

DRAWING	ISSUE
1	1
2D	1
3D	1
4B	1
5B	1
6A	1
7B	1
8B	1
9B	1

SD-95283-01-B2

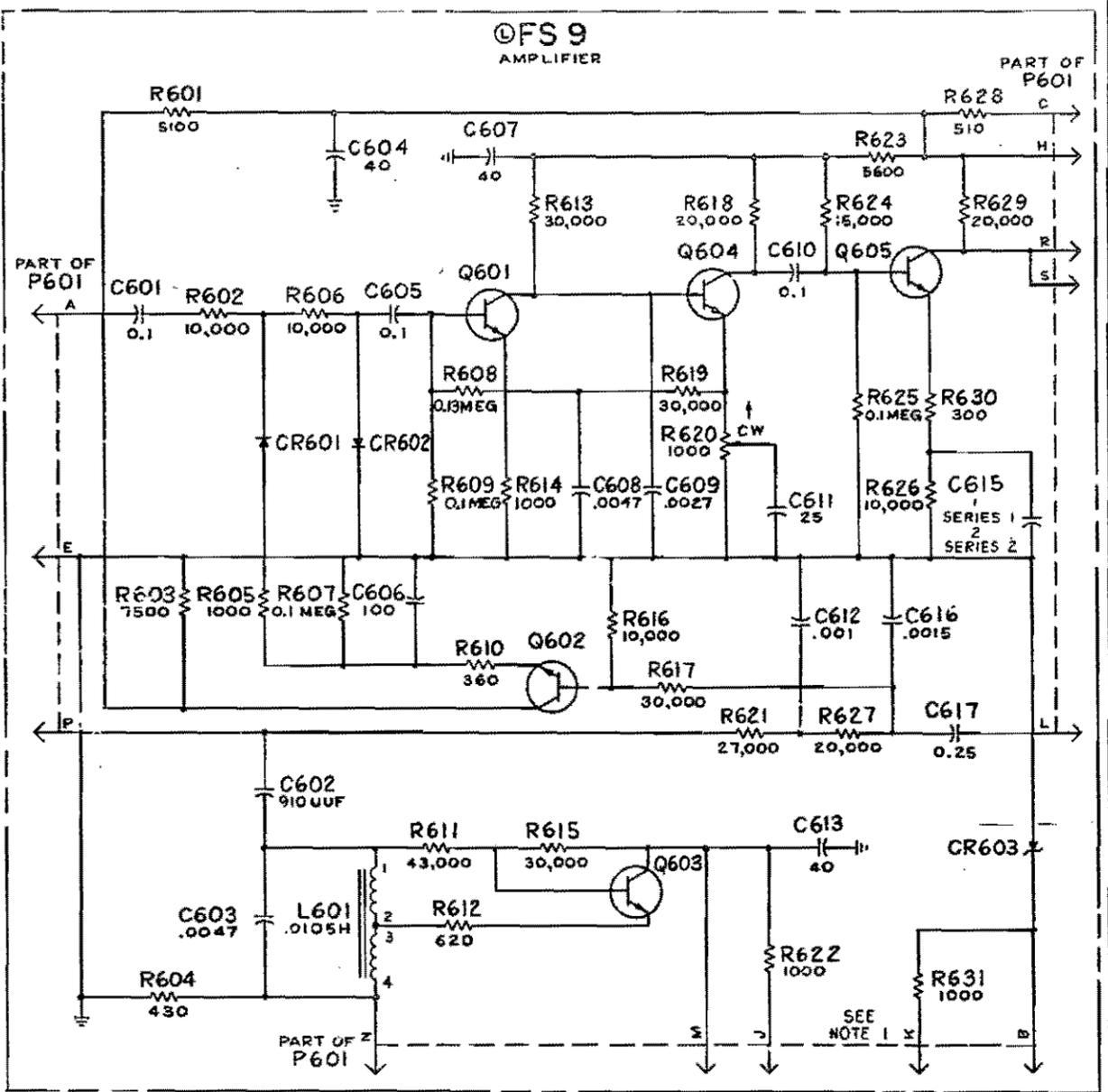
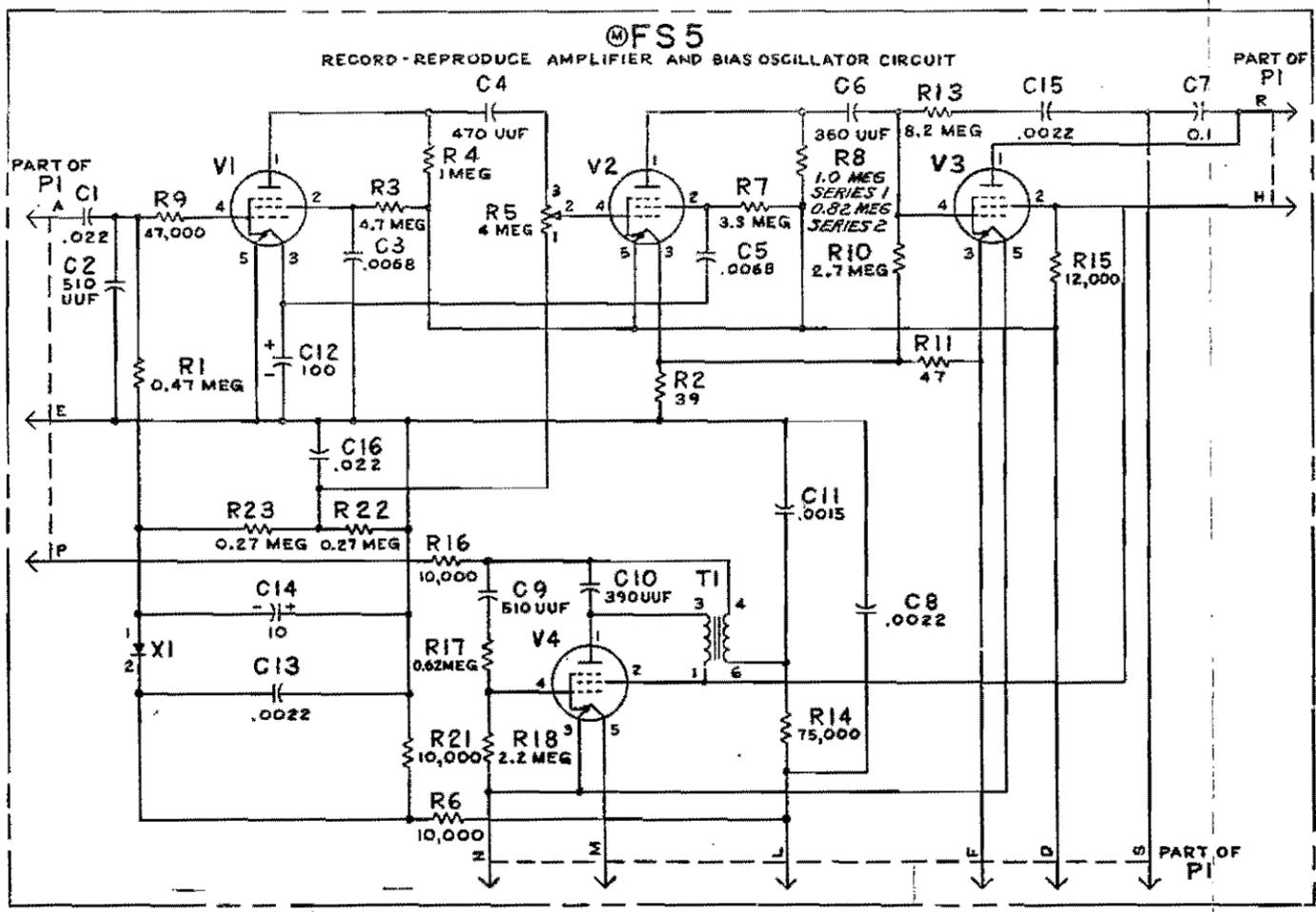
SHEET NOTES:
 1. IN K5-14766, 14 ANNOUNCEMENT SETS PRIOR TO SERIAL NO. 9002, (X1) WAS A G.E. CO. NO. 6R85HT3 SELENIUM RECTIFIER.

ANNOUNCEMENT CIRCUIT

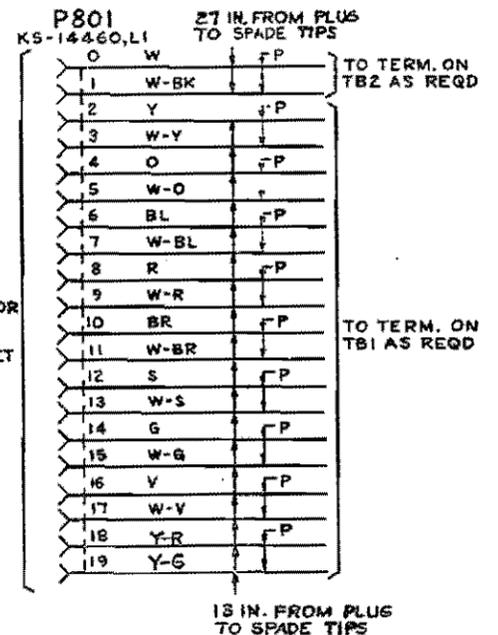
SD-95283-01-B2

BELL TELEPHONE LABORATORIES
INCORPORATED

6S



**FS 10
CONNECTING CIRCUIT**



SHEET NOTES:
I. K TERMINAL NOT USED IN LIST 2 ANNOUNCEMENT SET. USED IN LIST 1 ONLY.

SD-95283-01-B3

APP FIG. 1

RELAY		A		B		D		E		ST		STP		DESIG	
DESIG	CODE	AK4		AJ5		AJ5		AK4						CODE	
CONT. ARR	LGC	CONT. ARR	LGC	CONT. ARR	LGC	CONT. ARR	LGC	CONT. ARR	LGC	CONT. ARR	LGC	CONT. ARR	LGC	CONT. ARR	LGC
12		M	107	EBM	2B1	EBM	a	EBM	2E0	M	2E0	EBM	1F6	12	
11		EBM	1E6	EBM	2G1	EBM	b	EBM	1F6	EBM	1F6	EBM	1F6	11	
10		EBM		EBM	2G1	EBM		EBM	1D6	EBM	1D6	EBM	1D6	10	
9		EBM	2E0	EBM	1F5	EBM	b	EBM	2H0	EBM	2H0	EBM	2H0	9	
8		EBM		EBM	2F7	EBM	1E6	EBM	1E6	EBM	a	EBM	a	8	
7		EBM		EBM	2G2	EBM	2F1	EBM	2F1	EBM	a	EBM	a	7	
6		EBM		EBM	1B1	EBM	1D6	EBM	1D6	EBM	a	EBM	a	6	
5	EMB	2F0		EBM	a	EBM	1E1	EMB	1A6	EMB	1A6	EMB	1A6	5	
4	EMB	1E7		EBM	1B5	EBM	1D1	EMB	2G4	EMB	2G4	EMB	2G4	4	
3	EBM	107		EBM	1B6	EBM	1B1	EBM	1C6	EBM	1C6	EBM	1C6	3	
2	EBM	1F7		EBM	2G0	EBM	1A1	EBM	1D5	EBM	1D5	EBM	1D5	2	
1	H	2E1		EBM	2B2	EBM	2F8	H	2F7	H	2F7	H	2F7	1	
COIL		1E6	1C6	1C6	1C6	1D6	1D6	1B6	1F6	1B6	1F6	1B6	1F6	COIL	

CORD & PLUG POWER

DESIG	LOC	CODE
PG1	2G8	B-650422-2 OR EQUIV.
PG1	2G8	B-650422-1 OR EQUIV.

FUSE

DESIG	LOC	CODE
F1	2G7	BUSSMAN, AGC 1/2 AMP

JACK

DESIG	LOC	CODE
J3	1F1	223A
J4	1G1	223A

LAMP

DESIG	LOC	CODE
D	2E1	2Y

NETWORK

DESIG	LOC	CODE
A	2E6	185A
B	2D6	
D	2C6	
E	2E6	
STP	2B6	

RECTIFIER

DESIG	LOC	CODE
X1	2F6	B-650051

RESISTOR

DESIG	LOC	CODE
R1	2F5	47000 ±10%, 0.5W, ALLEN BRADLEY
R2	2F5	WARD LEONARD, 5X1000
R3	2F6	5100 ±5%, EB
R4	1F1	47000 ±10%, 0.5W, ALLEN BRADLEY
R5	2A2	27000 ±10%, 0.5W, ALLEN BRADLEY
R6	1G1	820 ±5%, EB
R7	1H1	1300 ±5%, EB
R8	1G3	39000 ±5%, EB
R9	2B9	12000 ±5%, EB
R10	2F5	10,000 ±10%, EB
R11	1E5	6810, WARD LEONARD, 7/8Y, AXIOM
R12	1H3	470 ±5%, EB, ALLEN BRADLEY
R13	2F6	100 ±5%, KS-14603, L3A

TERMINAL BOARD

DESIG	TB1		TB2		TB3		TB4	
	NO.	LOC	NO.	LOC	NO.	LOC	NO.	LOC
	B-190894							
	B-190895							
	CINCH MFG. CO. 1520							
	B-190906							
G	1A1	23	1B4	1	2G6	2A2	1	1G5
R	1B0	24	1B4	2	2G6	2A2	2	1G5
T	1A0	25	1C4	3	2H6		3	1G5
1	1H6	26	2G4	4	2H6		4	1G7
2	1H6	27	2F4	5	2H6		5	1G7
3	3H6	28	2F4	6	2G6		6	1G7
4	2H4	29	1E0	7	2G6		7	1H6
5	2G4	30	1E0	8	2G6		8	1H6
6	2G4	31	1D0	9	2F6		9	1H6
7	2F0	32	1D0	10	2F6			
8	2G0	33	1D0					
9	1G0	34	2H0					
10	1F0	35						
11	2E0	36	2G4					
12	2E0	37	2F4					
13	1D4	38	2F0					
14	2H0	39	1A1					
15	2H0	40	2G4					
16	1F4	41	2G0					
17	2E0	42	1F0					
18	1H0	43	2H4					
19	1B0	44	2G0					
20	1B0	45	2A9					
21	1E0	46	2A9					
22	1C0	47	2A9					

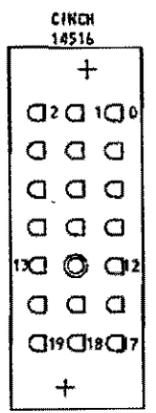
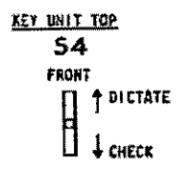
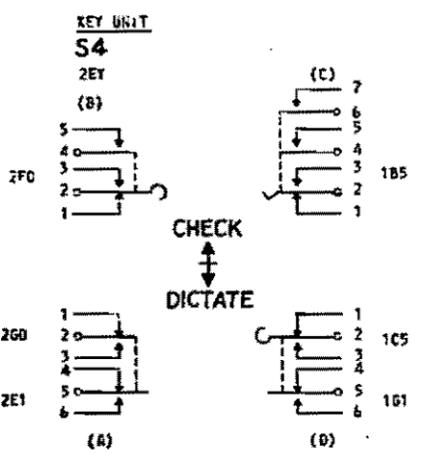
CAPACITOR

DESIG	LOC	CODE
C1A	2F6	SPRAGUE, D-27842
C1B	2F6	
C1C	2F6	
C2	2E6	CORNELL-DUBILIER, BR5015
C3A	1F2	SPRAGUE, D-27842
C3B	2F5	
C3C	2E7	
C7	2B2	ELMENDO, CM20911J
C8	1G2	SPRAGUE, 91P2240152
C9	2E8	CORNELL-DUBILIER, BR5015
C10	2F6	SPRAGUE, 39D7576075JL0

CONNECTOR

H.M. BUGGIE B-4226

DESIG	SOCKET
J1	SOCKET
NO.	LGC
S	2E7
R	2A8
P	2C3
N	2E4
H	2E5
L	2E6
K	-
J	2E5
H	2B8
F	3F9
D	2E7
C	2E7
B	-
A	2B3



DESIG J7

SOCKET

NO.	LGC
19	-
18	-
17	-
16	1A8
15	1A8
14	1F8
13	1D8
12	1E8
11	-
10	3D8
9	-
8	1C8
7	1B8
6	1C8
5	1F8
4	-
3	1D8
2	1G8
1	1G8
0	1G8

TRANSFORMER

DESIG	LOC	CODE
T1	2F7	B-191263 (POWER)
T2	2C8	529B (OUTPUT)

SHEET NOTE:

1. UNLESS OTHERWISE SPECIFIED "B" NUMBERS REFERRED TO ARE S.T.L. DRAWING NUMBERS; ORDER AS FOLLOWS: "B- (NO)" (PART OF KS-16765, L2)."

ANNOUNCEMENT CIRCUIT

SD-95283-01-C1

BELL TELEPHONE LABORATORIES INCORPORATED

65

SD-95283-01-C1

DRAWING ISSUE

20

30

4B

5B

6B

7B

8B

9B

WORD DRAWING REPRODUCED WITH-OUT CHANGE 9-15-71

9

APP FIG. 2

(FS 3)

1	REV	DATE
3D	REV	DATE
4B	REV	DATE

KS-16765, L3 RECORDER

SOLENOID
B-190918

L1 L2

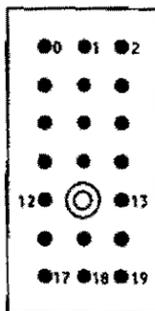


1B8 1C8

CAPACITOR

DESIG	LOC	CODE
C1	1A9	121P40591RST13, SPRAGUE

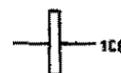
CONNECTOR
CINCH, 14586



DESIG		P2	
CONN	PLUG	NO.	LOC
OPTION			
		19	
		18	
		17	
		16	1A8
		15	1A8
		14	1F8
		13	1D8
		12	1E8
		11	
		10	1D8
		9	
		8	1C8
		7	1B8
		6	1C8
		5	1F8
		4	
		3	1D8
		2	1G8
		1	1G8
		0	1E8

ERASE COIL

L3
B-190922



HEAD

DESIG	LOC	CODE
H1	1G8	B-191264

MOTOR

DESIG	LOC	CODE
M1	1A9	B-65041B PART OF B-65041Z DRIVE ASSEMBLY (SEE NOTE 2)

NETWORK

DESIG	LOC	CODE
L1	1B8	1B5A
L2	1C8	
L3	1D8	

RESISTOR

DESIG	LOC	CODE
R1	1F8	0.1 MEG 0.47 MEG 0.47 MEG ALLEN BRADLEY, EB. ±10%
R2	1D8	
R3	1E8	

SWITCH

DESIG	LOC	CODE
S1	1F9	B-191179
S2	1D9	B-190969-1
S3	1E9	B-19069-2

APP FIG. 3 (MFR DISC)

(FS 5)

KS-16765, L4

RECORD-REPRODUCE AMPLIFIER AND BIAS OSCILLATOR CIRCUIT (PRINTED WIRING BOARD ASSEMBLY)

CAPACITOR

DESIG	LOC	CODE
C1	3A0	65P22391 SPRAGUE OR EQUIV
C2	3B0	CM150511J ELMENCO OR EQUIV
C3	3B1	75P68291 SPRAGUE OR EQUIV
C4	3A1	CM150471J ELMENCO OR EQUIV
C5	3B2	75P68291 SPRAGUE OR EQUIV
C6	3A3	CM150361J ELMENCO OR EQUIV
C7	3A4	65P10491 SPRAGUE OR EQUIV
C8	3C3	85P22291 SPRAGUE OR EQUIV
C9	3C1	CM150511J ELMENCO OR EQUIV
C10	3C2	CM150391J ELMENCO OR EQUIV
C11	3C3	85P15291 SPRAGUE OR EQUIV
C12	3B1	150D107X0010R2 SPRAGUE OR EQUIV
C13	3D1	85P22291 SPRAGUE OR EQUIV
C14	3C1	150D106X0035R2 SPRAGUE OR EQUIV
C15	3A4	85P22291 SPRAGUE OR EQUIV
C16	3C1	65P22391 SPRAGUE OR EQUIV

CONNECTOR
H. H. BUGGIE
EC-84225

DESIG		P1	
CONN	PLUG	NO.	LOC
OPTION			
		S	3D4
		R	3A4
		P	3C0
		N	3D1
		K	3D2
		L	3D3
		K	
		J	
		H	3A4
		F	3D3
		E	3B0
		D	3D4
		C	
		B	
		A	3A0

DIODE

DESIG	LOC	CODE
X1	3C0	400

POTENTIOMETER

DESIG	LOC	CODE
R5	3A2	JA-4052-502024, ALLEN BRADLEY

RESISTOR

DESIG	LOC	CODE
R1	3B0	0.47 MEG ±20%
R2	3B2	39R
R3	3A1	4.7 MEG ±5%
R4	3A1	1 MEG
R6	3D1	10,000
R7	3A2	3.2 MEG ±5%
R8	3A3	0.52 MEG ±5%
R9	3A0	47 MEG ±10%
R10	3B3	2.7 MEG ±10%
R11	3B3	47R
R13	3A3	8.2 MEG
R14	3D3	75,000R ±5%
R15	3B4	12,000R
R16	3C1	10,000R
R17	3C1	0.62 MEG
R18	3D1	2.2 MEG
R21	3D1	10,000R ±10%
R22	3C1	0.27 MEG
R23	3C0	0.27 MEG

ALLEN BRADLEY, EB OR EQUIV

TRANSFORMER

DESIG	LOC	CODE
T1	3C2	669D

TUBE, ELECTRON

DESIG	LOC	CODE
V1	3A0	CK-512AX RAYTHEON MFG CO.
V2	3A2	
V3	3A3	
V4	3C2	

SHEET NOTE:

- UNLESS OTHERWISE SPECIFIED "B" NUMBERS REFERRED TO ARE BTL DRAWING NUMBERS; ORDER AS FOLLOWS: "B-(NO.) (PART OF KS-16765, L3)".
- ON SETS WITH SERIAL NO. 5813 AND LOWER, M1 MOTOR IS KS-15914, L1 OR L2.

COMMON SYSTEMS
ANNOUNCEMENT CIRCUIT

SD-95283-01-C2

BELL TELEPHONE LABORATORIES
INCORPORATED

65

SD-95283-01-C2

0 1 2 3 4 5 6 7 8 9

APP FIG. 4
(FS 9)

KS-16765, LB AMPLIFIER (PRINTED WIRING BOARD ASSEMBLY)

CAPACITOR

DESIG	LOC	CODE	
C601	3B5	65P10491	SPRAGUE OR EQUIV
C602	3D6	CM200911J	ELNENCO OR EQUIV
C603	3E6	CM20E472J	OR EQUIV
C604	3A6	KS-16390, LB	
C605	3B6	65P10491	SPRAGUE
C606	3C6	40D114A2	OR EQUIV
C607	3A7	KS-16390, LB	
C608	3C7	85P47291	SPRAGUE
C609	3C8	85P27291	OR EQUIV
C610	3B8	65P10491	SPRAGUE
C611	3C8	40D149A2	OR EQUIV
C612	3C8	85P10291	SPRAGUE OR EQUIV
C613	3E8	KS-16390, LB	
C615	3C9	40D186A2	
		SERIES 1	
		40D187A2	
		SERIES 2	SPRAGUE
			OR EQUIV
C616	3C9	85P15291	
C617	3D9	542C	

CONNECTOR

H. H. BUGGIE
EC-84225

DESIG	TERM.	LOC
P601		
CONN		PLUG
OPTION		
	S	3B9
	R	3B9
	P	3D5
	H	3F6
	M	3F8
	L	3C9
	K	3F9
	J	3F8
	H	3A9
	F	
	E	3C5
	D	
	C	3A9
	B	3F9
	A	3B5

DIODE

DESIG	LOC	CODE	
CR601	3C6		
CR602	3C6	1N1692	TEXAS INSTRUMENT OR EQUIV
CR603	3E9	420M	

RESISTOR

DESIG	LOC	CODE	
R601	3A5	5100Ω	
R602	3B6	10,000Ω	
R603	3C5	7500Ω	
R604	3E5	430Ω	
R605	3C6	1000Ω	
R606	3B6	10,000Ω	
R607	3C6	0.1 MEG	
R608	3B7	0.13 MEG	ALLEN BRADLEY, EB, ±5% OR EQUIV
R609	3C7	0.1 MEG	
R610	3D7	360Ω	
R611	3E7	43,000Ω	
R612	3E7	620Ω	
R613	3A7	30,000Ω	
R614	3C5	1000Ω	
R615	3E7	30,000Ω	
R616	3C7	10,000Ω	

INDUCTOR

DESIG	LOC	CODE
L601	3E6	1589B

RESISTOR (CONT)

DESIG	LOC	CODE	
R617	3D8	30,000Ω	
R618	3A8	20,000Ω	
R619	3B8	30,000Ω	
R621	3D8	27,000Ω	
R622	3E8	1000Ω	
R623	3A8	5600Ω	ALLEN BRADLEY, EB, ±5% OR EQUIV
R624	3A8	15,000Ω	
R625	3B8	0.1 MEG	
R626	3C9	10,000Ω	
R627	3D8	20,000Ω	
R628	3A9	510Ω	
R629	3A9	20,000Ω	
R630	3B9	300Ω	
R631	3E9	1000Ω	

POTENTIOMETER

DESIG	LOC	CODE	
R620	3C8	RV41FX5B102D	ALLEN BRADLEY OR EQUIV

TRANSISTORS

DESIG	LOC	CODE	
Q601	3B7	ZN2712	
Q602	3D7	ZN697	GENERAL ELECTRIC OR EQUIV
Q603	3E7	ZN697	
Q604	3B8	ZN2712	
Q605	3B8	ZN697	

APP FIG. 5
(FS 10)

CORD

DESIG	LOC	CODE
CC1	3E1	KS-16765, LB

SD-95283-01-C3

COMMON SYSTEMS ANNOUNCEMENT CIRCUIT		②	SD-95283-01-C3
BELL TELEPHONE LABORATORIES INCORPORATED		65	

4

CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
BATTERY SYMBOL		VOLTAGE RANGE	

102.

FEATURE OR OPTION	PROVIDE		
	APP FIG.	APP OR WRG	QUANTITY
KS-16765,L2 ANNOUNCEMENT SET	1,2,3	H	1 PER SET
	1,2,4	L	1 PER SET
KS-16765,L3 RECORDER	2		AS REQD
KS-16765,L4 AMPLIFIER	3	H	AS REQD
KS-16765,L6 AMPLIFIER	4	L	AS REQD
KS-16765,L8 CORD	5		SEE NOTE 106
RECORD-REPRODUCE AMPLIFIER	INTERNAL	*2	
	EXTERNAL	Y	REMOVE Z
NOMINAL OUTPUT	600Ω	*X	
	20Ω	W	REMOVE X
MUTING OF OUTPUT DURING RECORDING		V	
INTERNAL 48V DC SUPPLY		S	
LEAD MU (MUS) GROUNDED		R	
LEADS T AND R MUTED		H	
USE WITH KS-16754 AMPLIFIER		N,Y W,Z	
48V POWER SUPPLY TO CONNECTING CKT		P	
AUTOMATIC CALL DISTRIBUTING SYSTEM NO. 2A AND 2B		H	
RECEIVER OFF HOOK TONE CONNECTING CIRCUIT FOR 5-X 5		F	REMOVE R REMOVE P REMOVE G SEE NOTE 109
STD WIRING WHEN OPTION F IS NOT USED		G	SEE NOTE 104
REDUCE 60 CYCLE HUM		D	SEE NOTE 104

* SEE NOTE 105

103.

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

CIRCUIT NOTES: (CONT)

104.

RECORD CHANGED ON ISS	OF APP FIGS IF JOBS RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT		
				STD	A&M	NO
4B			107	L		H
5B			108	K		J
6A	F		102	G		
9B	B OR C	C	102	B		C
9B	D OR E	E	102	D		E

105. OPTIONS Z AND X ARE FURNISHED WITH SETS AS MANUFACTURED AND SHOULD BE LEFT IN PLACE UNLESS OTHERWISE SPECIFIED.
106. KS-16765,L8 CORD ORDERED AS REQUIRED.
107. M WIRING IN SETS WITH SERIAL NUMBERS LOWER THAN 9559 FOR USE WITH EITHER LIST A OR LIST 6 AMPLIFIERS. L WIRING FOR USE WITH LIST 6 AMPLIFIERS ONLY.
108. X WIRING INTRODUCED IN SETS BEGINNING WITH SERIAL NO. 7950.
109. OPTION F PROVIDES +48V DC POWER TO CONNECTING CIRCUIT ON LEAD B2 AT PUNCHING 31, T81, WHEN THE BAIL SOLENOID OPERATES.

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.

DRAWING ISSUE
4B
5B
6A
7B
9B

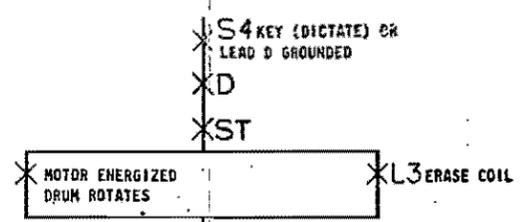
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SD-95283-01-D1

ANNOUNCEMENT CIRCUIT	SD-95283-01-D1
BELL TELEPHONE LABORATORIES INCORPORATED	65

SCI
ANNOUNCEMENT RECORD

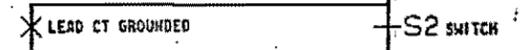
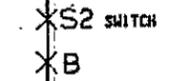
DRAWING	ISSUE	DATE
1	1	11-1-50
4B	1	11-1-50



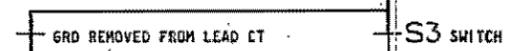
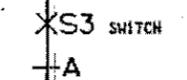
1 SEC (MAX)



2 SEC (APPROX)

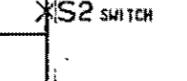


1 SEC (APPROX)

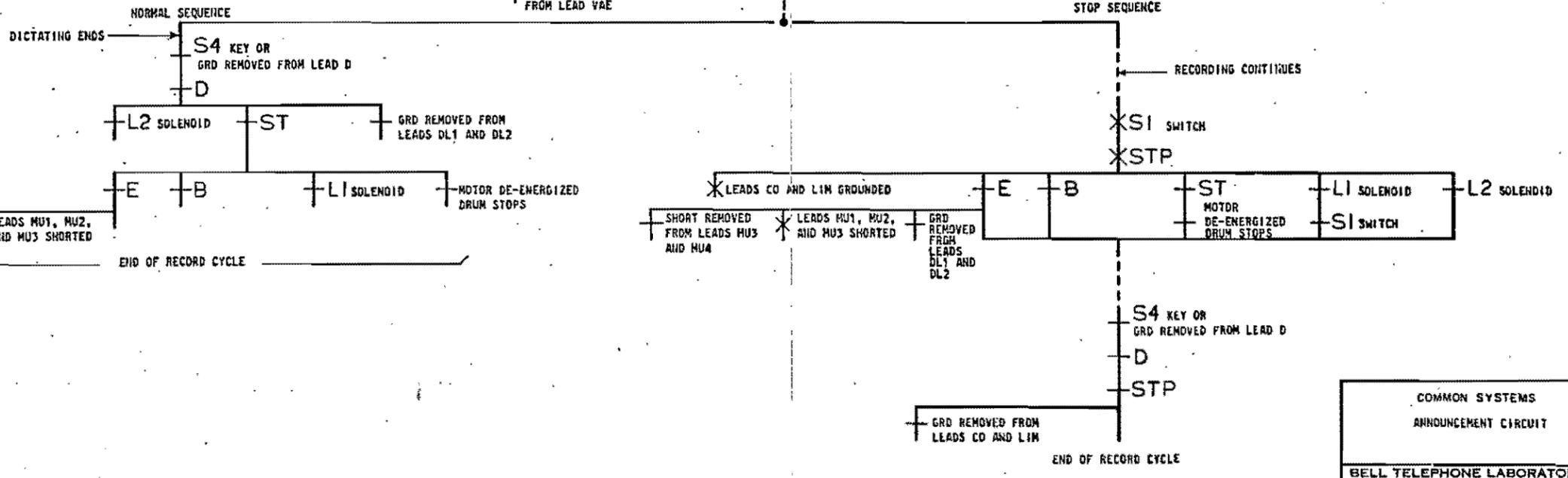


RECORDING STARTS

2 SEC (APPROX)



RECORDING CONTINUES



SD-95283-01-E1

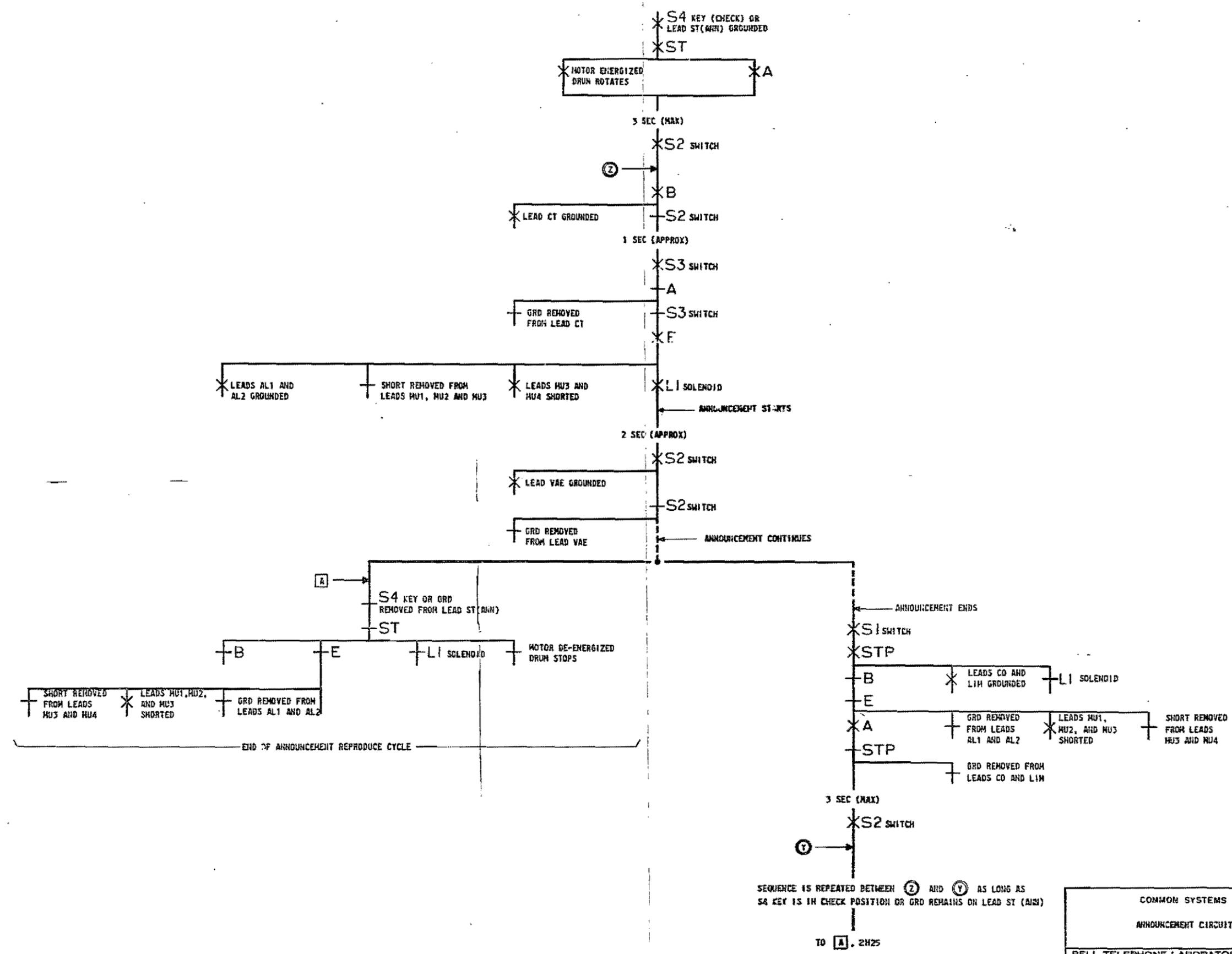
COMMON SYSTEMS
ANNOUNCEMENT CIRCUIT

BELL TELEPHONE LABORATORIES
INCORPORATED

6S

SD-95283-01-E1

SC2
 ANNOUNCEMENT REPRODUCE



SD-95283-01-E2

COMMON SYSTEMS
 ANNOUNCEMENT CIRCUIT
 SD-95283-01-E2
 BELL TELEPHONE LABORATORIES
 INCORPORATED
 6S

CIRCUIT REQUIREMENTS

ANNOUNCEMENT CIRCUIT

APPARATUS				MECH. REQ.			CIRCUIT PREPARATION			DIRECT CURRENT FLOW MENT						REMARKS	
ITEM	CODE	OPTION	P.N.	BSP P/C	CONT. PRESS.	ANN. FEED.	MOCK OR IMULATE	TEXT CLIP DATA		TEST SET PREP.	SEE TEST NOTE	TEST NO.	TEST FOR	AFTER SOAK			
								CONN. BAT.	CONN. END.					RA	RL		RA
SOLENOIDS																	
L1	SEE APP		2														1, 2
L2	FIG. 2																1, 4, 5
RELAYS																	
A	1/2AK4		1	202			(ST)NO, (E)D	2L(A)	1L(A)	B/G	1	B	0		11.9	11.3	HTD WITH (B)
B	1/2AK4		1	202			(ST)NO, (E)D, (STP)O	2U(B)	1U(B)	B/G	1	T	0		11.9	11.3	HTD WITH (A)
D	AJ5		1	220			(ST)NO	L(D)	U(D)	B/G	1, 6		0		12.3	12.6	
E	AJ5		1	220			(ST)NO, (D)D, (STP)O, 4B(A)	L(E)	U(E)	B/G	1		0		12.3	12.6	
ST	1/2AK4		1	202			(D)O, (STP)O	2L(ST)	1L(ST)	B/G	1, 6	B	0		11.9	11.3	HTD WITH (STP)
STP	1/2AK4		1	202			9B(B)	2U(STP)	1U(STP)	B/G	1	T	0		11.9	11.3	HTD WITH (ST)

DRAWING ISSUE
1 CAN
2D FOR
4B NEW

DRAWING ISSUE
1 CAN
2D FOR
4B NEW

- TEST NOTES:
- DISCONNECT AC POWER FROM ANNOUNCEMENT SET BEFORE PERFORMING ANY TESTS.
 - REFER TO BSP FOR MECHANICAL REQUIREMENTS AND ADJUSTING PROCEDURES.
 - BEFORE ENERGIZING SOLENOID (L1), ROTATE DRUM MANUALLY BY TURNING DRUM SHAFT PULLEY (AVOID TOUCHING MAGNETIC RECORDING BAND) CCW AS VIEWED FROM MOTOR SIDE UNTIL PIN ON DRUM OPERATES SWITCH (S3).
 - IF OPERATE TESTS ARE MADE ON SOLENOID (L2) IT WILL BE NECESSARY TO RECORD A NEW ANNOUNCEMENT AFTER COMPLETING TESTS.
 - MIN. OPR VOLTAGE 44V DC ACROSS WINDING.
 - FOR SETS WITH "S" OPTION (STRAP BETWEEN 26 & 36 OF TB1) REMOVE THIS STRAP WHEN TESTING.

ANNOUNCEMENT CIRCUIT	SD-95283-01-F1
BELL TELEPHONE LABORATORIES INCORPORATED	

COMMON SYSTEMS ANNOUNCEMENT CIRCUIT	SD-95283-01-F1
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SD-95283-01-F1

4