

SHEET INDEX

CONTENTS	SHEET NO.	ISSUE NO.																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
SHEET INDEX SUPPORTING INFORMATION	A1	1	2	3	4	5	6																			
FS 1 - 202T-L1 TRANSMITTER-RECEIVER (MFR DISC.) AND REVERSE CHANNEL	B1	1	2	3	3	5	6																			
FS 2 - INTERFACE CIRCUIT AND POWER TRANSFORMER (47BI DATA MOUNTING) P/O FS 3 - 40B1 DATA MOUNTING	B2	1	2	3	3	3	6																			
P/O FS 3 - 40B1 DATA MOUNTING	B3	1	2	3	3	3																				
FS 4 - 39A1 DATA MOUNTING	B4	1	1	3	3	3																				
FS 5 - 202T-L1A TRANSMITTER-RECEIVER AND REVERSE CHANNEL	B5						6																			
APP FIG. 1-G	C1	1	2	3	4	5	6																			
CIRCUIT NOTES	D1A X	1	2	3	3	5	6																			
	D1B						6																			
EQUIPMENT NOTES	D2	1	2	2	2	5	6																			
INFORMATION NOTES	D3	1	1	3	3	5	6																			
	D4	1	2	2	4	5	5																			

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

CONTENTS	SHEET NO.	ISSUE NO.																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
CPS 1 - 202T-L1 TRANSMITTER-RECEIVER (MFR DISC.)	J1A	1	2	3	4	5	6																			
	J1B	1	2	2	4	5	6																			
	J1C	1	2	3	4	5	6																			
CPS 1B - 202T-L1A TRANSMITTER-RECEIVER	J1D						6																			
	J1E						6																			
	J1F						6																			
CPS 2 - JY1 REVERSE CHANNEL (MFR DISC.)	J2A	1	2	2	2	5	5																			
	J2B	1	2	2	2	5	5																			
CPS 2B - JY2 REVERSE CHANNEL (MFR DISC.)	J2C					5	6																			
	J2D					5	6																			
CPS 2C - JY4 REVERSE CHANNEL	J2E					6																				
	J2F					6																				
CPS 3 - INTERFACE CIRCUIT	J3	1	2	2	2	2	6																			
CPS 4 - FLEX TAPE	J4	1	2	3	3	3	3																			
CPS 5 - BACKPLANE	J5	1	2	2	2	2	2																			

DWG ISSUE	CD ISSUE	DATE ISSUED	CHKD	APPD
1	1	12-29-72	AKS	RAL
2A1	2A1	7-3-73	AKS	RAL
3A1	2A1	11-28-73	AKS	RAL
4B1	2A1	11-6-74	AKS	RAL
5A1	2A1	11-11-75	AKS	RAL
6B1	3B1	5-24-78	AKS	RAL

SHEET INDEX NOTES	SUPPORTING INFORMATION	
	CATEGORY	NO.
1. WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.	MANUFACTURING TEST REQUIREMENTS	X-18012
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.		X-18265
3. THE ISSUE NUMBER ASSIGNED TO A CHANGED OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE SHEET INDEX.	BSP	592-031-100
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER.		592-031-180
5. THE LAST ISSUE NUMBER OF THE SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.		592-031-200
		592-031-300
		592-031-500
		590-102-130
		590-102-131
	592-861-100	
	592-861-200	
	592-861-300	
	592-861-500	

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

ISSUE
6B1

SD-ID243-01 1102

DATA SYSTEMS STATION

DATA SET 202T TYPE, 39A1 DATA MOUNTING AND 40B1 DATA MOUNTING

AT&TCO STANDARD

SD-ID243-01-A1
27 SHEETS

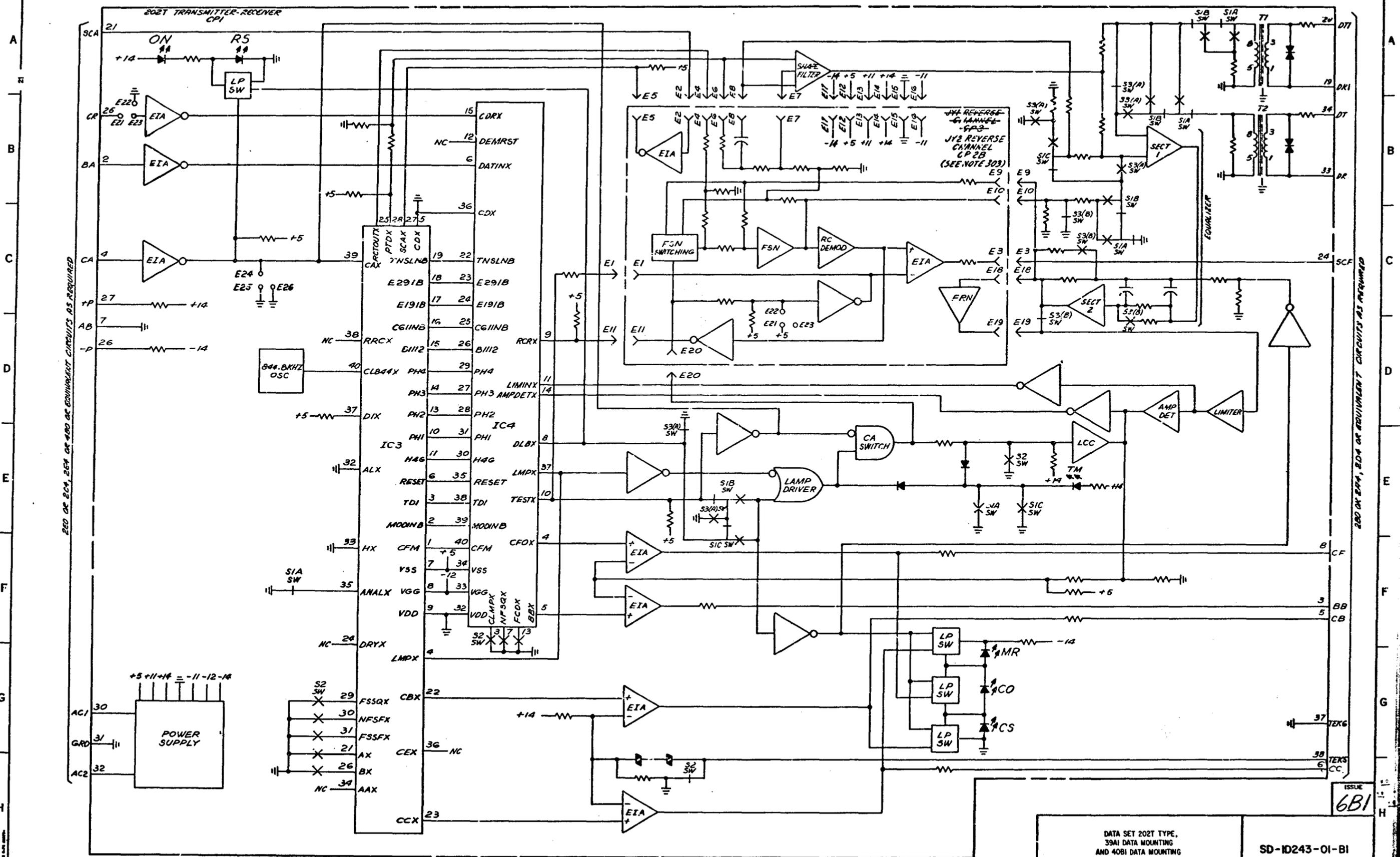
BELL TELEPHONE LABORATORIES INCORPORATED

6S

SD-ID243-01-A1

100

FSI (MFR DISC)
202T-L1 TRANSMITTER-RECEIVER
AND REVERSE CHANNEL



2E0 OR 2C4, 2E4 OR 400 OR EQUIVALENT CIRCUITS AS REQUIRED

2E0 OR 2F4, 2D4 OR EQUIVALENT CIRCUITS AS REQUIRED

1B-10 05

DATA SET 202T TYPE,
39A1 DATA MOUNTING
AND 40B1 DATA MOUNTING

SD-ID243-01-B1

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INCORPORATED

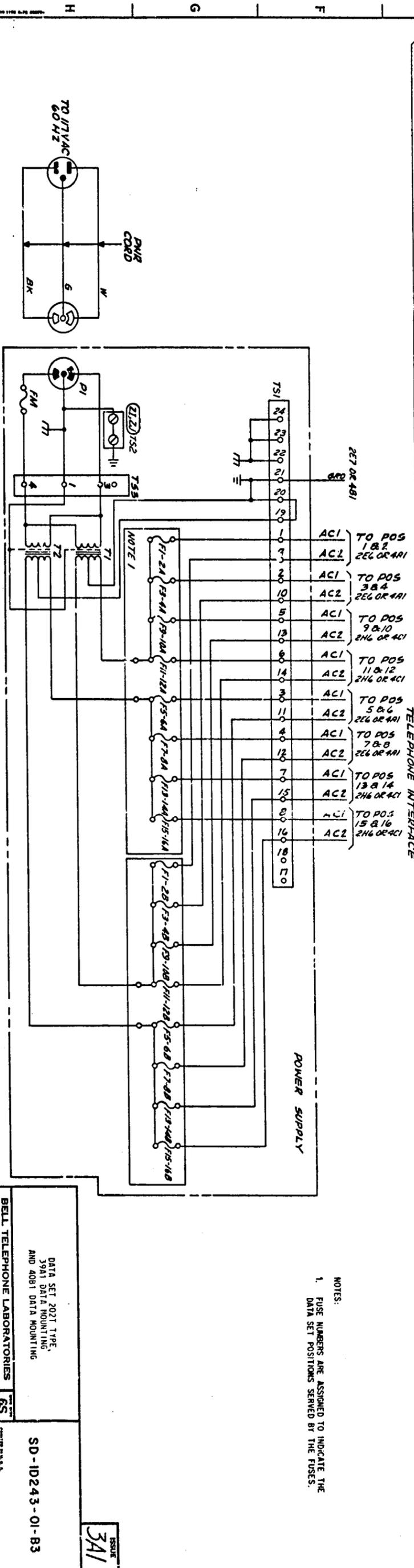
6S

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ISSUE
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PART OF FS 3
4081 DATA MOUNTING

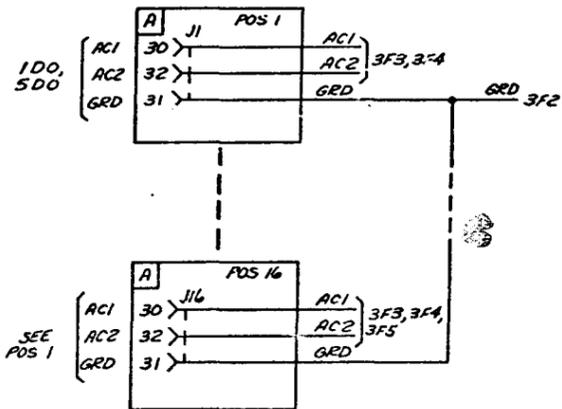
1	DR (1)	DR	TS1	DR	DR	TO POS 1, 206
26	DT (1)	DT	TS1	DT	DT	TO POS 1, 206
2	DRI (1)	DRI	TS1	DRI	DRI	TO POS 2, 206
27	DTI (1)	DTI	TS1	DTI	DTI	TO POS 3, 206
3	TEKS (1)	TEKS	TS1	TEKS	TEKS	TO POS 4, 206
28	TEK6 (1)	TEK6	TS1	TEK6	TEK6	TO POS 5, 206
4	DR (2)	DR	TS2	DR	DR	TO POS 6, 206
29	DT (2)	DT	TS2	DT	DT	TO POS 7, 206
5	DRI (2)	DRI	TS2	DRI	DRI	TO POS 8, 206
30	DTI (2)	DTI	TS2	DTI	DTI	TO POS 9, 206
6	TEKS (2)	TEKS	TS2	TEKS	TEKS	TO POS 10, 206
31	TEK6 (2)	TEK6	TS2	TEK6	TEK6	TO POS 11, 206
7	DR (3)	DR	TS3	DR	DR	TO POS 12, 206
32	DT (3)	DT	TS3	DT	DT	TO POS 13, 206
8	DRI (3)	DRI	TS3	DRI	DRI	TO POS 14, 206
33	DTI (3)	DTI	TS3	DTI	DTI	TO POS 15, 206
9	TEKS (3)	TEKS	TS3	TEKS	TEKS	TO POS 16, 206
34	TEK6 (3)	TEK6	TS3	TEK6	TEK6	TO POS 17, 206
10	DR (4)	DR	TS4	DR	DR	TO POS 18, 206
35	DT (4)	DT	TS4	DT	DT	TO POS 19, 206
11	DRI (4)	DRI	TS4	DRI	DRI	TO POS 20, 206
36	DTI (4)	DTI	TS4	DTI	DTI	TO POS 21, 206
12	TEKS (4)	TEKS	TS4	TEKS	TEKS	TO POS 22, 206
37	TEK6 (4)	TEK6	TS4	TEK6	TEK6	TO POS 23, 206
13	DR (5)	DR	TS5	DR	DR	TO POS 24, 206
38	DT (5)	DT	TS5	DT	DT	TO POS 25, 206
14	DRI (5)	DRI	TS5	DRI	DRI	TO POS 26, 206
39	DTI (5)	DTI	TS5	DTI	DTI	TO POS 27, 206
15	TEKS (5)	TEKS	TS5	TEKS	TEKS	TO POS 28, 206
40	TEK6 (5)	TEK6	TS5	TEK6	TEK6	TO POS 29, 206
16	DR (6)	DR	TS6	DR	DR	TO POS 30, 206
41	DT (6)	DT	TS6	DT	DT	TO POS 31, 206
17	DRI (6)	DRI	TS6	DRI	DRI	TO POS 32, 206
42	DTI (6)	DTI	TS6	DTI	DTI	TO POS 33, 206
18	TEKS (6)	TEKS	TS6	TEKS	TEKS	TO POS 34, 206
43	TEK6 (6)	TEK6	TS6	TEK6	TEK6	TO POS 35, 206
19	DR (7)	DR	TS7	DR	DR	TO POS 36, 206
44	DT (7)	DT	TS7	DT	DT	TO POS 37, 206
20	DRI (7)	DRI	TS7	DRI	DRI	TO POS 38, 206
45	DTI (7)	DTI	TS7	DTI	DTI	TO POS 39, 206
21	TEKS (7)	TEKS	TS7	TEKS	TEKS	TO POS 40, 206
46	TEK6 (7)	TEK6	TS7	TEK6	TEK6	TO POS 41, 206
22	DR (8)	DR	TS8	DR	DR	TO POS 42, 206
47	DT (8)	DT	TS8	DT	DT	TO POS 43, 206
23	DRI (8)	DRI	TS8	DRI	DRI	TO POS 44, 206
48	DTI (8)	DTI	TS8	DTI	DTI	TO POS 45, 206
24	TEKS (8)	TEKS	TS8	TEKS	TEKS	TO POS 46, 206
49	TEK6 (8)	TEK6	TS8	TEK6	TEK6	TO POS 47, 206
1	DR (9)	DR	TS9	DR	DR	TO POS 48, 206
26	DT (9)	DT	TS9	DT	DT	TO POS 49, 206
2	DRI (9)	DRI	TS9	DRI	DRI	TO POS 50, 206
27	DTI (9)	DTI	TS9	DTI	DTI	TO POS 51, 206
3	TEKS (9)	TEKS	TS9	TEKS	TEKS	TO POS 52, 206
28	TEK6 (9)	TEK6	TS9	TEK6	TEK6	TO POS 53, 206
4	DR (10)	DR	TS10	DR	DR	TO POS 54, 206
29	DT (10)	DT	TS10	DT	DT	TO POS 55, 206
5	DRI (10)	DRI	TS10	DRI	DRI	TO POS 56, 206
30	DTI (10)	DTI	TS10	DTI	DTI	TO POS 57, 206
6	TEKS (10)	TEKS	TS10	TEKS	TEKS	TO POS 58, 206
31	TEK6 (10)	TEK6	TS10	TEK6	TEK6	TO POS 59, 206
7	DR (11)	DR	TS11	DR	DR	TO POS 60, 206
32	DT (11)	DT	TS11	DT	DT	TO POS 61, 206
8	DRI (11)	DRI	TS11	DRI	DRI	TO POS 62, 206
33	DTI (11)	DTI	TS11	DTI	DTI	TO POS 63, 206
9	TEKS (11)	TEKS	TS11	TEKS	TEKS	TO POS 64, 206
34	TEK6 (11)	TEK6	TS11	TEK6	TEK6	TO POS 65, 206
10	DR (12)	DR	TS12	DR	DR	TO POS 66, 206
35	DT (12)	DT	TS12	DT	DT	TO POS 67, 206
11	DRI (12)	DRI	TS12	DRI	DRI	TO POS 68, 206
36	DTI (12)	DTI	TS12	DTI	DTI	TO POS 69, 206
12	TEKS (12)	TEKS	TS12	TEKS	TEKS	TO POS 70, 206
37	TEK6 (12)	TEK6	TS12	TEK6	TEK6	TO POS 71, 206
13	DR (13)	DR	TS13	DR	DR	TO POS 72, 206
38	DT (13)	DT	TS13	DT	DT	TO POS 73, 206
14	DRI (13)	DRI	TS13	DRI	DRI	TO POS 74, 206
39	DTI (13)	DTI	TS13	DTI	DTI	TO POS 75, 206
15	TEKS (13)	TEKS	TS13	TEKS	TEKS	TO POS 76, 206
40	TEK6 (13)	TEK6	TS13	TEK6	TEK6	TO POS 77, 206
16	DR (14)	DR	TS14	DR	DR	TO POS 78, 206
41	DT (14)	DT	TS14	DT	DT	TO POS 79, 206
17	DRI (14)	DRI	TS14	DRI	DRI	TO POS 80, 206
42	DTI (14)	DTI	TS14	DTI	DTI	TO POS 81, 206
18	TEKS (14)	TEKS	TS14	TEKS	TEKS	TO POS 82, 206
43	TEK6 (14)	TEK6	TS14	TEK6	TEK6	TO POS 83, 206
19	DR (15)	DR	TS15	DR	DR	TO POS 84, 206
44	DT (15)	DT	TS15	DT	DT	TO POS 85, 206
20	DRI (15)	DRI	TS15	DRI	DRI	TO POS 86, 206
45	DTI (15)	DTI	TS15	DTI	DTI	TO POS 87, 206
21	TEKS (15)	TEKS	TS15	TEKS	TEKS	TO POS 88, 206
46	TEK6 (15)	TEK6	TS15	TEK6	TEK6	TO POS 89, 206
22	DR (16)	DR	TS16	DR	DR	TO POS 90, 206
47	DT (16)	DT	TS16	DT	DT	TO POS 91, 206
23	DRI (16)	DRI	TS16	DRI	DRI	TO POS 92, 206
48	DTI (16)	DTI	TS16	DTI	DTI	TO POS 93, 206
24	TEKS (16)	TEKS	TS16	TEKS	TEKS	TO POS 94, 206
49	TEK6 (16)	TEK6	TS16	TEK6	TEK6	TO POS 95, 206



NOTES:
1. FUSE NUMBERS ARE ASSIGNED TO INDICATE THE DATA SET POSITIONS SERVED BY THE FUSES.

BELL TELEPHONE LABORATORIES
INCORPORATED
DATA SET 2021 TYPE,
39A1 DATA MOUNTING
AND 4081 DATA MOUNTING
SD-10243-01-B3
341

FS 4
3941 DATA MOUNTING



243-01-

ISSUE
6B1

DATA SET 2021 TYPE,
3941 DATA MOUNTING
AND 4081 DATA MOUNTING

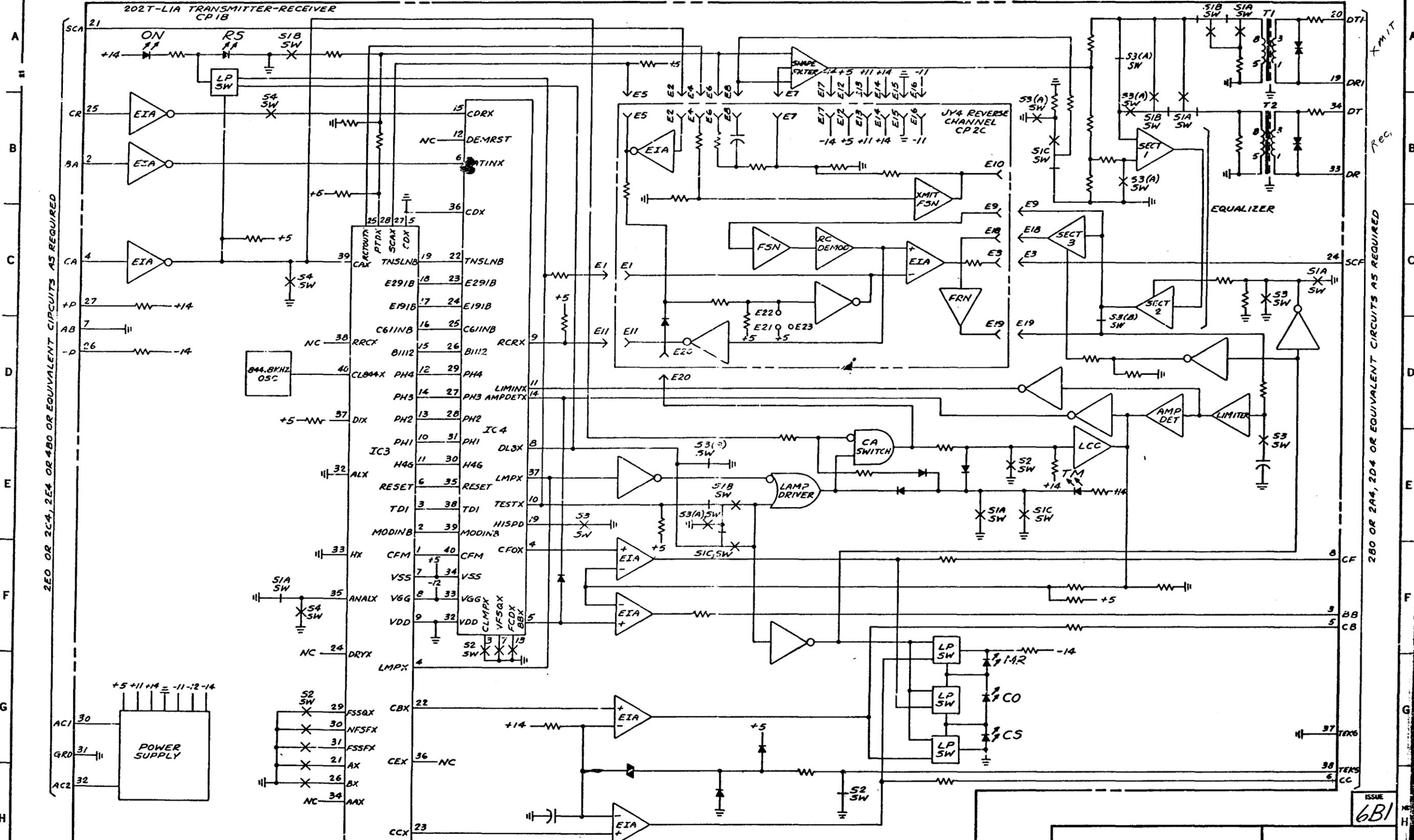
BELL TELEPHONE LABORATORIES
INCORPORATED

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SD-ID243-01-B4

FS 5

202T-LIA TRANSMITTER-RECEIVER AND REVERSE CHANNEL



2E0 OR 2E4, 2E4 OR 4B0 OR EQUIVALENT CIRCUITS AS REQUIRED

2B0 OR 2A4, 2D4 OR EQUIVALENT CIRCUITS AS REQUIRED

APP FIG. 1

CIRCUIT PACK		
EQPT LOC	CP1	CP1B
DESIG	CP1	CP1B
CODE	202T, L1 (MFR DISC)	202T-L1A
OPTION		
ELEM IDENT	TERM.	TERM.
TERM. FS LOC	38-109	38-509

APP FIG. 2

CIRCUIT PACK			
EQPT LOC	CP2	CP2B	CP2C
DESIG	CP2	CP2B	CP2C
CODE	JY1 (MFR DISC)	JY2 (MFR DISC)	JY4
OPTION			
ELEM IDENT	TERM.	TERM.	TERM.
TERM. FS LOC	E19-107	E19-107	E19-507

APP FIG. 3

CIRCUIT PACK	
EQPT LOC	CP3
DESIG	CP3
CODE	841-228-893
OPTION	
ELEM IDENT	TERM.
TERM. FS LOC	34-200

APP FIG. 3

CONNECTOR		
DESIG	J2	P1
CODE	KS-19087, L6 CONNECTOR	KS-19088, L22 PLUG
OPTION		
TERM.	LOC	LOC
1	2F2	
2	2D2	
3	2A2	
4	2E2	
5	2A2	
6	2A2	
7	2E2	2B2
8	2B2	2B2
9	2F2	2C2
10	2F2	2B2
11	2E2	2D2
12	2B2	
13		2D2
14		
15		
16		
17		
18		
19	2E2	
20		
21		
22		
23		
24		
25	2E2	

APP FIG. 4

CORD		
DESIG	LOC	CODE
CA1	2G2	840-807-028
CA2	2B2	MSK

TRANSFORMER		
DESIG	LOC	CODE
T1	2F3	(MFR DISC)KS-21239, L1 KS-21239, L4 KS-21239, L5

CONNECTOR			
DESIG	J1-J16		
CODE	908C		
OPTION			
TERM.	LOC	TERM.	LOC
1		21	
2		22	
3		23	
4		24	
5		25	
6		26	
7		27	
8		28	
9		29	
10		30	4A0
11		31	4B0
12		32	4A0
13		33	
14		31	
15		35	
16		36	
17		37	
18		38	
19		39	
20		40	

APP FIG. 5

CIRCUIT PACK		
EQPT LOC	[16] CP4	CP5
DESIG	[16] CP4	CP5
CODE	840-339-899	840-339-881
OPTION		
ELEM IDENT	TERM.	TERM.
TERM. FS LOC	34-2E5	47-3E9

APP FIG. 6

CORD		
DESIG	LOC	CODE
PWR	3H1	840339907

POWER SUPPLY		
E/W	DESIG	LOC
F1SE		
F1-2A	3G3	70G, 1/2 AMP
F3-4A	3G3	70G, 1/2 AMP
F5-6A	3G4	70G, 1/2 AMP
F7-8A	3G4	70G, 1/2 AMP
F9-10A	3G3	70G, 1/2 AMP
F11-12A	3G4	70G, 1/2 AMP
F13-14A	3G4	70G, 1/2 AMP
F15-16A	3G5	70G, 1/2 AMP
F1-2B	3G5	70G, 1/2 AMP
F3-4B	3G5	70G, 1/2 AMP
F5-6B	3G6	70G, 1/2 AMP
F7-8B	3G6	70G, 1/2 AMP
F9-10B	3G6	70G, 1/2 AMP
F11-12B	3G6	70G, 1/2 AMP
F13-14B	3G7	70G, 1/2 AMP
F15-16B	3G7	70G, 1/2 AMP
FM	3H2	70A, 1-1/3 AMP

POWER SUPPLY (CONT)		
E/W	PLUG	DESIG
P1		
P1	3H2	HUBBELL, 7595

TRANSFORMER		
DESIG	LOC	CODE
T1	3H3	KS-21192, L1
T2	3H3	KS-21192, L1

243-01

ISSUE 6B1

DATA SET 202T TYPE, 39A1 DATA MOUNTING AND 40B1 DATA MOUNTING	SD-ID243-01-C1
BELL TELEPHONE LABORATORIES INCORPORATED	65

CIRCUIT NOTES: (CONT)

107(B). DATA SET INSTALLER OPTIONS FOR 202T-L1A.

CIRCUIT NOTES: (CONT)

108. TRANSMITTER-RECEIVER CIRCUIT PACKS WITH OR WITHOUT THE REVERSE CHANNEL CIRCUIT PACK MAY BE USED IN OTHER MOUNTING CIRCUITS AS REQUIRED PROVIDED THE AC POWER SUPPLY IS ELECTRICALLY EQUIVALENT TO THAT OF THE 40B1 DATA MOUNTING.

FEATURE	OPTIONS		SWITCH SETTING										PROVIDE
			S3 SWITCH CONTACT SETTING ON TRANSMITTER-RECEIVER (CP 1B)										
			1	2	3	4	5	6	7	8	9	0	
4-WIRE OPERATION	ZK		0	-	0	-	X	X	X	X	X	X	ONE PER SET
2-WIRE OPERATION WITHOUT REVERSE CHANNEL	ZD		X	-	-	X	-	X	0	0	0	0	
2-WIRE OPERATION WITH REVERSE CHANNEL	* ZC		X	-	-	X	-	0	0	0	0	0	
COMPROMISE DELAY EQUALIZATION	ZY	MIN.	-	X	-	-	-	-	-	-	-	-	ONE PER SET
	ZU	MAX.	-	0	-	-	-	-	-	-	-	-	
COMPROMISE AMPLITUDE EQUALIZATION	Zx	MIN.	-	-	-	X	-	-	-	-	-	-	ONE PER SET
	ZW	MAX.	-	-	-	0	-	-	-	-	-	-	
CHANNEL CONDITION	Z2	C2	-	-	X	-	-	-	-	-	-	-	ONE PER SET
	ZY	BASIC	-	-	0	-	-	-	-	-	-	-	
			S7 SWITCH CONTACT SETTING ON TRANSMITTER-RECEIVER (CP 1)										
			1	2	3	4	5	6	7	8	9	0	
4-WIRE OPERATION	ZK		X	-	-	-	-	-	-	-	-	-	ONE PER SET
LOCAL COPY ON PRIMARY CHANNEL IN 2 WIRE	ZA	IN	X	-	-	-	-	-	-	-	-	-	
	* ZB	OUT	0	-	-	-	-	-	-	-	-	-	
SOFT TURN-OFF AND SQUELCH INTERVALS		SOFT TURN-OFF											
	Z	0	-	X	-	-	-	0	X	0	-	-	ONE PER SET
	Y	8 MSEC	0	-	X	-	-	0	0	0	-	-	
	X	24 MSEC	0	-	X	-	-	0	0	X	-	-	
	W	0	9 MSEC	-	0	-	-	0	X	0	-	-	
	V	0	156 MSEC	-	0	-	-	X	X	0	-	-	
	T	8 MSEC	9 MSEC	-	0	-	-	0	0	0	-	-	
	S	8 MSEC	156 MSEC	-	0	-	-	X	0	0	-	-	
FAST CARRIER DETECTION	Q	IN	-	-	0	-	-	-	-	-	-	-	ONE PER SET
	N	OUT	-	-	X	-	-	-	-	-	-	-	
CLEAR TO SEND INTERVAL	M	8 MSEC	-	-	0	-	-	-	-	-	-	0	ONE PER SET
	K	30 MSEC	-	-	0	-	-	-	-	-	-	X	
	J	60 MSEC	-	-	X	-	-	-	-	-	-	0	
	G	180 MSEC	-	-	X	-	-	-	-	-	-	X	
CONTROL BY DATA AUX. SET 828 OR 829 TYPE	B	IN	-	-	-	-	-	-	-	0	-	-	ONE PER SET
	A	OUT	-	-	-	-	-	-	-	X	-	-	
CLAMP	F	IN	-	-	-	0	-	-	-	-	-	-	ONE PER SET
	E	OUT	-	-	-	X	-	-	-	-	-	-	
			S4 SWITCH CONTACT SETTING ON TRANSMITTER-RECEIVER (CP 1B)										
			1	2	3								
CARRIER DETECTOR RESET	ZL	IN	-	X	-								ONE PER SET
	ZH	OUT	-	0	-								
CONTINUOUS CARRIER	ZN	IN	X	-	-								ONE PER SET
	ZO	OUT	0	-	-								
STATE OF CC (DSR) DURING ANALOG LOOPBACK	YB	ON	-	-	X								ONE PER SET
	YA	OFF	-	-	0								
LOCAL COPY ON REVERSE CHANNEL			STRAPPING ON REVERSE CHANNEL (CP 2)										
	ZE	IN	INSTALL E21-E22										ONE PER SET
	*ZF	OUT	INSTALL E21-E23										
GROUNDING OPTION			SCREW SWITCH SETTING ON INTERFACE CIRCUIT (CP 3)										
	ZG	SIGNAL GROUND CONNECTED TO FRAME GROUND	S1 CLOSED										ONE PER SET
	ZH	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND	S1 OPEN										
GROUNDING OPTION			STRAPPING ON 39A1 AND 40B1 DATA MOUNTINGS										
	ZI	SIGNAL GROUND CONNECTED TO FRAME GROUND	WIRE STRAP OF POWER SUPPLY IN										ONE PER DATA MOUNTING
	ZJ	SIGNAL GROUND NOT CONNECTED TO FRAME GROUND	WIRE STRAP OF POWER SUPPLY OUT										

CONTACT CLOSED
 CONTACT NOT APPLICABLE
 CONTACT OPEN

SEE NOTE 205

FACTORY FURNISHED
 * FACTORY FURNISHED INSTEAD OF 4 WIRE OPTION WHEN REVERSE CHANNEL BOARD IS INSTALLED.

ISSUE 6B1

DATA SET 202T TYPE,
39A1 DATA MOUNTING
AND 40B1 DATA MOUNTING

SD-ID243-01-D1B

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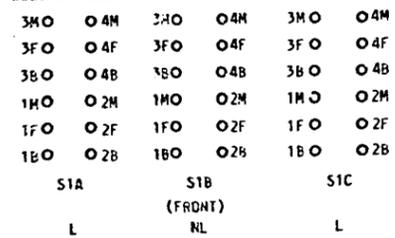
6S

EQUIPMENT NOTES:

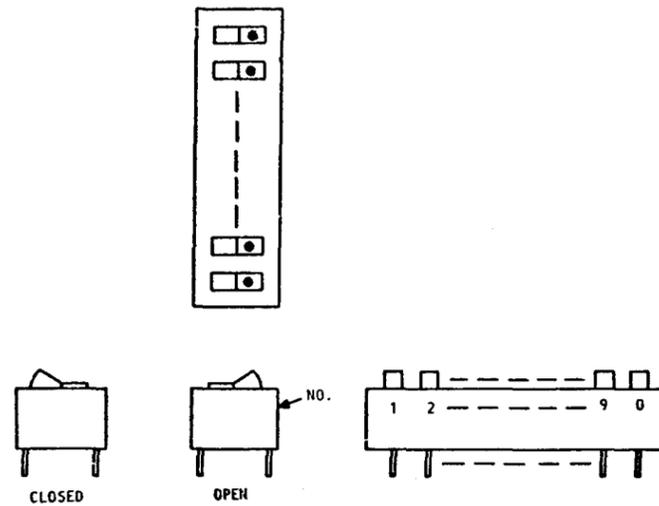
201. THE CODE OF A DATA SET IS COMPOSED OF THE BASIC CODE FOLLOWED BY THE LIST NUMBERS. EXAMPLE: 202T-L1/2/3
 ORDERABLE CODES ARE 202T-L1, 202T-L1/2, 202T-L1/3;
~~202T-L1/2/3, 202T-L1/3, 202T-L1/2/3A, 202T-L1A, 202T-L1A/2, 202T-L1A/3, 202T-L1A/2/3B.~~
202. APP FIGURE CROSS REFERENCE TO DATA SET LIST NUMBERS.

202T LIST	APPLICABLE APP FIGURES	DATA MTG	APPLICABLE APP FIGURES
1,1A	1	39A1	4,6
2	3	40B1	5,6
3	2	47B1	3
3A	2		
3B	2		

203. WIRING WHERE NOT SPECIFIED SHALL BE 20AWG AND COLOR CODED AS DESIRED.
204. TOP VIEW OF SWITCH ASSEMBLY FOR S1A, B, C INTERNATIONAL ELECTRO EXCHANGE, MINNEAPOLIS, MINN, KS-21216.



205. SWITCH ASSEMBLY FOR S2, S3 AND S4, KS-21193. AMP INC., HARRISBURG, PA.



206. SURFACE WIRING TYPE BW BETWEEN TS1 OF THE POWER SUPPLY AND EACH DATA SET CONNECTOR (J1) SHALL BE WITH 24GA FOR AC1 AND AC2 AND 22GA FOR SIGNAL GROUND (GRD) FOR THE 39A1 AND 40B1 DATA MOUNTINGS.

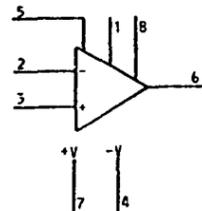
ISSUE
681

DATA SET 202T TYPE, 39A1 DATA MOUNTING AND 40B1 DATA MOUNTING	SD-ID243-01-D2
BELL TELEPHONE LABORATORIES INCORPORATED	ES

D243-0

INFORMATION NOTES:

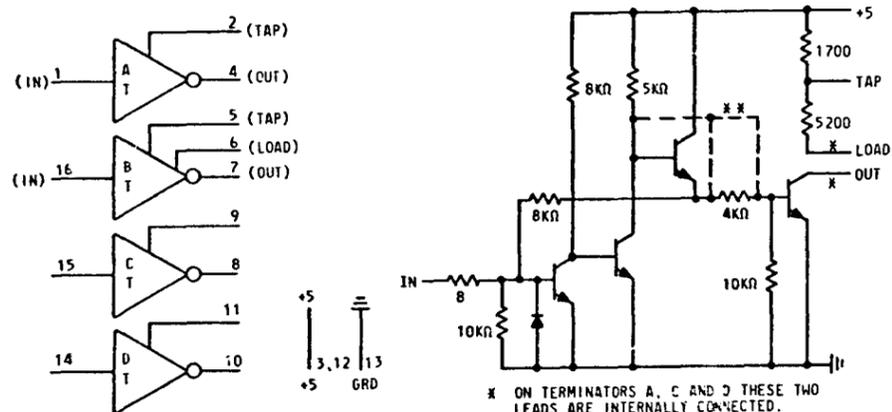
301. UNLESS OTHERWISE SPECIFIED: VALUES PRECEDED BY THE SYMBOL + (PLUS) OR - (MINUS) ARE IN VOLTS.
302. INTEGRATED CIRCUIT DEVICE CIRCUIT ELEMENTS:
 (A) OPERATIONAL AMPLIFIER, 1 PER DEVICE, KS-20973, L1, SEE NOTE 1.



CIRCUIT DESCRIPTION

THIS DEVICE CONTAINS A HIGH PERFORMANCE OPERATIONAL AMPLIFIER WITH A DIFFERENTIAL INPUT (PINS 2 AND 3) AND A SINGLE-ENDED OUTPUT (PIN 6). FREQUENCY COMPENSATION IS ALLOWED BY CONNECTING AN EXTERNAL NETWORK BETWEEN PIN 1 AND 5. NULLING OUT THE EFFECTS OF VOLTAGE CAN BE ACCOMPLISHED BY CONNECTING EXTERNAL COMPONENTS TO PINS 5 AND 1.

(B) 41L, QUAD EIA TERMINATORS, RTL, 4 PER DEVICE, SEE NOTE 2.



CIRCUIT DESCRIPTION

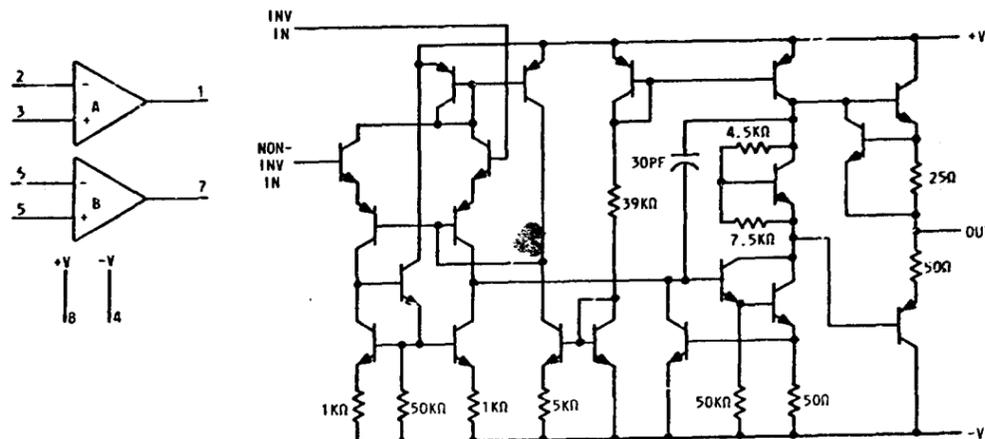
THIS DEVICE CONTAINS FOUR EIA TERMINATING CIRCUITS WHICH ALLOW CONVERSION OF EIA SIGNAL LEVELS (RS232 B,C) TO DATA SET LOGIC LEVELS. TO MEET EIA SPECIFICATIONS, AN EXTERNAL RESISTOR IS REQUIRED IN SERIES WITH EACH INPUT LEAD. WHEN THIS IS DONE, A VOLTAGE GREATER THAN +3 VOLTS AT THE INTERFACE CAUSES A LOGICAL 0 OUTPUT AND A VOLTAGE LESS THAN -3 VOLTS CAUSES A LOGICAL 1 OUTPUT AT THE TERMINATOR OUTPUT PIN. DEVICES A AND D EXHIBIT A "FAIL SAFE" CHARACTERISTIC IN THAT AN OPEN CIRCUIT INPUT CAUSES A LOGICAL 1 AT THE TERMINATOR OUTPUT PIN.

* ON TERMINATORS A, C AND D THESE TWO LEADS ARE INTERNALLY CONNECTED, ONLY ONE APPEARS AS AN OUTPUT.

** ON TERMINATORS A AND D ONE TRANSISTOR AND THE 4KΩ RESISTOR ARE SHORTED INTERNALLY.

INFORMATION NOTES: (CONT)

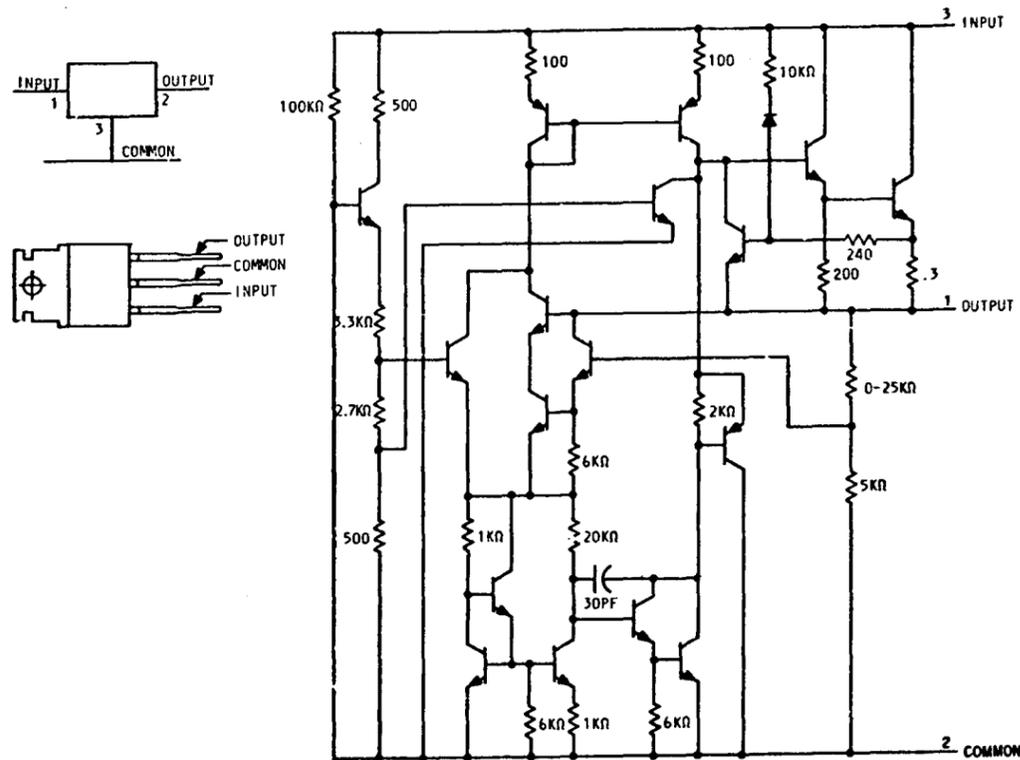
302. (CONT)
 (C) DUAL OPERATIONAL AMPLIFIER, 2 PER DEVICE, KS-21167, L1, SEE NOTE 1.



CIRCUIT DESCRIPTION

THIS DEVICE CONTAINS DUAL HIGH PERFORMANCE OPERATIONAL AMPLIFIERS WITH DIFFERENTIAL INPUTS (PINS 2 AND 3 AND PINS 5 AND 6) AND SINGLE ENDED OUTPUTS (PIN 1 AND 7). THE DEVICES ARE SHORT CIRCUIT PROTECTED, AND THE INTERNAL FREQUENCY COMPENSATION ENSURES STABILITY WITHOUT EXTERNAL COMPONENTS.

(D) 5 VOLT REGULATOR, 1 PER DEVICE, KS-21322, L1, 614A

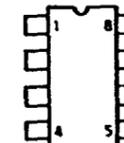


CIRCUIT DESCRIPTION

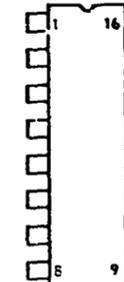
THIS DEVICE CONTAINS 1 FIVE VOLT REGULATOR EMPLOYING INTERNAL THERMAL OVERLOAD PROTECTION AND INTERNAL SHORT CIRCUIT CURRENT LIMITING FEATURES.

NOTES:

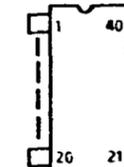
1. PIN NUMBERING, TOP VIEW.



2. PIN NUMBERING, TOP VIEW.



3. PIN NUMBERING, TOP VIEW.



(E) DEMODULATOR, 1 PER DEVICE, KS-21217, L1, 229C. SEE NOTE 3.

CIRCUIT DESCRIPTION
 SEE CD-10243-01

(F) MODULATOR, 1 PER DEVICE, KS-21217, L2, KS-21217, L3 SEE NOTE 3.

CIRCUIT DESCRIPTION
 SEE CD-10243-01.

ISSUE 6B1

DATA SET 2021 TYPE,
 39A1 DATA MOUNTING
 AND 40B1 DATA MOUNTING

BELL TELEPHONE LABORATORIES
 INCORPORATED

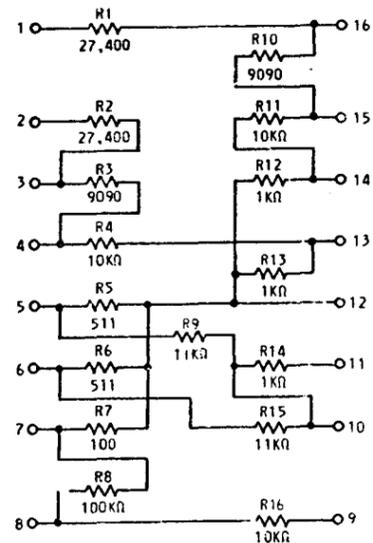
SD-ID243-01-D3

6S

INFORMATION NOTES: (CONT)

302. (CONT)

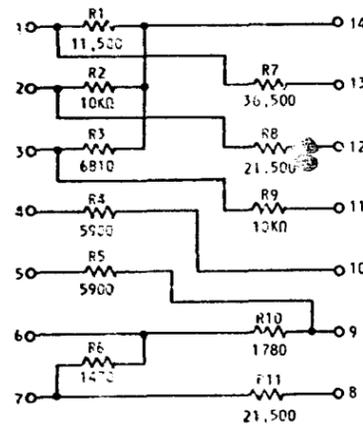
(G) NETWORK, 16 RESISTORS PER DEVICE,
~~CORNING-401477~~, KS-21288,L9, SEE NOTE 1.



INFORMATION NOTES: (CONT)

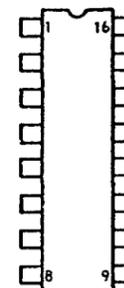
302. (CONT)

(I) NETWORK, 11 RESISTORS PER DEVICE,
~~CORNING-401600~~, KS-21288,L13, SEE NOTE 2.

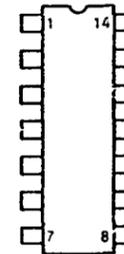


NOTES:

1. PIN NUMBERING, TOP VIEW

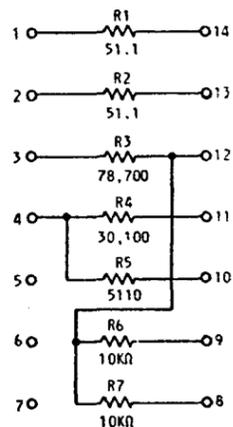


2. PIN NUMBERING, TOP VIEW



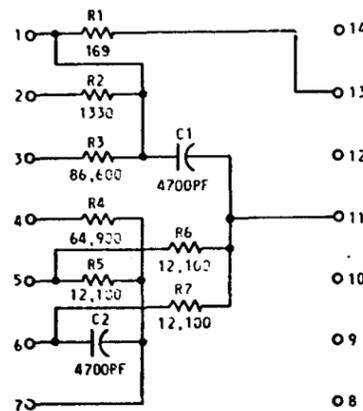
(H) NETWORK, 7 RESISTORS PER DEVICE,

~~CORNING-401495~~, KS-21288,L11, SEE NOTE 2.



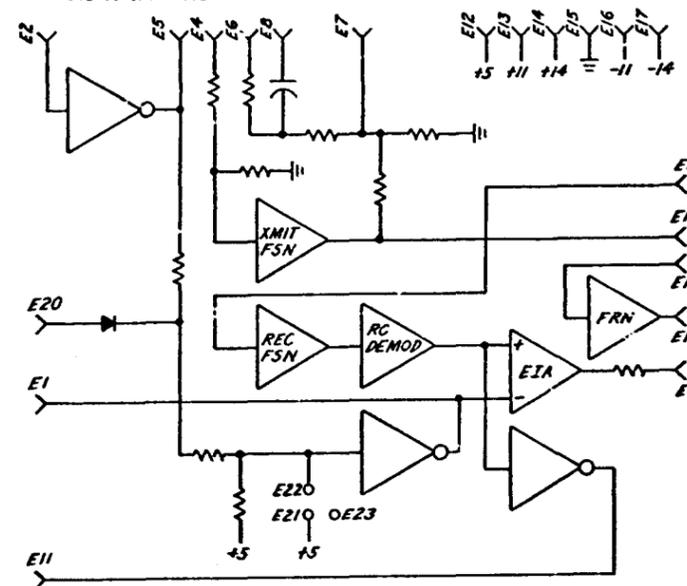
(J) NETWORK, 7 RESISTORS AND 2 CAPACITORS PER DEVICE,

~~CORNING-401426~~, KS-21288,L14, SEE NOTE 2.



INFORMATION NOTES: (CONT)

303. THE JY1 SYMBOL IS SHOWN ON SHEET B1. THE SYMBOL FOR JY2 IS SHOWN BELOW.



ISSUE
5A1

DATA SET 2021 TYPE,
 39A1 DATA MOUNTING
 AND 40B1 DATA MOUNTING

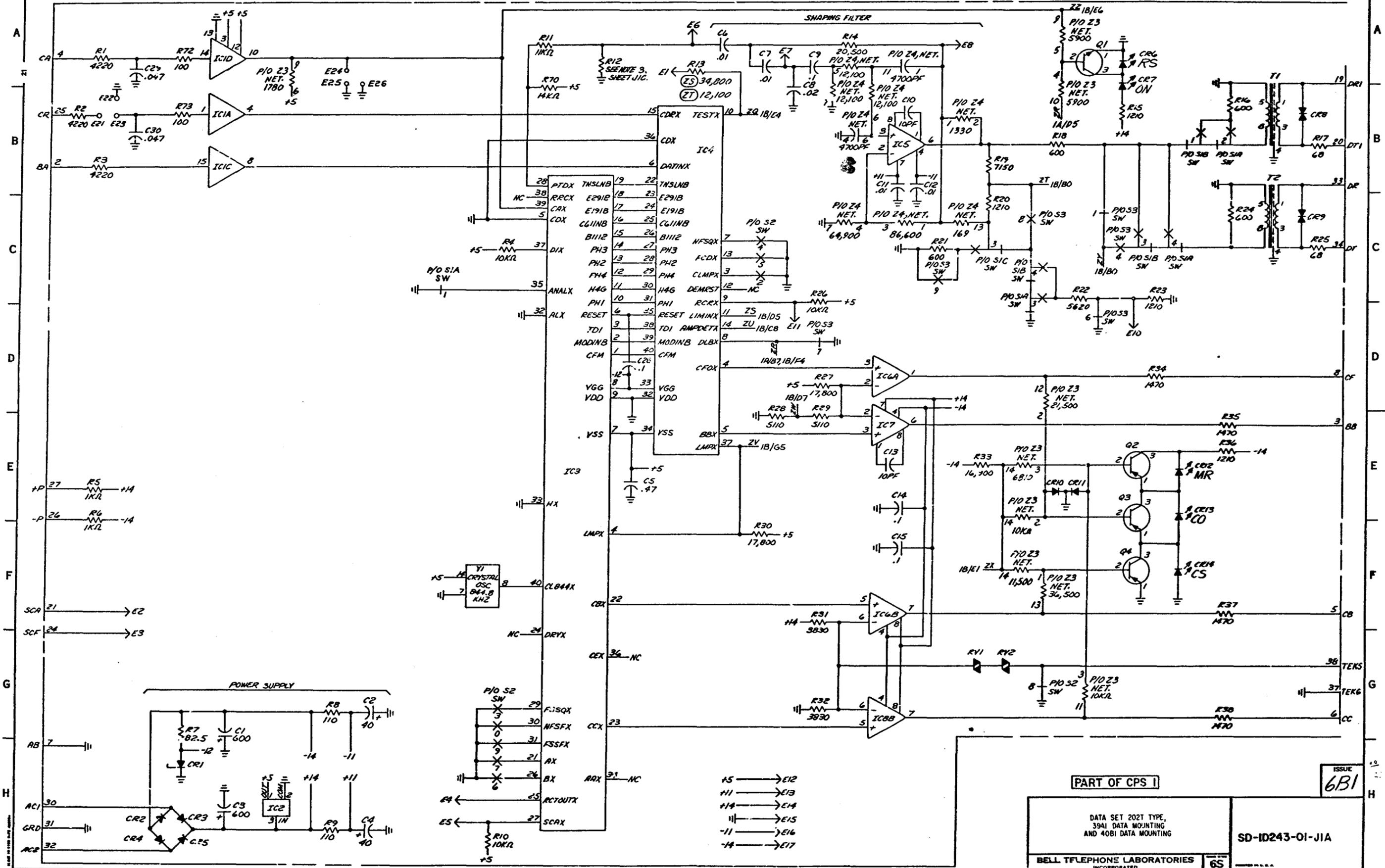
SD-ID243-01-D4

BELL TELEPHONE LABORATORIES
 INCORPORATED

65

-102-3-

PART OF CPS I (MFR DISC.)
202T-L1 TRANSMITTER-RECEIVER



243-01-

PART OF CPS I

DATA SET 202T TYPE,
3941 DATA MOUNTING
AND 40B1 DATA MOUNTING

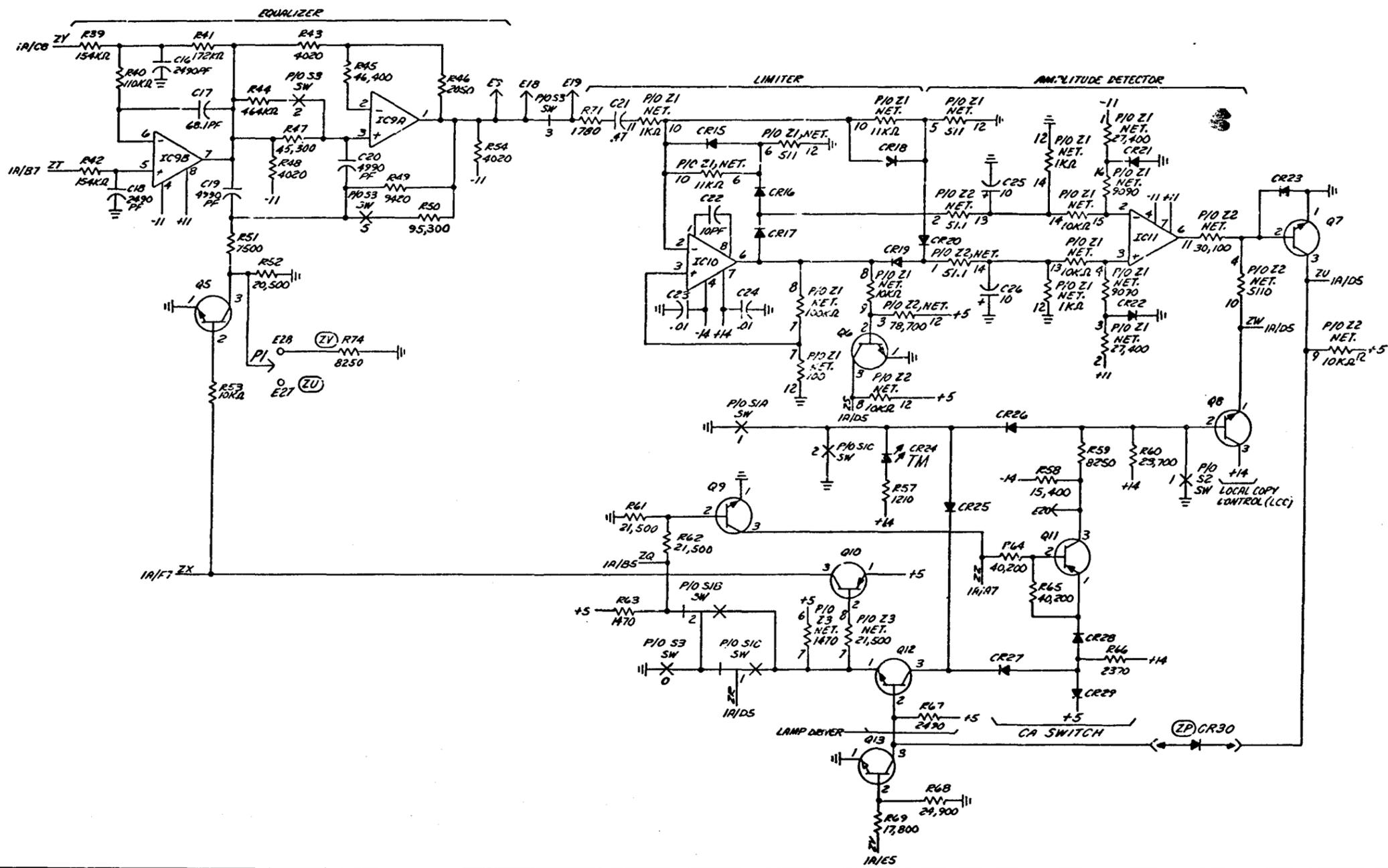
BELL TELEPHONE LABORATORIES
INCORPORATED

ISSUE
6B1

SD-ID243-01-J1A

6S

PART OF CPS I (MFR DISC.)
202T-L1 TRANSMITTER-RECEIVER



PART OF CPS I

ISSUE
6B1

DATA SET 202T TYPE,
39A1 DATA MOUNTING
AND 40B1 DATA MOUNTING

SD-ID243-01-J1B

BELL TEL. HO. NE. LABORATORIES
INCORPORATED

6S

PRINTED IN U.S.A.

D243-01

PART OF CPS I (MFR DISC.)
202T-L1 TRANSMITTER-RECEIVER

COMPONENT LIST

CAPACITOR

DESIG	CODE
C1	KS-20423,L9
C2	602A
C3	KS-20423,L9
C4	602A
C5	KS-20736,L1, .47
C6	KS-16742,L27, .01
C7	KS-16742,L27, .01
C8	577D, .02
C9	KS-19774,L5, .1
C10	KS-16958,L27, 10PF
C11	KS-20736,L4, .01
C12	KS-20736,L4, .01
C13	KS-16958,L27, 10PF
C14	KS-20736,L4, .1
C15	KS-20736,L4, .1
C16	KS-16742,L27, 2490PF
C17	KS-16958,L27, 68,1PF
C18	KS-16742,L27, 2490PF
C19	KS-16742,L26, 4990PF
C20	KS-16742,L26, 4990PF
C21	KS-19774,L6, .47
C22	KS-16958,L27, 10PF
C23	KS-20736,L4, .01
C24	KS-20736,L4, .01
C25	601B
C26	601B
C28	KS-19774,L6,.1
C29	KS-19774,L5,.047, KS-19774,L6
C30	KS-19774,L6,.047, KS-19774,L6

CONNECTOR (PATCH CORD)

DESIG	CODE
P1	CAMBION,ES7291-01-03-10

CRYSTAL (OSCILLATOR)

DESIG	CODE
Y1	KS-21035,L2

DIODE

DESIG	CODE
CR1	426P
CR2	446F
CR3	446F
CR4	446F
CR5	446F
CR6	530A
CR7	530A
CR8	521C
CR9	521C
CR10	458C
CR11	458C
CR12	530A
CR13	530A
CR14	530A
CR15	458D
CR16	458D
CR17	458D
CR18	458D
CR19	458D
CR20	458D
CR21	458D
CR22	458D
CR23	458D
CR24	530A
CR25	458C
CR26	458C
CR27	458C
CR28	458C
CR29	458C
CR30	458C
CR31	458C
CR32	458C
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CR88	458C
CR89	458C
CR90	458C
CR91	458C
CR92	458C
CR93	458C
CR94	458C
CR95	458C
CR96	458C
CR97	458C
CR98	458C
CR99	458C
CR100	458C

COMPONENT LIST (CONT)

INTEGRATED CIRCUIT

DESIG	CODE
IC1A,C,D	41L
IC2	KS-21322,L4, 614A
IC3	KS-21217,L3, KS-21217,L3
IC4	KS-21217,L1, 229C
IC5	KS-20973,L1
IC6A,B	KS-21167,L1
IC7	KS-20973,L1
IC8B	KS-21167,L1
IC9A,B	KS-21167,L1
IC10	KS-20973,L1
IC11	KS-20973,L1

NETWORK (RESISTOR)

DESIG	CODE
Z1	KS-21228,L9
Z2	KS-21228,L11
Z3	KS-21228,L13
Z4	KS-21228,L14

RESISTOR

DESIG	CODE
R1	KS-20616,L1A, 4220
R2	KS-20616,L1A, 4220
R3	KS-20616,L1A, 4220
R4	KS-20616,L1A, 10KΩ
R5	KS-20616,L1A, 1KΩ
R6	KS-20616,L1A, 1KΩ
R7	KS-20810,L1A, 82.5
R8	KS-20810,L1A, 110
R9	KS-20810,L1A, 110
R10	KS-20616,L1A, 10KΩ
R11	KS-20616,L1A, 11KΩ
R12	KS-20616,L1A, SEE NOTE 3
R13	KS-20616,L1A, 34,800
R14	KS-20616,L1A, 20,500
R15	KS-20616,L1A, 1210
R16	KS-20616,L1A, 600
R17	KS-19151,L1, 68
R18	KS-20616,L1A, 600
R19	KS-20616,L1A, 7150
R20	KS-20616,L1A, 1210
R21	KS-20616,L1A, 600
R22	KS-20616,L1A, 5620
R23	KS-20616,L1A, 1210
R24	KS-20616,L1A, 600
R25	KS-19151,L1, 68
R26	KS-20616,L1A, 10KΩ
R27	KS-20616,L1A, 17,800
R28	KS-20616,L1A, 5110
R29	KS-20616,L1A, 5110
R30	KS-20616,L1A, 17,800
R31	KS-20616,L1A, 3830
R32	KS-20616,L1A, 3830
R33	KS-20616,L1A, 16,900
R34	KS-20289,L6C, 1470
R35	KS-20289,L6C, 1470
R36	KS-20616,L1A, 1210
R37	KS-20289,L6C, 1470
R38	KS-20289,L6C, 1470
R39	KS-20616,L1A, 154KΩ
R40	KS-20616,L1A, 110KΩ
R41	KS-20616,L1A, 172KΩ
R42	KS-20616,L1A, 154KΩ
R43	KS-20616,L1A, 4020
R44	KS-20616,L1A, 464KΩ
R45	KS-20616,L1A, 46,400
R46	KS-20616,L1A, 2050
R47	KS-20616,L1A, 45,300
R48	KS-20616,L1A, 4020

COMPONENT LIST (CONT)

RESISTOR (CONT)

DESIG	CODE
R49	KS-20616,L1A, 9420
R50	KS-20616,L1A, 95,300
R51	KS-20616,L1A, 750C
R52	KS-20616,L1A, 20,500
R53	KS-20616,L1A, 10KΩ
R54	KS-20616,L1A, 4020
R57	KS-20616,L1A, 1210
R58	KS-20616,L1A, 15,400
R59	KS-20616,L1A, 8250
R60	KS-20616,L1A, 23,700
R61	KS-20616,L1A, 21,500
R62	KS-20616,L1A, 21,500
R63	KS-20616,L1A, 1470
R64	KS-20616,L1A, 40,200
R65	KS-20616,L1A, 40,200
R66	KS-20616,L1A, 2370
R67	KS-20616,L1A, 2490
R68	KS-20616,L1A, 24,900
R69	KS-20616,L1A, 17,800
R70	KS-20616,L1A, 14KΩ
R71	KS-20616,L1A, 1780
R72	KS-20616,L1A, 100
R73	KS-20616,L1A, 100
R74	KS-20616,L1A, 8250

SWITCH

DESIG	CODE
S1A	KS-21216,L16
S1B	KS-21216,L15
S1C	KS-21216,L16
S2	KS-21193,L7 WITH COVER KS-21193,L14
S3	KS-21193,L7 WITH COVER KS-21193,L14

TERMINAL

DESIG	CODE
E1-E20	841-227-812
E21-E26	CAMBION, 450-3752-01-03, 840-347-868
E27,E28	840-347-868

TRANSFORMER

DESIG	CODE
T1	2564BL
T2	2564BL

TRANSISTOR

DESIG	CODE
Q1	66J
Q2	51E
Q3	51E
Q4	51E
Q5	66J
Q6	66J
Q7	66J
Q8	66J
Q9	66J
Q10	51A
Q11	51A
Q12	66J
Q13	66J

VARIATOR

DESIG	CODE
RV1	100E
RV2	100E

MANUFACTURING REFERENCES

CATEGORY	NO.
CIRCUIT PACK CODE	202T,L1
CONNECTOR ON FRAME	908 TYPE

SYMBOL SHOWN IN FS

NOTES:

- UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS, VALUES PRECEDED BY THE SYMBOL + (PLUS) OR - (MINUS) ARE IN VOLTS.
- ⚡ - GROUND RETURN.
- ONE OF THE FOLLOWING VALUES IS SELECTED IN X-SPEC TEST: 287C, 3160, 3480, 3830, 4220, 3010, 3320, 3650, OR 4020.
- SWITCHES S1A, S1B AND S1C PROVIDE THE ANALOG LOOPBACK, LOCAL SELF TEST AND REMOTE TEST FUNCTIONS, RESPECTIVELY.

RECORD OF CHANGES

DWG ISS	SERIES	STD	MFR DISC.	SEE NOTE
4B1	2	ZR	ZQ	
4B1	3	ZT	ZS	
4B1	4	ZP		
5A1	5		ZP	
5A1	6	ZV		

INPUT/OUTPUT INFORMATION

HIGHEST RES. AND CAP. USED ON THIS DRAWING	
R74	C30
NOT USED	
R55, R56	C27

PART OF CPS I

ISSUE **6B1**

DATA SET 202T TYPE, 39A1 DATA MOUNTING AND 40B1 DATA MOUNTING

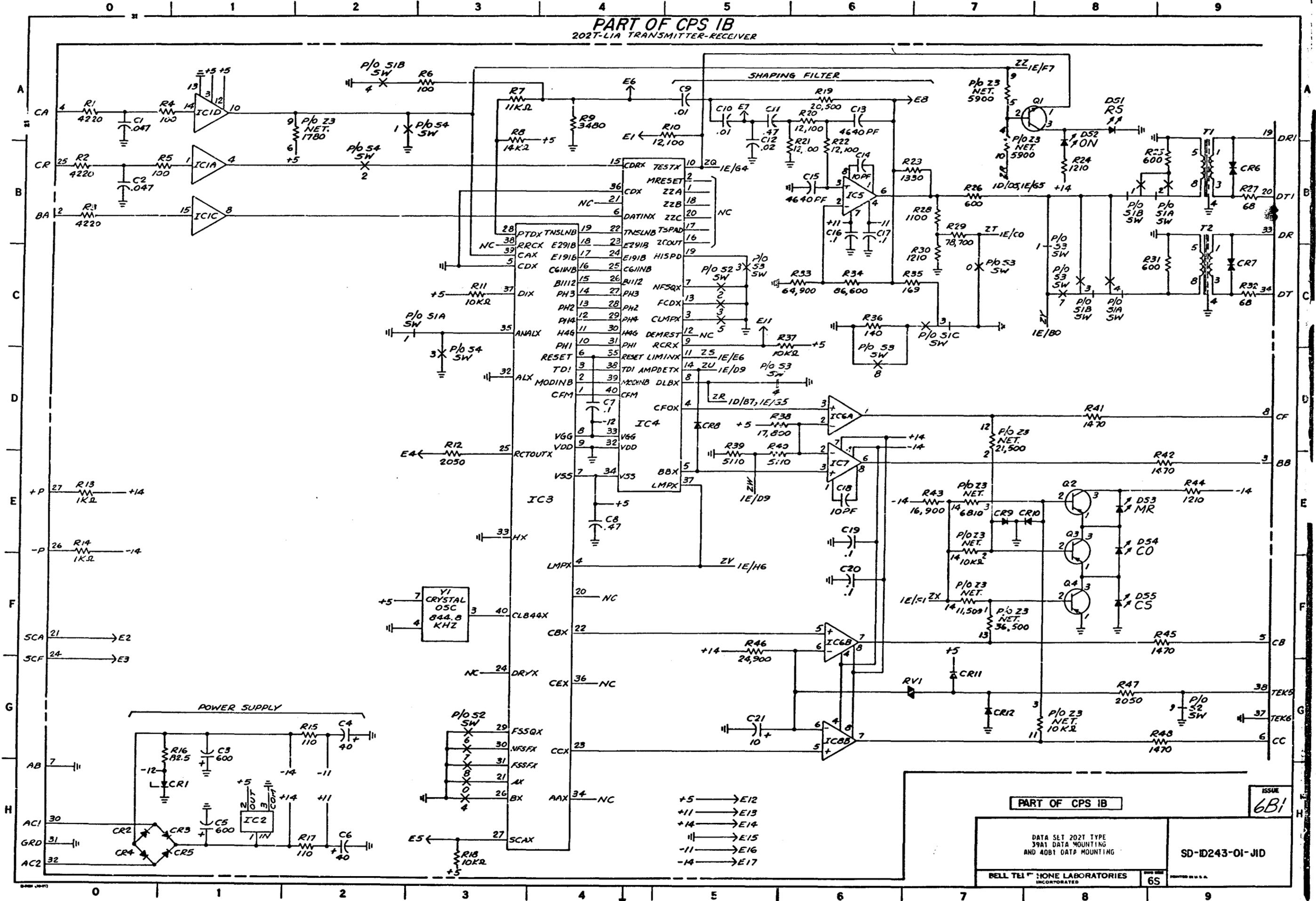
SD-ID243-01-JIC

BELL TELEPHONE LABORATORIES INCORPORATED

65

243-01-1

PART OF CPS IB
202T-LIA TRANSMITTER-RECEIVER



PART OF CPS IB

ISSUE
6B1

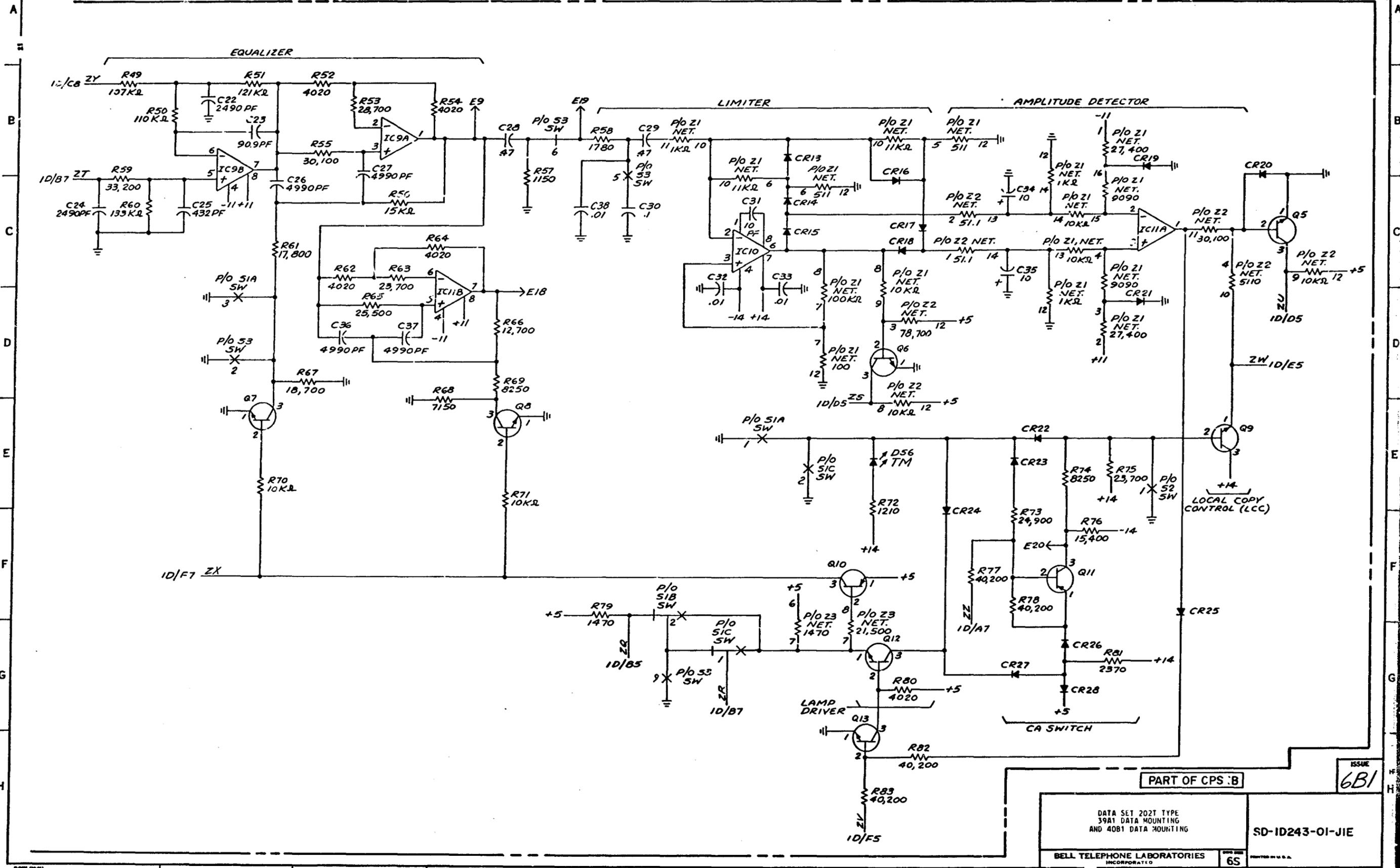
DATA SET 202T TYPE
39A1 DATA MOUNTING
AND 40B1 DATP MOUNTING

SD-ID243-01-J1D

BELL TELEPHONE LABORATORIES
INCORPORATED

65

PART OF CPS 1B
202T-LIA TRANSMITTER-RECEIVER



ISSUE
6B1

PART OF CPS 1B

DATA SET 202T TYPE
39A1 DATA MOUNTING
AND 40B1 DATA MOUNTING

SD-ID243-01-JIE

BELL TELEPHONE LABORATORIES
INCORPORATED

6S

PART OF CPS IB
2021-LIA TRANSMITTER-RECEIVER

MANUFACTURING REFERENCES

CATEGORY	NO.
CIRCUIT PACK CODE	2021-LIA
CONNECTOR ON FRAME	908 TYPE

SYMBOL
SHOWN IN FS

NOTES:

- UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS,
CAPACITANCE VALUES ARE IN MICROFARADS,
VALUES PRECEDED BY THE SYMBOL + (PLUS)
OR - (MINUS) ARE IN VOLTS.
- \perp - GROUND RETURN.
- SWITCHES S1A, S1B AND S1C PROVIDE THE ANALOG
LOOPBACK, LOCAL SELF TEST AND REMOTE TEST
FUNCTIONS, RESPECTIVELY.

COMPONENT LIST

CAPACITOR

DESIG	CODE
C1	KS-19774 L6, .047
C2	KS-19774 L6, .047
C3	KS-20423 L9, 600
C4	602A
C5	KS-20423 L9, 600
C6	602A
C7	KS-19774 L6, .1
C8	KS-20736 L1, .47
C9	KS-16742 L27, .01
C10	KS-16742 L27, .01
C11	KS-19774 L5, .47
C12	7270, .02
C13	KS-16742 L27, 4640PF
C14	KS-16958 L27, 10PF
C15	KS-16742 L27, 4640PF
C16	KS-20736 L4, .1
C17	KS-20736 L4, .1
C18	KS-16958 L27, 10PF
C19	KS-20736 L4, .1
C20	KS-20736 L4, .1
C21	601B
C22	KS-16742 L27, 2490PF
C23	KS-16958 L27, 90.9PF
C24	KS-16742 L27, 2490PF
C25	KS-16958 L27, 432PF
C26	KS-16742 L26, 4990PF
C27	KS-16742 L26, 4990PF
C28	KS-19774 L5, .47
C29	KS-19774 L6, .47
C30	KS-19774 L5, .1
C31	KS-16958 L27, 10PF
C32	KS-21743 L1, .01
C33	KS-21743 L1, .01
C34	601B
C35	601B
C36	KS-16742 L26, 4990PF
C37	KS-16742 L26, 4990PF
C38	KS-19774 L1, .01

CRYSTAL (OSCILLATOR)

DESIG	CODE
Y1	103D, 344.8kHz

DIODE

DESIG	CODE
CR1	813AB
CR2	533F
CR3	533F
CR4	533F
CR5	533F
CR6	521C
CR7	521C
CR8	458C
CR9	458C
CR10	458C
CR11	458C
CR12	458C
CR13	458D
CR14	458D
CR15	458D
CR16	458D

COMPONENT LIST (CONT)

DIODE (CONT)

DESIG	CODE
CR17	458C
CR18	458D
CR19	458D
CR20	458C
CR21	458D
CR22	458C
CR23	458C
CR24	458C
CR25	458C
CR26	458C
CR27	458C
CR28	458C

DIODE (LIGHT-EMITTING)

DESIG	CODE
DS1 (RS)	530A
DS2 (ON)	530A
DS3 (MR)	530A
DS4 (CO)	530A
DS5 (CS)	530A
DS6 (TM)	530A

INTEGRATED CIRCUIT

DESIG	CODE
IC1A,C,D	41L
IC2	614A
IC3	KS-21217 L3
IC4	229C
IC5	KS-20973 L1
IC6A,B	KS-21167 L1
IC7	KS-20973 L1
IC8B	KS-21167 L1
IC9A,B	KS-21167 L1
IC10	KS-20973 L1
IC11A,B	KS-21167 L1

NETWORK (RESISTOR)

DESIG	CODE
Z1	KS-21288 L9
Z2	KS-21288 L11
Z3	KS-21288 L13

RESISTOR

DESIG	CODE
R1	KS-20616 L1A, 4220
R2	KS-20616 L1A, 4220
R3	KS-20616 L1A, 4220
R4	KS-20616 L1A, 100
R5	KS-20616 L1A, 100
R6	KS-20616 L1A, 100
R7	KS-20616 L1A, 11KΩ
R8	KS-20616 L1A, 14KΩ

COMPONENT LIST (CONT)

RESISTOR (CONT)

DESIG	CODE
R9	KS-20616 L1A, 3480
R10	KS-20616 L1A, 12,100
R11	KS-20616 L1A, 10KΩ
R12	KS-20616 L1A, 2050
R13	KS-20616 L1A, 1KΩ
R14	KS-20616 L1A, 1KΩ
R15	KS-20810 L1A, 110
R16	KS-20810 L1A, 82.5
R17	KS-20810 L1A, 110
R18	KS-20616 L1A, 10KΩ
R19	KS-20616 L1A, 20,500
R20	KS-20616 L1A, 12,100
R21	KS-20616 L1A, 12,100
R22	KS-20616 L1A, 12,100
R23	KS-20616 L1A, 1330
R24	KS-20616 L1A, 1210
R25	KS-20616 L1A, 600
R26	KS-20616 L1A, 600
R27	KS-19151 L1, 68
R28	KS-20616 L1A, 1100
R29	KS-20616 L1A, 78,700
R30	KS-20616 L1A, 1210
R31	KS-20616 L1A, 600
R32	KS-19151 L1, 68
R33	KS-20616 L1A, 64,900
R34	KS-20616 L1A, 86,600
R35	KS-20616 L1A, 169
R36	KS-20616 L1A, 140
R37	KS-20616 L1A, 10KΩ
R38	KS-20616 L1A, 17,800
R39	KS-20616 L1A, 5110
R40	KS-20616 L1A, 5110
R41	GF1, TRW, 1470
R42	GF1, TRW, 1470
R43	KS-20616 L1A, 16,900
R44	KS-20616 L1A, 1210
R45	GF1, TRW, 1470
R46	KS-20616 L1A, 24,900
R47	KS-20616 L1A, 2050
R48	GF1, TRW, 1470
R49	KS-20616 L1A, 107KΩ
R50	KS-20616 L1A, 110KΩ
R51	KS-20616 L1A, 121KΩ
R52	KS-20616 L1A, 4020
R53	KS-20616 L1A, 28,700
R54	KS-20616 L1A, 4020
R55	KS-20616 L1A, 30,100
R56	KS-20616 L1A, 15KΩ
R57	KS-20616 L1A, 1150
R58	KS-20616 L1A, 1780
R59	KS-20616 L1A, 33,200
R60	KS-20616 L1A, 133KΩ
R61	KS-20616 L1A, 17,600
R62	KS-20616 L1A, 4020
R63	KS-20616 L1A, 23,700
R64	KS-20616 L1A, 4020
R65	KS-20616 L1A, 25,500
R66	KS-20616 L1A, 12,700
R67	KS-20616 L1A, 18,700
R68	KS-20616 L1A, 7150
R69	KS-20616 L1A, 8250
R70	KS-20616 L1A, 10KΩ
R71	KS-20616 L1A, 10KΩ
R72	KS-20616 L1A, 1210
R73	KS-20616 L1A, 24,900
R74	KS-20616 L1A, 8250
R75	KS-20616 L1A, 23,700
R76	KS-20616 L1A, 15,400
R77	KS-20616 L1A, 40,200
R78	KS-20616 L1A, 40,200
R79	KS-20616 L1A, 1470
R80	KS-20616 L1A, 4020

COMPONENT LIST (CONT)

RESISTOR (CONT)

DESIG	CODE
R81	KS-20616 L1A, 2370
R82	KS-20616 L1A, 40,200
R83	KS-20616 L1A, 40,200

SWITCH

DESIG	CODE
S1A	KS-21216 L16
S1B	KS-21216 L15
S1C	KS-21216 L16
S2	{KS-21193 L7 WITH COVER KS-21193 L14}
S3	{KS-21193 L7 WITH COVER KS-21193 L14}
S4	KS-21193 L37

TERMINAL

DESIG	CODE
[19] {E1-E9}	841-227-812
{E11-E20}	

TRANSFORMER

DESIG	CODE
T1	2564BL
T2	2564BL

TRANSISTOR

DESIG	CODE
Q1	66J
Q2	51E
Q3	51E
Q4	51E
Q5	66J
Q6	66J
Q7	66G
Q8	66G
Q9	66J
Q10	51A
Q11	51A
Q12	66J
Q13	66J

VARIABLE

DESIG	CODE
RV1	100E

CIRCUIT DESCRIPTION

SEE CD-10243-01

INPUT/OUTPUT INFORMATION

PART OF CPS IB

ISSUE
6B1

DATA SET 2021 TYPE,
3941 DATA MOUNTING
AND 4081 DATA MOUNTING

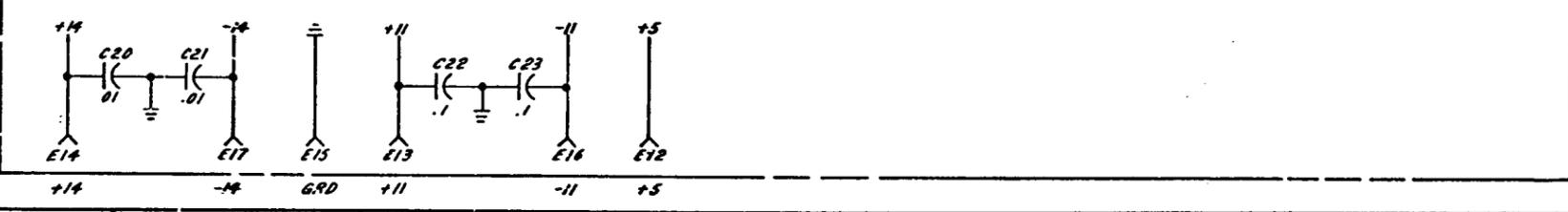
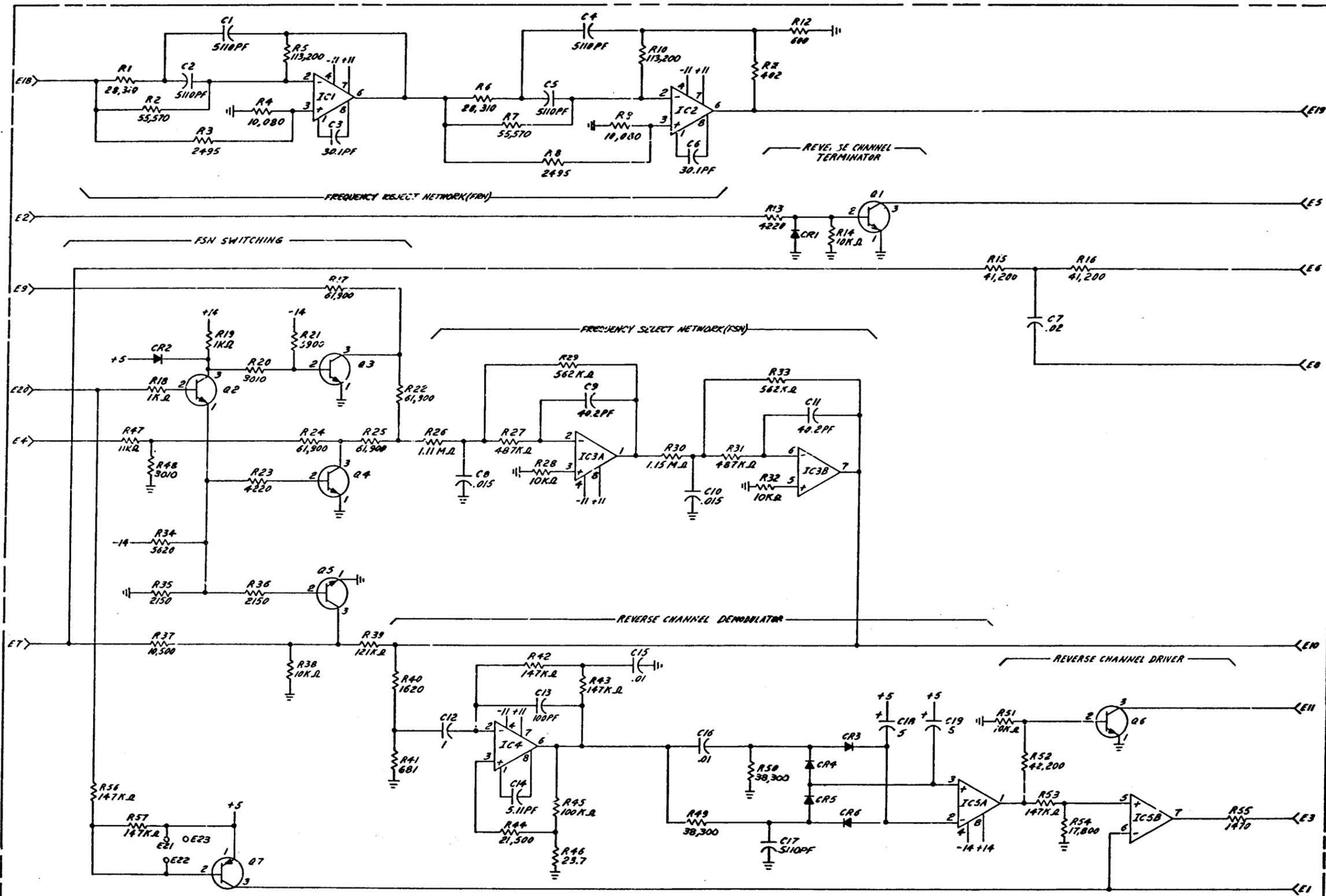
SD-ID243-01-JIF

BELL TELEPHONE LABORATORIES
INCORPORATED

6S

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PART OF CPS 2 (MFR DISC.)
JYI REVERSE CHANNEL



PART OF CPS 2
ISSUE 5A1

DATA SET 202T TYPE,
39AI DATA MOUNTING
AND 40BI DATA MOUNTING
SD-ID243-01-J2A
BELL TELEPHONE LABORATORIES
INCORPORATED
65

ID243-01-A

PART OF CPS 2 (MFR DISC.)

JY1 REVERSE CHANNEL

MANUFACTURING REFERENCES

CATEGORY	NO.
CONTROLLING DRAWING	SD-10238-01-J2A, J2B
CIRCUIT PACK CODE	JY1
CONNECTOR ON FRAME	

NOTES:

- UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS,
CAPACITANCE VALUES ARE IN MICROFARADS,
VALUES PRECEDED BY THE SYMBOL + (PLUS)
OR - (MINUS) ARE IN OHMS.
- $\frac{1}{2}$ - GROUND RETURN.
- THIS CPS IS FOR INFORMATION ONLY AND MAY NOT AGREE
WITH CURRENT ISSUE OF CONTROLLING DRAWING.

PART OF CPS 2

ISSUE
5A1

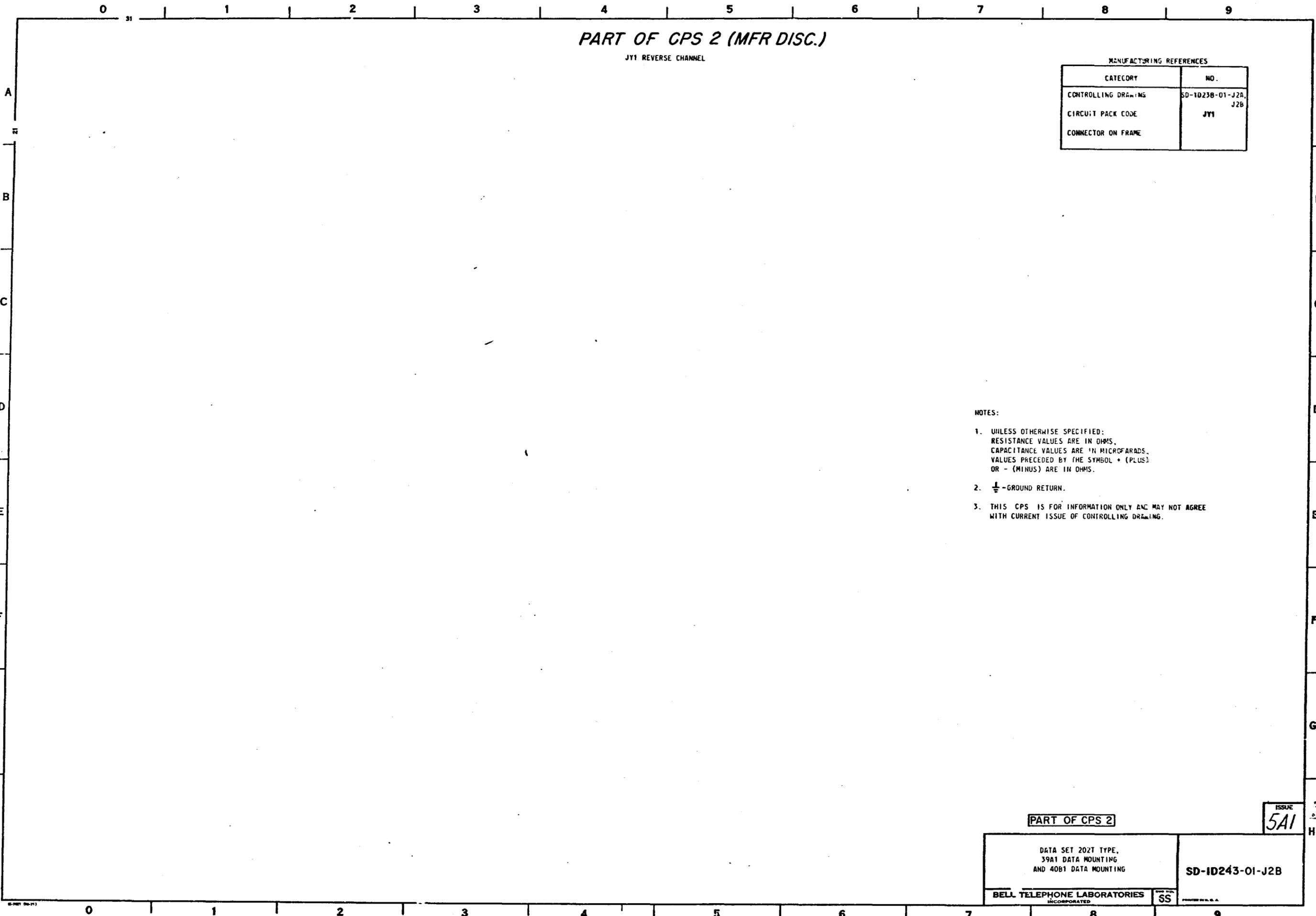
DATA SET 202T TYPE,
39A1 DATA MOUNTING
AND 40B1 DATA MOUNTING

SD-ID243-01-J2B

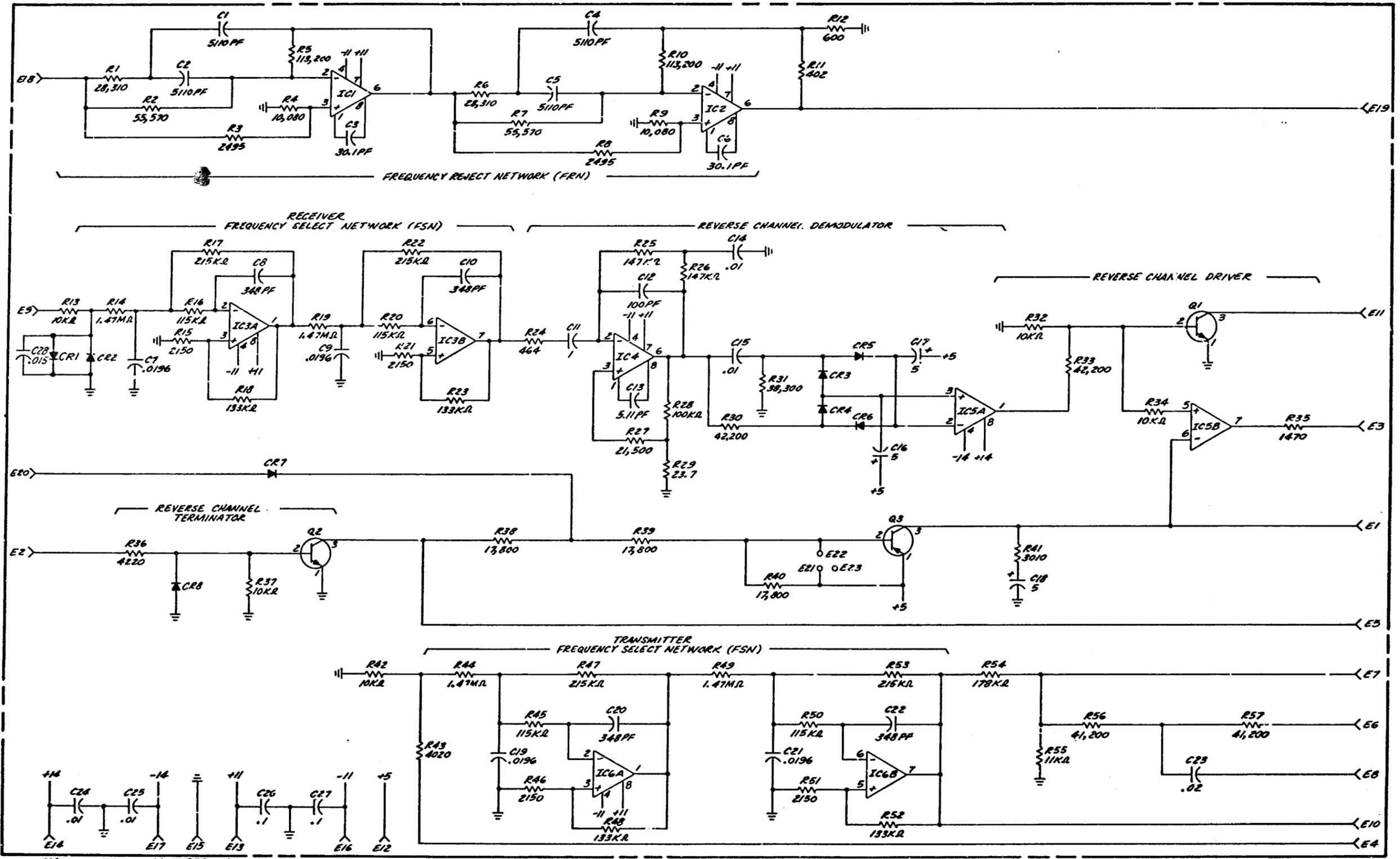
BELL TELEPHONE LABORATORIES
INCORPORATED

SS

SD-10243-01-J2B



PART OF CPS 2B (MFR DISC.)
JY2 REVERSE CHANNEL



PART OF CPS 2B

6B1

DATA SET 202T TYPE,
39A1 DATA MOUNTING
AND 40B1 DATA MOUNTING

SD-ID243-01-J2C

BELL TELEPHONE LABORATORIES
INCORPORATED

65

SD-ID243-01-J2C

0 1 2 3 4 5 6 7 8 9

PART OF CPS 2B (MFR DISC.)
JY2 REVERSE CHANNEL

MANUFACTURING REFERENCES

CATEGORY	NO.
CONTROLLING DRAWING	SD-1D238-01-J2C J2D
CIRCUIT PACK CODE	JY2
CONNECTOR ON FRAME	

SYMBOL
SHOWN IN FS

NOTES:

- UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS,
CAPACITANCE VALUES ARE IN MICROFARADS,
VALUES PRECEDED BY THE SYMBOL + (PLUS)
OR - (MINUS) ARE IN VOLTS.
- \perp GROUND RETURN.
- THIS CPS IS FOR INFORMATION ONLY AND
MAY NOT AGREE WITH CURRENT ISSUE OF
CONTROLLING DRAWING.

A
B
C
D
E
F
G
H

A
B
C
D
E
F
G
H

PART OF CPS 2B

ISSUE
6B1

DATA SET 202T TYPE,
29A1 DATA MOUNTING
AND 40B1 DATA MOUNTING

SD-1D243-01-J2D

BELL TELEPHONE LABORATORIES
INCORPORATED

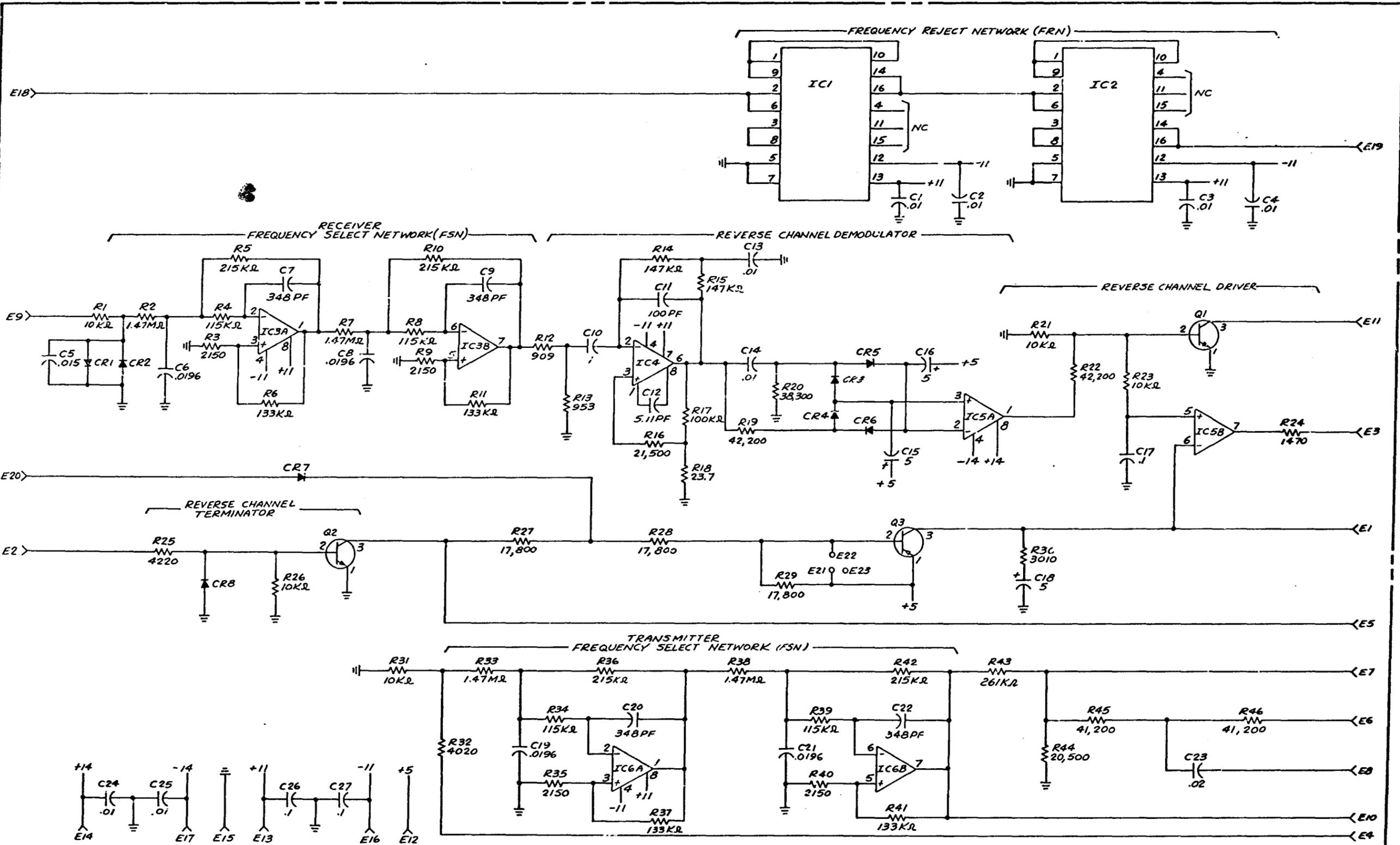
6S

PRINTED U.S.A.

0 1 2 3 4 5 6 7 8 9

SD-1D243-01-J2D

PART OF CPS 2C
JY4 REVERSE CHANNEL



PART OF CPS 2C

ISSUE
6B1

DATA SET 202T TYPE
3981 DATA MOUNTING
AND 4081 DATA MOUNTING

BELL TELEPHONE LABORATORIES
INCORPORATED

SD-ID243-01-J2E

6S

PART OF CPS 2C
JY4 REVERSE CHANNEL

MANUFACTURING REFERENCES

CATEGORY	NO.
CIRCUIT PACK CODE	JY4
CONNECTOR ON FRAME	

COMPONENT LIST

CAPACITOR

DESIG	CODE
C1	KS-21743 L1, .01
C2	KS-21743 L1, .01
C3	KS-21743 L1, .01
C4	KS-21743 L1, .01
C5	KS-19774 L8, .015
C6	727D, .0196
C7	KS-16958 L27, 348PF
C8	727D, .0196
C9	KS-16958 L27, 348PF
C10	596G, 1
C11	KS-16958 L27, 100PF
C12	KS-16958 L27, 5.11PF
C13	KS-16742 L27, .01
C14	KS-16742 L27, .01
C15	600B
C16	600B
C17	KS-19774 L5, .1
C18	600B
C19	727D, .0196
C20	KS-16958 L27, 348PF
C21	727D, .0196
C22	KS-16958 L27, 348PF
C23	727D, .02
C24	KS-21743 L1, .01
C25	KS-21743 L1, .01
C26	KS-20736 L4, .1
C27	KS-20736 L4, .1

DIODE

DESIG	CODE
CR1	449A
CR2	449A
CR3	458D
CR4	458D
CR5	458D
CR6	458D
CR7	458A
CR8	458A

INTEGRATED CIRCUIT

DESIG	CODE
IC1	618JC
IC2	618JC
IC3A,B	KS-21167 L1
IC4	KS-20973 L1
IC5A,B	KS-21167 L1
IC6A,B	KS-21167 L1

COMPONENT LIST (CONT)

RESISTOR

DESIG	CODE
R1	KS-20616 L1A, 10KΩ
R2	KS-20810 L1A, 1.47MΩ
R3	KS-20616 L1A, 2150
R4	KS-20616 L1A, 115KΩ
R5	KS-20616 L1A, 215KΩ
R6	KS-20616 L1A, 133KΩ
R7	KS-20810 L1A, 1.47MΩ
R8	KS-20616 L1A, 115KΩ
R9	KS-20616 L1A, 2150
R10	KS-20616 L1A, 215KΩ
R11	KS-20616 L1A, 133KΩ
R12	KS-20616 L1A, 909
R13	KS-20616 L1A, 953
R14	KS-20616 L1A, 147KΩ
R15	KS-20616 L1A, 147KΩ
R16	KS-20616 L1A, 21,500
R17	KS-20616 L1A, 100KΩ
R18	KS-20616 L1A, 23.7
R19	KS-20616 L1A, 42,200
R20	KS-20616 L1A, 38,300
R21	KS-20616 L1A, 10KΩ
R22	KS-20616 L1A, 42,200
R23	KS-20616 L1A, 10KΩ
R24	KS-20616 L1A, 1470
R25	KS-20616 L1A, 4220
R26	KS-20616 L1A, 10KΩ
R27	KS-20616 L1A, 17,800
R28	KS-20616 L1A, 17,800
R29	KS-20616 L1A, 17,800
R30	KS-20616 L1A, 3010
R31	KS-20616 L1A, 10KΩ
R32	KS-20616 L1A, 4020
R33	KS-20810 L1A, 1.47MΩ
R34	KS-20616 L1A, 115KΩ
R35	KS-20616 L1A, 2150
R36	KS-20616 L1A, 215KΩ
R37	KS-20616 L1A, 133KΩ
R38	KS-20810 L1A, 1.47MΩ
R39	KS-20616 L1A, 115KΩ
R40	KS-20616 L1A, 2150
R41	KS-20616 L1A, 133KΩ
R42	KS-20616 L1A, 215KΩ
R43	KS-20616 L1A, 261KΩ
R44	KS-20616 L1A, 20,500
R45	KS-20616 L1A, 41,200
R46	KS-20616 L1A, 41,200

TERMINAL

DESIG	CODE
[20] E1-E20	AMP INC., 87003-1 (REELED PART) OR 87105-1 (LOOSE PIECE PART)
[3] E21-E23	840-347-868

COMPONENT LIST (CONT)

TRANSISTOR

DESIG	CODE
Q1	66J
Q2	66J
Q3	51A

CIRCUIT DESCRIPTION

SEE CD-10243-01

INPUT/OUTPUT INFORMATION

SYMBOL
SHOWN IN FS

NOTES:

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

PART OF CPS 2C

ISSUE
6B1

DATA SET 202T TYPE
39A1 DATA MOUNTING
AND 40B1 DATA MOUNTING

SD-10243-01-J2F

BELL TELEPHONE LABORATORIES
INCORPORATED

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GPS 3 INTERFACE CIRCUIT

COMPONENT LIST

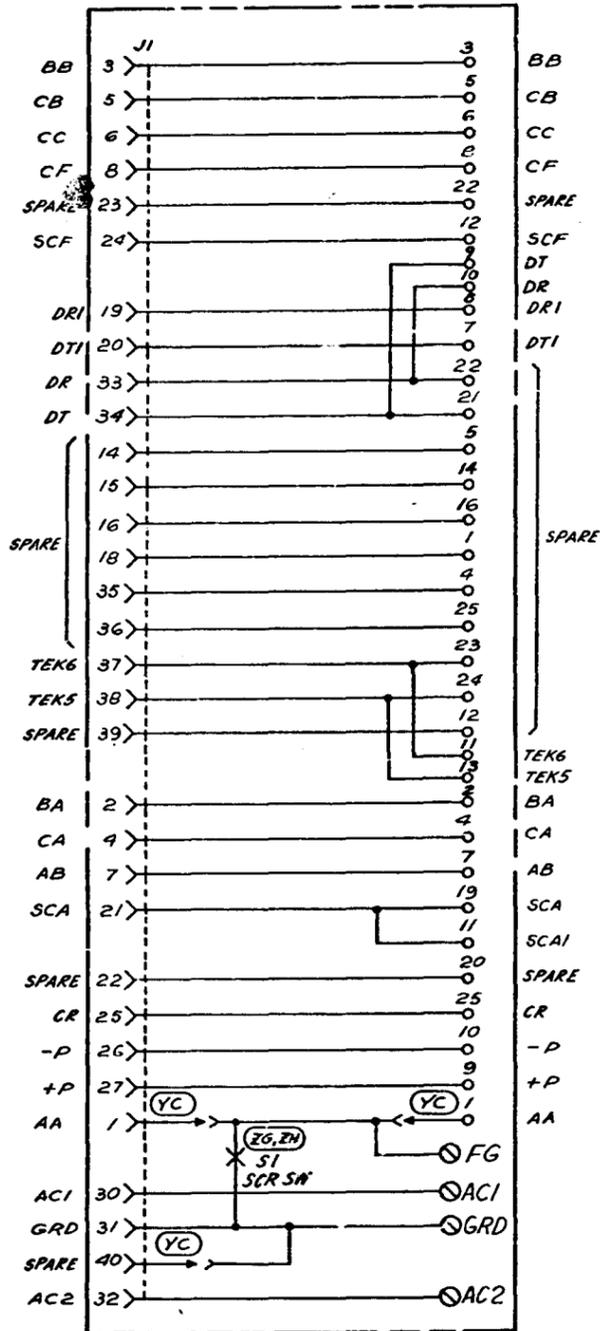
CONNECTOR

DESIG	CODE
J1	908L

SWITCH

DESIG	CODE
S1	P30H562

MANUFACTURING REFERENCES	
CATEGORY	NO.
CIRCUIT PACK CODE	841-228-893
CONNECTOR ON FRAME	



NOTES:

1.

RECORD OF CHANGES				
DWG ISS	SERIES	STD	MFR DISC	SEE NOTE
6B1	3		YC	2

2. SEE FS 2 FOR YU WIRING OPTION.

SD-102-1-J3

CPS 3

ISSUE
6B1

DATA SET 202T TYPE, 39AI DATA MOUNTING AND 40B1 DATA MOUNTING	SD-ID243-01-J3
BELL TELEPHONE LABORATORIES INCORPORATED.	6S

CPS 4
FLEX TAPE

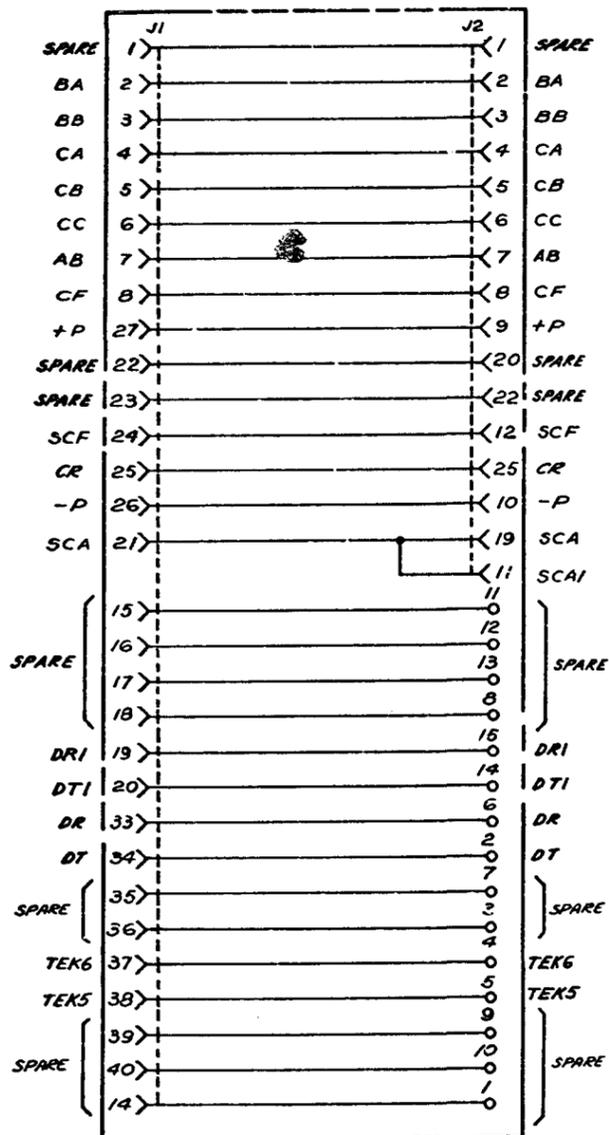
COMPONENT LIST

CONNECTOR

DESIG	CODE
J1	908L
J2	KC-19087, L6

MANUFACTURING REFERENCES

CATEGORY	NO.
CIRCUIT PACK CODE	840-339-899
CONNECTOR ON FRAME	



SD-ID243-01-J4

CPS 4

ISSUE
3A1

DATA SET 202T TYPE,
39A1 DATA MOUNTING
AND 40B1 DATA MOUNTING

SD-ID243-01-J4

BELL TELEPHONE LABORATORIES
INCORPORATED

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