C8				6,5	B	17M3	6,5	M	-
	5,4,3	BM	11D5	4,3	M	3D8	4,3	B	13F6	4,3	M	28F1
	2,1	B	25D8	2,1	B	-	2,1	B	13F6	2,1	M	19E5
	2,1	B	5F5	2,1	B	3D7	2,1,3	MB	37H2	2,1	M	19E1
	5,4,3	BM	11E8	4,3	M	-	5,4	M	11G1	4,3	M	19E2
BOT.	8,7,6	BM	-				7,6	M	26E1	6,5	M	19E3
	10,9	M	11B5				10,9,8	BM	18G7	8,7	M	19D4
							12,11	M	26G1	10,9	M	19C4
										12,11	M	13G7
COIL			11C6			3C9			37G1			18F0

RELAY SEE NOTE 206

DESIG	RCE	RCE	RCO	RCO
CODE	263A	287A	263A	287A
OPTION	ZE	XE	ZE	XE
59	36E6	36E6	36E6	36E6
58	18F7	18F7	13F7	18F7
57	16G7	16G7	16G7	16G7
56	18A7	18A7	18A7	18A7
55	17C9	17C8	17C8	17C8
49	3986	3986	3986	3986
48	18A4	18A4	18A4	18A4
47	3986	3986	3986	3986
46	17A8	17A8	17A8	17A8
45	18G7	18G7	18G7	18G7
39	16F7	16F7	16F7	16F7
38	1887	1887	1887	1887
37	25F3	25F3	25F3	25F3
36	17G8	17G8	17G8	17G8
35	26D2	26D2	26D2	26D2
29	3946	3946	3946	3946
28	1887	1887	1887	1887
27	35B6	35B6	35B6	35B6
26	36F6	36F6	36F6	36F6
25	15F5	15F5	15F5	15F5
19	13D2	18D2	13D2	18D2
18	18H7	18H7	18H7	18H7
17	3886	3886	3886	3886
16	18C7	18C7	18C7	18C7
15	38E5	38E6	38E6	38E6
09	26H2	26H2	26H2	26H2
08	2183	2183	2183	2183
07	1688	1688	16D8	16D8
06	17H2	17H2	17H2	17H2
05	38F6	38F6	38F6	38F6
COIL	1688	1648	1608	1608
54	19C1	19C1	19C1	19C1
53	19C1	19C1	19C1	19C1
52	19C1	19C1	19C1	19C1
51	19C1	19C1	19C1	19C1
50	19C1	19C1	19C1	19C1
44	19C3	19C3	19C3	19C3
43	19C3	19C3	19C3	19C3
42	19C3	19C3	19C3	19C3
41	19C3	19C3	19C3	19C3
40	19C3	19C3	19C3	19C3
34	19C5	19C5	19C5	19C5
33	19C5	19C5	19C5	19C5
32	19C5	19C5	19C5	19C5
31	19C5	19C5	19C5	19C5
30	19C5	19C5	19C5	19C5
24	20C0	20C0	20C0	20C0
23	20C0	20C0	20C0	20C0
22	20C0	20C0	20C0	20C0
21	20C0	20C0	20C0	20C0
20	20C0	20C0	20C0	20C0
14	21C0	21C0	21C0	21C0
13	21C0	21C0	21C0	21C0
12	21C0	21C0	21C0	21C0
11	21C0	21C0	21C0	21C0
10	21C0	21C0	21C0	21C0
04	19C0	19C0	19C0	19C0
03	19C0	19C0	19C0	19C0
02	19C0	19C0	19C0	19C0
01	3881	3881	3881	3881
00	1780	1780	1780	1780
COIL	1688	1648	1608	1608

RELAY

DESIG	ROS			RS			RSC			SC			SC1			SKA			SKP		
CODE	U286			Y205			Y205			U144			U144			U144 ZL			U144 ZL		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
										12,11	M	18C5	12,11	M	18C6	12,11	M	18D6	12,11	M	18D5
				10,9	M	18G1	10,9	M	18A2	10,9	M	18D1	10,9	M	19G5	10,9	M	18E2	10,9	M	-
TOP				8,7	M	16C4	8,7	M	37H1	8,7	M	-	8,7	M	19G5	8,7	M	-	8,7	M	-
				6,5	M	17G3	6,5	M	17M3	6,5	M	-	6,5	M	19G5	6,5	M	-	6,5	M	-
	5,4	M	18H6	4,3	M	37H1	4,3	M	12E7	4,3	M	-	4,3	M	19G5	4,3	M	-	4,3	M	-
	3,2,1	BM	18B2	2,1	B	24A6	2,1	B	17F3	2,1	M	28E1	2,1	M	19G5	2,1	M	-	2,1	M	29C1
	2,1	M	18C4	2,1	B	-	2,1	B	15B4	2,1	M	19E1	2,1	M	-	2,1	M	19E5	2,1	M	19D1
	4,3	M	18G6	4,3	M	37G3	4,3	M	16B4	4,3	M	19E2	4,3	M	-	4,3	M	19F6	4,3	M	19D2
BOT				6,5	M	18A2	6,5	M	23G5	6,5	M	19E3	6,5	M	20E8	6,5	M	20E8	6,5	M	19C3
				8,7	M	1704	8,7	M	12C7	8,7	M	19E4	8,7	M	20D8	8,7	M	20D8	8,7	M	19E4
				10,9	M	-	10,9	M	2505	10,9	M	19D4	10,9	M	21C5	10,9	M	21C5	10,9	M	19D4
										12,11	M	18C5	12,11	M	21B5	12,11	M	21B5	12,11	M	18D5
COIL			18H5			13F5			18A2			18E0			18E0			18D0			18D0

RELAY

DESIG	SP			SPA			SPT			SS		
CODE	U80			U6036			U6036			U930		
OPTION												
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
	12,11	M	18G5							12,11	PM	17H3
	10,9	B	17F3	10,9	M	19E5	10,9	M	18C0	10,9	M	17B2
TOP	8,7	B	18C3	8,7	M	18C2	8,7	M	18C2	3,7	B	17C2
	6,5	B	2504	6,5	M	18D7	6,5	M	18D7	6,5	B	17A7
	4,3	B	-	4,3	M	-	4,3	M	-	4,3	B	17H1
	2,1	B	-	2,1	M	28C1	2,1	M	-	2,1	B	25E2
	2,1,3	MB	23F6	2,1	M	19F7	2,1	M	19C1	2,1	M	18C3
	5,4	M	18H7	4,3	M	20F8	4,3	M	19D2	4,3	M	17C3
BOT.	7,6	M	18A1	6,5	M	20F8	6,5	M	19D3	6,5	M	18G4
	10,9,8	BM	a	8,7	M	21C5	9,7	M	19F4	9,8,7	BM	1881
	12,11	M	26H1	10,9	M	21B5	10,9	M	19E4	11,10	M	18F1
COIL			18G5			18C0			18C0			17G4
		a	18G3 28A1									

RELAY

DESIG	SY			T8R			TGT			TSP			PTRA								
CODE	U1113			U179			U499			UA108			316M VB								
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	10,9	M	-	9,8	M	37G1															
	8,7	M	18B6	7,6	M	12D1				8,7	M	18C3									
	6,5,4	BM	1702	5,4	M	37G2	5,4	M	17C1	6,5,4	BM	2861									
	3,2,1	BM	1845	3,2,1	BM	1604	3,2,1	BM	-	3,2,1	BM	2881	7,5,4	BM	18C1						
	3,2,1	BM	a	3,2,1	BM	25G2	2,1	B	17G8	2,1	B	1883									
	6,5,4	BM	19G6	5,4	M	2600	4,3	M	-	4,3	M	-									
BOT.	8,7	M	19G5	7,6	M	12E7				6,5	M	25E2									
	10,9	M	19G6							8,7	PM	18C4									
COIL			18B6			24A5			17C1			1883			18H4						
		a	WY 19G5 WZ 18A6																		

PART OF APP FIG. 8

CAPACITOR

	DESIG	LOC	CODE
(UK)	T(T)	18A1	2288
	(T1)		2288
(UL)	T	18AF	535NR
	T1	1880	~~KS-13366,L3~~ KS-13365,L35,1000UUF

NETWORK

	DESIG	LOC	CODE
[1]	COP	18F2	177C
[1]	PTO	18G2	177C
	P1	17A0	177A
	PA	17G7	177A
	PTR	18C7	177C
	RCE	16A8	177A
	RCO	16E8	177A
	SP	18C0	177E
	TSP	18B3	185A
(V8)	PTRA	18H4	185A

RESISTOR

DESIG	LOC	CODE
OP	18F2	18GF
T1	18A1	KS-13490,L1,1000
T2	18A0	144E,.1 MEG
T&	18A0	144E,.942 MEG
TF	26E0	18AG
TR	18C8	18GF

TUBE,. ELECTRON

DESIG	LOC	CODE
SP	18A0	313CC

DRAWING ISSUE: 3ID TLC MEC AM-1

APP FIG. 10

RELAY

DESIG	ST-						ST-						ST-						EST		
CODE	U1291						U1291						U1291						U1291		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	11,10	M	28C8				11,10	M	2808				11,10	M	2808				11,10	M	2888
	9,8,7	BM	12F6				9,8,7	BM	12F5				9,8,7	BM	12F4				9,8,7	BM	12F4
	6,5,4	BM	12D5				6,5,4	BM	12D5				6,5,4	BM	12D4				6,5,4	BM	12D3
	2,1,3	MB	22G1				2,1,3	MB	22G1				2,1,3	MB	22H1				2,1,3	MB	22E1
BOT.	3,2,1	BM	1286				3,2,1	BM	1245				3,2,1	BM	1245				3,2,1	BM	1283
	6,5,4	BM	1208				6,5,4	BM	1208				6,5,4	BM	1208				6,5,4	BM	1209
	8,7	M	1383				8,7	M	1384				8,7	M	1384				8,7	M	1383
COIL			a						a						a						a
	a P-22G1 S-12H5						a P-22G1 S-12H5						a P-22H1 S-12H4						a P-22E1 S-12H3		

APP FIG. 11

APP FIG. 12

APP FIG. 13

APP FIG. 14

RELAY

DESIG	ST-						ST-						ST-					
CODE	U1291						U1291						U1291					
OPTION																		
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	11,10	M	28C8				11,10	M	28C8				11,10	M	2888			
	9,8,7	BM	12F3				9,8,7	BM	12F2				9,8,7	BM	12F2			
	6,5,4	BM	12D2				6,5,4	BM	12D2				6,5,4	BM	-			
	2,1,3	MB	22E1				2,1,3	MB	22D1				2,1,3	MB	22D1			
BOT.	3,2,1	BM	1283				3,2,1	BM	1283				3,2,1	BM	1282			
	6,5,4	BM	12D9				6,5,4	BM	12D9				6,5,4	BM	12D9			
	8,7	M	1384				8,7	M	1384				8,7	M	1385			
COIL			a						a						a			
	a P-22E1 S-12H3						a P-22D1 S-12H2						a P-22C1 S-12H1					

APP FIG. 15

APP FIG. 16

ISSUE 56B

MASTER TIMING CIRCUIT (2)

SD-25633-01-C9

BELL TELEPHONE LABORATORIES INCORPORATED

SIZE 6S

STABLO

APP FIG. 17

RELAY

DESIG	CKR			DL			DL1			DLR			LT1			LT2			LT3		
CODE	U460			U624			Y223			U460			U582			U582			U582		
OPTION				V																	
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP													9,8,7	BM	-	9,8,7	BM	-	9,8,7	BM	-
	5,4	M	-				4,3	M	-	5,4	M	-	6,5,4	BM	-	6,5,4	BM	-	6,5,4	BM	-
	3,2,1	BM	17D4	2,1	M	24E7	2,1	B	-	3,2,1	BM	24D3	2,1,3	MB	-	2,1,3	MB	23D1	2,1,3	MB	23D2
BOT.	3,2,1	BM	-	2,1	M	24G6	2,1	B	24E3	3,2,1	BM	-	3,2,1	BM	23D1	3,2,1	BM	23D1	3,2,1	BM	23D2
	5,4	M	36F5				4,3	M	24E3	5,4	M	24C4	6,5,4	BM	23B1	6,5,4	BM	23B2	6,5,4	BM	23B3
													8,7	M	-	8,7	M	-	8,7	M	-
COIL			24A1			24G5			24D2			24A1			23D0			23C1			23C2

RELAY

DESIG	LT4			LT5			LT6			LT7			LT8			LT9			LT4		
CODE	U582			U582			U582			U582			U582			U582			U932		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	9,8,7	BM	-	9,8,7	BM	-	9,8,7	BM	-	9,8,7	BM	-	9,8,7	BM	-	9,8,7	BM	-			
	6,5,4	BM	-	6,5,4	BM	-	6,5,4	BM	-	6,5,4	BM	-	6,5,4	BM	-	6,5,4	BM	-	5,4,3	PBM	25C3
	2,1,3	MB	23D2	2,1,3	MB	2303	2,1,3	MB	2304	2,1,3	MB	2304	2,1,3	MB	2305	2,1,3	MB	2306	2,1	M	23C6
BOT.	3,2,1	BM	23D3	3,2,1	BM	2303	3,2,1	BM	2304	3,2,1	BM	2305	3,2,1	BM	2305	3,2,1	BM	-	3,2,1	BM	-
	6,5,4	BM	23B3	6,5,4	BM	2384	6,5,4	BM	2384	6,5,4	BM	2385	6,5,4	BM	2386	6,5,4	BM	-	5,4	M	-
	8,7	M	25C3	8,7	M	-	8,7	M	-	8,7	M	-	8,7	M	1884	8,7	M	25D3			
COIL			23C2			23C3			23C4			23C4			23C5			23C5			25C3

RELAY

DESIG	LT8			LTR			RCCK			RK			RKA			RKO			TIB		
CODE	U607			U368			U1239			U934			U660			U162			U247		
OPTION				XO			XM, XO, V														
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP										10,9	M	25G1	9,8	M	-						
	7,6	M	23C6							8,7,6	BM	25F7	7,6	M	25A1						
	5,4,3	BM	-							5,4,3	BM	25F7	5,4	M	25B2	5,4	M	25A1	5,4	M	24A3
	2,1	B	25C4	2,1	M	24H6	3,2,1	BM	24E7	2,1	B	25G4	3,2,1	BM	25F7	3,2,1	BM	25H1	3,2,1	BM	24A7
BOT	2,1,3	MB	-	2,1	M	24H7				3,2,1	BM	17C3	3,2,1	BM	25F6	3,2,1	BM	25G2	3,2,1	BM	24E6
	5,4	M	25C3							6,5,4	BM	17C4	5,4	M	25G1				5,4	M	27D2
										9,3,7	BM	-	7,6	M	-						
COIL			23C6			24H6			24E7			25F1			25G3			25A0			24B6

RELAY

DESIG	TM1			TM2			TM3			TM4			TM5			TM6			TMP		
CODE	U594			U158			U67			U426			U1119			U639			U440		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																12,11	M	25C1			
																10,9,8	BM	31E6			
	6,5	M	25F1				7,6	M	25A4	7,6	M	25A3	6,5	PM	2581	7,6	M	27E1			
	4,3	M	25H1				5,4	M	25B4	5,4,3	BM	25B3	4,3	B	2581	5,4	M	24C1			
	2,1	M	2592	3,2,1	BM	25B4	3,2,1	BM	17D3	2,1	B	25A1	2,1	B	25G2	2,1,3	MB	25D3	3,2,1	BM	23B1
BOT.	2,1	B	3783	2,1	M	-	3,2,1	BM	25G1	3,2,1	BM	25F8	2,1	M	24C7	2,1	B	22C1	3,2,1	BM	-
	4,3	M	25G5	4,3	M	25A2	5,4	M	2443	5,4	M	25G2	4,3	M	-	4,3	M	24F2			
	6,5	M	24D3													6,5	M	12F7			
																9,8,7	BM	a			
																11,10	M	2447			
COIL			25C0			25F6			25B3			25A3			2580			2580			23E2
																	a	1604 31H4			

RELAY

DESIG	TMR		
CODE	U601		
OPTION			
	CONT NO.	CONT ARR	LOC
TOP	9,8	M	24F7
	7,6	M	2401
	5,4	M	2444
	3,2,1	BM	27D2
BOT.	2,1	B	13C4
	5,4,3	BM	2487
	7,6	M	2461
COIL			24E2

CAPACITOR

	DESIG	LOC	CODE
(UK)	TM(TM)	25G9	2288
	(TM1)		2288
(UL)	TM	25G9	535NR
	TM1	25G8	~~KS-13366,L3~~ KS-13365,L35,.1000UF

NETWORK

DESIG	LOC	CODE
TIB	2486	1854
TM2	25F6	1854
TMP	23F2	185A

RESISTOR

DESIG	LOC	CODE
RK	25F0	184C
TA	2402	1808
TB1	2486	184G
TM1	25F8	KS-13490,L1, 1000
TM2	25F8	144E,.1 MEG
TM3	25F8	~~T470~~ KS-20289,L6C,1.5 MEG
TM4	25F9	~~T470~~ KS-20289,L6C,1.5 MEG
TP	22C1	184G

TUBE, ELECTRON

DESIG	LOC	CODE
TM	25F8	313CC

DRAWING ISSUE

31D	PWR ~~xxcl~~ AA-2

ISSUE 59B

MASTER TIMING CIRCUIT (2) SD-25633-01-C10

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-C10

APP FIG. 18

RELAY

DESIG	PF	PF1	PFA																	
CODE	U108	U569	UA108																	
OPTION																				
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP							8,7	M	31D3											
	6,5,4	BM	31H6	5,4	M	-	6,5,4	BM	31G4											
	3,2,1	BM	31C1	3,2,1	BM	31C1	3,2,1	BM	-											
BOT.	3,2,1	BM	31C2	3,2,1	BM	31C2	2,1	B	31C3											
	5,4	M	-	5,4	M	-	4,3	M	-											
							6,5	M	31E4											
							8,7	PM	31D3											
COIL			31F2			31G5			31C2											

CAPACITOR

	DESIG	LOC	CODE
(UL)	PF	31D1	535NR
(UK)	PF (PF)	31D1	228B
	(PF1)		228B
	PF1	31D0	~~KS-13346,L3, 1000UUF~~ KS-13365,L35,1000UUF

LAMP

DESIG	LOC	CODE
PF	31D2	2Y

NETWORK

DESIG	LOC	CODE
PF	31F2	185A
PF1	31G5	
PFA	31C2	

RESISTOR

DESIG	LOC	CODE
PF1	31D1	KS-13490,L1,1000
PF2	31D0	T44E,.1 MEG
PF3	31D0	~~T470~~,263A,2.2 MEG

TUBE,ELECTRON

DESIG	LOC	CODE
RF	31D0	3130C

APP FIG. 19

RELAY

DESIG	ACO	ALM	RA	SSF			TSF								
CODE	U270	U256	U241	U551			U306								
OPTION															
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP							8,7	M	-	8,7	M	31H6			
	6,5	M	-			-	6,5	B	11C1	6,5	M	31A1			
	4,3	B	-	5,4,3	BM	31G6	4,3	B	31C3	4,3	M	31D4	4,3	M	31D5
	2,1	B	-	2,1	B	-	2,1	B	25B1	2,1	M	31G4	2,1	M	31H4
BOT.	2,1	B	31E4	3,2,1	BM	31F6	2,1	B	29C1	3,2,1	BM	a	2,1	M	31B4
	4,3	M	31G4	5,4	M	-	4,3	B	31C7	5,4	M	31C1	4,3	M	31E4
							6,5	B	-	7,6	M	31E4			
COIL			31G3			31E3			3106			31B0			31B5

a (VI) 4A/F2
(31) 4A/C5

RELAY

DESIG	SFA		
CODE	AJ15		
OPTION	WZ		
	CONT ARR	LOC	
12	EBM		
11	EBM		
10	EBM		
9	EBM		
8	EMB		
7	EBM		
6	EMB		
5	EMB		
4	EBM		
3	EBM		
2	EBM		
1	EBM	8A/A2	
COIL		31H5	

LAMP

DESIG	LOC	CODE
SSF	31D3	2Y
TSF	31D5	2Y

RESISTOR

DESIG	LOC	CODE
MJ	31F5	18CN

DRAWING ISSUE 31D TLC MISC AMC

ISSUE 56B

MASTER TIMING CIRCUIT (2) SD-25633-01-CII

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-CII

STABILO

E-7488-B (12-64)

PART OF APP FIG. 20

RELAY

DESIG	29			2R1			2R2			32			37			AD			AD1		
CODE	U577			U1073			U1112			U93			U84			U1072			U1047		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
										12,11	M	32B1									
				12,11	M	36F4				10,9	M	33D7				12,11	M	38D1			
TOP	11,10	M	32C5	10,9,8	BM	-	11,10	M	-	8,7	M	32A4				10,9,8	BM	-	11,10,9	BM	22C3
	9,8,7	BM	32A4	7,6	M	-	9,8,7	BM	35F3	6,5	B	38F5	7,6,5	BM	-	7,6	M	32F5	8,7,6	BM	22D4
	6,5,4	BM	32C0	5,4	M	32E1	6,5,4	BM	32C6	4,3	B	39B3	4,3	M-M	32B3	5,4	B	38E5	5,4	B	38F5
	2,1,3	MB	32B5	2,1,3	MB	-	2,1,3	MB	32E1	2,1	B	38D5	2,1		32B3	2,1,3	MB	-	2,1,3	MB	32D0
	2,1	B	32G3	2,1,3	MB	32B0	2,1,3	MB	32E5	2,1	B	38C6	3,2,1	BM	33F8	2,1,3	MB	a	2,1,3	MB	36C5
	5,4,3	BM	33F8	6,5,4	BM	36D5	6,5,4	BM	32D3	4,3	B	36M4	6,5,4	BM	32F3	5,4	M	35F5	5,4	B	36H2
BOT.	8,7,6	BM	33D6	9,8,7	BM	-	9,8,7	BM	32E4	7,6,5	BM	a				7,6	M	36E5	8,7,6	BM	38A1
	10,9	M	37E7	11,10	M	32C1	11,10	M	32B4	9,8	M	35F5				10,9,8	BM	38B6	11,10,9	BM	38B1
																12,11	M	38D0			
COIL			32B6			32B0			32E0			34E0			34F0			38D0			38D0
										a		3882 39A3				a		16G7 32F5			

RELAY

DESIG	ADL			APR			APT			BT			CA			CA1			CA5		
CODE	U200			U607			U576			U1180			U643			U721			U1113		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
													12,11	M	32E3						
										10,9	M	36E5	10,9	M	32E3						
TOP	9,8	M	32B3							8,7	B	36B5	8,7	M	32E5				10,9	M	32F3
	7,6	M	-	7,6	M	38E4	7,6	M	-	6,5	B	36H3	6,5	M	32B5				8,7	M	32F3
	5,4	M	38D1	5,4,3	BM	36B1	5,4,3	BM	35D6	4,3	B	-	4,3	B	37B4	6,5,4	BM	32B5	6,5,4	BM	-
	3,2,1	BM	-	2,1	B	39C0	2,1	B	36B3	2,1	B	-	2,1	B	32D3	3,2,1	BM	32B1	3,2,1	BM	32G2
	3,2,1	BM	32C3	2,1,3	MB	36D3	2,1	B	23E6	2,1	B	36C6	2,1	B	35G6	3,2,1	BM	32C3	3,2,1	BM	-
	6,5,4	BM	32F3	5,4	M	36E3	5,4,3	BM	36E4	4,3	B	38G6	4,3	B	36A3	6,5,4	BM	32E5	6,5,4	BM	24A2
BOT.	8,7	M	-				7,6	M	36E6	6,5	M	32E5	6,5	B	32C3				8,7	M	36F5
										8,7	M	36G6	9,8,7	BM	3200				10,9	M	37A4
													11,10		32E3						
COIL			32B2			36D3			36E3			35A5			32E2			32C2			37A3

RELAY

DESIG	DTN			ER			ETM			GU			ICK			KRB			LOK		
CODE	U556			U937			U706			U148			U686			U948			Y82		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
																			12,11	M	38D1
																			10,9	M	36H3
				10,9	M	38F1													8,7	B	32C3
TOP	8,7	M	35C6	8,7,6	BM	38E1				6,5	M	38E5				7,6	PM	37C7	6,5	B	32F5
	6,5,4	BM	-	5,4	M	37C4	5,4,3	BM	a	4,3	M	36C1	5,4,3	BM	35E5	5,4	M	38H1	4,3	B	22C4
	3,2,1	BM	36B6	3,2,1	BM	-	2,1	B	36G3	2,1	B	36C5	2,1	B	35G5	2,1,3	MB	22E5	2,1	B	36A4
	3,2,1	BM	a	3,2,1	BM	a	2,1	B	-	3,2,1	BM	36D6	3,2,1	BM	-	2,1	B	12D0	2,1	B	34B1
	6,5,4	BM	38F5	6,5,4	BM	-	5,4,3	BM	-	5,4	M	38E5	5,4	M	35C6				5,4,3	BM	-
BOT				9,8,7	BM	-													8,7,6	BM	-
																			10,9	M	-
COIL			35C5			38F0			32E4			38A5			35C5			22E6			36H1
		a	35H5 3983		a	27C9 39A5		a	36A3 3744												

RELAY

DESIG	ON			OST			P'			P1'			PH			RC'			RCE1		
CODE	U118			U747			U1041			U643			U604			U831			U144		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
	12,11	M	32D3							12,11	M	39A3							12,11	M	38A0
	10,9	M	38E1				11,10	M	38G6	10,9	M	35E6							10,9	M	35A6
TOP	8,7	M	34B1				9,8,7	BM	32D1	8,7	M	36H3							8,7	M	36A4
	6,5	M	12C0				6,5	M	35F5	6,5	M	36A1				7,6	PM	38E4	6,5	M	35G6
	4,3	M	28E1	4,3	M	37C4	4,3	M	35F5	4,3	B	38A0	5,4	M	35G5	5,4,3	BM	38E2	4,3	M	35F6
	2,1	B	24G2	2,1	B	-	2,1	B	25F2	2,1	B	38B0	3,2,1	BM	32D3	2,1	M	36B4	2,1	M	38D6
	2,1	M	37A3	2,1	B	-	3,2,1	BM	32G3	2,1	B	38E1	3,2,1	BM	37B4	3,2,1	BM	39B5	2,1	M	36B7
	4,3	M	33D8	4,3	M	38G1	5,4	M	38B5	4,3	B	32F5				6,5,4	BM	36D1	4,3	M	35E6
BOT.	6,5	M	37E3				7,6	M	32F5	6,5	B	32F5							6,5	M	35C6
	8,7	M	32B5				9,8	M	-	9,8,7	BM	36G4							8,7	M	38J6
	10,9	M	12C0							11,10	M	-							10,9	M	35C6
	12,11	M	22E7																12,11	M	36G6
COIL			32D2			T2C1			32F4			36A0			32C4			38E2			38A0

RELAY

DESIG	RCE2			RCE3			RCK			RCO1			RCO2			RCO3			RTS		
CODE	U144			U144			Y209			U144			U144			U144			Y109		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
	12,11	M	38A6	12,11	M	-				12,11	M	38C0	12,11	M	38A6	12,11	M	-			
	10,9	M	39E6	10,9	M	-				10,9	M	35A6	10,9	M	39E6	10,9	M	-			
TOP	8,7	M	39F6	8,7	M	-				8,7	M	36A5	8,7	M	39F6	8,7	M	-			
	6,5	M	39F6	6,5	M	-				6,5	M	35G6	6,5	M	39F6	6,5	M	-			
	4,3	M	39G6	4,3	M	-				4,3	M	35F6	4,3	M	39G6	4,3	M	-	4,3	M	38E1
	2,1	M	39H6	2,1	M	36B1	3,2,1	BM	36C5	2,1	M	38D6	2,1	M	39H6	2,1	M	36B1	2,1	M	36A4
	2,1	M	39E7	2,1	M	36E6	3,2,1	BM	38E3	2,1	M	36B7	2,1	M	39E7	2,1	M	36E6	3,2,1	BM	36G3
	4,3	M	39D6	4,3	M	35D6				4,3	M	35E6	4,3	M	39D6	4,3	M	35D6	5,4	M	35F4
BOT	6,5	M	39D6	6,5	M	-				6,5	M	35C6	6,5	M	39D6	6,5	M	-			
	8,7	M	39C6	8,7	M	-				8,7	M	38A6	8,7	M	39C6	8,7	M	-			
	10,9	M	39C6	10,9	M	-				10,9	M	35C6	10,9	M	39C6	10,9	M	-			
	12,11	M	36D6	12,11	M	36H6				12,11	M	36H6	12,11	M	36D6	12,11	M	36H6			
COIL			38A0			38B0			36C0			38B0			38C0			38C0			38D0

RELAY

DESIG	RW			RW1			RW2			RWC			SLO			STE			TAP		
CODE	U1189			U409			U1312			U234			U934			U747			U179		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC
				12,11	M	37C7															
				10,9	M	37D2	11,10	M	-												
TOP				8,7	B	-	9,8,7	BM	37D3				10,9	M	32D3				9,8	M	39C5
				6,5	B	32B2	6,5	B	12E0				8,7,6	BM	-				7,6	M	39H5
	4,3	M	37D3	4,3	B	32B4	4,3	B	38E1	5,4,3	BM	37F3	5,4,3	BM	37B3	4,3	M	37C4	5,4	M	39E5
	2,1	M	37D3	2,1	B	35E1	2,1	B	27C8	2,1	B	18A4	2,1	B	38E0	2,1	B	-	3,2,1	BM	39B0
	2,1	B	25D1	3,2,1	MM	-	2,1	B	37A3	3,2,1	BM	37C3	3,2,1	BM	37B2	2,1	B	-	3,2,1	BM	36D4
	4,3	M	37E3	5,4	M	35H0	5,4,3	BM	-	5,4	M	37D4	6,5,4	BM	2482	4,3	M	38G1	5,4	M	36E4
BOT				7,6	M	36A4	8,7,6	BM	a				9,8,7	BM	1200				7,6	M	36E3
				9,8	M	35G5	10,9	M	-												
				11,10	M	37D4															
COIL			37E1			37D1			38H0			37C3			3783			12C0			34E0
							a		1201 24G2												

PART OF APP FIG. 20

RELAY

DESIG	TC			TE			TLK			TOK			TPC			TST1			TST2		
CODE	U577			U639			U1158			U1346			U58			UA39			U1072		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
							13,12	M	32A3												
TOP				12,11	M	13E5	11,10	M	3984				11,10	M	7F2	12,11	M	22F3	12,11	M	16C5
	11,10	M	39A3	10,9,8	BM		9,8	M	3805				9,8	M	3707	10,9,8	BM	22D3	10,9,8	BM	32E2
	9,8,7	BM	—	7,6	M	—	7,6	M	3486				7,6	M	—	7,6	M	22E3	7,6	M	32C4
	6,5,4	BM	36H4	5,4	M	32D2	5,4	M	38B2				5,4	M	32F4	5,4	M	38H1	5,4	B	18A3
	2,1,3	MB	38F5	2,1,3	MB	32E3	1,2,3	BM	a	3,2,1	BM	36D5	3,2,1	BM	23E6	2,1,3	MB	13F4	2,1,3	MB	a
BOT.	2,1	B	38D6	2,1	B	2307	2,1	B	—	2,1	M	35E6	2,1	B	2501	2,1	B	22C4	2,1,3	MB	b
	5,4,3	BM	34E6	4,3	M	32C5	4,3	M	38F6				5,4,3	BM	12D0	4,3	M	22E6	5,4	M	22C4
	8,7,6	BM	—	6,5	M	36A3	6,5	M	38G4				8,7,6	BM	36G5	6,5	M	12E1	7,6	M	13E4
	10,9	M	—	9,8,7	BM	—	9,8,7	BM	34F6				10,9	M	13E5	9,8,7	BM	2483	10,9,8	BM	25G2
				11,10	M	12E1	10,11,12	BM	33G1							11,10	M	25E5	12,11	M	37F7
COIL			38F4			3286			32A2			35D6			37E1			38E0			38H0
							a		38C5 39A4										a		32E1 39A5
																			b		22E7 39A5

RELAY

DESIG	TVM																				
CODE	U794																				
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	32B2																		
	10,9	M	36C5																		
	8,7	M	18E5																		
	6,5	M	32F6																		
	4,3	M	36B5																		
	2,1	B	38G5																		
BOT.	2,1	B	38D0																		
	4,3	M	16F6																		
	6,5	M	38F6																		
	8,7	M	32G5																		
	10,9	M	—																		
	12,11	M	—																		
COIL			32D0																		

DIODE

	DESIG	LOC	CODE
VT	STA	23A7	446K
VT	STB	23B7	446K

NETWORK

DESIG	LOC	CODE
P'	35F4	177C
TS	34G5	177A

RESISTOR

	DESIG	LOC	CODE
	APT	36E4	18AP
	BT	3585	18AP
	CA	32E3	18BH
	CB	22E5	18AG
	DTK	38F4	19CL
	GCI	38F4	18AG
	GU	38A6	19KP
	IR	3885	18AE
	ON	32D2	18AC
WO	RC	38F2	18AS
WN	RC	38F2	19DC
WN	RC1	38F2	19HF
WN	RC2	38F3	19RP
WO	RC2	38F3	19ABM
	RCK	3806	19RP
	RW	37E1	18BM
	RWI	37E5	18AC
	SE	12C0	19RM
	SLO	37B2	18AC
	SO	12C1	19RM
	TS	3505	19B

SELECTOR

DESIG	OPTION	CODE	BANK CODE	ARC 1 TERM.	ARC 1 LOC	ARC 2 TERM.	ARC 2 LOC	ARC 3 TERM.	ARC 3 LOC	ARC 4 TERM.	ARC 4 LOC	ARC 5 TERM.	ARC 5 LOC	ARC 6 TERM.	ARC 6 LOC	STEP MAG LOC	INTER. CONT LOC
TS		209A	26A	1-22	3543	23-44	32C7	1-22	32F7	23-42 43,44	3503	1-22	35F3	23-43 44	3503	35F5	32C5

DRAWING ISSUE

31D	TLC MKC AA-J	CB
38B		CB

ISSUE 50A

MASTER TIMING CIRCUIT (2) SD-25633-01-C13

BELL TELEPHONE LABORATORIES INCORPORATED SIZE 6S

SD-25633-01-C13

APP FIG. 21

RELAY																																			
DESIG	C01E			C01D			C02E			C02D			C03E			CC			C04E			C04D			C05E			C05D			C06E			C06D		
CODE	U826			U826			U826			U826			U826			U826			U826			U826			U826			U826			U826			U826		
OPTION																																			
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	L C	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	14B8	12,11	M	14C8	12,11	M	-	12,11	M	-	12,11	M	-	12,11	M	-	12,11	M	14E8	12,11	M	14F8	12,11	M	-	12,11	M	-	12,11	M	-	12,11	M	-
	10,9	B	14G1	10,9	B	14C4	10,9	B	14D1	10,9	B	14D4	10,9	B	-	10,9	B	-	10,9	B	15G1	10,9	B	15G3	10,9	B	15D1	10,9	B	15C3	10,9	B	-	10,9	B	-
	8,7	B	14G1	8,7	B	14C4	8,7	B	14D1	8,7	B	14C4	8,7	B	-	8,7	B	-	8,7	B	15G1	8,7	B	15G3	8,7	B	15D1	8,7	B	15D3	8,7	B	15C3	8,7	B	-
	6,5	B	14F1	6,5	B	14F4	6,5	B	14C1	6,5	B	14C4	6,5	B	14A1	6,5	B	14A4	6,5	B	15F1	6,5	B	15F3	6,5	B	15D1	6,5	B	15D3	6,5	B	15A1	6,5	B	15A3
	4,3	B	14F1	4,3	B	14F4	4,3	B	14C1	4,3	B	14C4	4,3	B	14A3	4,3	B	14A4	4,3	B	15F1	4,3	B	15F3	4,3	B	15C1	4,3	B	15C3	4,3	B	15A1	4,3	B	15A3
	2,1	B	14F1	2,1	B	14F4	2,1	B	14C1	2,1	B	14C4	2,1	B	14A1	2,1	B	14A4	2,1	B	15F1	2,1	B	15F3	2,1	B	15C1	2,1	B	15C3	2,1	B	15A1	2,1	B	15A3
BOT	2,1	B	14G1	2,1	B	14G4	2,1	B	14D1	2,1	B	14D4	2,1	B	14B1	2,1	B	14B4	2,1	B	15G1	2,1	B	15G3	2,1	B	15D1	2,1	B	15D3	2,1	B	15B1	2,1	B	15B3
	4,3	B	14G1	4,3	B	14G4	4,3	B	14E1	4,3	B	14E4	4,3	B	14B1	4,3	B	14B4	4,3	B	15H1	4,3	B	15H3	4,3	B	15E1	4,3	B	15E3	4,3	B	15B1	4,3	B	15B3
	6,5	B	14H1	6,5	B	14H4	6,5	B	14E1	6,5	B	14E4	6,5	B	14B1	6,5	B	14B4	6,5	B	15H1	6,5	B	15H3	6,5	B	15E1	6,5	B	15E3	6,5	B	15B1	6,5	B	15B3
	8,7	B	14H1	8,7	B	14H4	8,7	B	14E1	8,7	B	14E4	8,7	B	14B1	8,7	B	14B4	8,7	B	15H1	8,7	B	15H3	8,7	B	15E1	8,7	B	15E3	8,7	B	15B1	8,7	B	15B3
	10,9	B	14H1	10,9	B	14H4	10,9	B	14E1	10,9	B	14E4	10,9	B	14C1	10,9	B	14C4	10,9	B	15H1	10,9	B	15H3	10,9	B	15F1	10,9	B	15F3	10,9	B	15C1	10,9	B	15C3
	12,11	M	1306	12,11	M	1305	12,11	M	1306	12,11	M	1305	12,11	M	1306	12,11	M	1305	12,11	M	1304	12,11	M	1303	12,11	M	1302	12,11	M	1303	12,11	M	1302	12,11	M	1303
COIL			14A7			14A7			14B7			14C7			14B7			14C7			14D7			14E7			14F7			14F7			14G7		

RELAY																																			
DESIG	PLX0			XPE			XPE1			XP0			XP01																							
CODE	U119			U543			U587			U543			U587																							
OPTION																																			
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																																			
	7,6	M	15C6				6,5	M	-				6,5	M	-																					
	5,4	M	1506	4,3	M	15A7	4,3	M	15A7	4,3	M	15C7	4,3	M	15C7																					
	3,2,1	BM	25C1	2,1	M	15A7	2,1	M	15A6	2,1	M	15C7	2,1	M	15C6																					
BOT	2,1	M	24E4	2,1	M	-	2,1	M	-	2,1	M	-	2,1	M	-																					
	4,3	M	1506	4,3	M	-	4,3	M	-	4,3	M	-	4,3	M	-																					
	6,5	M	27D1				6,5	M	-				6,5	M	-																					
COIL			15C6			14D2			15D2			14D5			15D4																					

RESISTOR

DESIG	LOC	CODE
[3] A-H	14A1-C1	
[5] AA-AE	14C1,H1	
[21] AF-AZ	14A6-F4	
[7] BA-BG	14G4,H4	
[5] J-N	14C1,G1	19E0
P	14D1	
[9] R-Z	14E1-G1	
XPE	14E2	19CP
XP0	14E5	19CP

PART OF APP FIG. 22

RELAY																																			
DESIG	233			234			235			238			239			ΔP1			ΔP2			ΔP3			ΔP4			ΔP5			ΔP6			ΔP7		
CODE	U763			U763			U763			U794			U794			U536			U536			U536			U536			U536			U536			U536		
OPTION																																			
	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC
TOP										12,11	M	39A2	12,11	M	34H1																						
										10,9	M	39D5	10,9	M	39A2																						
	10,9	M	34B1	10,9	M	35D6	10,9	M	34C1	8,7	M	39C4	8,7	M	38F6																					
	8,7	M	36K4	8,7	M	3637	8,7	M	39A3	6,5	M	39F6	6,5	M	36D6	7,6	M	3382	7,6	M	33G2	7,6	M	33D2	7,6	M	33C2	7,6	M	34D3	7,6	M	33E2	7,6	M	33F2	7,6	M	33B5	7,6	M	33F5
	6,5,4	BM	32H3	6,5,4	BM	33B7	6,5,4	BM	3686	4,3	M	39F5	4,3	M	36G5	5,4	M	-	5,4	M	34G4	5,4	M	34C4	5,4	M	35C3	5,4	M	-	5,4	M	34G6	5,4	M	3305	5,4	M	-			
	3,2,1	BM	3641	3,2,1	BM	3982	3,2,1	BM	-	2,1	B	-	2,1	B	36H5	3,2,1	BM	33H4	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	34D4	3,2,1	BM	34H6	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	34C5
BOT	3,2,1	BM	-	3,2,1	BM	3505	3,2,1	BM	3604	2,1	B	36C3	2,1	B	36C3	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	-
	6,5,4	BM	36H2	6,5,4	BM	3604	6,5,4	BM	-	4,3	M	36C2	4,3	M	-	5,4	M	3382	5,4	M	33G1	5,4	M	3302	5,4	M	33C2	5,4	M	34D3	5,4	M	33E2	5,4	M	33F2	5,4	M	3385	5,4	M	33F5
	8,7	M	-	8,7	M	33A8	8,7	M	36H5	6,5	M	-	6,5	M	36D6																											
	10,9	M	34B0	10,9	M	3604	10,9	M	34C0	8,7	M	3684	8,7	M	3686																											
										10,9	M	38D4	10,9	M	39C2																						
										12,11	M	-	12,11	M	-																						
COIL			34B0			33A7			34C0			34G0			34G0			33B1			33G1			34A2			33C1			33D1			33E1			33F1			33A4			33F4

COMMON SYSTEMS

MASTER TIMING CIRCUIT (2)

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-C14

DRAWING ISSUE 310 TLC #4C AM-3

PART OF APP FIG. 22

RELAY

DESIG	AP10			AP11			AP12			AP13			AP14			AP15			AP16		
CODE	U586			U586			U586			U586			U586			U586			U586		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																					
	7,6	M	33E5	7,6	M	3385	7,6	M	33G5	7,6	M	33C5	7,6	M	34D8	7,6	M	34B7	7,6	M	3386
	5,4	M	34C6	5,4	M	-	5,4	M	34F8	5,4	M	34G8	5,4	M	3384	5,4	M	3401	5,4	M	39C5
	3,2,1	BM	-	3,2,1	BM	34G9	3,2,1	BM	-	3,2,1	BM	34C9	3,2,1	BM	-	3,2,1	BM	34E8	3,2,1	BM	36H4
	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	-	3,2,1	BM	23E6	3,2,1	BM	-	3,2,1	BM	34E7
BOT.	5,4	M	33E5	5,4	M	3385	5,4	M	33G4	5,4	M	33C5	5,4	M	34D8	5,4	M	-	5,4	M	33C7
COIL			33E4			3384			33G4			33C4			34C7			34A7			33C7

RELAY

DESIG	BLK			CKC			DTNP1			DTNP2			DTNP3			DTNP4			P1A'		
CODE	U1205			Y218			U144			U144			U144			U144			U341		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP							12,11	M	39C0	12,11	M	39C1	12,11	M	39C2	12,11	M	39C4			
							10,9	M	-	10,9	M	-	10,9	M	-	10,9	M	36G4	10,9	M	36G4
							8,7	M	-	8,7	M	-	8,7	M	-	8,7	M	-	8,7	B	-
	6,5	M	36G2	7,6	PM	36G5	6,5	M	3802	6,5	M	3803	6,5	M	3803	6,5	M	3803	6,5	M	3606
	4,3	M	-	5,4,3	BM	36B2	4,3	M	39E4	4,3	M	39F4	4,3	M	39G4	4,3	M	39G5	4,3	M	-
	2,1	B	36H2	2,1	M	3388	2,1	M	39F4	2,1	M	39F4	2,1	M	39G4	2,1	M	39H4	2,1	M	36H6
	2,1	B	36B1	2,1	M	3686	2,1	M	39C4	2,1	M	3905	2,1	M	3904	2,1	M	39E5	2,1	B	-
	4,3	M	-	5,4,3	BM	36G2	4,3	M	39C5	4,3	M	3904	4,3	M	3905	4,3	M	39E6	4,3	B	-
BOT.	6,5	M	24E4	7,6	PM	3308	6,5	M	-	6,5	M	-	6,5	M	-	6,5	M	-	7,6,5	BM	39C2
							8,7	M	-	8,7	M	-	8,7	M	-	8,7	M	-	9,8	M	3686
							10,9	M	-	10,9	M	-	10,9	M	-	10,9	M	-			
							12,11	M	-	12,11	M	-	12,11	M	-	12,11	M	-			
COIL			36F2			36G3			3400			3400			3400			3400			3605

RELAY

DESIG	PN1			PN2			PN3			PN4			PN5			PN6			PN7		
CODE	U144			U144			U144			U144			U144			U144			U144		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO	CONT ARR	LOC
TOP	12,11	M	18E5	12,11	M	18E5	12,11	M	18E5	12,11	M	18E5	12,11	M	18E5	12,11	M	18E5	12,11	M	18E5
	10,9	M	34B8	10,9	M	3408	10,9	M	34D8	10,9	M	34B8	10,9	M	34D8	10,9	M	34D8	10,9	M	34B8
	8,7	M	34G4	8,7	M	34H4	8,7	M	34E4	8,7	M	34E4	8,7	M	34E4	8,7	M	34F4	8,7	M	34F4
	6,5	M	34H4	6,5	M	34H4	6,5	M	34F4	6,5	M	34F4	6,5	M	34F4	6,5	M	34G4	6,5	M	34G4
	4,3	M	3484	4,3	M	3484	4,3	M	3484	4,3	M	34D4	4,3	M	34C4	4,3	M	34C4	4,3	M	3484
	2,1	M	34C4	2,1	M	34C4	2,1	M	34C4	2,1	M	34E4	2,1	M	34D4	2,1	M	34D4	2,1	M	34C4
	2,1	M	34G6	2,1	M	34H6	2,1	M	34F6	2,1	M	34F6	2,1	M	34E6	2,1	M	34F6	2,1	M	34F6
	4,3	M	34H6	4,3	M	34H6	4,3	M	34F6	4,3	M	34E6	4,3	M	34F6	4,3	M	34H6	4,3	M	34H6
	6,5	M	34B6	6,5	M	3486	6,5	M	3486	6,5	M	34E6	6,5	M	34C6	6,5	M	34C6	6,5	M	3486
BOT	8,7	M	34C6	8,7	M	34C6	8,7	M	34C6	8,7	M	34E6	8,7	M	34D6	8,7	M	34D6	8,7	M	34C6
	10,9	M	34F8	10,9	M	34G8	10,9	M	34E8	10,9	M	34E8	10,9	M	34E8	10,9	M	34F8	10,9	M	34F8
	12,11	M	34H8	12,11	M	34H8	12,11	M	34F8	12,11	M	34F8	12,11	M	34E8	12,11	M	34G8	12,11	M	34G8
COIL			33A0			33A0			3304			33C0			33F0			33A0			3300

RELAY

DESIG	PN8			PN9			PN10			PN11			PN12			PN13			PN14		
CODE	U144			U144			U144			U144			U144			U144			U144		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	19E5	12,11	M	19E5	12,11	M	18E5	12,11	M	19E5	12,11	M	19E5	12,11	M	19E5	12,11	M	19E5
	10,9	M	3408	10,9	M	3405	10,9	M	3408	10,9	M	34C8	10,9	M	3408	10,9	M	3408	10,9	M	3408
	8,7	M	34E4	8,7	M	34E4	8,7	M	34E4	8,7	M	34E4	8,7	M	34E4	8,7	M	34E4	8,7	M	34F4
	6,5	M	34H4	6,5	M	34G4	6,5	M	34F4	6,5	M	34H4	6,5	M	34H4	6,5	M	34G4	6,5	M	34H4
	4,3	M	3484	4,3	M	3484	4,3	M	3484	4,3	M	3484	4,3	M	3484	4,3	M	34C4	4,3	M	3484
	2,1	M	34D4	2,1	M	34C4	2,1	M	34E4	2,1	M	34D4	2,1	M	34E4	2,1	M	34E4	2,1	M	34D4
	2,1	M	34E6	2,1	M	34F6	2,1	M	34E6	2,1	M	34E6	2,1	M	34F6	2,1	M	34F6	2,1	M	34F6
	4,3	M	34H6	4,3	M	34H6	4,3	M	34F6	4,3	M	34H6	4,3	M	34H6	4,3	M	34H6	4,3	M	34H6
	6,5	M	3486	6,5	M	3486	6,5	M	3486	6,5	M	3486	6,5	M	3486	6,5	M	34C6	6,5	M	3486
BOT.	8,7	M	34D6	8,7	M	34C6	8,7	M	34E6	8,7	M	34E6	8,7	M	34E6	8,7	M	34E6	8,7	M	34D6
	10,9	M	34E8	10,9	M	34E8	10,9	M	34E8	10,9	M	34E8	10,9	M	34E8	10,9	M	34E8	10,9	M	34F8
	12,11	M	34H8	12,11	M	34G8	12,11	M	34F8	12,11	M	34G8	12,11	M	34H8	12,11	M	34G8	12,11	M	34H8
COIL			33A0			33E7			34A0			33A7			3400			33A0			33F7

RELAY

DESIG	PN15																				
CODE	U144																				
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	18E5																		
	10,9	M	34D8																		
	8,7	M	34E4																		
	6,5	M	34H4																		
	4,3	M	34B4																		
	2,1	M	34E4																		
	2,1	M	34G6																		
	4,3	M	34H6																		
BOT.	6,5	M	34D6																		
	8,7	M	34E6																		
	10,9	M	34F8																		
	12,11	M	34H8																		
COIL			33A0																		

RELAY

DESIG																					
CODE																					
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																					
BOT																					
COIL																					

RESISTOR

DESIG	LOC	CODE
OT	39C1	19RN
OT1	39C0	18CR
OT2	39C3	18DR
PCK	36G4	18BT

DRAWING ISSUE 31D

ISSUE 54AC

MASTER TIMING CIRCUIT

SD-25633-01-C15

BELL TELEPHONE LABORATORIES INCORPORATED

SIZE 6S

SD-25633-01-C15

APP FIG. 23

RELAY

DESIG	OME			OMO			TDE2			TDO2					
CODE	U220			U220			U144			U144					
OPTION															
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP							12,11	M	29D4	12,11	M	29D4			
							10,9	M	28C4	10,9	M	29C4			
							8,7	M	28A4	8,7	M	28A4			
	6,5	M	28F5	6,5	M	29F5	6,5	M	28A4	6,5	M	29A4			
	4,3	M	28C5	4,3	M	28C5	4,3	M	28A4	4,3	M	28A4			
	2,1	B	28E5	2,1	B	28E5	2,1	M	-	2,1	M	-			
BOT.	3,2,1	BM	28C5	3,2,1	BM	28C5	2,1	M	28F4	2,1	M	29F4			
	5,4	M	28H5	5,4	M	28H4	4,3	M	28F4	4,3	M	28F4			
							6,5	M	28F4	6,5	M	28F4			
							8,7	M	28D4	8,7	M	28D4			
							10,9	M	29D4	10,9	M	28D4			
							12,11	M	-	12,11	M	-			
COIL			28G4			28H4			16G0			16G0			

RELAY

DESIG	3E		TRI			
CODE	AJ83		AJ15			
OPTION	WZ		WZ			
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC
12	EBM		EBM			
11	EBM		EBM	2A/B5		
10	EBM		EBM	2A/B5		
9	EBM		EBM			
8	EMB		EMB			
7	EBM		EBM	3G6		
6	EMB		EMB	3B2		
5	EMB	11E0	EMB	3G1		
4	EBM		EBM	3G1		
3	EBM		EBM	2B/D1		
2	EBM	11H0	EBM	2B/93		
1	EBM	11G2	EBM	2A/F4		
COIL		11E0		2A/B1		

RELAY

DESIG	HRTI
CODE	AJ202
OPTION	WZ
	CONT ARR / LOC
24	M 48/A7
23	M 48/A7
22	M 48/A7
21	M 48/A7
20	M 48/A7
19	M 48/A7
18	M 48/A7
17	M 48/A7
16	M 48/A7
15	M 48/A7
14	M 48/A7
13	M 48/A7
12	M 48/A7
11	M 48/A7
10	M 48/A7
9	M 48/A7
8	M 48/A7
7	M 48/A7
6	M 48/A7
5	M 48/A7
4	M 48/A7
3	M 48/A7
2	M 48/A7
1	M 28/E8
COIL	28/E7

APP FIG. 24

RELAY

DESIG	FA			FA1			FA2								
CODE	UA15			U1319			U624								
OPTION							ZN								
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP															
				9,8	M	31D5									
				7,6	M	27A4									
	4,3	M	31C5	5,4	M	27A4									
	2,1	B	2783	3,2,1	BM	2782	2,1	M	-						
BOT.	2,1	M	2782	2,1	B	-	2,1	M	3186						
				5,4,3	BM	27C2									
				7,6	M	-									
COIL			3187			31C5			31A6						

RESISTOR

DESIG	LOC	CODE
(ZN) FA	31A7	KS-13492,L1,10,000
(ZN) FAE	3186	18DF
(ZN) FAQ	3186	18DF

APP FIG. 25

WIRING ONLY

APP FIG. 26

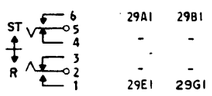
RELAY

DESIG	CSY			CTS			DRP			ORP			TSC			TTS					
CODE	Y107			Y266			U540			U779			U336			U1171					
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP													8,7	M	29A0	11,10	M	10E5			
				7,6	M	10F7				8,7	M	-	6,5	M	29G2	9,8,7	BM	10E8			
	4,3	M	a	5,4,3	BM	10E6	6,5,4	BM		6,5,4	BM	-	4,3	M	-	6,5,4	BM	10D8			
	2,1	B	3184	2,1	B	-	2,1,3	MB	10E8	2,1,3	MB	10E6	2,1	M	29E2	2,1,3	MB	10F6			
BOT.	3,2,1	BM	10E6	2,1,3	MB	10D8	3,2,1	BM	-	3,2,1	BM	10F6	2,1	M	29B1	3,2,1	BM	10F5			
				6,5,4	BM	10E8	5,4	M	10F6	6,5,4	BM	10F7	4,3	M	29A1	6,5,4	BM	10F7			
										8,7	M	10E8	6,5	M	-	9,8,7	BM	31F2			
													8,7	M	-						
COIL			10H5			1007			10E7			10E6			29A0			10D4			

(WZ) 10H6
a
(WY) 10H6

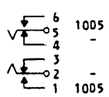
KEY
552E

MSE MSO



29A1 29B1
- -
- -
29E1 29G1

KEY
TT
552A



1005 -
- -
- 1005

KEYTOP
MSE,O

KEYTOP
TT

NETWORK

DESIG	LOC	CODE
CSY	10H5	177C

RESISTOR

DESIG	LOC	CODE
TT	10F5	18AC

APP FIG. 27

RELAY

DESIG	CCRT-						TW			TZ						CCT					
CODE	U177						U564			U141						U144					
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																12,11	M	40E7			
																10,9	M	40F8			
																8,7	M	40F8			
	9,8,7	BM	40E3													6,5	M	40F8			
	6,5,4	BM	40E3				5,4	B	-							4,3	M	40F8			
	3,2,1	BM	40E3				2,1,3	MB	40D2	3,2,1	MB	40D1				2,1	M	40F8			
BOT.	3,2,1	BM	40E3				3,2,1	BM	40E7	3,2,1	MB	-				2,1	M	40F8			
	6,5,4	BM	40E3													4,3	M	40F8			
	9,8,7	BM	40E3													6,5	M	40F8			
																8,7	M	40F8			
																10,9	M	40F8			
																12,11	M	-			
COIL			40E6						40D1			40D1						40E1			

RESISTOR

DESIG	LOC	CODE
TWTZ	40D0	19EY

APP FIG. 28

APP FIG. 29

DRAWING ISSUE

3ID	PNF #'s, Acct
34P	CKT #'s, Acct

ISSUE
55B

MASTER TIMING CIRCUIT (2)

BELL TELEPHONE LABORATORIES INCORPORATED

6S

SD-25633-01-C16A

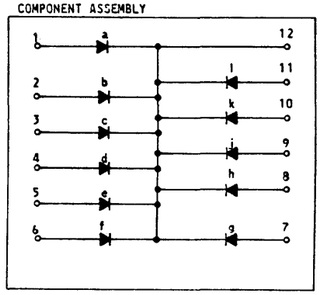
SD-25633-01-C16A

APP FIG 30

RELAY

DESIG	AL			W			Z											
CODE	U188			U1324			U1324											
OPTION																		
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	-															
	10,9,9	BM	-	11,10	M	31F1	11,10	M	31G2									
	7,6	M	-	9,8,7	BM	-	9,8,7	BM	-									
	5,4	M	31G6	6,5,4	BM	31G2	6,5,4	BM	-									
	2,1,3	MB	31G1	2,1,3	MB	31G1	2,1,3	MB	31E0									
BOT	2,1,3	MB	-	2,1,3	MB	-	2,1,3	MB	31E2									
	5,4	M	31F6	6,5,4	BM	-	6,5,4	BM	-									
	7,6	M	-	9,8,7	BM	-	9,8,7	BM	-									
	10,9,8	BM	-	11,10	M	-	11,10	M	-									
	12,11	M	-															
COIL			31G2			31E1			31E1									

COMPONENT ASSEMBLY



DESIG			PTU1		PTU2		PTU3	
CODE			[3]ED-94823-G435					
OPTION					WF		WS	
COMPONENT		CODE	DESIG	LOC	DESIG	LOC	DESIG	LOC
DIODE	a	446K	PTU0	31H2	PTU10	31H2	PTU20	31H2
	b		PTU1	31H2	PTU11	31H2	PTU21	31H2
	c		PTU2	31H2	PTU12	31H2	PTU22	31H2
	d		PTU3	31H2	PTU13	31H2	PTU23	31H2
	e		PTU4	31H2	PTU14	31H2	PTU24	31H2
	f		PTU5	31H2	PTU15	31H2	PTU25	31H2
	g		PTU6	31H2	PTU16	31H2	PTU26	31H2
	h		PTU7	31H2	PTU17	31H2	PTU27	31H2
	j		PTU8	31H2	PTU18	31H2	PTU28	31H2
	k		PTU9	31H2	PTU19	31H2	PTU29	31H2
	L		PTUEM	31H2	SPARE	-	SPARE	-

LAMPS

OPT	DESIG	LOC	CODE
WF	[10]PTU0-9	31H1	2Y (RED)
	[10]PTU10-19	31H1	
	PTUEM	31H1	
WS	[10]PTU20-29	31H1	

APP FIG 31

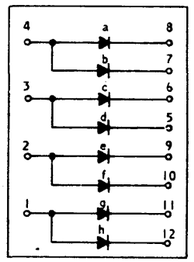
RELAY

DESIG	HRTA			HRTB			HRTC											
CODE	U495			U495			U495											
OPTION				WR			WT											
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	12,11	M	4A/G5	12,11	M	4A/H5	12,11	M	4A/H5									
	10,9	M	4A/G5	10,9	M	4A/H5	10,9	M	4A/H5									
	8,7	M	4A/G5	8,7	M	4A/H5	8,7	M	4A/H5									
	6,5	M	4A/G5	6,5	M	4A/H5	6,5	M	4A/H5									
	4,3	M	4A/G5	4,3	M	4A/H5	4,3	M	4A/H5									
	2,1	M	4A/G5	2,1	M	4A/H5	2,1	M	4A/H5									
BOT	2,1	M	4A/G5	2,1	M	4A/H5	2,1	M	4A/H5									
	4,3	M	4A/G5	4,3	M	4A/H5	4,3	M	4A/H5									
	6,5	M	4A/G5	6,5	M	4A/H5	6,5	M	4A/H5									
	8,7	M	4A/G5	8,7	M		8,7	M	4A/H5									
	10,9	M	4A/G5	10,9	M		10,9	M										
	12,11	M	4A/G5	12,11	M		12,11	M										
COIL			4A/B6			4A/B6			4A/B6									

LAMPS

OPT	DESIG	LOC	CODE
	HRTA	4A/G4	13J (RES)
WR	HRTB	4A/H4	13J (RES)
WT	HRTC	4A/H4	13J (RES)

APP FIG. 32



DESIG			RIO		RI1		RI2	
CODE			[3] ED-94933-10G					
OPTION								
COMPONENT		CODE	DESIG	LOC	DESIG	LOC	DESIG	LOC
DIODE	a	446K	C0	188	C4	188	C8	188
	b		C20	188	C24	188	C28	188
	c		C1	187	C5	187	C9	187
	d		C21	187	C25	187	C29	187
	e		C2	188	C6	188		
	f		C22	188	C26	188		
	g		C3	187	EMER	1A8		
	h		C23	187	C27	1A8		

DRAWING ISSUE

348	CMC (CB, AF)
350	NJF (CB)
388	

ISSUE 53B

MASTER TIMING CIRCUIT (2) SD-25633-01-C16B

BELL TELEPHONE LABORATORIES INCORPORATED — SIZE D — 65

SD-25633-01-C16B

E-7422-8-1(8-64)

APP FIG. A (MFR DISC.)

RELAY

DESIG	DR1			DR2			DR3			DR4			DR5			DR6			EXR		
CODE	U1367			U1367			U1367			U1367			U1367			U1367			U639		
OPTION	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																			12,11	M	2986
																			10,9,8	BM	–
																			7,6	M	2986
	4,3	M	29B7	4,3	M	21A7	4,3	M	21A7	4,3	M	29A7	4,3	M	29A7	4,3	M	29A8	5,4	M	2946
	2,1	M	29B7	2,1	M	21A7	2,1	M	21A7	2,1	M	29A7	2,1	M	29A7	2,1	M	29A8	2,1,3	MB	5D6
BOT.	2,1	M	29B7	2,1	M	29B7	2,1	M	29B7	2,1	M	29B7	2,1	M	29B3	2,1	M	21A3	2,1	B	5C5
	4,3	M	7E5	4,3	M	7E5	4,3	M	7E5	4,3	M	7E5	4,3	M	7E5	4,3	M	7E5	4,3	M	29E6
																			6,5	M	2906
																			9,8,7	BM	586
																			11,10	M	2906
COIL			5A0			580			5C0			5D0			5E0			5F0			3000

RELAY

DESIG	MA			MA1			MC			RCO			RDT			RD2			RD3		
CODE	U300			U69			U1113			U1367			U1367			U1367			U1367		
OPTION	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																					
	9,3	M	3F7				10,9	M	387												
	7,6	M	5C5	9,8,7	BM	–	8,7	M	5C5												
	5,4	M	5H7	6,5,4	BM	5C1	6,5,4	BM	5C1	4,3	M	19H9	4,3	M	29E8	4,3	M	29E8	4,3	M	1907
	3,2,1	BM	387	3,2,1	BM	5E1	3,2,1	BM	5C1	2,1	M	19H9	2,1	M	29E8	2,1	M	19C9	2,1	M	1907
BOT.	2,1	B	–	3,2,1	BM	5G1	3,2,1	BM	5F1	2,1	M	29D8	2,1	M	29E7	2,1	M	29E7	2,1	M	29E7
	5,4,3	BM	5H1	6,5,4	BM	5F1	6,5,4	BM	5E1	4,3	M	7E5	4,3	M	7E5	4,3	M	7E5	4,3	M	7E5
	7,6	M	5H1				8,7	M	5F3												
							10,9	M	3C7												
COIL			a			5G6			3F8			5A3			523			583			5C8

a P-383
S-500

RELAY

DESIG	RD4			RD5			RH														
CODE	U1367			U1367			U153														
OPTION	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																					
	4,3	M	2907	4,3	M	2907															
	2,1	M	2907	2,1	M	2907	3,2,1	BM	–												
BOT.	2,1	M	29E7	2,1	M	29E7	2,1	M	5H5												
	4,3	M	7E5	4,3	M	7E5	4,3	M	–												
COIL			5C3			5D3			5F3												

RELAY

DESIG																					
CODE																					
OPTION	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																					
BOT.																					
COIL																					

NETWORK

DESIG	LOC	CODE
RH	5H4	177A

SELECTOR

DESIG	OPTION	CODE	BANK CODE	ARC 1 TERM.	ARC 1 LOC	ARC 2 TERM.	ARC 2 LOC	ARC 3 TERM.	ARC 3 LOC	ARC 4 TERM.	ARC 4 LOC	ARC 5 TERM.	ARC 5 LOC	ARC 6 TERM.	ARC 6 LOC	STEP MAG LOC	INTER CUKT LOC
PC	*	2C9A	26A	1-22	703	23-44	5A4	1-22	504	23-31 32-44	703 -	1-22	5A7	23-44	507	5G4	5G3

DRAWING ISSUE

310	TLC #LL Add

31

COMMON SYSTEMS MASTER TIMING CIRCUIT (2)		SD-25633-01-C17
BELL TELEPHONE LABORATORIES INCORPORATED	SIZE 6S	

APP FIG. B (MFR DISC.)

RELAY

DESIG	DR1			DR2			DR3			DR4			EXR			MA			MA1		
CODE	U1367			U1367			U1367			U1367			U639			U300			U68		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP													12,11	M	29F6						
													10,9,8	BM	-	9,8	M	3F7			
													7,6	M	29C6	7,6	M	6F5	9,8,7	BM	-
	4,3	M	29C7	4,3	M	21B7	4,3	M	21B7	4,3	M	21A9	5,4	M	29C6	5,4	M	6A6	6,5,4	BM	6D0
	2,1	M	29C7	2,1	M	21B7	2,1	M	21B7	2,1	M	21A9	2,1,3	MB	6E6	3,2,1	BM	3B7	3,2,1	BM	6D0
BOT.	2,1	M	29C7	2,1	M	29C7	2,1	M	29C7	2,1	M	29C7	2,1	B	6F6	2,1	B	-	3,2,1	BM	6C0
	4,3	M	7G5	4,3	M	7G5	4,3	M	7G5	4,3	M	7G5	4,3	M	29F6	5,4,3	BM	6E1	6,5,4	BM	6B1
													6,5	M	29G6	7,6	M	6E0			
													9,8,7	BM	6D7						
													11,10	M	29G6						
COIL			6A0			6B0			6C0			6D0			30C0			a			6A5

a P-3B8, S-6E0

RELAY

DESIG	RD6			RD7			RD8			RD9			RH								
CODE	U1367			U1367			U1367			U1367			U158								
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																					
	4,3	M	29G8	4,3	M	19H9	4,3	M	19H9	4,3	M	19H9									
	2,1	M	29G8	2,1	M	19H9	2,1	M	19H9	2,1	M	19H9	3,2,1	BM	-						
BOT.	2,1	M	29G8	2,1	M	29F7	2,1	M	29F8	2,1	M	29G8	2,1	M	6F4						
	4,3	M	7F5	4,3	M	7F5	4,3	M	7F5	4,3	M	7F5	4,3	M	-						
COIL			6C9			6D9			6E9			6F9			6E3						

RELAY

DESIG	MD			RD0			RD1			RD2			RD3			RD4			RD5		
CODE	U1113			U1367			U1367			U1367			U1367			U1367			U1367		
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP	10,9	M	3B7																		
	8,7	M	6F5																		
	6,5,4	BM	6D0	4,3	M	19H9	4,3	M	29F7	4,3	M	29G7	4,3	M	29G7	4,3	M	29G7	4,3	M	29G8
	3,2,1	BM	6C0	2,1	M	19H9	2,1	M	29F7	2,1	M	29G7	2,1	M	29G7	2,1	M	29G7	2,1	M	29G8
BOT.	3,2,1	BM	6B0	2,1	M	29G7	2,1	M	29F8	2,1	M	29F7	2,1	M	29F7	2,1	M	29F7	2,1	M	29F8
	6,5,4	BM	5A0	4,3	M	7F5	4,3	M	7F5	4,3	M	7F5	4,3	M	7F5	4,3	M	7F5	4,3	M	7F5
	8,7	M	6E3																		
	10,9	M	3C7																		
COIL			3F8			6A9			6A9			6A9			6B9			6B9			6C9		6C9

RELAY

DESIG																					
CODE																					
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																					
BOT.																					
COIL																					

NETWORK

DESIG	LOC	CODE
RH	6F3	1774

SELECTOR

DESIG	OPTION	CODE	BANK CODE	ARC												STEP MAG LOC	INTER. CONT LOC
				1		2		3		4		5		6			
				TERM.	LOC	TERM.	LOC	TERM.	LOC	TERM.	LOC	TERM.	LOC	TERM.	LOC		
RD		209A	26A	1-22	7D8	23-44	6A4	1-22	6C4	23-31 32-44	7D8 -	1-22	6A7	23-44	6D7	6F3	6E3

APP FIG. C (MFR DISC.)

RELAY

DESIG	TT																				
CODE	U488																				
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																					
	6,5	M	10E6																		
	4,3	M-M	10E5																		
	2,1		1B3																		
BOT.	2,1	M	1B1																		
	5,4,3	BM	8B/E7																		
COIL			10E5																		

APP FIG. D

RELAY

DESIG	TT																				
CODE	U178																				
OPTION																					
	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC	CONT NO.	CONT ARR	LOC
TOP																					
	9,8,7	BM	b																		
	6,5,4	BM	8B/F6																		
	3,2,1	BM	40E1																		
	4,3	M-M	1CE5																		
BOT.	2,1		1C3																		
	7,6,5	BM	a																		
COIL			10E5																		

a 1C1, 40A7

b 10E6, 40D7

STABILO

DRAWING ISSUE 31D

ISSUE 43B

MASTER TIMING CIRCUIT (2)

SD-25633-01-C18

BELL TELEPHONE LABORATORIES

CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
AE	1-1/3	-48V SIG	APP FIG. 1
AO	1-1/3	-48V SIG	APP FIG. 1 & 23
BE	1-1/3	-48V SIG	APP FIG. 2
BO	1-1/3	-48V SIG	APP FIG. 2 & 23
CE OR CO	1-1/3	-48V SIG	APP FIG. 3 & 4
D	1-1/3	-48V SIG	APP FIG. 4 ODD OR EVEN
E	1-1/3	-48V SIG	APP FIG. 4 ODD OR EVEN
F	1-1/3	-48V SIG	APP FIG. 4 ODD OR EVEN
G	1-1/3	-48V SIG	APP FIG. 4 ODD OR EVEN
U	1-1/3	-48V SIG	APP FIG. 4 ODD OR EVEN
J	1-1/3	-48V SIG	APP FIG. 8 ODD OR EVEN
K	1-1/3	-48V SIG	APP FIG. 8 ODD OR EVEN
LE	1-1/3	-48V SIG	APP FIG. 5,10,11,& 12
LO	1-1/3	-48V SIG	APP FIG. 9
ME	1-1/3	-48V SIG	APP FIG. 7
MO	1-1/3	-48V SIG	APP FIG. 6,13,14,15,& 16
MTE OR MTO	1-1/3	-48V SIG	APP FIG. 24 LOCATED ON BUS BAR ON OTHER THAN MASTER TIMING FRAME
NE OR NO	1-1/3	-48V SIG	APP FIG. 21
PO	1-1/3	-48V SIG	APP FIG. 20 & 22
Q	1-1/3	-48V SIG	APP FIG. A OR B ODD OR EVEN
S	1-1/3	-48V SIG	APP FIG. 17 ODD OR EVEN
TE	1-1/3	-48V SIG	APP FIG. 3,18,& 19
TO	1-1/3	-48V SIG	APP FIG. 2,26,27,& 28 OR APP FIG. 2,26,& 29
MTE	1-1/3	-22V 60~	APP FIG. 1
MTO	1-1/3	-22V 60~	APP FIG. 2
MTE	1/2 HV CSBR *.180 SXS	+130V SIG	APP FIG. 8 (EVEN) AND APP FIG. 17 (ODD)
MTO	1/2 HV CSBR *.180 SXS	+130V SIG	APP FIG. 8 (ODD), APP FIG. 17 (EVEN) & APP FIG. 18
H	1-1/3	-48V SIG	APP FIG. 1 & 2 EVEN & ODD
PE	1-1/3	-48V SIG	APP FIG. 3 & 23 COMMON
PTU	1-1/3	-48V SIG	APP FIG. 30
T	1-1/3	-48V SIG	APP FIG. 31
U	1-1/3	-48V SIG	APP FIG. 31
A	SEE NOTE 205	GRD	APP FIG. 1,2,3,5,7,9,10,11, 12,13,14,15,16,19,23,& 24
B		GRD	APP FIG. 1,2,3,6,7,9,24, 26,28,& C OR D
C		GRD	APP FIG. 4,A OR B ODD & EVEN
D		GRD	APP FIG. 4 ODD OR EVEN
E		GRD	APP FIG. 1 & 18 APP FIG. 4,8,& 17 ODD & EVEN
F		GRD	APP FIG. 8 ODD & EVEN
G		GRD	APP FIG. 8 ODD & EVEN
H		GRD	APP FIG. 8 ODD & EVEN
J,K,L, M,N,P, R,S,T, U,V		GRD	APP FIG. 5 & 6
W		GRD	APP FIG. 21
X		GRD	APP FIG. 17,20,& 22
Y,Z, AA,AB, AC,AD		GRD	APP FIG. 29
AE,AF	SEE NOTE 205	GRD	
AG,AL		GRD	APP FIG. 1,2,& 4 EVEN & ODD
AH		GRD	APP FIG. 3 & 23 COMMON
AJ,AK		GRD	APP FIG. 23
GRD		GRD(-22V 60~)	APP FIG. 1 & 26 OR 2 & 26
PTU		GRD	APP FIG. 30

* PROVIDE 5.1 OHMS RESISTANCE IN SERIES WITH EACH 130V FUSE

BATTERY SYMBOL	VOLTAGE RANGE
-48	45-50V
+130	125V-135V

102. (FORMERLY NOTE 103)

FEATURE OR OPTION			PROVIDE APP FIG.	APP OR WRG	QUANTITY PER MASTER TIMING FR
CHECK LAMPS			3		1
PULSE FAILURE ALARM			18		1
RECORDER TEST			20		1
PERFORATOR LEADS TEST			21		1
TEST PATTERN RELAYS			22		1
NO. 5 CSBR CAMA & LAMA IN SAME OFFICE OR NO. 5 CSBR CAMA OR SXS INTERTOLL CALL COUNT PROC CONT REG TRANSFER			29		1
TIMER TRANSFER CONTROL			26.0		1
TIME CONTROL FOR NO. 5 CSBR MASTER TEST FR & SXS & TDM CSBR TROUBLE RCDR FR OR NO. 4A OR 4M TOLL DECODER MKR TEST & TROUBLE RCDR FR OR SXS INTERTOLL TROUBLE TICKETER			23		1
NO. 5 CSBR WITH	1 MKR GP 1 MASTER TMG FR			ZO,ZP	
NO. 1 OR TDM CSBR WITH	1 MKR GP, 1 MA TMG FR 1 TV TBL IND OR 1 TBL RCDR			ZO,ZP	
	2 MKR GROUPS 2 MA TMG FRAMES 1 TV TBL IND OR 1 TBL RCDR	MG0 MG100		ZO,ZQ ZR,ZP	
SXS NO. 1 WITH	1 IDENTIFIER GP 1 MA TMG FR			ZO,ZP	
SXS INTERTOLL				ZO,ZP	
NO. 4A OR NO. 4M TOLL WITH	1 TV GP 1 MA TMG FR			ZO,ZP	
	2 TV GROUPS 2 MA TMG FRAMES	TV GR A TV GR B		ZO,ZQ ZR,ZP	
NO. 4A OR NO. 4M TOLL OR TANDEM CSBR CALL COUNT PROCESS CONTROL REGISTER TRANSFER			27		1 PER 6 OR LESS RECORDERS
			28		1
POSITION CKT (TRAFFIC SERVICE POSITION NO. 100A)	WITH 1 SEC TMG			XZ,VO	1 PER CKT
	WITHOUT 1 SEC TMG			XZ,VN	1 PER CKT
PAPER TAKE-UP ALARM IN AMA PERFORATOR CABINET	PERFORATORS 10-19		30	WF	1 PER CKT
	PERFORATORS 20-39			WS	
TO CONFINE MUTILATED HOUR ENTRIES TO THOSE RECORDERS THAT ARE OUT OF SYNCHRONISM	NO		31	VI	1 PER CKT
	HOUR TIME REQ FOR TROUBLE RECORDS: YES	RECORDERS 11-19		WR	1 PER CKT
		RECORDERS 20-29		WT	
	NO			VI,WJ	
1 SEC TMG ACCURACY (SEE NOTE 134,135,136)	NO. 1 CSBR NO. 5 CSBR SXS IT. NO:			WY	1 PER CKT
	NO. 1 CSBR NO. 5 CSBR SXS IT. YES			WZ,VC, UA,UC	
	CSBR TDM NO			WY	
	YES	WITHOUT TSP		WZ,VC, UA,UC	
		WITH TSP		WZ,VD UA,UC	
	NO. 4 TOLL NO			WY,VE	
	NO. 4 TOLL YES			WZ,VC VF,UA, UC	
	SXS NO.1 NO			WY,VC	
	SXS NO.1 YES			WZ,VC, VH,UA, UC	
CHECK FAILURE ALARM TO PERIODICALLY REINSTATE ALARM AFTER ACO KEY IS OPERATED IF TROUBLE REMAINS	YES		19	VM	1
	NO			VL	
BILLING DATA TRANSMITTER CKT PROVIDED	YES			VT,UE	
	NO			VU	

102. (CONT)

FEATURE OR OPTION			PROVIDE APP FIG.	APP OR WRG	QUANTITY PER MASTER TIMING FR
NO. 5 CSBR REMOTE MESSAGE REGISTRATION	WHEN 48 MESSAGE REGISTER PULSE JUNCTOR CIRCUITS OR LESS ARE PROVIDED			VP	
	WHEN AN ADDITIONAL 48 MESSAGE REGISTER PULSE JUNCTOR CIRCUITS ARE PROVIDED			VQ	
TO ISOLATE "C-" LEADS BETWEEN RECORDERS WHEN MORE THAN 20 RECORDERS ARE PROVIDED	YES		32		1 PER 4 RECORDERS
	NO			UD	
MASTER TIMER PROVIDES FOR 3AM ENTRY AND TIME FOR AMA RECORDERS (SEE NOTES 132, 138 & 139)	YES			VS,UF,UP	
		WITH 1 SEC TIMING ACCURACY		VX,UJ	
		WITH APP FIG 31		VY	
	NO			VR,UQ	
		WITH 1 SEC TIMING ACCURACY		UG	
		WITH 6 SEC TIMING ACCURACY		UH	

ISSUE 59B

MASTER TIMING CIRCUIT

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BELL TELEPHONE LABORATORIES INCORPORATED

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CIRCUIT NOTES: (CONT)

102. (CONT)

FEATURE OR OPTION (EVEN TIMING CKT)				PROVIDE APP FIG.	PROVIDE APP OR WRG	PROVIDE QUANTITY PER MASTER TIMING FR
TIME PULSE RCDR CONTROLLER				1		1
MONTH, DAY & HOUR CONTROL				4		1
HOUR TIME LEADS				5		10
RCDR RECORD CONTROLLER				8		1
GROUPING CKT				9		1
START FOR FIRST EVEN RCDR				10		1
START FOR INTER. EVEN RCDR				11		1 PER RCDR
START FOR LAST EVEN RCDR				12		1
WHEN LAST EQUIPPED EVEN RCDR IS WIRED PER APP FIG. 10 PROVIDE "S" OPTION, IF PER APP FIG. 11 PROVIDE "R" OPTION, IF PER APP FIG. 12 PROVIDE "T" OPTION						
TIME OUT & TROUBLE RELEASE				17		1
NO. 5 CSBR FUSE ALARM				24	ZN	1
NO. 1 TDM CSBR, NO. 4A OR NO. 4M TOLL OR SXS NO. 1 OR SXS INTERTOLL FUSE ALARM CONN				25		1
TANDEM CSBR WITH TROUBLE RCDR					XM	
FLEXIBLE NUMBER ROUNDS PER MONTH					ZK,XE, XG	
TO ADVANCE (M) SEL AT END OF 28 DAY MONTH. TO BE REMOVED ONLY DURING LEAP YEAR					Z	
NO. 1 OR TDM CSBR WITH TV TBL IND					W	
NO. 5 CSBR OR SXS NO. 1 OR SXS INTERTOLL					V,ZF	
NO. 1 OR TDM CSBR WITH	1 MKR GP, 1 MA TMG FR 1 TV TBL IND, OR 1 TBL RCDR				ZF	
	2 MKR GROUPS, 2 MA TMG FRAMES. 1 TV TBL IND OR 1 TBL RCDR				ZG	
NO. 4A OR NO. 4M TOLL					XO	
NO. 4A OR NO. 4M TOLL WITH	1 TV GP 1 MA TMG FR				ZF	
	2 TV GROUPS 2 MA TMG FRAMES				ZG	
LOCAL CSBR & SXS NO. 1 AMA					ZY	
NO. 5 CSBR LAMA	AND CAMA REQ MORE THAN 1 RCDR GP NO.				ZZ	
TDM CSBR AMA						
NO. 4A OR 4M TOLL						
SXS INTERTOLL						
CALL COUNT PROCESS CONTROL REGISTER TRANSFER					XH	
SXS NO. 1 AMA					XJ	
CENTRALIZED COIN ZONE AND COIN TOLL DIALING FOR CSBR TDM	WITH 1 SEC TMG				WC,WE, WI,VK	
	WITHOUT 1 SEC TMG				WC,WE, WI,VJ	
NO. 5 CSBR CAMA					ZZ	
RCDR GP HUNDREDS	NOT REQUIRED				WK	
	RCDR GROUPS IN OFFICE IN SAME HUNDREDS	YES			WL	
		NO			WM	

102. (CONT)

FEATURE OR OPTION (EVEN TIMING CKT)				PROVIDE APP FIG.	PROVIDE APP OR WRG	PROVIDE QUANTITY PER MASTER TIMING FR
1 SEC TMG ACCURACY (SEE NOTE 133,134,135, 136)	NO.1 CSBR	NO			WY	
		YES			WZ,VC, UA,UC	
	NO.5 CSBR SXS IT	NO			WY,VV	
		YES			WZ,VC, VW,UA, UC	
	CSBR TDM	NO			WY,VV	
		YES	WITHOUT TSP		WZ,VC, VW,UA, UC	
			WITH TSP		WZ,VD, VW,UA, UC	
	NO.4 TOLL	NO			WY,VE, VV	
		YES			WZ,VC, VW,UA, UC,VF	
	SXS NO.1	NO			WY,VG, VV	
		YES			WZ,VC, VH,VW, UA,UC	

102. (CONT)

FEATURE OR OPTION (ODD TIMING CKT)			PROVIDE APP FIG.	PROVIDE APP OR WRG	PROVIDE QUANTITY PER MASTER TIMING FR
TIME PULSE RCDR CONTROLLER			2		1
MONTH, DAY & HOUR CONTROL			4		1
HOUR TIME LEADS			6		10
GROUPING CKT			7		1
RCDR RECORD CONTROLLER			8		1
START FOR EMERGENCY RCDR			13		1
START FOR FIRST REG ODD RCDR			14		1 FOR FIRST REG ODD RCDR
START FOR INTER. ODD RCDR			15		1 PER RCDR
START FOR LAST ODD RCDR			16		1
WHEN LAST EQPT ODD RCDR IS WIRED PER APP FIG. 14 PROVIDE "M" OPTION. IF PER APP FIG. 15 PROVIDE "Q" OPTION					
TIME OUT & TROUBLE RELEASE			17		1
NO. 5 CSBR FUSE ALARM			24	ZN	1
NO. 1 TDM CSBR OR SXS NO. 1 OR SXS INTERTOLL FUSE ALARM CONN			25		1
CALL COUNT PROCESS CONTROL REG TRFR				XH	
TDM CSBR WITH TROUBLE RCDR				XM	
FLEXIBLE NUMBER ROUNDS PER MONTH				ZK,XE, XG	
TO ADVANCE (M) SEL AT END OF 28 DAY MONTH. TO BE REMOVED ONLY DURING LEAP YEAR				Z	
NO. 1 OR TDM CSBR WITH TV TBL IND				W,ZB	
NO. 5 CSBR OR SXS NO. 1				V,ZF	
NO. 1 OR TDM CSBR WITH	1 MKR GP, 1 MA TMG FR, 1 TV TBL IND OR 1 TBL RCDR			ZF	
	2 MKR GROUPS, 2 MA TMG FRAMES, 1 TV TBL IND OR 1 TBL RCDR			ZG	
NO. 4A OR NO. 4M TOLL				XO	
NO. 4A OR NO. 4M TOLL WITH	1 TV GP 1 MA TMG FR			ZF	
	2 TV GROUPS 2 MA TMG FRAMES			ZG	
LOCAL CSBR & SXS NO. 1 AMA				ZY	
NO. 5 CSBR LAMA	AND CAMA REQ MORE THAN 1 RCDR GP NO.			ZZ	
TDM CSBR AMA					
NO. 4A OR 4M TOLL					
SXS INTERTOLL					
SXS NO. 1 AMA				XJ	
WHERE AMA TRK TRANSFER CKT	IS PROVIDED			XQ	
	IS NOT PROVIDED			XP	
CENTRALIZED COIN ZONE AND COIN TOLL DIALING FOR CSBR TDM	WITH 1 SEC TMG			WC,WE, WI,VK	
	WITHOUT 1 SEC TMG			WC,WE, WI,VJ	
NO. 5 CSBR CAMA				ZZ	
PAPER TAKE-UP ALARM IN AMA PERFORATOR CABINET				WG	1
RCDR GP HUNDREDS	NOT REQUIRED			WK	
	RCDR GROUPS IN OFFICE IN SAME HUNDREDS	YES		WL	
		NO		WM	

102. (CONT)

FEATURE OR OPTION (ODD TIMING CKT)				PROVIDE APP FIG	PROVIDE APP OR WRG	PROVIDE QUANITY PER MASTER TIMING FR
1 SEC TMG ACCURACY (SEE NOTE 133,134,135, 136)	NO.1 CSBR	NO			WY	
		YES			WZ,VC, UA,UC	
	NO.5 CSBR SXS IT	NO			WY,VV	
		YES			WZ,VC, VW,UA UC	
	CSBR TDM	NO			WY,VV	
		YES	WITHOUT TSP		WZ,VC, VW,UA, UC	
			WITH TSP		WZ,VD, VW,UA, UC	
	NO.4 TOLL	NO			WY,VE, VV	
		YES			WZ,VC, VW,UA, UC,VF	
	SXS NO.1	NO			WY,VG, VV	
		YES			WZ,VC, VH,VW, UA,UC	

ISSUE 52B

MASTER TIMING CIRCUIT

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CIRCUIT NOTES: (CONT)

103. (FORMERLY NOTE 106)

NETWORK VALUES		
NETWORK NO	RESISTANCE IN OHMS	CAPACITANCE IN uF
1	470	0.5
2	150	1.0
3	470	0.11
4	150	0.5
5	1000	0.5

104.

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	MD	PROV
11-B	X	Y		X		Y	
11-B	J	K		J		K	
11-B	G	H		G		H	
11-B	F	NONE		F			
11-B	B	E		B		E	
11-B	ZA	A		ZA		A	
11-B	ZB	NONE		ZB			
11-B	ZC	NONE		ZC			
12-B	N OR ZD	N	129	ZD		N	
13-B	ZH OR ZI	ZH		ZI		ZH	
13-B	ZK OR ZJ	ZJ	102	ZK,ZJ			
13-B	ZL OR ZM	ZL		ZM		ZL	
13-B	ZS OR ZT	ZS		ZT		ZS	
13-B	ZU OR ZV	ZU		ZV		ZU	
13-B	ZW OR ZX	ZW		ZX		ZW	
14-B	ZF OR ZG	ZF	102	ZF,ZG			
14-B	ZO,ZP,ZQ, OR ZR	ZO,ZP	102	ZO,ZP, ZQ,OR ZR			
15D	ZN	NONE		ZN			
16D	ZY OR ZZ	ZY		ZY			ZZ
16D	RELAYS			U188		U1199	
16D	XA OR XB	XA		XB		XA	
16D	XC OR XD	XC		XD		XC	
17B	XE	NONE	102	XE			
18B	XG	XE & ZK OR ZJ ONLY	102, 111	XG		XF	
19D	XH	NONE	102	XH			
19D	APP FIG C OR D	APP FIG C	112	APP FIG D		APP FIG C	
19D			102	APP FIG 27			
19D			102	APP FIG 28			
19D	ZE OR XI	ZE		XI		ZE	
19D				ZZ			
20D	XJ	NONE	102	XJ			
20D						APP FIG A&B	
20D						ZJ	
22D			102	APP FIG 29			
22D	TIMER			4A		D171689	
22D	XM	V OR W	102	XM			
23D	XN	NONE	205	XN			
23D	XO	XJ,XM, VW	102	XO			
23D	RESISTOR			147D		141A	
24D	XP OR XQ	XP	102	XP,XQ			
24D	ZY OR ZZ	ZY		ZY,ZZ			
24D	RESISTOR			144E		140A	
24D	RESISTOR			147D		141A	
26D	XT	NONE	115	XT			
	XR OR XS	XR	119	XR,XS			
	XU,XV	XU	114	XV		XU	
27D	XY,XZ, WA	N WITH WA OR ZD WITH XY	102 117	XY XZ		WA	
	WB	NONE	120	WB			
28AC	WC	NONE	102	WC		XS	
30D	WD OR WE	WC WITH WD OR NONE	103	WE		WD	

104.

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	MD	PROV
34B	APP FIG 30	NONE	102	APP FIG 30			
	WF	NONE	102	WF			
35D	WG	NONE	102	WG			
	WH,WI	WH OR NONE	102, 118	WI		WH	
37B	WJ	NONE	102, 121	WJ			
38B	WK,WL, WM	WK,WM	102, 122	WK,WL, WM			
	WN,WO	WN	123			WN	
	WP	WP	124	WQ		WP	
		NONE	102, 124	APP FIG 31,WR			
	VI OR APP FIG 31,WR	WI WITH ZD OR N	102, 129	WI			
39D	WS	NONE	102	WS			
	WT	NONE	102	WT			
43B	VC,VD	WC OR WZ WITH VC OR NONE	102	VC,VD			
	VE,VF	XO WITH VE OR NONE	102	VE,VF			
	VG,VH	XJ WITH VG OR NONE	102	VG,VH			
	VJ OR VK	VJ WITH WC OR NONE	102, 130	VJ,VK			
	VN,VO	XZ WITH VN OR NONE	102, 130	VN,VO			
	WY,WZ	WY	102, 125, 126, 134, 136	WY,WZ			
45B	WW,WX	WW	127	WX		WW	
	VA,VB	VA	128	VB		VA	
	CAPACITOR			KS-13365, L35		KS-13366, L3	
48B	VL,VM	VL	102	VL,VM			
	VP,VQ	NONE	102, 131	VP,VQ			
	VR,VS	VS	102, 132, 139	VR,VS			
50A	VT,VU	VU	102, 137	VT,VU			
51B	VX	WZ WITH VX OR WZ	102, 132	VX			
	VY	APP FIG 31 WITH VY OR VI WITH ZD OR N	102, 132	VY			
	VV,VW	VV OR NONE	102, 133	VV,VW			
52B	UB,UC	UB WITH WZ OR NONE	102, 125, 135	UC		UB	
	UA,VZ	VZ WITH WZ OR NONE	102, 134, 136	UA		VZ	
53B	APP FIG 32,UD	UD	102	APP FIG 32,UD			
54AC	UE	NONE	102, 137	UE			
55B	UF,UG, UH	UF	102, 138, 139	UF,UG, UH			
	UJ	WZ & UJ OR NONE	102	UJ			

104.

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	MD	PROV
56B	UL,UK	UK	140	UL		UK	
	RESISTOR			KS-20289, L6C & 263A		147D	
58AC	UM	NONE	141	UM			
	UN OR UO*	UN	142	UN, UO			
59B	UP OR UQ	UP	102, 139	UP,UQ			

*OPTION UO IS A FALSE OPTION

ISSUE 59B

MASTER TIMING CIRCUIT.

SD-25633-01-D2A

BELL TELEPHONE LABORATORIES INCORPORATED

SIZE 6S

CIRCUIT NOTES: (CONT)

105. NOTE CANCELLED ON ISSUE 49B

106. (FORMERLY NOTE 107)

CLASS RELAYS OPERATED	SPLICE	RECORDER OPERATION: MAKE BUSY: PLUG INSERTED	MAKE BUSY: PLUG REMOVED	TRANSFER: PLUG INSERTED: REGULAR RCDR RECORD	TRANSFER: PLUG INSERTED: EMER RCDR RECORD	TRANSFER: PLUG REMOVED: EMER RCDR RECORD	TRANSFER: PLUG REMOVED: REGULAR RCDR RECORD
	SP	D	E	A,A1	A1,D	B,B1	B,B1

107. ALL CURRENT FLOW TESTS AS APPLIED BY APP FIG 20 HAVE BEEN COMPUTED ON THE BASIS OF HAVING A MINIMUM OF 48.5V AND A MAXIMUM OF 50V. ALL LOCAL CIRCUIT APPARATUS WILL OPERATE ON A VOLTAGE RANGE OF 45-50V.

108. FORMER NOTE 108 NOW NOTE 107.

109.

(TS) TEST SELECTOR (APP FIG 20)

TERM ARCS 1 & 4	TEST NUMBER PROVIDED	(PN) APP FIG 22	(DTNP) APP FIG 22	TEST	TERM ARCS 5 & 6	TEST RECORDER CHECK RELAYS	(AP) APP FIG. 22	(PN) APP FIG 22	+OR- LEADS	TEST
1	001010	1		VISUAL PATTERN CHECK OF INDIVIDUAL PERFORATORS	1	B0	1	11	-B4	FOR TROUBLE CROSSES IN CONTACTS OF CHECK RELAYS
2	233333	3			2				-B4	
3	030303	4			3	B7		2	-B4	
4	116161	5			4	B0,B1,B2	2	5	+B2	
5	266666	6			5	B1,B2,B4	3	3	+B4	
6	061616	7			6	B2,B4,B7	2	2	+B2	
7	103030	2			7	C0	4	11	-C4	
8	233333	3			8	C7		4	-C4	
9	030303	4			9	C0,C1,C2	5	7	+C2	
10	116161	5			10	C1,C2,C4	3	3	+C4	
11	266666	6			11	C2,C4,C7	5	4	+C2	
12	061616	7			12	D0	6	11	-D4	
13	103030	2			13	D7		2	-D4	
14	233333	3			14	D0,D1,D2	7	5	+D2	
15	030303	4			15	D1,D2,D4	8	3	+D4	
16	116161	5			16	D2,D4,D7	7	2	+D2	
17	266666	6			17	E0	9	11	-E4	
18	061616	7			18	E7		4	-E4	
19	103030	2			19	E0,E1,E2	10	7	+E2	
20	233333	3			20	E1,E2,E4	8	3	+E4	
21	030303	4			21	E2,E4,E7	10	4	+E2	
22	116161	5			22	F0	11	11	-F4	
23	266666	6			23	F7		2	-F4	
24	061616	7			24	F0,F1,F2	12	5	+F2	
25	103030	2			25	F1,F2,F4	13	3	+F4	
26	233333	3			26	F2,F4,F7	12	2	+F2	
27	030303	4			27	A0,A1	14	11	+A1	
28	116161	5			28	A0,A2		11	+A2	
29	266666	6			29	A1,A2	15	12	+A2	
30	061616	7			30	A0,A1,A2		12	+A0 +A2	
31	175757	8			31	NONE OPERATED	13	11	-A0	
32	052525	9			32	OTO	16		+OT	
33	227272	10		RECORDER OPERATION WITH TRANSVERTER	33	RCK		10		
34	044444	11			34	OTK		11		
35	188888	12			35			11		TBL GRD XTC LEAD
36	259595	13			36			13		TRANSVERTER
37	195959	14			37			14		
38	ENTRY AND TIME 11		1	RECORDER ANSWER & DISCONNECT RECORDS	38					OPEN OT LEAD
39	ENTRY AND TIME 33		2		39					TBL GRD TCO LEAD
40	ENTRY AND TIME 66		3		40			DTNP 3		ANS OR DISCONNECT
41	ENTRY AND TIME 00		4		41			DPNP 4		
42				TBL ENTRY	42	IDENTIFICATION		15		END OF CYCLE
43				PASS BY	43	288000				
44				OPERATE(2R)	44					PASS BY

110. FORMER NOTE 110 NOW NOTE 104.

111. PRIOR TO ISSUE 18B, OPTION XF WAS PART OF OPTION ZK.

112. PRIOR TO ISSUE 19B, FIG C (NOW APP FIG C) WAS PART OF FIG 26 (NOW APP FIG 26).

113. WITH THE 22V 60 CPS SUPPLY AN EMERGENCY POWER SUPPLY SHALL BE USED THAT HAS AN UPPER FREQUENCY LIMIT OF 60 CPS:

114. NOTE CANCELLED.

115. IF THE OFFICE IS ARRANGED WITH ONE RECORDER AND AN EMERGENCY RECORDER PROVIDE OPTION XT.

116. PRIOR TO ISSUE 26D, LOOPING SYMBOLS WERE NOT SHOWN.

117. WHERE XZ IS PROVIDED, OPTION XY MUST ALSO BE PROVIDED. PRIOR TO ISSUE 27D OPTION WA WAS SHOWN AS PART OF OPTION N AND OPTION XY WAS SHOWN AS PART OF OPTION ZD.

118. PRIOR TO ISSUE 35D, OPTION WH WAS PART OF OPTION WC.

ISSUE 54AC

MASTER TIMING CIRCUIT

SD-25633-01-D2B

BELL TELEPHONE LABORATORIES INCORPORATED

6S

CIRCUIT NOTES: (CONT)

119. WHEN "XS" OPTION IS PROVIDED, "XV" OPTION MUST BE PROVIDED.

120. TO INCREASE THE LIFE OF THE 206 AF SELECTOR DESIGNATED (U), ADD OPTION "WB".

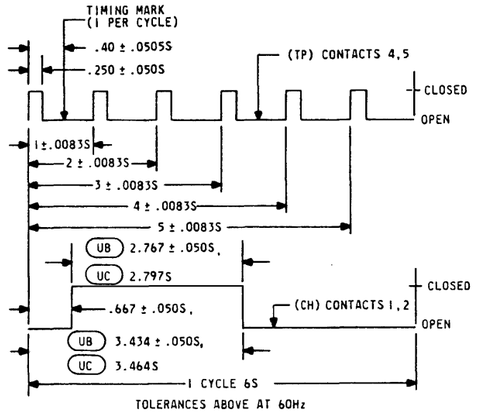
(MFR DISC.) 121. TO CONFINE MUTILATED HOUR ENTRIES TO THOSE RECORDERS THAT ARE OUT OF SYNCHRONISM, ADD "WJ" OPTION.

122. IF RECORDER GROUP HUNDREDS IS REQUIRED, AND RECORDER GROUPS IN OFFICE ARE IN MORE THAN ONE HUNDREDS, THE RECORDER GROUP HUNDREDS IS PROVIDED BY THE INDIVIDUAL RECORDERS, AND NOT BY THIS CIRCUIT. OPTION "WM" IS A FALSE OPTION TO PERMIT REMOVAL OF OPTION "WK" IN THIS CASE.

123. IF RELAY (DTK) IN AMA RECORDER CIRCUIT IS CHANGED TO 600Ω 316U, OPTION "WO" MUST REPLACE OPTION "WN".

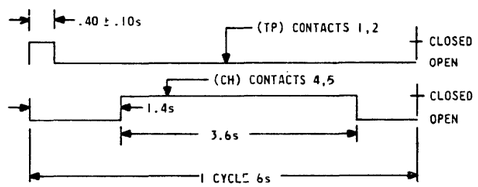
124. IF APP FIG. 31 IS PROVIDED, OPTION "WQ" MUST REPLACE OPTION "WP".

125. A. 1 SECOND TIMING.
TIMER INTERVALS FOR 4B TIMER, OPTION "UB" AND FOR 4E TIMER, OPTION "UC". TOLERANCES SHOWN APPLY ONLY TO THE THE 4B TIMER. THE TIMING MARK IS THE RESET STATE OF THE 4E TIMER.



TOLERANCES ABOVE AT 60Hz

B. TIMER INTERVALS FOR 4A TIMER, 6 SECOND TIMING, OPTION "WY".



126. WHEN ONE SECOND TIMING ACCURACY IS PROVIDED, OPTIONS "G" AND "ZD" ARE REQUIRED. APP FIGURES A OR B, IF PROVIDED, MUST BE REMOVED. APP FIG. 23 MUST BE ADDED IF NOT ALREADY PROVIDED. FOR X8R TDM WITH TSP, OPTION "WI" MUST BE ADDED IF NOT ALREADY PROVIDED.

127. PROVIDE OPTION "WX" TO INSURE THE PERFORATION OF A SECOND SPLICE PATTERN WHEN A TAPE WINDOW IS ENCOUNTERED DURING THE TAPE IDENTITY PERFORATION FOLLOWING A PREVIOUS SPLICE PATTERN.

128. TO PREVENT EROSION OF CONTACTS 3 AND 4B OF RELAY (PTR), OPTION "V8" MUST REPLACE OPTION "VA". OPTION "V8" SHOULD BE PROVIDED WHEN OPTION "XX" OF SD-25872-01 (RECORDER AND RECORDER CONNECTOR) IS PROVIDED.

129. PRIOR TO ISSUE 38B, OPTION "VI" WAS PART OF OPTION "ZD" AND WAS PROVIDED AFTER DATE STANDARD.

130. PRIOR TO ISSUE 43B, "VJ" OPTION WAS PART OF "WC" OPTION AND "VN" OPTION WAS PART OF "XZ" OPTION.

131. WHEN THE REMOTE REGISTER PULSE FEATURE PER OPTIONS "VP" AND "VQ" IS PROVIDED, OPTIONS "WZ" AND "VC" MUST BE PROVIDED.

132. WHEN OPERATING WITH CAMA-C OR BILLING DATA TRANSMITTER OR CDT AND THE PAPER TAPE PERFORATORS ARE REMOVED, THE TIME KEEPING FUNCTION AND 3AM ENTRIES ARE NOT NECESSARY IN THE AMA RECORDERS. PRIOR TO ISSUE 51B, OPTION "VX" WAS PART OF OPTION "WZ" AND OPTION "VY" WAS A PART OF APP FIG. 31.

133. OPTION "VW" PROVIDES SEPARATE CONTROLS FOR TROUBLE CARD DATA AND AMA RECORDER HOUR/TEN MINUTE DATA. SEPARATE CONTROLS WILL PREVENT INCORRECT ENTRIES DURING SIMULTANEOUS REQUESTS FOR DATA FROM BOTH THE AMA RECORDER AND THE TROUBLE RECORDER IN OFFICES ARRANGED FOR ONE-SECOND TIMING. OPTIONS "VV" AND "VW" DO NOT APPLY TO NO. 1 CROSSBAR.

134. FOR THE ONE-SECOND TIMING FEATURE PROVIDE OPTION "UA" FOR THE FOLLOWING IMPROVEMENT:

A. TO ELIMINATE MARGINAL CONDITIONS IN THE "SECONDS UNITS" COUNTER.
B. TO ELIMINATE MARGINAL CONDITIONS IN THE UH/UZ CIRCUIT.
C. TO PROVIDE LAMPS TO MONITOR THE TP AND CH OUTPUT SIGNALS FROM BOTH THE EVEN AND ODD TIMERS.
D. TO ELIMINATE POSSIBLE FALSE RELEASE OF THE TMT RELAY DURING TEN MINUTE ENTRIES.

135. OPTION "UC" PROVIDES THE 4E ELECTRONIC TIMER FOR THE ONE SECOND TIMING FEATURE. PRIOR TO ISSUE 52B, OPTION "UB" WAS PART OF "WZ". WHEN OPTION "UC" IS PROVIDED IT MUST BE APPLIED IN BOTH THE EVEN AND ODD TIMERS.

136. PRIOR TO ISSUE 52B, OPTION "VZ" WAS PART OF OPTION "WZ".

137. WHEN OPTION VT, THE BILLING DATA TRANSMITTER FEATURE IS USED, OPTION UE MUST ALSO BE PROVIDED TO PREVENT FAILURE OF RECORDER TEST 232 IF ALL RECORDERS ARE NOT EQUIPPED WITH OPTION WN.

138. PRIOR TO ISSUE 55B OPTION UJ WAS A PART OF OPTION WZ.

139. WHEN RECORDERS ARE DISABLED BUT LEFT IN PLACE, OR WHEN THE MASTER TIMING FUNCTIONS ARE NOT REQUIRED FOR AMA BUT ONLY FOR THE TROUBLE RECORDER, THE FOLLOWING CONDITIONS APPLY:

A. PROVIDE OPTION "VR" WITH OPTION "UG" OR "UH".
B. REMOVE FUSES NE,NO AND PTU.
C. DISCONNECT LEADS EST AND ST- TO THE RECORDER AND RECORDER CONNECTOR CIRCUIT.
D. REPLACE OPTION "UP" WITH OPTION "UQ".
E. REMOVE OPTION "UF".

140. ON ISSUE 56B CAPACITOR CODE 535NR IS PROVIDED STD WITH OPTION "UL" FOR REPLACEMENT OF MFR. DISC. CODE 228B WITH OPTION "UK".

141. WHEN THE AMA RECORDER IS EQUIPPED WITH APP FIG 31 WHICH IS USED TO DETECT OPEN START LEADS TO THE MASTER TIMER, PROVIDE OPTION UM TO ELIMINATE POSSIBLE FALSE OPERATION OF THE TM TIMER IN THE AMA RECORDER.

142. WHEN THE AMA RECORDER IS MODIFIED FOR CAMA C OR BDT OPERATION WITH TIME KEEPING FUNCTIONS RETIRED IN PLACE, AND INSTANT TRANSFER AND MAKE BUSY OPERATION AFTER PERFORATOR REMOVAL IS REQUIRED, (SD-25872-01 OPTION UF), FURNISH OPTION UO AND REMOVE OPTION UN. THIS WILL PREVENT FALSE UNIT LAMP INDICATIONS.

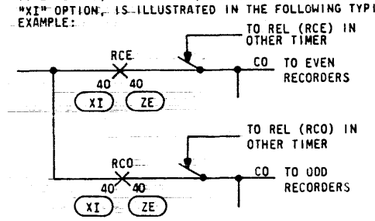
EQUIPMENT NOTES:

201. NOTE CANCELED (SEE CROSS CONNECTING INFORMATION).

202. THE CONNECTION FOR THE LEAD FROM GROUND "W" SHALL BE MADE AT THE FIRST PIECE OF APPARATUS, IT SHALL BE LOOPED TO THE OTHER APPARATUS AND FROM THE LAST PIECE OF APPARATUS BACK TO THE FIRST PIECE OF APPARATUS.

203. IN CADS 1 AND 2, THE STRAPS BETWEEN TERMINALS 1-4 AND 10-13 ON TS(MGN) WERE RATED MFR DISC. ON ISSUE 11B.

204. THE DIFFERENCE BETWEEN A HORIZONTAL MULTIPLE FOR 263 TYPE RELAYS, "ZE" OPTION, AND THE 287 TYPE RELAYS, "XI" OPTION, IS ILLUSTRATED IN THE FOLLOWING TYPICAL EXAMPLE:



(ZE) CONTACT 40 IS THE FIXED SPRING WITH THE HORIZONTAL MULTIPLE ON THE ARMATURE.

(XI) THE HORIZONTAL MULTIPLE IS ON FIXED SPRING 40.

205. LOOP A AND B GROUNDS TO ALL APPARATUS AS DESIGNATED AND CONNECT OTHER END OF LOOPS TO AE AND AF GROUNDS, "XN" OPTION, RESPECTIVELY.

206. PROVIDE SUPPLEMENTAL LOCAL CABLE WHEN "XS" OPTION IS REQUIRED.

INFORMATION NOTES:

301. UNLESS OTHERWISE SPECIFIED RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS, VALUES PRECEDED BY THE SYMBOL +(PLUS) OR -(MINUS) ARE IN VOLTS.

302. SHOWN ON SHEET 048.

303. INTERRUPTIONS IN THE 22V AC SUPPLY FOR THE TIMERS RESULTING FROM LOSS OF 120V AC COMMERCIAL POWER OR SWITCHOVERS DURING ROUTINE TESTING OF THE AC RESERVE SYSTEM MAY CAUSE AN OUT-OF-SYNCHRONISM CONDITION RESULTING IN LOSS OF REVENUE. MASTER TIMERS ARRANGED FOR ONE SECOND TIMING ARE MORE SENSITIVE TO SUCH INTERRUPTIONS. TO AVOID THESE INTERRUPTIONS, THE 120 VAC SOURCE SHOULD BE BACKED WITH A STANDBY INVERTER SUCH AS THE LORAIN WAA501B. TO ALLEVIATE ONLY THOSE INTERRUPTIONS DURING SWITCHOVERS, THE 120V AC MAY BE SUPPLIED FROM A POWER SERVICE CABINET WHICH IS ONLY TRANSFERRED TO THE EMERGENCY SUPPLY DURING LOSS OF COMMERCIAL AC POWER.

MASTER TIMING CIRCUIT	DWG SIZE 6S	ISSUE 61B
BELL LABORATORIES	SD-25633-01-	D3

INFORMATION NOTES: (CONT)
302. BLOCK DIAGRAM

MASTER TIMING CIRCUIT

APP FIG. 4
MONTH, DAY AND HOUR CONTROL CKT
APP FIG. 4 MFR DISC. 6RD PER MO | APP FIG. 8 MFR DISC. 10RD PER MO

APP FIG. 5
HOUR TIME LEADS

APP FIG. 1
TIME PULSE RECORDER CONTROLLER MAKE BUSY AND SYNCHRONIZING CHECK FOR EVEN CKT

APP FIG. 7
GROUPING CKT FOR EVEN RECORDERS AND RECORDER START CONTROL

APP FIG. 3
CHECK LAMPS

APP FIG. 23
TIME CONTROL FOR MASTER TEST FR OR TROUBLE RECORDER FR

APP FIG. 18
PULSE FAILURE ALARM

APP FIG. 26
TIMER

APP FIG. 21
PERFORATOR LEAD TEST (ODD) (EVEN)

APP FIG. 9
RECORDER RECORD CONTROL (SERVES EVEN RECORDERS)

APP FIG. 8
RECORDER RECORD CONTROL (SERVES ODD RECORDERS)

RECORDER AND RECORDER CONNECTOR CKT (EVEN)

RECORDER AND RECORDER CONNECTOR CKT (ODD)

APP FIG. 20
RECORDER TEST (ODD) (EVEN)

APP FIG. 17
TIME OUT AND TROUBLE RELEASE (EVEN)

APP FIG. 17
TIME OUT AND TROUBLE RELEASE (ODD)

APP FIG. 19
CHECK FAILURE ALARM

APP FIG. A MFR DISC. 6RD PER MO | APP FIG. B MFR DISC. 10RD PER MO
APP FIG. 4
MONTH, DAY AND HOUR CONTROL CKT

APP FIG. 6
HOUR TIME LEADS

APP FIG. 2
TIME PULSE RECORDER CONTROLLER MAKE BUSY AND SYNCHRONIZING CHECK FOR ODD CKT

APP FIG. 9
GROUPING CKT FOR ODD RECORDERS AND RECORDER START CONTROL

APP FIG. 22
TEST PATTERN RELAYS

DRAWING ISSUE
31D THRU 46D AND 47D

ISSUE
52B

MASTER TIMING CIRCUIT (2) SD-25633-01-D.4A
BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-D4A

CROSS CONNECTING INFORMATION:(GENERAL)

CROSS CONNECTIONS FOR	CROSS CONN TABLE PART	CIRCUITS WITH RELATED CROSS CONN
MARKER GROUP NUMBER FOR CROSSBAR LOCAL AMA OR IDENTIFIER GROUP NUMBER FOR SXS NO. 1	1	
RECORDER GROUP HUNDREDS	2	

CROSS CONNECTING INFORMATION:(CONDITION)

PART	CONDITION		CONNECT TERM.	CONNECT TO TERM.	CONNECT TERM	CONNECT TO TERM.		REFERENCE
1	MARKER GROUP NUMBER FOR CROSSBAR LOCAL AMA OR IDENTIFIER GROUP NUMBER FOR SXS NO. 1							
	TENS NUMBERING	0	A	E4	B	E7		
		1		E0		E1		
		2		E0		E2		
		3		E1		E2		
		4		E0		E4		
		5		E1		E4		
		6		E2		E4		
		7		E0		E7		
		8		E1		E7		
		9		E2		E7		
	UNITS NUMBERING	0	C	F4	D	F7		
		1		F0		F1		
		2		F0		F2		
		3		F1		F2		
		4		F0		F4		
		5		F1		F4		
		6		F2		F4		
		7		F0		F7		
		8		F1		F7		
		9		F2		F7		
2	RECORDER GROUP HUNDREDS	0	G	J4	H	J7		
		1		J0		J1		
		2		J0		J2		
		3		J1		J2		
		4		J0		J4		
		5		J1		J4		
		6		J2		J4		
		7		J0		J7		
		8		J1		J7		
		9		J2		J7		

CROSS CONNECTING INFORMATION:(LOCATION)

TERMINAL	LOCATION FS	LOCATION TERMINAL STRIP	LOCATION NO.	CROSS CONN TABLE PART	FUNCTIONAL DESIGNATION
A	20B7	MGN	13	1	
B	20B8		4		
C	21C3		13		
D	21C3		4		
E0,1,2,4,7	20B7		9,8,7,6,5		
F0,1,2,4,7	21C3		9,8,7,6,5		
G	19C7		16	2	
H	19C7		15		
J0,1,2,4,7	19C7		14,12,3,2,1		

DRAWING ISSUE
310 7M1 AH
378
3 3

ISSUE 52B

MASTER TIMING CIRCUIT (2) SD-25633-01-D4B

BELL TELEPHONE LABORATORIES INCORPORATED SIZE 6S

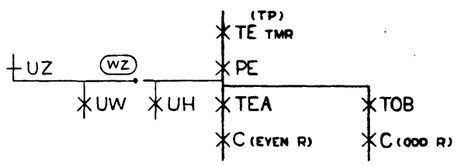
SD-25633-01-D4B

PART OF SC I

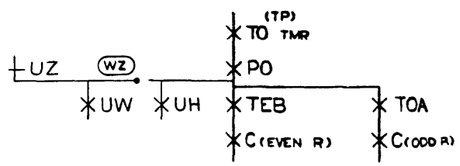
TIME PULSES

(THIS SC DOES NOT APPLY TO BOT OR CAMA-C OPERATION WITH OPTION VR PROVIDED SINCE RELAY C (RC) IS DISABLED BY RECORDER OPTION UF)

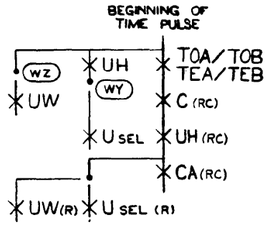
EVEN TIMER



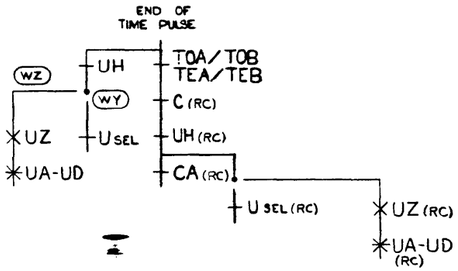
ODD TIMER



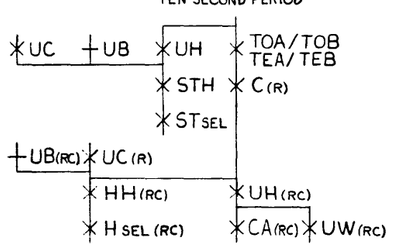
BEGINNING OF TIME PULSE



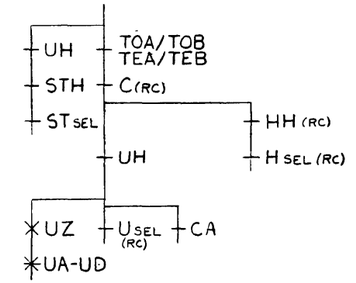
END OF TIME PULSE

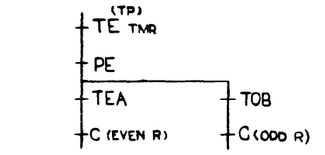


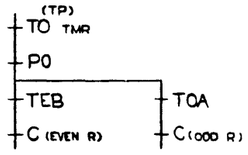
(WZ) APPROACH OF END OF TEN SECOND PERIOD



(WZ) END OF TIME PULSE



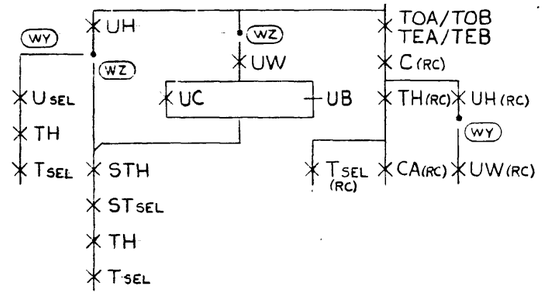




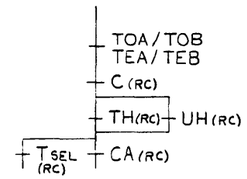
RELAY	(WZ) DECIMAL COUNTER									
	0	1	2	3	4	5	6	7	8	9
UA	-	-	-	X	X	X	X	-	-	-
UB	-	X	X	X	X	X	X	X	X	-
UC	-	-	-	-	-	X	X	X	X	X
UD	X	X	-	-	X	X	-	-	X	X
UZ	-	X	-	X	-	X	-	X	-	X

X = DENOTES RELAY OPERATED
- = DENOTES RELAY NORMAL

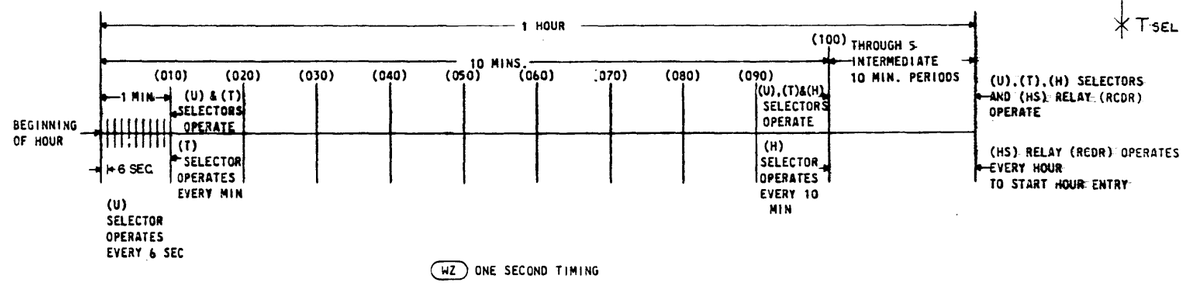
APPROACH OF END OF MINUTE PERIOD



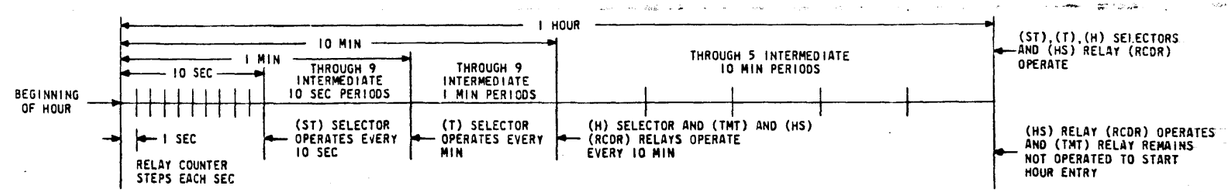
END OF TIME PULSE



(WY) SIX SECOND TIMING SWITCH CHART



(WZ) ONE SECOND TIMING



DRAWING ISSUE

31D

ISSUE 55B

MASTER TIMING CIRCUIT (2)

SD-25633-01-EIA

BELL TELEPHONE LABORATORIES INCORPORATED

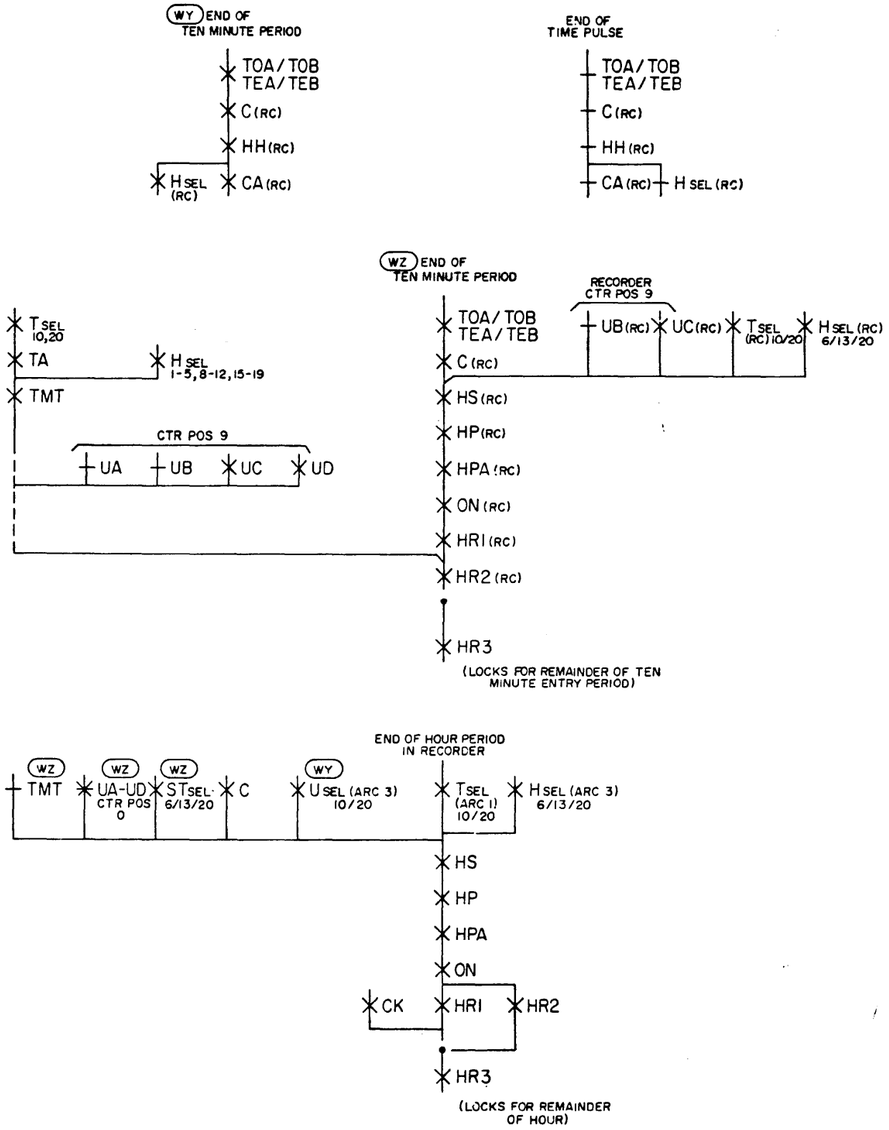
SIZE B 65

SD-25633-01-EIA

PART OF SC I

TIME PULSES

(THIS SC DOES NOT APPLY TO BOT OR CAMA-C OPERATION WITH OPTION VR PROVIDED SINCE RELAY C (RC) IS DISABLED BY RECORDER OPTION UF)



ISSUE 55B

MASTER TIMING CIRCUIT	SD-25633-01-E18
BELL TELEPHONE LABORATORIES INCORPORATED	6S

PART OF SC 2

CONTROL OF TIMING SWITCHES
HOUR, DAY, & MONTH INFORMATION

(WY) 4A TIMER CONTACTS CLOSE EVERY SIX SECONDS

(TP) TE TMR → PE, UH, U SEL 1

(TP) TE TMR → PE, UH, U SEL 1-2

(WY) REPEAT ABOVE SEVEN TIMES

(TP) TE TMR → PE, UH, U SEL 9/19

(TP) TE TMR → PE, UH

1 MIN · .4 SEC PULSE DURATION · 6 SECONDS BETWEEN PULSES

L2 · M2 · TE,N3 · U,P2

TIME SWITCH POSITIONS

IND POS (U)&(T) SEL			U & T DIGIT	IND POS (H)&(ST) SEL			H DIGIT
	21	22	-			22	-
10	20		9	7	14	21	-
9	19		8	6	13	20	5
8	18		7	5	12	19	4
7	17		6	4	11	18	3
6	16		5	3	10	17	2
5	15		4	2	9	16	1
4	14		3	1	8	15	0
3	13		2				
2	12		1				
1	11		0				

TIME COUNTERS
000-599 1/10 MINUTE INTERVALS

A21 · B21 · X2

TE,D18 · UH,E20

(TP) TE TMR → U SEL 9/19-10/20; CSO (START 1 MINUTE SYNCHRONIZATION CHECK SEE SC 13); PE; UH; U SEL; TH; T SEL

(TP) TE TMR → PE, UH, U SEL 10/20-11/1 (POS 21 AND 22 BY-PASS), SCO; TH; T SEL 1/11-2/12

(WY) REPEAT ABOVE SEVEN TIMES

(TP) TE TMR → PE, UH, U SEL; TH; T SEL

(TP) TE TMR → PE

Y2 · UH,Z2

L25 · N25 · PE,P25

U SEL ADVANCES 9 POSITIONS

UH → U SEL 10/20-11/1 (POS 21 AND 22 BY-PASS), SCO; TH; T SEL 9/19-10/20

(TP) TE TMR → PE, UH, U SEL 10/20; TH; T SEL; TA; HH; H SEL 1/8/15

9 MINUTES

COMPLETE 10 MINUTES

U SEL 10/20-11/1 (POS 21 AND 22 BY-PASS); TH; T SEL 10/20-11/1 (POS 21 AND 22 BY-PASS); HH; H SEL 1/8/15-2/9/16; TA

40 MINUTES

(WY) REPEAT ABOVE FOUR TIMES

(TP) TE TMR → PE, UH, U SEL 8/18-9/19; T SEL IN POS 10/20; TA; H SEL 6/13/20; TO HH, 3K14

(TP) TE TMR → CSO, PE, UH, U SEL; SR (PREPARATION OF OPER OF THE HOUR SELECTOR); HRT (RECORDING OF THE HOUR ENTRY SEE SC 3); ADV; HUH; HU SEL

TO 3C2 · TO 3D2

RELAYS (UA-UD) OPER/RELEASE

(WZ) RELAY COUNTER — 10 SEC

(WZ) ST SEL — POS 1/8/15 · POS 7,14,21,22 BY-PASS · POS 8/15/1 · 10 SEC · 1 MIN

SWITCH — POS 1/11 · POS 21,22 BY-PASS · POS 11/1

(WY) U SEL — 6 SEC · 1 MIN

T SEL — POS 1/11 · POS 21,22 BY-PASS · POS 2/12 · 1 MIN · POS 11/1 · 9 MIN · 10 MIN

H SEL — POS 1/8/15 · POS 7,14,21,22 BY-PASS · POS 2/9/16 · POS 8/15/1 · 50 MIN

HU SEL — POS 1 · 1 HR · POS 2 · 9 HRS · POS 10 · 1HR · POS 1 · 10 HRS · POS 11-22 BY-PASS · POS 1 · 4 HR · POS 4 · POS 5-22 BY-PASS · POS 1

HT SEL — POS 1 · 24 HRS · POS 2 · POS 3 · POS 1 · POS 4-22 BY-PASS

DU SEL — POS 1/11 · 1 DAY · POS 2/12 · 9 DAYS · POS 11/1 · 10 DAYS · POS 1-11 · 10 DAYS · POS 11/1 · POS 1 · POS 13-22 BY-PASS

DT SEL — POS 1 · 10 DAYS · POS 2 · POS 3 · POS 4 · POS 1 · POS 13-22 BY-PASS

M SEL — POS 1 · 1 MONTH (31 DAYS) · 1 YEAR · POS 2 · 11 MONTHS · POS 12 · POS 1

TIMING CHART

DRAWING ISSUE — 31D — DG, 7WA, AMC

ISSUE 49B

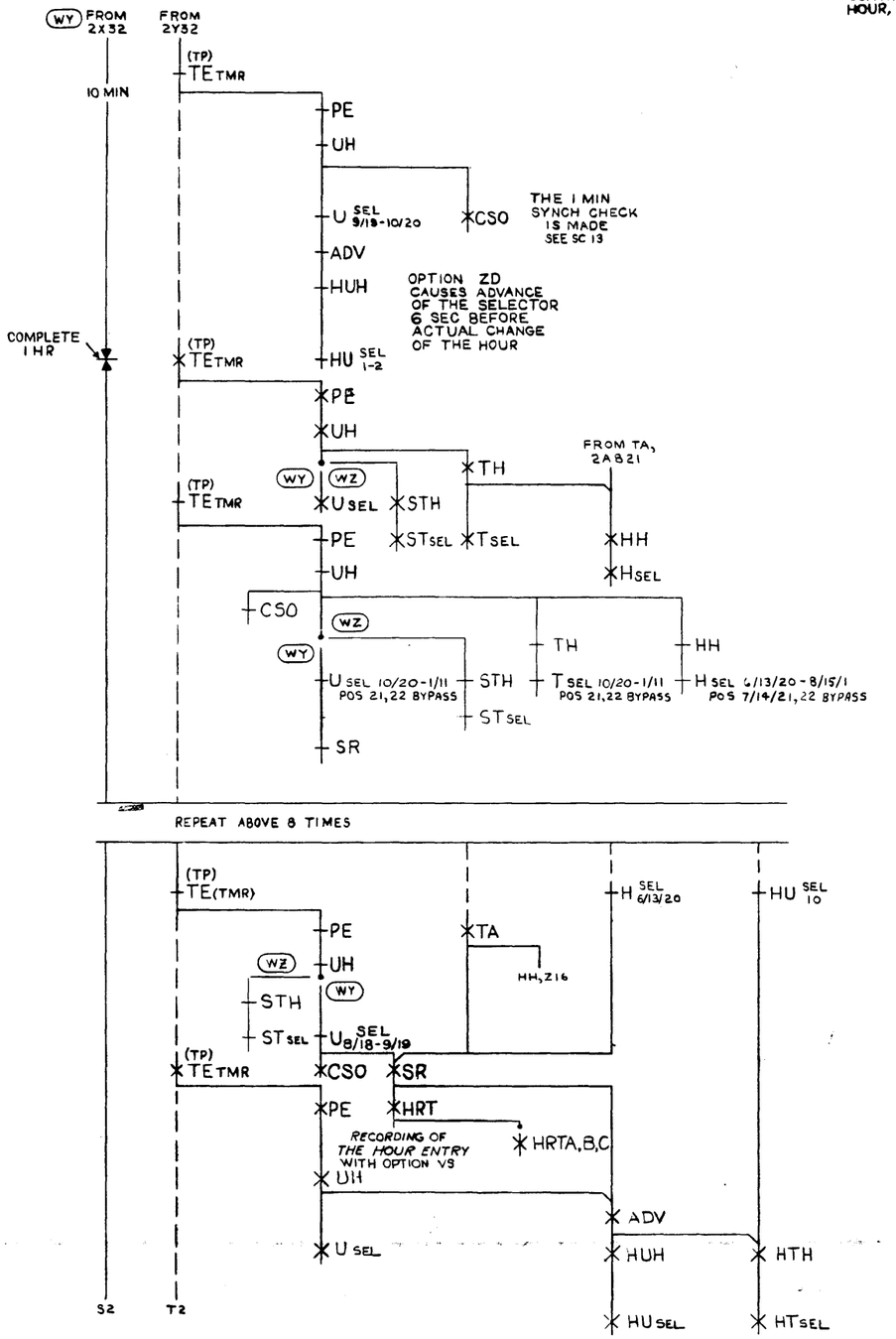
MASTER TIMING CIRCUIT (2) SD-25633-01-E2

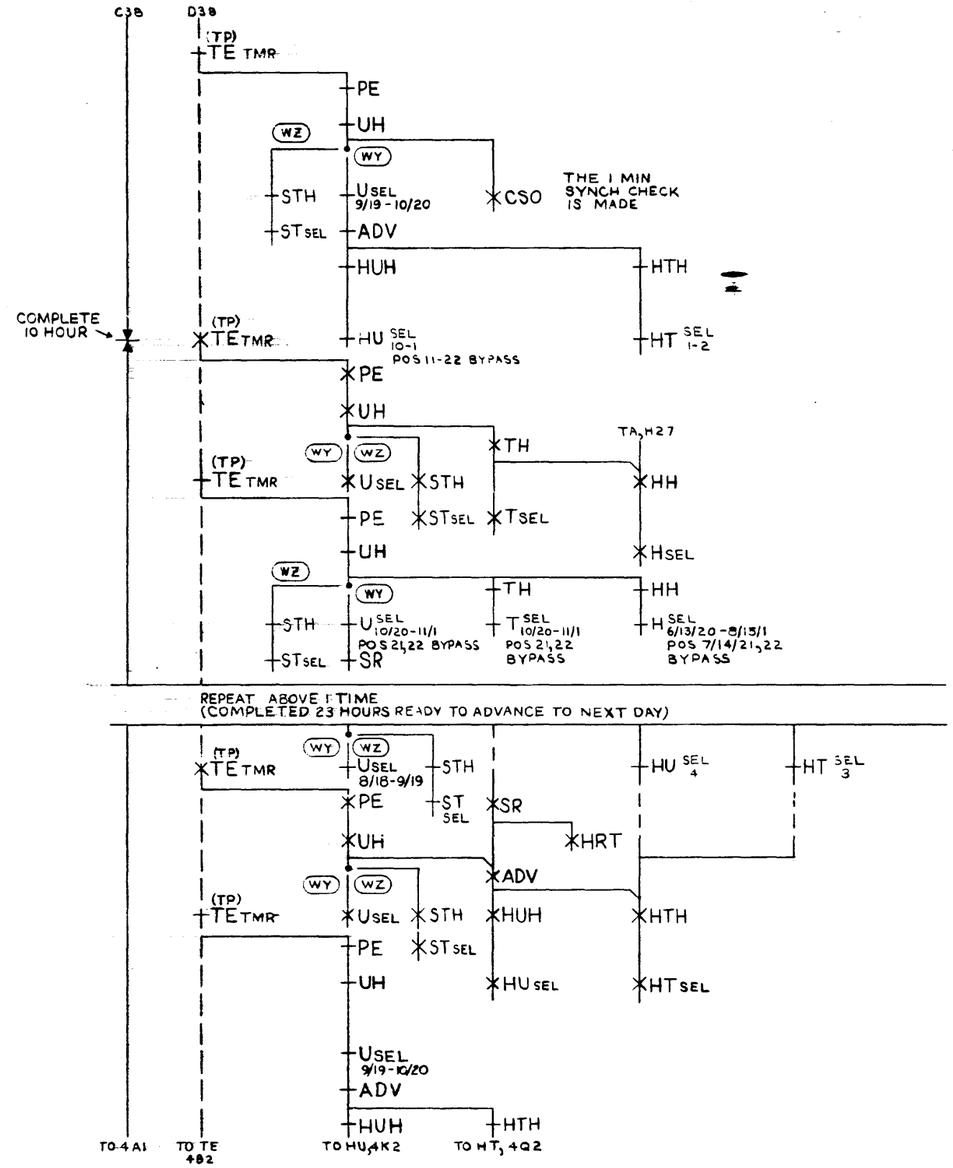
BELL TELEPHONE LABORATORIES INCORPORATED — 65

SD-25633-01-52

PART OF SC 2

CONTROL OF TIMING SWITCHES
HOUR, DAY, & MONTH INFORMATION





DRAWING ISSUE	
38D	JGS, DJW, AMC
38B	

ISSUE 55B

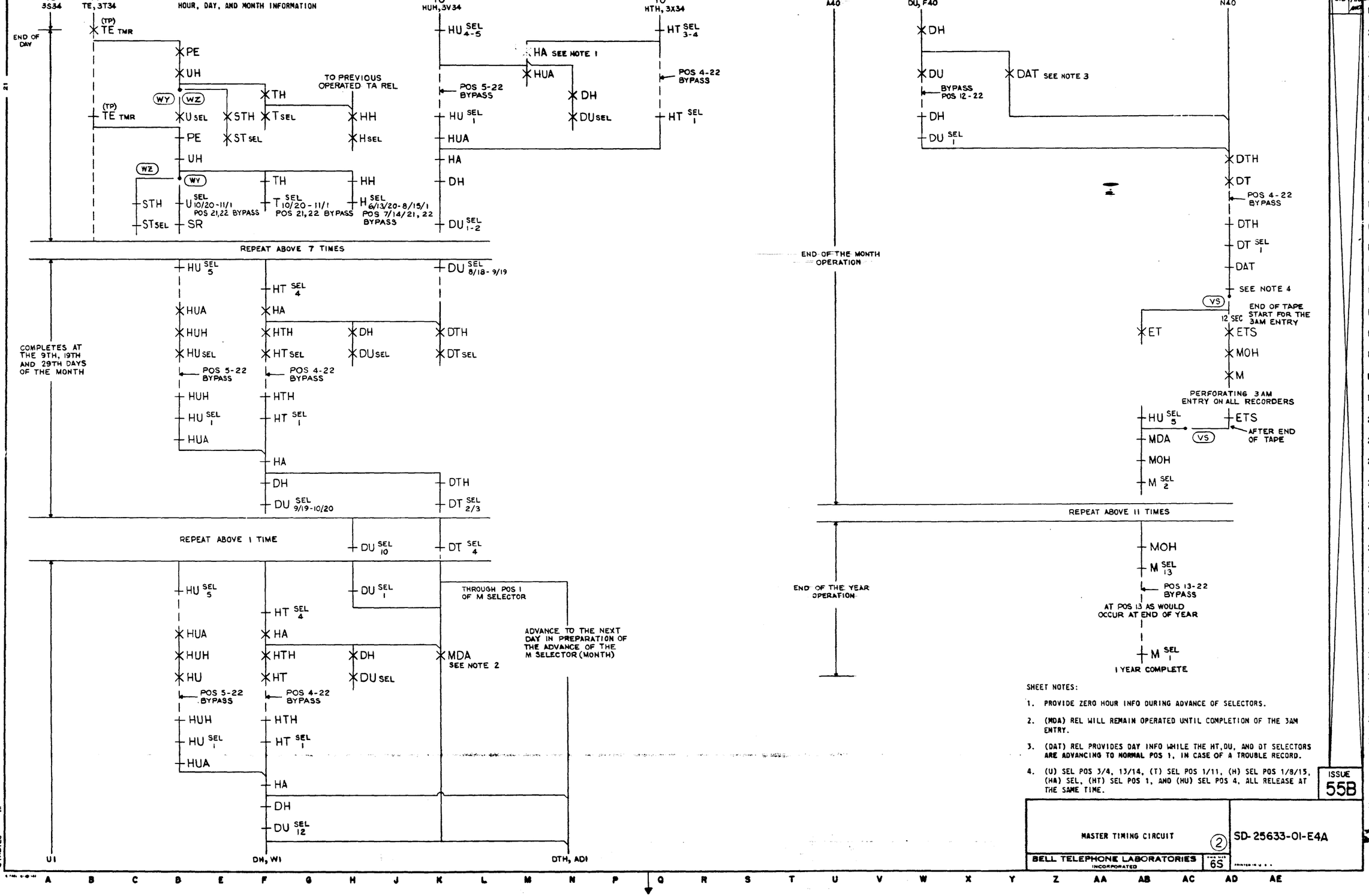
MASTER TIMING CIRCUIT (2) SD-25633-01-E3

BELL TELEPHONE LABORATORIES INCORPORATED — SHEET 6S

SD-25633-01-E3

PART OF SC 2

CONTROL OF TIMING SWITCHES
HOUR, DAY, AND MONTH INFORMATION



SHEET NOTES:

1. PROVIDE ZERO HOUR INFO DURING ADVANCE OF SELECTORS.
2. (MDA) REL WILL REMAIN OPERATED UNTIL COMPLETION OF THE 3AM ENTRY.
3. (DAT) REL PROVIDES DAY INFO WHILE THE HT, DU, AND DT SELECTORS ARE ADVANCING TO NORMAL POS 1, IN CASE OF A TROUBLE RECORD.
4. (U) SEL POS 3/4, 13/14, (T) SEL POS 1/11, (H) SEL POS 1/8/15, (HA) SEL, (HT) SEL POS 1, AND (HU) SEL POS 4, ALL RELEASE AT THE SAME TIME.

DRAWING ISSUE
31D

ISSUE 55B

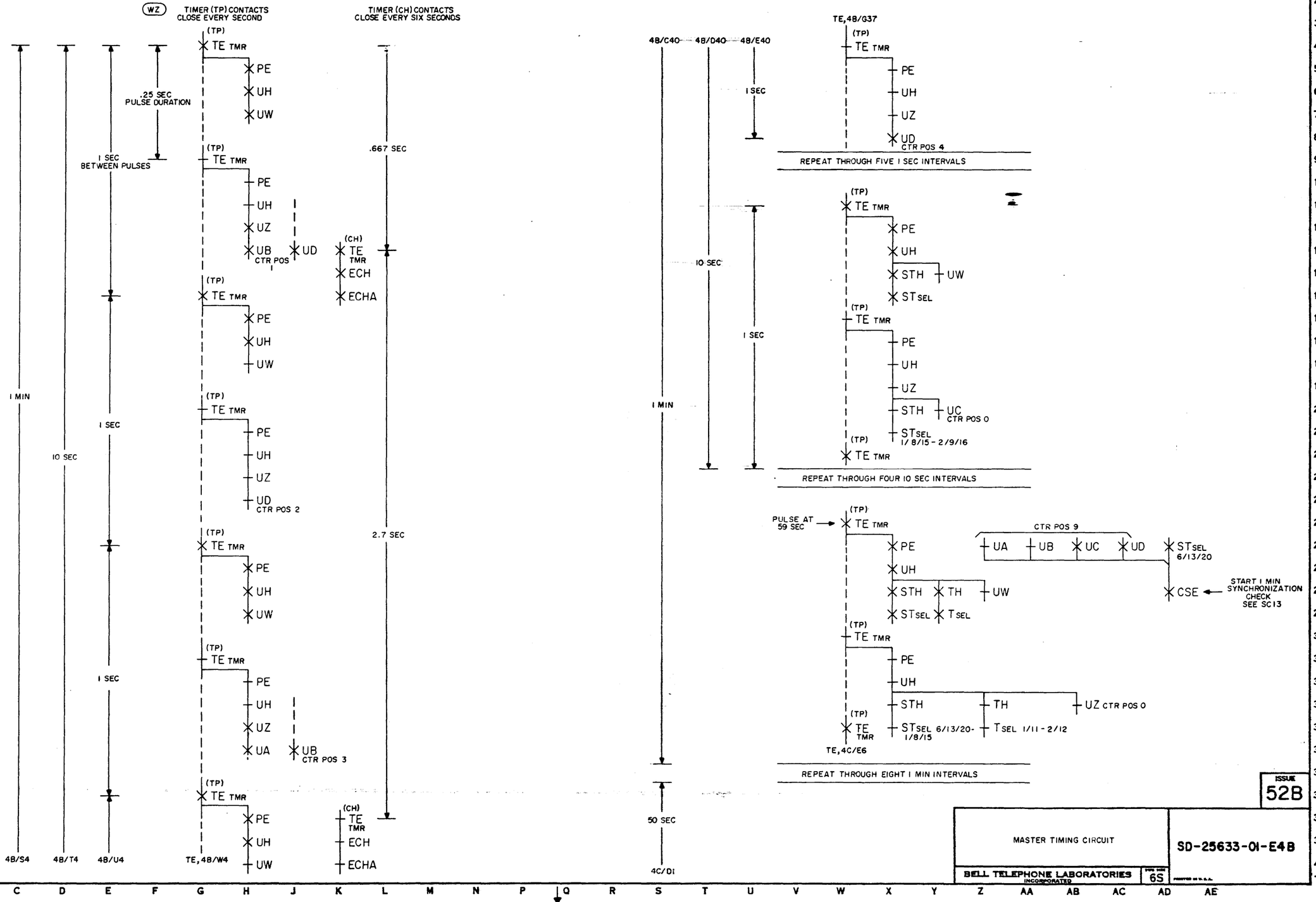
MASTER TIMING CIRCUIT (2) SD-25633-01-E4A

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-E4A

PART OF SC 2

CONTROL OF TIMING SWITCHES
HOUR, DAY AND MONTH INFORMATION

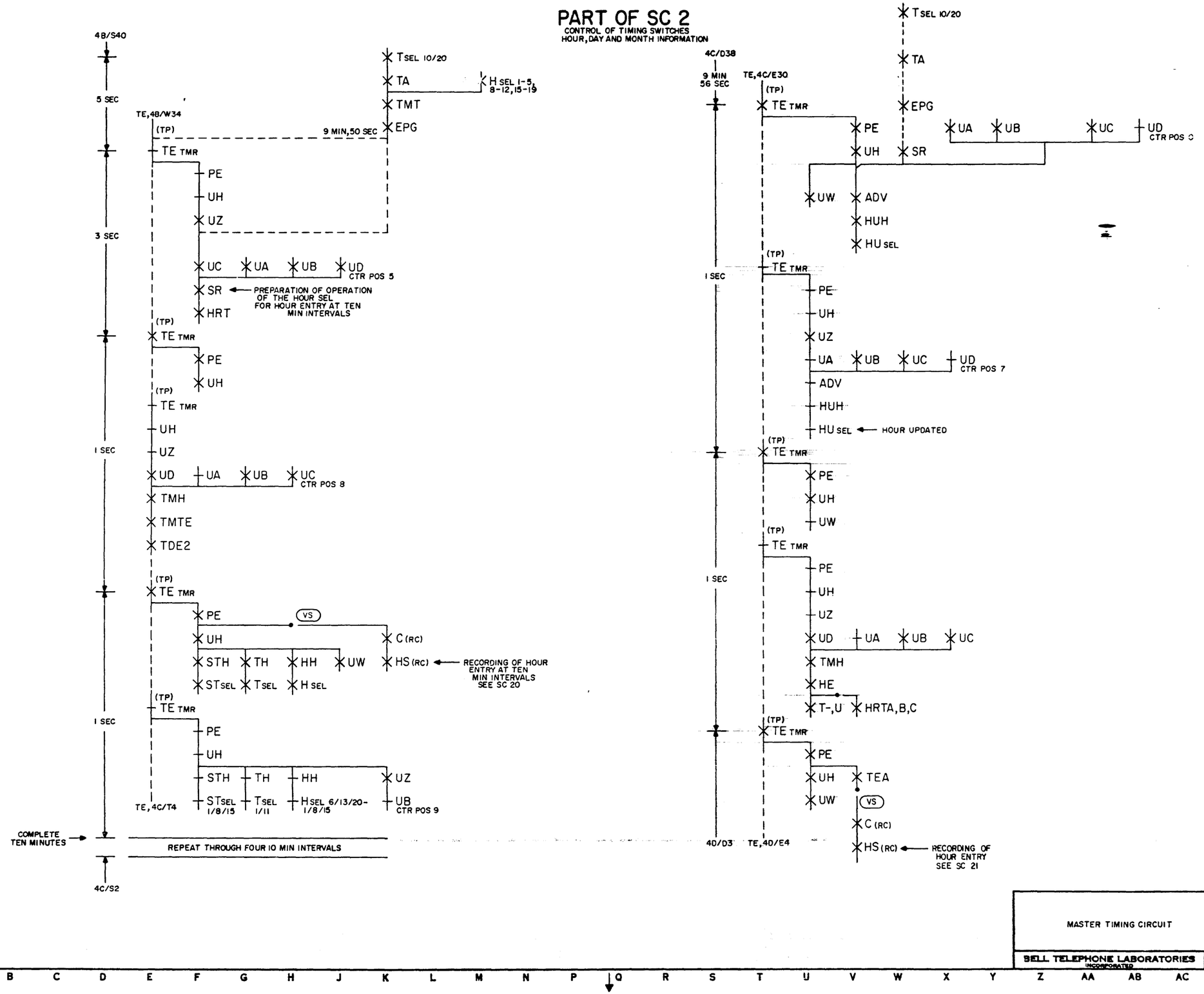


ISSUE 52B

MASTER TIMING CIRCUIT	SD-25633-01-E48
BELL TELEPHONE LABORATORIES INCORPORATED	SHEET 6S

PART OF SC 2

CONTROL OF TIMING SWITCHES
HOUR, DAY AND MONTH INFORMATION

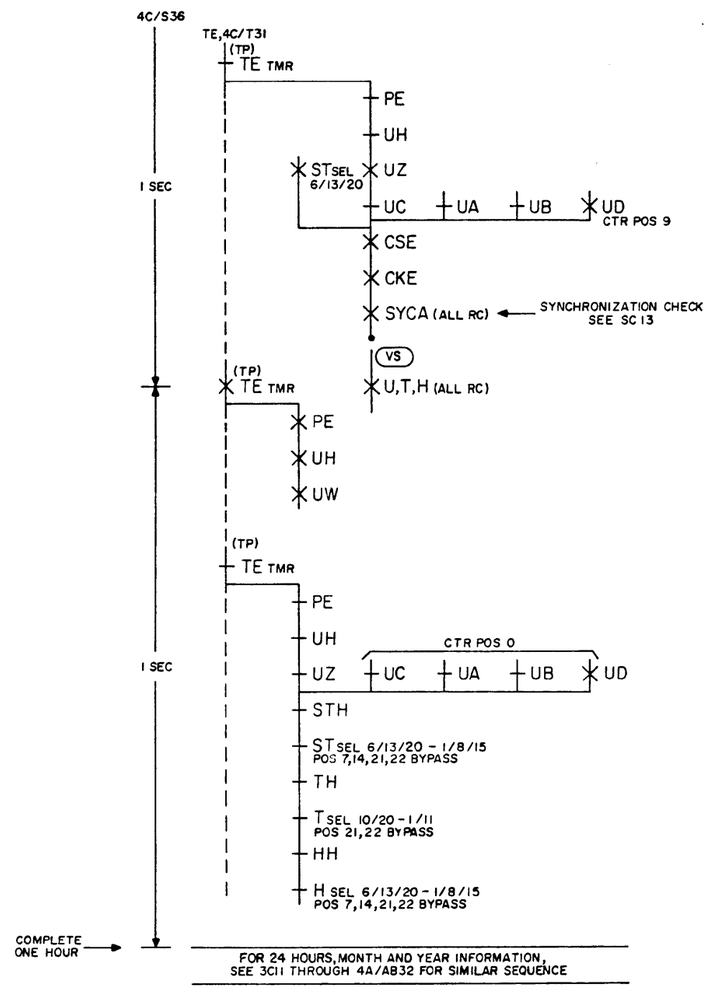


ISSUE 55B

MASTER TIMING CIRCUIT	SD-25633-01-E4C
BELL TELEPHONE LABORATORIES INCORPORATED	SHT NO 6S

PART OF SC 2

CONTROL OF TIMING SWITCHES
HOUR, DAY AND MONTH INFORMATION



ISSUE 55B

MASTER TIMING CIRCUIT

BELL TELEPHONE LABORATORIES INCORPORATED

SHEET NO. 6S

SD-25633-01-E4D

BRUNING 44-131 24092

PART OF SC 3

RECORDING OR HOURLY ENTRY
(WY) SIX SECOND TIMING ACCURACY
(THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WITH OPTION VR PROVIDED SINCE RELAY C (RC) IS DISABLED BY RECORDER OPTION UF.)

(N) MASTER TIMER (MFR DISC.)

(TP) TE TMR
PE
UH — TEA — TOB
C (RC EVEN) — C (RC ODD)
U SEL — UH (RC)
CA (RC)
U SEL (RC)
(TP) TE TMR
PE
UH — T SEL ARCH 10/20 — TEA — TOB
C (RC EVEN) — C (RC ODD)
U SEL — TA — UH (RC)
CSE — SR
TTE — HRT — PRE — U SEL (RC)
HE — (CH) TE TMR — CA (RC)
T 2/5 E — U 2/5 E — ECH, OCH
CKE — HT 2/5 — HU 2/5 — ADV
CE — CEI — SYC (ALL RC) — TL — UL — HUH
HU, HT, DU, DT, M SEE NOTE 2 — U, T, H SEE NOTE 2 — U, T, H (ALL RC) — HL
HU SEL
(CH) TE TMR
ECH, OCH
ADV
CKE TIMERS AND RECORDERS IN SYNCHRONIZATION
CE — CEI — SYC (ALL RC) — TL — UL — HUH
HU, HT, DU, DT, M — U, T, H — U, T, H (ALL RC) — HL
SEE NOTE 2
HU SEL
SEE NOTE 1
U 2/5 E — T 2/5 E — (TP) TE TMR
HU 2/5 — U 2/5 E — HT 2/5 — T 2/5 E — PE
HU 2/5 — HT 2/5 — UH
TH
HH — U SEL
T SEL — (TP) TE TMR
H SEL — PE
TO TEA 6W2

TIMERS AND RECORDERS OUT OF SYNCHRONIZATION
SSF — TEA — TOB
ALM — C (RC EVEN) — C (RC ODD)
UH (RC) — HS (RC) — TH (RC) — HH (RC)
CA (RC) — HP (RC) — HE
U SEL (RC) — PTO BIASED (RC) — HPA (RC) — HRI — T SEL (RC) — H SEL (RC) — T 2/5 E — U 2/5
HT 2/5 — HU 2/5
TO ON, 602

TIME PULSES 6 SEC

(TP) TE TMR — SWITCHES ADVANCED — 0.4 SEC — CONTACT CLOSED — (TP) TE TMR — 1 SEC DELAY BEFORE CLOSING CH CONTACT — (CH) TE TMR — 6 SEC — CHECKS MADE — 3.6 SEC — (CH) TE TMR — 1 SEC DELAY — (TP) TE TMR — SWITCH ADVANCED — 0.4 SEC — (TP) TE TMR — TO 6AC1

(TP) TE TMR — TO 6A01

TIME ON SELECTOR INDICATORS

H	T	U
6/13/20	10/20	9/19

(TP) TE TMR — 598 — 599 LAST STEP IN HOUR

H	T	U
6/13/20	10/20	10/20

U SEL ADVANCED

H	T	U
1/18/15	1/11	2/12

TO 6AE1

NOTES:
1. WHEN (HU) SEL RELEASES THE ($U\frac{2}{5}E$ AND $T\frac{2}{5}E$) RELAYS BROUGHT UP BY THE OLD HOUR RELEASE & A NEW SET OF ($U\frac{2}{5}E$ AND $T\frac{2}{5}E$) RELAYS OPERATE FROM THE NEW HOUR SETTING ON THE (HU AND HT) SEL THE ($T\frac{2}{5}E$) RELAYS PERFORM THIS OPERATION AT THE 10TH, 20TH AND 00 HOURS ONLY.
2. (U, T, H, HU, DT, DU AND M) RELAYS ARE OPERATED AND RELEASED IN THE ODD MASTER TIMER (THE EVEN MASTER TIMER IS IN CONTROL).

DRAWING ISSUE 310

ISSUE 55B

MASTER TIMING CIRCUIT (2)
SD-25633-01-E5
BELL TELEPHONE LABORATORIES INCORPORATED
SHEET 6S
PRINTED IN U.S.A.

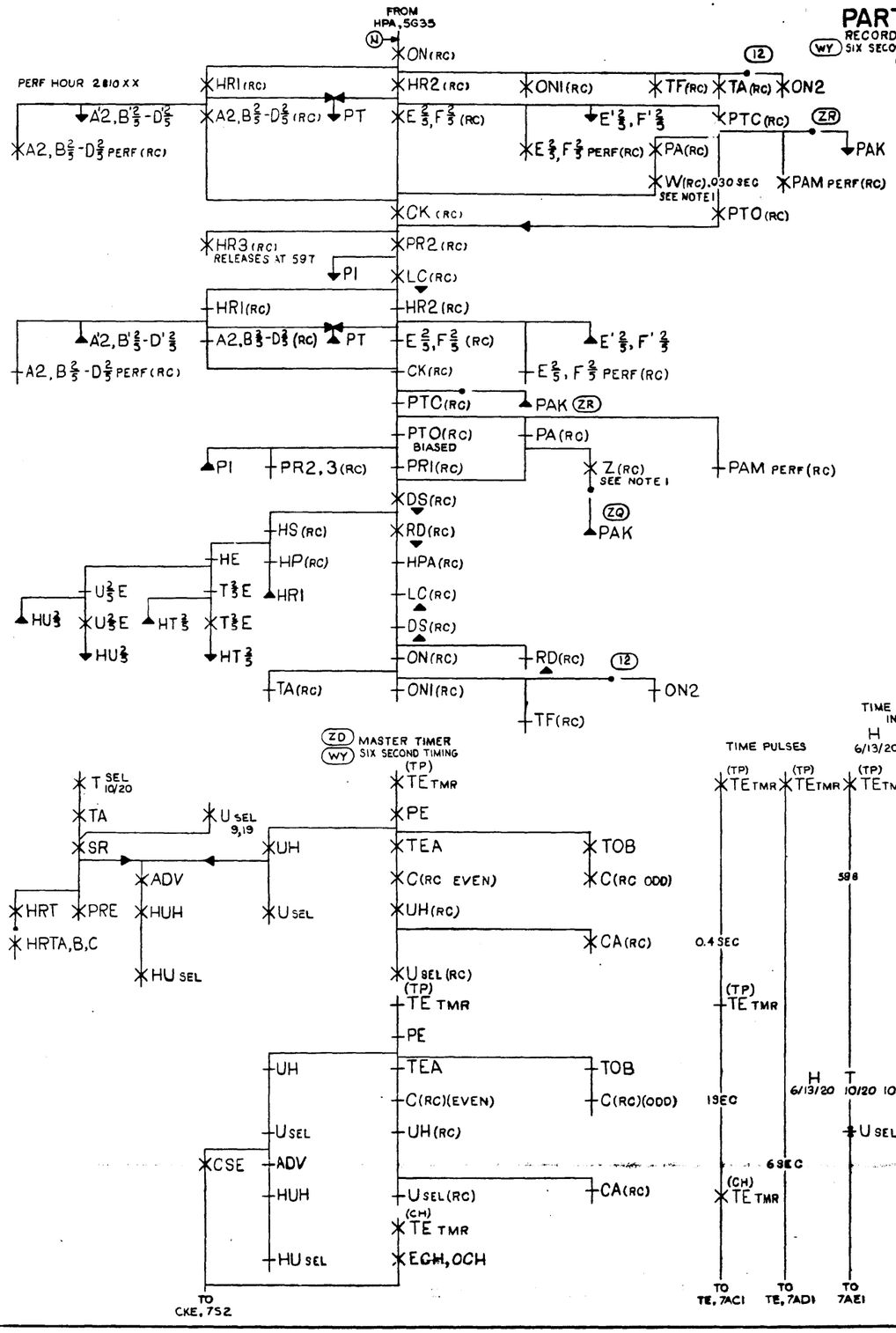
SD-25633-01-E5

PART OF SC 3

RECORDING OF HOURLY ENTRY

(WY) SIX SECOND TIMING ACCURACY

(SEE NOTE 2)



NOTES:

1. RECORDER W & Z RELAYS NORMAL AT START OF ENTRY.
2. THIS SC DOES NOT APPLY TO BOT OR CAMA-C OPERATION WITH OPTION VR PROVIDED SINCE RELAY C (RC) IS DISABLED BY RECORDER OPTION UF.

MASTER TIMING CIRCUIT (2)

SD-25633-01-E6

BELL TELEPHONE LABORATORIES INCORPORATED

65

PART OF SC 3

RECORDING OF HOURLY ENTRY
(WY) SIX SECOND TIMING ACCURACY
(SEE NOTE 4)

FROM CSE, 6D40 (ZD)

CKE
CE | CEI | SYC (ALL RC) | TL | UL
HU, HT, DU, DT, M (SEE NOTE 3) | U,T,H (SEE NOTE 3) | U,T,H (ALL RC) | HL

(CH) TE TMR
ECH, OCH

CKE - TIMERS AND RECORDERS IN SYNCHRONIZATION

CE | CEI | SYC (ALL RC) | TL | UL
HU, HT, DU, DT M | U,T,H (SEE NOTE 3) | U,T,H (ALL RC) | HL

(TP) TE TMR
PE
UH
TH
HH
USEL
TSEL
HSEL
(TP) TE TMR
PE
UH
TEA
C (RC EVEN)
UH (RC)
USEL (RC)
(CH) TE TMR
ECH, OCH
(CH) TE TMR
(TP) TE TMR
PE
UH
TEA
C (RC EVEN)
UH (RC)
USEL (RC)
CA (RC)
TOB
C (RC ODD)
CA (RC)
(CH) TE TMR
ECH, OCH
(TP) TE TMR
PE
UH
TEA
C (RC EVEN)
UH (RC)
USEL (RC)
CA (RC)
TOB
C (RC ODD)
USEL
HRT
HRTA, B, C

FROM TE, 6M40
3.6 SEC
(CH) TE TMR
1 SEC
(TP) TE TMR
0.4 SEC
(TP) TE TMR
1 SEC
(CH) TE TMR
3.6 SEC
(CH) TE TMR
1 SEC
(TP) TE TMR
0.4 SEC
(TP) TE TMR

FROM 6N40
(TP) TE TMR

FROM U, 6P40
599
H T U 1/8/15 1/11 1/11
6 SEC
U,T,HSEL
H T U 1/8/15 1/11 2/12
USEL
001

TIMERS AND RECORDERS OUT OF SYNCHRONIZATION
SSF
ALM
SSF LP
UH (RC)
CA (RC)
USEL (RC)
PTO (RC) BIASED
PERF. HOUR 2810 XX
A2, B$\frac{2}{5}$ - D$\frac{2}{5}$ PERF (RC)
HR3 (RC) RELEASES AT 597
PI
PR2, 3 (RC)
A2, B$\frac{2}{5}$ - D$\frac{2}{5}$ PERF (RC)
PAK
TEA
C (RC EVEN)
HS (RC)
HP (RC)
HPA (RC)
ON (RC)
HR1 (RC)
HR2 (RC)
ONI (RC)
TE (RC)
TA (RC)
A2, B$\frac{2}{5}$ - D$\frac{2}{5}$ (RC)
PT
E$\frac{2}{5}$, F$\frac{2}{5}$ (RC)
E$\frac{2}{5}$, F$\frac{2}{5}$ PERF (RC)
PA (RC)
W (RC) SEE NOTE 1
.030 SEC
PTO (RC)
PTC (RC)
CK (RC)
PR2 (RC)
LC (RC)
HR1 (RC)
HR2 (RC)
A2, B$\frac{2}{5}$ - D$\frac{2}{5}$ (RC)
PT
E$\frac{2}{5}$, F$\frac{2}{5}$ (RC)
E'$\frac{2}{5}$, F'$\frac{2}{5}$
A2, B$\frac{2}{5}$ - D$\frac{2}{5}$ PERF (RC)
CK (RC)
E$\frac{2}{5}$, F$\frac{2}{5}$ PERF (RC)
PAK
PTC (RC)
PTO (RC) BIASED
PRI
PA (RC)
SEE NOTE 1
Z (RC)
PAM PERF (RC)
PI
PR2, 3 (RC)
DS (RC)
RD (RC)
HPA (RC)
LC (RC)
DS (RC)
ON (RC)
TA (RC)
ONI (RC)
RD (RC)
ON2 (RC)
TF (RC)
HS (RC)
HP (RC)
HRI
(WY) HE
T$\frac{2}{5}$E
HT$\frac{2}{5}$
U$\frac{2}{5}$
HU$\frac{2}{5}$
SEE NOTE 2
T$\frac{2}{5}$E
HT$\frac{2}{5}$
U$\frac{2}{5}$E
HU$\frac{2}{5}$
PAM PERF (RC)
(ZR) PAK
(12) ON2
TH
TSEL
TA
HH
HSEL
HH
HSEL
SR
PRE
CSE
HH (RC)
HSEL (RC)
HH (RC)
HSEL (RC)
HH (RC)
HSEL (RC)
TH (RC)
TSEL (RC)

NOTES:
1. RECORDER W AND Z RELAYS NORMAL AT START OF ENTRY.
2. WHEN SEL HU RELEASES (U$\frac{2}{5}$E AND T$\frac{2}{5}$E) RELAYS BROUGHT UP BY THE OLD HOUR RELEASES A NEW SET OF (U$\frac{2}{5}$E AND T-E) RELAYS OPERATE FROM THE NEW HOUR SETTING ON THE HU AND HT SEL. THE (T$\frac{2}{5}$E) RELAYS PERFORM THIS OPERATION AT THE 10TH, 20TH AND 00 HOURS ONLY.
3. U,T,H,HU,DU,DT AND M RELAYS ARE OPERATED AND RELEASED IN THE ODD MASTER TIMER (THE EVEN MASTER TIMER IS IN CONTROL).
4. THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WITH OPTION VR PROVIDED SINCE RELAY C (RC) IS DISABLED BY RECORDER OPTION UF.

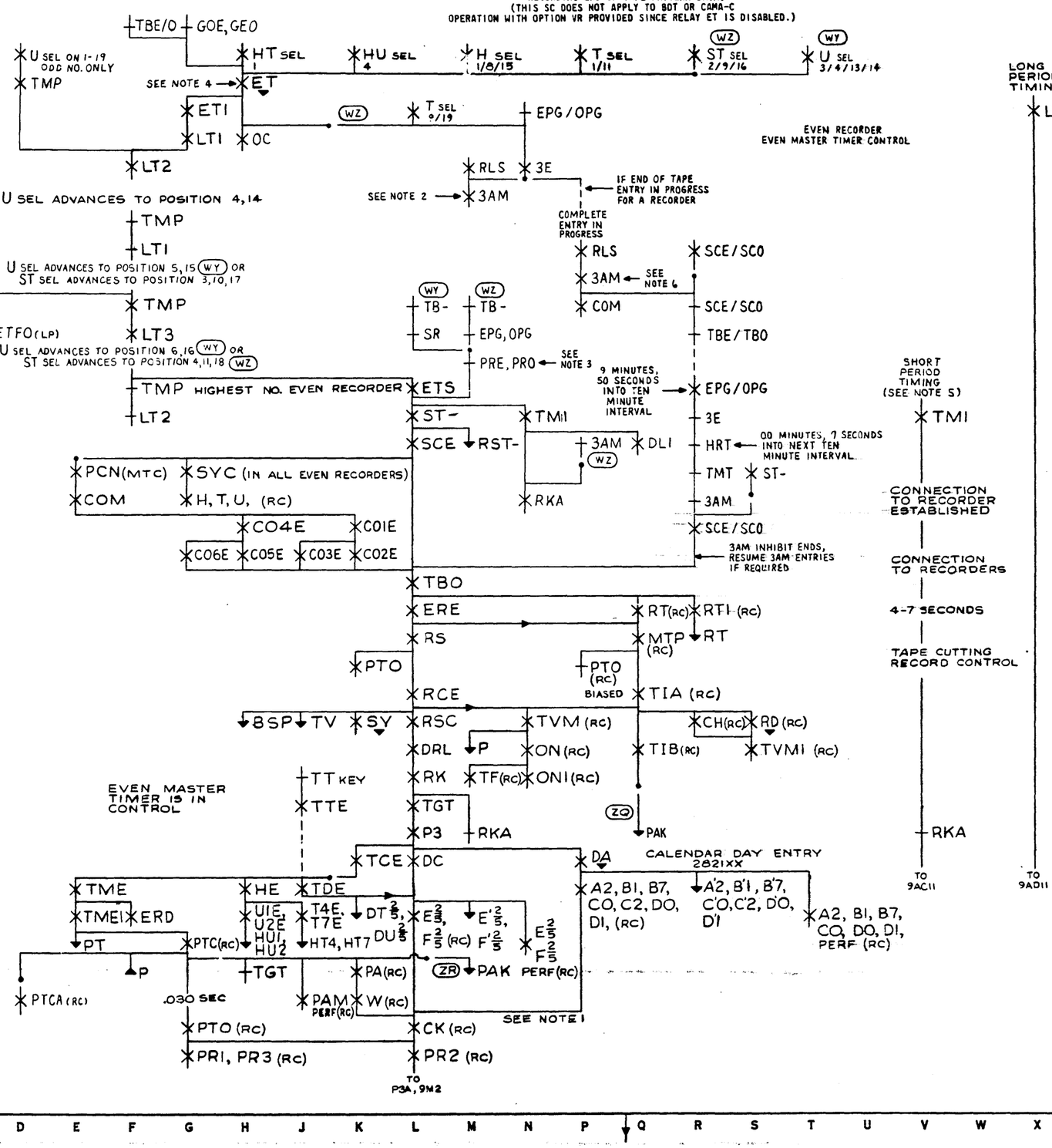
DRAWING ISSUE
31D NP 7W1 4W2

ISSUE 55B

MASTER TIMING CIRCUIT
(2) SD-25633-01-E7
BELL TELEPHONE LABORATORIES INCORPORATED
6S

PART OF SC 4

RECORDING END OF TAPE PATTERN 3A.M.
(THIS SC DOES NOT APPLY TO BOT OR CAMA-C
OPERATION WITH OPTION VR PROVIDED SINCE RELAY ET IS DISABLED.)



NOTES:

1. THE (CK) RELAY OPERATES SLIGHTLY IN ADVANCE OF THE (PTO) RELAY.
2. FOR ROUTINE TEST OF END OF TAPE WITH ONE SECOND TIMING, OPTION WZ: IF PLUG IS INSERTED IN (RET) JACK AT LEAST 2 MINUTES BEFORE A TEN MINUTE ENTRY, THE 3AM INHIBIT FEATURE WILL BE FUNCTIONAL IF THE 3AM ENTRY IS NOT COMPLETED FOR ALL RECORDERS. IF PLUG IS INSERTED DURING LAST MINUTE OF A TEN MINUTE PERIOD, 3AM INHIBIT FEATURE WILL NOT OPERATE. IT IS RECOMMENDED TO INSERT PLUG FOLLOWING AN HOUR ENTRY OR FOLLOWING ANY TEN MINUTE ENTRY.
3. ASSUME 3AM INHIBIT FEATURE, OPTION WZ, HAS ENDED FOLLOWING TEN MINUTE ENTRY.
4. WITH OPTION WZ, (ET) OPERATES TEN SECONDS AFTER (3AM) FOLLOWING TEN MINUTE PERFORATION.
5. WITH OPTION WZ, SHORT PERIOD TIMING IS CANCELED UNTIL END OF TAPE INHIBIT RELEASES.
6. WITH OPTION WZ, RELAY (3AM) OPERATED INHIBITS OPERATION OF (SCE/SCO) RELAY TO PREVENT NEW END OF TAPE ENTRY IF ALL RECORDER 3AM ENTRIES ARE NOT COMPLETED UNTIL TEN MINUTE ENTRY IS RECORDED.

DRAWING ISSUE
31 D JN 7M 4E

ISSUE 55B

MASTER TIMING CIRCUIT (2)
SD-25633-01-E8
BELL TELEPHONE LABORATORIES INCORPORATED
SHEET 65

PART OF SC 4

RECORDING OF END OF TAPE PATTERN 3A.M.
(THIS SC DOES NOT APPLY TO BOT OR CAMA-C
OPERATION WITH OPTION VR PROVIDED SINCE RELAY ET IS DISABLED.)

FROM PR2, BL 40

P3A → P1
DC → DA
E 2/5, F 2/5 (RC) → A2,B1,B7,C0, C2,D0,D1 (RC); A'2,B'1,B'7,C'0, C2,D0,D'1; A2,B1,B7,C0,C2, D0,D1 PERF (RC)
E'2/5, F'2/5 PERF (RC) (ZR) PAK
CK (RC)
PTC (RC) → PT
PTO BIASED (RC) → PAM PERF (RC); PA (RC); Z (RC) SEE NOTE 1 (ZQ) PAK; PTCA (RC)
PI; PR2,PR3 (RC); PR1 (RC) → P
P4
(WZ) 2812 XX (WY) 2811 XX
END OF TAPE HOUR ENTRY → HR; A'2,B'1,B'7,C'0, C'1,D'0,D'1; A2,B1,B7,C0,C1, D0,D1, PERF (RC)
HRE → A2,B1,B7,C0, C1,D0,D1 (RC)
HRN → E 2/5, F 2/5 (RC); E'2/5, F'2/5; E 2/5, F 2/5 PERF (RC)
PT; PTC (RC); P; PA (RC); W (RC); .030 SEC; PTCA (RC); PAM PERF (RC)
PAC PERF (RC); KD (RC)
PAK; CK (RC) SEE NOTE 2 → PTO (RC)
PRI (RC); PR3 (RC); PR2 (RC)
P4A → PI
PAC PERF (RC); HRE; HRN
A'2,B'1,B'7,C'0, C'1,D'0,D'1; A2,B1,B7,C0,C1, D0,D1 (RC); E 2/5, F 2/5 (RC); E'2/5, F'2/5
A2,B1,B7,C0,C1,D0,D1, PERF,(RC); CK (RC); E 2/5, F 2/5 PERF (RC)
KD (RC) (ZQ) PAK; PTC (RC); PT (ZR) PAK
PA (RC); PTO BIASED (RC)
PAM PERF (RC); Z (RC) (ZQ) PAK; PRI (RC); PR2,PR3 (RC) P1; PTCA (RC)
P6 → P
(W2) 2806 XX (WY) 2805 XX
RECORDER NO. ENTRY → A'2,B'1,B'7, C'4,C'7,D'4; A2,B1,B7,C4, C7,D4 PERF (RC)
RN; RN (RC)
A2,B1,B7,C4, C7,D4 (RC) (ZR) PAK; PT; PTC (RC); P
D1,E 2/5, F 2/5 (RC); D'1,E'2/5, F'2/5; D1,E 2/5, F 2/5 PERF (RC)
PA (RC); W (RC); .030 SEC; PTCA (RC); PAM PERF (RC)
SEE NOTE 2
CK (RC) → PTO (RC)
PRI, PR3 (RC); PR2 (RC)
P6A → PI
RN; RN (RC)
A'2,B'1,B'7, C'4,C'7,D4; A2,B1,B7,C4, C7,D4 (RC); D1,E 2/5, F 2/5 (RC); D'1,E'2/5, F'2/5
A2,B1,B7,C4,C7, D4 PERF (RC); CK (RC); D1,E 2/5, F 2/5 PERF (RC)
(ZR) PAK; PTC (RC) → PT
PTO BIASED (RC)
PTCA (RC); PAM PERF (RC); Z (RC) (ZQ) PAK; PRI (RC); PR2,PR3 (RC) P1
P7 → P
TO MO,ION2

FROM RKA, 8V32
FROM 8X32
TIMING FROM RECORDER SEIZURE TO START OF SPLICE ENTRY 4-7 SEC; 8-31 SEC
TO 10Z2
TO 10AA2

NOTES:

1. (W) AND (Z) RELAY IN THE RECORDER ASSUMED NORMAL AT START OF ENTRY.
2. THE (CK) RELAY OPERATES SLIGHTLY IN ADVANCE OF THE (PTO) RELAY.

DRAWING ISSUE
3ID

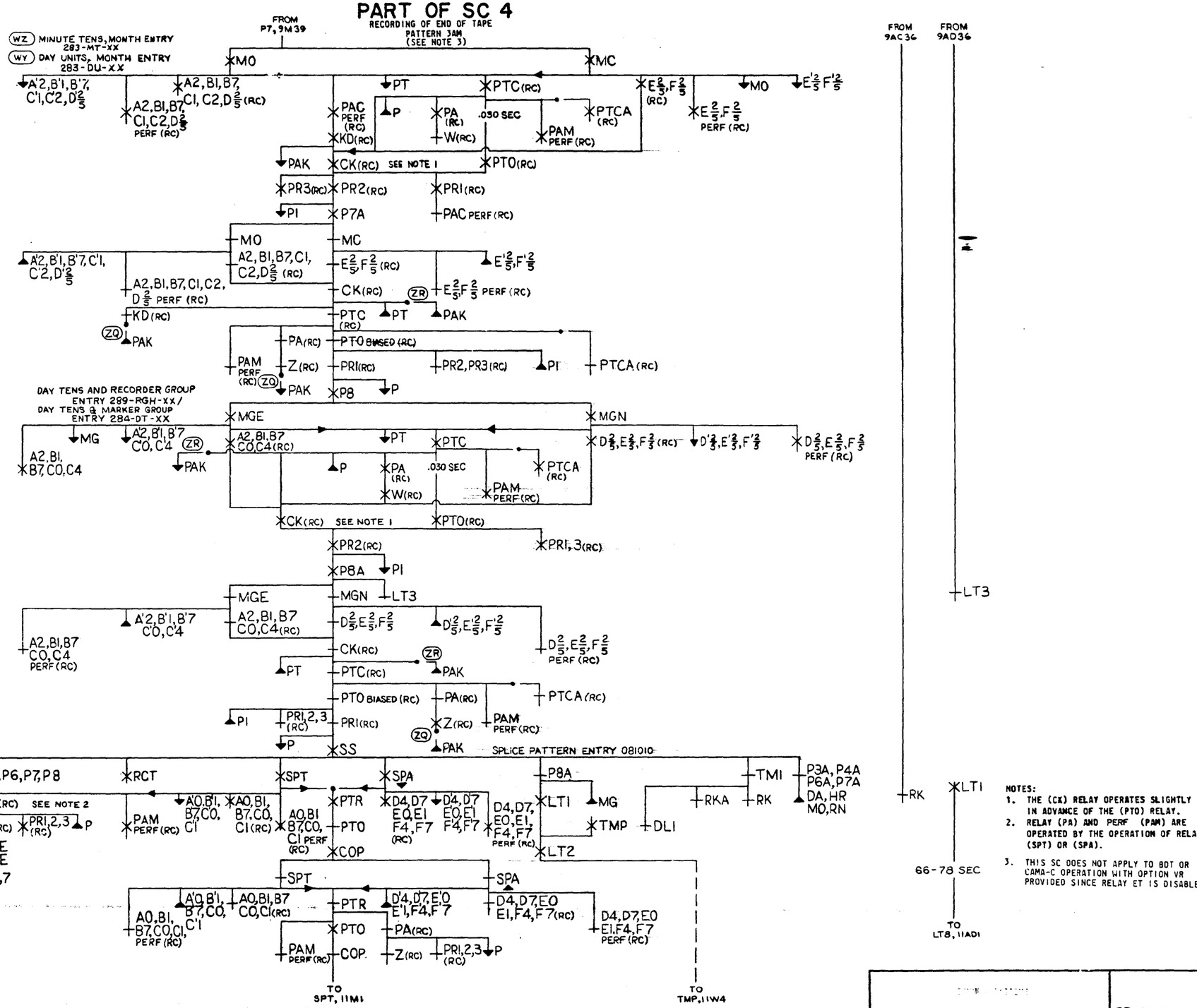
ISSUE 55B

MASTER TIMING CIRCUIT (2) SD-25633-01-E9
BELL TELEPHONE LABORATORIES INCORPORATED
SHEET NO. 65
PRINTED IN U.S.A.

SD-25633-01-E9

PART OF SC 4

RECORDING OF END OF TAPE
PATTERN 3AM
(SEE NOTE 3)



NOTES:
1. THE (CK) RELAY OPERATES SLIGHTLY IN ADVANCE OF THE (PTO) RELAY.
2. RELAY (PA) AND PERF (PAM) ARE OPERATED BY THE OPERATION OF RELAY (SPT) OR (SPA).
3. THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WITH OPTION VR PROVIDED SINCE RELAY ET IS DISABLED.

DRAWING ISSUE 1
30 LOG ONLY AND

ISSUE 55B

MASTER TIMING CIRCUIT (2)

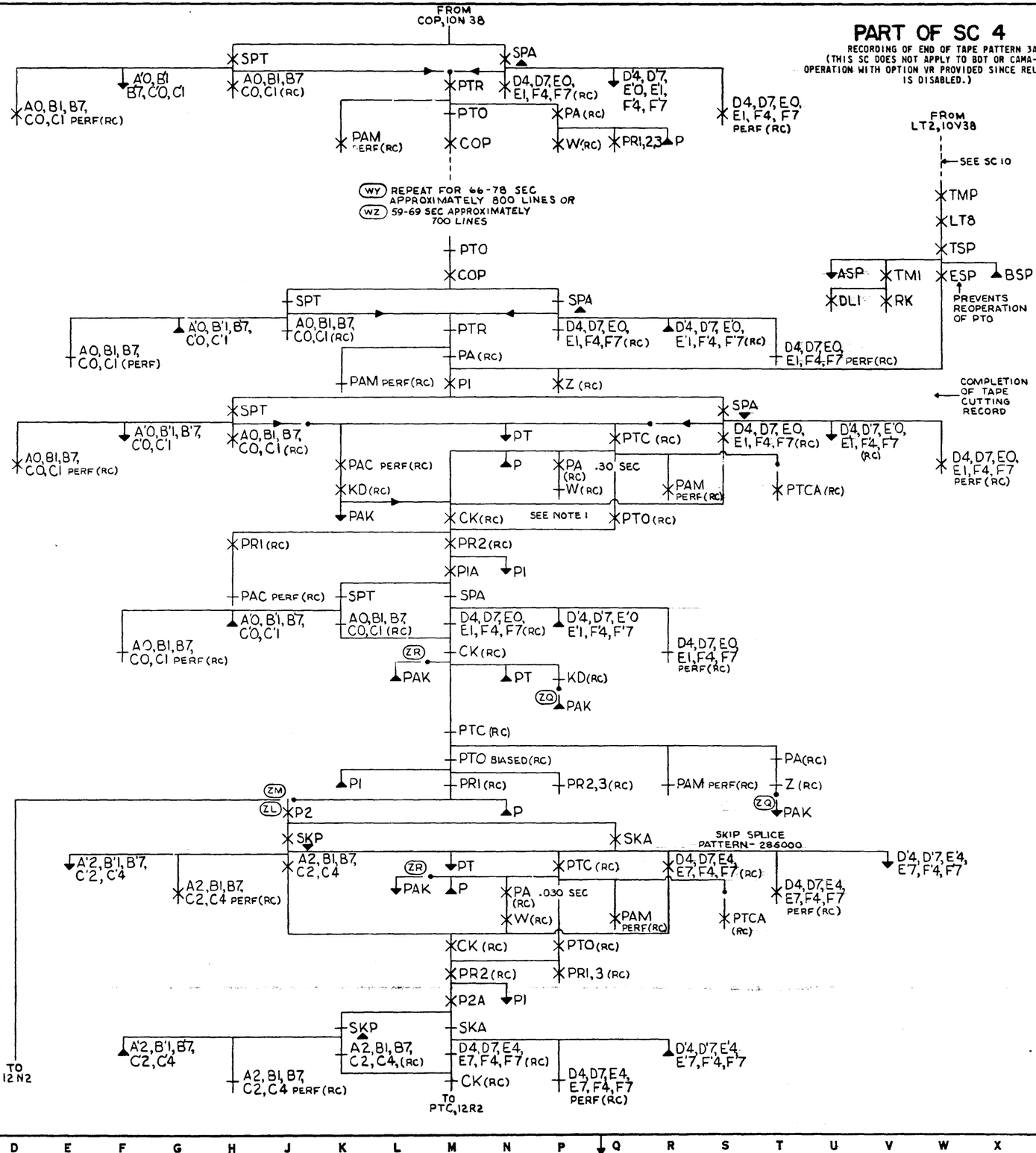
SD-25633-01-E10

BELL TELEPHONE LABORATORIES INCORPORATED

6S

PART OF SC 4

RECORDING OF END OF TAPE PATTERN 3AM
(THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WITH OPTION VR PROVIDED SINCE RELAY ET IS DISABLED.)



NOTE:
1. THE (CK) RELAY OPERATES SLIGHTLY IN ADVANCE OF THE (PTO) RELAY.

DRAWING ISSUE
31D D.S. F.M. AND

ISSUE 55B

MASTER TIMING CIRCUIT (2) SD-25633-01-E11

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-E11

PART OF SC 4

RECORDING OF END OF TAPE PATTERN 3AM
(SEE NOTE 1)

FROM 11D39

FROM CK,11M39

PT
PTC(RC)
(ZR) PAK
PTO BIASED(RC)
PA(RC)
PAM PERF(RC)
PR1(RC)
PR2
PR3(RC)
P1
P
Z(RC)
(ZQ) PAK
PTCA(RC)
(ZL)
(ZM)
TGT
P3

FROM 11AC37
4-7 SEC

FROM 11AD37
LT8

REPEAT FIRST FIVE LINES OF 3AM END OF TAPE PATTERN

P8A
MGE
MGN
LT8
A'2,B'1,B'7,C'0,C'4
A2,B1,B7,C0,C4(RC)
D⅔-F⅔(RC)
D'⅔-F'⅔
A2,B1,B7,C0,C4 PERF(RC)
CK(RC)
D⅔-F⅔ PERF(RC)
(ZR) PAK
PTC(RC)
PT
KD(RC)
(ZQ) PAK
PA(RC)
PTO BIASED(RC)
PTCA (RC)
PAM(RC)
Z(RC)
(ZQ) PAK
PRI(RC)
P
PC
PR2
PR3(RC)
P1
RLS
RTI(RC)
RTI(RC)
ST- (INTERMEDIATE OR LOWEST NO. EVEN RECORDER)
RT
MTP(RC)
RT(RC)
RST-
RCE
P3
TCE
HE
TDE
DU⅔, DT⅔
CH(RC)
TVMI (RC)
P1A-P4A, P6A-P8A
SPA,SKP,DA, HR,RN,MO,MG
TME
TDE2
TMEI,TDEI
MU⅔, MT⅔
U1E
HU1
U2E
HU2
T4E
HT4
T7E
HT7
P1,P2,P4, P6-P8
TVM(RC)
P
ON(RC)
TF(RC)
ONI (RC)
SY
SD(RD)
ON2 (RC)
DRL
RK
TIA(RC)
MTP(RC)
TIB(RC)
(ZQ) PAK
TIA(RC)
RS
RKA
PC
RSC
SS
RLS
ST- (HIGHEST NO. EVEN RECORDER)
RST-
RTI(RC)
RT
TMI
COP
TSP
RS
RKA
ASP
ESP
RCT
PTO
RCE
TO RSC,13R5

RK
RKA
4-7 SEC
RKA

NOTES:
1. THIS SC DOES NOT APPLY TO BOT OR CAMA-C OPERATION WITH OPTION VR PROVIDED SINCE RELAY ET IS DISABLED.

DRAWING ISSUE
3ID | MPT TM AMC

ISSUE 558

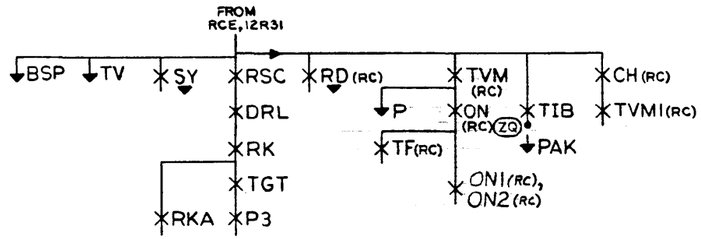
MASTER TIMING CIRCUIT (2) SD-25633-01-E12

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-E12

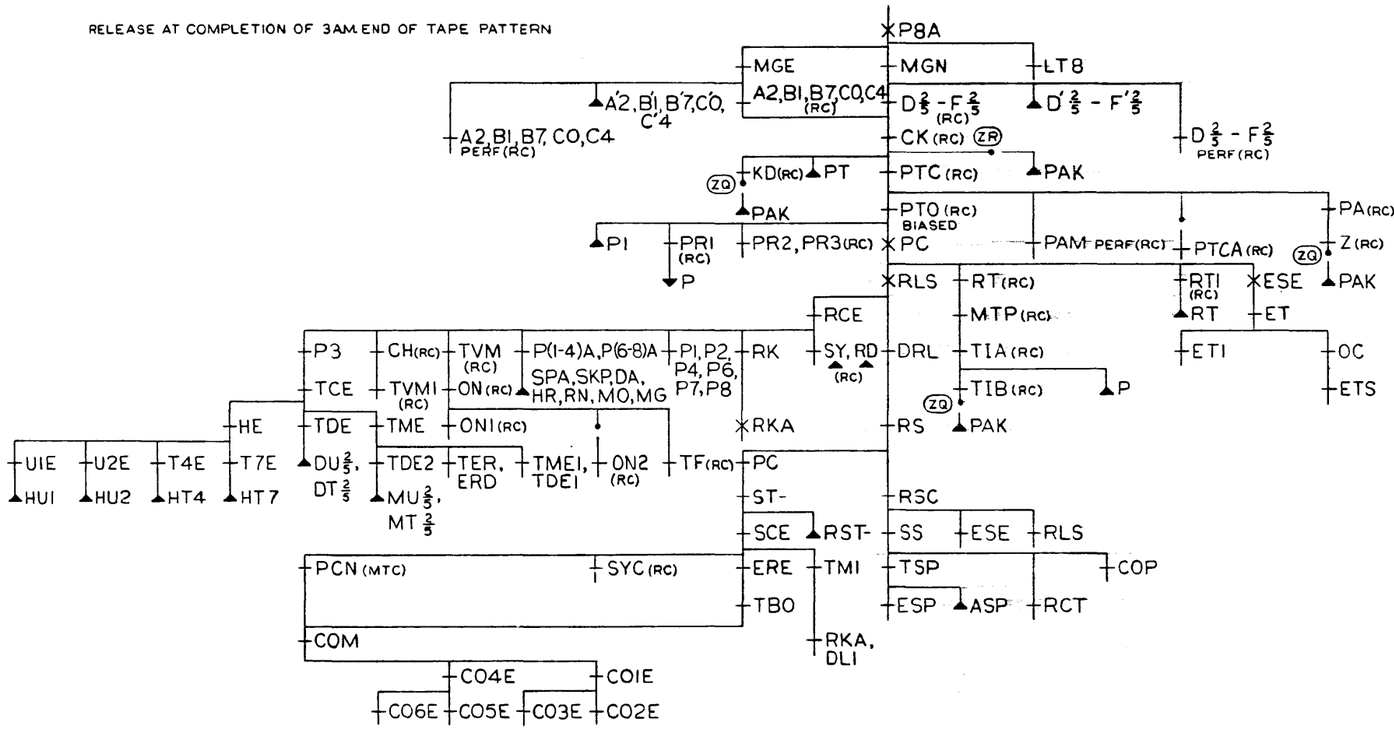
PART OF SC 4

RECORDING OF END OF TAPE PATTERN 3A.M.
(THIS SC DOES NOT APPLY TO BOT OR CAMA-C OPERATION WITH OPTION VR PROVIDED SINCE RELAY ET IS DISABLED.)



REPEAT COMPLETE 3AM END OF TAPE PATTERNS FOR ALL INTERMEDIATE AND LOWEST NO. EVEN RECORDER

RELEASE AT COMPLETION OF 3AM END OF TAPE PATTERN



DRAWING ISSUE 30 DG TM-1 and 2

ISSUE 55B

MASTER TIMING CIRCUIT (2)

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-E13

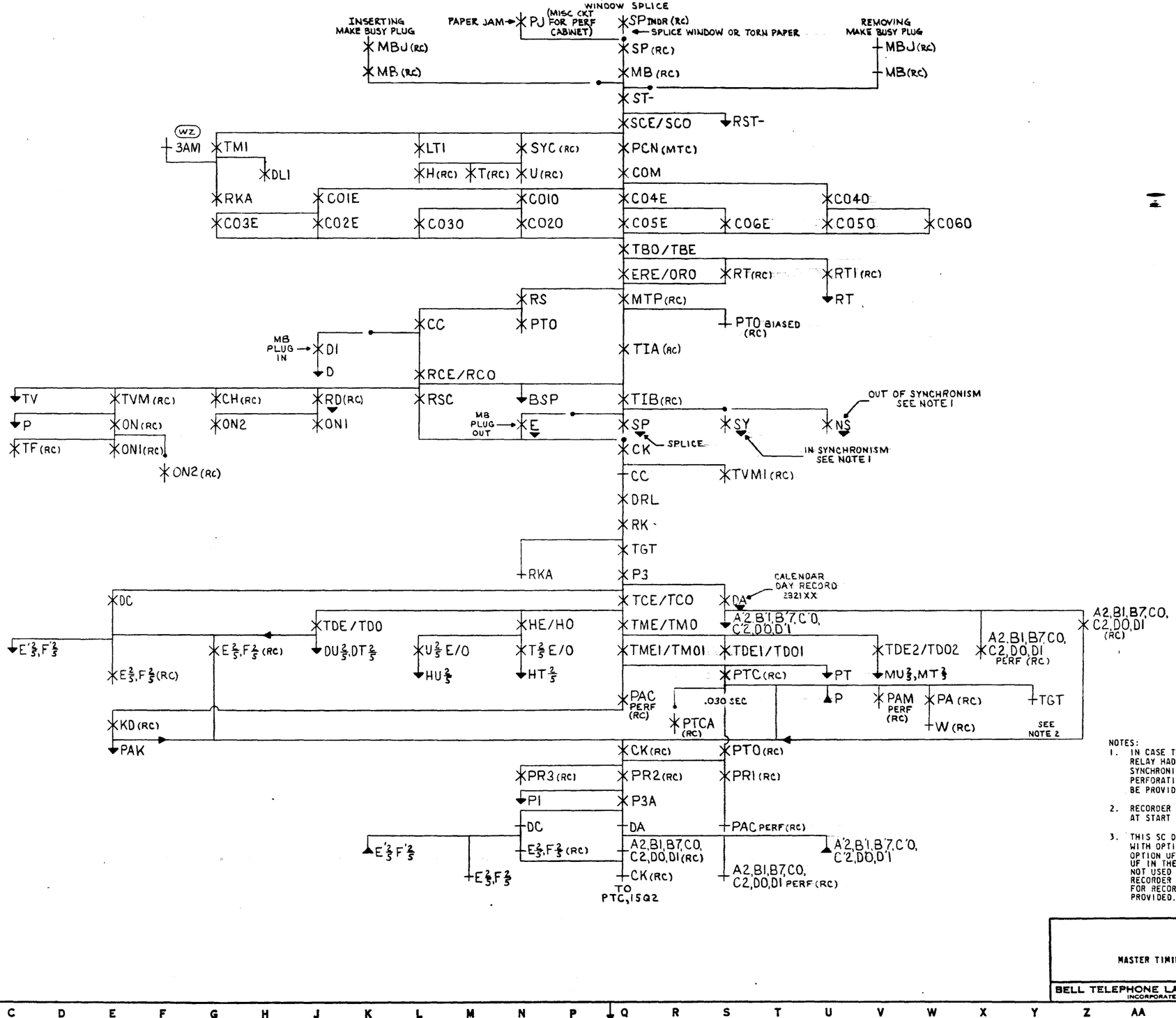
PROJ. NOS. 6S

PRINTED IN U.S.A.

SD-25633-03

PART OF SC 5

RECORDING OF END OF TAPE PATTERN
WINDOW SPLICE OR MAKE BUSY
(SEE NOTE 3)



NOTES:
1. IN CASE THE (NS) RELAY INSTEAD OF THE (SY) RELAY HAD OPERATED, INDICATING AN OUT OF SYNCHRONISM CONDITION. A LINE (285600) PERFORATION CONTROLLED BY THE (PS) RELAY WILL BE PROVIDED.
2. RECORDER (W) AND (Z) RELAYS ASSUMED OPERATED AT START OF ENTRY.
3. THIS SC DOES NOT APPLY TO BOT OR CAMA-C OPERATION WITH OPTION VR PROVIDED IN THIS CIRCUIT AND OPTION UF PROVIDED IN THE RECORDERS. WITH OPTION UF IN THE RECORDERS, THE MASTER TIMING CIRCUIT IS NOT USED IN MAKING RECORDERS BUSY. SEE THE RECORDER AND RECORDER CONNECTOR SEQUENCE CHARTS FOR RECORDER MAKE BUSY OPERATION WITH OPTION UF PROVIDED.

DRAWING ISSUE
3ID GDL 7NL AMC

ISSUE 55B

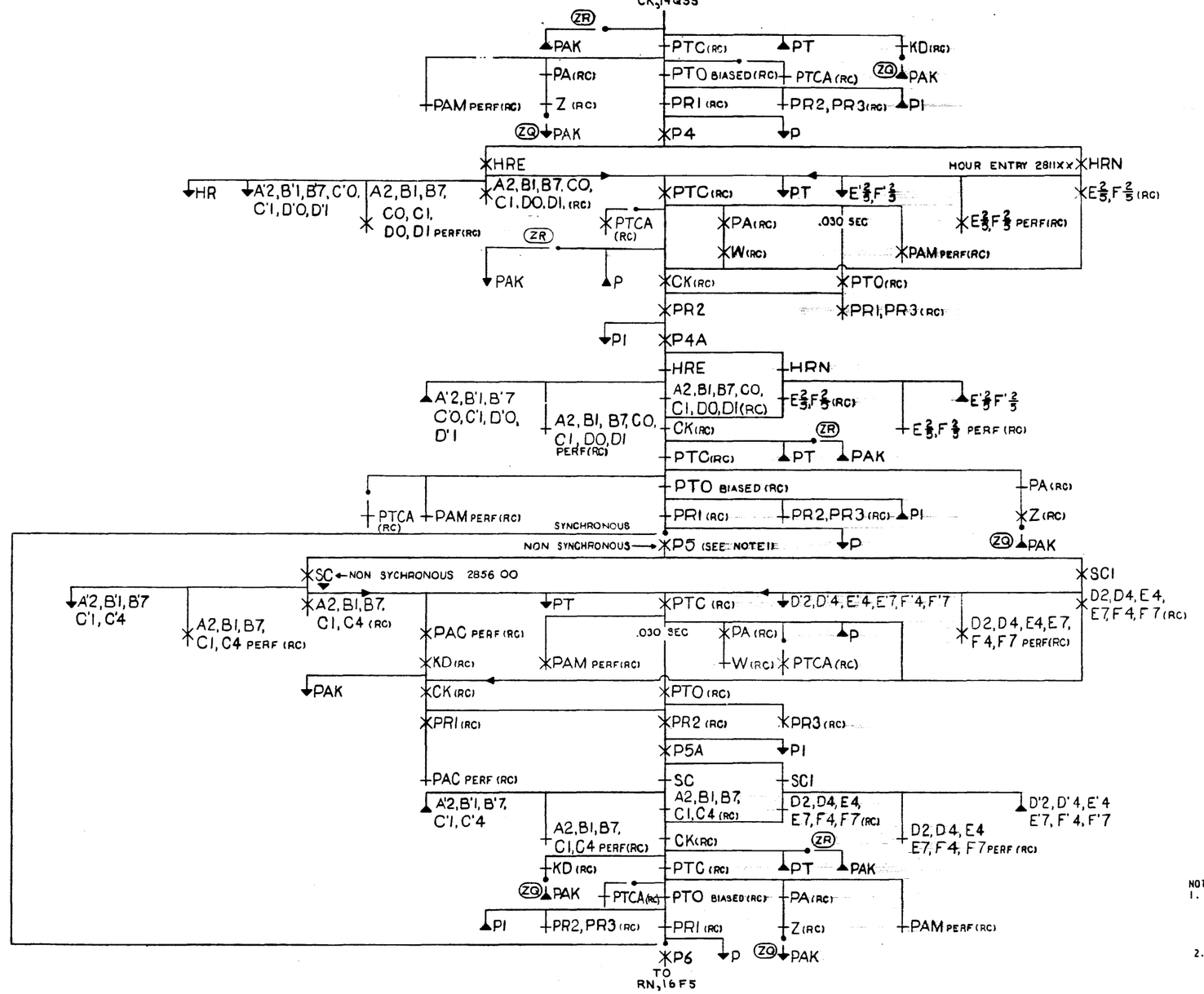
MASTER TIMING CIRCUIT (2) SD-25633-01-E14

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-E14

PART OF SC 5

RECORDING OF END OF TAPE PATTERN
WINDOW SPLICE OR MAKE BUSY
(SEE NOTE 2)
FROM
CK, 14Q35



NOTES:
1. IN CASE THE (NS) RELAY INSTEAD OF THE (SY) RELAY HAS OPERATED, INDICATING AN OUT OF SYNCHRONISM CONDITION, A LINE (285600) PERF CONTROLLED BY THE (P5) RELAY WILL BE PROVIDED.

2. THIS SC DOES NOT APPLY TO BOT OR CAMA-C OPERATION WITH OPTION VR PROVIDED IN THIS CIRCUIT AND OPTION UF PROVIDED IN THE RECORDERS. WITH OPTION UF IN THE RECORDERS, THE MASTER TIMING CIRCUIT IS NOT USED IN MAKING RECORDERS BUSY. SEE THE RECORDER AND RECORDER CONNECTOR SEQUENCE CHARTS FOR RECORDER MAKE BUSY OPERATION WITH OPTION UF PROVIDED.

DRAWING ISSUE
31D WB 7KU AMD

ISSUE
55B

MASTER TIMING CIRCUIT (2)

SD-25633-01-E15

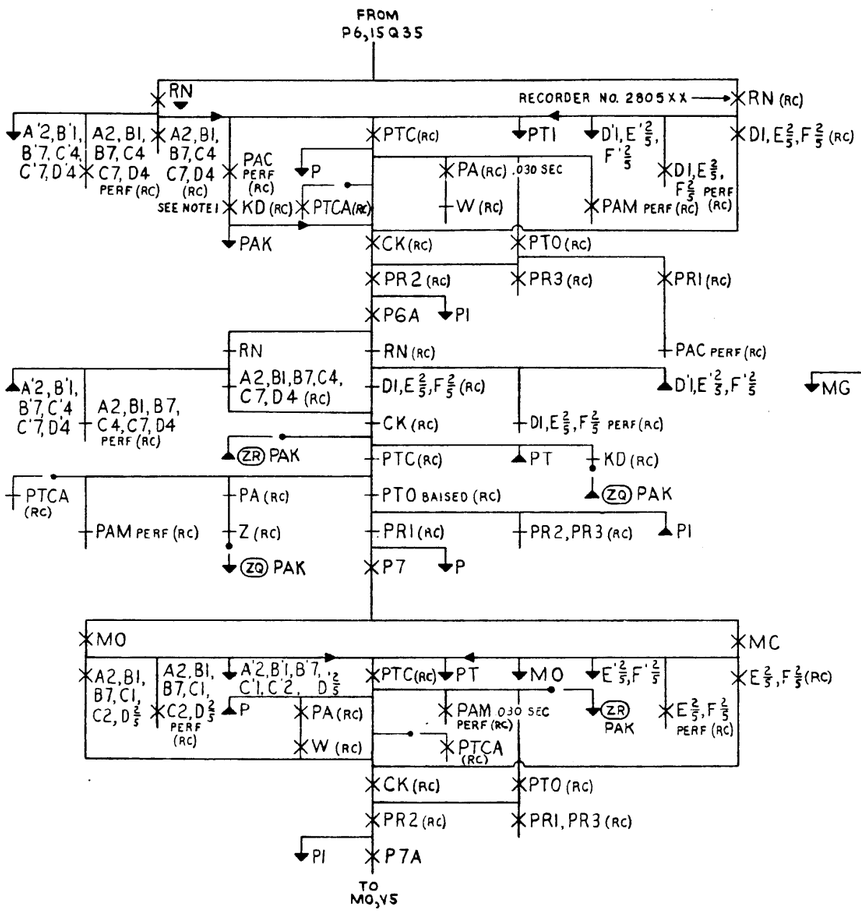
BELL TELEPHONE LABORATORIES INCORPORATED

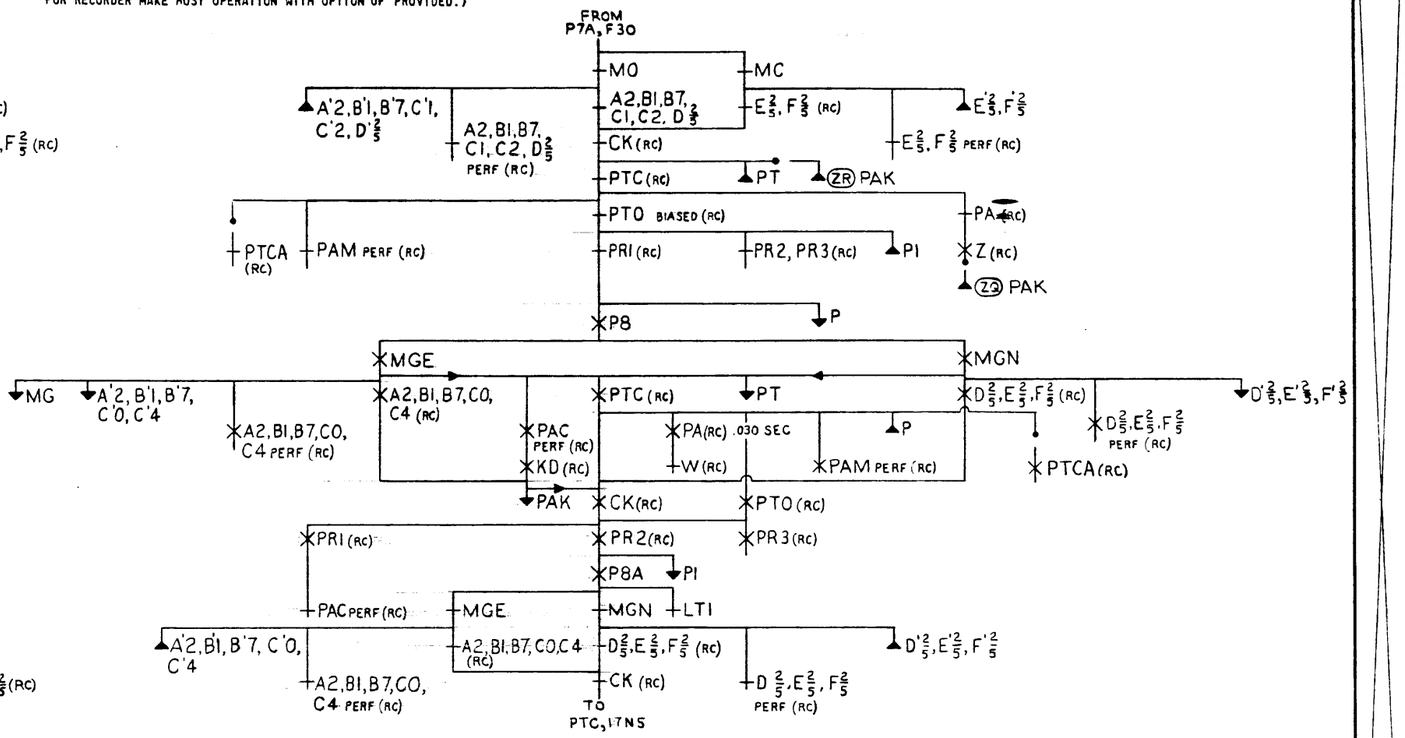
WEB SIZE 6S

PRINTED IN U.S.A.

PART OF SC 5

RECORDING OF END OF TAPE PATTERN
WINDOW SPLICE OR MAKE BUSY
(THIS SC DOES NOT APPLY TO BDT OR CAMA-C
OPERATION WITH OPTION VR PROVIDED IN THIS CIRCUIT
AND OPTION UF PROVIDED IN THE RECORDERS. WITH OPTION
UF IN THE RECORDERS, THE MASTER
TIMING CIRCUIT IS NOT USED IN MAKING RECORDERS BUSY.
SEE THE RECORDER AND RECORDER CONNECTOR SEQUENCE CHARTS
FOR RECORDER MAKE BUSY OPERATION WITH OPTION UF PROVIDED.)





NOTES:
1. AFTER RECORDER NUMBER PERFORATOR AND IN SUBSEQUENT PERFORATORS THE PAPER ADVANCE CHECK (PAC) RELAY OPERATION SHOWN ASSUMES THE RECORDER AND MASTER TIMER WERE IN SYNCHRONISM.

DRAWING ISSUE 31D

ISSUE 55B

MASTER TIMING CIRCUIT (2)

SD-25633-01-E16

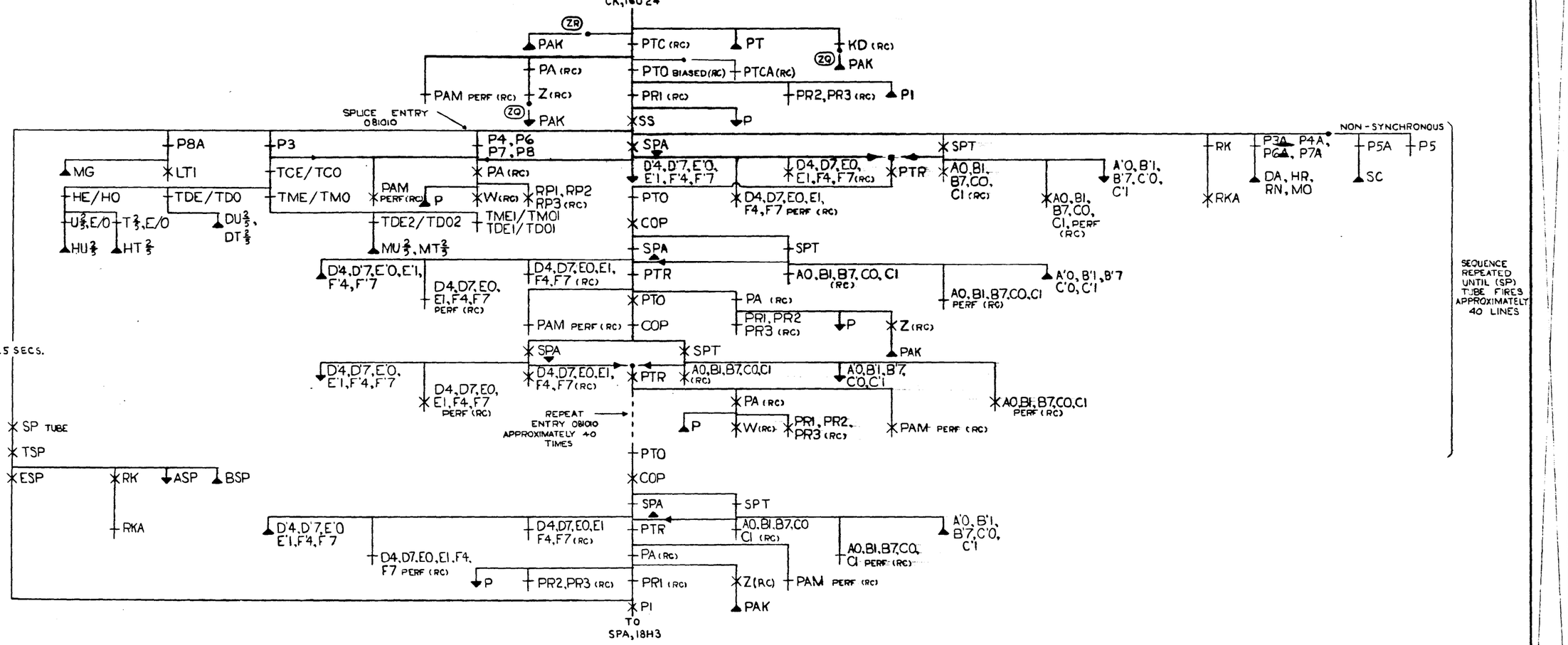
BELL TELEPHONE LABORATORIES INCORPORATED

SHEET NUMBER 65

PART OF SC 5

RECORDING OF END OF TAPE PATTERN
WINDOW SPLICE OR MAKE BUSY

(THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WITH OPTION VR PROVIDED IN THIS CIRCUIT AND OPTION UF PROVIDED IN THE RECORDERS. WITH OPTION UF IN THE RECORDERS, THE MASTER TIMING CIRCUIT IS NOT USED IN MAKING RECORDERS BUSY. SEE THE RECORDER AND RECORDER CONNECTOR SEQUENCE CHARTS FOR RECORDER MAKE BUSY OPERATION WITH OPTION UF PROVIDED.)



DRAWING ISSUE
31D JAT

ISSUE 55B

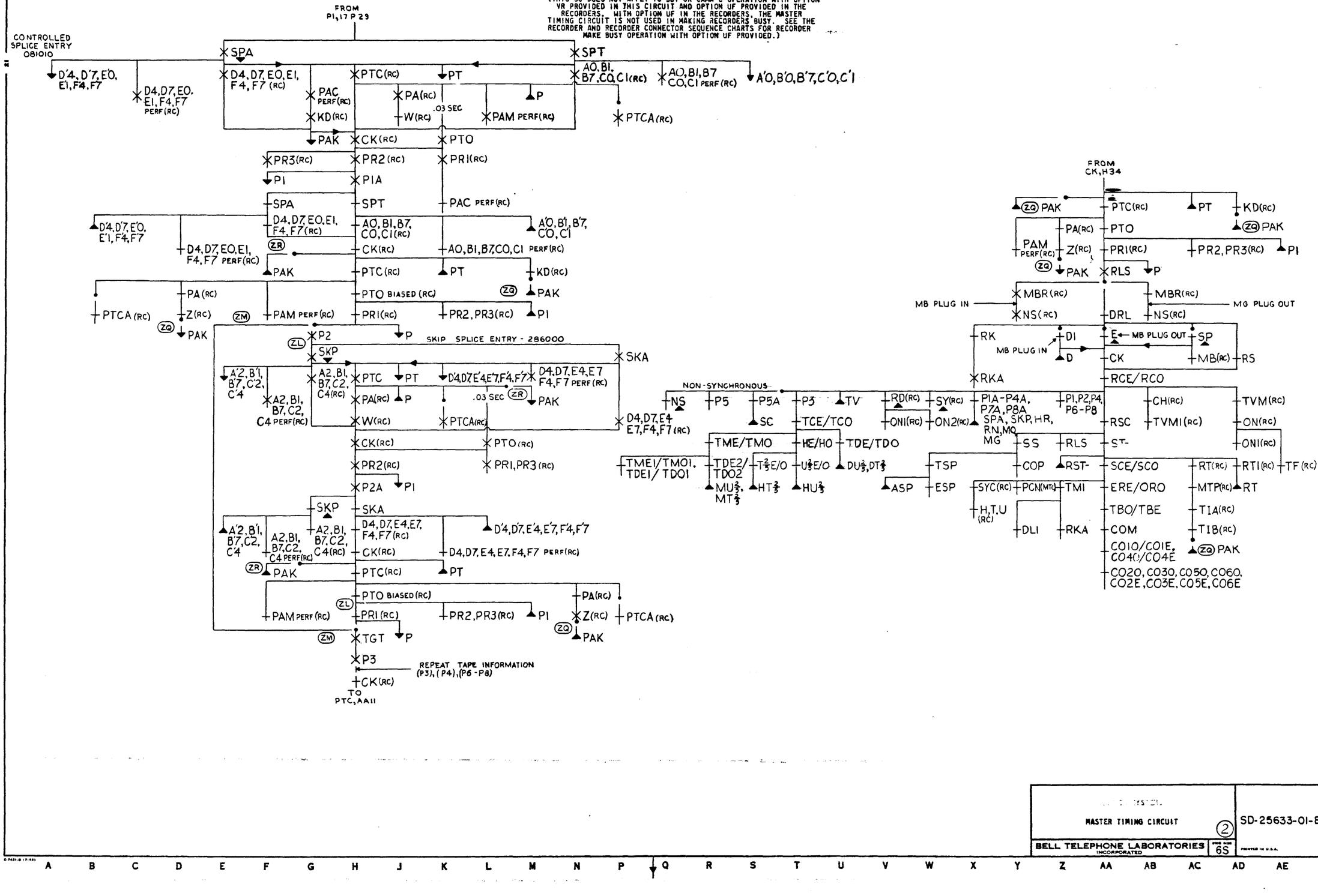
DIGITAL SYSTEMS
MASTER TIMING CIRCUIT
(2)
SD-25633-01-E17

BELL TELEPHONE LABORATORIES INCORPORATED
6S

SD-25633-01-E17

PART OF SC 5

RECORDING OF END OF TAPE PATTERN
WINDOW SPLICE OR MAKE BUSY
(THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WITH OPTION VA PROVIDED IN THIS CIRCUIT AND OPTION UF PROVIDED IN THE RECORDERS. WITH OPTION UF IN THE RECORDERS, THE MASTER TIMING CIRCUIT IS NOT USED IN MAKING RECORDERS BUSY. SEE THE RECORDER AND RECORDER CONNECTOR SEQUENCE CHARTS FOR RECORDER MAKE BUSY OPERATION WITH OPTION UF PROVIDED.)



DRAWING ISSUE 31D

ISSUE 55B

MASTER TIMING CIRCUIT (2)

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-E18

SD-25633-01-E18

PART OF SC 6

TIME OUT FAILURE TO COMPLETE END OF TAPE RECORD (SEE NOTE 4)

ST- / SCE/SCO / RST- / SYC (RC) / PCN (MTC) / COM / C01E C01O C04E C040 / C03E C02E C030 C020 C05E C06E C050 C060 / TBO/TBE / RT1 (RC) / RT / ERE/ORO / RT (RC) / RS / MTP (RC) / PTO / PTO (RC) BIASED / RCE/RCO / TIA (RC) / CH (RC) RD (RC) TVM (RC) RSC SY BSP, TV SEE NOTE 3 / TVM1 (RC) P ON (RC) DRL ZQ TIB (RC) / ON2 (RC) TF (RC) ONI (RC) RK (FAILS TO OPERATE) PAK / TM2 / TM3 RKO / DLR RK / DL1 RKA / TMR TM2 TM TUBE / PCN (MTC) TPE/TPO (MTC) / MTE/MTO (MTC) / STR1 (TRCT) / STR2 (TRCT) STR (TRC) / MC (TRCT) MC (TRC) / MCR (TRCT) MC (TR) / TRC (TRCT) TRC1 (TR) / TRC (MTC) TRC (MTC) / RR (MTC) TRC2 RT (MTC) / TTIB (RC) TIB / TPE/TPO CKR / MTE/MTO LCI / TO LC2, U2

TAKE TROUBLE RECORD

TMI WZ 3AM / DLI RKA / 4-7 SEC / TM TUBE

FROM LC1, E34

LC2 LC3 / TMI TGT / RKO TMR TM3 P3 / PCN (MTC) CKR TIB DLR TCE/TCO / HE/HO / U 2/5, E/O HU 2/5 / T 2/5, E/O HT 2/5 / TDE2, TD02 TDE1/TD01 / MU 2/5, MT 2/5 / TME/TMO TME1/TM01 / TDE/TDO DU 2/5, DT 2/5 / PTR / PTO / COP / TGT / P3A / DC DA / PTR A2, B1, B7, C0, C2, D0, D1 (RC) A'2, B'1, B'7, C'0, C'2, D'0, D'1 / PTO PA (RC) / COP Z (RC) PRI, 2, 3 (RC) P PAM PERF (RC) ZQ PAK SEE NOTE 1 / P4

CALENDAR DAY RECORD 2821 XX

DC / DA / E 2/5, F 2/5 (RC) / E'2/5, F'2/5 / A2, B1, B7, C0, C2, D0, D1 (RC) / A'2, B'1, B'7, C'0, C'2, D'0, D'1 / A2, B1, B7, C0, C2, D0, D1 PERF (RC)

PAM PERF (RC) P / PRI, 2, 3 / PA (RC) / W (RC) SEE NOTE 1 / PA (RC) PAM PERF (RC) / PRI-3 (RC)

E'2/5, F'2/5 / E 2/5, F 2/5 (RC) / E 2/5, F 2/5 PERF (RC)

OPERATION THROUGH (P8) SIMILAR TO ABOVE SEE NOTE 5

P8A / MGN MGE / D'2/5 - F'2/5 / D 2/5 - F 2/5 (RC) / D 2/5 - F 2/5 PERF (RC) / PTR A'2, B1, B'7, C0, C4 A2, B1, B7, C0, C4, (RC) / PTO PA (RC) / A2, B1, B7, C0, C4 PERF / COP Z (RC) PRI, 2, 3 (RC) PAM PERF (RC) / ZQ SS PAK SPLICE ENTRY 081010

P3 / TCE/TCO / TME/TMO TDE/TDO / TDE2/TDO2 DT 2/5, DU 2/5 / TDE1/TDO1/TME1/TMO1 MT 2/5, MU 2/5 / ALL OTHER END OF TAPE PATTERNS / 2.5 SEC

P8A RCT / LTI MG / SPT SPA / LC3 / P(3, 4, 6, 7)A D4, HR, MD, RN / P(4, 6-8) / A'0, B'1, B'7, C'0, C1 A0, B1, B7, C0, C1 (RC) / PTR D4, D7, E0, E1, E4, E7 (RC) / D'4, D'7, E'0, E'1, F'4, F'7 / PTO P W (RC) PRI-3 (RC) / COP / A0, B1, B7, C0, C1 PERF (RC) D4, D7, E0, E1, E4, E7 PERF (RC)

SPT SPA / A'0, B'1, B'7, C'0, C1 A0, B1, B7, C0, C1 (RC) / PTR D'4, D'7, E'0, E'1, F'4, F'7 D4, D7, E0, E1, E4, E7 (RC) / A0, B1, B7, C0, C1 PERF (RC) / PTO PA (RC) / D4, D7, E0, E1, E4, E7 PERF (RC) / COP ZQ Z (RC) PRI, 2, 3 (RC) P PAM PERF (RC) PAK

SPT SPA / A'0, B'1, B'7, C'0, C1 A0, B1, B7, C0, C1 (RC) / PTR D'4, D'7, E'0, E'1, F'4, F'7 D4, D7, E0, E1, E4, E7 (RC) / A0, B1, B7, C0, C1, PEPF (RC) / PTO PA (RC) / D4, D7, E0, E1, E4, E7 PERF (RC) / COP W (RC) PRI, 2, 3 (RC) P PAM PERF (RC)

WY 66 TO 78 SEC / WZ 59 TO 69 SEC

3A.M. END OF TAPE PATTERN

SP TUBE TO 20 H3 / TO LT8, 20J3 / TO COP, 20Q3

SPLICE ENTRY SEE NOTE 2

NOTES:

1. RECORDER (W) AND (Z) RELAYS ASSUMED NORMAL AT START OF ENTRY.
2. APPROXIMATELY 800 LINES WITH OPTION "WY" AND 700 LINES WITH OPTION "WZ" FOR 3A.M. TAPE CUTTING. APPROXIMATELY 40 LINES FOR WINBOW SPLICE, MAKE BUSY OR RECORDER TRANSFER.
3. ONLY WIRING OPTION "ZC" (M.D.) FOR THE (PAK) PUNCH IS SHOWN, BECAUSE WIRING OPTION "ZR" IS SUCH THAT THE (PAK) PUNCH DOES NOT FUNCTION AFTER TIME-OUT.
4. THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WITH OPTION VR PROVIDED IN THIS CIRCUIT AND OPTION UF PROVIDED IN THE RECORDERS. WITH OPTION UF IN THE RECORDERS, THE MASTER TIMING CIRCUIT IS NOT USED IN MAKING RECORDERS BUSY. SEE THE RECORDER AND RECORDER CONNECTOR SEQUENCE CHARTS FOR RECORDER MAKE BUSY OPERATION WITH OPTION UF PROVIDED.

NOTES: (CONT)

5. AFTER THE OPERATION OF THE (P4) RELAY, THE FOLLOWING INFORMATION IS RECORDED:

CONTROL RELAY		RECORD	INFORMATION
WY	P4	2811-XX	HOUR
WZ	P4	2812-XX	HOUR
	P6	2805-XX	RECORDER NUMBER
ZJ	P7	283-OR-XX	MONTH
WZ	P7	283-MIN TENS-XX	MONTH.
WY, ZK	P7	283-DU-XX	MONTH
WK, ZK, ZY	P8	284-0T-XX	MARKER GROUP
WK, ZJ, ZY	P8	284-RD-XX	MARKER GROUP
WL, WM, ZY	P8	284-RGH-XX	RECORDER GROUP
WL, WM, ZZ	P8	289-0T-XX	RECORDER GROUP

DRAWING ISSUE 31D DG 7M1 M2

ISSUE 55B

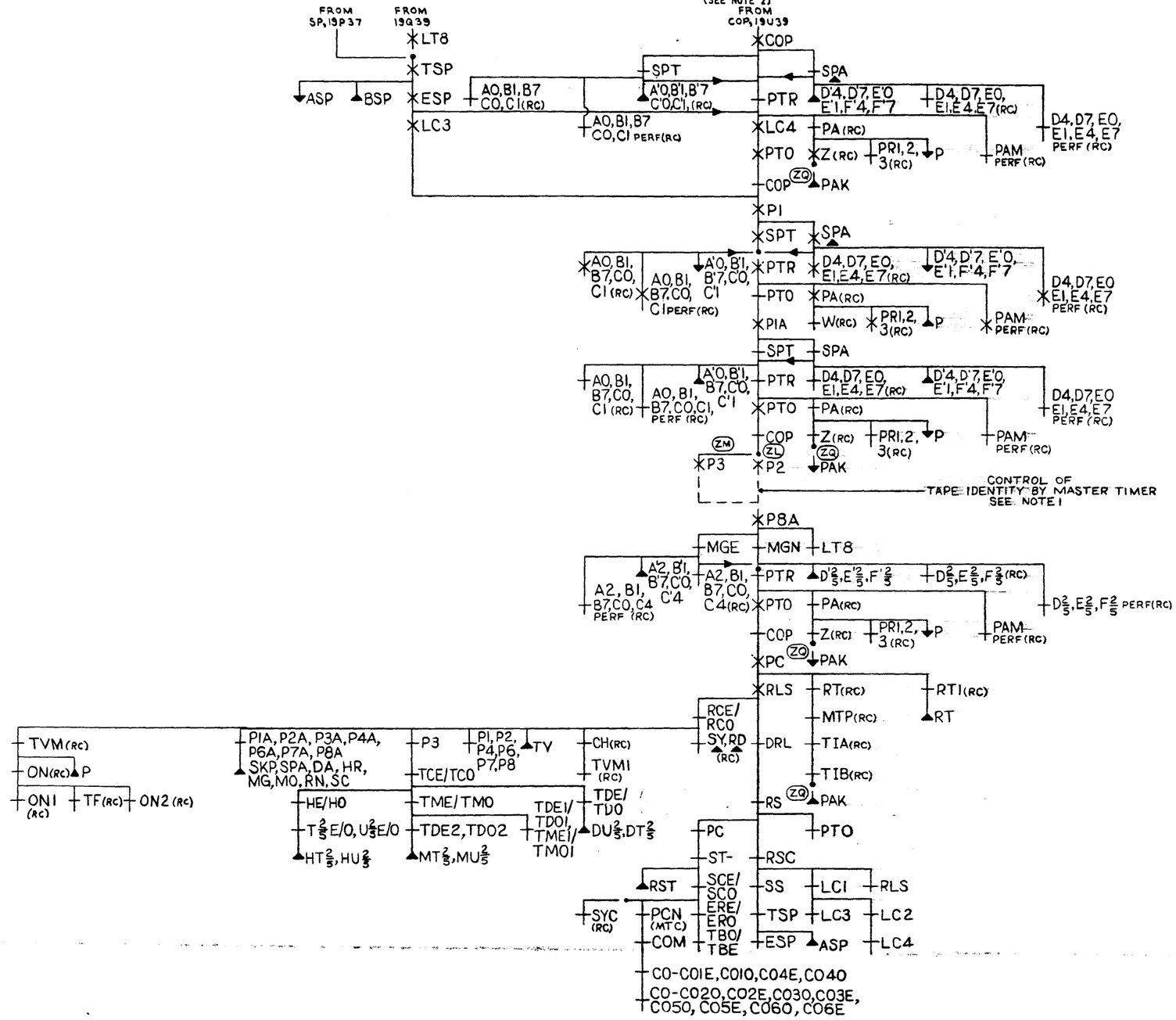
MASTER TIMING CIRCUITS (2) SD-25633-01-E19

BELL TELEPHONE LABORATORIES INCORPORATED SHEET 65

SD-25633-01-E19

PART OF SC 6

TIMEOUT FAILURE TO COMPLETE END OF TAPE RECORD (SEE NOTE 2)



NOTES:

1. AFTER (P2) OR (P3) RELAY OPERATES, THE FOLLOWING INFORMATION IS RECORDED:

CONTROL RELAY	RECORD	INFORMATION
ZL	P2	286000 SKIP SPLICE PATTERN
ZM	P3	2821-XX DAY
	P4	2811-XX HOUR
WZ	P4	2812-XX HOUR
	P6	2805-XX RECORDING NUMBER
	P7	283-0U-XX MONTH
WY, ZJ	P7	283-0R-XX MONTH
W Z	P7	283-MINTENS-XX MONTH
WK, ZK, ZY	P8	284-0T-XX MARKER
WK, ZJ, ZY	P8	284-R0-XX MARKER
(WL/WM), ZY	P8	284-RGH-XX MARKER
(WL/WM), ZZ	P8	289-0T-XX RECORDER
WK, ZJ, ZZ	P8	289-R0-XX RECORDER
(WL/WM), ZZ	P8	289-RGH-XX RECORDER

2. THIS SC DOES NOT APPLY TO BOT OR CAMA-C OPERATION WITH OPTION VR PROVIDED IN THIS CIRCUIT AND OPTION UF PROVIDED IN THE RECORDERS. WITH OPTION UF IN THE RECORDERS, THE MASTER TIMING CIRCUIT IS NOT USED IN MAKING RECORDERS BUSY. SEE THE RECORDER AND RECORDER CONNECTOR SEQUENCE CHARTS FOR RECORDER MAKE BUSY OPERATION WITH OPTION UF PROVIDED.

DRAWING ISSUE 31D JGS TM AM

ISSUE 55B

MASTER TIMING CIRCUIT (2) SD-25633-01-E20

BELL TELEPHONE LABORATORIES INCORPORATED SHEET 65

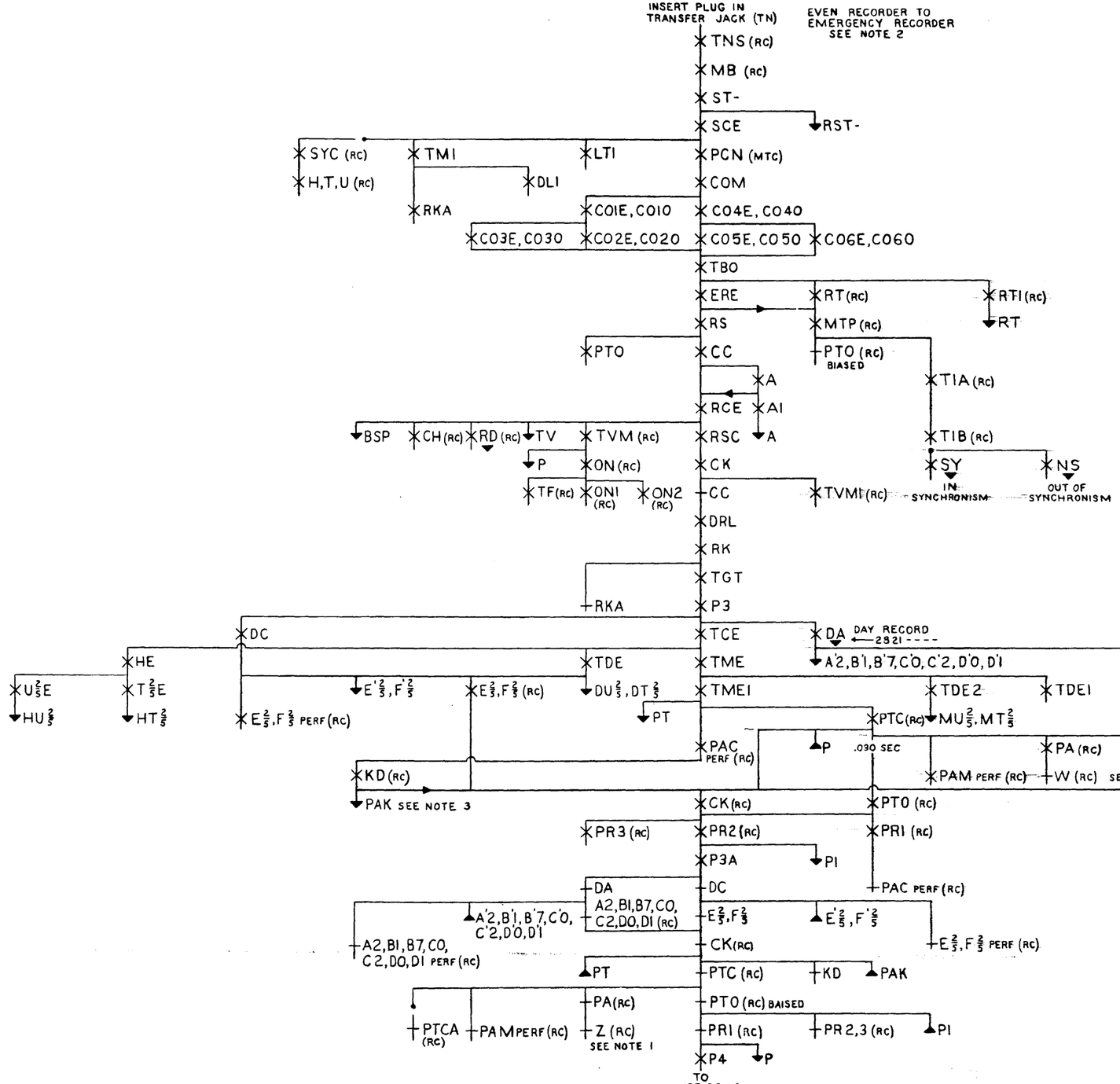
PRINTED IN U.S.A.

SD-25633-01-E20

PART OF SC 7

RECORDING OF END OF TAPE PATTERN RECORDER TRANSFER

(SEE NOTE 4)



NOTES:

1. RECORDER (W) AND (Z) RELAYS ASSUMED OPERATED AT START OF ENTRY.
2. TRANSFER OF ODD RECORDER TO EMERGENCY RECORDER IS SIMILAR TO EVEN RECORDER TRANSFER.
3. SD OPTION "ZR" ONLY IS SHOWN FOR "PAK".
4. THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WHEN OPTION VR IS PROVIDED IN THIS CIRCUIT AND OPTION UF IS PROVIDED IN THE RECORDERS. WITH OPTION UF IN THE RECORDERS, THE MASTER TIMING CIRCUIT IS NOT USED IN TRANSFERRING RECORDERS. SEE THE RECORDER AND RECORDER CONNECTOR CIRCUIT SEQUENCE CHARTS FOR RECORDER TRANSFER OPERATION WITH OPTION UF PROVIDED.

DRAWING ISSUE 310 CDP TIM/ AMA

ISSUE 55B

MASTER TIMING CIRCUIT (2)

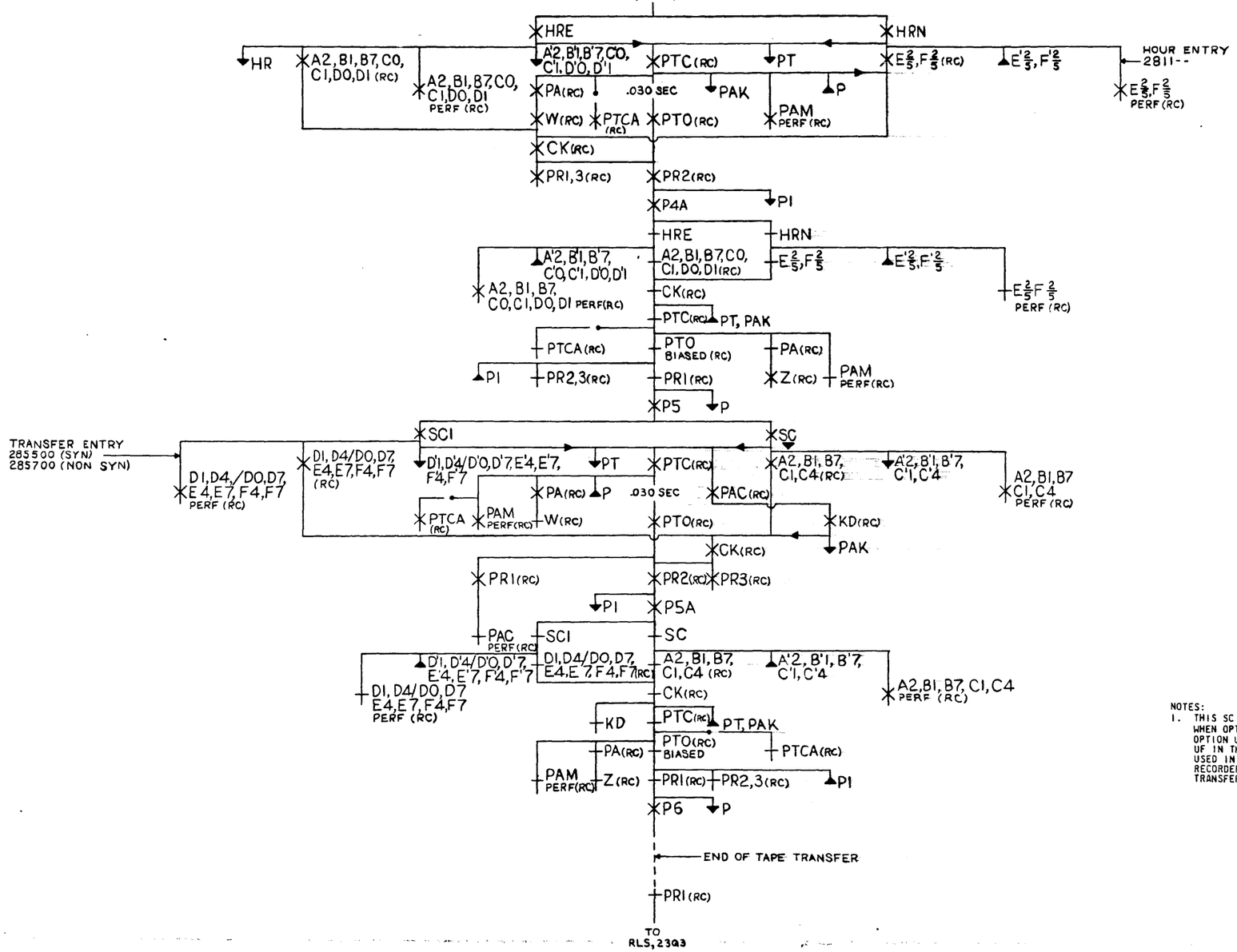
SD-25633-01-E21

BELL TELEPHONE LABORATORIES INCORPORATED

SHEET 65

PART OF SC 7

RECORDING OF END OF TAPE PATTERN
RECORDER TRANSFER
(SEE NOTE 1)
FROM
P4, 21 P 39



NOTES:
1. THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WHEN OPTION VR IS PROVIDED IN THIS CIRCUIT AND OPTION UF IS PROVIDED IN THE RECORDERS. WITH OPTION UF IN THE RECORDERS, THE MASTER TIMING CIRCUIT IS NOT USED IN TRANSFERRING RECORDERS. SEE THE RECORDER AND RECORDER CONNECTOR CIRCUIT SEQUENCE CHARTS FOR RECORDER TRANSFER OPERATION WITH OPTION UF PROVIDED.

DRAWING ISSUE
BID UGS 7A AMP

ISSUE 55B

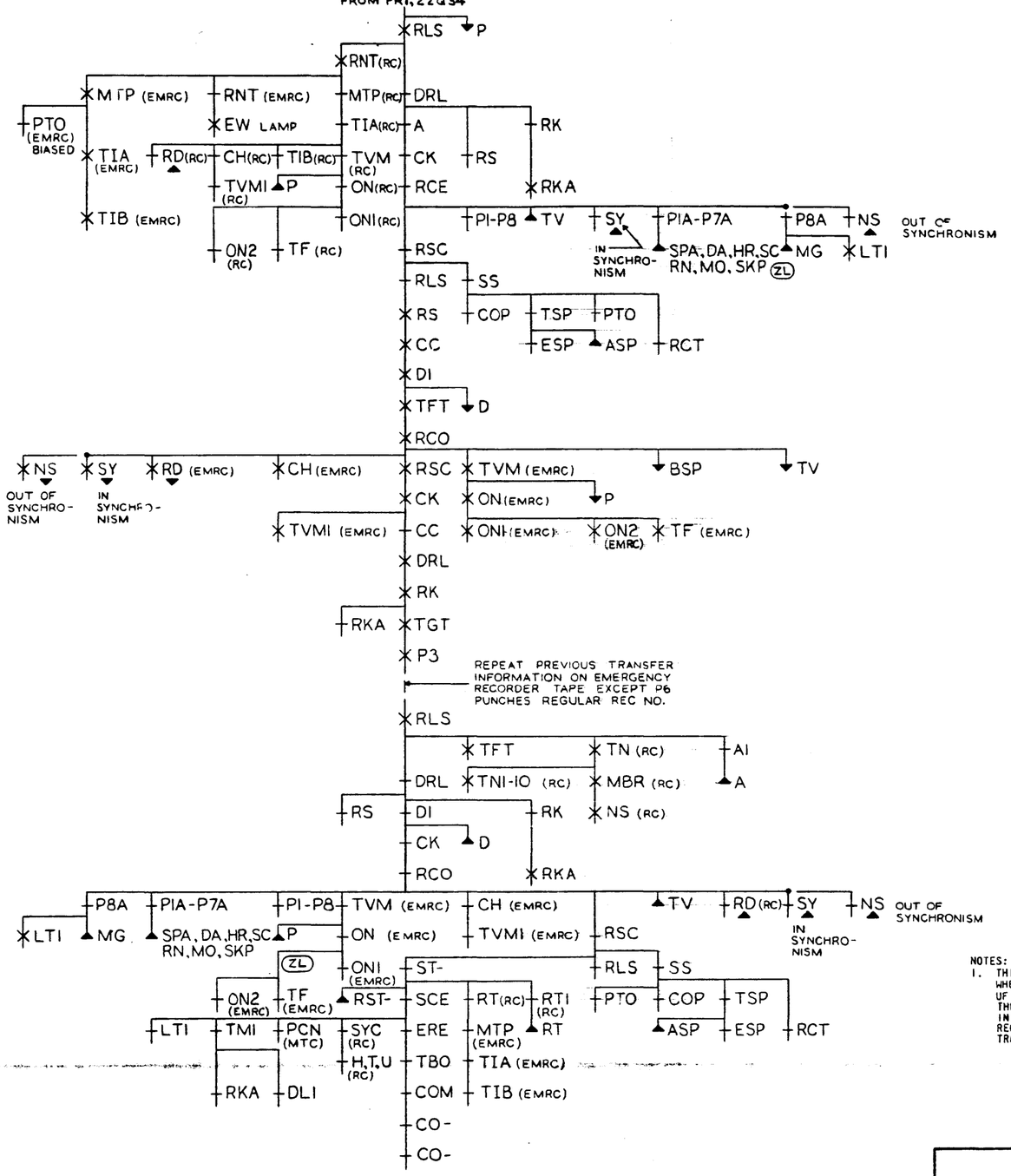
MASTER TIMING CIRCUIT (2)
SD-25633-01-E22
BELL TELEPHONE LABORATORIES INCORPORATED
6S

SD-25633-01-E22

PART OF SC 7

RECORDING OF END OF TAPE PATTERN RECORDER TRANSFER (SEE NOTE 1)

FROM PR1, 22G34



NOTES:

1. THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WHEN OPTION VR IS PROVIDED IN THIS CIRCUIT AND OPTION UF IS PROVIDED IN THE RECORDERS. WITH OPTION UF IN THE RECORDERS, THE MASTER TIMING CIRCUIT IS NOT USED IN TRANSFERRING RECORDERS. SEE THE RECORDER AND RECORDER CONNECTOR CIRCUIT SEQUENCE CHARTS FOR RECORDER TRANSFER OPERATION WITH OPTION UF PROVIDED.

DRAWING ISSUE 31D

ISSUE 55B

MASTER TIMING CIRCUIT (2) SD-25633-01-E23

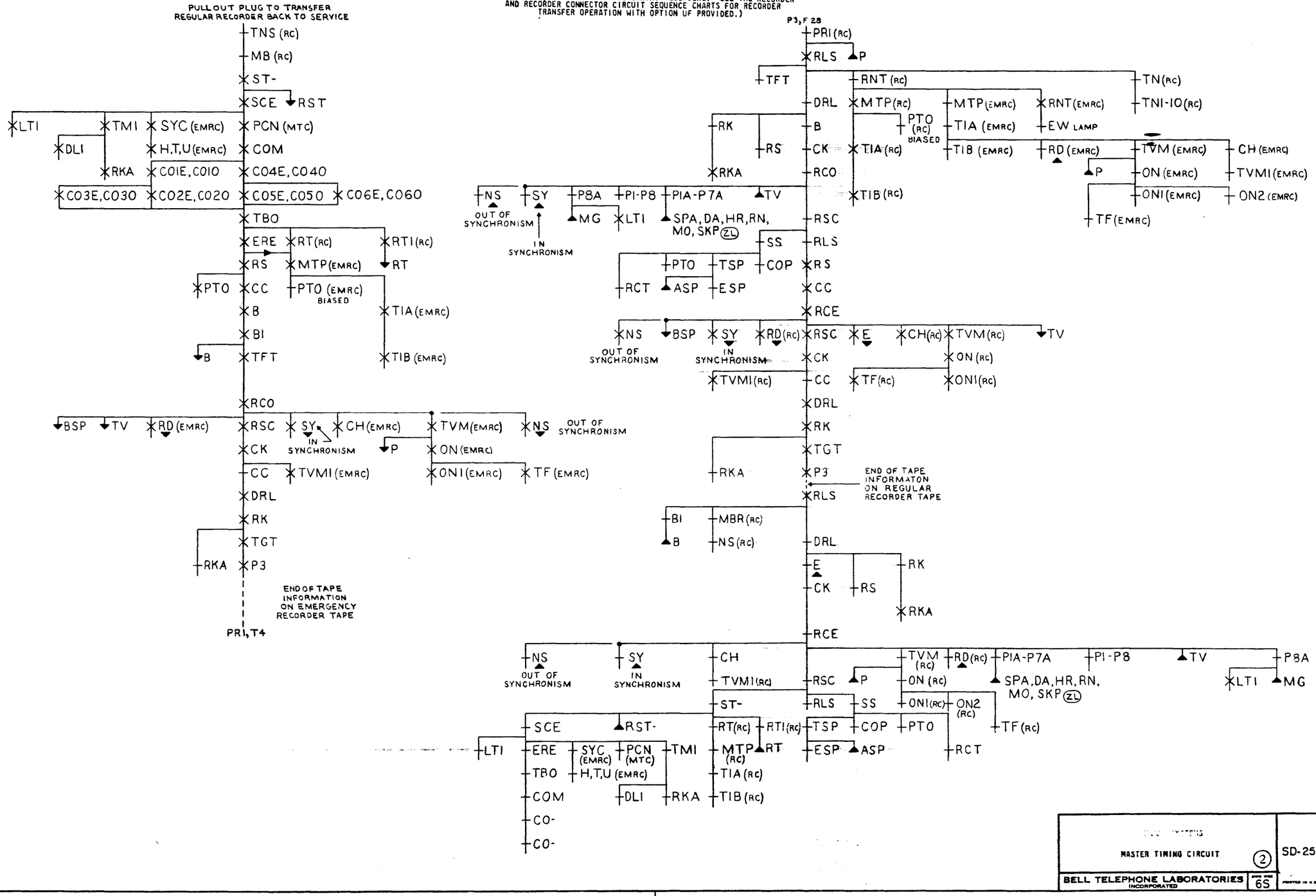
BELL TELEPHONE LABORATORIES INCORPORATED SHEET 65

SD-25633-01-E23

PART OF SC 7

RECORDING OF END OF TAPE PATTERN
RECORDER TRANSFER

(THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WHEN OPTION VR IS PROVIDED IN THIS CIRCUIT AND OPTION UF IS PROVIDED IN THE RECORDERS. WITH OPTION UF IN THE RECORDERS, THE MASTER TIMING CIRCUIT IS NOT USED IN TRANSFERRING RECORDERS. SEE THE RECORDER AND RECORDER CONNECTOR CIRCUIT SEQUENCE CHARTS FOR RECORDER TRANSFER OPERATION WITH OPTION UF PROVIDED.)



DRAWING ISSUE 31D

ISSUE 55B

MASTER TIMING CIRCUIT (2)

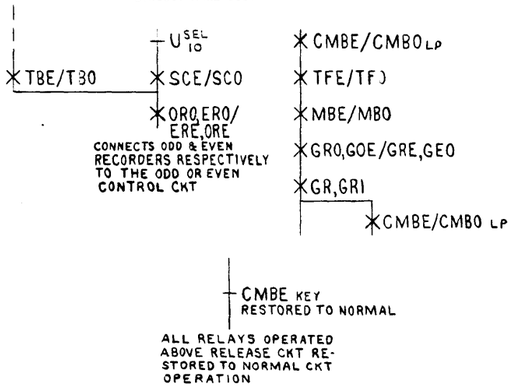
SD-25633-01-E24

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-E24

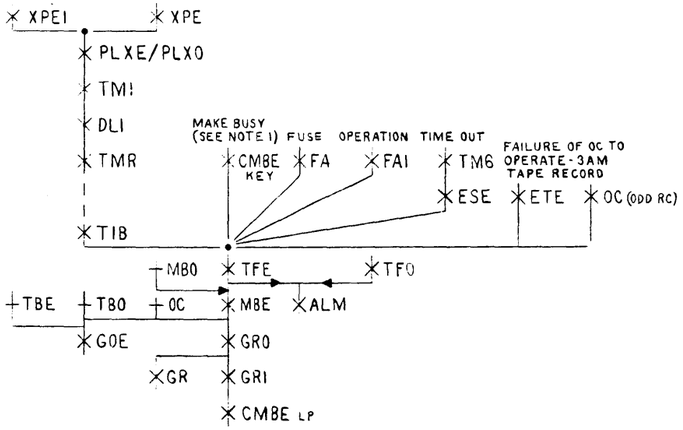
SC 11

MASTER TIMING RECORDER CONTROLLER CIRCUIT MAKE BUSY



SC 12

MASTER TIMER MAKE BUSY, PULSE ALARMS & RECORDER GROUPING



SHEET NOTES:

1. CHECK RELAYS
   (H),(T), AND (U) IN RECORDER
   (H),(T),(U),(HU),(DU),(DT), AND (M) IN ODD MASTER TIMER
   CHECK LAMPS
   (ES/OS) IN RECORDER
   (U0-9),(T0-9),(H0-5),(HU0-9),(HT0-2),(DU1-10),(DT0-3), AND (M1-12) IN MASTER TIMER.

2. THIS CKT PROVIDES FOR CHECKING ONCE A MINUTE THAT THE SELECTORS OF BOTH THE EVEN AND ODD MASTER TIMING CKT AND ALL RECORDERS ARE RESTING ON CORRESPONDING TERMINALS.

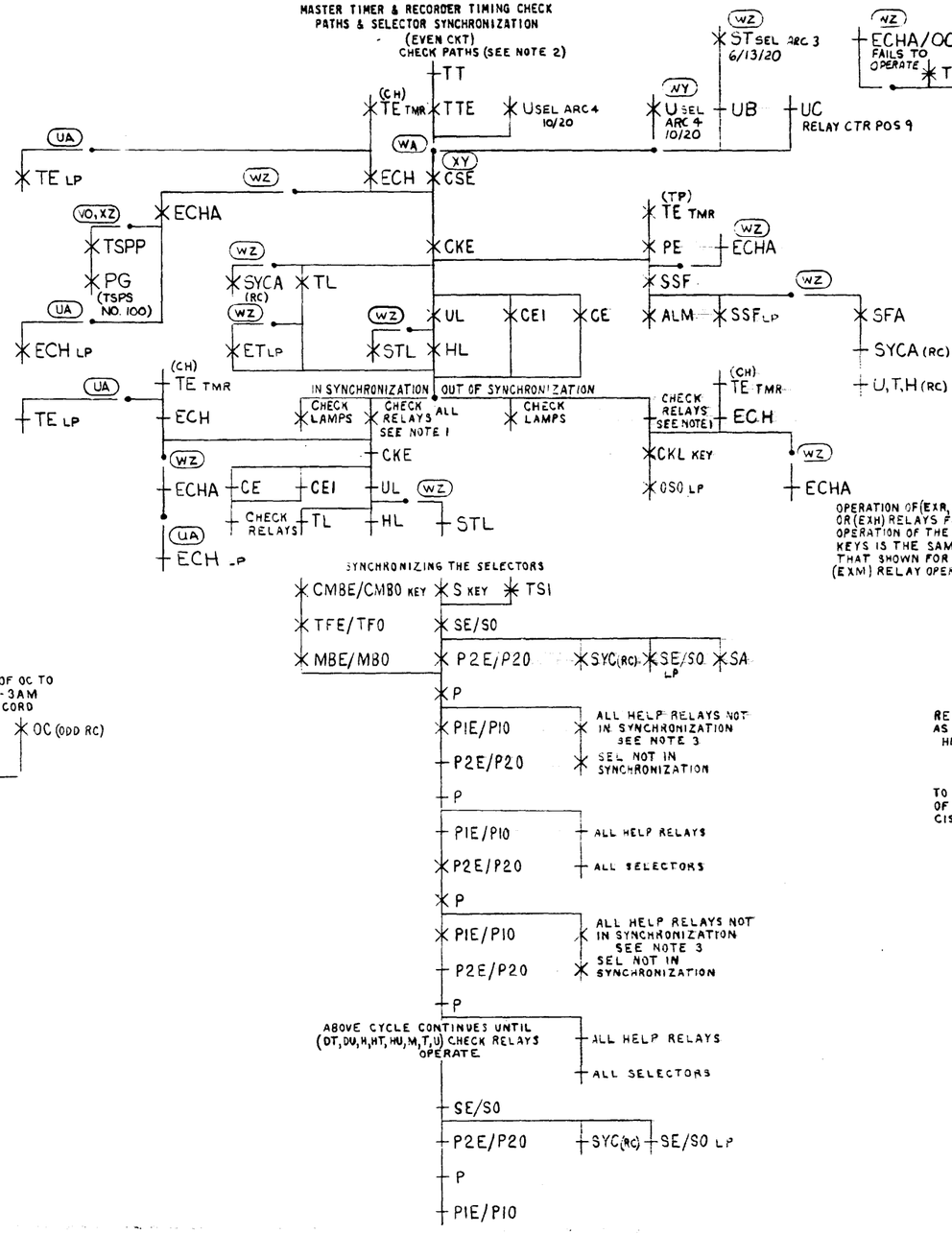
3. HELP RELAYS IN RECORDER (HH,TH), AND (UH).
   HELP RELAYS IN MASTER TIMER (DH,DTH,HH,HTH,HUH,MOH), AND (TH).

4. THE BANKS OF THE SELECTORS OF THE ODD AND EVEN MASTER TIMER ARE MULTIPLIED TOGETHER.

SC 13

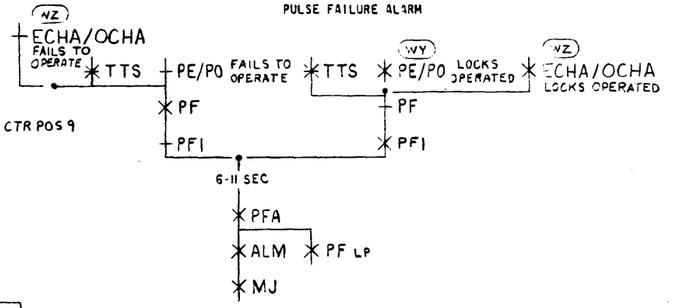
MASTER TIMER & RECORDER TIMING CHECK PATHS & SELECTOR SYNCHRONIZATION (EVEN CKT)

CHECK PATHS (SEE NOTE 2)



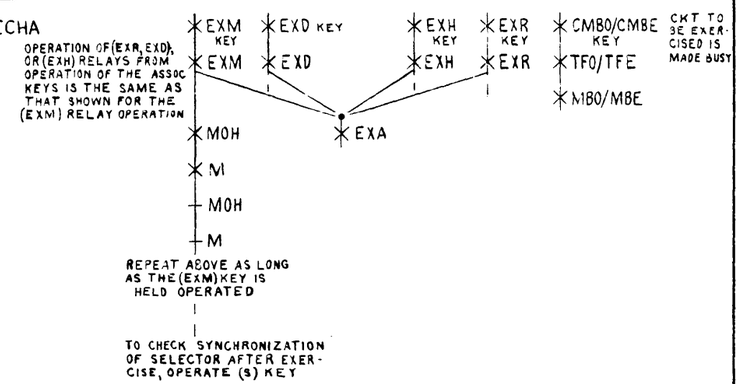
SC 14

PULSE FAILURE ALARM



SC 15

EXERCISE THE SELECTORS



DRAWING ISSUE 310 AJL 7MA ARO

ISSUE 52B

MASTER TIMER CIRCUIT (2) SD-25633-01-E27

BELL TELEPHONE LABORATORIES INCORPORATED DRAWING SIZE 6S

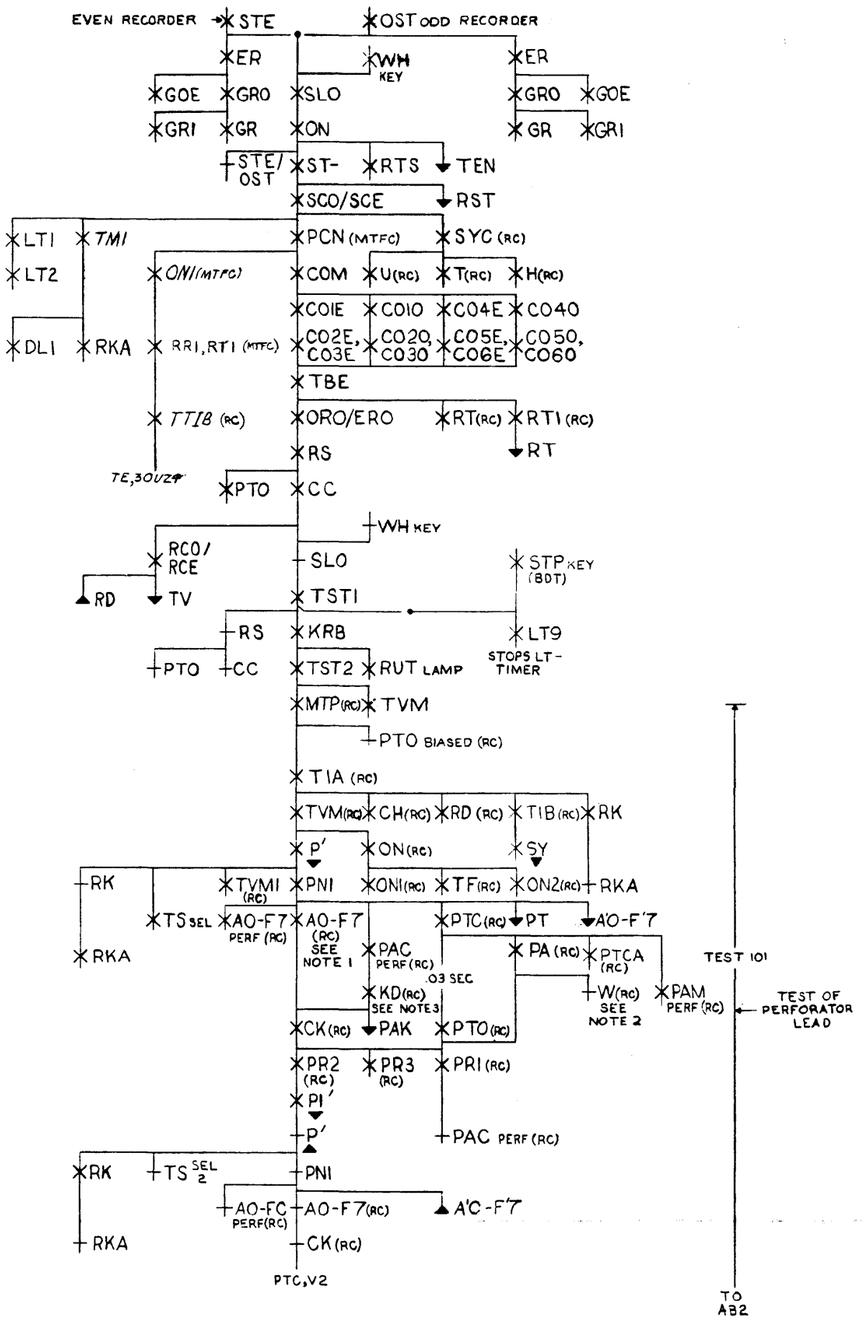
SD-25633-01-E27

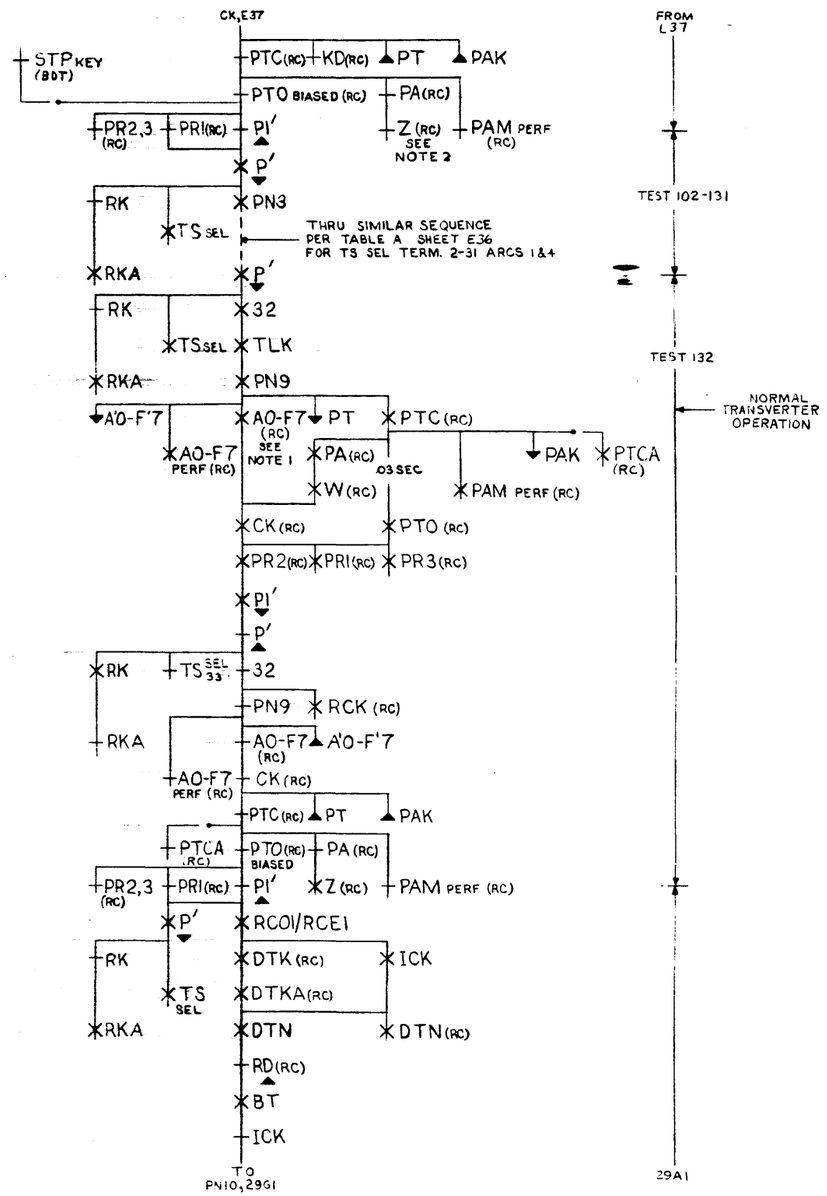
PART OF SC 16

AMA RECORDER TEST
RECORDER OF TEST GROUP ENTRY
(FOR BDT AND CAMA-C
TYPICAL RECORDING OPERATION
WITH PERFORATOR REMOVED
SEE SC 22 AND SC 23)

MAKE RECORDER BUSY

MAKE BUSY PLUG IN REC JACK (TST) PLUG OF 32A TEST SET IN JACK (R) OF MASTER TIMER





NOTES:

1. SEE TABLE A ON SHEET E36.
2. ASSUME W(RC) & Z(RC) RELAYS OPERATED AT BEGINNING OF TEST.
3. THE STANDARD ARRANGEMENT, OPTION ZR(RC), ONLY IS SHOWN.

DRAWING ISSUE

310	TLC 12J	C
350	NJF	
378		

ISSUE 55B

MASTER TIMING CIRCUIT (2)

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-E28

SIZE 6S

SD-25633-01-01-E28

PART OF SC 16

AMA RECORDER TEST
RECORDER OF TEST GROUP ENTRY
(FOR BOT AND CAMA-C TYPICAL RECORDING OPERATION WITH PERFORATOR REMOVED
(SEE SC 22 AND SC 23).

FROM 28AB34

FROM ICK, 28W35

PN10
A'0-F'7 PT
A0-F7 PERF (RC)
A0-F7 (RC) SEE NOTE 1
PAC (RC)
.030 SEC
KD (RC)
PTC (RC)
PA (RC)
W (RC)
PTCA (RC)
PAM PERF (RC)
CK (RC)
PAK
PTO (RC)
PR2 (RC)
PR3 (RC)
PR1 (RC)
PI'
DS (RC)
PAC PERF (RC)
TC
RCK (RC)
DTK (RC)
RD
BT
LOK
MTP (RC)
TIA (RC)
TEST 133
P'
RK
TS SEL 34
RKA
PT
PAK
PNI0
A0-F7 (RC)
CK (RC)
PTC (RC)
PTO (RC) BIASED
PR1 (RC)
PR2,3 (RC)
P
TV
TIB (RC)
DTN (RC)
DTN
CH (RC)
TVM (RC)
DS (RC)
TVMI
TA (RC)
ON (RC)
DTKA (RC)
ONI (RC)
ON2 (RC)
TF (RC)
PTO BIASED (RC)
TEST 134-136
CH (RC)
RD (RC)
ON
ONI
ON2
TVMI (RC)
ICK
DTKA (RC)
DTN
RD (RC)
ADL
PNI1
PNI4
37
THRU SIMILAR SEQUENCE FOR PNI1, 12, 13
AE1
A0,W2

PNI4, G37
A'0-F'7
A0-F7 PERF (RC)
A0-F7 (RC)
PAC PERF (RC)
.030 SEC
PA (RC)
W (RC)
PAM PERF (RC)
PTCA (RC)
PTC (RC)
PT
CK (RC)
PAK
PTO (RC)
PR2 (RC)
PR3 (RC)
PR1 (RC)
PI'
DS
PAC PERF (RC)
TC
RCK (RC)
DTK (RC)
RD
BT
LOK
TVM
MTP (RC)
AD
TIA (RC)
ADI
TIB (RC)
CH (RC)
DS (RC)
TVM (RC)
DTN (RC)
DTN
TVMI (RC)
RD (RC)
TA (RC)
TC
ON (RC)
DTKA (RC)
TA (RC)
ONI (RC)
ON2 (RC)
TF (RC)
TI (RC)
TIA (RC)
TIB (RC)
P'
RK
TS SEL 38
37
PN14
RKA
A0-F7 (RC)
A0-F7 PERF (RC)
CK (RC)
PT
PAK
PTC (RC)
KD (RC)
PA (RC)
PTO BIASED (RC)
PAM PERF (RC)
Z (RC)
PRI,2,3 (RC)
RCO1/RCE1
RCO2/RCE2
RCO3/RCE3
A39
TEST 137
TEST 138
TO 30Q3
RK
TS SEL
RKA
DTNPI
DTK (RC)
IP (RC)
IPA (RC)
ON (RC)
GU
ONI (RC)
ON2 (RC)
TA (RC)
TF (RC)
UL (RC)
RCK
DTK (RC)
DTKA (RC)
DTN (RC)
M (RC)
DTK
A0-D7
A0-D7 (RC)
A0-D7 PERF (RC)
E0-F7 (RC)
E0-F7 PERF (RC)
E'0-F'7
PTC (RC)
PAK
PA (RC)
W (RC)
.030 SEC
PAM PERF (RC)
CK (RC)
PTO (RC)
PR2 (RC)
PRI
PR3 (RC)
PI
DTK (RC) FAILS TO HOLD
LC (RC)
TO DTN, 30F2

NOTES:
1. SEE TABLE A ON SHEET E34

DRAWING ISSUE
310 JNT TAU ANS
350 NJF

ISSUE 55B

MASTER TIMING CIRCUIT (2)
SD-25633-01-E29
BELL TELEPHONE LABORATORIES INCORPORATED
6S

SD-25632-01-E29
STABILO RUWE

PART OF SC 16

AM RECORDER TEST
RECORDER OF TEST GROUP ENTRY
(SEE NOTE 1)

FROM LC,29F2

M(RC) DTN(RC) RC′
AO-F7 PTI — AO-D7 (RC) — EO-F7(RC) — EO-F7
AO-D7 PERF (RC) — CK(RC) — EO-F7 PERF(RC) — RC
PTC (RC) — PAK — DTK(RC)
PA(RC) — PTO BIASED(RC) — PAM PERF(RC)
Z(RC) — PI — PR2,3 (RC) — PRI(RC) — PTCA (RC)
DS(RC)
OTK (RC) — RD(RC)
GU — BT — IPA(RC) — UL(RC)
PI′ — LC (RC)
P′ — DS (RS)
RK — TS SEL 39 — IP(RC) — DTNP1 — ON(RC)
RC′ — DTKA (RC) — TA(RC) — DTK
RKA — PI′ — RD(RC) — ON1(RC) — TF(RC)
BT
P′
DTNP2 — THRU SIMILAR SEQUENCE FOR DTNP2
P′
RK — DTNP3 — IP(RC)
TS SEL — OTO(RC) — IPA(RC)
RKA — ON(RC)
ON2 (RC) — UL(RC) — TF(RC) — TA(RC) — ON1(RC) — GU
RCK
DTK(RC)
DTKA(RC)
M(RC) — DTK — DTN(RC)
AO-D7(RC) — PTI A′O-D′7 — EO-F7(RC) — PTC(RC) — E′O-F′7
AO-D7 PERF(RC) — PA(RC) — .030 SEC — PAK — EO-F7 PERF(RC)
W(RC) — PTCA (RC) — PAM PERF (RC)
CK(RC) — PTO(RC)
PR2 (RC) — PRI(RC) — PR3(RC)
PI — LC(RC)
M (RC) — DTN (RC) — RC′
PTI A′O-D′7 — AO-D7(RC) — EO-F7(RC) — E′O-F′7
AO-D7 PERF(RC) — CK(RC) — EO-F7 PERF(RC) — RCK
PAK — PTC(RC) — DTK
PTO, U2

FROM 39AE37

TEST 138

TEST 139

TEST 140

AE1

PTC, F37

PTO(RC) BIASED — PA(RC)
PI — PR2,3 (RC) — PRI(RC) — Z (RC) — PAM STEP (RC)
DS(RC)
OTO(RC) — RD(RC)
GU — BT — IPA(RC) — UL(RC)
PI′ — LC(RC)
P′ — DS(RC)
RK — TS SEL 41 — IP(RC) — DTNP3 — ON(RC)
RC′ — DTKA (RC) — TA(RC) — DTK
RKA — PI′ — RD(RC) — ON1 (RC) — ON2 (RC) — TF(RC)
BT
P′
DTNP4 — THRU SIMILAR SEQENCE FOR DTNP4
P′
RK — IP(RC) — TAP
TS SEL — IPA(RC) — OTK(RC)
RKA — ON(RC)
TA(RC) — UL(RC) — ON2 (RC) — ON1(RC) — TF(RC) — GU
TM(RC) BIASED .560 SEC — RCK
TM(RC) — DTK(RC)
TTTB, 28 C/3 — TB (RC) — DTKA(RC)
TE (RC) — DTK — DTN (RC)
M(RC) — PTI, A′O-D′7 — EO-F7(RC) — PTC(RC) — E′O-F′7
TA (RC) — AO-D7 (RC) — AO-D7 PERF(RC) — EO-F7 PERF(RC) — PAK — PA(RC) .030 SEC
TM (RC) — TF (RC) — W(RC) — PTO(RC) — PAM PERF(RC)
TBL (RC)
TBLA (RC) — PTS (RC)
(Z1) — APR
OTK(RC)
RCK
DTK (RC)
RD, 31G4

Q39

TEST 140

TEST 141

TEST 142

TROUBLE ON DIS ENTRY

CANCEL ENTRY TO 31Q2

NOTES:
1. FOR BDT AND CAMA-C TYPICAL RECORDING OPERATION WITH PERFORATOR REMOVED (SEE SC 22 AND SC 23).

DRAWING ISSUE
310 55B 7M AM
350 NLF
378

ISSUE 55B

MASTER TIMING CIRCUIT (2) SD-25633-01-E30
BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-E30

3MMS

PART OF SC 16

AMA RECORDER TEST
RECORDER OF TEST GROUP ENTRY

FROM 30AE 35

FROM TF,30U27

RD (RC)
GU
IPA (RC)
BT
UL(RC)
(ZH)
DTK (RC)
TEC(RC)
M (RC)
DTN (RC)
RCK
CK(RC)
A0-D7 (RC)
PT1 A0-D7
E0-F7 (RC)
E'0-F'7
PR2 (RC)
PR3 (RC)
PR1 (RC)
A0-D7 PERF(RC)
E0-F7 PERF(RC)
PI
TBL(RC)
APT
CK(RC)
TBLA (RC)
PAK
PTC(RC)
PTO (RC)
PA(RC)
PTCA (RC)
PR1,2 (RC)
Z (RC)
PAM PERF(RC)
ON (RC)
TD(RC)
TE(RC)
DTKA (RC)
TC(RC)
TB (RC)
TPC (RC)
RPR (MTC)
ON1(RC)
IPA(RC)
ON2 (RC)
TA(RC)
TF(RC)
ADT (RC)
UL(RC)
ON1 (RC)
GU (RC)
A'0-F'7
PT
A0-F7 (RC)
A0-F7 PERF(RC)
PAC PERF(RC)
.030 SEC
KD (RC)
W(RC)
PR2,3 (RC)
LC(RC)
DS(RC)
TOK
PI,X4

FOR TROUBLE CROSSES IN CONTACTS OR CHECK RELAYS IN RECORDERS →

TO A03

TOK,G37

RD(RC)
PI'
PTS(RC)
GU(RC)
UL(RC)
BT
P'
TEC(RC)
(ZH)
TAP
TS SEL 43
IP(RC)
RK
RCK
APR
APT
PH
IPA(RC)
TCK
LC(RC)
RKA
PI'
TS SEL
DS(RC)
ON(RC)
ON1 (RC)
TPC (RC)
TA(RC)
ON2 (RC)
RD(RC)
TF(RC)
TS SEL 44
2R
TLK
ADL
2R LAMP
RD(RC)
RC02/ RCE2
RC03/ RCE3
AD
ADI
TS SEL
TV
TVM (RC)
CH(RC)
MTP (RC)
TI(RC)
ON (RC)
P
ON1 (RC)
TF(RC)
ON2(RC)
TS SEL 1
2RI
2R2
TVM
P'
RK
TVMI (RC)
API
TS SEL
PNII
RKA
A0-F7 (-84)(RC)
PTC (RC)
PT
A'0-F'7
A0-F7 (-84)PERF(RC) SEE NOTE 1
.030 SEC
PA(RC)
PAK
PTO (RC)
W(RC)
PAM PERF(RC)
PTCA (RC)
TBL(RC)
TBLA (RC)
CKC
CK(RC)
PR2 (RC)
PR3 (RC)
PRI(RC)
TBL(RC)
PI
PI'
P'
CKC
RK
TS SEL 2
API
PNII
RKA
A0-F7 (RC)
A'0-F'7
A0-F7 PERF(RC)
CK
TO PTC,32G3

FROM Q37

TEST 143

TEST 144

TEST 201

FOR TROUBLE CROSSES IN CONTACTS OR CHECK RELAYS IN RECORDER →

TO 32 N1

NOTES:
1. SEE TABLE A ON SHEET E34

DRAWING ISSUE

31D	PEC TAU AMD
35D	NF

ISSUE 49B

MASTER TIMING CIRCUIT (2) SD-25633-01-E31

BELL TELEPHONE LABORATORIES INCORPORATED

DATE 65

SD-25633-01-E31

STABLE

PART OF SC 16

AMA RECORDER TEST
RECORDER OF TEST GROUP ENTRY
(FOR BOT AND CAMA-C TYPICAL RECORDING OPERATION WITH PERFORATOR REMOVED (SEE SC 22 AND SC 23).

FROM CK, 31X37

PTC (RC) PT PAK
PTCA (RC) PTO BIASED (RC) PA (RC)
PR2,3 (RC) PRI (RC) PI′ Z (RC) PAM PERF (RC)
P′
API

THRU SIMILAR SEQUENCE PER TABLE A, SHEET E36 FOR TS TERMS. 2-32, ARGS 5 & 6

P′
RK TS SEL 32
RKA TLK
API6
OTO (RC) PNII
AO-F7 (RC) PTC (RC) PT A'O-F'7
AO-F7 PERF (RC) PAC PERF (RC) .30 SEC PA (RC) PTCA (RC)
KD (RC) PTO (RC) W (RC) PAM PERF (RC)
PAK TBL (RC)
CKC
CK (RC)
PR2 (RC) PRI (RC) PR3 (RC)
PI TBL (RC) TBLA (RC)
PAC PERF (RC) PI′
P′ CKC
RK TS SEL 33 PNII API6 32
A'O-F'O AO-F7 (RC) OTO (RC) 2RI RCK (RC)
RKA AO-F7 PERF (RC) CK (RC)
PTC (RC) KD (RC) PT PAK
PTCA (RC) PTO BIASED (RC) PA (RC)
PR1 (RC) PR2,3 (RC) PI′ Z (RC) PAM PERF (RC)
P P′ RCOI/RCEI
RK DTK (RC) ICK TL (RC)
TS SEL DTKA (RC)
RKA DTN DTN (RC)
RD (RC)
ZC
UL (RC) GU BT
ICK

233, W2

FROM 31AD37

TESTS 202 - 231

TEST 232

TEST 233

AE1

ICK, G36

233
PNIO
CKC PT AO-F7 (RC) A'O-F'7 PTC (RC)
AO-F7 PERF (RC) PA (RC) .030 SEC PAK
W (RC) PAM PERF (RC)
CK (RC) PTO (RC)
PR2 (RC) PR3 (RC) PRI (RC)
PI′
P′ DS
RK PNIO TS SEL 34 TC
AO-F7 (RC) AO-F7 DTK (RC)
RKA CK (RC) CKC
PAK PTC (RC) PT RCK (RC)
PTO BIASED (RC) RD (RC)
PI PRI,2,3 (RC) PTCA (RC) BT GU UL (RC)
P LOK
PI′ MTP (RC) 233
TIA (RC)
TIB (RC) CH (RC) DTN (RC) DTN TVM (RC) DS (RC)
TVMI (RC) ON (RC) TC RD (RC)
DTKA (RC)
TF (RC) ON2 (RC) ONI (RC) LOK
MTP (RC)
TIA (RC)
CH (RC) TVM (RC)
RD (RC) P′ TIB (RC) ON (RC)
RK TVMI (RC) RCK (RC) TF (RC) ON2 (RC) ONI (RC)
TS SEL DTK (RC) ICK
RKA DTKA (RC)
DTN DTN (RC)
ZC RD (RC)
UL GU BT
ICK
234
PNII

TO AO, 33 F2

N 37

TEST 233

TO 33Q2

DRAWING ISSUE

3ID	EP 7A/7 A6B
350	NLF

ISSUE 55B

MASTER TIMING CIRCUIT (2) SD-25633-01-E32

BELL TELEPHONE LABORATORIES INCORPORATED 6S

PART OF SC 16

AMA RECORDER TEST
RECORDER OF TEST GROUP ENTRY
(SEE NOTE 1)

FROM PN11, 32W36

A'O-F'7
AO-F7(RC)
AO-F7 PERF(RC)
PTC(RC)
PT
PAC PERF(RC)
KD(RC)
.030 SEC
PTCA (RC)
PA(RC)
W(RC)
PAM PERF(RC)
CK(RC)
PAK
PTO(RC)
PR2(RC)
PR1(RC)
PR3(RC)
PI
PIA'
OTK(RC)
PAC PERF(RC)
DTN
DTN(RC)
CKC
DTN
PI'
DS
P'
CKC
TC
OTK(RC)
PN11
TS SEL 35
RK
234
RCK(RC)
DTK(RC)
DTN(RC)
AO-F7(RC)
A'O-F'7
RD(RC)
ZC
CK(RC)
AO-F7 PERF(RC)
RKA
BT
GU
UL(RC)
PTC(RC)
KD(RC)
PT, PAK
LOK
PTO BIASED(RC)
PA(RC)
PI'
MTP(RC)
PAM PERF(RC)
PI
PIA'
PR1,2,3(RC)
Z(RC)
PTCA (RC)
P
TIA(RC)
P
TIB(RC)
DTN
DTN(RC)
TVM (RC)
CH(RC)
DS(RC)
TC
ON(RC)
TVMI (RC)
RD(RC)
DTKA(RC)
LOK
ONI(RC)
ON2 (RC)
MTP(RC)
TIA(RC)
CH(RC)
TVM(RC)
RD(RC)
P'
TIB(RC)
TF (RC)
ONI (RC)
ON2 (RC)
RK
TVMI(RC)
RCK(RC)
TSSEL
DTK(RC)
ICK
RKA
DTKA(RC)
DTN
DTN(RC)
RD
ZC
BT
GU
UL(RC)
ICK
235
PN12
AO-F7 W2

FROM 32 AE 37
TEST 234

TBL GND "X,TC" LEAD TEST
AE1

PN12, F39

AO-F7(RC)
PTC(RC)
A'O-F'7
AO-F7 PERF(RC)
PA(RC)
PAK
W(RC)
.030 SEC
PTCA (RC)
PAM PERF(RC)
CK(RC)
PTO(RC)
PR2(RC)
PR1(RC)
PR3(RC)
PI
PIA'
XTC(RC)
PI'
P'
DS
RK
TS SEL 36
PN12
TC
AO-F7 (RC)
A'O-F'7
RD(RC)
ZC
RCK(RC)
DTK(RC)
RKA
AO-F7 PERF(RC)
CK(RC)
BT
GU
UL(RC)
PAK
PT
PTC(RC)
LOK
PTCA(RC)
PTO(RC)
MTP(RC)
235
PA(RC)
PIA'
PR1(RC)
PR2, 3(RC)
PI'
TIA(RC)
XTC(RC)
Z(RC)
PAM PERF(RC)
P
TIB(RC)
DTN
CH(RC)
DS(RC)
DTN (RC)
TVM (RC)
P
TC
TVM(RC)
RD (RC)
ON(RC)
LOK
DTKA(RC)
MTP (RC)
ONI (RC)
ON2 (RC)
TF(RC)
PTO BIASED(RC)
TIA(RC)
CH(RC)
TVM(RC)
RD(RC)
P'
TIB(RC)
ON(RC)
TF (RC)
ON2 (RC)
ONI(RC)
RK
TVMI(RC)
RCK(RC)
TSSEL
DTK(RC)
ICK
RKA
DTKA(RC)
DTN
DTN(RC)
RD(RC)
ZC
BT
GU
UL(RC)
ICK
PN13
TO AO, 34G2

Q39
TEST 235
TRANSVERTER TEST
TEST 236
34P2

NOTES:
1. FOR BOT AND CAMA-C TYPICAL RECORDING OPERATION WITH PERFORATOR REMOVED (SEE SC 22 AND SC 23).

DRAWING ISSUE
31D HKY TMM AMR
35D NLF

ISSUE 55B

MASTER TIMING CIRCUIT (2) SD-25633-01-E33
BELL TELEPHONE LABORATORIES INCORPORATED 65

SD-25633-01-E33

PART OF SC 16

AMA RECORDER TEST
RECORDER OF TEST GROUP ENTRY
(SEE NOTE 1)

FROM PN13, 33W33

A'0-F'7
AO-F7 PERF (RC)
AO-F7 (RC)
PAC PERF (RC)
PTC (RC)
PT
PA (RC)
KD .030 SEC
W (RC)
PAM PERF (RC)
PTCA (RC)
CK (RC)
PAK
PTO (RC)
PR2 (RC)
PR1 (RC)
PR3 (RC)
PI'
PAC PERF (RC)
P'
DS (RC)
RK
TS SEL 37
PN13
TC
A'0-F'7
AO-F7 (RC)
RCK (RC)
DTK (RC)
RKA
AO-F7 PERF (RC)
CK (RC)
RD (RC) ZC
PAK
PT
KD (RC)
PTC (RC)
BT
GU
UL (RC)
PA (RC)
PTO (RC) BIASED
LOK
PAM PERF (RC)
Z (RC)
PTCA (RC)
MTP (RC)
PR2,3 (RC)
PR1 (RC)
PI'
TIA (RC)
P'
P
TIB (RC)
DTN
CH (RC)
TVM (RC)
DS (RC)
DTN (RC)
TC
TVM (RC)
TA (RC)
RD (RC)
ON (RC)
LOK
DTKA (RC)
TA (RC)
MTP (RC)
ON1 (RC)
ON2 (RC)
TF (RC)
PTO (RC) BIASED
TIA (RC)
CH (RC)
TVM (RC)
RD (RC)
ON (RC)
TF (RC)
ON1 (RC)
ON2 (RC)
P'
TIB (RC)
RK
TS SEL
TVM1 (RC)
RCK (RC)
RKA
DTK (RC)
ICK
DTKA (RC)
DTN
DTN (RC)
RD (RC) ZC
BT
GU
UL (RC)
ICK
37
ADL
PN14
AQ, X2

FROM 33AE36

TEST 237

TRANSVERTER TEST

AE1

NOTES:
1. FOR BDT AND CAMA-C TYPICAL RECORDING OPERATION WITH PERFORATOR REMOVED (SEE SC 22 AND SC 23).

PN 14, G35

A'0-F'7
AO-F7 PERF (RC)
AO-F7 (RC)
PT
PTC (RC)
PAK
PA (RC)
W (RC) .030 SEC
PAM PERF (RC)
PTCA (RC)
CK (RC)
PTO (RC)
PR2 (RC)
PR1 (RC)
PR3 (RC)
PI'
DS (RC)
P'
RK
TS SEL 38
37
TC
RKA
PN14
RCK (RC)
DTK (RC)
A'0-F'7
AO-F7 (RC)
RD (RC) ZC
AO-F7 PERF (RC)
CK (RC)
BT
GU
UL (RC)
PAK
PT
PTC (RC)
LOK
PA (RC)
PTO (RC) BIASED
TVM
MTP (RC)
PTCA (RC)
PAM MAG (RC)
Z (RC)
PR1,2,3 (RC)
PI'
AD
TIA (RC)
TV
ADI
DTN
CH (RC)
DS (RC)
TVM (RC)
DTN (RC)
TIB (RC)
TC
TVM1 (RC)
RD (RC)
TA (RC)
RCO2/RCE2, RCO3/RCE3
RCO1/RCE1
TL (RC)
ON (RC)
LOK
TI (RC)
DTKA (RC)
TA (RC)
TIA (RC)
ON1 (RC)
ON2 (RC)
TF (RC)
TIB (RC)
BT
P'
RK
IP (RC)
238
TS SEL
IPA (RC)
RKA
ON (RC)
GU
TA (RC)
ON1 (RC)
UL (RC)
TF (RC)
ON2 (RC)
RCK
0.560 SEC
DTK (RC)
TM (RC)
TB (RC)
0.600 SEC
RPR (MTC)
TM (RC)
TC (RC)
0.560 SEC
TM (RC)
TD (RC)
0.600 SEC
TO TM, 35G3

P34

OPEN "DT" LEAD TEST

TEST 238

TO 35P1

DRAWING ISSUE
3ID
35D

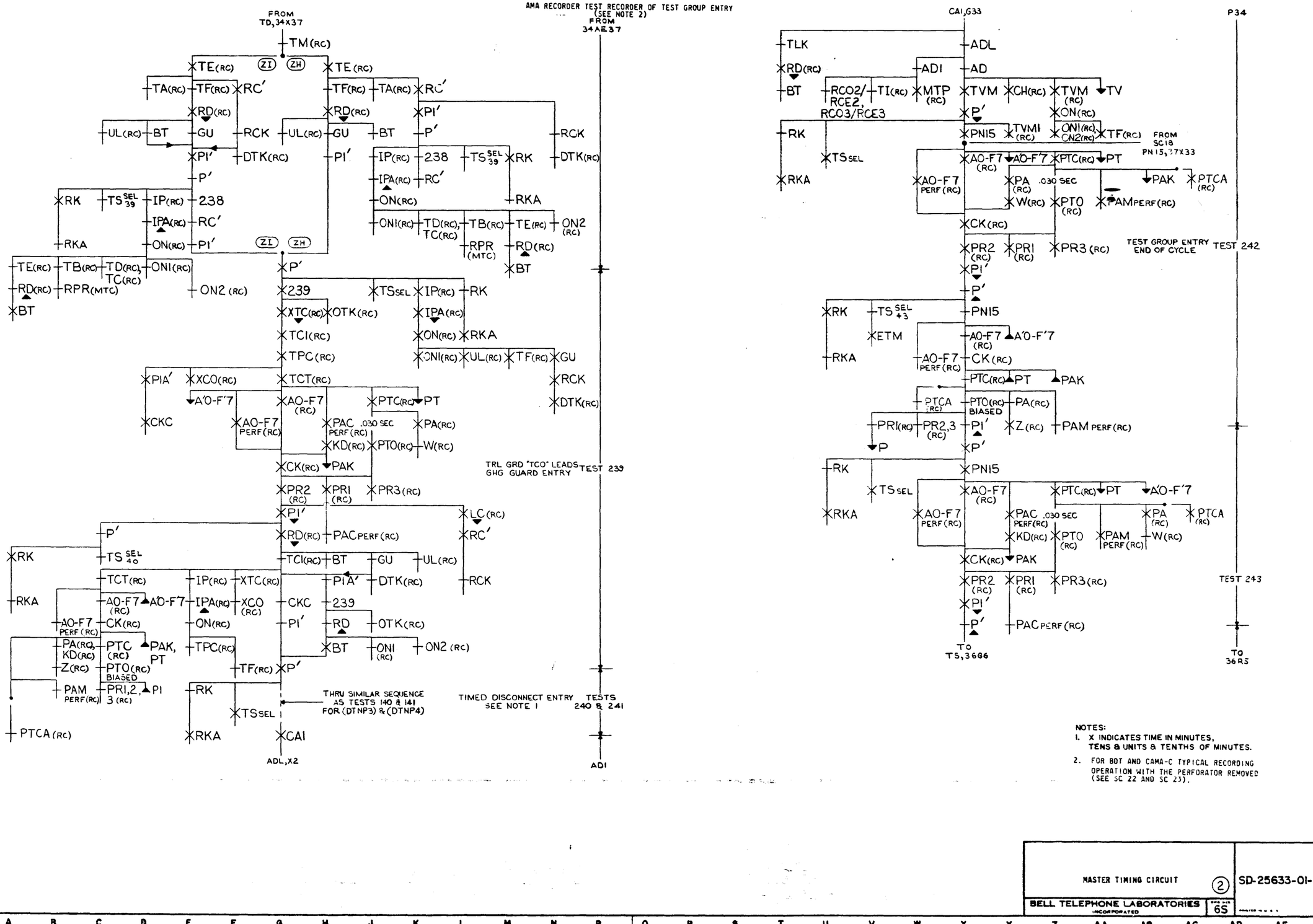
ISSUE 55B

MASTER TIMING CIRCUIT (2)
BELL TELEPHONE LABORATORIES INCORPORATED
SIZE 6S
SD-25633-01-E34

SD-25633-01-E34
RUWE

PART OF SC 16

AMA RECORDER TEST RECORDER OF TEST GROUP ENTRY (SEE NOTE 2)



NOTES:
1. X INDICATES TIME IN MINUTES, TENS & UNITS & TENTHS OF MINUTES.
2. FOR BDT AND CAMA-C TYPICAL RECORDING OPERATION WITH THE PERFORATOR REMOVED (SEE SC 22 AND SC 23).

DRAWING ISSUE

31D	55B
35D	N.F.

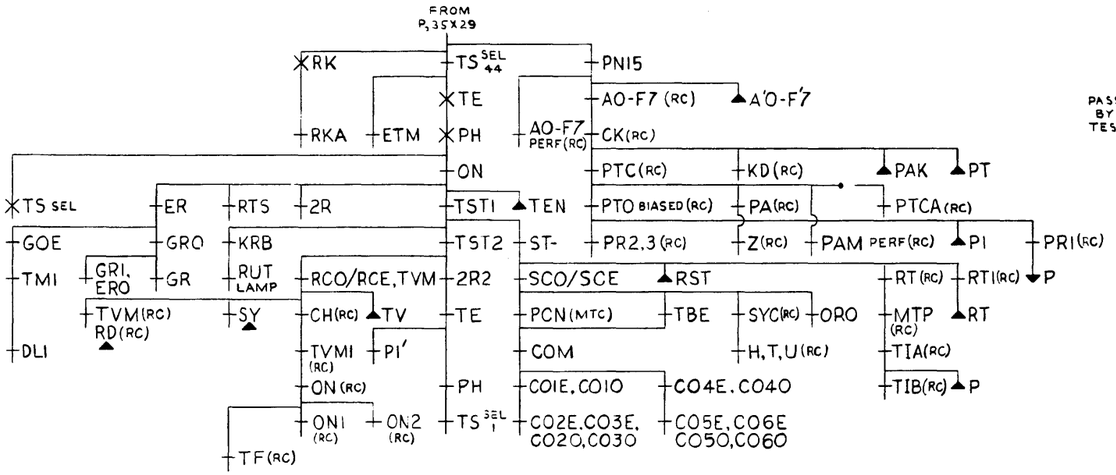
ISSUE 55B

MASTER TIMING CIRCUIT	2	SD-25633-01-E35
BELL TELEPHONE LABORATORIES INCORPORATED	SIZE 6S	

SD-25633-01-E35

STA 815

PART OF SC 16
AMA RECORDER TEST
RECORDER OF TEST GROUP ENTRY



PASS BY TEST

FROM 35AD29

TEST 244

TABLE A

STEPPING MAGNET (TS) - TEST SELECTOR

TEST LEAD	TERMS ARCS 1 & 4	TEST NUMBER PERFORATED A	B	C	D	E	F	PATTERN RELAYS PN REL	DTNP REL	TEST
101	1	0	0	1	0	1	0	1		INDIVIDUAL PERFORATORS IN RECORDER VISUAL DIAMOND SHAPED PATTERN
102	2	2	3	3	3	3	3	3		
103	3	0	3	0	3	0	3	4		
104	4	1	1	6	1	6	1	5		
105	5	2	6	6	6	6	6	6		
106	6	0	6	1	6	1	6	7		
107	7	1	0	3	0	3	0	2		
108	8	2	3	3	3	3	3	3		
109	9	0	3	0	3	0	3	4		
110	10	1	1	6	1	6	1	5		
111	11	2	6	6	6	6	6	6		
112	12	0	6	1	6	1	6	7		
113	13	1	0	3	0	3	0	2		
114	14	2	3	3	3	3	3	3		
115	15	0	3	0	3	0	3	4		
116	16	1	1	6	1	6	1	5		
117	17	2	6	6	6	6	6	6		
118	18	0	6	1	6	1	6	7		
119	19	1	0	3	0	3	0	2		
120	20	2	3	3	3	3	3	3		
121	21	0	3	0	3	0	3	4		
122	22	1	1	6	1	6	1	5		
123	23	2	6	6	6	6	6	6		
124	24	0	6	1	6	1	6	7		
125	25	1	0	3	0	3	0	2		
126	26	2	3	3	3	3	3	3		
127	27	0	3	0	3	0	3	4		
128	28	1	1	6	1	6	1	5		
129	29	2	6	6	6	6	6	6		
130	30	0	6	1	6	1	6	7		
131	31	1	7	5	7	5	7	8		
132	32	0	5	2	5	2	5	9		
133	33	2	2	7	2	7	2	10		RECORDER OPERATION WITH TRANSVERTER
134	34	0	4	4	4	4	4	11		
135	35	1	8	8	3	3	8	12		
136	36	2	5	9	5	9	5	13		
137	37	1	9	5	9	5	9	14		
138	38	1	X	X	X	1	1		1	RECORDER ANS AND DISCONNECT ENTRIES SEE NOTE 1
139	39	1	X	X	X	3	3		2	
140	40	3	X	X	X	6	6		3	
141	41	3	X	X	X	0	0		4	
142	42	1	X	X	X	7	⊖			TBL ON ANS OR DISCONNECT ENTRY (SEE NOTES 1,2,3)
		2	8	7	1	0	0			CANCEL ENTRY
143	43									PASS BY
144	44									OPERATE (2R)

TEST LEAD	TERMS ARCS 5 & 6	TEST NUMBER PERFORATED A	B	C	D	E	F	PATTERN RELAYS AP REL	PN REL	DTNP REL	RECORDER CHECK RELAYS TESTED	TEST
201	1	0	⊖	4	4	4	4	1	11		80	FOR TROUBLE CROSSES IN CONTACTS OF CHECK RELAYS IN RECORDER
202	2	0	⊖	4	4	4	4	1	11		80	
203	3	1	≠	3	0	3	0	1	2		87	
204	4	1	⊘	6	1	6	1	2	5		80,81,82	
205	5	2	≠	3	3	3	3	3	3		81,82,84	
206	6	1	⊘	3	0	3	0	2	2		82,84,87	
207	7	0	4	⊖	4	4	4	4	11		C0	
208	8	0	3	≠	3	0	3	4	4		C7	
209	9	0	6	⊘	6	1	6	5	7		C0,C1,C2	
210	10	2	3	▲	3	3	3	3	3		C1,C2,C4	
211	11	0	3	⊘	3	0	3	5	4		C2,C4,C7	
212	12	0	4	4	⊖	4	4	6	11		00	
213	13	1	0	3	≠	3	0	6	2		07	
214	14	1	1	6	⊘	6	1	7	5		00,01,02	
215	15	2	3	3	▲	3	3	8	3		01,02,04	
216	16	1	0	3	⊘	3	0	7	2		02,04,07	
217	17	0	4	4	4	⊖	4	9	11		E0	
218	18	0	3	0	3	≠	3	9	4		E7	
219	19	0	6	1	6	⊘	6	10	7		E0,E1,E2	
220	20	2	3	3	3	▲	3	9	3		E1,E2,E4	
221	21	0	3	0	3	⊘	3	10	4		E2,E4,E7	
222	22	0	4	4	4	4	⊖	11	11		F0	
223	23	1	0	3	0	3	≠	11	2		F7	
224	24	1	1	6	1	6	⊘	12	5		F0,F1,F2	
225	25	2	3	3	3	3	▲	13	3		F1,F2,F4	
226	26	1	0	3	0	3	⊘	12	2		F2,F4,F7	
227	27	0	4	4	4	4	4	14	11		A0,A1	
228	28	0	4	4	4	4	4	14	11		A0,A2	
229	29	1	3	3	3	8	8	15	12		A1,A2	
230	30	0	8	3	9	8	8	15	12		A0,A1,A2	
231	31	-	4	4	4	4	4	13	11			
232	32	⊖	4	4	4	4	4	16	11		OTO	
233	33	2	2	7	2	7	2		10		RCK	
234	34	0	4	≠	4	4	4		11		OTK	
235	35	1	8	8	8	3	8		12			TBL GRD "XTC" LEAD
236	36	2	5	9	5	9	5		13			TRANSVERTER
237	37	1	9	5	9	5	9		14			OPEN "OT" LEAD
238	38											TBL GRD "TCO" LEADS
239	39	2	3	5	4	0	0					CHG GUARD ENTRY
240	40	3	X	X	X	6	6			3		TIMED DISCONNECT
241	41	3	X	X	X	0	0			4		ENTRY (SEE NOTE 1)
242	42	2	3	8	0	0	0		15			TEST GROUP ENTRY
243	43	2	8	8	0	0	0		15			END OF CYCLE
244	44											PASS BY

▲ — 1,2,4
▲▲ — 2,4,7
✻✻ — 0 — OPT WM (RCDR)
0,2 — OPT WN (RCDR)

NOTES:
1. X INDICATES TIME IN MINUTES TENS & UNITS & TENTHS OF MINUTES.
2. THIS SEL POS 42 CAUSES THE FAILURE OF THE (CK) RELAY IN THE RECORDER.
3. ANY NUMBERS WITH A LINE THRU THEM INDICATE THE NUMBER OF THE HOLE OR HOLES PERFORATED.

DRAWING ISSUE
31D HPR RV AMB
350 NJF

ISSUE 49B

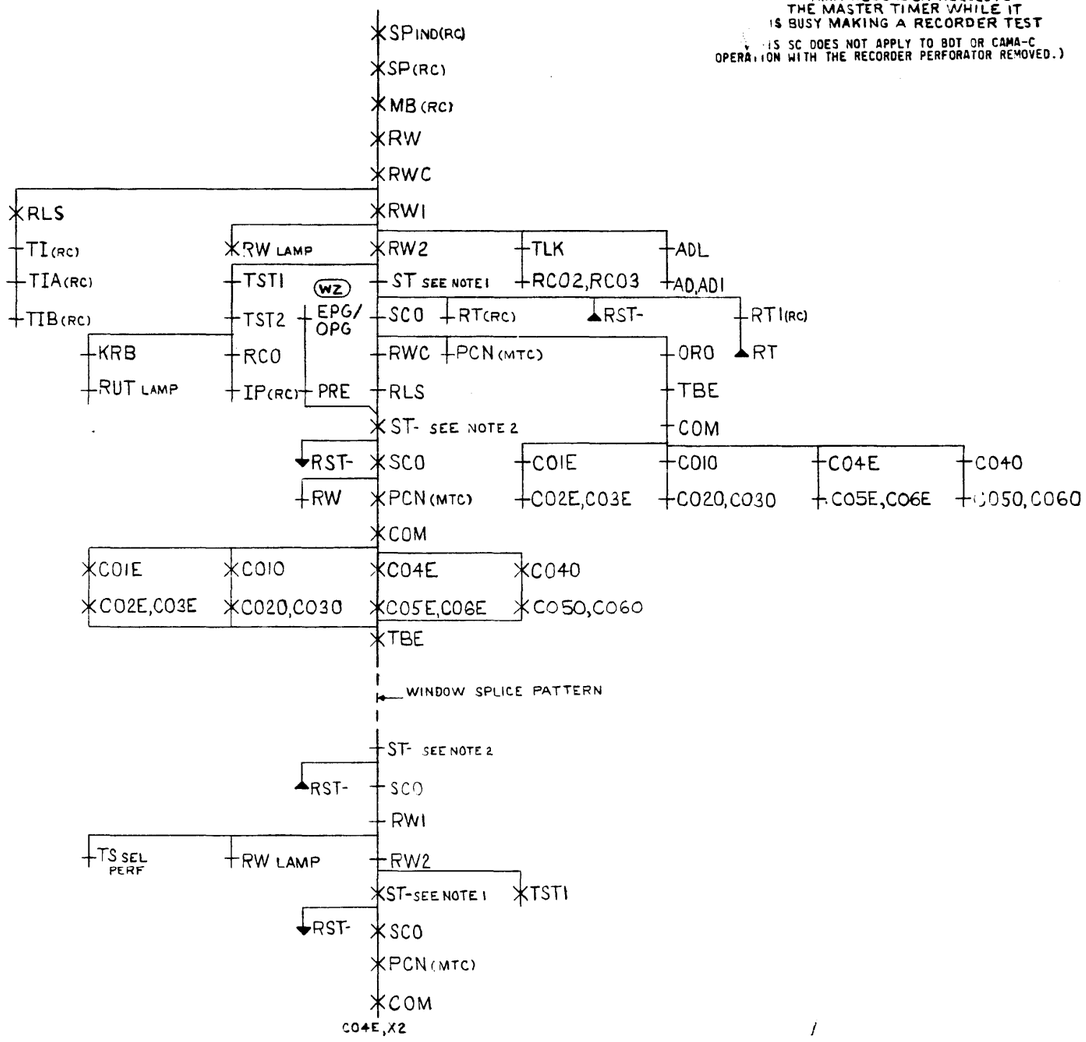
STABILO

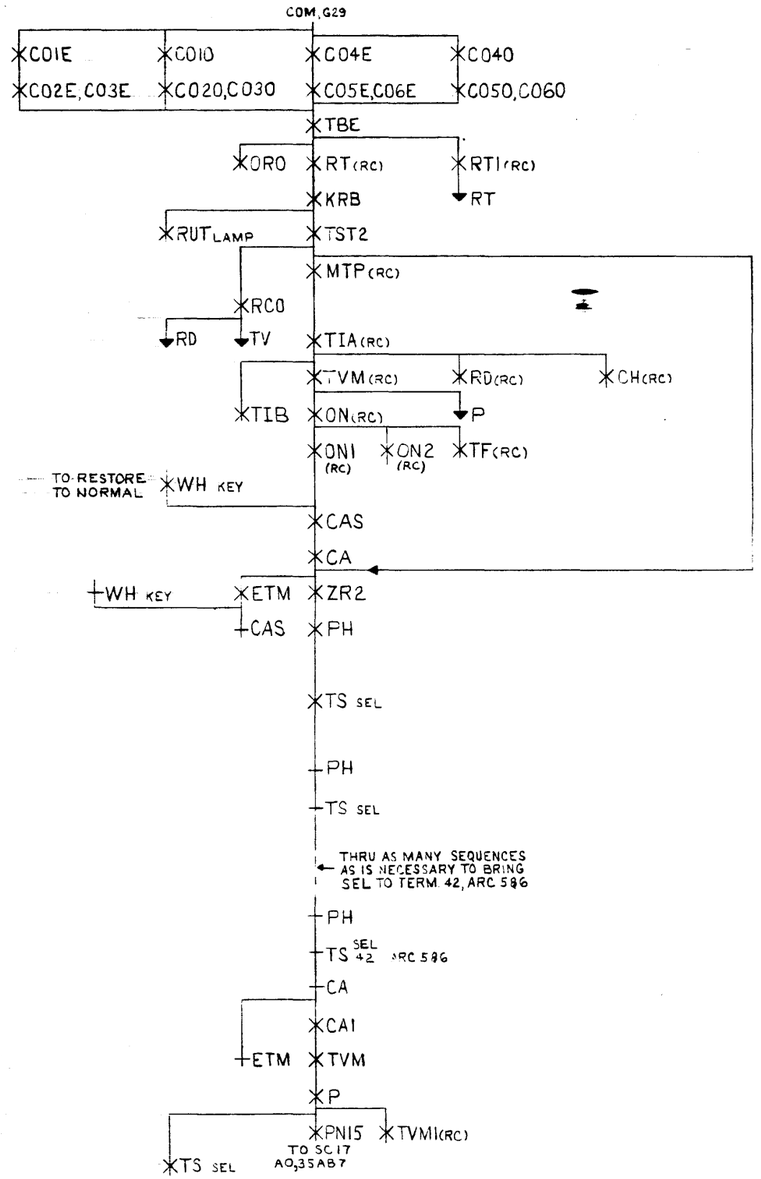
MASTER TIMING CIRCUIT (2)
SD-25633-01-E36
BELL TELEPHONE LABORATORIES INCORPORATED
65

SC 17

AMA RECORDER REQUESTS
THE MASTER TIMER WHILE IT
IS BUSY MAKING A RECORDER TEST

(THIS SC DOES NOT APPLY TO BDT OR CAMA-C
OPERATION WITH THE RECORDER PERFORATOR REMOVED.)





NOTES:
1. ASSOCIATED WITH RECORDER UNDER TEST.
2. ASSOCIATED WITH RECORDER REQUESTING MASTER TIMER.

DRAWING ISSUE 31D

ISSUE 55B

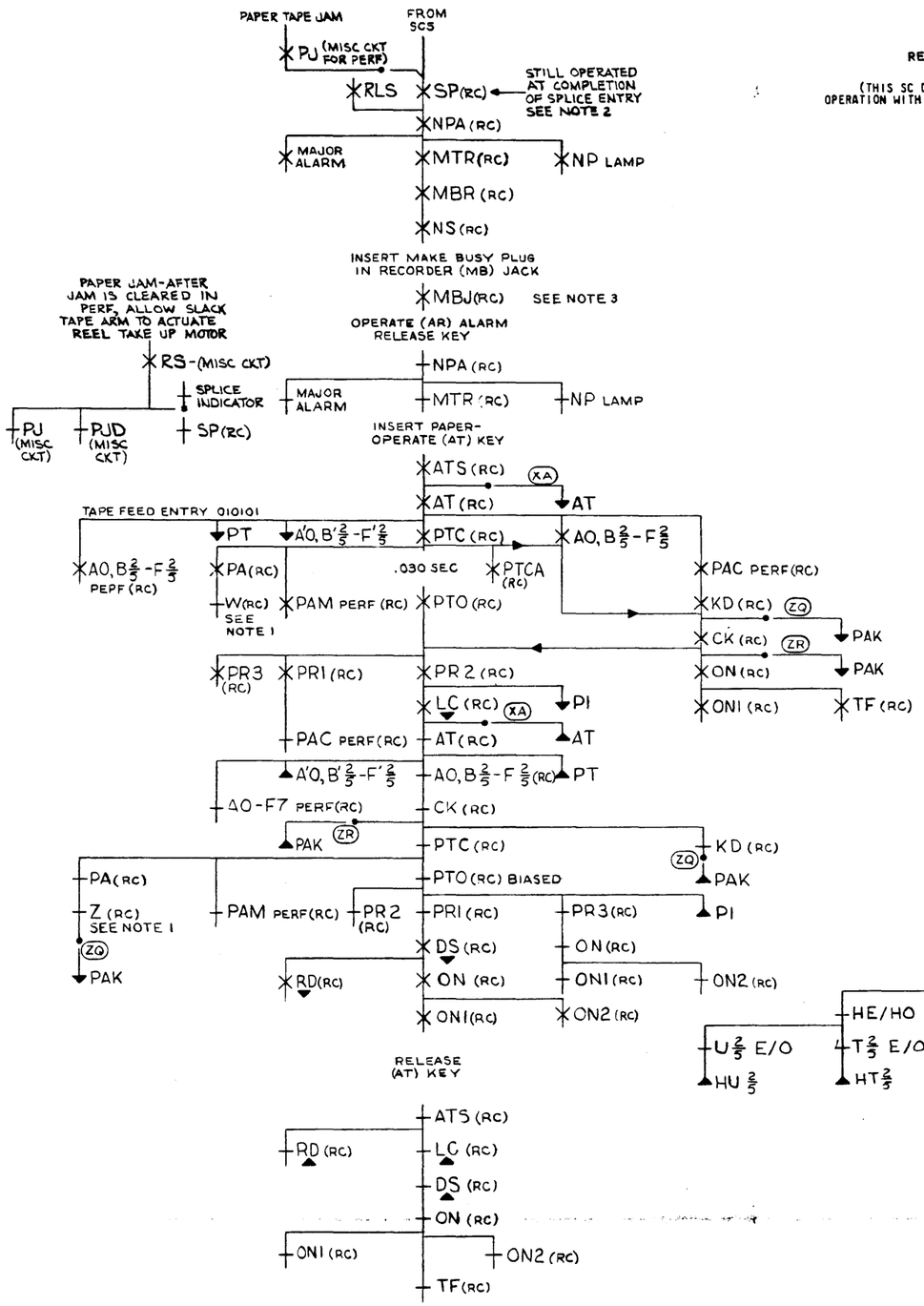
MASTER TIMING CIRCUIT (2)	SD-25633-01-E37
BELL TELEPHONE LABORATORIES INCORPORATED	6S

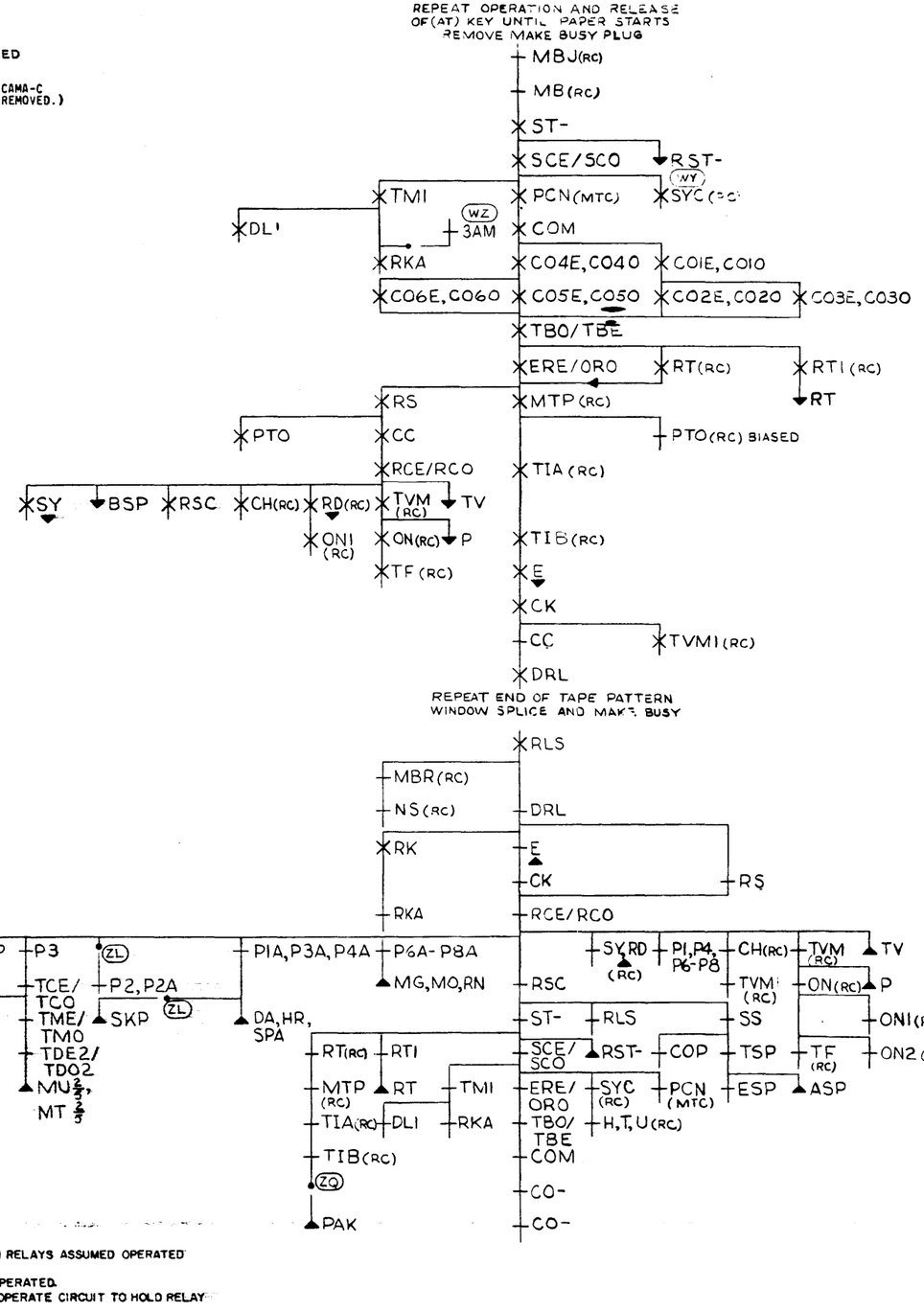
STABILO

SC 18

NO PAPER ALARM
RECORDING OF TAPE FEED
ENTRY

(THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WITH THE RECORDER PERFORATOR REMOVED.)





NOTES:
1. RECORDER (W) AND (Z) RELAYS ASSUMED OPERATED AT START OF ENTRY.
2. RELAY (MB) REMAINS OPERATED.
3. PROVIDES AUXILIARY OPERATE CIRCUIT TO HOLD RELAY (MB) OPERATED

DRAWING ISSUE
30D DLS 7/74 148

ISSUE 55B

MASTER TIMING CIRCUIT (2) SD-25633-01-E38

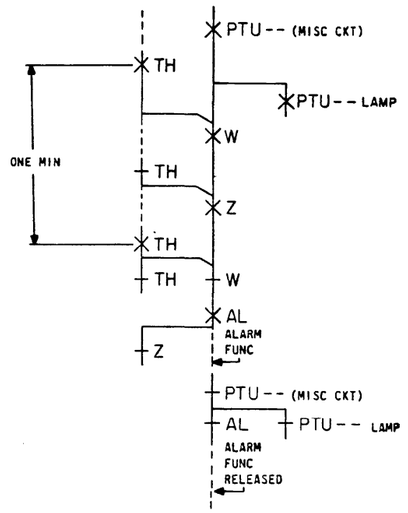
BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-E38

STABILO

SC 19

PAPER TAKE-UP ALARM
(THIS SC DOES NOT APPLY TO BDT OR CAMA-C
OPERATION WITH THE RECORDER PERFORATOR REMOVED.)



DRAWING ISSUE	
34B	CMC PKJ RHD
350	NJF

ISSUE 55B

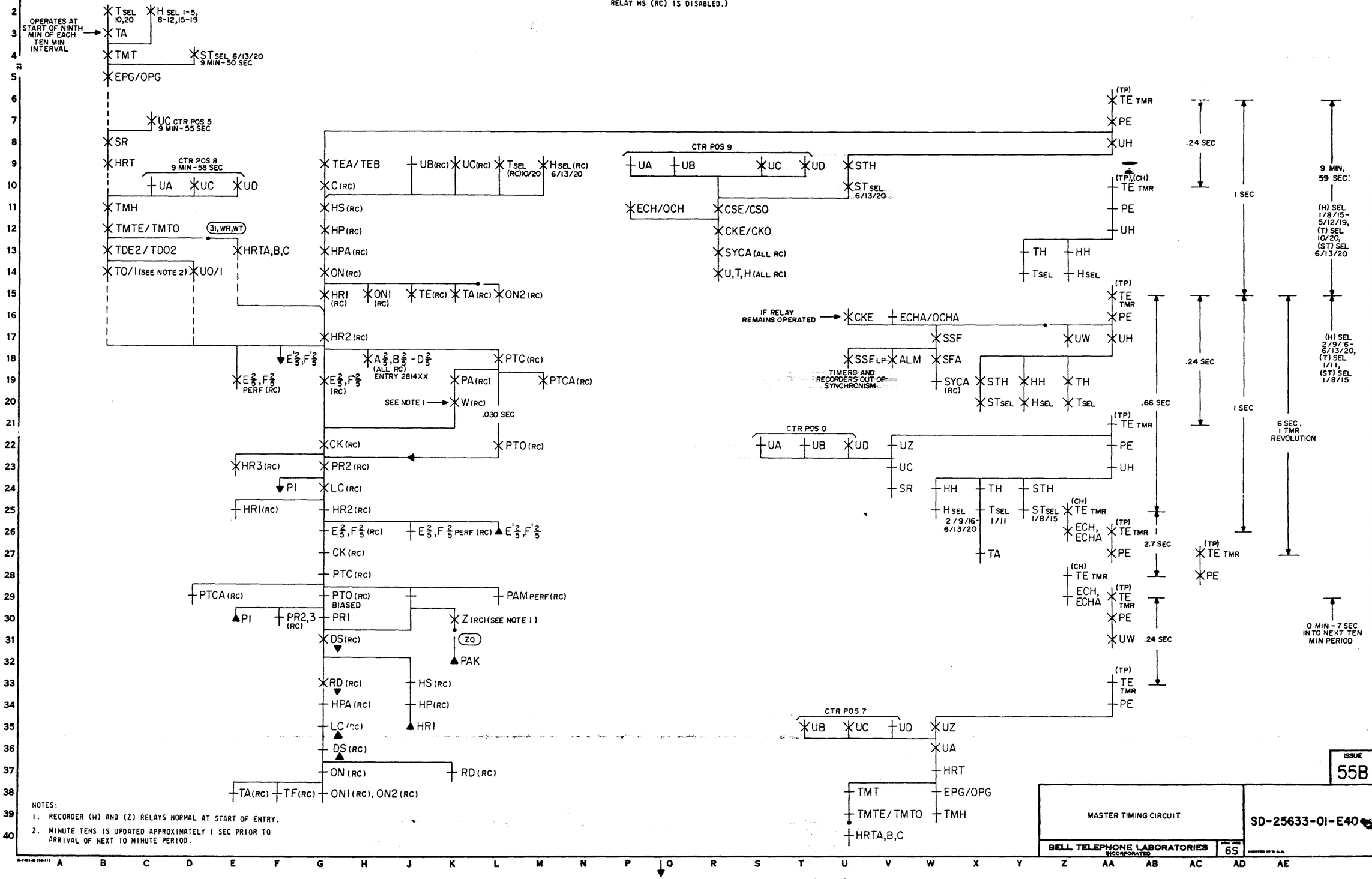
MASTER TIMER CIRCUIT (2) SD-25633-01-E39

BELL TELEPHONE LABORATORIES INCORPORATED 6S

(WZ,ZD) SC 20

RECORDING OF TEN MINUTE ENTRY

(THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WITH OPTION VR PROVIDED SINCE RELAY HS (RC) IS DISABLED.)



NOTES:

1. RECORDER (W) AND (Z) RELAYS NORMAL AT START OF ENTRY.
2. MINUTE TENS IS UPDATED APPROXIMATELY 1 SEC PRIOR TO ARRIVAL OF NEXT 10 MINUTE PERIOD.

ISSUE 55B

MASTER TIMING CIRCUIT

SD-25633-01-E40

BELL TELEPHONE LABORATORIES INCORPORATED

6S

(WZ,ZD) **SC 21**
RECORDING OF HOURLY ENTRY
ONE SECOND TIMING
(THIS SC DOES NOT APPLY TO BDT OR CAMA-C OPERATION WITH OPTION VR PROVIDED SINCE RELAY HS (RC) IS DISABLED.)

H SEL ARC 3,4, 6,13,20
T SEL 9,19 58TH MIN
MT1,4
HRT1
HR (RC)
T SEL 10,20 59TH MIN
H SEL ARC 1, 6,13,20
ST SEL ARC 4, 6,13,20
TMT
TA
EPG/OPG 59TH MIN-50 SEC
UC CTR POS 5 59TH MIN-55 SEC
SR
CTR POS 6, 59TH MIN-56 SEC
HRT
UA UB UC UD
TMT
TE PE UH
ADV
HUH
CTR POS 7, 59TH MIN-57 SEC
HU SEL
UA UB UC UD
TE PE UH
ADV
HUH
HU SEL ← ADVANCE TO NEW HOUR
CTR POS 8 59TH MIN-58 SEC
UA UC UD
TMT
TMH
HE/HO
31,WR,WT
T(0,1,2,4,7)
U(0,1,2,4,7)
HRTA,B,C
$E\frac{2}{5}, F\frac{2}{5}$ PERF (RC)
$E'\frac{2}{5}, F'\frac{2}{5}$

59 MIN - 59 SEC
TEA/TEB
C (RC) UB (RC) UC (RC) T SEL (RC) 10/20
H SEL (RC) 6/13/20
HS (RC)
HP (RC)
HPA (RC)
ON (RC)
HRI (RC) ONI (RC) TE (RC) TA (RC) ON2 (RC)
HR2 (RC)
ENTRY 2810XX
$E\frac{2}{5}, F\frac{2}{5}$ (RC)
$A\frac{2}{5}, B\frac{2}{5}$ - $D\frac{2}{5}$ (ALL RC)
PTC (RC)
PTCA (RC)
PA (RC)
.030 SEC.
SEE NOTE 1 → W (RC)
CK (RC)
PTO (RC)
PR2 (RC)
LC (RC)
HRI (RC)
HR2 (RC)
$E\frac{2}{5}, F\frac{2}{5}$ (RC)
$E\frac{2}{5}, F\frac{2}{5}$ PERF (RC)
$E'\frac{2}{5}, F'\frac{2}{5}$
CK (RC)
PTC (RC)
PTCA (RC)
PTO (RC) BIASED
PA (RC)
PAM PERF (RC)
PI
PR2,3 (RC)
PRI
DS, 41V33
Z (RC) ← SEE NOTE 1

(TP) TE TMR PE UH UW .24 SEC
(TP)(CH) TE TMR PE UH UZ
CTR POS 9
ST SEL 6/13/20
UA UB UD UC
CSE
CKE
SYNCHRONISM CHECK SEE SC 13 → SYCA (R)
ECHA/OCHA
SSF
SSF LP
ALM
TIMERS AND RECORDERS OUT OF SYNCHRONISM
SFA
SYCA (RC)
UW
(TP) TE TMR PE UH .66 SEC
CTR POS 0
UA UB UD
TMP
UZ UC SR
STH ADV
ADVANCE TO 1/8/15 → ST SEL
ADVANCE TO 1/11 → TH T SEL
HH TA
ADVANCE TO 1/8/15 → H SEL
(CH) TE TMR PE ECH, ECHA 2.7 SEC
(CH) TE TMR ECH, ECHA
PRI, 41L38
DS (RC)
RD (RC)
HPA (RC)
LC (RC)
HS (RC)
HP (RC)
HRI

1 SEC
59 MIN, 59 SEC
(H) SELECTOR 6/13/20
(T) SELECTOR 10/20,
(ST) SELECTOR 6/13/20
.24 SEC
(H) SELECTOR 1/8/15,
(T) SELECTOR 1/11
(ST) SELECTOR 1/8/15
1 SEC
(TP) TE PE
(TP) TE TMR PE UW .24 SEC
0 MIN, 7 SEC INTO NEXT HOUR
(TP) TE TMR PE UZ UA HRT EPG/OPG

NOTES:
1. RECORDER W AND Z RELAYS NORMAL AT START OF ENTRY.

ISSUE 55B

MASTER TIMING CIRCUIT

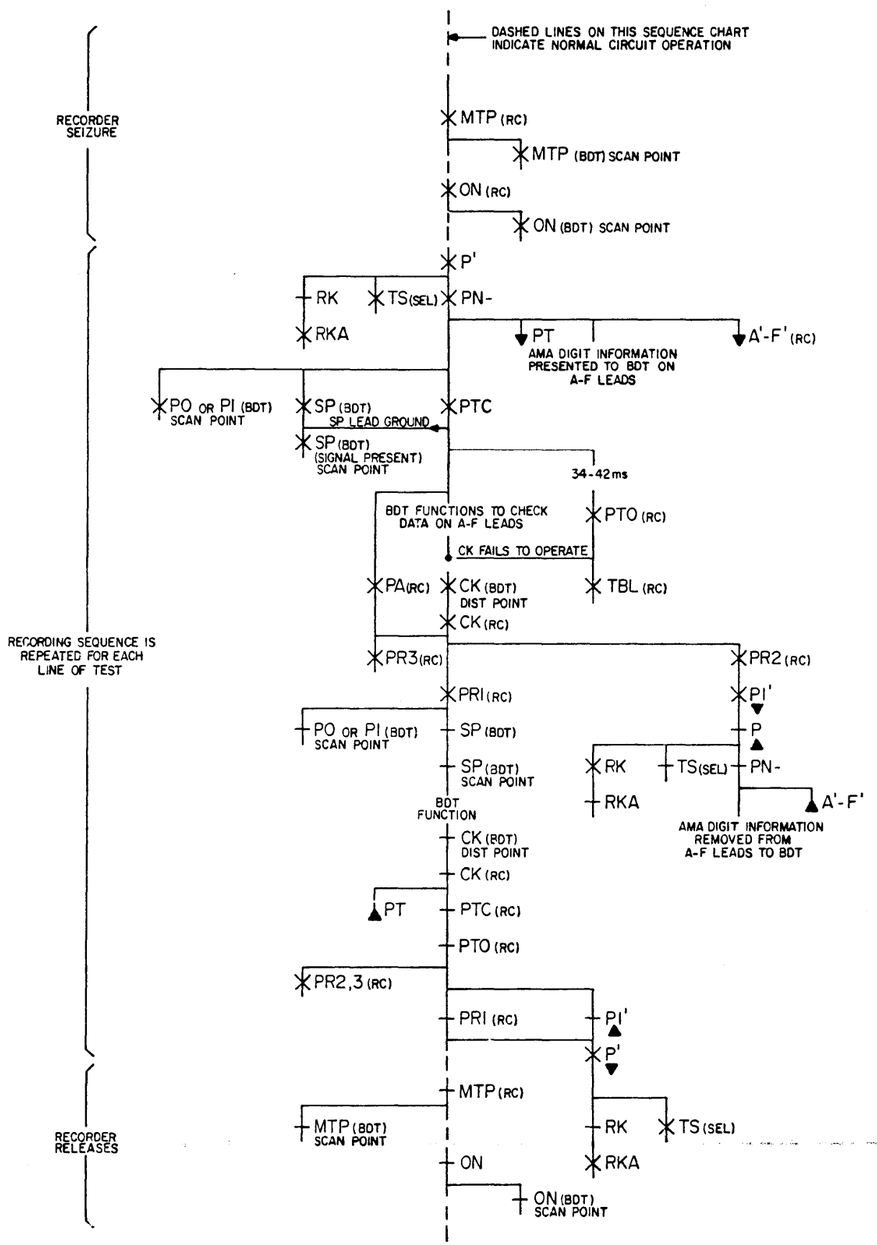
SD-25633-01-E41

BELL TELEPHONE LABORATORIES INCORPORATED

6S

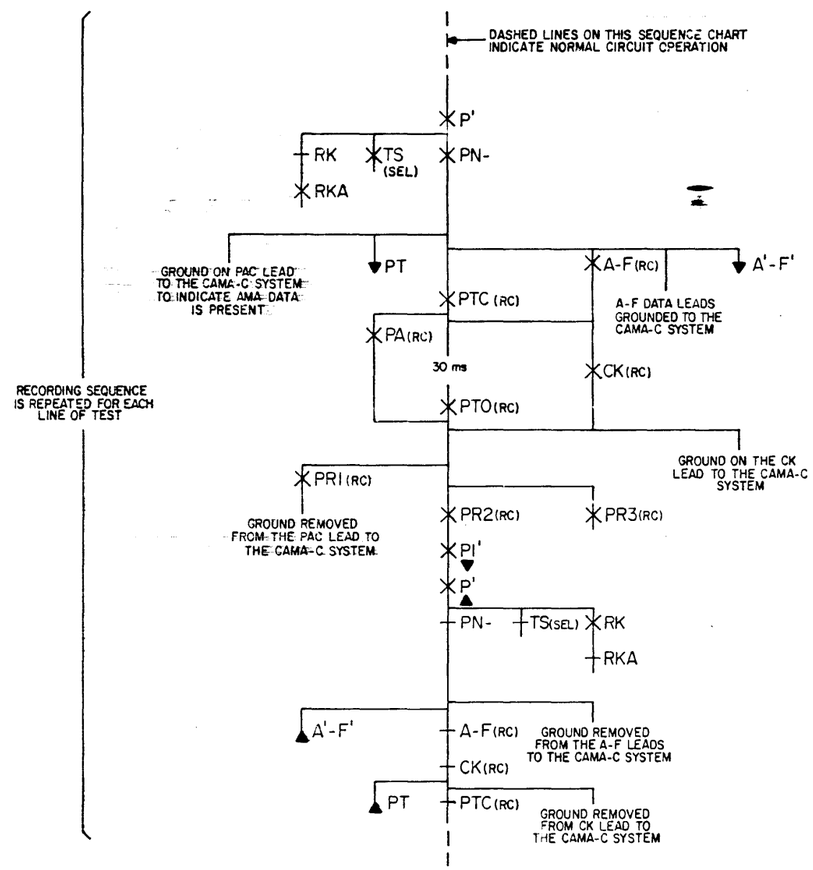
SC 22

BILLING DATA TRANSMITTER
TYPICAL RECORDING OPERATION WITH
PERFORATOR REMOVED



SC 23

CAMA-C SYSTEM
TYPICAL RECORDING OPERATION
WITH PERFORATOR REMOVED



MASTER TIMING CIRCUIT		DWG SIZE 6S	ISSUE 55
BELL LABORATORIES	SD-25633-01-		E42

SD-25633-01 15 PAGES

CIRCUIT REQUIREMENTS

MASTER TIMING CIRCUIT (MTO),(MTE),(MT COM),(RCDR TST)

DRAWING ISSUE: 30D GTM 64-1 AMD; 348 CVC 9&J 8&U 8MS; 550 NLF

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT	APPARATUS FIG.	MECH REQT BSP FIG.	MECH REQT CONT PRESS.	MECH REQT ARM. TRVL.	CIRCUIT PREPARATION BLOCK OR INSULATE	CIRCUIT PREPARATION TEST CLIP DATA CONN BAT.	CIRCUIT PREPARATION TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	DIRECT CURRENT FLOW REQT TEST FOR	DIRECT CURRENT FLOW REQT AFTER SOAK MA.	DIRECT CURRENT FLOW REQT TEST MA.	DIRECT CURRENT FLOW REQT READJ MA.	REMARKS
MAGNETS																	
DT	206AF SEL		4	SEE BSP			(DTH)NO		2T(DTH)	G/V					BSP	BSP	STEPPING
									2 STEP(DU)	GRD	1/2				BSP	BSP	RUNNING
DU	206AF SEL		4	SEE BSP			(DH)NO		2T(DH)	G/V					BSP	BSP	STEPPING
									2 STEP(DU)	GRD	1/2				BSP	BSP	RUNNING
H	206AF SEL		4	SEE BSP			(HH)NO		2B(HH)	G/V					BSP	BSP	STEPPING
									2 STEP(H)	GRD	1/2				BSP	BSP	RUNNING
HT	206AF SEL		4	SEE BSP			(HTH)NO		2T(HTH)	G/V					BSP	BSP	STEPPING
									2 STEP(HT)	GRD	1/2				BSP	BSP	RUNNING
HU	206AF SEL		4	SEE BSP			(HUH)NO		2T(HUH)	G/V					BSP	BSP	STEPPING
									2 STEP(HU)	GRD	1/2				BSP	BSP	RUNNING
M	206AF SEL		4	SEE BSP			(MOH)NO		2T(MOH)	G/V					BSP	BSP	STEPPING
									2 STEP(M)	GRD	1/2				BSP	BSP	RUNNING
RO	209A SEL		A,B	SEE BSP					7B(MO)	G/V					BSP	BSP	STEPPING
ST	206AF SEL	WZ	4	SEE BSP			(STH)NO		5(STH)	G/V					BSP	BSP	STEPPING
									2(STEP(ST)	GRD					BSP	BSP	RUNNING
T	206AF SEL		4	SEE BSP			(TH)NO		2B(TH)	G/V					BSP	BSP	STEPPING
									2 STEP(T)	GRD	1/2				BSP	BSP	RUNNING
TS	209A SEL		20	SEE BSP			(TST2)NO		4T(PH)	G/V			0		BSP	BSP	STEPPING
U	206AF SEL		4	SEE BSP			(UH)NO		2B(UH)	G/V					BSP	BSP	STEPPING
									2 STEP(U)	GRD	1/2				BSP	BSP	RUNNING
RELAYS																	
043A, 043B	U122	XS	4	148/130	H	47			T REL TST	GRD	3		0		10.4	9.9	
1CL	U113		8	132/101	H	47			T(1CL)	GRD			0		7.4	7	
2R	U577		20	163/150	H	59	2(TS)		T(2R)	GRD			0		29.5	28	
2R1	U1073		20	161/163	H	59	3T(AD)		T(2R1)	GRD			0		31.5	30	
2R2	U1112		20	163/163	H	59			T(2R2)	GRD			0		17.5	16.5	
3AM	AJ15	WZ	4	249					U(3AM)	GRD			0		43	40.5	
3E	AJ83	WZ	23	249					U(3E)	GRD			0		13.3	12.6	
18A, 18B	U122	XS	4	148/130	H	47			T REL TST	GRD			0		10.4	9.9	
20A	U122	XX	4	148/130	H	47			T(20A)	GRD	3		0		10.4	9.9	
21A, 21B	U122	XW	4	148/130	H	47			T REL TST	GRD	3		0		10.4	9.9	
32	U93		20	154/149	H	47			T(32)	GRD			0		23	21.5	
37	U84		20	311/121	H	59			T(37)	GRD			0		27	25.5	

TEST NOTES:

1. CHECK FOR STEADY AND UNIFORM OPERATION WHEN CONTACT 1 OF STEPPER UNDER TEST IS CONNECTED TO CONTACT 2T OF THE ASSOCIATED (DTH),(DH),(HTH),(HUH), OR (MOH) RELAY, OR TO CONTACT 2B OF THE ASSOCIATED (HH) OR (TH) RELAY.
2. BLOCK NON-OPERATED (PE) OR (PO) RELAY ASSOCIATED WITH CIRCUIT UNDER TEST.
3. WHEN TESTING RELAYS IN APP FIG. 4 THE EVEN TIMER MUST BE MADE BUSY, AND VICE VERSA.

PAGE 1

MASTER TIMING CIRCUIT | SD-25633-01-FI

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-FI

CIRCUIT REQUIREMENTS

DRAWING ISSUE: 30D GTM 64-1 AMD CB; 348 CVC 9&J 8&U 8MS CB; 550 NLF

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT	APPARATUS FIG.	MECH REQT BSP FIG.	MECH REQT CONT PRESS.	MECH REQT ARM. TRVL.	CIRCUIT PREPARATION BLOCK OR INSULATE	CIRCUIT PREPARATION TEST CLIP DATA CONN BAT.	CIRCUIT PREPARATION TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	DIRECT CURRENT FLOW REQT TEST FOR	DIRECT CURRENT FLOW REQT AFTER SOAK MA.	DIRECT CURRENT FLOW REQT TEST MA.	DIRECT CURRENT FLOW REQT READJ MA.	REMARKS
233	U768		22	114/114	H	50	9T(233)		TF(233)	GRD		P	0		23	21.5	
							9B(233)		TR(233)	GRD		S	0		24.5		
234	U768		22	114/114	H	50	7B(234)		TF(234)	GRD		P	0		23	21.5	
							9T(234)		TR(234)	GRD		S	0		24.5		
235	U768		22	114/114	H	50	9T(235)		TF(235)	GRD		P	0		23	21.5	
							9B(235)		TR(235)	GRD		S	0		24.5		
238, 239	U794		22	119/119	H	35			T REL TST	GRD			0		22.5	21	
30S	U422	WC	4	132/101	H	47	2B(305)		T(305)	GRD	1		0		17.5	13.7	
A	U639		8	161/195	H	53			T(A)	GRD			0		34	32	
A1	U1113		8	114/114	H	50	1T,2T(RLS)		T(A1)	GRD			0		22.5	21	
ACO	U270		19	137/110	H	41			T(ACO)	GRD			0		8.3	7.9	
AD	U1072		20	197/161	H	59	2B(TVM)		T(AD)	GRD			0		18	17	
AD1	U1047		20	167/167	H	65			T(AD1)	GRD			0		23	22	
ADL	U200		20	117/118	H	50			T(ADL)	GRD			0		10.4	9.9	
ADV	U588		4	119/119	H	35	2T(UH)		T(ADV)	GRD			0		13.7	13	
AP1-16	U586		22	145/108	H	47	6B REL; 4B TST		TF REL; TR TST	GRD		P	0		17	16	
										GRD		S	0		20		
APR	U607		20	148/130	H	47	5B(APR)		T(APR)	GRD			0		20.5	19.5	
APT	U576		20	148/148	H	47			T(APT)	GRD			0		21	20	
									T(APT)	GRD			NO		10.4	11	
AL	U188		30	161/161	H	53	4B,4T(AL)		13T(AL)	GRD			0		19.5	17.5	
ALM	U256		19	160/108	H	47			T(ALM)	GRD			0		20	19	
B	U639		8	161/195	H	53			T(B)	GRD			0		34	32	
B1	U1113		8	114/114	H	50	1T,2T(RLS)		T(B1)	GRD			0		22.5	21	
BE1, BE2	U314		1	125/125	H	62	4B(ORP)		REL				0		26.5	25	WDG ALONE
									T TST	GRD			0		59	56	CKT COMB. OF (BE1) AND (BE2) REL
BLK	U1205		22	120/120	H	35			T(BLK)	GRD			0		24.5	23	
B01, B02	U314		2	125/125	H	62	4B(ORP)		REL				0		26.5	25	WDG ALONE
									T TST	GRD			0		59	56	CKT COMB. OF (B01) AND (B02) REL
BT	U1180		20	157/151	H	50							0		22	20.5	WDG ALONE
								B(BT)		BAT			0		59	55	CKT COMB. OF (BT) REL & (BT) RES
													NO		11.6	12.5	WDG ALONE
								B(BT)		BAT			NO		27	28.5	CKT COMB. OF (BT) REL & (BT) RES

TEST NOTES:

1. DO NOT TEST RELAYS (30S) AND (WHR) WITHIN TEN MINUTES OF ANY HOUR.

PAGE 2

ISSUE 41B CB

MASTER TIMING CIRCUIT (2) | SD-25633-01-FI

BELL TELEPHONE LABORATORIES INCORPORATED | SIZE 6S

CIRCUIT REQUIREMENTS

DRAWING ISSUE: 31D WCD

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT	APPARATUS FIG	MECH REQT BSP FIG.	MECH REQT CONT PRESS.	MECH REQT ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	CIRCUIT PREPARATION TEST CLIP DATA CONN BAT.	CIRCUIT PREPARATION TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS
CA	U643		20	162/103	H	50			TF(CA)	GRD		P	0		22.5	21	
												S	0		25.5		WDG ALONE
							5T(TE), 9B(2R2)		TR(CA)	GRD		S	0		67		CKT COMB. OF (CA)REL &(CA)RES
CA1	U721		20	121/121	H	50			T(CA1)	GRD			0		22	20.5	
CA5	U1113		20	114/114	H	50	5T(ETM)		T(CA5)	GRD			0		22.5	21	
CC	U953		8	207/197	H	59			T(CC)	GRD			0		27.5	26	
CCRT-	U177		27	139/139	H	59			T(CCRT-)	GRD	1, 2, 3		0		19	18	WDG ALONE
													0		41.5	39.5	CKT 2(CCRT-) RELAYS
													0		66	62	COMB. 3(CCRT-) RELAYS
													0		90	85	OF 4(CCRT-) RELAYS
CCT	U144		29	113/113	H	29			T(CC)	GRD	2,4		0		21.5	20.5	
CE	U1112		1	163/163	H	59	6B(TSI)						0		17.5	16.5	WDG ALONE
									T(CE)	GRD			0		39	37	CKT COMB. OF (CE) AND (CEI) REL
CEI	U692		1	139/139	H	59	6B(TSI)						0		17	16	WDG ALONE
									T(CEI)	GRD			0		38	36	PAR COMB. WITH (CE) REL
CK	U953		8	207/197	H	59			T(CK)	GRD			0		27.5	26	
CKC	Y218		22	320/320	H	53				GRD			0	FS	43.5	41	
									T(CKC)	GRD			H	FS	6.3	6	
										GRD			R	FS	1.5	1.9	
CKE	U891		1	113/127	H	47	7B(CSE)		TF(CKE)	GRD		P	0		25.5	24	
							11T(CKE)		TR(CKE)	GRD		S	0		20.5		
CKO	U891		2	113/127	H	47	7B(CSO), 11T(CKO)		TF(CKO)	GRD		P	0		25.5	24	
									TR(CKO)	GRD		S	0		20.5		
CKR	U460		17	108/108	H	47			T(CKR)	GRD			0		11.2	10.6	
CO	U1112		2	163/163	H	59							0		17.5	16.5	WDG ALONE
									T(CO)	GRD			0		39	37	CKT COMB. OF (CO) AND (CO1) REL
CO1	U692		2	139/139	H	59							0		17	16	WDG ALONE
									T(CO1)	GRD			0		38	36	CKT COMB. OF (CO) AND (CO1) REL
CO1E, CO10	U826		21	124/124	H	59	2T(COM)		T REL / T TST	GRD			0		20 / 45	19 / 42.5	WDG ALONE / CKT COMB. OF (CO1E) AND(CO10)REL
CO2E	U826		21	124/124	H	59							0		20	19	WDG ALONE
							11T(CO1E)		T(CO2E)	GRD			0		45	42.5	CKT COMB. OF (CO2E) AND(CO3E)REL
CO20	U826		21	124/124	H	59							0		20	19	WDG ALONE
							11T(CO10)		T(CO20)	GRD			0		45	42.5	CKT COMB. OF (CO20) AND(CO30)REL
CO3E	U826		21	124/124	H	59							0		20	19	WDG ALONE
							11T(CO1E)		T(CO3E)	GRD			0		45	42.5	CKT COMB. OF (CO2E) AND(CO3E)REL
CO30	U826		21	124/124	H	59							0		20	19	WDG ALONE
							11T(CO10)		T(CO30)	GRD			0		45	42.5	CKT COMB. OF (CO20) AND(CO30)REL
CO4E, CO40	U826		21	124/124	H	59	2B(COM)		T REL / T TST	GRD			0		20 / 45	19 / 42.5	WDG ALONE / CKT COMB. OF (CO4E) AND(CO40)REL

TEST NOTES:

1. MAKE ADJUSTMENTS IN CKT AS QUICKLY AS POSSIBLE TO MINIMIZE INTERFERENCE WITH "CALL COUNT PROCESS CONTROL" FEATURE.
2. ADJUSTMENTS SHOULD NOT BE MADE DURING THE TIME BETWEEN 2:55 AM & 3:30 AM.
3. RESTORE RELAYS TO CONDITION BEFORE ADJUSTMENTS WERE MADE.
4. INSULATE CONTACT 7 OF (RL)RELAY IN CALL COUNT PROCESS CONTROL STORAGE AND REGISTER CKT AND CONTACT 2B OF (RL) RELAY IN RECORDER AND RECORDER CONN CKT TO PREVENT SELECTOR FROM STEPPING TO NEXT POSTION WHEN TESTING IS COMPLETE, REMOVE INSULATORS.

MASTER TIMING CIRCUIT

SD-25633-01-F2

BELL TELEPHONE LABORATORIES INCORPORATED

PRINTED IN U.S.A.

CIRCUIT REQUIREMENTS

DRAWING ISSUE: 31D WCD

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT	APPARATUS FIG	MECH REQT BSP FIG.	MECH REQT CONT PRESS.	MECH REQT ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	CIRCUIT PREPARATION TEST CLIP DATA CONN BAT.	CIRCUIT PREPARATION TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS
COSE	U826		21	124/124	H	59							0		20	19	WDG ALONE
							11T(CO4E)		T(COSE)	GRD			0		45	42.5	CKT COMB. OF (COSE) AND(CO6E) REL
COSO	U826		21	124/124	H	59							0		20	19	WDG ALONE
							11T(CO40)		T(COSO)	GRD			0		45	42.5	CKT COMB. OF (COSO) AND(CO6O) REL
CO6E	U826		21	124/124	H	59							0		20	19	WDG ALONE
							11T(CO4E)		T(CO6E)	GRD			0		45	42.5	CKT COMB. OF (CO6E) AND(COSE) REL
CO6O	U826		21	124/124	H	59							0		20	19	WDG ALONE
							11T(CO40)		T(CO6O)	GRD			0		45	42.5	CKT COMB. OF (CO6O) AND(COSO) REL
COM	Y122		21	190/115	H	29	9T(TBO), (TBE)			GRD		P	0	FS	19	18	
									TF(COM)	GRD		P	H	FS	2.8	2.6	
										GRD		P	R	FS	1	1.3	
									TR(COM)	GRD		S	0	FS	18.5	17.5	
COP	U293		8	132/110	H	47	2B(PTO)		T(COP)	GRD			0		19	18	
									T(COP)	GRD			NO		11.7	12.4	
CSE	Y231		1	118/118	H	50				GRD	1		0		23.5	22	
							(ECH)NO		T(CSE)	GRD	1		NO		12.8	13.5	
										GRD	1		H		4.4	4.2	
										GRD	1		R		0.7	0.9	
CSO	Y231		2	118/118	H	50	(OCH)NO			GRD	1		0		23.5	22	
									T(CSO)	GRD	1		NO		12.8	13.5	
										GRD			H		4.4	4.2	
										GRD			R		0.7	0.9	
CSY	Y107		26	188/175	H	47				GRD			0	FS	14.3	13.6	
							4T(PE)		T(CSY)	GRD			H	FS	1.7	1.6	
										GRD			R	FS	0.7	0.9	
CTS	Y266		26	213/102	H	53				GRD			0		24.5	23	
							5T(TTS)		T(CTS)	GRD			H		3.5	3.3	
										GRD			R		0.9	1.1	
D1	U642		8	169/161	H	56			T(D1)	GRD			0		22.5	21	
DA	U144		8	113/113	H	29							0		22	20.5	WDG ALONE
									T(DA)	GRD			0		49	45.5	CKT COMB. OF (DA) AND (DC) REL
DAT	U1289		4	114/118	H	50			T(DAT)	GRD			0		25	23.5	
DC	U144		8	113/113	H	29							0		22	20.5	WDG ALONE
									T(DC)	GRD			0		49	45.5	CKT COMB. OF (DC) AND (DA) REL
DH	U1228	XU	4	111/101	H	29	6B(HA)		T(DH)	GRD			0		6.3	6	
DH	U340	XV	4	111/111	H	29	6B(HA), 2T(EXA)		T(DH)	GRD			0		8	7.6	
DL	U624	V	17	101/101	H	29	19(DL)		T(DL)	GRD			0		6.6	6.3	
DL1	Y223		17	198/198	H	35			T(DL1)	GRD			0	FS	28.5	27	
										GRD			H	FS	3.2	3	
										GRD			R	FS	1.7	2	

TEST NOTES:

1. BEFORE TESTING OR ADJUSTING, OPERATE (TT) KEY, AND WAIT FOR OPERATION OF (TT) RELAY. SEE BSP.

31

COMMON SYSTEMS

MASTER TIMING CIRCUIT (2)

SD-25633-01-F2

BELL TELEPHONE LABORATORIES INCORPORATED

DRAWING SIZE 6S

PRINTED IN U.S.A.

CIRCUIT REQUIREMENTS

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT	APPARATUS FIG.	MECH REQT BSP FIG.	MECH REQT CONT PRESS.	MECH REQT ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	TEST CLIP DATA CONN BAT.	TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS
DLR	U460		17	108/108	H	47			T(DLR)	GRD			O		11.2	10.6	
DR1-6	U1367		A	111/111	H	29	9B(EXR)		T REL TST	GRD			O		29	27.5	
DR1-4	U1367		B	111/111	H	29	9B(EXR)		T REL TST	GRD			O		29	27.5	
DRL	Y218		B	320/320	H	53	(RS)NO			GRD			O	FS	43.5	41	
									T(DRL)	GRD			H	FS	6.3	6	
										GRD			R	FS	1.5	1.9	
DRP	U540		26	102/108	H	53			T(DRP)	GRD			O		10.6	10.1	
DT	U164		4	128/128	H	41	6B(CE), (CO)		T(DT)	GRD			O		8.8	8.3	
DTH	U1228		4	111/101	H	29	8B(HA)		T(DTH)	GRD			O		6.3	6	
DTN	U556		20	118/121	H	50		8F(DTN)		BAT.		P	O		25	23.5	
									TR(DN)	GRD		S	O		85		
DTNP 1-4	U144		22	113/113	H	29			T REL TST	GRD			O		22	20.5	
DU	U164		4	128/128	H	41	9B(CE), (CO)		T(DU)	GRD			O		8.8	8.3	
E	U642		B	169/161	H	56			T(E)	GRD			O		22.5	21	
ECH	Y109		1	190/108	H	47							O	FS	22	20.5	
													H	FS	3.5	3.3	WINDING ALONE
													R	FS	0.9	1.2	
							4,5(TE) TMR INTER.		T(ECH)	GRD			O	FS	72	68	
										GRD			H	FS	11.5	10.8	CKT COMB. OF (ECH) AND (ECHA) REL
										GRD			R	FS	2.3	3.1	
ECHA	AJ15	WZ	1	249									O		43	40.5	WINDING ALONE
							4,5(TE) TMR INTER.		U(ECHA)	GRD			O		72	67.5	CKT COMB. OF (ECHA) AND (ECH)REL
EPG	AJ83	WZ	1	249					U(EPG)	GRD	2		O		13.3	12.6	
ER	U937		20	179/139	H	59			T(ER)	GRD			O		28.5	27	
ERD	U144	ZJ	1	113/113	H	29							O		22	20.5	WDG ALONE
									T(ERD)	GRD			O		48	46	CKT COMB. OF (ERD) AND (TER) REL
ERE	U144		9	113/113	H	29	3B(GRO)		T(ERE)	GRD			O		22	20.5	
ERO	U144		7	113/113	H	29			T(ERO)	GRD	1		O		22	20.5	
ESE	U979		9	310/310	H	68	3T(GRE)		T(ESE)	GRD			O		33	31	
ESO	U979		7	310/310	H	68	3T(GR), 6B(GR1)		T(ESO)	GRD			O		32.5	31	
ESP	U1047		8	167/167	H	65			T(ESP)	GRD			O		23.5	22	
EST	U1291		13	163/118	H	59				GRD		S	O		47.5	45	
									TR(EST)	GRD		S	NO			23	
										GRD		S	R		9.3	9.8	
								BF(EST)		BAT.		P	O		29.5		
										BAT.		P	NO		13.2		
ET	U188, U1199		B	161/161	H	53	(OC)NO		T(ET)	GRD			O		18.5	17.5	
ET1	U1324		B	163/163	H	59	2T(ET1)		T(ET1)	GRD			O		23	21.5	

DRAWING ISSUE: 31D WCO 6mi AMC; 33A RPS NCS AAP

TEST NOTES:
1. NO TEST SHOULD BE MADE DURING FIRST FIVE MINUTES IN AN HOUR. SEE BSP.
2. BEGIN TEST IMMEDIATELY AFTER ANY MINUTE. HALT TEST BEFORE NEXT MINUTE IF NOT COMPLETED.

SD-25633-01-F3

CIRCUIT REQUIREMENTS

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT	APPARATUS FIG.	MECH REQT BSP FIG.	MECH REQT CONT PRESS.	MECH REQT ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	TEST CLIP DATA CONN BAT.	TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS
ETE	U300		1	117/148	H	47	8T(ETE)		TF(ETE)	GRD		P	O		21	20	
									TR(ETE)	GRD		S	O		17		
ETM	U706		20	160/160	H	47			T(ETM)	GRD			O		25.5	24	
													NO		12.5	13	
ETO	U300		2	117/148	H	47	8T(ETO)		TF(ETO)	GRD		P	O		21	20	
									TR(ETO)	GRD		S	O		17		
ETS	U67		8	145/108	H	47			T(ETS)	GRD			O		18	17	
EXA	U151		4	128/132	H	47			T(EXA)	GRD			O		19.5	18.5	
EXD, EXH	U695		4	113/113	H	29			T REL TST	GRD			O		10.4	9.9	
EXM	U809		4	112/117	H	47			T(EXM)	GRD			O		19	18	
EXR	U639		A,B	161/195	H	53			T(EXR)	GRD			O		34	32	
FA	UA15		24	110/101	H	35							O		5.3	5	WDG ALONE
								B(FA)		BAT.	1		O		33.5	31.5	CKT COMB. OF (FA) REL & ASSOC RES IN MISC CKT
FA1	U1319		24	117/148	H	47	8T(FA1)		T(FA1)	GRD			O		12.3	11.7	
FA2	U624	ZN	24	101/101	H	29		T(FA2)		BAT.			O		6.7	6.3	
GEO	U1112		7	163/163	H	59	10T(GEO), 2B(TBE)		T(GEO)	GRD	2		O		17.5	16.5	WDG ALONE
													O		39	37	CKT COMB. OF (GEO) AND (GRE) REL
GOE	U1112		9	163/163	H	59	10T(GOE), 2B(TBO)		T(GOE)	GRD	3		O		17.5	16.5	WDG ALONE
													O		39	37	CKT COMB. OF (GOE) AND (GRO) REL
GR, GR1	U177		9	139/139	H	59			T REL TST	GRD	3		O		19	18	WDG ALONE
													O		42.5	40	CKT COMB. OF (GR) AND (GR1) REL
GRE	U1112		7	163/163	H	59	10T(GRE), 2B(TBE)		T(GRE)	GRD	2		O		17.5	16.5	WDG ALONE
													O		39	37	CKT COMB. OF (GRE) AND (GEO) REL
GRO	U1112		9	163/163	H	59	10T(GRO), 2B(TBO)		T(GRO)	GRD	3		O		17.5	16.5	WDG ALONE
													O		39	37	CKT COMB. OF (GRO) AND (GOE) REL
GU	U148		20	120/108	H	47			T(GU)	GRD			O		9	8.5	WDG ALONE
													O		17	16	CKT COMB. OF (GU) REL & (GU) RES
H	U164		4	128/128	H	41	3B(CE1), (CO1)		T(H)	GRD			O		8.8	8.3	
HA	U1199, U188		4	161/161	H	53	11T(HA) 4-5T(HAA)		T(HA)	GRD			O		18.5	17.5	WINDING ALONE
									T(HA)	GRD	5		O		41.5	39	PAR. COMB. (HA, HAA)
HAA	U188	XS, WC	4	161/161	H	53	11T(HA) 4-5T(HAA)		T(HAA)	GRD	5		O		18.5	17.5	WINDING ALONE
															41.5	39	PAR. COMB (HA, HAA)
HE	U695		1	113/113	H	29			T(HE)	GRD	4		O		10.4	9.9	

DRAWING ISSUE: 31D WCO 6mi AMC; 33A RPS NCS AAP

TEST NOTES:
1. CONNECT DIRECT GRD TO T(FA) AND REMOVE THE (FA) LAMP IN ASSOCIATED CKT.
2. NO TEST SHOULD BE MADE DURING FIRST FIVE MINUTES IN AN HOUR. SEE BSP.
3. SEE BSP.
4. BEFORE TESTING OR ADJUSTING, OPERATE (TT) KEY, AND WAIT FOR OPERATION OF (TT) RELAY. SEE BSP.
5. PARALLEL COMB. OF RELAYS HA AND HAA ARE WITH XS AND WC OPTIONS PROVIDED.

ISSUE 41B CB

CIRCUIT REQUIREMENTS

DRAWING ISSUE: 31D WGD 46m AMP

388

APPARATUS DESIG	CODE	OPT	FIG.	MECH REQT BSP FIG.	CONT PRESS.	ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	TEST CLIP DATA CONN BAT.	TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS
HH	U897		4	130/111	H	44	5T(UH)		T(HH)	GRD			0		19	18	
HHR	U422	VJ	4	132/101	H	47	2B(HHR)		T(HHR)	GRD	1		0		17.5	13.7	
HHR	U177	VK	4	139/139	H	59	(TA)NO		T(HHR)	GRD	1		0		19	18	
HL	U207		3	123/123	H	29							0		7.2	6.8	WDG ALONE
							1B(UL)		T(HL)	GRD			0		39	36.5	CKT COMB. OF (H. AND (STL) REL
HO	U695		2	113/113	H	29			T(HO)	GRD			0		10.4	9.9	SEE BSP
HRE, HRN	U144		8	113/113	H	29			T REL TST TST				0		22	20.5	WDG ALONE
										GRD			0		49	45.5	CKT COMB. OF (HRE) AND (HRN) REL
HRT	U660		4	117/145	H	47	1T(SR), 68(HRT)		T(HRT)	GRD			0		23.5	22	
HRTI	AJ202	WZ	23	500					U(HRTI)	GRD			0		43	40.5	
HRTA	U495		31	113/113	H	29			T(HRTA)	GRD			0		17.5	16.5	
															39	37	IN PAR. WITH (HRTB)
HRTB	U495	WR	31	113/113	H	29			T(HRTB)	GRD			0		17.5	16.5	
															39	37	IN PAR. WITH (HRTA)
HRTC	U495	WT	31	113/113	H	29			T(HRTC)	GRD			0		17.5	16.5	WDG ALONE
															58	55	IN PAR. WITH (HRTA & HRTB)
HT	U164		4	128/128	H	41	3B(CE),(CO)		T(HT)	GRD			0		8.8	8.3	
HTH	U1228		4	111/101	H	29	1B(AD)		T(HTH)	GRD			0		6.3	6	
HU	U164		4	128/128	H	41	9T(CE),(CO)		T(HU)	GRD			0		8.8	8.3	
HUA	U268		4	149/183	H	47			T(HUA)	GRD			0		12.4	11.8	
HUH	U1228		4	111/101	H	29	1T(AD)		T(HUH)	GRD			0		6.3	6	
ICK	U686		20	160/108	H	47			T(ICK)	GRD			0		7.6	7.2	
KRB	U948		20	321/144	H	53	1T(KRB)	B(KRB)	T(KRB)	B/G			0		8.1	7.7	
										B/G			NO		5.2	4.5	
LC1	U58		8	127/150	H	50			T(LC1)	GRD			0		11.2	10.7	
LC2	U138		8	161/161	H	53			T(LC2)	GRD			0		18.5	17.5	
LC3	U735		8	132/132	H	47			T(LC3)	GRD			0		17.5	16.5	
LC4	U1317		8	117/148	H	47	6B(LC4)		T(LC4)	GRD			0		19	18	
LOK	Y82		20	168/150	H	50			T(LOK)	GRD			0	FS	26	24.5	
										GRD			H	FS	5.4	5.1	
										GRD			R	FS	1	1.2	
LT1-	U582		17	126/118	H	59	1B(LT1), 1T(REL TST)		T REL TST	GRD			0		27	25.5	
LTA	U932		17	327/108	H	53	3T(LTA), 2T(LT8)		6T(LTA)	GRD			0		11.1	10.5	
LT8	U607		17	148/130	H	47	1T(LT9)		8T(LT8)	GRD			0		20.5	19.5	
LTR	U368	XO	17	101/101	H	29	2B(LTR)		3TF(LTR)	GRD		P	0		14.8	14.1	
								4BR(LTR)		BAT.		S	0		12	11.5	
M	U164		4	128/128	H	41	6T(CE), (CO)		T(M)	GRD			0		8.8	8.3	

TEST NOTES:
1. DO NOT TEST RELAY (HHR) WITHIN TEN MINUTES OF THE HALF HOUR.

PAGE 7

MASTER TIMING CIRCUIT — SD-25633-01-F4

BELL TELEPHONE LABORATORIES INCORPORATED — PRINTED IN U. S. A.

E-74488 10-611

SD-25633-01-F4

CIRCUIT REQUIREMENTS

DRAWING ISSUE: 31D WGD 46m AMP

388

APPARATUS DESIG	CODE	OPT	FIG.	MECH REQT BSP FIG.	CONT PRESS.	ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	TEST CLIP DATA CONN BAT.	TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS
MA	U300		A,B	117/148	H	47	6B(MA)		TF (MA) TR	GRD		P	0		21	20	
										GRD		S	0		16.8		
MA1	U68		A,B	139/121	H	59			T(MA1)	GRD			0		27.3	26	
MBE	U188, U1199		1	161/161	H	53	1T(TFE)		T(MBE)	GRD			0		18.5	17.5	
MBO	U188, U1199		2	161/161	H	53	1T(TFO)		T(MBO)	GRD			0		18.5	17.5	
MC	U144		8	113/113	H	29							0		23	20.5	WDG ALONE
									T(MC)	GRD			0		49	45.5	CKT COMB. OF (MC) AND (MO) REL
MD	U1113		A,B	114/114	H	50			T(MD)	GRD			0		22.5	21	
MDA	U699		4	109/109	H	29	(EXA)O		T(MDA)	GRD			0		8.2	7.8	
MGE	U144		8	113/113	H	29							0		22	20.5	WDG ALONE
									T(MGE)	GRD			0		49	45.5	CKT COMB. OF (MGE) AND (MGN) REL
MGN	U144		8	113/113	H	29							0		22	20.5	WDG ALONE
									T(MGN)	GRD			0		49	45.5	CKT COMB. OF (MGN) AND (MGE) REL
MO	U144		8	113/113	H	29							0		22	20.5	WDG ALONE
									T(MO)	GRD			0		49	45.5	CKT COMB. OF (MO) AND (MC) REL
MOH	U1228		4	111/101	H	29			T(MOH)	GRD			0		6.3	6	
MT1	1/2AK49	WZ	3	234					IU(MT1)	GRD			0		11.9	11.3	MTD WITH (MT4) REL
MT4	1/2AK49	WZ	3	234					IL(MT4)	GRD			0		11.9	11.3	MTD WITH (MT1) REL
MU2	1/2AK49	WZ	3	234					IL(MU2)	GRD			0		11.9	11.3	MTD WITH (TMH) REL
NS	U1113		8	114/114	H	50			T(NS)	GRD			0		22.5	21	
OC	U642		8	169/161	H	56	6T(ET)		T(OC)	GRD			0		22.5	21	
OCH	Y109		2	190/108	H	47			T(OCH)				0	FS	22	20.5	
													H	FS	3.5	3.3	WINDING ALONE
													R	FS	0.9	1.2	
							4,5(TO) TMR INTER.		T(OCH)	GRD			0	FS	72	68	CKT COMB. OF (OCH) AND (OCHA) REL
										GRD			H	FS	11.5	10.8	
										GRD			R	FS	2.3	3.1	
OCHA	AJ15	WZ	2	249									0		43	40.5	WINDING ALONE
							4,5(TO) TMR INTER.		U(OCHA)	GRD			0		72	67.5	CKT COMB. OF (OCHA) AND (OCH) REL
OME, OMO	U220		23	120/108	H	47			T REL TST	GRD			0		19	18	
ON	U118		20	119/113	H	35	11T(ON)		T(ON)	GRD			0		38	36	
OPG	AJ83	WZ	2	249					U(EPG)	GRD	2		0		13.3	12.6	
ORD	U144	ZJ	2	113/113	H	29							0		22	20.5	WDG ALONE
									T(ORD)	GRD			0		48	46	CKT COMB. OF (ORD) AND (TOR) REL
ORE	U144		9	113/113	H	29			T(CE)	GRD			0		22	20	
ORO	U144		7	113/113	H	29	3B(GRE)		T(ORO)	GRD	1		0		22	20.5	
ORP	U779		26	153/118	H	53	(CTS)NO		T(ORP)	GRD			0		12	11.4	
OST	U747		20	110/110	H	35		B(OST)		BAT.			0		5.3	5	

TEST NOTES:
1. NO TEST SHOULD BE MADE DURING FIRST FIVE MINUTES IN AN HOUR. SEE BSP.
2. BEGIN TEST IMMEDIATELY AFTER ANY MINUTE. HALT TEST BEFORE NEXT MINUTE IF NOT COMPLETED.

PAGE 8

ISSUE 47A

MASTER TIMING CIRCUIT (2) — SD-25633-01-F4

BELL TELEPHONE LABORATORIES INCORPORATED — DWG SIZE 6S — PRINTED IN U. S. A.

CIRCUIT REQUIREMENTS

DRAWING ISSUE: 310 SRL Amp

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT	APPARATUS FIG.	MECH REQT BSP FIG.	MECH REQT CONT PRESS.	MECH REQT ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	CIRCUIT PREPARATION TEST CLIP DATA CONN BAT.	CIRCUIT PREPARATION TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	DIRECT CURRENT FLOW REQT TEST FOR	DIRECT CURRENT FLOW REQT AFTER SOAK MA.	DIRECT CURRENT FLOW REQT TEST MA.	DIRECT CURRENT FLOW REQT READJ MA.	REMARKS
P	U695		4	113/113	H	29	1T(P23), (P20)		T(P)	GRD			0		10.4	9.9	
P'	U1041		20	195/117	H	47	2B(CA)		TF(P')	GRD		P	0		21	20	
									TR(P')	GRD		S	0		22.5		
P1	U98		8	118/118	H	50			T(P1)	GRD			0		23.5	22	
P1'	U643		20	162/103	H	50			TF(P1')	GRD		P	0		22.5	21	
									TR(P1')	GRD		S	0		25.5		
P1A	U111		8	152/148	H	47			TF(P1A)	GRD		P	0		24.5	23	
									TR(P1A)	GRD		S	0		20		
P1A'	U341		22	172/149	H	47			T(P1A')	GRD			0		21	20	
P1E, P1O	U476		1, 2	132/136	H	47			T REL	GRD			0		18.5	17.5	
									T TST	GRD			NO		11.2	11.8	
P2	U98	ZL	8	118/118	H	50			T(P2)	GRD			0		23.5	22	
P2A	U111	ZL	8	152/148	H	47			TF(P2A)	GRD		P	0		24.5	23	
									TR(P2A)	GRD		S	0		20		
P2E, P2O	Y185		1, 2	158/158	H	44			T REL	GRD			0	FS	24.5	23	
									T TST	GRD			H	FS	6.8	6.4	
										GRD			R	FS	1.4	1.7	
P3-8	U98		8	118/118	H	50			T REL	GRD			0		23.5	22	
									T TST								
P3A-9A	U111		8	152/148	H	47			TF REL	GRD		P	0		24.5	23	
									TR TST	GRD		S	0		20		
PC	U1173		8	321/321	H	53			T(PC)	GRD			0		26.5	25	
PE	AF509	WZ	1	219			1,2(TE) TMR INTER.		U(PE)	GRD			0		11.2	10.6	
													R		2.0	2.2	
PE	U318		1	150/179	H	50	1(TE) TMR INTER.		T(PE)	GRD	1		0		11.7	11.1	
PF	U108		18	121/108	H	50	9B(TTS)		T(PF)	GRD			0		10.1	9.6	
PF1	U569		18	108/108	H	47	6T(PF)		T(PF1)	GRD			0		26.5	25	
										GRD			NO		13.6	14.4	
PFA	UA108		18	118/344	H	50	1B,3B(PF1), 1B,8B(PFA)	8R(PFA)	TR(PFA)	B/G	2	S	0		8.1	7.7	
										B/G	3	S	0		11.2	10.6	
									TF(PFA)	GRD	3	P	0		20.5		
PH	U604		20	108/132	H	47	4T(PH)		T(PH)	GRD			0		18	17	
										GRD			NO		9.3	9.8	
PLXE, PLXO	U119		21	145/123	H	47	6T REL TST		T REL TST	GRD			0		16	14.9	
PNI-15	U144		22	113/113	H	29			T REL TST	GRD			0		22	20.5	
PO	AF509	WZ	2	219			1,2(TO) TMR INTER.		U(PO)	GRD			0		11.2	10.6	
													R		2.0	2.2	
PO	U318		2	150/179	H	50	1T(TO) TMR INTER.		T(PO)	GRD			0		21	20	
PRE	U299		9	132/110	H	47	3B(PRE), 9B(TBE)		T(PRE)	GRD			0		21	20	
PRO	U299		7	132/110	H	47	3B(PRO), 9B(TBO)		T(PRO)	GRD			0		21	20	
PSA	AG2	VF, VH, VO	3	36B					U(PSA)	GRD			0	36	12.4	11.8	
													H	36	2.1	2	
													R	36	1.1	1.4	
PSB	AF63		3	229					U(PSB)	GRD			0		7.1	6.7	

TEST NOTES:
1. BEFORE TESTING OR ADJUSTING, OPERATE (TT) KEY, AND WAIT FOR OPERATION OF (TT) RELAY. SEE BSP.
2. CONTACTS 7-8B SHALL CLOSE.
3. RELAY SHALL FULLY OPERATE.

MASTER TIMING CIRCUIT — SD-25633-01-F5

BELL TELEPHONE LABORATORIES INCORPORATED — PRINTED IN U.S.A.

E-7468-10-611

CIRCUIT REQUIREMENTS

DRAWING ISSUE: 310 SRL Amp

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT	APPARATUS FIG.	MECH REQT BSP FIG.	MECH REQT CONT PRESS.	MECH REQT ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	CIRCUIT PREPARATION TEST CLIP DATA CONN BAT.	CIRCUIT PREPARATION TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	DIRECT CURRENT FLOW REQT TEST FOR	DIRECT CURRENT FLOW REQT AFTER SOAK MA.	DIRECT CURRENT FLOW REQT TEST MA.	DIRECT CURRENT FLOW REQT READJ MA.	REMARKS
PTO	U293		8	132/110	H	47	2B (PTR)		T(PTO)	GRD			0		19	18	
										GRD			NO		11.7	12.4	
PTR	U293		8	132/110	H	47			T(PTR)	GRD			0		19	18	
										GRD			NO		11.7	12.4	
PTRA	316M	VB	8										0	3.3	1.1		
													R		0.3		
RA	U241		19	152/138	H	47			T(RA)	GRD			0		17	16	
RC	U164	ZJ	4	128/129	H	41			T(J)	GRD			J		8.8	8.3	
RC'	U831		20	320/121	H	53			TF(RC')	GRD		P	0		43	41	
									TR(RC')	GRD		S	0		22		
										GRD		P	NO		19	20	
RCCK	U1239	V	17	132/136	H	47			T(RCCK)	GRD			0		8.1	7.7	
RCE	263A	ZE	8						T(RCE)	GRD			0		73.5	70	WDG ALONE
													0		170	160	2 WDG IN PAR.
	287A	XI											0		80	75	WDG ALONE
									T(RCE)	GRD			0		180	170	2 WDG IN PAR.
RCE 1-3	U144		20	113/113	H	29			T REL TST	GRD			0		22	20.5	
RCK	Y209		20	175/175	H	47			T(RCK)	GRD			0	FS	24.3	23	
										GRD			H	FS	2.9	2.7	
										GRD			R	FS	1.4	1.7	
RCO	263A	ZE	8						T(RCO)	GRD			0		73.5	70	WDG ALONE
													0		170	160	2 WINDINGS IN PAR.
	287A	XI											0		80	75	WDG ALONE
									T(RCO)	GRD			0		180	170	2 WINDINGS IN PAR.
RCO 1-3	U144		20	113/113	H	29			T REL TST	GRD			0		22	20.5	
RCT	Y82		8	168/150	H	50			T(RCT)	GRD			0	FS	26	24.5	
										GRD			H	FS	5.4	5.1	
										GRD			R	FS	1	1.2	
RD0-5	U1367		A,B	111/111	H	29	9B(EXR)		T REL TST	GRD			0		29	27.5	
RD6-9	U1367		B	111/111	H	29	9B(EXR)		T REL TST	GRD			0		29	27.5	
RET	U333		8	150/150	H	50			T(RET)	GRD			0		15.5	14.4	
RET1	U566	XG	8	110/110	H	35			T(RET1)	GRD			0		6.5	6.2	
RH	U158		A,B	132/111	H	47			T(RH)	GRD			0		7.9	7.5	
RK	U934		17	150/139	H	59			T(RK)	GRD			0		29.5	28	
RKA	U660		17	117/145	H	47			T(RKA)	GRD			0		28.5	27	
										GRD			NO		18	19	
RKO	U162		17	108/132	H	47			T(RKO)	GRD			0		18	17	
RLS	U80		8	124/161	H	59			T(RLS)	GRD			0		18	17	
RN	U144		8	113/113	H	29			T(RN)	GRD			0		22	20.5	
ROS	U286		8	108/111	H	47			T(ROS)	GRD			0		15.8	15	
RS	Y205		8	129/129	H	35	1T(RLS)		T(RS)	GRD			0	FS	26	24.5	
										GRD			H	FS	7.1	6.7	
										GRD			R	FS	1.8	2.2	

ISSUE 47A

MASTER TIMING CIRCUIT (2) — SD-25633-01-F5

BELL TELEPHONE LABORATORIES INCORPORATED — 6S — PRINTED IN U.S.A.

CIRCUIT REQUIREMENTS

DRAWING ISSUE: 31D DLS 6-1-71

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT	APPARATUS FIG.		MECH REQT BSP FIG.	MECH REQT CONT PRESS.	MECH REQT ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	CIRCUIT PREPARATION TEST CLIP DATA CONN BAT.	CIRCUIT PREPARATION TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	RF ADJ MA.	REMARKS
RSC	Y205		8		129/129	H	35	(DRL)NO		T (RSC)	GRD			0	FS	26	24.5	
											GRD			H	FS	7.1	6.7	
											GRD			R	FS	1.8	2.2	
RTS	Y109		20		190/108	H	47			T (RTS)	GRD			0	FS	22	20.5	
											GRD			H	FS	3.5	3.3	
											GRD			R	FS	0.9	1.2	
RW	U1199		20		111/110	H	35	3B(RW)	B(RW)	T(RW)	B/G			0		6.3	6	
RW1	U409		20		168/170	H	50	3B(SLO), 3B(RWC)		TF(RW1)	GRD		P	0		24.7		
										TR(RW1)	GRD		S	0		20	19	
RW2	U1312		20		103/150	H	50			T(RW2)	GRD			0		11.9	11.3	
RWC	U234		20		160/108	H	47	3B(SLO)		T(RWC)	GRD			0		19	18	
SA	U926		3		124/124	H	59			T(SA)	GRD			0		20	19	
SC, SC1	U144		8		113/113	H	29			REL				0		22	20.5	WDG ALONE
										T TST	GRD			0		49	45.5	CKT COMB. OF (SC) AND (SC1) REL
SCE	U940		9		127/127	H	47			T(SCE)	GRD			0		21	20	
SCO	U940		7		127/127	H	47			T(SCO)	GRD			0		21	20	
SE	U660		1		117/145	H	47	8T(SE)		T(SE)	GRD			0		28.5	27	
											GRD			NO		18	19	
SFA	AJ15	WZ	19		249					U(SFA)	GRD			0		43	40.5	
SKA	U144	ZL	8		113/113	H	29							0		22	20.5	WDG ALONE
										T(SKA)	GRD			0		49	45.5	CKT COMB. OF (SKA) AND (SKP) REL
SKP	U144	ZL	8		113/113	H	29							0		22	20.5	WDG ALONE
										T(SKP)	GRD			0		49	45.5	CKT CONB. OF (SKP) AND (SKA) REL
SLO	U934		20		150/139	H	59			T(SLO)	GRD			0		29.5	28	
SO	U660		2		117/145	H	47	8T(SO)		T(SO)	GRD			0		28.5	27	
											GRD			NO		18	19	
SP	U80		8		124/161	H	59			T(SP)	GRD			0		19	17	
SPA	U6036		8		112/112	H	29							0		19	18	WDG ALONE
								2B(COP)		T(SPA)	GRD			0		42.5	40	CKT COMB. OF (SPA) AND (SPT) REL
SPT	U6036		8		112/112	H	29							0		19	18	WDG ALONG
								2B(COP)		T(SPT)	GRD			0		42.5	40	CKT COMB. OF (SPT) AND (SPA) REL
SR	U108		4		121/108	H	50	6B(HA)		T(SR)	GRD			0		10.1	9.6	
SRC	Y91		2		155/121	H	50	5T(TS1)		T (SRC)	GRD			0	FS	23	21.5	
											GRD			H	FS	3.7	3.5	
											GRD			R	FS	0.7	0.9	
SS	U930		8		330/178	H	59			T(SS)	GRD			0		20	19	
SSF	U551		19		109/145	H	47	5T(CKE), (CKO), 4B(SSF)		TF(SSF)	GRD		P	0		19.5	18.5	
										TR(SSF)	GRD		S	0		11.4		

PAGE 11

CIRCUIT REQUIREMENTS

DRAWING ISSUE: 31D DLS 6-1-71 CB

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT	APPARATUS FIG.		MECH REQT BSP FIG.	MECH REQT CONT PRESS.	MECH REQT ARM. TRVL	CIRCUIT PREPARATION BLOCK OR INSULATE	CIRCUIT PREPARATION TEST CLIP DATA CONN BAT.	CIRCUIT PREPARATION TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS
ST-	U1291		10,		163/116	H	59			BF (ST-)	GRD		S	0		47.5	45	
			11,							TR (ST-)	GRD		S	NO			23	
			12,								GRD		S	R		9.3	9.8	
			14,							BF (EST)	BAT.		P	G		29.5		
			15,								BAT.		P	NO		13.2		
			16															
STC	AJ15	WZ	4		249			3T(CE)OR(CO)		U(STC)	GRD			0		43	40.5	
STE	U747		20		110/110	H	35		B(STE)		BAT.			0		5.3	5	
STH	AJ15	WZ	4		249			2T(UH)		U(STH)	GRD			0		43	40.5	
STL	AJ15	WZ	3		249									0		43	40.5	WINDING ALONE
								1B(UL)		U(STL)	GRD			0		58	54.5	CKT COMB. OF (STL) AND (HL) REL
SY	U1113		8		114/114	H	50			T(SY)	GRD			0		22.5	21	
T	U164		4		128/128	H	41	9T(CE1), (CO1)		T(T)	GRD			0		8.8	8.3	
T(0, 1,2,4, 7)E	U695		5		113/113	H	29			T REL TST	GRD	1,2		0		10.4	9.9	
T(0, 1,2,4, 7)O	U695		6		113/113	H	29			T REL TST	GRD	1,2		0		10.4	9.9	
TA	U158		4		132/111	H	47			T(TA)	GRD			0		7.9	7.5	
TAP	U179		20		117/145	H	47			T(TAP)	GRD			0		20	18.5	
TBE	U643		7		162/103	H	50	3T(GRE), (ERO)		TF(TBE)	GRD		P	0		22.5	21	
										TR(TBE)	GRD		S	0		25.5		
TBO	U643		9		162/103	H	50	6B(GOE)		TF(TBO)	GRD		P	0		22.5	21	SEE BSP
										TR(TBO)	GRD		S	0		25.5		
TBR	U179		8		117/145	H	47			T(TBR)	GRD			0		19.5	18.5	
TC	U577		20		163/150	H	59	4T(AD1)		T(TC)	GRD			0		29.5	29	
											GRD			NO		10.9	11.5	
TCE	U1391		1		123/123	H	29			T(TCE)	GRD			0		14.3	13.6	
TCO	U1391		2		123/123	H	29			T(TCO)	GRD			0		14.3	13.6	
TDE	U144		1		113/113	H	29							0		22	20.5	WDG ALONE
										T(TDE)	GRD			0		48	46	CKT COMB. OF (TDE) AND (TME) REL
TDE1	U144		1		113/113	H	29							0		22	20.5	WDG ALONE
										T(TDE1)	GRD			0		48	46	CKT COMB. OF (TDE1) AND (TME1) REL
TDE2	U144		23		113/113	H	29			T(TDE2)	GRD			0		22	20.5	
TDO	U144		2		113/113	H	29							0		22	20.5	WDG ALONE
										T(TDO)	GRD			0		49	46	CKT COMB. OF (TDO) AND (TMO) REL
TDO1	U144		2		113/113	H	29							0		22	20.5	WDG ALONE
										T(TDO1)	GRD			0		49	46	CKT COMB. OF (TDO1) AND (TMO1) REL

TEST NOTES:

1. SEE CIRCUIT NOTE 102.
2. NO TEST SHOULD BE MADE DURING FIRST FIVE MINUTES IN AN HOUR. SEE BSP.

PAGE 12

ISSUE 41B CB

CIRCUIT REQUIREMENTS

DRAWING ISSUE 31D JLK 6-1-64 AH-2

APPARATUS DESIG	CODE	OPT	FIG.		MECH REQT BSP FIG.	CONT PRESS.	ARM. TRVL.	CIRCUIT PREPARATION BLOCK OR INSULATE	TEST CLIP DATA CONN BAT.	TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS
TDO2	U144		23		113/113	H	29			T(TDO2)	GRD			0		22	20.5	
TE	U639		20		161/195	H	53			T(TE)	GRD			0		34	32	
TEA	U144		1		113/113	H	29			T(TEA)	GRD	1		0		22	20.5	
TEB	U144		2		113/113	H	29			T(TEB)	GRD			0		22	20.5	SEE BSP
TER	U144	ZJ	1		113/113	H	29							0		22	20.5	WDG ALONE
										T(TER)	GRD			0		48	46	CKT COMB. OF (TER) AND (ERD) REL
TFE, TFO	U90		1, 2		145/123	H	47			TF REL, TR TST	GRD		P, S	0		18, 14.5	17	
TFT	U299		7		132/110	H	47	3T(TBE)		T(TFT)	GRD			0		21	20	
TGT	U499		8		108/110	H	47			T(TGT)	GRD			0		20.5	19.5	
TH	U897		4		130/111	H	44	2T(UH)		T(TH)	GRD			0		19	18	
TIB	U247		17		108/108	H	47			TF(TIB)	GRD		P	0		25	23.5	
									BR(TIB)		BAT.		S	0		19.5	18.5	
TL	U695		3		113/113	H	29	1T(CKE), (CKO)						0		10.4	9.9	WDG ALONE
										T(TL)	GRD			0		23.5	22	CKT COMB. OF (TL) AND (UL) REL
TLCP	U115	XSWC	4		113/113	H	29			T(TLCP)	GRD	2		0		10.4	9.9	
TLK	U1158		20		207/223	H	SPL			T(TLK)	GRD			0		11.4	10.8	ARM. TRVL 50
TM1	U594		17		123/120	H	35	2T(TMS)		T(TM1)	GRD			0		6.9	6.5	
TM2	U158		17		132/111	H	47	2B(RKA)	T(TM2)		BAT.			0		7.9	7.5	
TM3	U67		17		145/108	H	47	2T(TM2)		T(TM3)	GRD			0		18	17	
TM4	U426		17		148/108	H	47			T(TM4)	GRD			0		19	18	
TM5	U1119		17		318/111	H	44			T(TM5)	GRD			0		17	16	
TM6	U639		17		161/195	H	53	4B(RA), 11T(TM6)		T(TM6)	GRD			0		34	32	
TME	U144		1		113/113	H	29							0		22	20.5	WDG ALONE
										T(TME)	GRD			0		48	46	CKT COMB. OF (TME) AND (TDE) REL
TME1	U144		1		113/113	H	29							0		22	20.5	WDG ALONE
										T(TME1)	GRD			0		48	46	CKT COMB. OF (TME1) AND (TDE1) REL
TMH	U2AK49	WZ	3		234					IU(TMH)	GRD			0		11.9	11.3	MTD WITH (MU2) REL
TMO	U144		2		113/113	H	29							0		22	20.5	WDG ALONE
										T(TMO)	GRD			0		49	46	CKT COMB. OF (TMO) AND (TDO) REL
TMO1	U144		2		113/113	H	29							0		22	20.5	WDG ALONE
										T(TMO1)	GRD			0		49	46	CKT COMB. OF (TMO1) AND (TDO1) REL
TMP	U440		17		132/132	H	47			T(TMP)	GRD			0		8.8	8.3	
TMR	U601		17		117/148	H	47			T(TMR)	GRD			0		19	18	
TMT	AJ83	WZ	4		249			2T(TA), 3(TMT)		U(TMT)	GRD			0		13.9	12.6	
TMTE	AJ83	WZ	1		249					U(TMTE)	GRD			0		13.3	12.6	WDG ALONE
																29.5	28	CKT COMB. OF (TMTE) AND (TRTE) REL
TMTO	AJ83	WZ	2		249					U(TMTO)	GRD			0		13.3	12.6	WDG ALONE
																29.5	28	CKT COMB. OF (TMTO) AND (TRTO) REL
TOA	U144		2		113/113	H	29			T(TOA)	GRD			0		22	20.5	SEE BSP
TOB	U144		1		113/113	H	29			T(TOB)	GRD	1		0		22	20.5	

TEST NOTES:

1. BEFORE TESTING OR ADJUSTING, OPERATE (TT) KEY, AND WAIT FOR OPERATION OF (TT) RELAY. SEE BSP.
2. WHEN TESTING THE RELAY IN THE EVEN APP FIG. 4, THE FUNCTIONS OF THE EVEN CONT UNIT IN THE TIMER LINK CKT MUST BE TRANSFERED TO THE ODD CONT UNIT AND VICE VERSA.

PAGE 13

MASTER TIMING CIRCUIT

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-F7

PRINTED IN U.S.A.

SD-25633-01-F7

CIRCUIT REQUIREMENTS

DRAWING ISSUE 31D JLK 6-1-64 AH-2

APPARATUS DESIG	CODE	OPT	FIG.		MECH REQT BSP FIG.	CONT PRESS.	ARM. TRVL.	CIRCUIT PREPARATION BLOCK OR INSULATE	TEST CLIP DATA CONN BAT.	TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS
TOK	U1346		20		132/101	H	47			T(TOK)	GRD			0		26.5	25	
TOR	U144	ZJ	2		113/113	H	29			T(TOR)	GRD			0		22	20.5	WDG ALONE
														0		49	46	CKT COMB. OF (TOR) AND (ORD) REL
TPC	U58		20		127/150	H	50			T(TPC)	GRD			0		11.3	10.7	
TR1	AJ15	WZ	23		249			1T(TDE),(TDO)		U(TR1)	GRD	11		0		43	40.5	
TRTE	AJ83	VW	1		249					U(REL TST)	GRD			0		13.3	12.6	WDG ALONE
																29.5	28	CKT COMB. OF (TRTE) AND (TMTE) REL
TRTO	AJ83	VW	2		249					U(REL TST)	GRD			0		13.3	12.6	WDG ALONE
																29.5	28	CKT COMB OF (TRTO) AND (TMTO) REL
TS	U1112		2		163/163	H	59							0		17.5	16.5	WDG ALONE
														0		39	37	CKT COMB. OF (TS) AND (TS1) REL
TS1	U692		2		139/139	H	59							0		17	16	WDG ALONE
														0		38	36	CKT COMB. OF (TS1) AND (TS) REL
TSC	U336		26		109/109	H	29			TR(TSC)	GRD		S	0		14.2	13.5	
TSF	U306		19		111/111	H	29	2T(CSV), (C80), 1B(TSF)		TF(TSF)	GRD		P	0		13.2	12.5	
										TR(TSF)	GRD		S	0		7.5		
TSP	UA108		8		118/344	H	50	(SS)NO, 5T(OC) 1B(TSP)	BR(TSP)	TR(TSP)	B/G	3	S	0		8.1	7.7	
											B/G	4	S	0		11.2	10.6	
										TF(TSP)	GRD	4	P	0		20.5		
TSPP	U611	XZ	1		139/139	H	59			T(TSP)	GRD			0		30	28.5	
TST1	U639		20		161/195	H	53			T(TST1)	GRD			0		34	32	
TST2	U1072		20		197/161	H	59			T(TST2)	GRD			0		18	17	
TT	U488		C		307/160	H	47	(TTE)O, 5T(TT) (TTO)NO		T(TT)	GRD			0		16.5	15.5	SEE CIRCUIT NOTE 112
											GRD			R		2.6	2.8	
TT	U178		D		139/311	H	59	(TTE)O, 7T(TT), (TTO)NO		T(TT)	GRD			0		19	18	
											GRD			R		1.6	1.7	
TTE	U991		1		161/178	H	53	4B(PE), (HE) NO		T(TTE)	GRD	5		0		17	16	
TTO	U991		2		161/178	H	53	(CTS), (HO) NO, 4B(PO)		T(TTO)	GRD			0		17	16	WDG ALONE
														0		30	28	CKT COMB. OF (TTO) AND (TTOA) REL
TTOA	AJ83	WZ	2		249			(CTS), (HO) NO, 4B(PO)		U(TTOA)	GRD			0		13.3	12.6	WDG ALONE
														0		41	39	CKT COMB. OF (TTOA) AND (TTO) REL
TTS	U1171		26		163/139	H	59	10T(TTS), (CTS)NO		TF(TTS)	GRD		P/S	0		17	16	
TVM	U794		20		119/119	H	35			T(TVM)	GRD			0		22.5	21	
TW	U564		28		142/132	H	53							0		16.5	15.5	WDG ALONE
								(TZ)NO, 2T(TW)		T(TW)	GRD	6, 8, 9, 10		0		37	34.5	
TZ	U141		28		132/132	H	47							0		18.5	17.5	WDG ALONE
								(TW) NO, 2T(TW)		T(TZ)	GRD	7, 8, 9, 10		0		40	37.5	
U	U164	WY	4		128/128	H	41	3T(CEI), (COI)		T(U)	GRD			0		8.8	8.3	
U	7224	WZ	4		201/188	H	41	3T(CEI), (COI)		T(U)	GRD			0	40	30.5	29	
														H	40	3.7	3.5	
														R	40	1.9	2.2	
U(0,1, 2,4, 7)E	U695		5		113/113	H	29			T REL, TST	GRD	1/2		0		10.4	9.9	
U(0,1, 2,4, 7)O	U695		6		113/113	H	29			T REL, TST	GRD	1/2		0		10.4	9.9	
UA,UB, UC,UD	AJ501	WZ	4		249					U REL, TST	GRD			0		43	40.5	

TEST NOTES:

1. SEE CIRCUIT NOTE 102.
2. NO TEST SHOULD BE MADE DURING FIRST FIVE MINUTES IN AN HOUR, SEE BSP.
3. CONTACTS 7, 88 SHALL CLOSE.
4. RELAY SHALL FULLY OPERATE.
5. BEFORE TESTING OR ADJUSTING, OPERATE (TT) KEY, AND WAIT FOR OPERATION OF (TT) RELAY. SEE BSP.
6. WDG IN SERIES WITH 1/2 (TWTZ) RES & IN MULT WITH 1/2 (TWTZ) RES IN SERIES WITH (TZ) REL.
7. WDG IN SERIES WITH 1/2 (TWTZ) RES & IN MULT WITH 1/2 (TWTZ) RES IN SERIES WITH (TW) REL.
8. BLOCK (CCRT-) REL OPERATED, IF OPERATED OR BLOCK NON-OPERATED, IF NORMAL.
9. ADJUSTMENTS SHOULD NOT BE MADE DURING THE TIME BETWEEN 2:55 AM & 3:30 AM.
10. RESTORE RELAYS TO CONDITION BEFORE ADJUSTMENTS WERE MADE.
11. BEGIN TEST IMMEDIATELY AFTER ANY MINUTE. HALT TEST BEFORE NEXT MINUTE IF NOT COMPLETED.

PAGE 14

ISSUE 51B

MASTER TIMING CIRCUIT (2)

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-F7

SYM. DES. 6S

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CIRCUIT REQUIREMENTS

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT	APPARATUS FIG.	MECH REQT BSP FIG.	MECH REQT CONT PRESS.	MECH REQT ARM. TRVL.	CIRCUIT PREPARATION BLOCK OR INSULATE	TEST CLIP DATA CONN BAT.	TEST CLIP DATA CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT TEST WDG	TEST FOR	AFTER SOAK MA.	TEST MA.	READJ MA.	REMARKS
UH	U897	XU	4	130/111	H	44	(PE)OR (PC)NO		T(UH)	GRD			0		19	18	
UH	U198	XV	4	123/111	H	29	(PE) OR (PO)NO. 3B(EXA).		T(UH)	GRD			0		16	15	
UL	U695		3	113/113	H	29	1T(CKE), 1T(CKO)							0	10.4	9.9	WDG ALONE
									T(UL)	GRD				0	23.5	22	CKT COMB. OF (UL) AND (TL) REL
UW	AJ501	WZ	4	249					U(UW)	GRD				0	43	40.5	
UZ	AJ501	WZ	4	249					U(UZ)	GRD				0	43	40.5	
W	U1324		30	163/163	H	59	(Z) NO, 3T (Z)		12T(W)	GRD			0		23.0	21.5	
WHR	U422	WH	4	132/101	H	47	2B(WHR)		T(WHR)	GRD	4		0		15.5	13.7	
WHR	U177	WI	4	139/139	H	59	(TA) NO		T(WHR)	GRD	4		0		19	18	
XPE	U543		21	111/111	H	29	(COM)O		T(XPE)	GRD			0		5.7	5.4	
XPE1	U587		21	123/123	H	29	(CON)O		TF(XPE1)	GRD		P	0		16	15	
XPO	U543		21	111/111	H	29	(COM)O		T(XPO)	GRD			0		5.7	5.4	
XPO1	U587		21	123/123	H	29	(COM)O		TF(XPE1)	GRD		P	0		16	15	
Z	U1324		30	163/163	H	59	2T (Z), 6T (W)		12T(Z)	GRD			0		24.0	21.5	
MISCELLANEOUS DIODES																	
TMT	446K	WZ	4														SEE BSP
ELECTRON TUBES																	
PF	313CC		18														SEE BSP
SP	313CC		8														SEE BSP
TM	313CC		17														SEE BSP
TIME REQT																	
ECH	Y109		1				(ECHA) NO 7T(CTS)				3,5						
OCH	Y109		2				(OCHA) NO 7T(CTS)				3,5						
PFA	JA108	18					8B(TTS)				1						
TM2	U158	17					1T(TM6)				2						
TM2	U158	17					1T(TM6), (TM4)O				3						
TSP	JA108	8									3						OPR CORRESPONDING (MBO) OR (MBE) KEY

DRAWING ISSUE

310	GTM GLM AMI
348	OMJ PM AHJ
350	NJ
378	

TEST NOTES:

1. OPERATE RELAY (PF) TO CAUSE OPERATION OF RELAY (PFA) WHICH SHALL OPERATE IN NOT LESS THAN 5.8 NOR MORE THAN 11 SECONDS.
2. OPERATE RELAY (TM1) TO CAUSE OPERATION OF RELAY (TM2) WHICH SHALL OPERATE IN NOT LESS THAN 4 NOR MORE THAN 7 SECONDS
3. USE TEST SET FOR TIMING TESTS.

DESIG	TEST CLIP DATA CONN 8K	CONN R	CONN W	TEST SET PREP SEND KEY	REC KEY	TIME REQT MIL. SEC. MIN	MAX
ECH	GRD	5T(ECH)	4B(ECH)	8K	OC-GRD	180	500
OCH	GRD	5T(OCH)	4B(OCH)	8K	OC-GRD	180	500
TM2	2T(TM1)	7T(TM1)	1T(TM2)	MK	OC-GRD	2000	3700
TSP	5B(SS)	13T(SS)	7T(TSP)	MK	OC-GRD	2500	4500

4. DO NOT TEST RELAYS (3OS) AND (WHR) WITHIN TEN MINUTES OF ANY HOUR.
5. WHEN OPTION UC IS PROVIDED RELAYS ECH & OCH SHOULD BE ADJUSTED TO RELEASE TIME SPECIFIED IN NOTE 3. BEFORE PERFORMING THE TEST, THE TIMER BEING TESTED MUST BE MADE BUSY AND THE 4E TIMER TURNED OFF.

PAGE 15

MASTER TIMING CIRCUIT

SD-25633-01-F8

BELL TELEPHONE LABORATORIES INCORPORATED

PRINTED IN U.S.A.

22

DRAWING ISSUE

310	GTM GLM AMI
348	OMJ PM AHJ
350	NJ
378	

ISSUE 56B

MASTER TIMING CIRCUIT (2)

SD-25633-01-F8

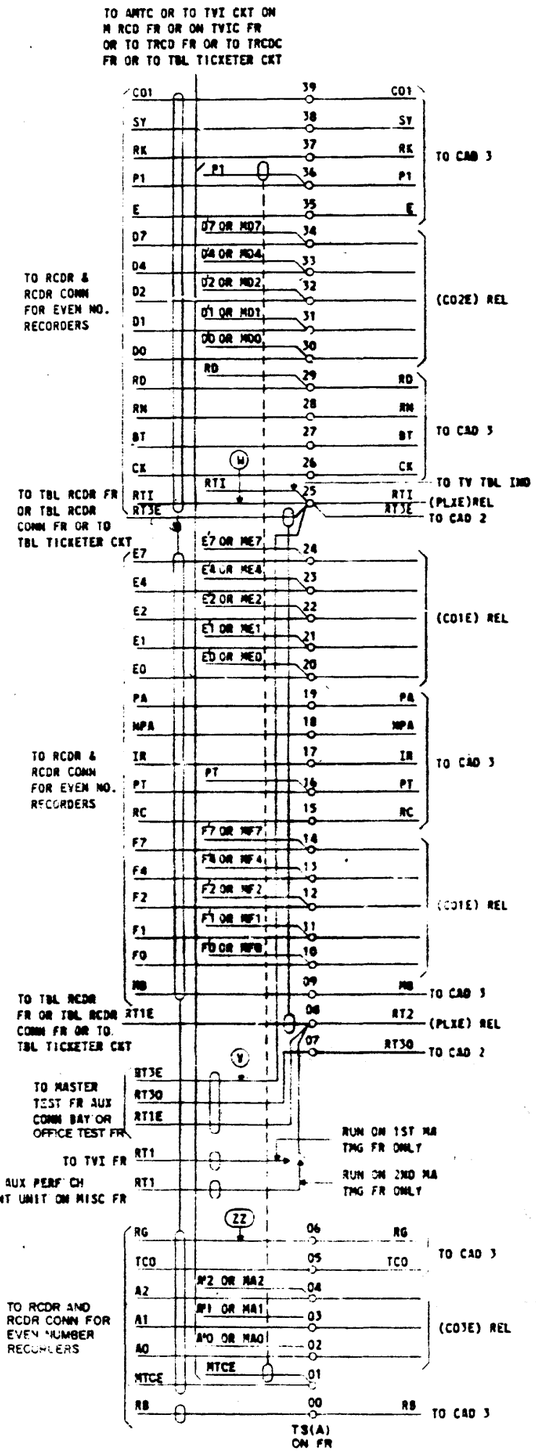
BELL TELEPHONE LABORATORIES INCORPORATED

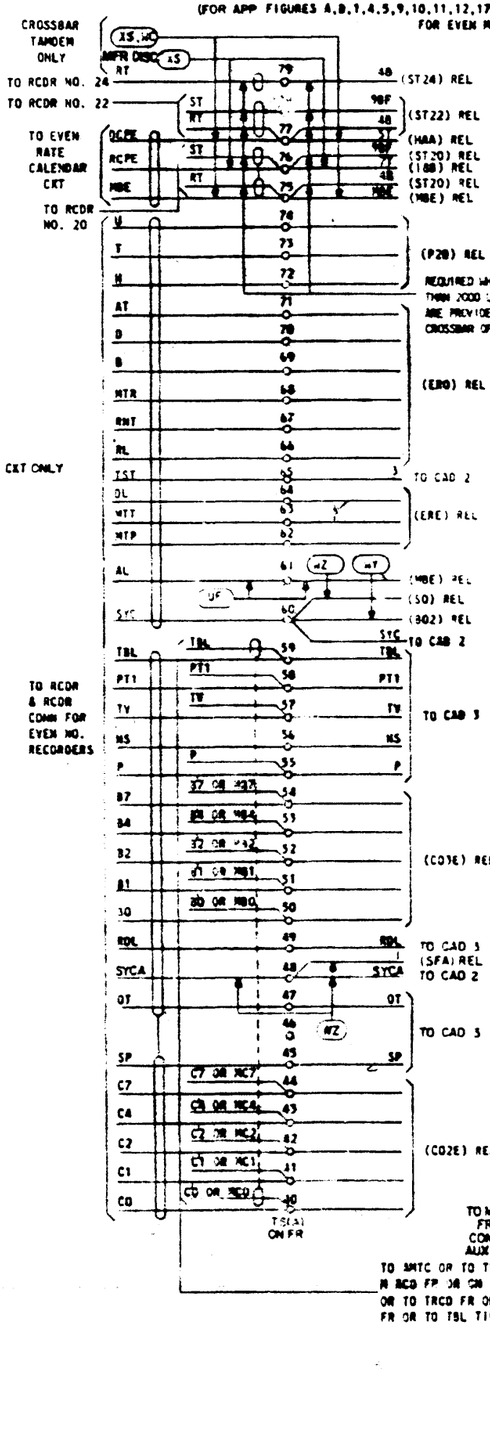
PAGE 6S

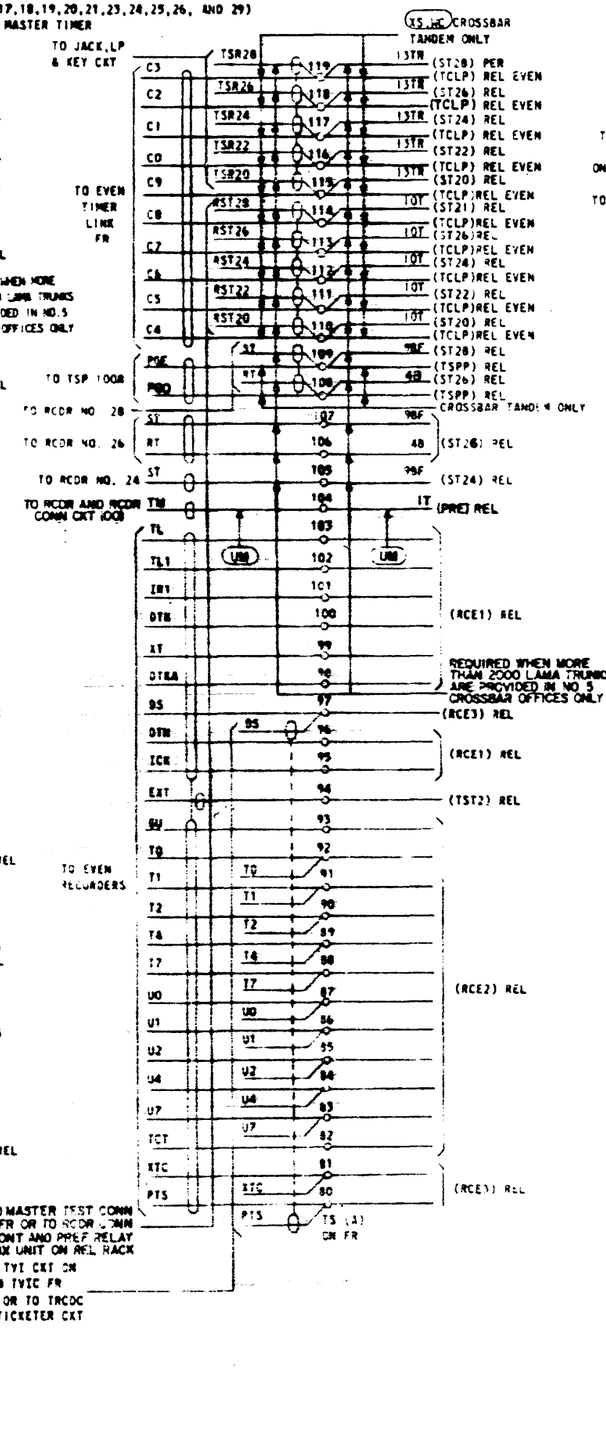
PRINTED IN U.S.A.

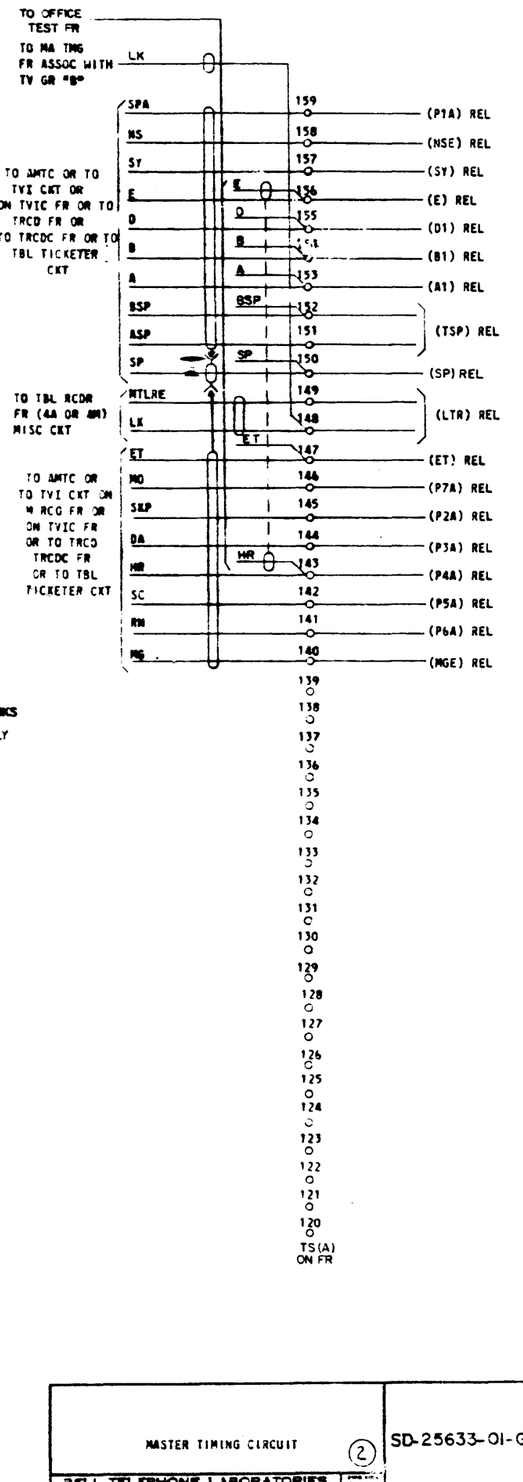
PART OF CAD I

(FOR APP FIGURES 4,8,1,4,5,9,10,11,12,17,18,19,20,21,23,24,25,26, AND 29)
FOR EVEN MASTER TIMER









DRAWING ISSUE
31D
53A
ISSUE 58AC

MASTER TIMING CIRCUIT (2) SD-25633-01-GI

BELL TELEPHONE LABORATORIES INCORPORATED 63

SD-25633-01-GI

PART OF CAD 1

(FOR APP FIGURES A,B,I,4,5,9-12,17-21,23-26 AND 29)
FOR EVEN MASTER TIMERS

TO TBL RCDR CONN FR (TDM) OR TO TBL RCDR FR (SXS) OR TO MASTER TEST FR CONN BAY (NO.5) OR TO TBL RCDR FR (NO.4A OR 4M TOLL) VIA TBL RCDR CONN FR WHEN FURNISHED

(RUN FROM MA TIMER ASSOC WITH FIRST TV GP ONLY)

DT7 49
DT4 39
DT2 29
DT1 19
DT0 09
DU7 48 (TDO)REL
DU4 38
DU2 28
DU1 18
DU0 08
MT7 52
MT4 42
MT2 32
MT1 22
MT0 12
MU7 51 (TDE2)REL
MU4 41
MU2 31
MU1 21
MU0 11

TO JK, LP, & KEY CKT MASTER TEST FR RCDR BAY OR CONT BAY (MFR DISC) OR TO JK, KEY, & LP CKT TBL RCDR FR OR TO JK,KEY, & LP CKT TBL TICKETER FR OR PEDESTAL

OL 27 (DL)REL
MTE 10 (CK)REL
TSR18 65 (ST18)REL
TSR16 75 (ST16)REL
TSR14 76 (ST14)REL
TSR12 66 (ST12) REL
TSR10 56 (ST10) REL
TSR8 46 (ST8)REL
TSR6 36 (ST6)REL
TSR4 26 (ST4)REL
TSR2 16 (ST2)REL
TSR0 06 (ST0)REL

TO TV TBL IND FR, TO JK, LP, & KEY CKT ON MASTER TEST FR JK BAY OR RCDR BAY OR AUX CONT BAY OR TO JK,KEY, & LP CKT TBL RCDR FR OR TO JK,KEY, & LP CKT TBL TICKETER FR OR TO MISC CKT FOR TBL RCDR FR

TO TBL RCDR FR OL

TO RECORDERS AND RCDR CONN CKT

CC(8) 79
CC(6) 69
CC(4) 59
CC(2) 77
CC(0) 67 (CCT)REL

ZG 34 (SCO)REL
ZF 34
24 1B (TMR)REL-ODD
24
14 2B (TMR)REL-EVEN
14
TS (8) ON FR

TS (8) ON 2ND MASTER TMG FR (FOR MKR GRP) 100 OR (FOR TV GRP B)

WHEN ISOLATION OF RECORDER C-LEADS IS PROVIDED
ADD
REMOVE

TO RCDR NO. 10
C 151 2T (B01)REL
ST 141 (ST10)REL
RT 131
TO RCDR NO.20
C 121 10B (B01)REL
C 7 (RI0)CPNTA-
ST 111
RT 101 (ST0)REL
TO RCDR NO. 0
HU7 91 (U70)REL
HU4 81 (U40)REL
HU2 150 (U20)REL
HU1 140 (U10)REL
HU0 130 (U00)REL
HT7 120 (T70)REL
HT4 110 (T40)REL
HT2 100 (T20)REL
HT1 90 (T10)REL
HT0 80 (T00)REL

TO OFFICE TEST FR
RST0

MASTER TEST FR RCDR BAY OR TO TBL RCDR FR OR MASTER TEST FR AUX CONT BAY

TO TBL TICKETER CKT OR TBL RCDR CONT CKT

SEE NOTE 1
SEE NOTE 2
TML 54 (TDO)REL
TMS 44 (TTE)REL
MA,AL,FA, OR MJ 25 (ALM)REL
MA,AL,FA, OR MJ
RST18 04 (ST18)REL
RST16 73 (ST16)REL
RST14 63 (ST14)REL
RST12 53 (ST12)REL
RST10 43 (ST10)REL
RST8 33 (ST8)REL
RST6 23 (ST6)REL
RST4 13 (ST4)REL
RST2 03 (ST2)REL
RST0 72 (ST0)REL
XPL 71 XPL TO CAD 2

TO MASTER TEST FR AUX CONN BAY OR TO TV TBL IND CKT ON M RCD RCDR FR OR ON TV TBL IND CONN FR (EVEN) OR TO TBL RCDR FR OR TO TBL RCDR CONN FR OR TO TBL TICKETER CKT

RCCK 01 (RCCK)REL
TRST OR MTP 50 (TIB)REL
TRB 60 (TM5)REL
PCN 02
TPR 05 (SCO)REL

SEE NOTE 3
SEE NOTE 4
RUN ON FIRST MASTER TIMING FR ONLY

TIS
TIB
PCN
TPR
TV TBL IND FR
MR 00
DL 40 (TMR)REL
TS (8) ON FR

TO PLANT REG CKT MASTER TEST FR RCDR BAY OR TO SXS PLANT REG CKT OR TO MISC CKT FOR TBL RCDR FR OR TO JACK,KEY, & LP CKT, TO AUX PREFERENCE CHAIN UNIT ON MISC FR

MTTRE
TIS
DL

RUN ON 2ND MASTER TMG FR ONLY

REMOVE
ADD
WHEN ISOLATION OF RECORDER C-LEADS IS PROVIDED

TO RCDR NO. 16
C 157 8T (B01)REL
ST 147 (ST16)REL
RT 137
TO RCDR NO. 26
C 127 4B (B01)REL
C 10 (RI1)CPNTA
ST 117
RT 107 (ST6)REL
HU7 97 (U70)REL
HU4 87 (U40)REL
HU2 156 (U20)REL
HU1 146 (U10)REL
HU0 136 (U00)REL
HT7 126 (T70)REL
HT4 116 (T40)REL
HT2 106 (T20)REL
HT1 96 (T10)REL
HT0 86 (T00)REL
TO RCDR NO.6
C 155 6T (B01)REL
ST 145 (ST14)REL
RT 135
C 125 6B (B01)REL
C 7 (RI1)CPNTA
ST 115
RT 105 (ST4)REL
HU7 95 (U70)REL
HU4 85 (U40)REL
HU2 154 (U20)REL
HU1 144 (U10)REL
HU0 134 (U00)REL
HT7 124 (T70)REL
HT4 114 (T40)REL
HT2 104 (T20)REL
HT1 94 (T10)REL
HT0 84 (T00)REL
TO RCDR NO. 14
C 153 4T (B01)REL
ST 143 (ST21)REL
RT 133
C 10 (RI0)CPNTA
C 123 8B (B01) REL
ST 103 (ST2)REL
RT
HU7 93 (U70)REL
HU4 83 (U40)REL
HU2 152 (U20)REL
HU1 142 (U10)REL
HU0 132 (U00)REL
HT7 122 (T70)REL
HT4 112 (T40)REL
HT2 102 (T20)REL
HT1 92 (T10)REL
HT0 82 (T00)REL
TO RCDR NO.4
TO RCDR NO. 12
TO RCDR NO.2
TO RCDR NO.22
TS(8) ON FR

WHEN ISOLATION OF RECORDER C-LEAD IS PROVIDED
ADD
REMOVE

TO TBL RCDR CONN FR (TDM) OR TO TBL RCDR FR (SXS) OR TO MASTER TEST FR CONN BAY OR TO TBL RCDR FR (4A OR 4M TOLL) VIA TBL RCDR CONN FR WHEN FURNISHED. (RUN FROM MA TIMER ASSOC WITH FIRST TV GROUP ONLY) OR TO TBL TICKETER CKT

VW
HU7 68 5
HU4 64 4
HU2 62 3 (TRTE) REL
HU1 61 2
HU0 58 1
HH 57 (HHR) REL
WC
H 55
WI
47
EH 45 (WHR) REL
30HH 37
WE
35
HT7 30 10
HT4 20 9
HT2 17 8 (TRTE) REL
HT1 15 7
HTO 07 6
TO EVEN RATE CALENDAR CKT
TO SXS COMMON RLS CONT CKT ON RR
C18
VH 10T TO PCHG 157 OF TS(D) ON FR
159 (B01)REL
149 (ST18)REL
139
129 28 (B01)REL
C 7 (RI2)CPNTA
ST 119
RT 109 (ST8)REL
HU7 99 (U70)REL
HU4 89 (U40)REL
HU2 158 (U20)REL
HU1 148 (U10)REL
HU0 138 (U00)REL
HT7 128 (T70)REL
HT4 118 (T40)REL
HT2 108 (T20)REL
HT1 98 (T10)REL
HTO 88 (T00)REL
TO RCDR NO.8
TS(8) ON FR
TO RCDR NO. 18
TO RCDR NO. 28

SHEET NOTES:

1. TO FL ALM FR OR UNIT FUSE & TIME ALM CKT OR TO SXS NO.1 OR INTERTOLL ALM CKT ON RR VIA OPTS OR TO NO.4A OR 4M FLOOR ALARM FUSE & TIME ALARM CKT.
2. MULT TO OTHER CAD 1 IN SAME AISLE OR TO INTERTOLL DIALING OFFICE WITH CAMA ALM CKT.
3. TO TV TBL IND CKT ON M RCD RCDR FR OR ON TV TBL IND CONN FR (ODD).
4. TO MA TMG FR SERVING TV GR "100" OR TV GRP "B".

DRAWING ISSUE
31D JLK ALM AMJ
350 NJF
36A

ISSUE 538

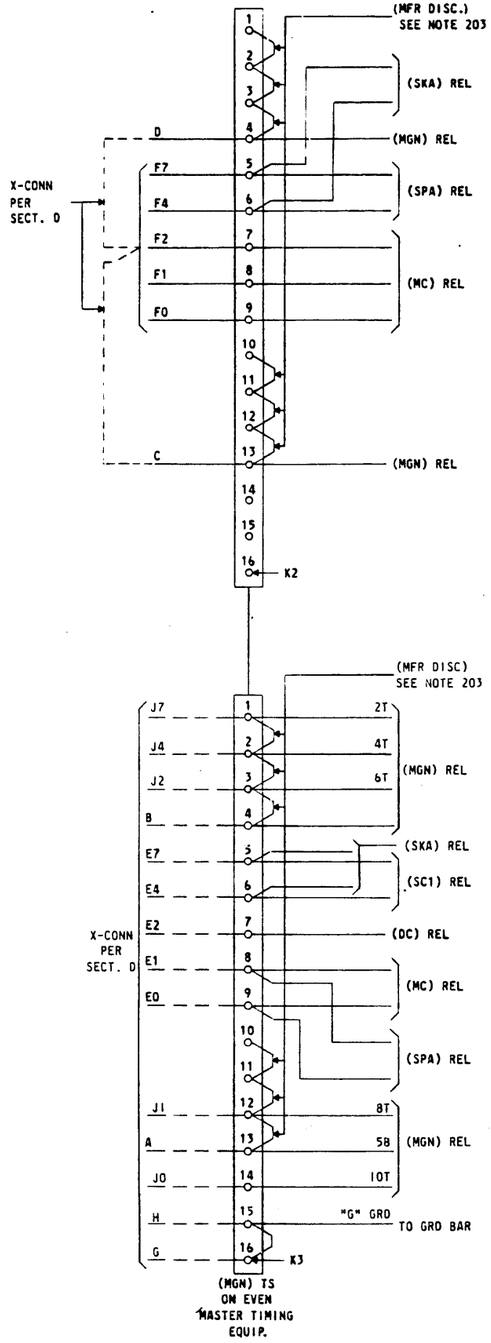
MASTER TIMING CIRCUIT (2) SD-25633-01-G2

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-25633-01-G2

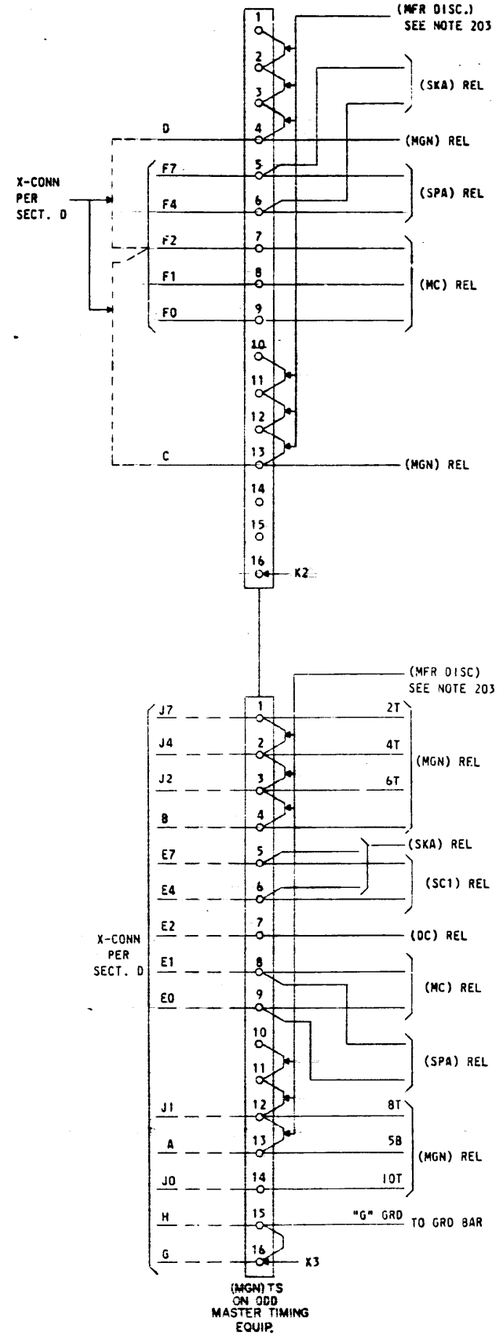
PART OF CAD 1

(FOR APP FIG.A,B,1,4,5,9,10,11,12,17,18,19,20,21,23,24,25,26,AND 29)
FOR EVEN MASTER TIMER

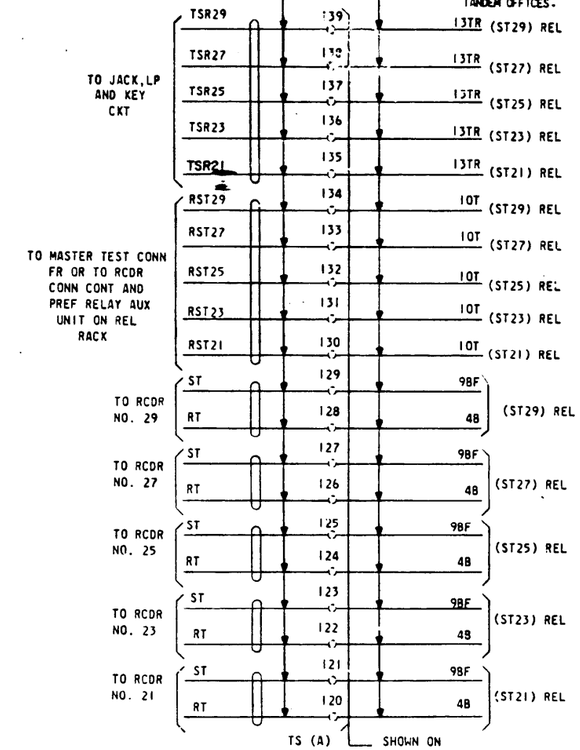


PART OF CAD 2

(FOR APP FIG. A,B,2,3,4,6,7,13,14,15,16,17,18,20,21,24,25, AND 29)
FOR ODD MASTER TIMER



REQUIRED WHEN MORE THAN 2000 LAMA TRUNKS ARE PROVIDED IN A NO. 5 CROSSBAR OFFICES ONLY. SEE CAD 5 FOR CONNECTIONS IN TANDEM OFFICES.



DRAWING ISSUE
310
388
ISSUE 39D

MASTER TIMING CIRCUIT (2)

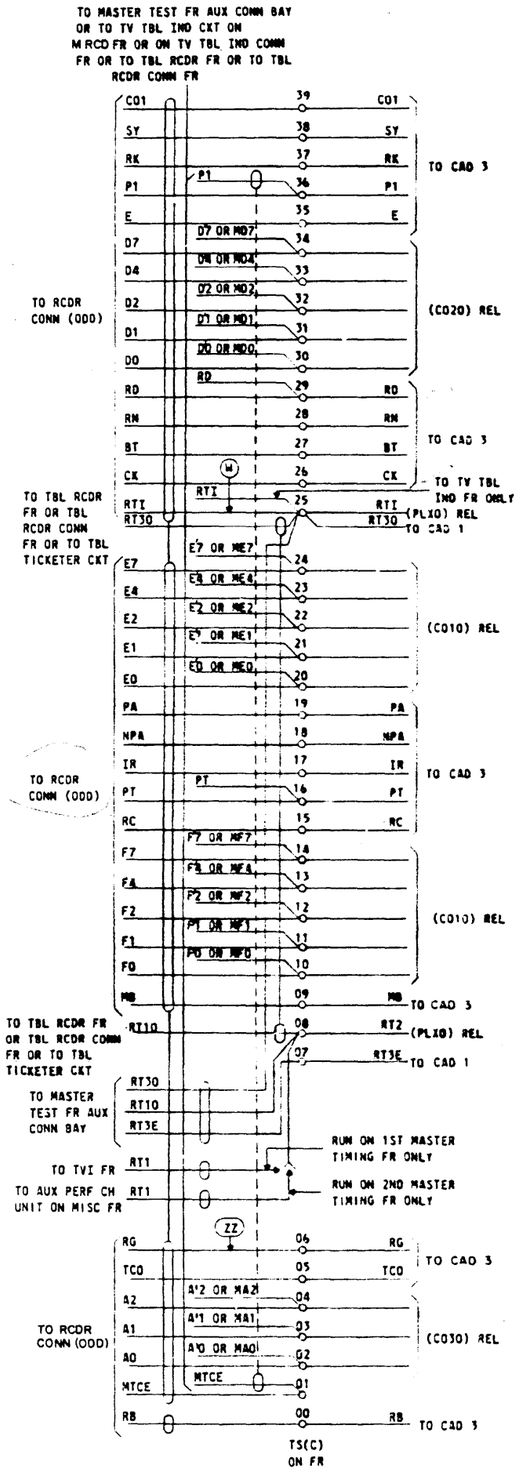
SD-25633-01-G3

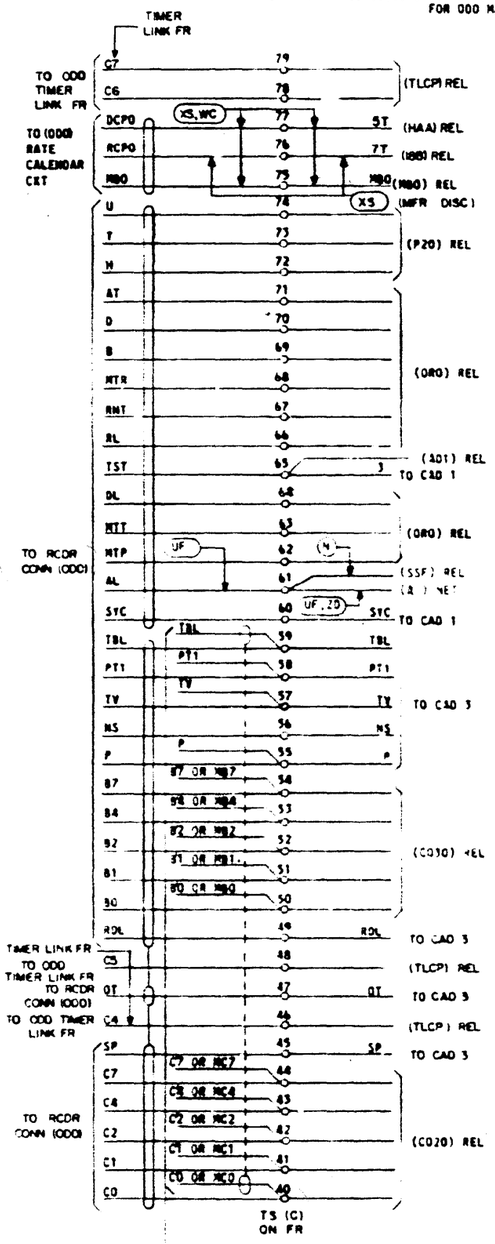
BELL TELEPHONE LABORATORIES

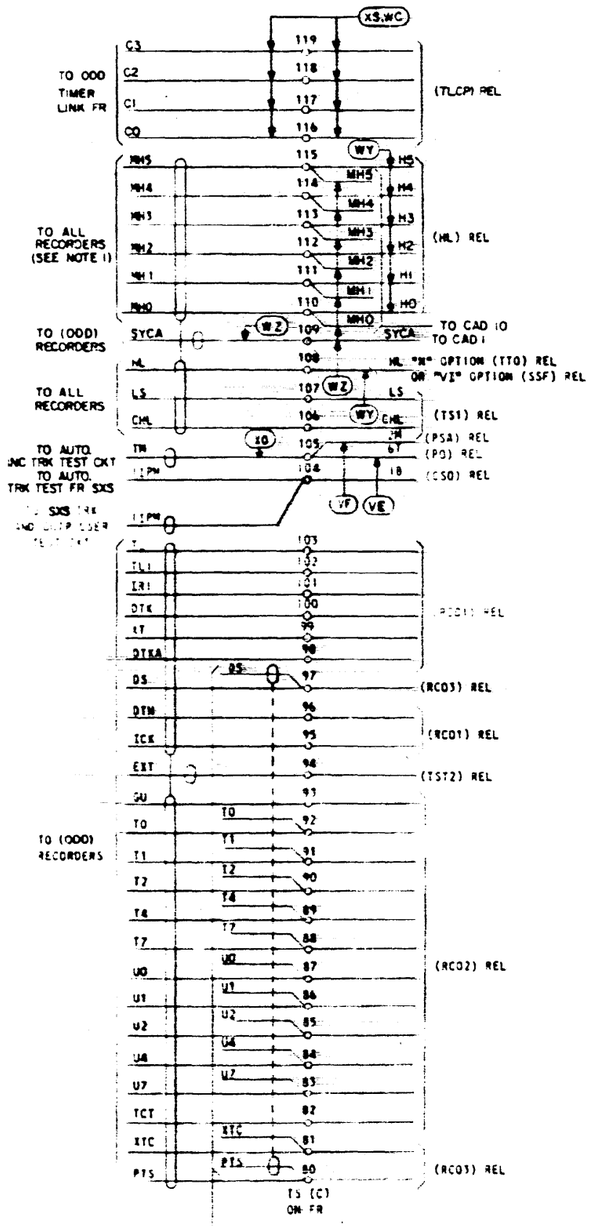
SD-25633-01-G3

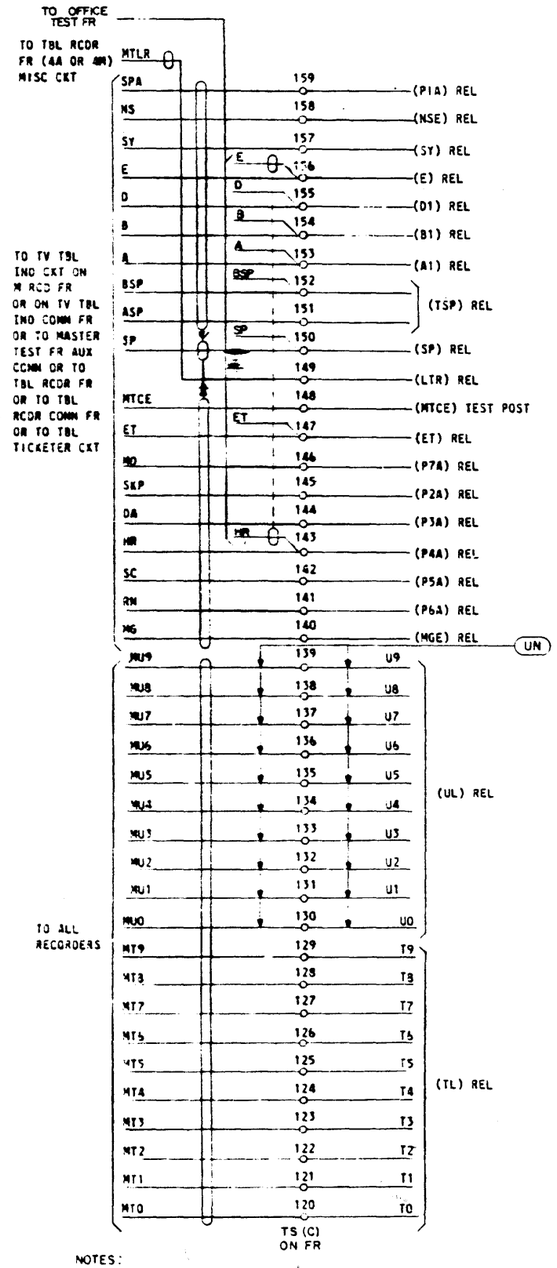
PART OF CAD 2

(FOR APP FIG. A, B, 2, 3, 4, 6, 7, 13, 14, 15, 16, 17, 18, 20, 21, 24, 25, AND 29)
FOR ODD MASTER TIMER









NOTES:

1 DURING TRANSITION OF RECORDERS TO 1 SEC TIMING ACCURACY, A SEPARATE MULTIPLE OF MHO-5 LEADS IS REQUIRED AS SHOWN IN CAD 10 FOR ALL 1 SEC RECORDERS. AFTER TRANSITION THE MHO-5 SW80 CABLE MULT IN CAD 10 SHALL BE REMOVED AND LOCAL WIRING, WZ OPTION, CONNECTED BETWEEN CAD 10 AND CAD 2.

DRAWING ISSUE
31D
33A
37B
38B

ISSUE 58AC

MASTER TIMING CIRCUIT (2)

BELL TELEPHONE LABORATORIES INCORPORATED

SD-25633-01-G4

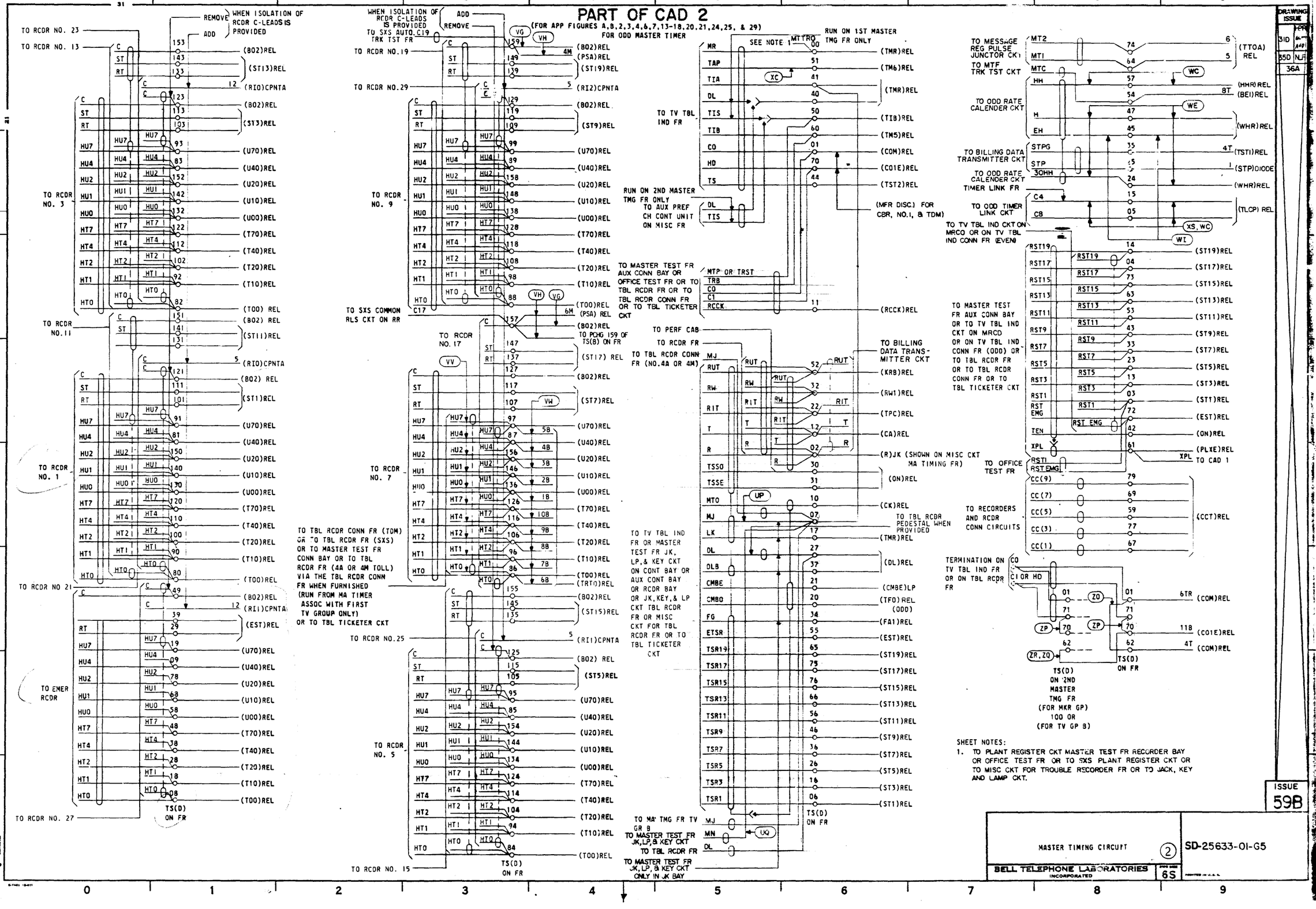
6S

SD-25633-01-G4

STABILO

PART OF CAD 2

(FOR APP FIGURES A,B,2,3,4,6,7,13-18,20,21,24,25, & 29) FOR ODD MASTER TIMER



SHEET NOTES:

1. TO PLANT REGISTER CKT MASTER TEST FR RECORDER BAY OR OFFICE TEST FR OR TO SXS PLANT REGISTER CKT OR TO MISC CKT FOR TROUBLE RECORDER FR OR TO JACK, KEY AND LAMP CKT.

DRAWING ISSUE
31D
35D NJ
36A

ISSUE 59B

MASTER TIMING CIRCUIT (2) SD-25633-01-G5

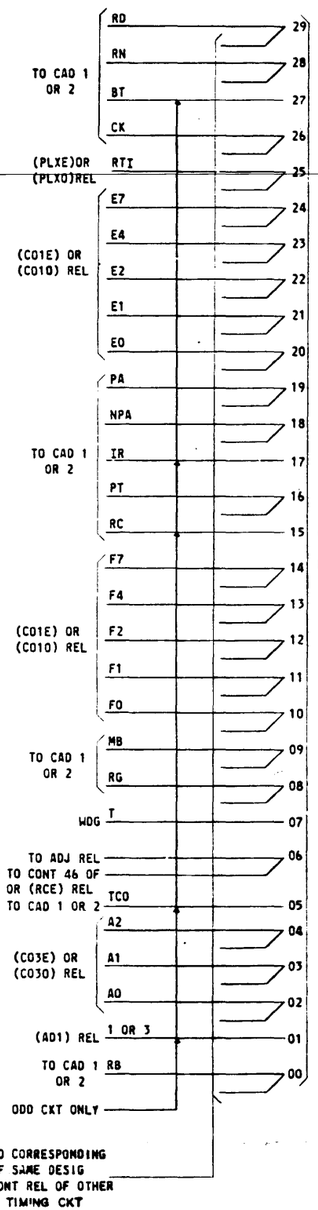
BELL TELEPHONE LABORATORIES INCORPORATED 6S

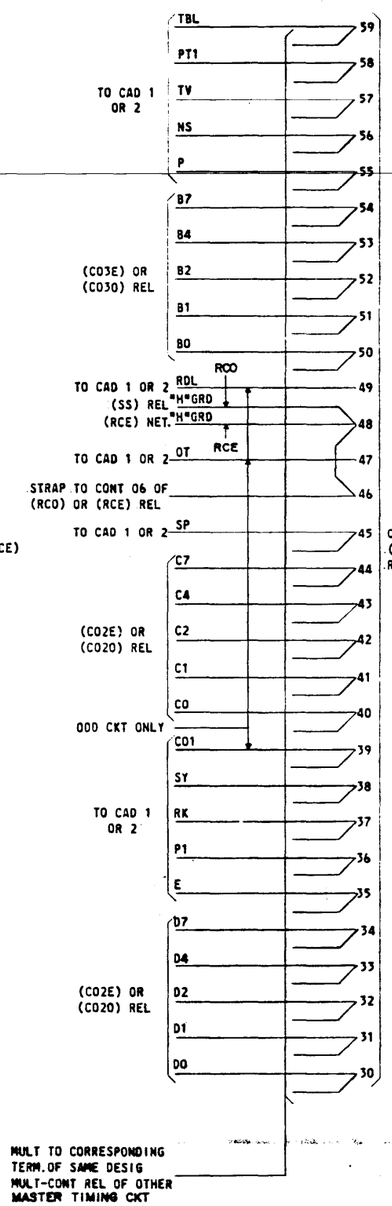
SD-25633-01-G5

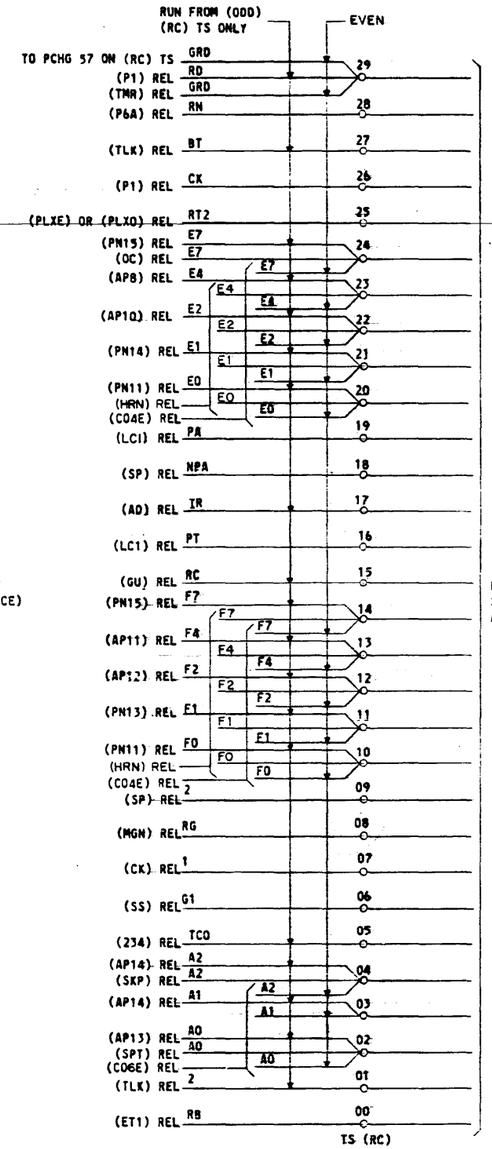
STABILO

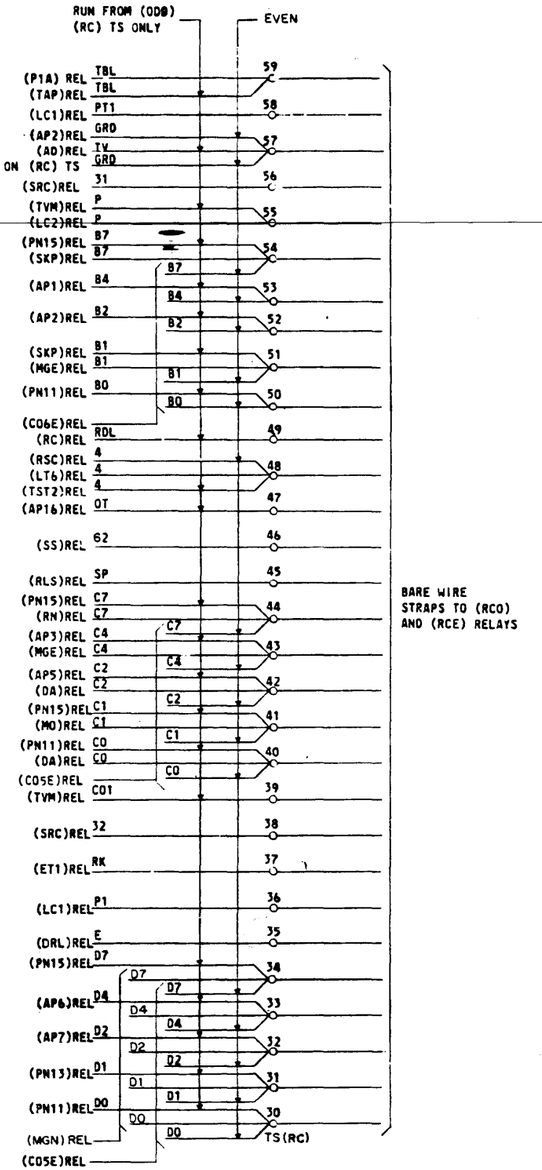
CAD 3

(APP FIG. 8,22)
FOR PART OF (ODD) OR (EVEN)









DRAWING ISSUE
31D DG

ISSUE 45B

SD-25633-01-G6

STABILO

MASTER TIMING CIRCUIT	②	SD-25633-01-G6
BELL TELEPHONE LABORATORIES INCORPORATED	6S	

CAD 4

BATTERY AND GROUND LEADS FOR
NO. 1 CROSSBAR, CROSSBAR TANDEM, SXS
NO. 1 WITH AMA, SXS INTERTOLL, & NO. 4A OR 4M TOLL

TO 48V FUSE PANEL ON OGT TEST FR JACK BAY OR ON MISC RR BAY FOR NO.1 CROSSBAR AND TANDEM, ON TBL RCDR FR NO.2 OR MISC RR BAY FOR SXS NO. 1, ON MISC FUSE BAY FOR NO.4A OR 4M TOLL OR ON MISC RR BAY FOR SXS INTERTOLL

*AA*GRD	45	4T	(CCT) REL
*Z*GRD	44	8T	
*AD*GRD	43	10B	
*AC*GRD	42	6B	
*AB*GRD	41	4B	
*Y*GRD	40	12T	
TR GRD	39	TO PCHG 31 OF (TA) TS	
AJ GRD	38	2	(HRTI) REL
AH GRD	37	1	(TRI) REL

SEE NOTE 1 — SEE NOTE 1

36
35 SHOWN IN CAD 5
34 SHOWN ON SD-25630-01
33
32
31
30
29
28
27
26
25
24
23 SHOWN ON SD-25630-01
22
21
20
19
18
17
16
15
14
13
12
11 SHOWN ON SD-25630-01
10
09
08
07
06
05
04
03 SHOWN ON SD-25630-01
02
01
00

TS(MISC)

TO 48V FUSE PANEL ON OGT TEST FR JACK BAY OR ON MISC RR BAY FOR NO.1 CROSSBAR AND TANDEM, ON TBL RCDR FR NO.2 OR MISC RR BAY FOR SXS NO.1, ON MISC FUSE BAY FOR NO.4A OR 4M TOLL, OR ON MISC RR BAY FOR SXS INTERTOLL

*RE*BAT.	91		(GRE) REL
*L*BAT.	90		(TOE) REL
*K*BAT.	89		(RCE) REL
*J*BAT.	88		(PBA) REL
*G*BAT.	87		(M) SEL
*F*BAT.	86		(HT) SEL
*E*BAT.	85		(H) SEL
*D*BAT.	84		(M) REL
*CE*BAT.	83		(OSE) LAMP
*BE*BAT.	82		(BO2) REL
*AE*BAT.	81		(CE1) REL
	80		
*AE*GRD	79	SEE NOTE 205	
*AF*GRD	78		
	77	SHOWN ON SD-25630-01	
*H*GRD	76		(P1) NET.
*G*GRD	75		(MGN) REL
*F*GRD	74		(MGE) REL
*E*GRD	73		(U) SEL
*D*GRD	72		(M) SEL
C GRD	71		(RH) NET.
*X*GRD	70		(CAS) REL
*W*GRD	69		(CO1E) REL
*V*GRD	68		
*U*GRD	67		
*T*GRD	66		
*S*GRD	65		
*R*GRD	64		
*P*GRD	63		(TOO) REL
*N*GRD	62		
*M*GRD	61		
*L*GRD	60		
*K*GRD	59		
*J*GRD	58		
*H*GRD	57		(P1) NET.
*G*GRD	56		(MGN) REL
*F*GRD	55		(MGE) REL
*E*GRD	54		(U) SEL
*D*GRD	53		(M) NET.
*C*GRD	52		(RH) NET.
*B*GRD	51		(CSY) NET.
*A*GRD	50		(ORO) REL
*PTU*GRD	49		(Z) REL
*AL*GRD	48	1	(ST) SEL-OOD
*AK*GRD	47	13	(HRTI) REL
*AG*GRD	46	5	(3AM) REL-OOD

EVEN

TS(MISC)

TO 48V FUSE PANEL ON OGT TEST FR JACK BAY OR ON MISC RR BAY FOR NO.1 CROSSBAR AND TANDEM, ON TBL RCDR FR NO.2 OR MISC RR BAY FOR SXS NO.1, ON MISC FUSE BAY FOR NO.4A OR 4M TOLL, OR ON MISC RR BAY FOR SXS INTERTOLL

(OOD)

*TR*BAT.	137	SEE NOTE 1 TO PCHG 11 OF (TA) TS	
	136		
	135		
	134		
	133		
	132		
	131		
	130		
	129		
*H*BAT.	128		(3AM) REL-ODD
T BAT.	127		(HRTA) REL
PTU BAT.	126		(AL) REL
	125	SHOWN ON SD-25630-01	
	124		
	123	SHOWN ON SD-25630-01	
	122		
	121		
	120		
	119	SHOWN ON SD-25630-01	
	118		
U BAT.	117		(TLCP) REL-ODD
*TQ*BAT.	116		(TT) REL
*S*BAT.	115		(RK) RES
*Q*BAT.	114		(RD) SEL
		MFR DISC	
*PO*BAT.	113		(RCE2) REL
*NO*BAT.	112		(CO3O) REL
*MO*BAT.	111		(TOO) REL
*LO*BAT.	110		(GBO) REL
*K*BAT.	109		(RCE) REL
*J*BAT.	108		(PBA) REL
*G*BAT.	107		(M) SEL
*F*BAT.	106		(HT) SEL
*E*BAT.	105		(H) SEL
*D*BAT.	104		(M) REL
*CO*BAT.	103		(OSO) LAMP
*BO*BAT.	102		(OCH) REL
*AO*BAT.	101		(BE2) REL
*PE*BAT.	100		(HRTI) REL
	99		
	98		
H BAT.	97		(3AM) REL
U BAT.	96		(TLCP) REL
*TE*BAT.	95		(MJ) RES
		MFR DISC	
*S*BAT.	94		(RK) RES
*Q*BAT.	93		(RS) SEL
*NE*BAT.	92		(CO3E) REL

ODD

EVEN

TS(MISC)

	159	SHOWN IN CAD 1	
	158	SHOWN IN CAD 2	
	157		
	156		
	155	SHOWN IN CAD 1	
	154	SHOWN IN CAD 2	
	153		
	152		
	151		
	150		
	149		
	148		
	147		
	146		
	145		
	144		
	143		
	142		
*AL*GRD	141	1	(ST) SEL
	140		
*AG*GRD	139		(3AM) REL
	138	SHOWN ON SD-25630-01	

TS(MISC)

TO 48V FUSE PANEL ON OGT TEST FR JACK BAY OR ON MISC RR BAY FOR NO.1 CROSSBAR AND TANDEM, ON TBL RCDR FR NO. 2 OR MISC RR BAY FOR SXS NO.1, ON MISC FUSE BAY FOR NO. 4A OR 4M TOLL, OR ON MISC RR BAY FOR SXS INTERTOLL

EVEN

NOTES:

1. *TR* BAT. AND *TR* GRD ARE REQUIRED BY ONE SECOND TIMING TRANSITION AUXILIARY UNIT PER SD-94834-01 AND SHALL BE REMOVED AFTER CONVERSION FROM SIX SECOND TO ONE SECOND TIMING ACCURACY.

DRAWING ISSUE

31D	Sheet 6 from 31D
350	NLF
38B	

ISSUE 43B

MASTER TIMING CIRCUIT (2) SD-25633-01-G7

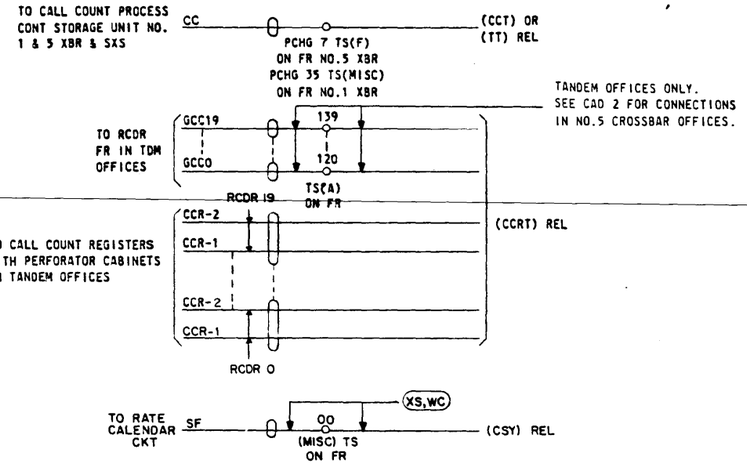
BELL TELEPHONE LABORATORIES INCORPORATED

SHEET 65

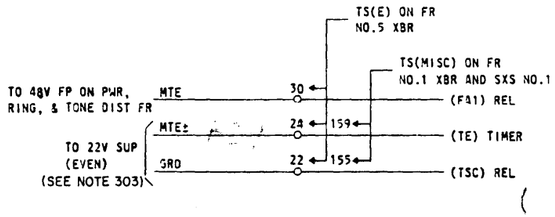
SD-25633-01-G7

STABILOHM

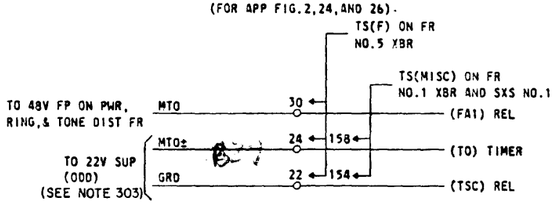
CAD 5
(FOR APP FIG 27,28,29 AND D)



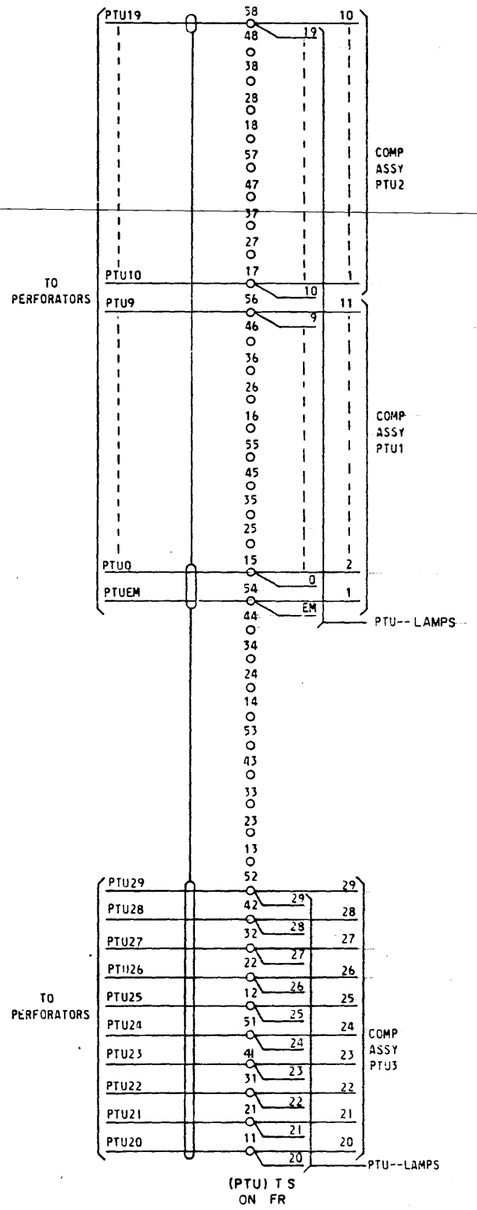
CAD 6
(FOR APP FIG.1,24,AND 26)



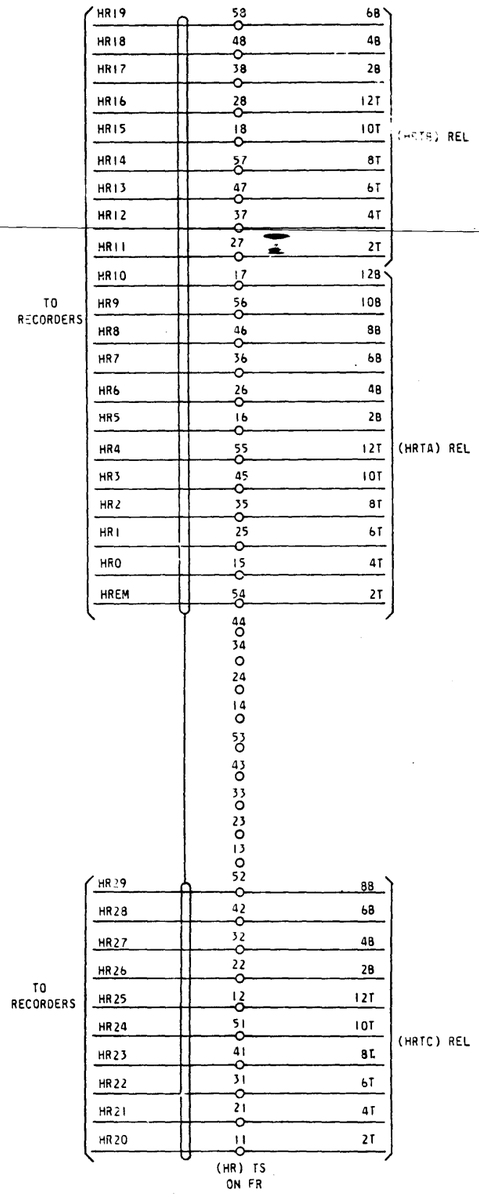
CAD 7
(FOR APP FIG.2,24,AND 26).



CAD 8
(FOR APP FIG 30)



CAD 9
(FOR APP FIG 31)



DRAWING ISSUE	
31D	4W,GA,GLM,AHO
34B	CWC,RW,AHO
350	NJF
388	

ISSUE 52B

MASTER TIMING CIRCUIT (2) SD-25633-01-G8

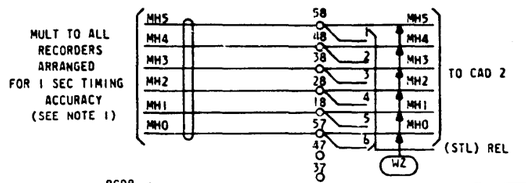
BELL TELEPHONE LABORATORIES INCORPORATED 6S

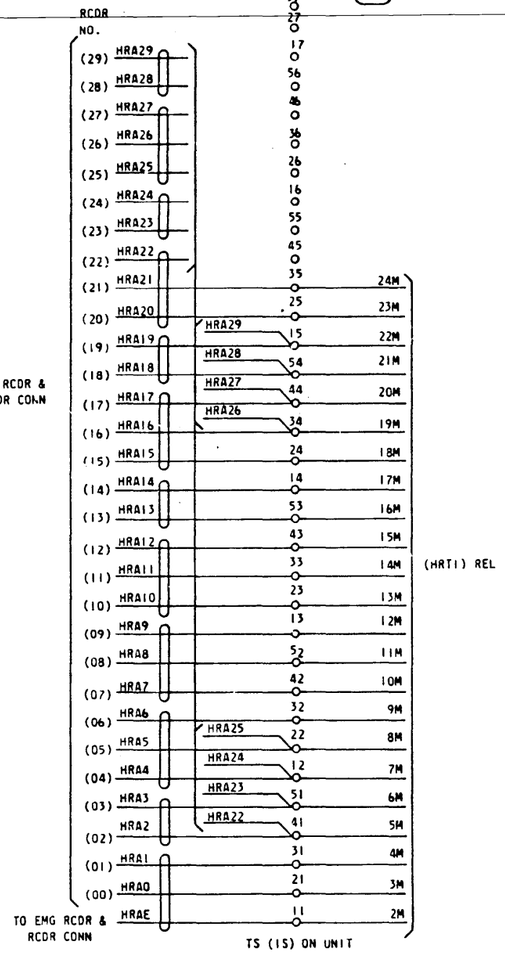
SD-25633-01-G8

STABILO K+E

CAD 10

FOR NO.1 AND NO.5 CROSSBAR, CROSSBAR TANDEM, NO.4A OR 4M TOLL AND SXS AND SXS INTERTOLL OFFICES





NOTES:

1. DURING TRANSITION OF RECORDERS TO 1 SEC TIMING ACCURACY, A SEPARATE MULTIPLE OF MH0-5 LEADS IS REQUIRED AS SHOWN IN CAD 10 FOR ALL 1 SEC RECORDERS. AFTER TRANSITION THE MH0-5 SWBO CABLE MULT IN CAD 10 SHALL BE REMOVED AND LOCAL WIRING, WZ OPTION, CONNECTED BETWEEN CAD 10 AND CAD 2.

ISSUE 43B

MASTER TIMING CIRCUIT (2)

SD-25633-01-GG

BELL TELEPHONE LABORATORIES INCORPORATED

6S

SD-25633-01-GG