

OKI

MICROLINE 292/293

TROUBLESHOOTING MANUAL with COMPONENT PARTS LIST

Preface

This manual provides a detailed description and a list of the component parts for ML292/293.

Drawing List (1/3)

Detailed Trouble Shooting Manual (LC-65047)

MLIN - Printed Circuit Board	4YA4042-1062G1
MLCE - Printed Circuit Board Assembly	4YA4042-1063
MLCE - Printed Circuit Board Assembly	4YA4042-1063G100
MLCE - Printed Circuit Board Assembly	4YA4042-1063G101
MLCE - Printed Circuit Board Assembly	4YA4042-1063G102
MLCE - Printed Circuit Board Assembly	4YA4042-1063G103
MLCE - Printed Circuit Board Assembly	4YA4042-1063G104
MLCE - Printed Circuit Board Assembly	4YA4042-1063G105
MLCE - Printed Circuit Board Assembly	4YA4042-1063G106
MLCE - Printed Circuit Board Assembly	4YA4042-1063G107
MLCE - Printed Circuit Board Assembly	4YA4042-1063G108
MLCE - Printed Circuit Board Assembly	4YA4042-1063G109
MLCE - Printed Circuit Board Assembly	4YA4042-1063G110
MLCE - Printed Circuit Board Assembly	4YA4042-1063G111
MLCE - Printed Circuit Board	4YA4042-1063Gxxx
MLCE - Printed Circuit Board Assembly	4YA4042-1343Gxxx-1/2(1/2)
MLCE - Printed Circuit Board Assembly	4YA4042-1343G104-2/2
MLCE - Printed Circuit Board Assembly	4YA4042-1343G105-2/2
MLCE - Printed Circuit Board Assembly	4YA4042-1343G106-2/2
MLCE - Printed Circuit Board Assembly	4YA4042-1343G107-2/2
MLCE - Printed Circuit Board Assembly	4YA4042-1343Gxxx-1/2(2/2)
MLCE - Printed Circuit Board	4YA4042-1343Gxxx-2/2
MLRC - Printed Circuit Board Assembly	4YA4042-1064
MLRC - Printed Circuit Board Assembly	4YA4042-1064G100
MLRC - Printed Circuit Board Assembly	4YA4042-1064G101
MLRC - Printed Circuit Board Assembly	4YA4042-1064G102
MLRC - Printed Circuit Board Assembly	4YA4042-1064G103
MLRC - Printed Circuit Board Assembly	4YA4042-1064G104
MLRC - Printed Circuit Board Assembly	4YA4042-1064G105
MLRC - Printed Circuit Board Assembly	4YA4042-1064G106
MLRC - Printed Circuit Board Assembly	4YA4042-1064G107

Drawing List (2/3)

MLRC - Printed Circuit Board Assembly	4YA4042-1064G108
MLRC - Printed Circuit Board Assembly	4YA4042-1064G109
MLRC - Printed Circuit Board Assembly	4YA4042-1064G110
MLRC - Printed Circuit Board Assembly	4YA4042-1064G111
MLRC - Printed Circuit Board	4YA4042-1064Gxxx
MLRC - Printed Circuit Board Assembly	4YA4042-1344Gxxx-1/2(1/2)
MLRC - Printed Circuit Board Assembly	4YA4042-1344G104-2/2
MLRC - Printed Circuit Board Assembly	4YA4042-1344G105-2/2
MLRC - Printed Circuit Board Assembly	4YA4042-1344G106-2/2
MLRC - Printed Circuit Board Assembly	4YA4042-1344G107-2/2
MLRC - Printed Circuit Board Assembly	4YA4042-1344Gxxx-1/2(2/2)
MLRC - Printed Circuit Board	4YA4042-1344Gxxx-2/2
MLSI - Printed Circuit Board Assembly	4YA4042-1067
MLSI - Printed Circuit Board Assembly	4YA4042-1067G100
MLSI - Printed Circuit Board Assembly	4YA4042-1067G101
MLSI - Printed Circuit Board Assembly	4YA4042-1067G102
MLSI - Printed Circuit Board Assembly	4YA4042-1067G103
MLSI - Printed Circuit Board Assembly	4YA4042-1067G104
MLSI - Printed Circuit Board Assembly	4YA4042-1067G105
MLSI - Printed Circuit Board Assembly	4YA4042-1067G106
MLSI - Printed Circuit Board Assembly	4YA4042-1067G107
MLSI - Printed Circuit Board Assembly	4YA4042-1067G108
MLSI - Printed Circuit Board Assembly	4YA4042-1067G109
MLSI - Printed Circuit Board Assembly	4YA4042-1067G110
MLSI - Printed Circuit Board Assembly	4YA4042-1067G111
MLSI - Printed Circuit Board	4YA4042-1067Gxxx
MLSI - Printed Circuit Board Assembly	4YA4042-1346Gxxx-1/2(1/2)
MLSI - Printed Circuit Board Assembly	4YA4042-1346G104-2/2
MLSI - Printed Circuit Board Assembly	4YA4042-1346G105-2/2
MLSI - Printed Circuit Board Assembly	4YA4042-1346G106-2/2
MLSI - Printed Circuit Board Assembly	4YA4042-1346G107-2/2
MLSI - Printed Circuit Board Assembly	4YA4042-1346Gxxx-1/2(2/2)

Drawing List (3/3)

MLSI - Printed Circuit Board

4YA4042-1346G~~xxx~~-2/2

Appendix: Explanation of the personality module short plug
(LC-65365)

TROUBLESHOOTING MANUAL

Troubleshooting

1. General

The troubleshooting of the component parts for ML292/293 is intended mainly for repair of their printed circuited board (PCB) assemblies and must be performed by persons with a certain degree of relevant technical knowledge.

2. Troubleshooting Tools

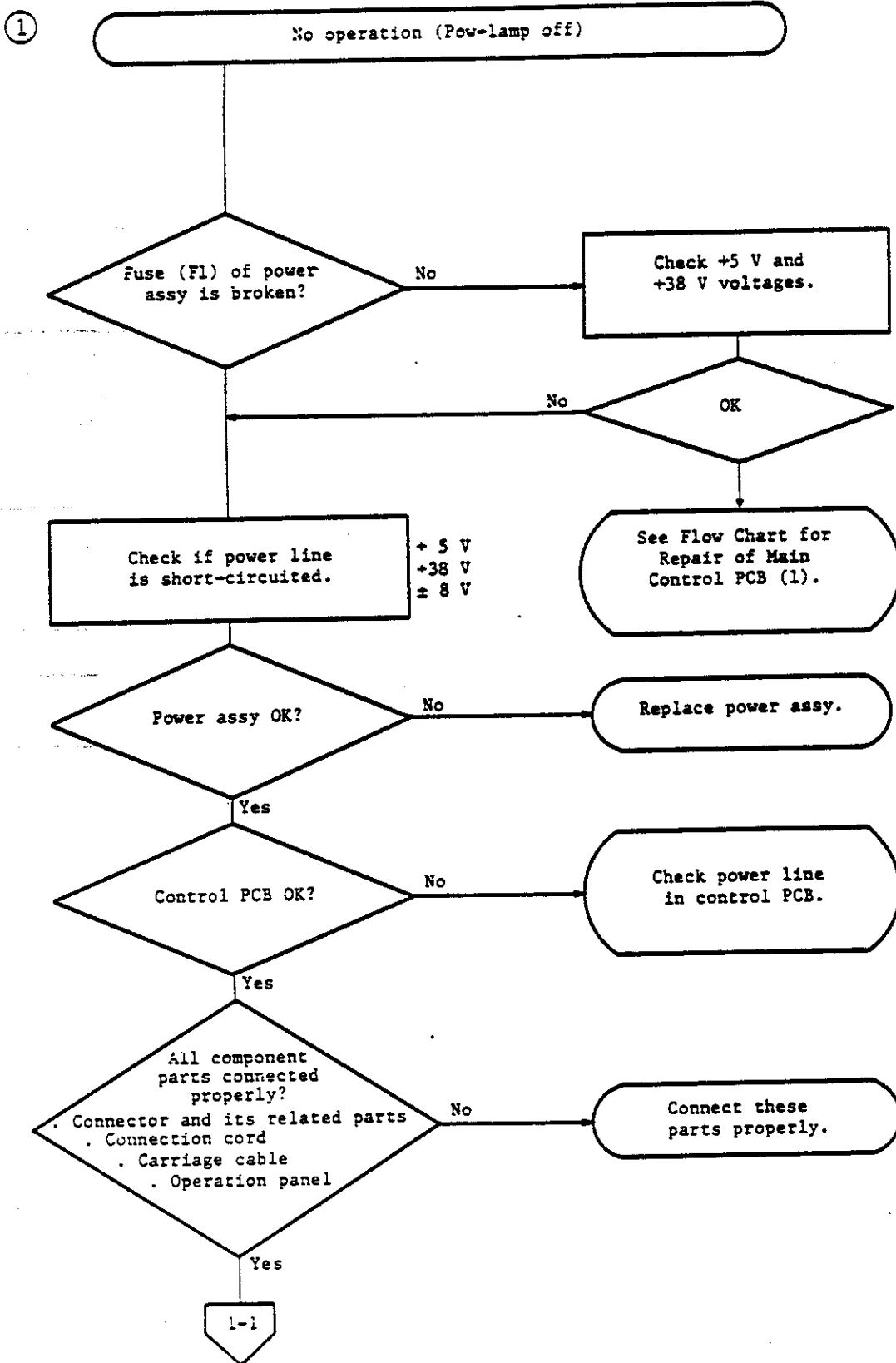
Besides general troubleshooting tools, the troubleshooting of the component parts for ML292/293 requires tools as listed below:

Troubleshooting tools	Remarks
Maintenance cord	3YU5009-1011G1
Extension cord	
Oscilloscope	20 MHz or more
Power cord	4YS4011-4798G1 (Necessary for troubleshooting of ML292 component parts.)
Soldering gun	On-the-counter (Preferably with a narrow hand)

3. Troubleshooting Table

Division	Trouble symptom	Item number or letter
Trouble occurring while power in on	No operation (Pow-lamp off)	1
	No space operation (Sel-lamp off)	2
	Abnormal space operation (Vibration and runaway)	3
Trouble occurring during printing or reception	Misprinting or dot missing	4
	No ribbon feed or color change	5
	No line feed	6
	No operation panel switch operation	7
	Parallel interface reception error	8
PCB repair	Flow chart for reepair of main control PCB (1)	A
	Flow chart for repair of main control PCB (2)	B
	Flow chart for repair of personality module	C
	Flow chart for repair of optional RAM PCB	D

4. Troubleshooting Flow Chart



1-1

Turn on power again
after about 5 min.

Note) When the power failure has been
caused by a trouble with the
alarm circuit, it will not work
for about 5 minutes after
removal of the trouble.

Power is on?

No

Replace power assy.

Yes

Turn off power
again. (*)

No

Finish

(*) The power lamp will
light momentarily.

Yes

Check drive TR of each
drive alarm circuit.

ALM
TR103, TR104

NG

Replace TR103 or
TR104 (2SC2412).

OK

SP ALM
TR2

NG

Replace TR2 (2SB1123).

LF ALM 1
TR7, TR17

NG

Replace TR7 or TR17.

LF ALM 2
TR8, TR17

NG

Replace TR8 or TR17.

HEAD E ALM
TR3, TR101

NG

Replace TR3 or TR101.

HEAD O ALM
TR4, TR102

NG

Replace TR4 or TR102.

RBN MO ALM
TR10, TR105

NG

Replace TR10 or TR105.

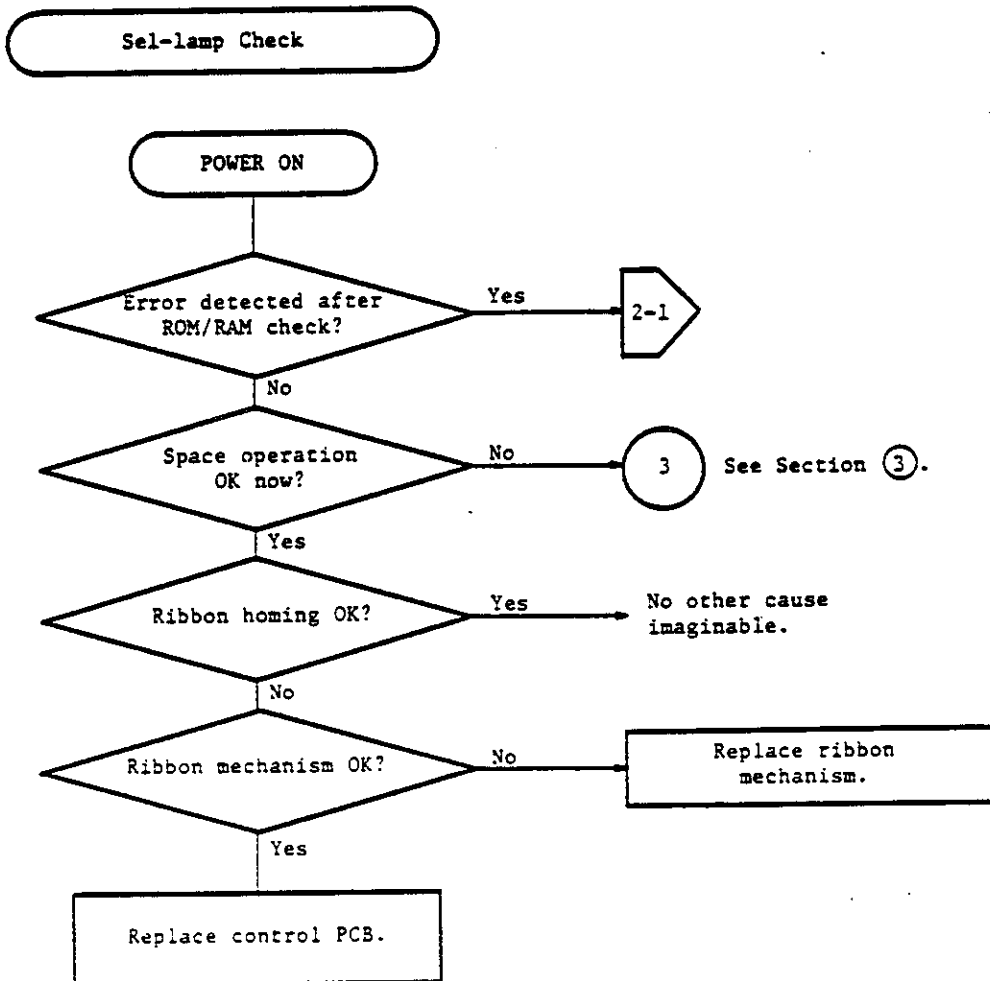
OK

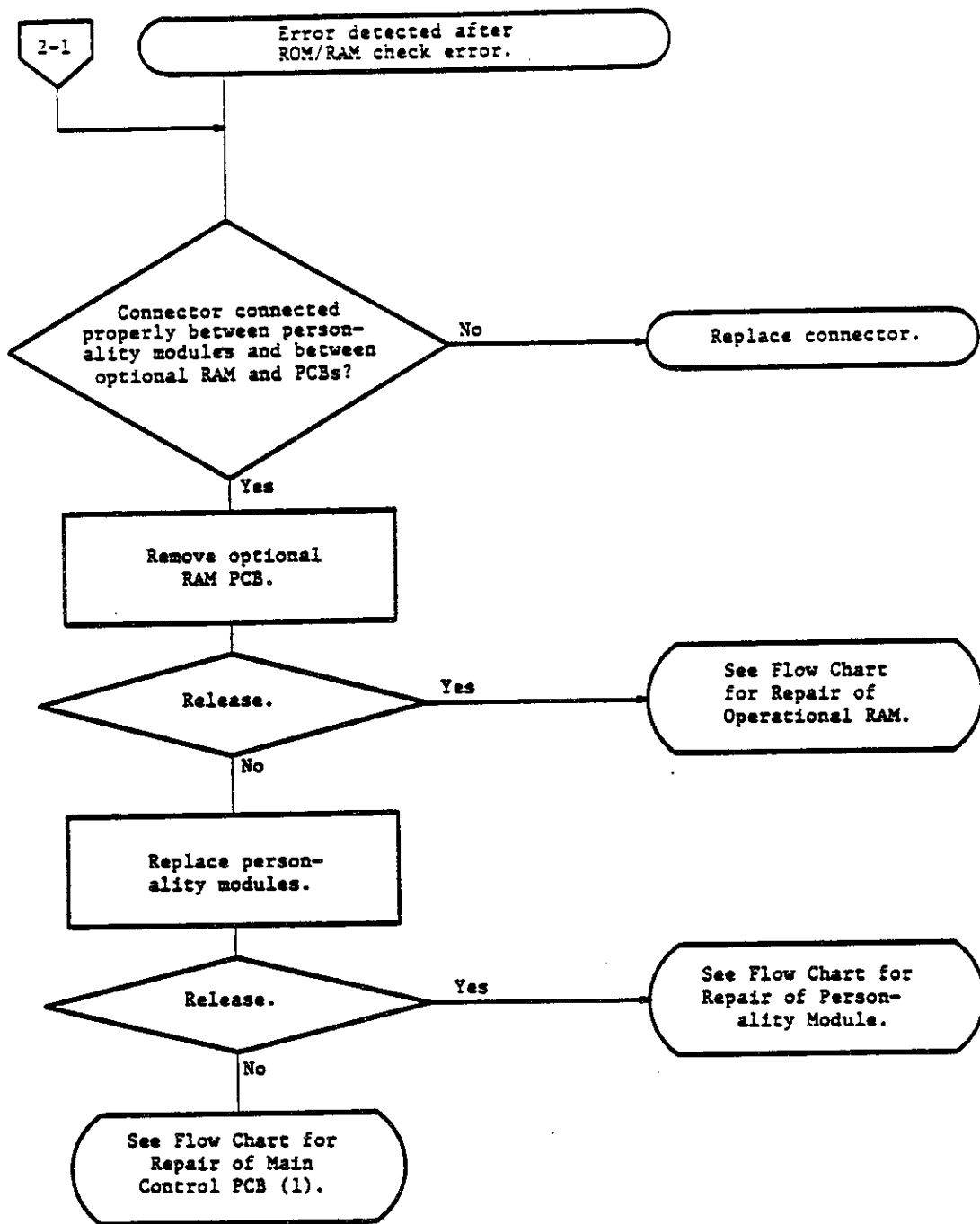
Check each
drive circuit.

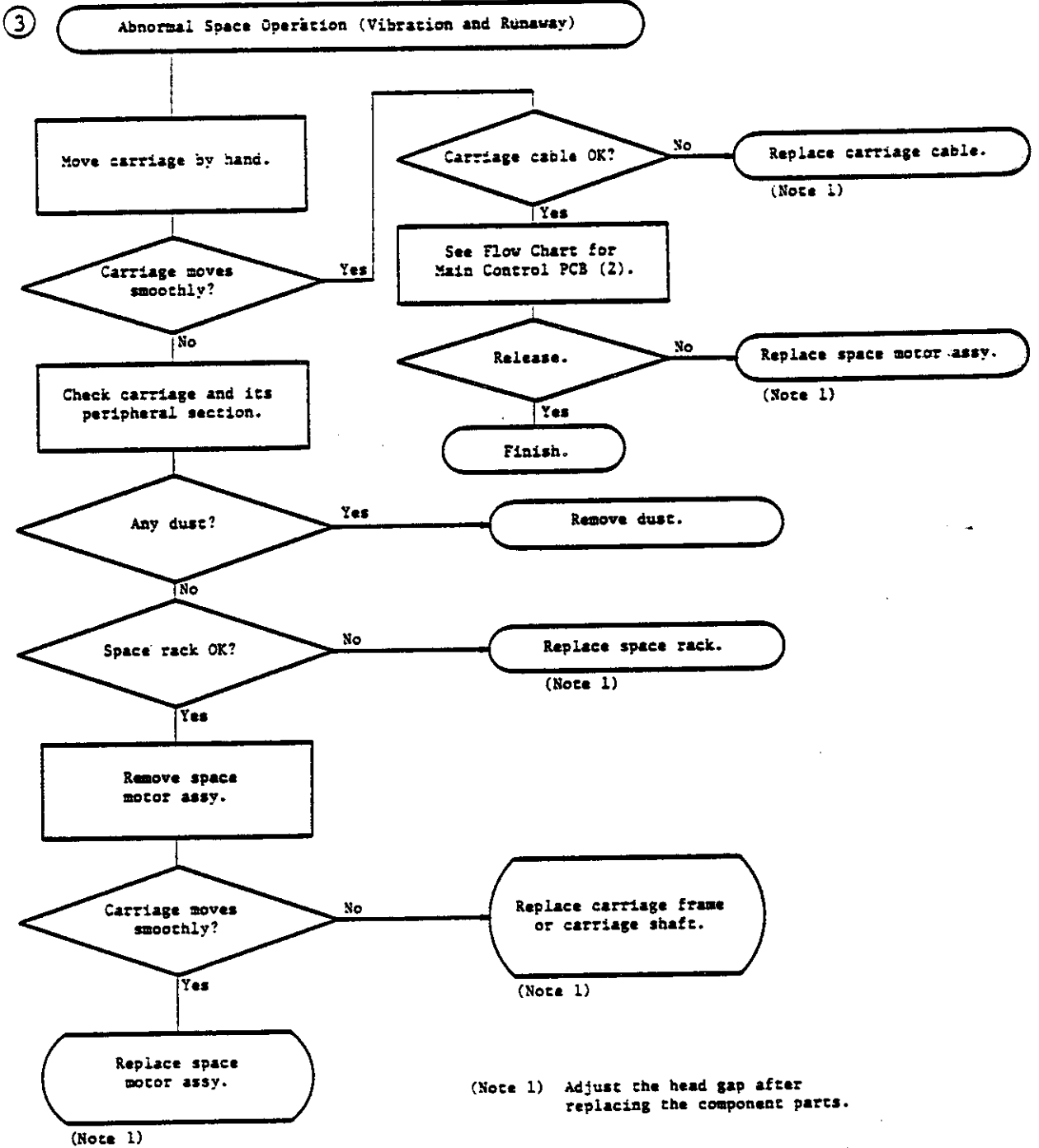
② No space operation (Sel-lamp Blinking)

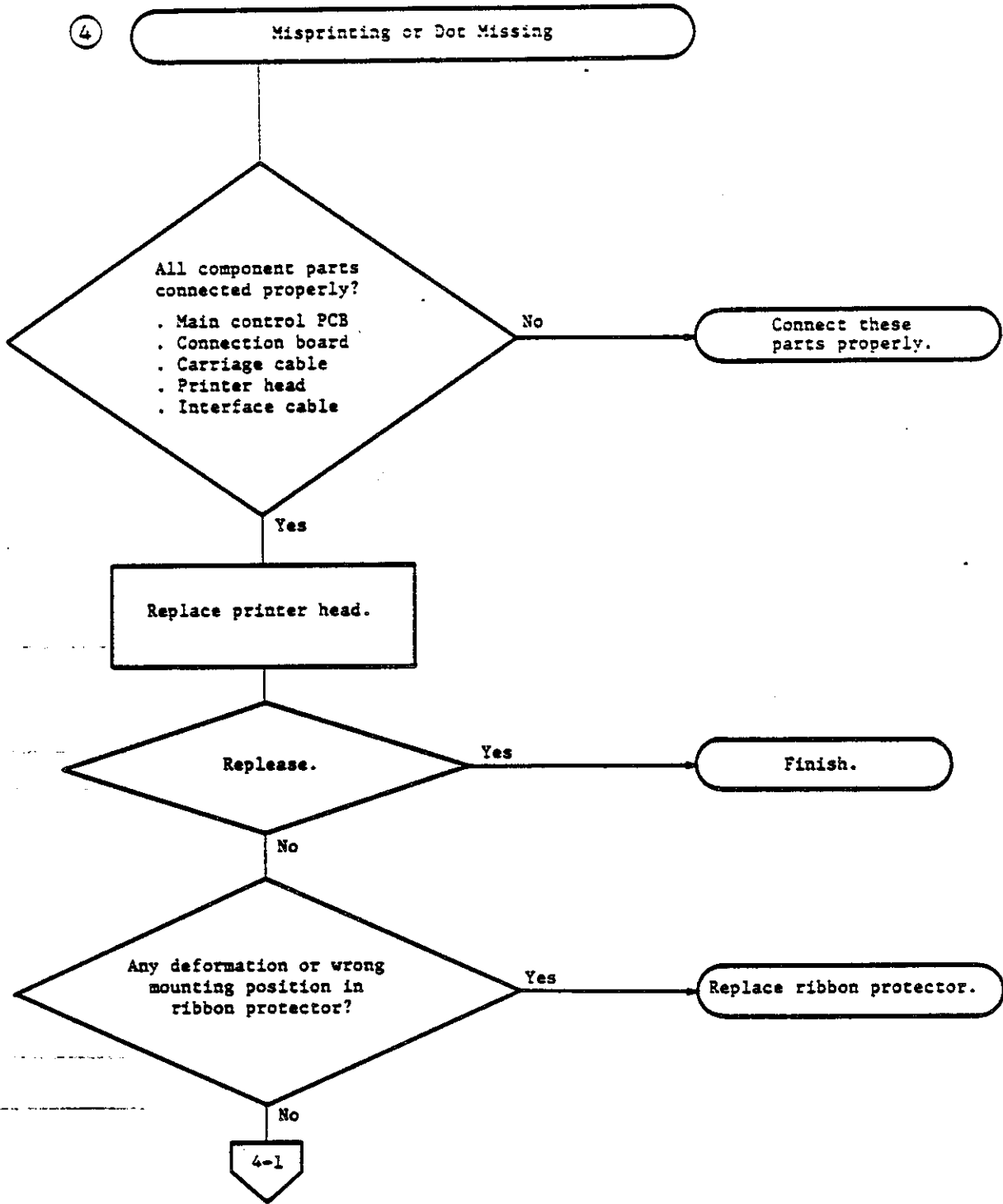
The SEL lamp will blink in any of the following cases:

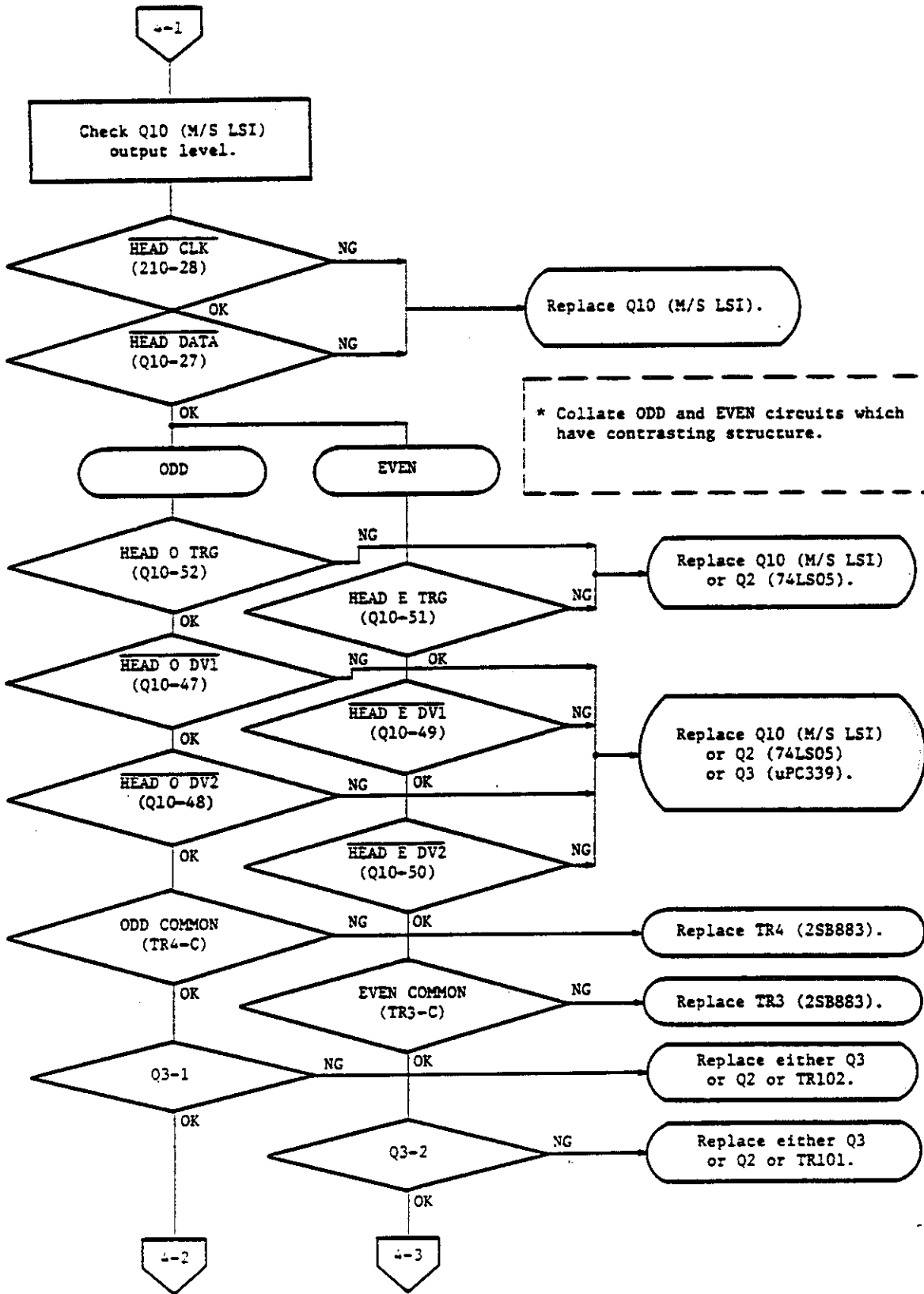
- ① The slit signals of the space motor do not change for 200 ms regardless of start instructions to the motor.
- ② The printing will not end within 6 seconds, counting in one line or one block space.
- ③ The home position of the ribbon, which is the standard for a ribbon band position, has failed to be detected. For example, the ribbon motor can not run.
- ④ An error is detected after checking the ROM and RAM in turning on the power.

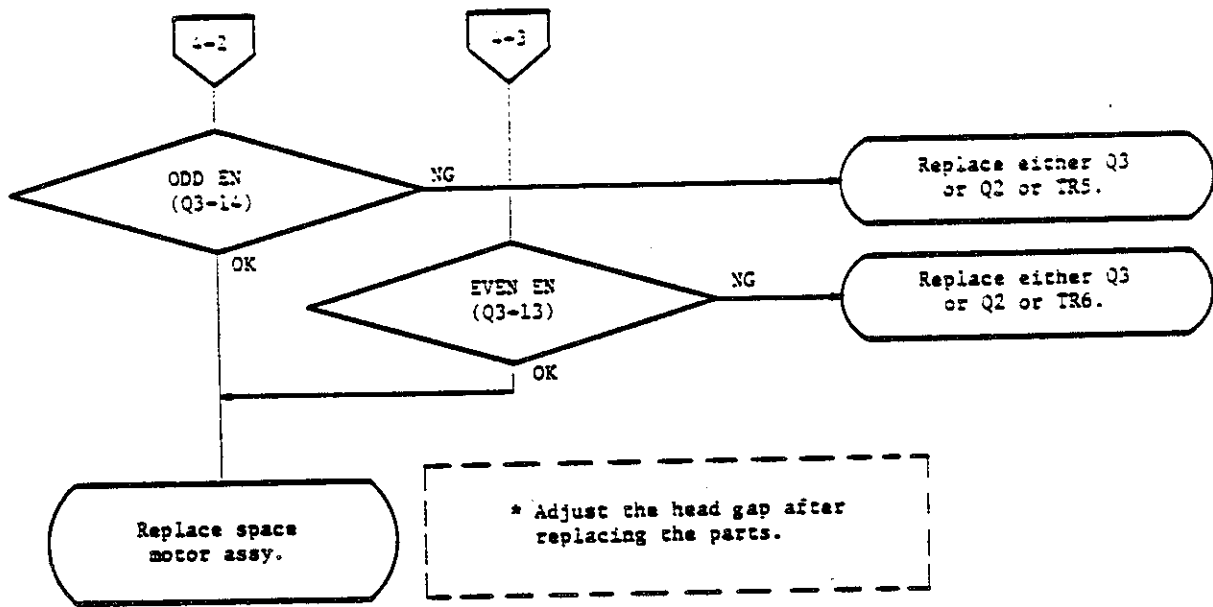




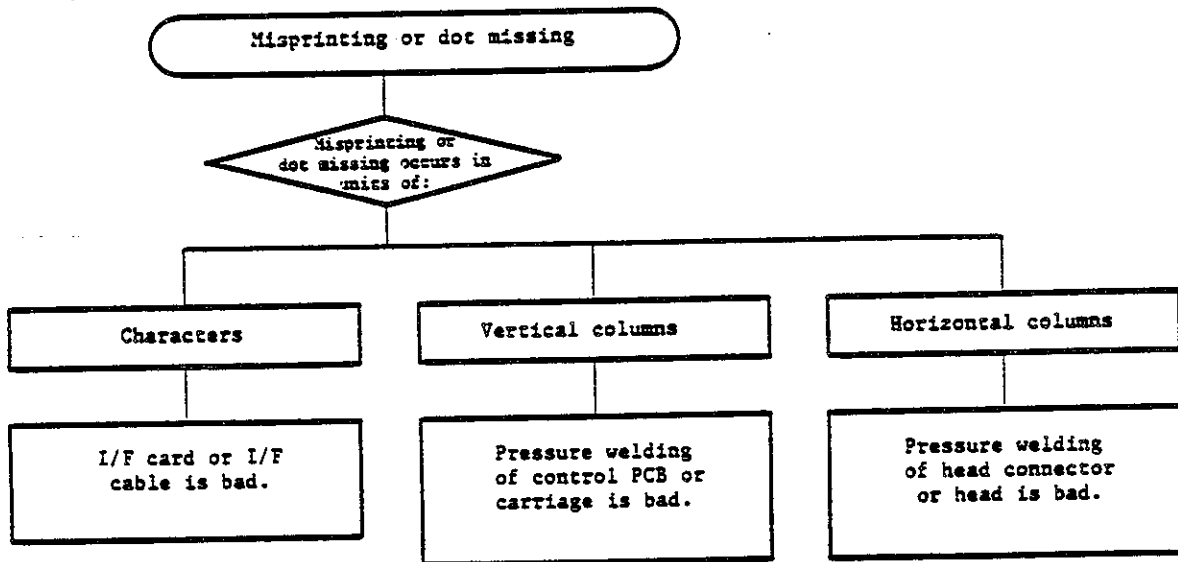






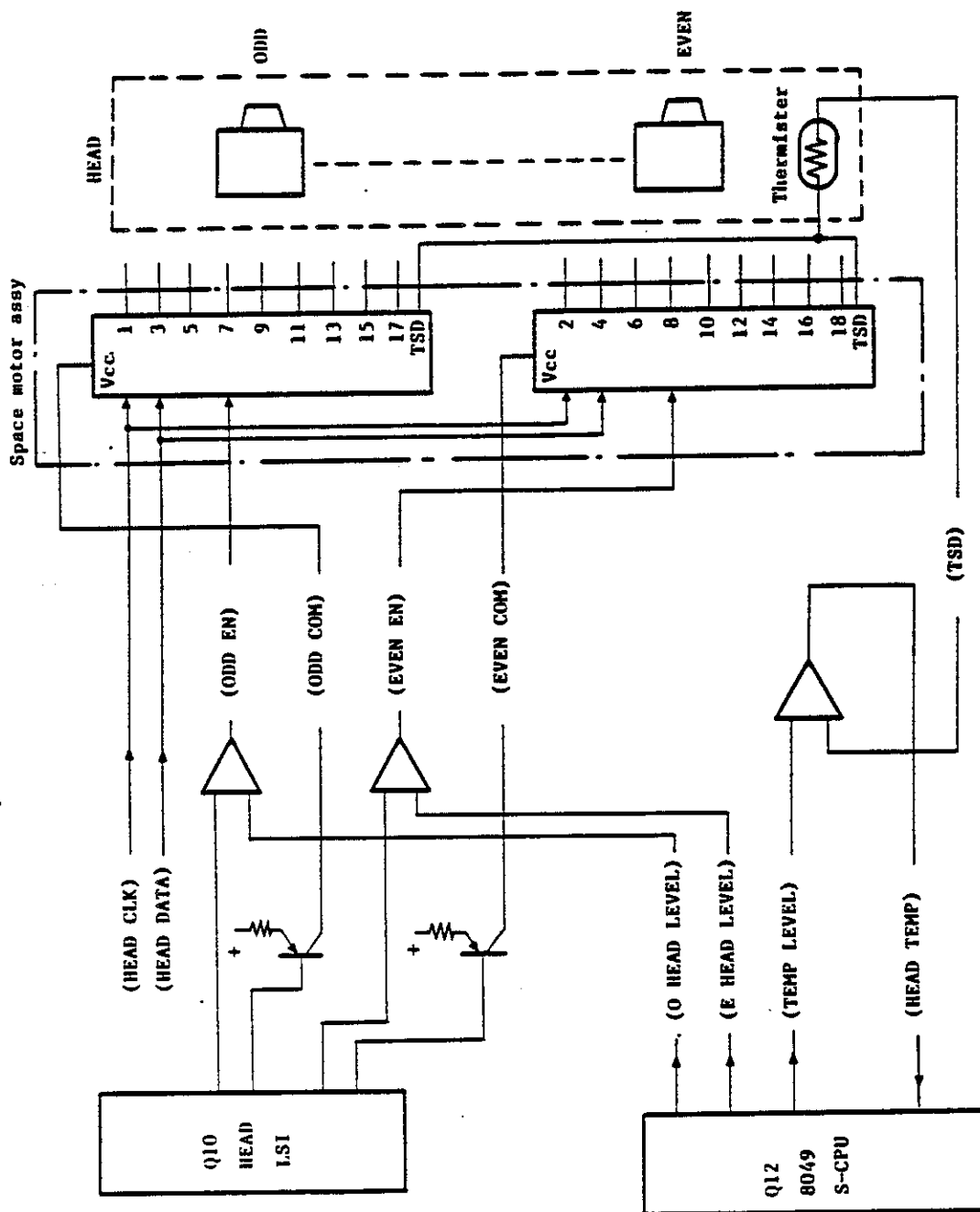


(Reference)



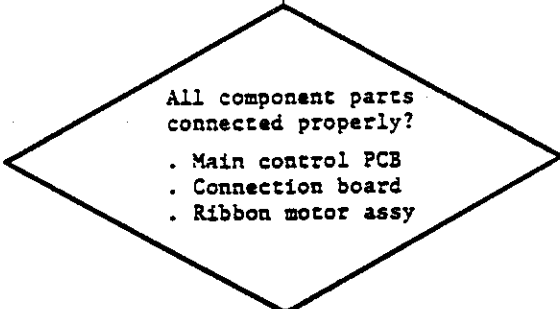
When the head driver or MLIN PCB is bad, printing is completely disabled (sometimes on either ODD or EVEN circuits).

In other cases, the trouble symptoms are not certain.



5

No Ribbon Feed or Color Change

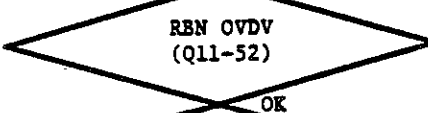


No

Connect these parts properly.

Yes

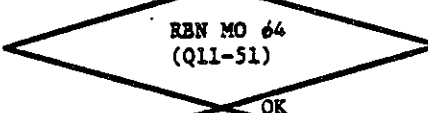
Check Q11 (Motor LSI) output level.



NG

Replace Q11 or TR105.

OK



NG

Replace Q11 or TR14.

OK



NG

Replace Q11 or TR15.

OK



NG

Replace Q11 or TR13.

RBN MO #1 (Q11-48)

NG

Replace Q11 or TR16.

Check output level of RBN MO COMMON signals.



NG

Replace TR10 (2SB766).

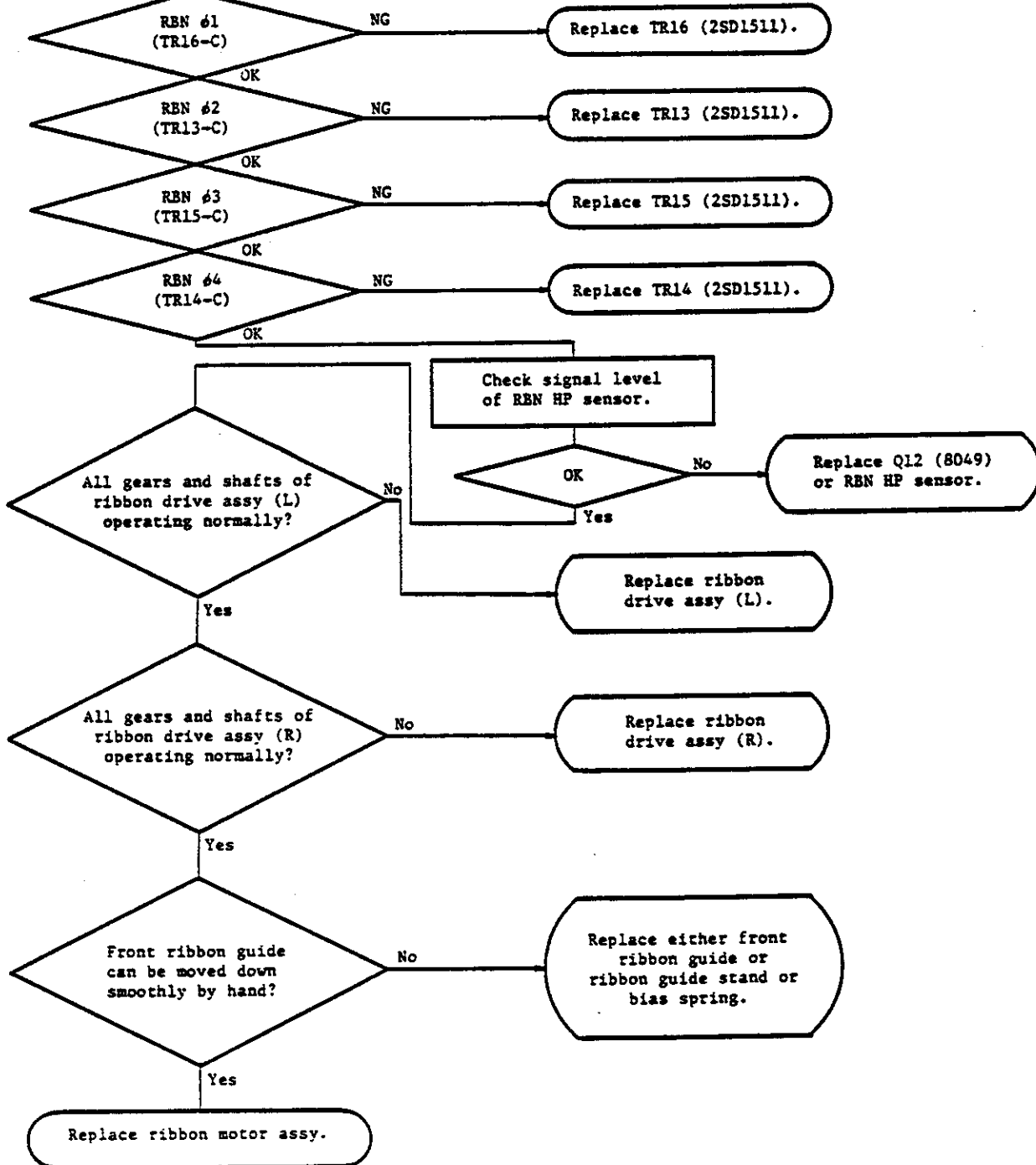
OK

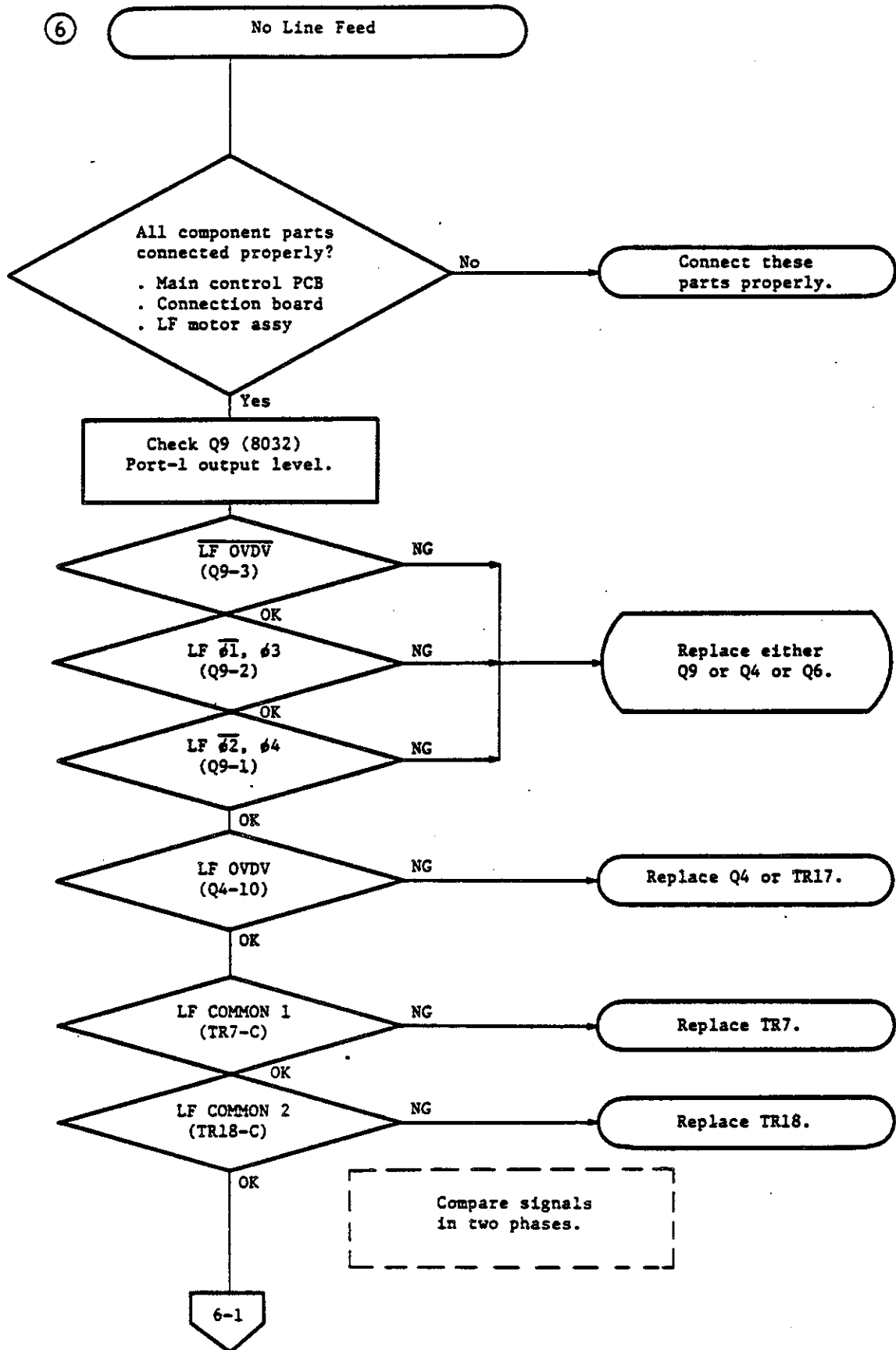
5-1

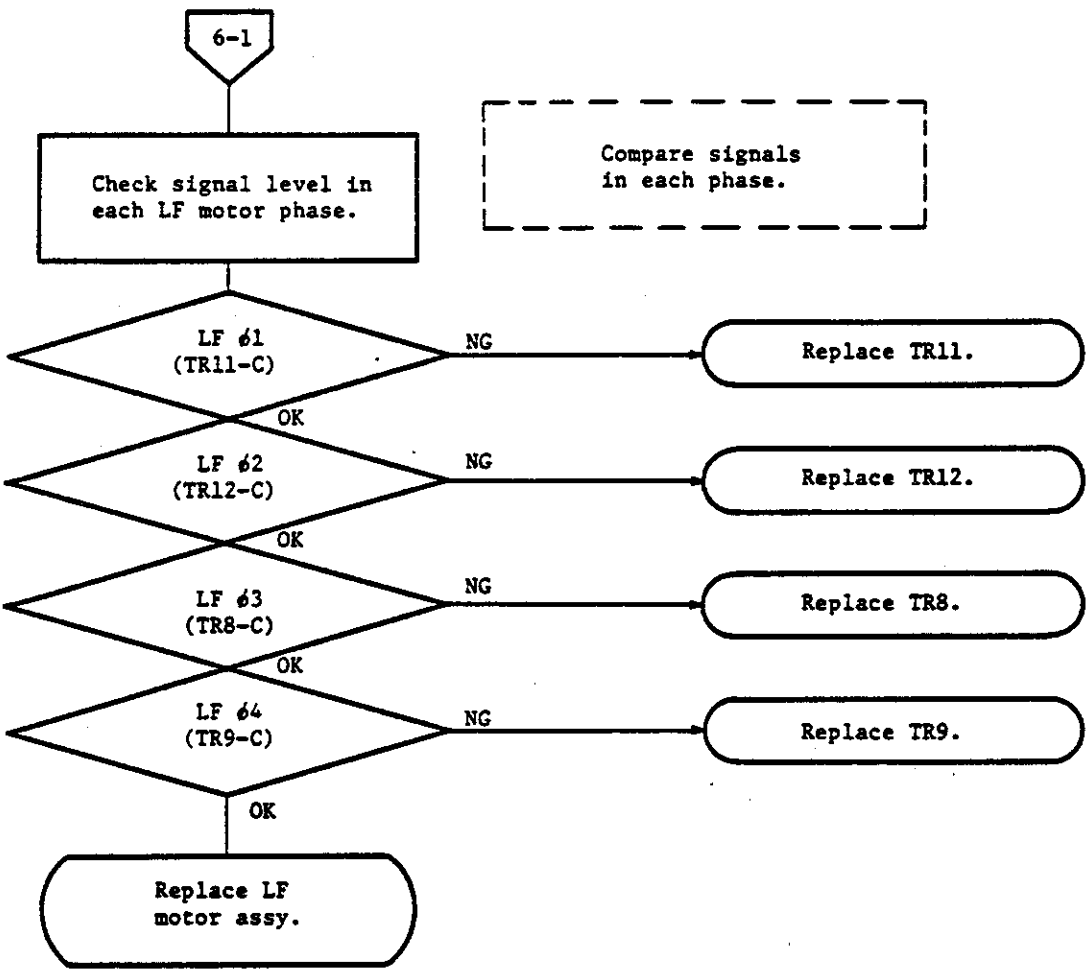
5-1

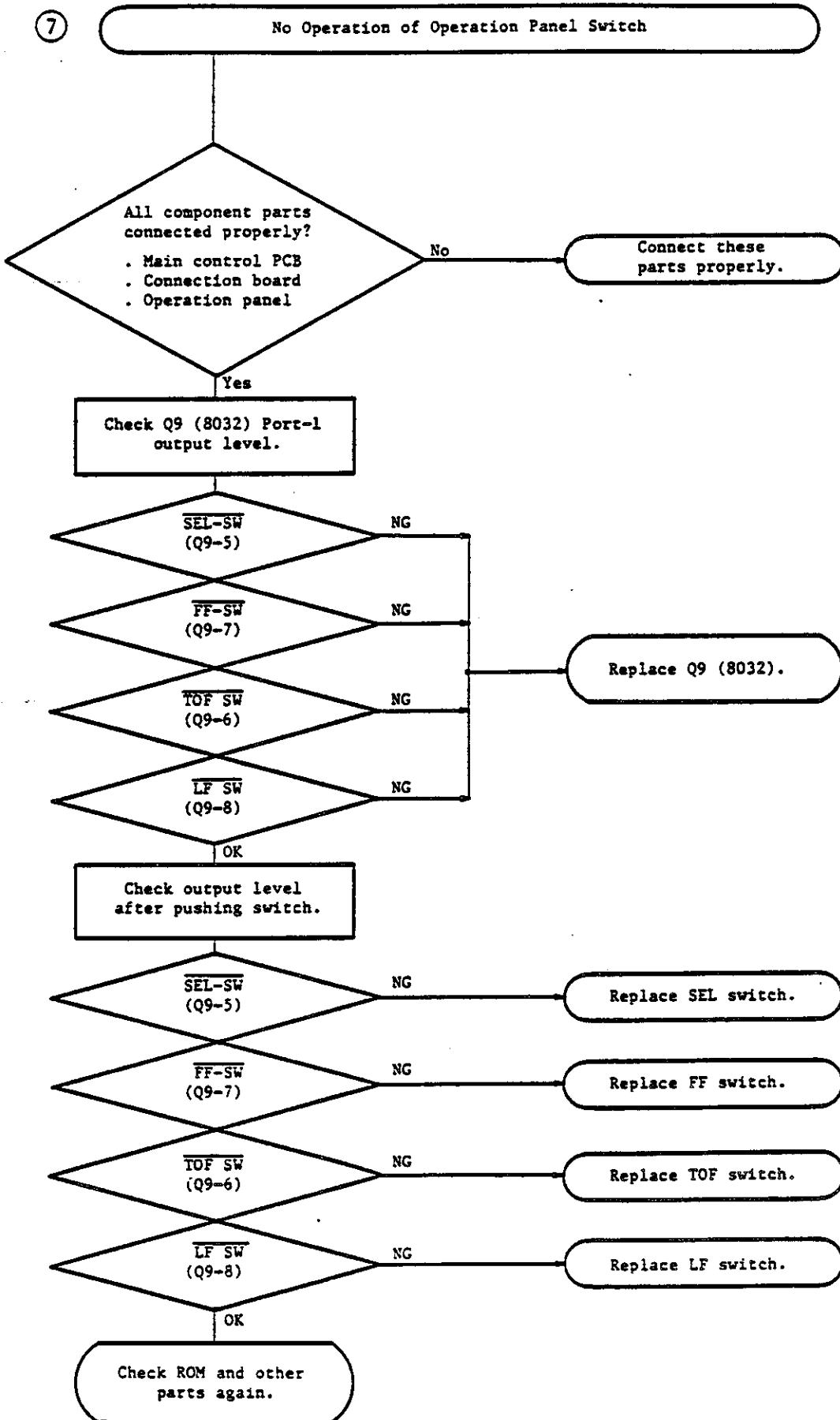
Check output level of signals in each ribbon motor phase.

* Signals in each ribbon motor phase have pulse waveform. Reject any output level that differs from that of the others.



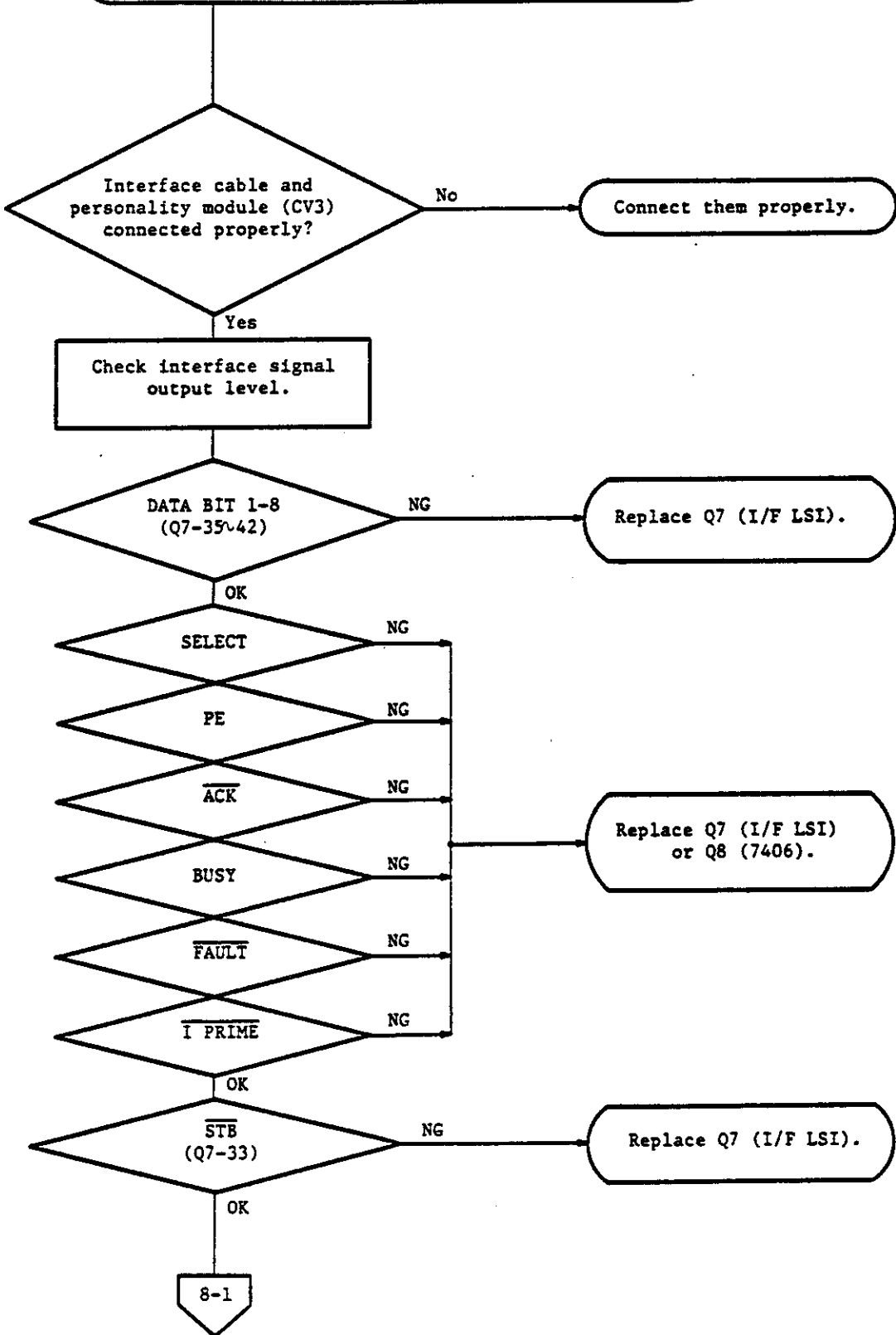


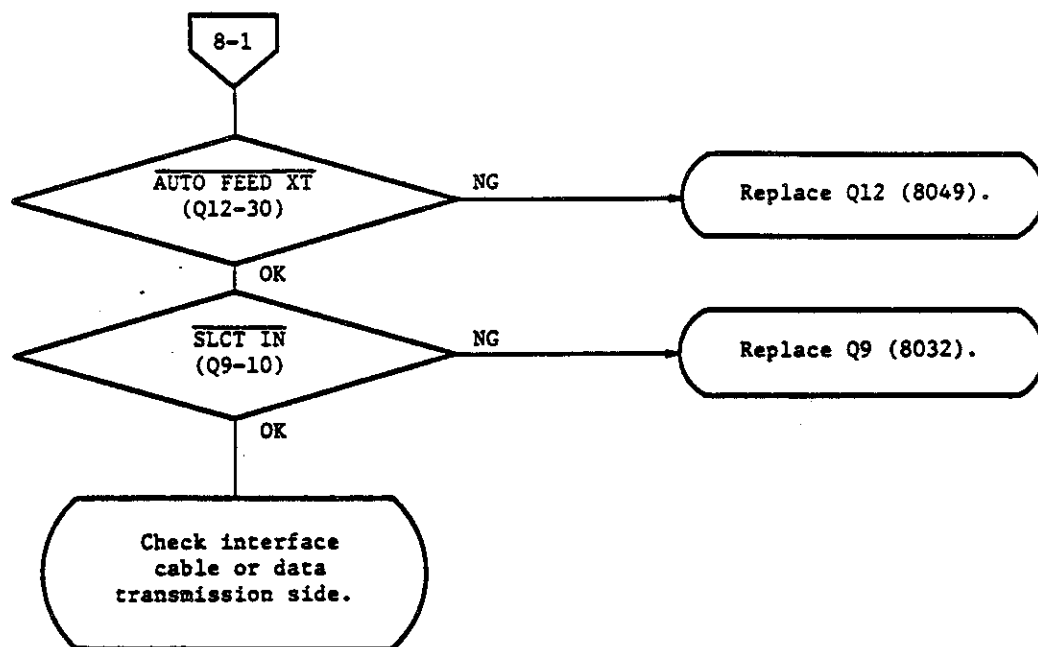




8

Parallel Interface Reception Error

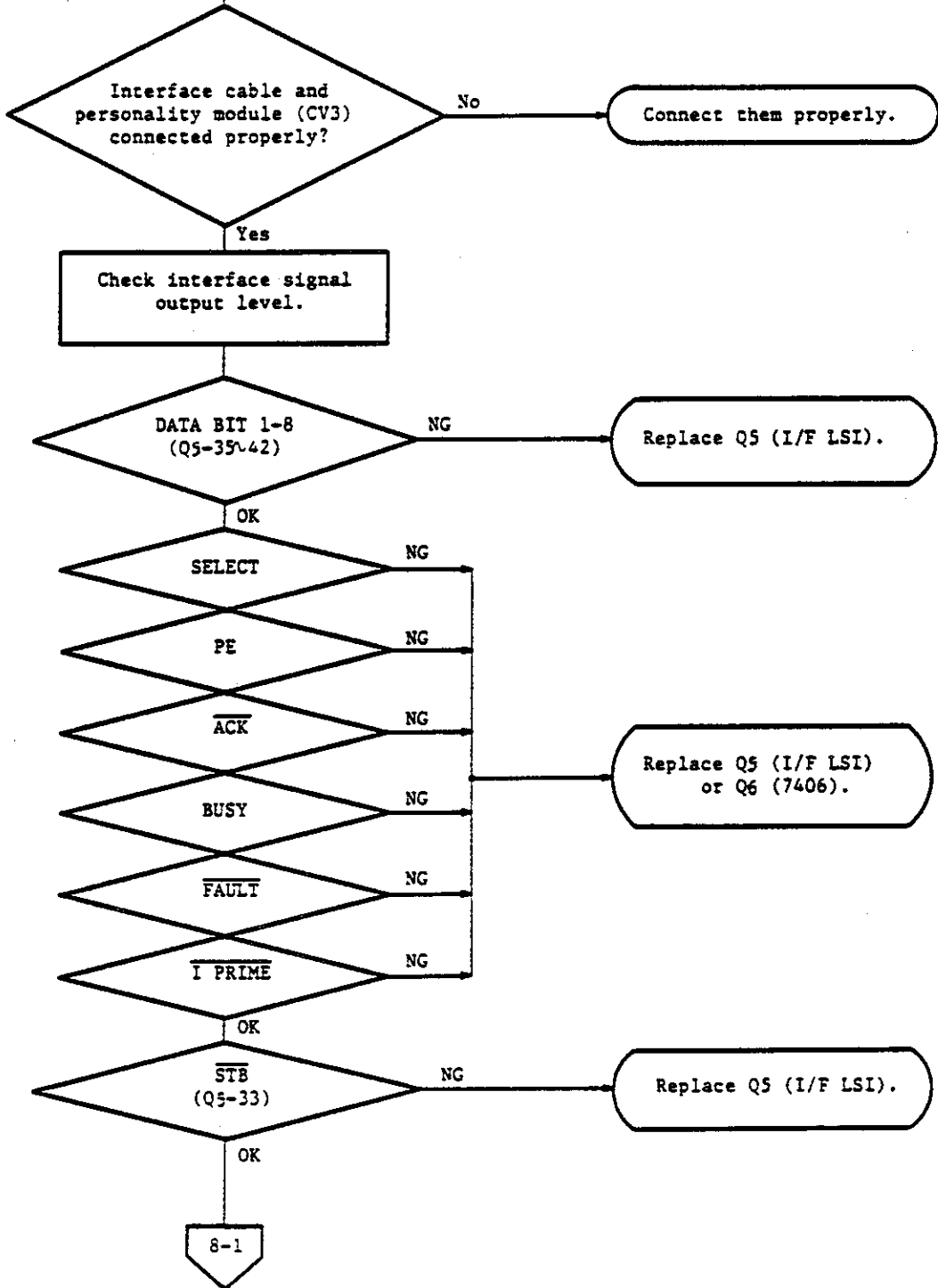




8

Parallel Interface Reception Error

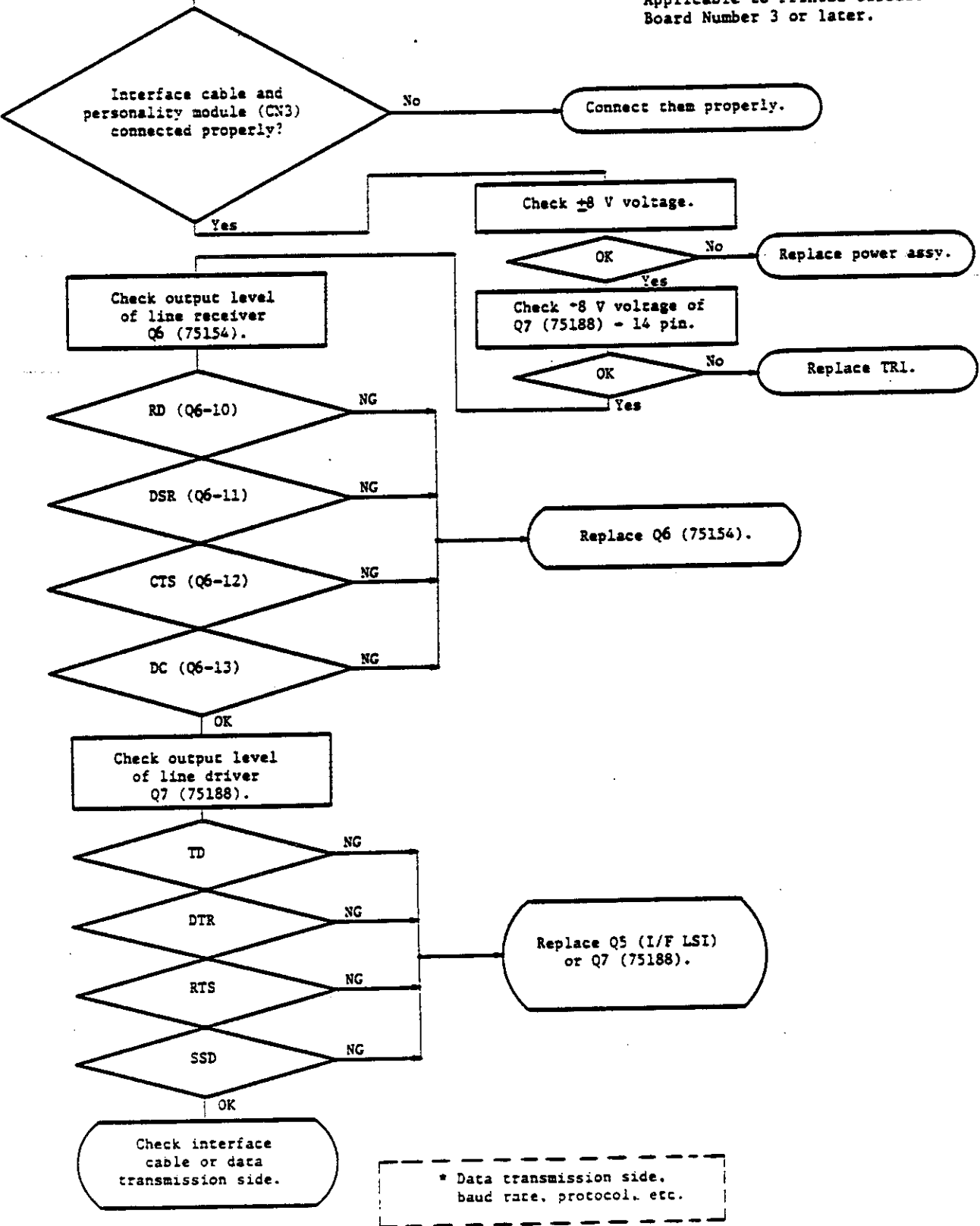
Applicable to Printed Circuit Board Number 3 or later.



9

Serial Interface Reception Error

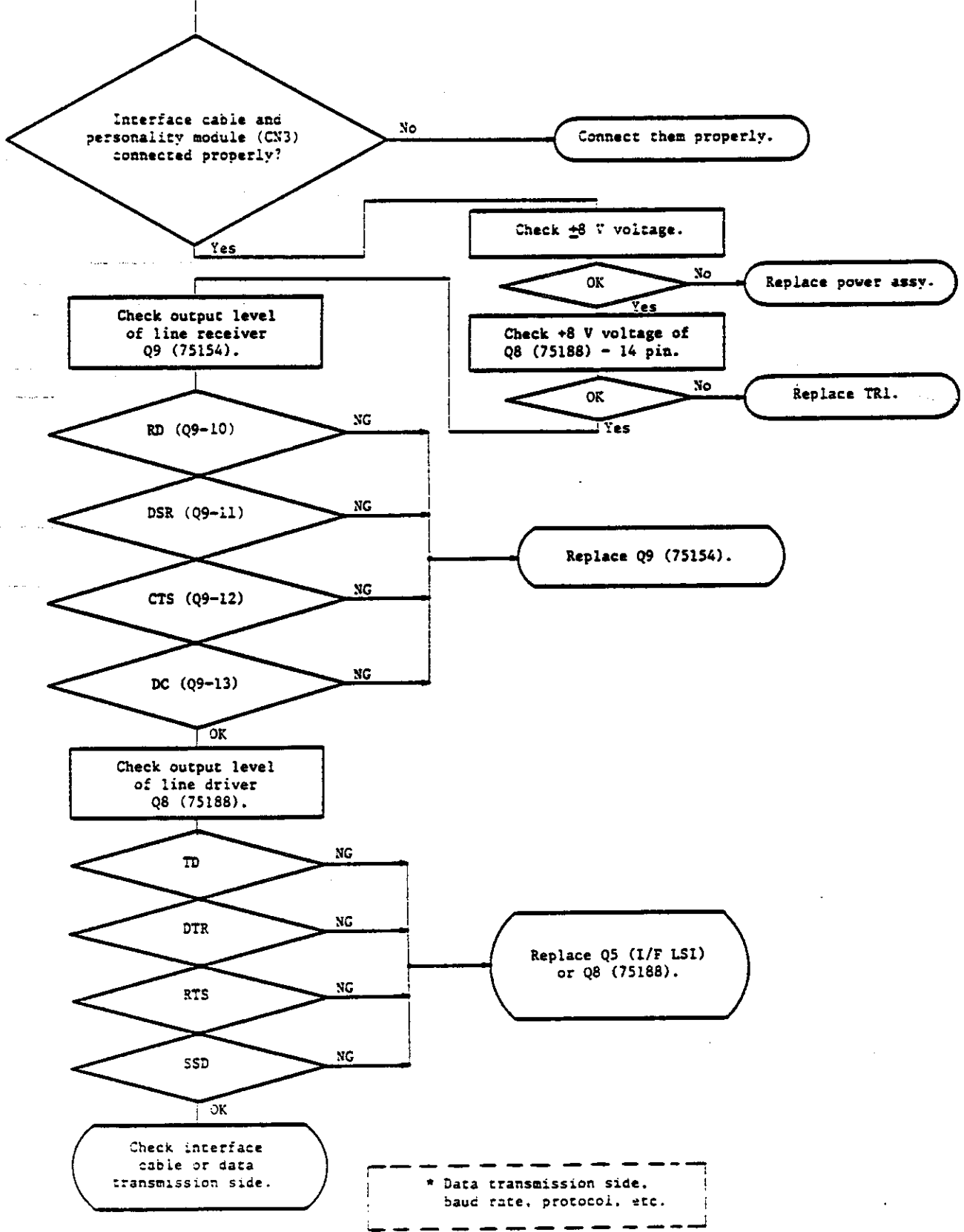
Applicable to Printed Circuit Board Number 3 or later.



* Data transmission side, baud rate, protocol, etc.

9

Serial Interface Reception Error



* Data transmission side. baud rate, protocol, etc.

A

Flow Chart for Repair of Main Control PCB (1)

No operation
ROM/RAM check error

OSC1 and OSC2 oscillate?

No

Replace OSC or Q9 or Q12.

Yes

Judge whether OSC1 and OSC2 can oscillate by checking if ALE has been issued, since OCS has a small oscillation margin.

Ports MCPU (8032 & 8049) have a normal output level?

No

Replace any bad element on BUS-Line.

Yes

All LSIs have normal output level?

No

Replace bad LSIs and their elements.

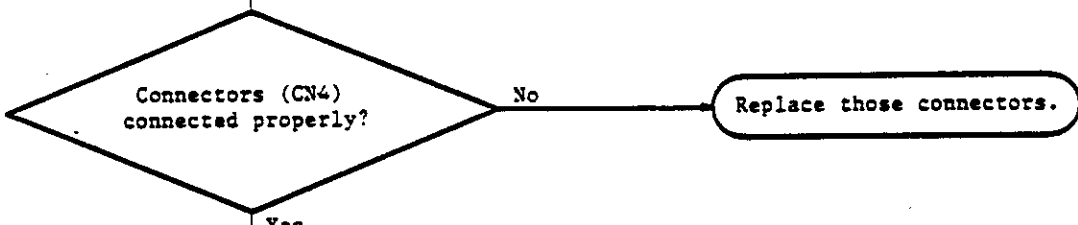
Yes

Check connection of connectors (CN1, CN3, CN4) and their related parts.

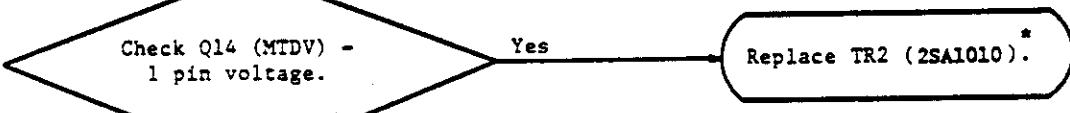
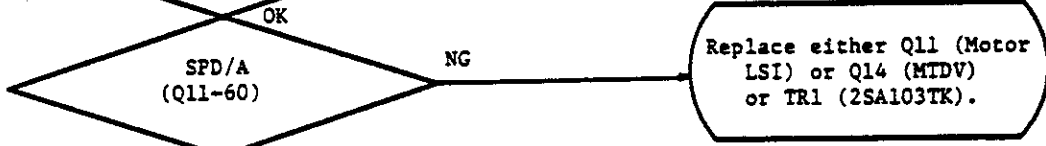
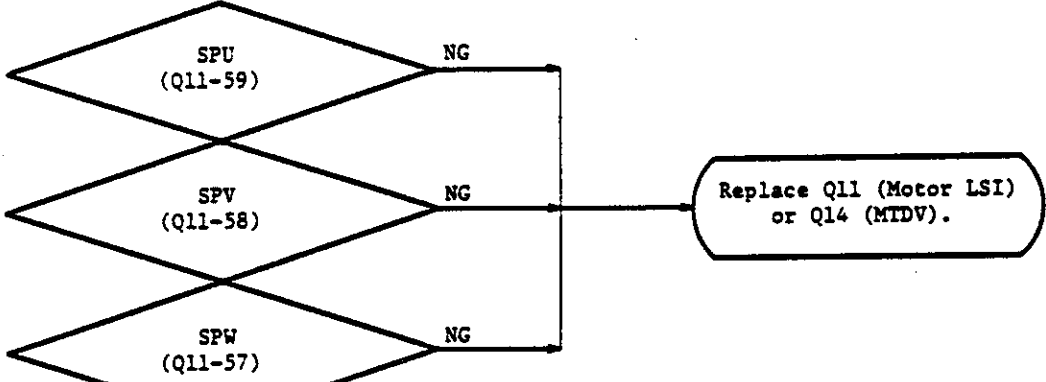
B

Flow Chart for Repair of Main Control PCB (2)

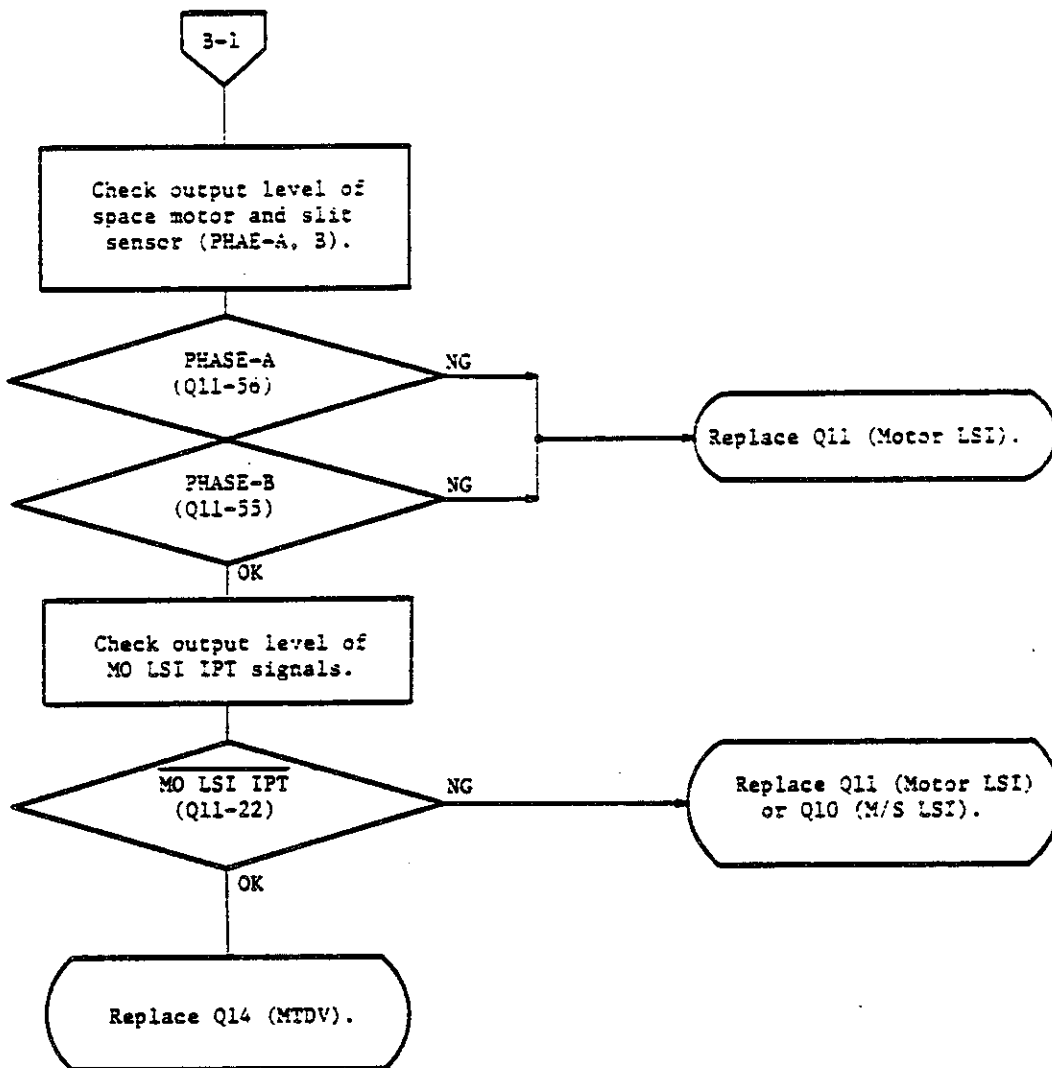
Abnormal space operation

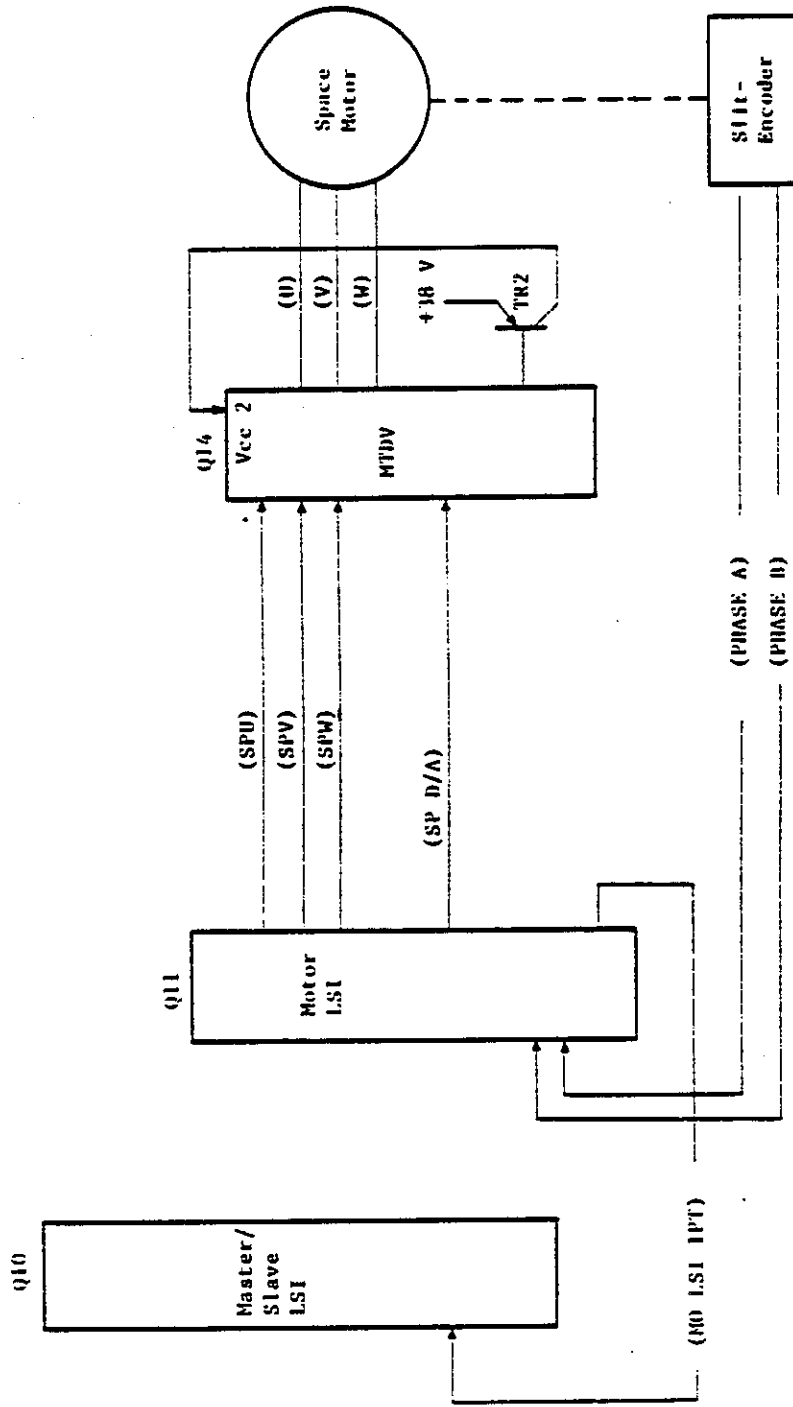


Check output level of Q11 (Motor LSI).



* 2SA1488 or 2SB1185 have the Printed Circuit Board Number 8 or later.

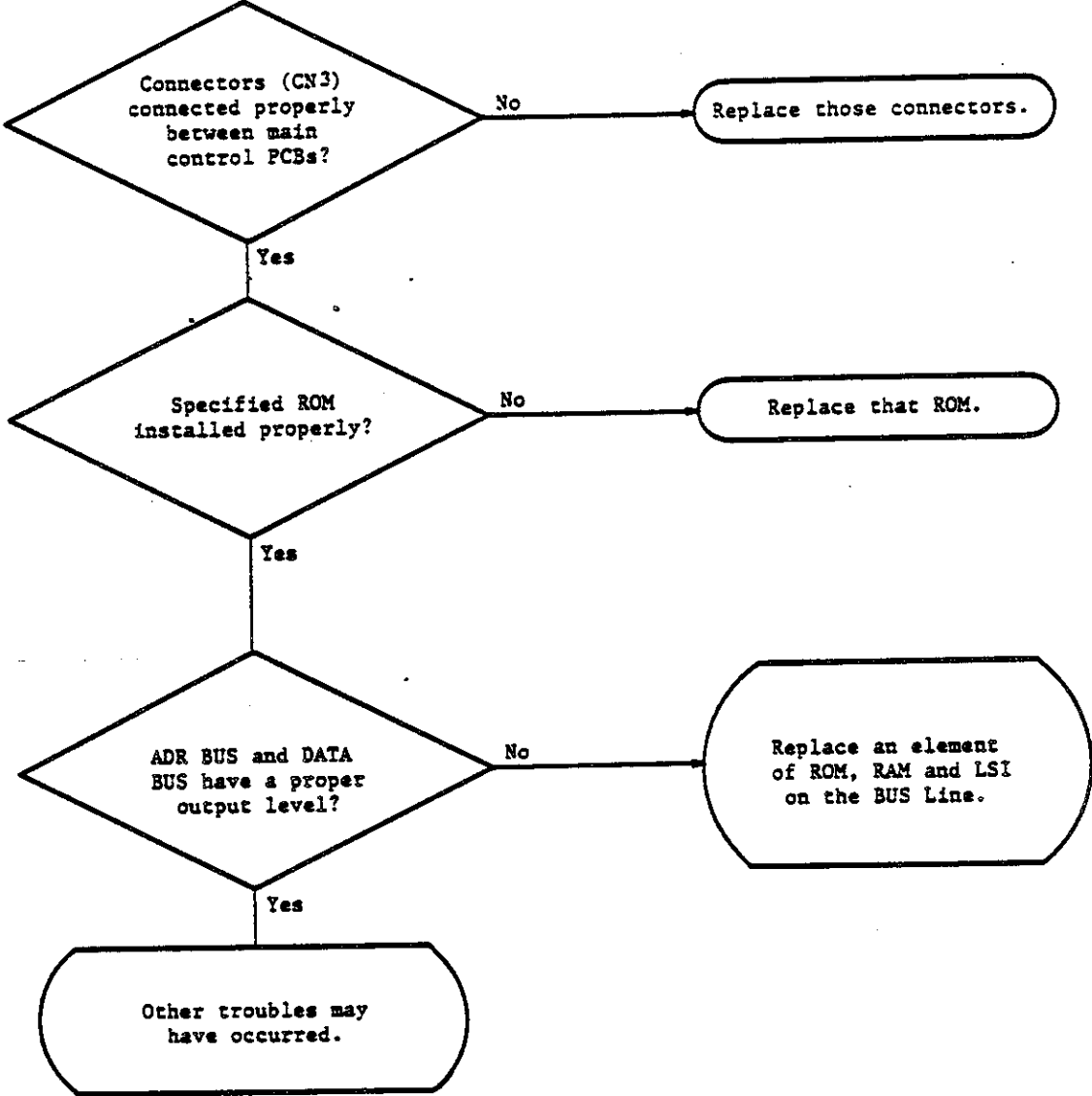




C

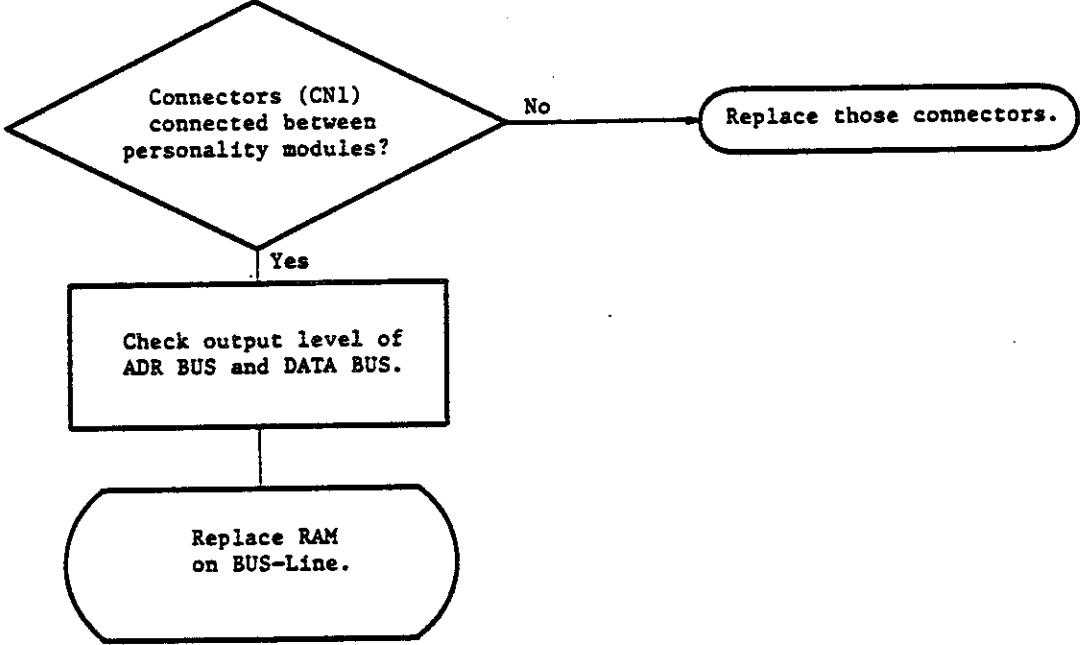
Flow Chart for Repair of Personality Module

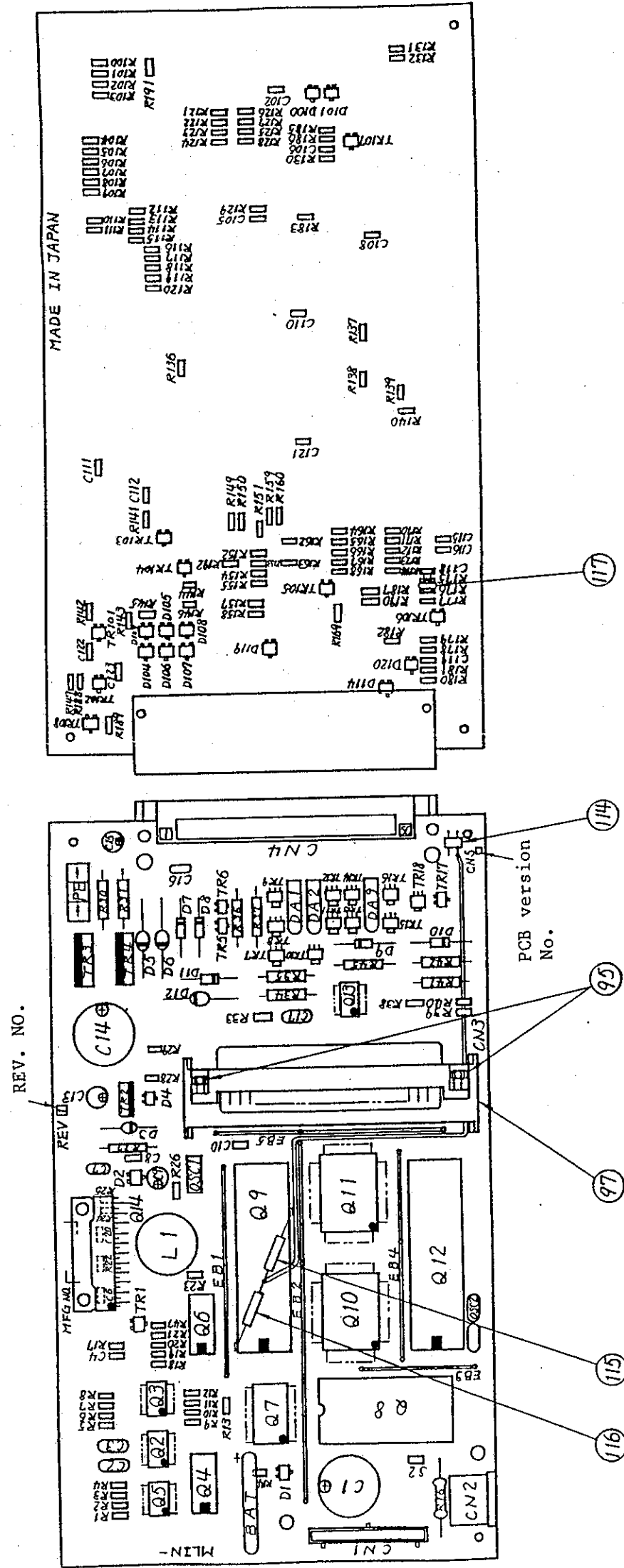
ROM/RAM error, etc.



D

Flow Chart for Repair of Optional RAM PCB





Part name	PCB version no.	Rev. no.
MLIN-	4	1
Remarks		

MLIN-Printed Circuit Board
(4YA4042-1062G1) 1/2 1st Version

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (1/6) 1st Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1	D11	RD39F-B Zener DI (CP)	613A2232L0322	1	
2	D2	MA3300 Zener DI (CP)	613A0291M0292	1	
3	D105	MA3200 Zener DI (CP)	613A0291M0252	1	
4	D4	MA3100 Zener DI (CP)	613A0291M0182	1	
5	D114	MA3047-M Zener DI (CP)	613A0291M0102M	1	
6	D1, D100, D101, D103, D106, D107	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	8	
7	D104, D108	MA152WK Signal DI (CP)	611A0029M0003	2	
8	D3	DFAL1 Rectification DI	610A0221L0021	1	
9	D5, D6, D12	DSA3A1 Rectification DI	610A0021L0092	3	
10	D7-D10	EM1Z/SM-1A-02/DSA1A2 Rectification DI	610A0003M0001	4	
11	DA1, DA3	D1CA20 Diode array	761A2232M0401	2	
12	DA2	D1CA20R Rectification diode	610A3027M0001	1	
13					
14					
15	R5, R7	RM73B2B472F RN resistance	323A5015F0472	2	
16	R1, R4, R100, R103	RM73B2B334J RN resistance (CP)	323A5015J0334	4	
17	R147	RM73B2B131J RN resistance (CP)	323A5015J0131	1	
18	R190	RM73B2B392J RN resistance (CP)	323A5015J0392	1	
19	R144	RM73B2B363J RN resistance (CP)	323A5015J0363	1	
20	R181	RM73B2B124J RN resistance (CP)	323A5015J0124	1	
21	R162	RM73B2B221J RN resistance (CP)	323A5015J0221	1	
22	R163	RM73B2B431J RN resistance (CP)	323A5015J0431	1	
23	R39, R180	RM73B2B511J RN resistance (CP)	323A5015J0511	2	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (2/6) 1st Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
24	R14,R19,R21, R28,R149-R151, R157-R159,R171, R174,R177,R187	RM73B2B1021J RN resistance (CP)	323A5015J0102	14	
25	R142,R143,R169, R182,R192	RM73B2B122J RN resistance (CP)	323A5015J0122	5	
26	R26,R29, R112-R117,R119, R120,R129,R130, R136,R164, R166-R168,R176	RM73B2B222J RN resistance (CP)	323A5015J0222	18	
27	R131,R132,R137, R138,R152-R155, R170,R183,R185, R186,R189,R191	RM73B2B512J RN resistance (CP)	323A5015J0512	14	
28	R40,R118,R165	RM73B2B562J RN resistance (CP)	323A5015J0562	3	
29	R13,R20,R23, R121-R128,R139, R140,R160,R175, R188	RM73B2B103J RN resistance (CP)	323A5015J0103	16	
30	R38	RM73B2B123J RN resistance (CP)	323A5015J0123	1	
31	R17	RM73B2B183J RN resistance (CP)	323A5015J0183	1	
32	R145,R146	RM73B2B104J RN resistance (CP)	323A5015J0104	2	
33	R18	RM73B2B224J RN resistance (CP)	323A5015J0224	1	
34	R6,R8,R24,R25, R107,R109,R172, R173	RM73B2B242F RN resistance (CP)	323A5015F0242	8	
35	R106,R108	RM73B2B272F RN resistance (CP)	323A5015F0272	2	
36	R33,R110,R111	RM73B2B223F RN resistance (CP)	323A5015F0223	3	
37	R9-R12	RM73B2B513F RN resistance (CP)	323A5015F0513	4	
38	R179	RM73B2B752F RN resistance (CP)	323A5015F0752	1	
39	R41,R42	RD1/2Y150ΩJ RD resistance	321A1431J0151	2	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (3/6) 1st Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
40	R34,R35,R45	RD1/ZY2.2k Ω J	321A1431J0222	3	
41	R36,R37	RD1/ZY3.9k Ω J RD resistance	321A1431J0392	2	
42	R27	MSF1/2B0.51 Ω J RS resistance	324A1001J0518	1	
43	R16	FMR1-1.8 Ω J Fuse resistance	327A1002J0189	1	
44	R30,R31	RD1/ZY2.4k Ω J RD resistance	321A1431J0242	2	
45	R141	RM73B2B201J RN resistance (CP)	323A5015J0201	1	
46	R178	RM73B2B202F RN resistance (CP)	323A5015J0202	1	
47	R2,R3,R101,R102	RM73B2B334J RN resistance (CP)	323A5015J0334	4	
48	R22	RM73B2B332J RN resistance (CP)	323A5015J0332	1	
49	R104,R105	RM73B2B243F RN resistance (CP)	323A5015F0243	2	
50					
51	C8,C115,C116	CK3216B1H102K CK capacitor (CP)	303A6009K3102	3	
52	C4,C118	CK3216B1H103K CK capacitor (CP)	303A6009K3103	2	
53	C6,C10,C102, C105,C106,C108, C110-C112,C119, C121	CK3216F1H104Z CK capacitor (CP)	303A6009K3104	11	
54	C7,C16	RPE123-127F105Z25 25V CK capacitor 1.0 μ	303A4117Z2105	2	
55	C2,C3	COM92PPLH223F 50V CQ capacitor 0.022 μ	306A4100F1223	2	
56	C15	CEUSM2A010 100V CE capacitor 1.0 μ	304A1041A2109	1	
57	C13	CEUSM1H4R7 50V CE capacitor 4.7 μ	304A1041H1479	1	
58	C9	CEUSM1H100 50V CE capacitor 10 μ	304A1041H1100	1	
59	C1,C14	CEUSM1H102 50V CE capacitor 1000 μ	304A1041H1102	2	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (4/6) 1st Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
60	C20	CC3216SL1H220J CC capacitor (CP)	303A3008K0220	1	
61	C17	RPE122-127C104M50 50V CK capacitor 0.1μ	303A4115M3104	1	
62	C122,C123	CC3216SL1H471J CC capacitor (CP)	303A3008K0471	2	
63					
64					
65	Q9	P8032AH MOS-CPU	851A2152M0011	1	
66	Q12	MSM80C39HRS MOS-CPU	851A0124F0003H	1	
67	Q11	MSM61048GS-VK MOS digital IC (FP)	702A4924F0020	1	
68	Q10	MSM60769GS-VK MOS digital IC (FP)	702A4924F7069V	1	
69	Q7	MSM5128-20GS-VK MOS-S-RAM (SO)	804A0024N4302Y	1	
70	Q6	7407P BIP digital IC	700A0003M0007	1	
71	Q2,Q5	SN74LS05NS	700A0550N0005	2	
72	Q4	7406P BIP digital IC	700A0003M0006	1	
73	Q14	HA13412 BIP linear system IC (SO)	720A4021E0004	1	
74	Q3,Q13	NJM2901M BIP linear system IC (SO)	720A0528N0002	2	
75	Q8	DL2-28A-05 IC socket	245A1155P0280	1	
76	Q8	Main ROM	4YR4064-1184	1	
77					
78	TR17,TR101, TR102,TR105	2SC3361 NPN-HF-TR (CP)	602A1032N0002	4	
79	TR7,TR10,TR18	2SB766A-Q/R PNP-LF-TR (CP)	601A1130M0001	3	
80	TR8,TR9, TR11-TR16	2SD1511 NPN-LF-TR (CP)	603A1130N0003	8	

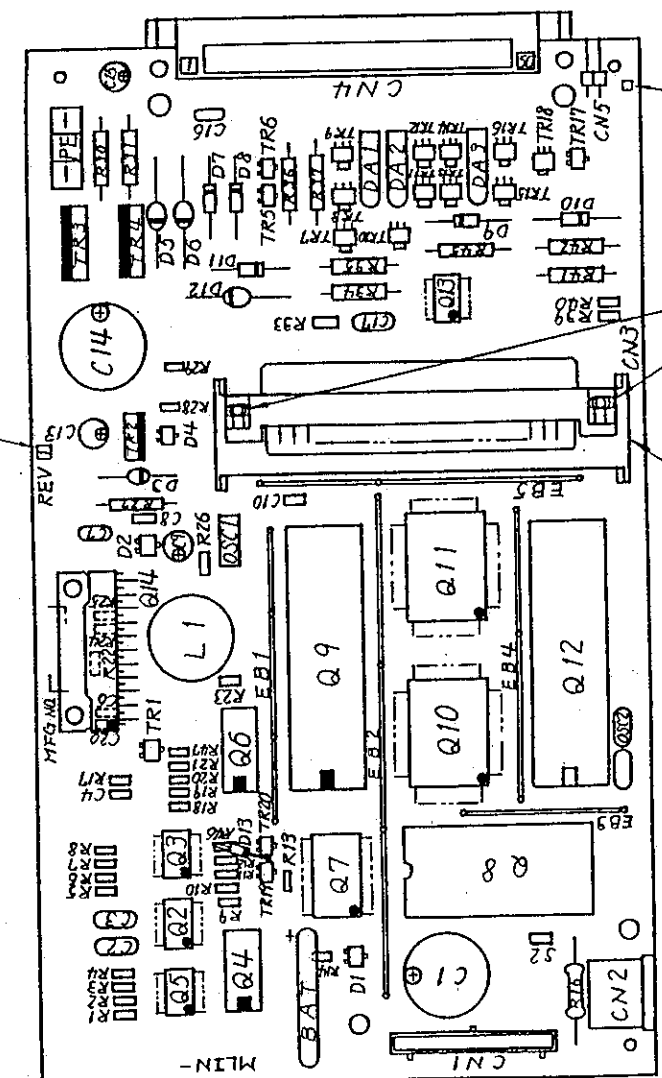
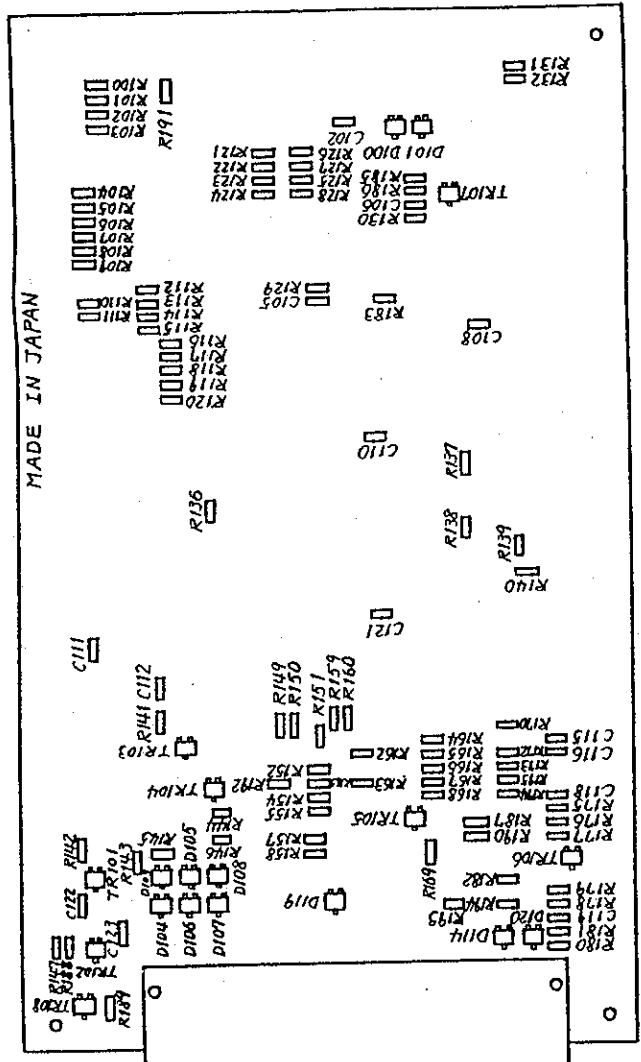
MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (5/6) 1st Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
81	TR1, TR106	2SA1331/2SA1037K PNP-HF-TR (CP)	600A1003N0002	2	
82	TR2	2SA1010 PNP-HF-TR	600A1223M0001	1	
83	TR3, TR4	2SB883 PNP-LF-TR	601A1232M0001	2	
84	TR5, TR6, TR103, TR104, TR107, TR108	2SC3361/2SC2412K NPN-HF-TR (CP)	602A1003N0002	6	
85					
86	L1	OL1614-102KR70 (B) H coil	353A3002K0102	1	
87					
88					
89	CN1	1-172681-2 PC connector	224A3462P0120	1	
90	CN2	TCS7580-01-101 Round head connector	221A1525P0080	1	
91	CN3	00-8272-244959762-06 PC connector	224A3607P0440	1	
92	CN4	PD50A2X0 PC connector	224A1160P0500	1	
93					
94					
95		P3055B Bush rivet	136A1180P0001	2	
96					
97		Connector support bracket	4PP4043-1996P001	1	
98					
99	OSC1	FAR-C4SB11059000-M02 Oscillator	4LP-12186-1	1	
100	OSC2	KMFC1112T7 Ceramic oscillator	381A1101B1013	1	
101					
102	PE	EE-SJ5-B Photocoupler	652A0127M0009	1	
103					
104	BAT	CR2430 Battery	4LP-45478	1	
106	S2	MCR18-JPW Chip jumper (CP)	323A5011P0001		

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (6/6) 1st Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
107					
108					
109	EB1	Power bar L=53.34	3LH-31313-70	1	
110	EB2	Power bar L=91.44 P=30.48 N=4	3LH-31313-86	1	
111	EB3	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	1	
112	EB4	Power bar L=53.34	3LH-31313-49	1	
113	EB5	Power bar L=60.96	3LH-31313-56	1	
114		Connector	FFC-2TLAW1B	1	
115		RD1/4Y1kΩJ RD resistance	321A1421J0102	1	
116		RD1/4Y5.1kΩJ RD resistance	321A1421J0512	1	
117		CK capacitor 1.5μF	303A4117Z2155	1	

REV. NO.



PCB version No.

95
97

Part name	PCB version no.	Rev. no.
MLIN-	5	1
Remarks		

MLIN-Printed Circuit Board
(4YA4042-1062G1) 1/2 2nd Version

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (1/6) 2nd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1	D11	RD39F-B Zener DI	613A2232L0322	1	
2	D2	MA3300 Zener DI (CP)	613A0291M0292	1	
3	D105	MA3200 Zener DI (CP)	613A0291M0252	1	
4	D4	MA3100 Zener DI (CP)	613A0291M0182	1	
5	D114	MA3047-M Zener DI(CP)	613A0291M0102M	1	
6	D1,D100,D101, D103,D106,D107, D119,D120	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	8	
7	D104,D108	MA152WK Signal DI (CP)	611A0029M0003	2	
8	D3	DFA1A1 Rectification DI	610A0221L0021	1	
9	D5,D6,D12	DSA3A1 Rectification DI	610A0021L0092	3	
10	D7-D10	EM1Z/SM-1A-02/DSA1A2 Rectification DI	610A0003M0001	4	
11	DA1,DA3	D1CA20 Diode array	761A2232M0401	2	
12	DA2	D1CA20R Rectification diode	610A3027M0001	1	
13	D13	1S953/1S2075K/1S2473 Signal DI	611A0003L0001	1	
14					
15	R5,R7	RM73B2B472F RN resistance (CP)	323A5015F0472	2	
16	R1,R4,R100,R103	RM73B2B334J RN resistance (CP)	323A5015F0334	4	
17	R147	RM73B2B131J RN resistance (CP)	323A5015F0131	1	
18	R106,R108,R190	RM73B2B392J	323A5015F0392	3	
19	R144	RM73B2B363J RN resistance (CP)	323A5015J0363	1	
20	R181	RM73B2B124J RN resistance (CP)	323A5015J0124	1	
21	R162	RM73B2B221J RN resistance (CP)	323A5015J0221	1	
22	R163	RM73B2B431J RN resistance (CP)	323A5015J0431	1	
23	R39,R180	RM73B2B511J RN resistance (CP)	323A5015J0511	2	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (2/6) 2nd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
24	R14,R19,R21, R28,R149-R151, R157-R159,R174, R177,R187,R193	RM73B2B102J RN resistance (CP)	323A5015J0102	14	
25	R142,R143,R169, R182,R192	RM73B2B122J RN resistance (CP)	323A5015J0122	5	
26	R26,R29,R112- R117,R119,R120, R129,R130,R136, R164,R166-R168, R176	RM73B2B222J RN resistance (CP)	323A5015J0222	18	
27	R131,R132,R137, R138,R152-R155, R170,R183,R185, R186,R189,R191, R194	RM73B2B512J RN resistance (CP)	323A5015J0512	15	
28	R40,R118,R165	RM73B2B562J RN resistance (CP)	323A5015J0562	3	
29	R13,R20,R23, R47,R121-R128, R139,R140,R160, R175,R188	RM73B2B103J RN resistance (CP)	323A5015J0103	17	
30	R195	RM73B2B123J RN resistance (CP)	323A5015J0123	1	
31	R17	RM73B2B183J RN resistance (CP)	323A5015J0183	1	
32	R145,R146	RM73B2B104J RN resistance (CP)	323A5015J0104	2	
33	R18	RM73B2B224J RN resistance (CP)	323A5015J0224	1	
34	R24,R25,R172, R173	RM73B2B242F RN resistance (CP)	323A5015F0242	4	
35	R6,R8,R107,R109	RM73B2B132F RN resistance (CP)	323A5015F0132	4	
36	R33,R104,R105, R110,R111	RM73B2B223F RN resistance (CP)	323A5015F0223	5	
37	R9-R12	RM73B2B513F RN resistance (CP)	323A5015F0513	4	
38	R179	RM73B2B752F RN resistance (CP)	323A5015F0752	1	
39	R41,R42	RD1/2Y100ΩJ RD resistance	321A1431J0101	2	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (3/6) 2nd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
40	R34,R35,R45	RD1/2Y2.2kΩJ RD resistance	321A1431J0222	3	
41	R36,R37	RD1/2Y3.9kΩJ RD resistance	321A1431J0392	2	
42	R27	MSF1/2B0.51ΩJ RS resistance	324A1001J0518	1	
43	R16	FMR1-1.8ΩJ Fuse resistance	327A1002J0189	1	
44	R30,R31	RD1/2Y2.4kΩJ RD resistance	321A1431J0242	2	
45	R141	RM73B2B201J RN resistance (CP)	323A5015J0201	1	
46	R178	RM73B2B202F RN resistance (CP)	323A5015F0202	1	
47	R2,R3,R101,R102	RM73B2B274J RN resistance (CP)	323A5015J0274	4	
48	R22	RM73B2B332J RN resistance (CP)	323A5015J0332	1	
49	R46	RM73B2B203J	323A5015J0203	1	
50					
51	C8,C115,C116	CK3216B1H102K CK capacitor (CP)	303A6009K3102	3	
52	C4,C118	CK3216B1H103K CK capacitor (CP)	303A6009K3103	2	
53	C6,C10,C102, C105,C106,C108, C110-C112,C119, C121	CK3216F1H104Z	303A6009Z3104	11	
54	C7,C16	RPE123-127F105Z25 25V CK capacitor 1.0μ	303A4117Z2105	2	
55	C2,C3	CQM92PP1H223F 50V CQ capacitor 0.022	306A4100F1223	2	
56	C15	CEUSM2A010 100V CE capacitor 1.0μ	304A1041A2109	1	
57	C13	CEUSM1H4R7 50V CE capacitor 4.7μ	304A1041H1479	1	
58	C9	CEUSM1H100 50V CE capacitor 10μ	304A1041H1100	1	
59	C1,C14	CEUSM1H102 50V CE capacitor 1000μ	304A1041H1102	2	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (4/6) 2nd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
60	C20	CC3216SL1H220J CC capacitor (CP)	303A3008K0220	1	
61	C17	RPE122-127C104M50 50V CK capacitor 0.1 μ	303A4115M3104	1	
62	C122, C123	CC3216SL1H471J CC capacitor (CP)	303A3008K0471	2	
63					
64					
65	Q9	P8032AH MOS-CPU	851A2152M0011	1	
66	Q12	MSM80C39HRS MOS-CPU	851A0124F0003H	1	
67	Q11	MSM61048GS-VK MOS digital IC (FP)	702A4924F0020	1	
68	Q10	MSM60769GS-VK MOS digital IC (FP)	702A4924F7069V	1	
69	Q7	MSM5128-20GS-VK MOS-S-RAM (SO)	804A0024N430ZY	1	
70	Q6	7407P BIP digital IC	700A0003M0007	1	
71	Q2, Q5	SN74LS05NS	700A0550N0005	2	
72	Q4	7406P BIP digital IC	700A0003M0006	1	
73	Q14	HA13412 BIP linear system IC (SO)	720A4021E0004	1	
74	Q3, Q13	NJM2901M BIP linear system IC (SO)	720A0528N0002	2	
75	Q8	DL2-28A-05 IC socket	245A1155P0280	1	
76	Q8	Main ROM	4YR4064-1184	1	
77					
78	TR17, TR19, TR20, TR101, TR102, TR105	2SC3361 NPN-HF-TR (CP)	602A1032N0002	6	
79	TR7, TR10, TR18	2SB766A-Q/R PNP-LF-TR (CP)	601A1130M0001	3	

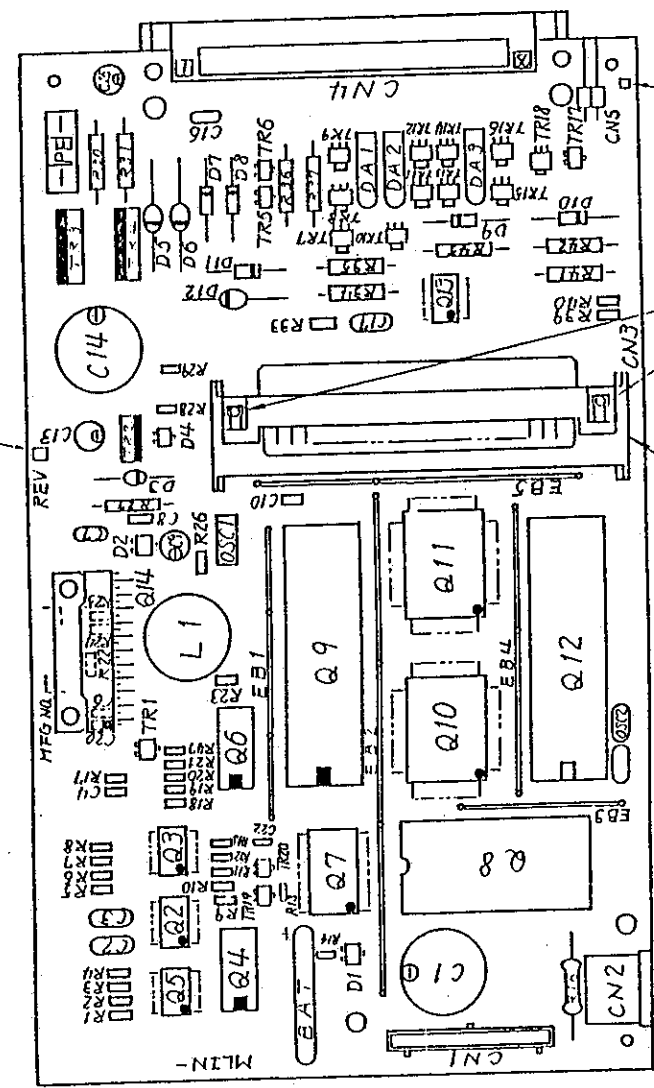
MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (5/6) 2nd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
80	TR8, TR9, TR11-TR16	2SD1511 NPN-LF-TR (CP)	603A1130N0003	8	
81	TR1, TR106	2SA1331/2SA1037K PNP-HF-TR (CP)	600A1003N0002	2	
82	TR2	2SA1010 PNP-HF-TR	600A1223M0001	1	
83	TR3, TR4	2SB883 PNP-LF-TR	601A1232M0001	2	
84	TR5, TR6, TR103, TR104, TR107, TR108	2SC3361/2SC2412K NPN-HF-TR (CP)	602A1003N0002	6	
85					
86	L1	OL1614-102KR70 (B) H coil	353A3002K0102	1	
87					
88					
89	CN1	1-172681-2 PC connector	224A3462P0120	1	
90	CN2	TCS7580-01-101 Round head connector	221A1525P0080	1	
91	CN3	00-8272-244959762-06 PC connector	224A3607P0440	1	
92	CN4	PD50A2X0 PC connector	224A1160P0500	1	
93	CN5	FFC-2TLAW1B FC connector	225A3119P0020	1	
94					
95		P3055B Bush rivet	136A1180P0001	2	
96					
97		Connector support bracket	4PP4043-1996P001	1	
98					
99	OSC1	FAR-C4SB11059000-M02 Oscillator	4LP-12186-1	1	
100	OSC2	KMFC1112T7 Ceramic oscillator	381A1101B1013	1	
101					

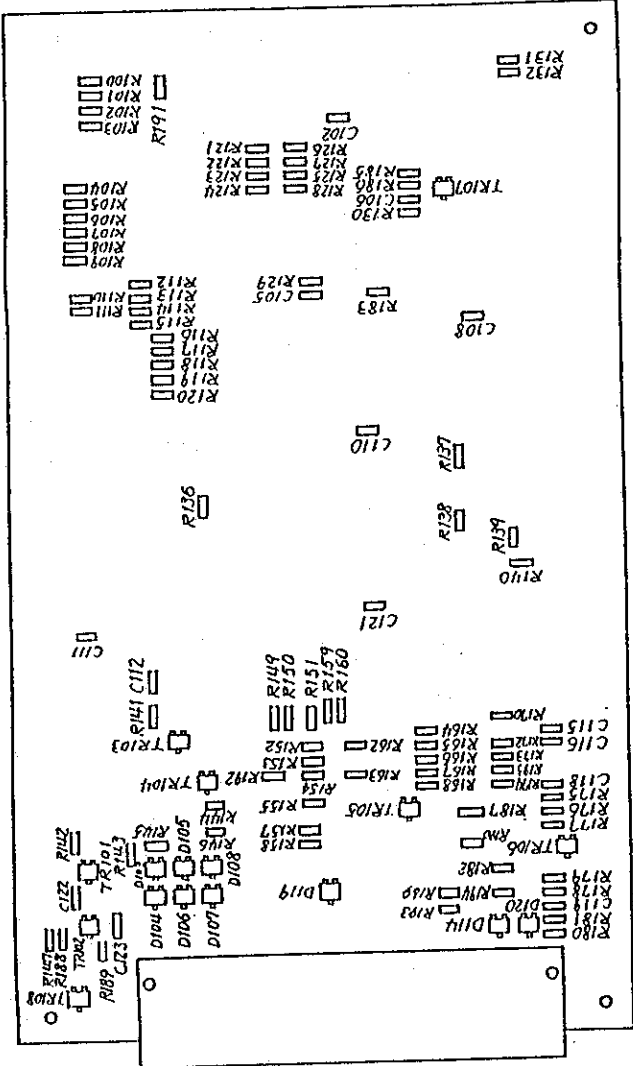
MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (6/6) 2nd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
102	PE	EE-SJ5-B Photocoupler	652A0127M0009	1	
103					
104	BAT	CR2430 Battery	4LP-45478	1	
106	S2	MCR18-JPW Chip jumper (CP)	323A5011P0001		
107					
108					
109	EB1	Power bar L=53.34	3LH-31313-70	1	
110	EB2	Power bar L=91.44 P=30.48 N=4	3LH-31313-86	1	
111	EB3	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	1	
112	EB4	Power bar L=53.34	3LH-31313-49	1	
113	EB5	Power bar L=60.96	3LH-31313-56	1	

REV. NO.



PCB version No.



Part name	PCB version no.	Rev. no.	Remarks
MLIN-	7	1	

MLIN-Printed Circuit Board
(4YA4042-1062G1) 1/2 3rd Version

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (1/6) 3rd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1	D11	RD39F-B Zener DI	613A2232L0322	1	
2	D2	MA3300 Zener DI (CP)	613A0291M0292	1	
3	D105	MA3200 Zener DI (CP)	613A0291M0252	1	
4	D4	MA3100 Zener DI (CP)	613A0291M0182	1	
5	D114	MA3047-M Zener DI(CP)	613A0291M0102M	1	
6	D1,D103,D106, D107,D119,D120	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	6	
7	D104,D108	MA152WK Signal DI (CP)	611A0029M0003	2	
8	D3	DFA1A1 Rectification DI	610A0221L0021	1	
9	D5,D6,D12	DSA3A1 Rectification DI	610A0021L0092	3	
10	D7-D10	EM1Z/SM-1A-02/DSA1A2 Rectification DI	610A0003M0001	4	
11	DA1,DA3	D1CA20 Diode array	761A2232M0401	2	
12	DA2	D1CA20R Rectification diode	610A3027M0001	1	
13					
14					
15	R5,R7	RM73B2B472F RN resistance (CP)	323A5015F0472	2	
16	R1,R4,R100,R103	RM73B2B334J RN resistance (CP)	323A5015J0334	4	
17	R147	RM73B2B131J RN resistance (CP)	323A5015J0131	1	
18	R106,R108,R190	RM73B2B392J	323A5015J0392	3	
19	R144	RM73B2B363J RN resistance (CP)	323A5015J0363	1	
20	R181	RM73B2B124J RN resistance (CP)	323A5015J0124	1	
21	R162	RM73B2B221J RN resistance (CP)	323A5015J0221	1	
22	R163	RM73B2B431J RN resistance (CP)	323A5015J0431	1	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (2/6) 3rd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
23	R39,R180	RM73B2B511J RN resistance (CP)	323A5015J0511	2	
24	R14,R19,R21, R28,R149-R151, R157-R159,R174, R177,R187,R193	RM73B2B102J RN resistance (CP)	323A5015J0102	14	
25	R142,R143,R169, R182,R192	RM73B2B122J RN resistance (CP)	323A5015J0122	5	
26	R26,R29,R112- R117,R119,R120, R129,R130,R136, R164,R166-R168, R176	RM73B2B222J RN resistance (CP)	323A5015J0222	18	
27	R131,R132,R137, R138,R152-R155, R170,R183,R185, R186,R189,R191, R194	RM73B2B512J RN resistance (CP)	323A5015J0512	15	
28	R40,R118,R165	RM73B2B562J RN resistance (CP)	323A5015J0562	3	
29	R13,R20,R23, R47,R121-R128, R139,R140,R160, R175,R188	RM73B2B103J RN resistance (CP)	323A5015J0103	17	
30	R195	RM73B2B123J RN resistance (CP)	323A5015J0123	1	
31	R17	RM73B2B183J RN resistance (CP)	323A5015J0183	1	
32	R145,R146	RM73B2B104J RN resistance (CP)	323A5015J0104	2	
33	R18	RM73B2B224J RN resistance (CP)	323A5015J0224	1	
34	R24,R25,R172, R173	RM73B2B242F RN resistance (CP)	323A5015F0242	4	
35	R6,R8,R107,R109	RM73B2B132F RN resistance (CP)	323A5015F0132	4	
36	R33,R104,R105, R110,R111	RM73B2B223F RN resistance (CP)	323A5015F0223	5	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (3/6) 3rd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
37	R9-R12	RM73B2B513F RN resistance (CP)	323A5015F0513	4	
38	R179	RM73B2B752F RN resistance (CP)	323A5015F0752	1	
39	R41,R42	RD1/2Y100ΩJ RD resistance	321A1431J0101	2	
40	R34,R35,R45	RD1/2Y2.2kΩJ RD resistance	321A1431J0222	3	
41	R36,R37	RD1/2Y3.9kΩJ RD resistance	321A1431J0392	2	
42	R27	MSF1/2B0.51ΩJ RS resistance	324A1001J0518	1	
43	R16	FMR1-1.8ΩJ Fuse resistance	327A1002J0189	1	
44	R30,R31	RD1/2Y2.4kΩJ RD resistance	321A1431J0242	2	
45	R141	RM73B2B201J RN resistance (CP)	323A5015J0201	1	
46	R178	RM73B2B202F RN resistance (CP)	323A5015F0202	1	
47	R2,R3,R101,R102	RM73B2B274J RN resistance (CP)	323A5015J0274	4	
48	R22	RM73B2B332J RN resistance (CP)	323A5015J0332	1	
49	R46	RM73B2B203J	323A5015J0203	1	
50					
51	C8,C115,C116	CK3216B1H102K CK capacitor (CP)	303A6009K3102	3	
52	C4,C112,C118	CK3216B1H103K CK capacitor (CP)	303A6009K3103	3	
53	C6,C10,C102, C105,C106,C108, C110,C111,C119, C121	CK3216F1H104Z	303A6009Z3104	10	
54	C7,C16	RPE123-127F105Z25 25V CK capacitor 1.0μ	303A4117Z2105	2	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (4/6) 3rd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
55	C2,C3	COM92PPLH223F 50V CQ capacitor 0.022μ	306A4100F1223	2	
56	C15	CEUSM2A010 100V CE capacitor 1.0μ	304A1041A2109	1	
57	C13	CEUSMLH4R7 50V CE capacitor 4.7μ	304A1041H1479	1	
58	C9	CEUSMLH100 50V CE capacitor 10μ	304A1041H1100	1	
59	C1,C14	CEUSMLH102 50V CE capacitor 1000μ	304A1041H1102	2	
60	C20	CC3216SL1H220J CC capacitor (CP)	303A3008K0220	1	
61	C17	RPE122-127C104M50 50V CK capacitor 0.1μ	303A4115M3104	1	
62	C122,C123	CC3216SL1H471J CC capacitor (CP)	303A3008K0471	2	
63	C22	CC3216SL1H101J CC capacitor(CP)	303A3008K0101	1	
64					
65	Q9	P8032AH MOS-CPU	851A2152M0011	1	
66	Q12	MSM80C39HRS MOS-CPU	851A0124F0003H	1	
67	Q11	MSM61048GS-VK MOS digital IC (FP)	702A4924F0020	1	
68	Q10	MSM60769GS-VK MOS digital IC (FP)	702A4924F7069V	1	
69	Q7	MSM5128-20GS-VK MOS-S-RAM (SO)	804A0024N4302Y	1	
70	Q6	7407P BIP digital IC	700A0003M0007	1	
71	Q2,Q5	SN74LS05NS	700A0550N0005	2	
72	Q4	7406P BIP digital IC	700A0003M0006	1	
73	Q14	HA13412 BIP linear system IC	720A4021E0004	1	

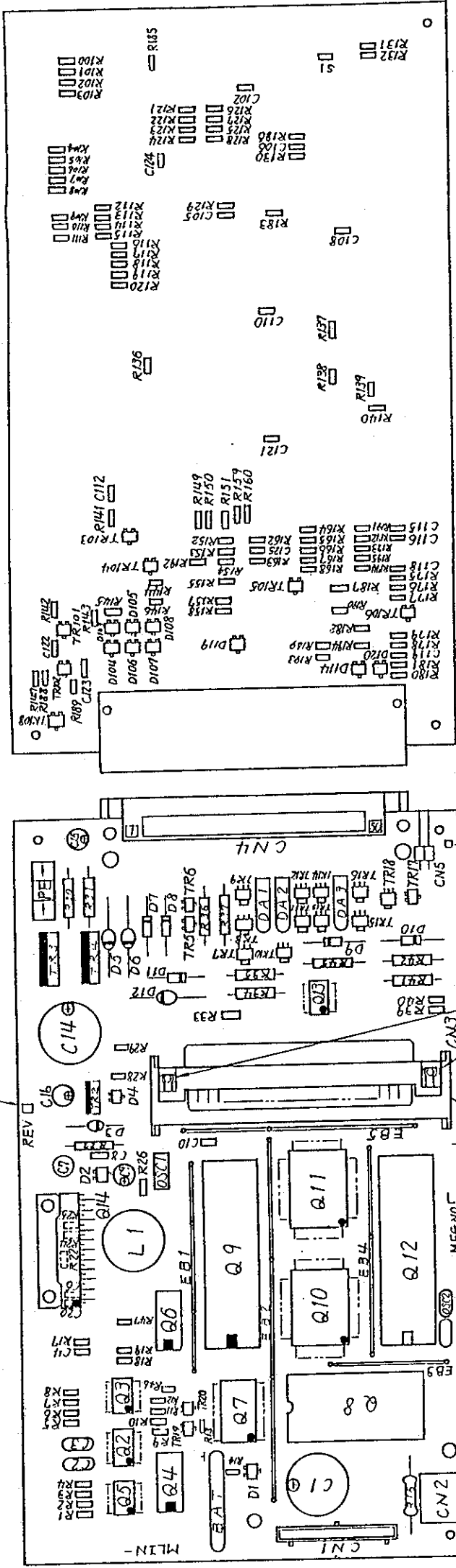
MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (5/6) 3rd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
74	Q3,Q13	NJM2901M BIP linear system IC (SO)	720A0528N0002	2	
75	Q8	DL2-28A-05 IC socket	245A1155P0280	1	
76	Q8	Main ROM	4YR4064-1184	1	
77					
78	TR17,TR19,TR20, TR101,TR102, TR105	2SC3361 NPN-HF-TR (CP)	602A1032N0002	6	
79	TR7,TR10,TR18	2SB766A-Q/R PNP-LF-TR (CP)	601A1130M0001	3	
80	TR8,TR9, TR11-TR16	2SD1511 NPN-LF-TR (CP)	603A1130N0003	8	
81	TR1,TR106	2SA1331/2SA1037K PNP-HF-TR (CP)	600A1003N0002	2	
82	TR2	2SA1010 PNP-HF-TR	600A1223M0001	1	
83	TR3,TR4	2SB883 PNP-LF-TR	601A1232M0001	2	
84	TR5,TR6,TR103, TR104,TR107, TR108	2SC3361/2SC2412K NPN-HF-TR (CP)	602A1003N0002	6	
85					
86	L1	OL1614-102KR70 (C) H coil	353A3002K0102	1	
87					
88					
89	CN1	1-172681-2 PC connector	224A3462P0120	1	
90	CN2	TCS7580-01-101 Round head connector	221A1525P0080	1	
91	CN3	00-8272-244959762-06 PC connector	224A3607P0440	1	
92	CN4	PD50A2X0 PC connector	224A1160P0500	1	
93	CN5	FFC-2TLAWLB FC connector	225A3119P0020	1	
94					

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (6/6) 3rd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
95		P3055B Bush rivet	136A1180P0001	2	
96					
97		Connector support bracket	4PP4043-1996P001	1	
98					
99	OSCI	FAR-C4SB11059000-M02 Oscillator	4LP-12186-1	1	
100	OSC2	MF-13MHz Oscillator	381A0220B0001	1	
101					
102	PE	EE-SJ5-B Photocoupler	652A0127M0009	1	
103					
104	BAT	CR2430 Battery	4LP-45478	1	
106	S2	MCR18-JPW Chip jumber (CP)	323A5011P0001		
107					
108					
109	EB1	Power bar L=53.34	3LH-31313-70	1	
110	EB2	Power bar L=91.44 P=30.48 N=4	3LH-31313-86	1	
111	EB3	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	1	
112	EB4	Power bar L=53.34	3LH-31313-49	1	
113	EB5	Power bar L=60.96	3LH-31313-56	1	

REV. NO.



PCB version No.

95

97

Part name	PCB version no.	Rev. no.	Remarks
MLIN-	8	1	

MLIN-Printed Circuit Board
(4YA4042-1062G1) 1/2 4th Version

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (1/5) 4th Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1	D11	RD39F-B Zener DI	613A2232L0322	1	
2	D2	MA3300 Zener DI (CP)	613A0291M0292	1	
3	D105	MA3200 Zener DI (CP)	613A0291M0252	1	
4	D4	MA3100 Zener DI (CP)	613A0291M0182	1	
5	D114	MA3047-M Zener DI(CP)	613A0291M0102M	1	
6	D1,D103,D106, D107,D119,D120	MA151WK/DAN202K Signal DI (CP)	611A0003N0003	6	
7	D104,D108	MA152WK Signal DI (CP)	611A0029M0003	2	
8	D3	DFAL1 Rectification DI	610A0221L0021	1	
9	D5,D6,D12	DSA3A1 Rectification DI	610A0021L0092	3	
10	D7-D10	EM1Z/SM-1A-02/DSA1A2 Rectification DI	610A0003M0001	4	
11	DA1,DA3	D1CA20 Diode array	761A2232M0401	2	
12	DA2	D1CA20R Rectification diode	610A3027M0001	1	
13	R5,R7	RM73B2B472F RN resistance (CP)	323A5015F0472	2	
14	R1,R4,R100,R103	RM73B2B334J RN resistance (CP)	323A5015J0334	4	
15	R147	RM73B2B131J RN resistance (CP)	323A5015J0131	1	
16	R190	RM73B2B392J	323A5015J0392	1	
17	R144	RM73B2B363J RN resistance (CP)	323A5015J0363	1	
18	R181	RM73B2B124J RN resistance (CP)	323A5015J0124	1	
19	R162	RM73B2B221J RN resistance (CP)	323A5015J0221	1	
20	R163	RM73B2B431J RN resistance (CP)	323A5015J0431	1	
21	R39,R180	RM73B2B511J RN resistance (CP)	323A5015J0511	2	
22	R106,R108	RM73B2B392F RN resistance (CP)	323A5015F0392	2	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (2/5) 4th Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
23	R14,R19,R28, R149-R151,R157- R159,R174,R177, R187,R193	RM73B2B102J RN resistance (CP)	323A5015J0102	13	
24	R142,R143,R169, R182,R192	RM73B2B122J RN resistance (CP)	323A5015J0122	5	
25	R26,R29,R112- R117,R119,R120, R129,R130,R136, R164,R166-R168, R176	RM73B2B222J RN resistance (CP)	323A5015J0222	18	
26	R131,R132,R137, R138,R152-R155, R183,R185,R186, R189,R191,R194	RM73B2B512J RN resistance (CP)	323A5015J0512	14	
27	R40,R118,R165	RM73B2B562J RN resistance (CP)	323A5015J0562	3	
28	R13,R47, R121-R128,R139, R140,R160,R175, R188	RM73B2B103J RN resistance (CP)	323A5015J0103	15	
29	R195	RM73B2B123J RN resistance (CP)	323A5015J0123	1	
30	R17	RM73B2B183J RN resistance (CP)	323A5015J0183	1	
31	R145,R146	RM73B2B104J RN resistance (CP)	323A5015J0104	2	
32	R18	RM73B2B224J RN resistance (CP)	323A5015J0224	1	
33	R24,R25,R172, R173	RM73B2B242F RN resistance (CP)	323A5015F0242	4	
34	R6,R8,R107,R109	RM73B2B132F RN resistance (CP)	323A5015F0132	4	
35	R33,R104,R105, R110,R111	RM73B2B223F RN resistance (CP)	323A5015F0223	5	
36	R9-R12	RM73B2B513F RN resistance (CP)	323A5015F0513	4	
37	R179	RM73B2B752F RN resistance (CP)	323A5015F0752	1	
38	R41,R42	RD1/2Y100ΩJ RD resistance	321A1431J0101	2	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (3/5) 4th Version

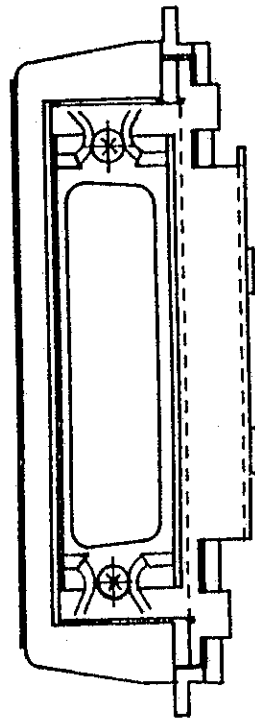
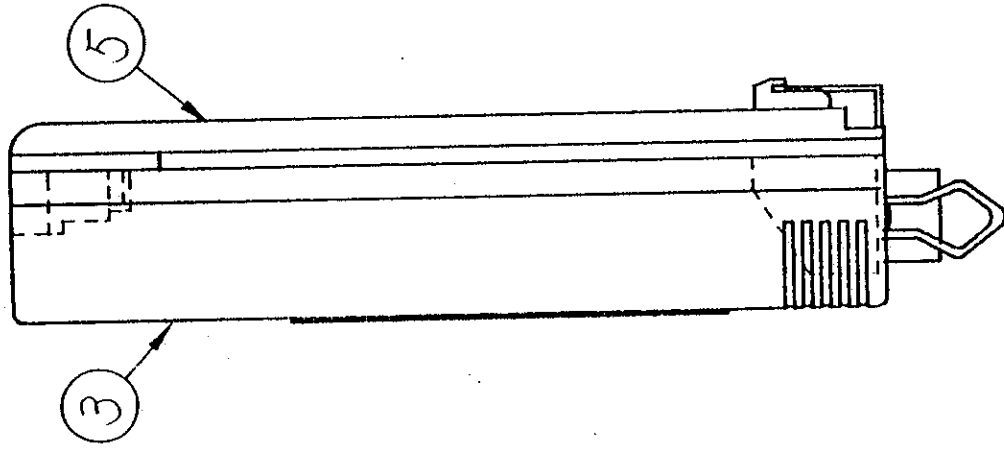
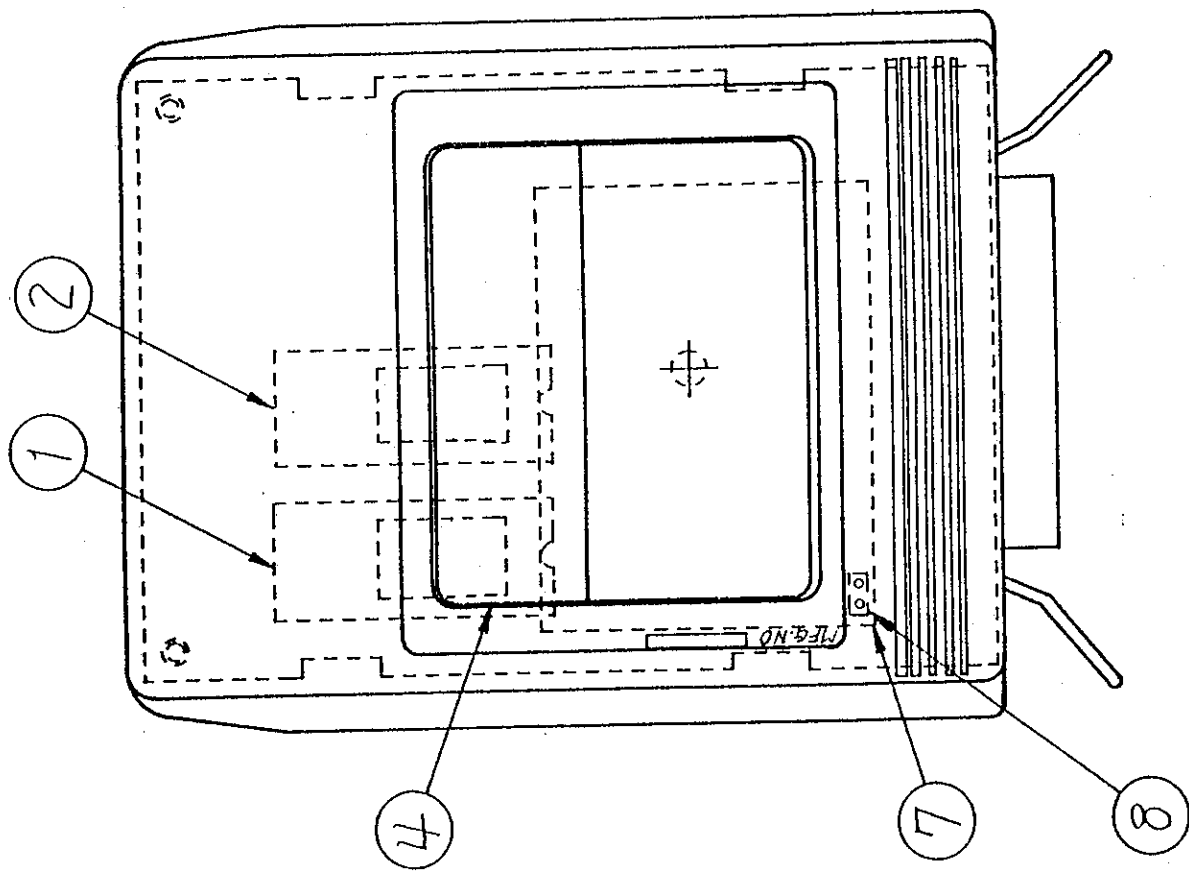
No.	Symbol	Name standard	Part No.	Q'ty	Remarks
39	R34,R35,R45	RD1/2Y2.2kΩJ RD resistance	321A1431J0222	3	
40	R36,R37	RD1/2Y3.9kΩJ RD resistance	321A1431J0392	2	
41	R27	MSF1/2B0.51ΩJ RS resistance	324A1001J0518	1	
42	R16	FMRI-1.8ΩJ Fuse resistance	327A1002J0189	1	
43	R30,R31	RD1/2Y2.4kΩJ RD resistance	321A1431J0242	2	
44	R141	RM73B2B201J RN resistance (CP)	323A5015J0201	1	
45	R178	RM73B2B202F RN resistance (CP)	323A5015F0202	1	
46	R2,R3,R101,R102	RM73B2B274J RN resistance (CP)	323A5015J0274	4	
47	R22	RM73B2B332J RN resistance (CP)	323A5015J0332	1	
48	R46	RM73B2B203J	323A5015J0203	1	
49					
50	C8,C115,C116	CK3216B1H102K CK capacitor (CP)	303A6009K3102	3	
51	C4,C112,C118	CK3216B1H103K CK capacitor (CP)	303A6009K3103	3	
52	C6,C10,C102, C105,C106,C108, C110,C119,C121, C125	CK3216F1H104Z	303A6009Z3104	10	
53	C2,C3	COM92PP1H223F 50V CQ capacitor 0.022μ	306A4103G2223	2	
54	C7,C15,C16	CEUSM2A010 100V CE capacitor 1.0μ	304A1041A2109	3	
55	C9	CEUSM1H100 50V CE capacitor 10μ	304A1041H1100	1	
56	C1,C14	CEUSM1H102 50V CE capacitor 1000μ	304A1041H1102	2	
57	C124	CC3216SLIH101J CC capacitor (CP)	303A3008K0101	1	
58	C20	CC3216SL1H220J CC capacitor (CP)	303A3008K0220	1	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (4/5) 4th Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
59	C122, C123	CC3216SL1H471J CC capacitor (CP)	303A3008K0471	2	
60	Q9	P8032AH MOS-CPU	851A2152M0011	1	
61	Q12	MSM80C39HRS MOS-CPU	851A0124F0003H	1	
62	Q11	MSM61048GS-VK MOS digital IC (FP)	702A4924F0020	1	
63	Q10	MSM60769GS-VK MOS digital IC (FP)	702A4924F7069V	1	
64	Q7	MSM5128-20GS-VK MOS-S-RAM (SO)	804A0024N4302Y	1	
65	Q6	7407P. BIP digital IC	700A0003M0007	1	
66	Q2, Q5	SN74LS05NS	700A0550N0005	2	
67	Q4	7406P BIP digital IC	700A0003M0006	1	
68	Q14	HA13412 BIP linear system IC	720A4021E0004	1	
69	Q3, Q13	NJM2901M BIP linear system IC (SO)	720A0528N0002	2	
70	Q8	DL2-28A-05 IC socket	245A1155P0280	1	
71	Q8	Main ROM	4YR4064-1184	1	
72	TR17, TR101, TR102, TR105 TR19, TR20	2SC3361 NPN-HF-TR (CP)	602A1032N0002	6	
73	TR7, TR10, TR18	2SB766A-Q/R PNP-LF-TR (CP)	601A1130M0001	3	
74	TR8, TR9, TR11-TR16	2SD1511 NPN-LF-TR (CP)	603A1130N0003	8	
75	TR106	2SA1331/2SA1037K PNP-HF-TR (CP)	600A1003N0002	1	
76	TR2	2SA1488/2SB1185 PNP-HF-TR	600A1203M0001	1	
77	TR3, TR4	2SB883 PNP-LF-TR	601A1232M0001	2	
78	TR5, TR6, TR103, TR104, TR108	2SC3361/2SC2412K NPN-HF-TR (CP)	602A1003N0002	5	

MLIN-Printed Circuit Board (4YA4042-1062G1) 2/2 (5/5) 4th Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
79	L1	OL1614-102KR70(D) H coil	353A3002K0102	1	
80	CN1	1-172681-2 PC connector	224A3462P0120	1	
81	CN2	TCS7580-01-201 Round head connector	221A1525P0081	1	
82	CN3	00-8272-244959762-06 PC connector	224A3607P0440	1	
83	CN4	PD50A2X0 PC connector	224A1160P0500	1	
84	CN5	FFC-2TLAW1B FC connector	225A3119P0020	1	
85		P3055B Bush rivet	136A1180P0001	2	
86		Connector support bracket	4PP4043-1996P001	1	
87	OSC1	FAR-C4SB11059000-M02 Oscillator	4LP-12186-1	1	
88	OSC2	MF-13MHz Oscillator	381A0220B0001	1	
89	PE	EE-SJ5-B Photocoupler	652A0127M0009	1	
90	BAT	CR2430 Battery	4LP-45478	1	
91	S1	MCR18-JFW Chip jumper (CP)	323A5011P0001	1	
92	EB1	Power bar L=53.34	3LH-31313-70	1	
93	EB2	Power bar L=91.44 P=30.48 N=4	3LH-31313-86	1	
94	EB3	Power bar L=30.48 P=30.48 N=2	3LH-31313-117	1	
95	EB4	Power bar L=53.34	3LH-31313-49	1	
96	EB5	Power bar L=60.96	3LH-31313-56	1	



G, no.	ROM no.	ROM code no.	Product name
G100	Q2	"67-1019"	27256
	Q1	"67-1018"	27256
G101	Q2	"67-1021"	27256
	Q1	"67-1020"	27256
G102	Q2	"67-1019"	27256
	Q1	"67-1018"	27256
G103	Q2	"67-1021"	27256
	Q1	"67-1020"	27256
G104	Q2	"67-1025"	27256
	Q1	"67-1024"	27256
G105	Q2	"67-1027"	27256
	Q1	"67-1026"	27256
G106	Q2	"67-1025"	27256
	Q1	"67-1024"	27256
G107	Q2	"67-1027"	27256
	Q1	"67-1026"	27256
G108	Q2	"67-1023"	27256
	Q1	"67-1022"	27256
G109	Q2	"67-1023"	27256
	Q1	"67-1022"	27256
G110	Q2	"67-1032"	27256
	Q1	"67-1031"	27256
G111	Q2	"67-1032"	27256
	Q1	"67-1031"	27256

MLCE-Printed Circuit Board Assembly
 (4YA4042-1063Gxxx) 3IC-634/9-A-1/1

MLCE-Printed Circuit Board Assembly (4YA4042-1063G100)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1018G1	1	
2		CG ROM	4YR4067-1019G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P100	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1063G101)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1020G1	1	
2		CG ROM	4YR4067-1021G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P101	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1063G102)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1018G1	1	
2		CG ROM	4YR4067-1019G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P100	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4YA4042-1065G3		
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1063G103)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1020G1	1	
2		CG ROM	4YR4067-1021G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P101	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4YA4042-1065G3		
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1063G104)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1024G1	1	
2		CG ROM	4YR4067-1025G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5525P100	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1063G105)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1026G1	1	
2		CG ROM	4YR4067-1027G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5525P101	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1063G106)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1024G1	1	
2		CG ROM	4YR4067-1025G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5525P100	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4Y4042-1065G3		
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1063G107)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1026G1	1	
2		CG ROM	4YR4067-1027G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5525P101	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4Y4042-1065G3		
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1063G108)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1022G1	1	
2		CG ROM	4YR4067-1023G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P104	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1063G109)

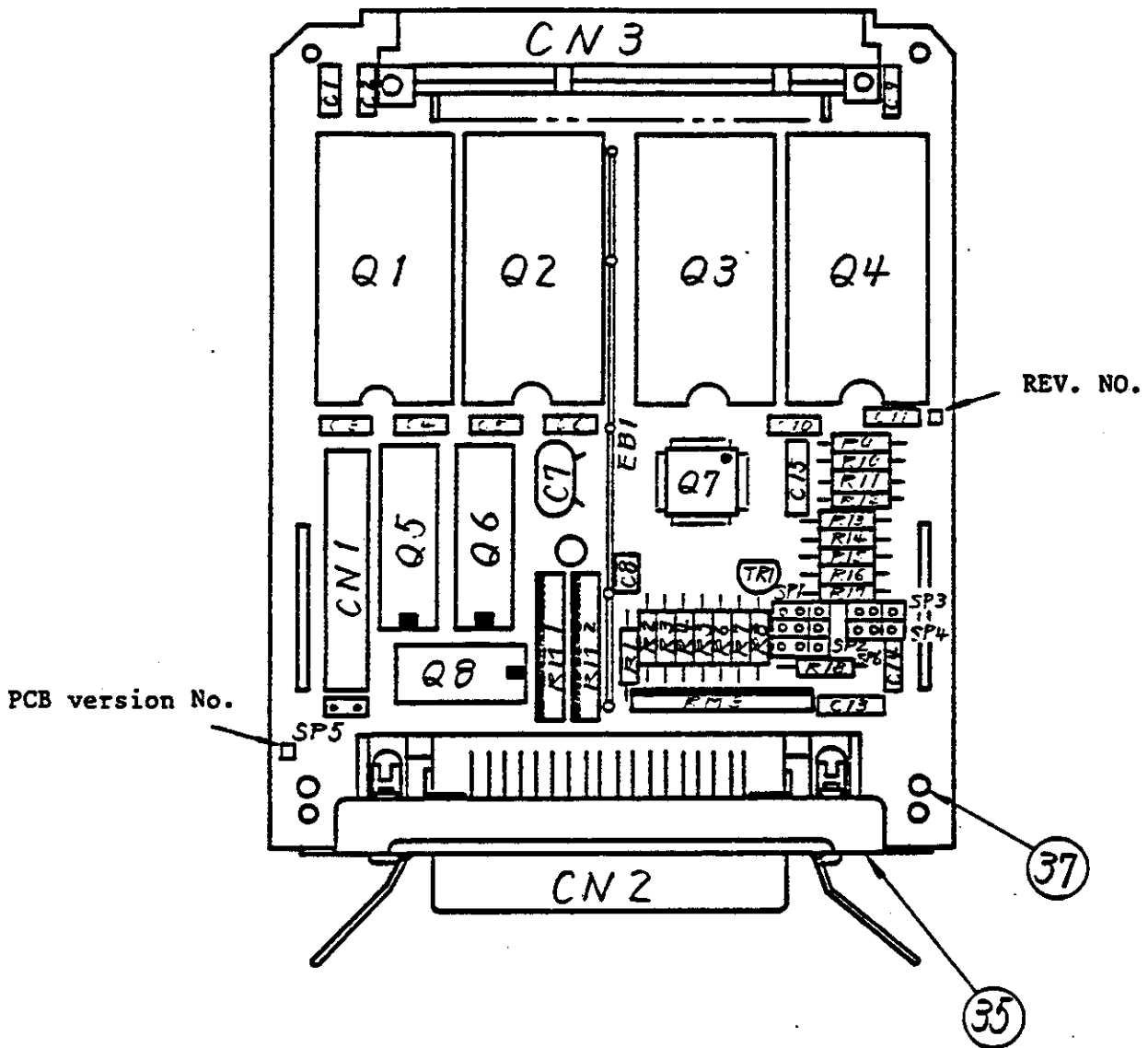
No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1022G1	1	
2		CG ROM	4YR4067-1023G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P104	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4YA4042-1065G3		
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1063G110)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1031G1	1	
2		CG ROM	4YR4067-1032G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P105	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					
8					

MLCE-Printed Circuit Board Assembly (4YA4042-1063G111)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1031G1	1	
2		CG ROM	4YR4067-1032G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P105	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4YA4042-1065G3		
8					



Part name	PCB version no.	Rev. no.	Remarks
MLCE-	2	1	2YU5005-1051G1

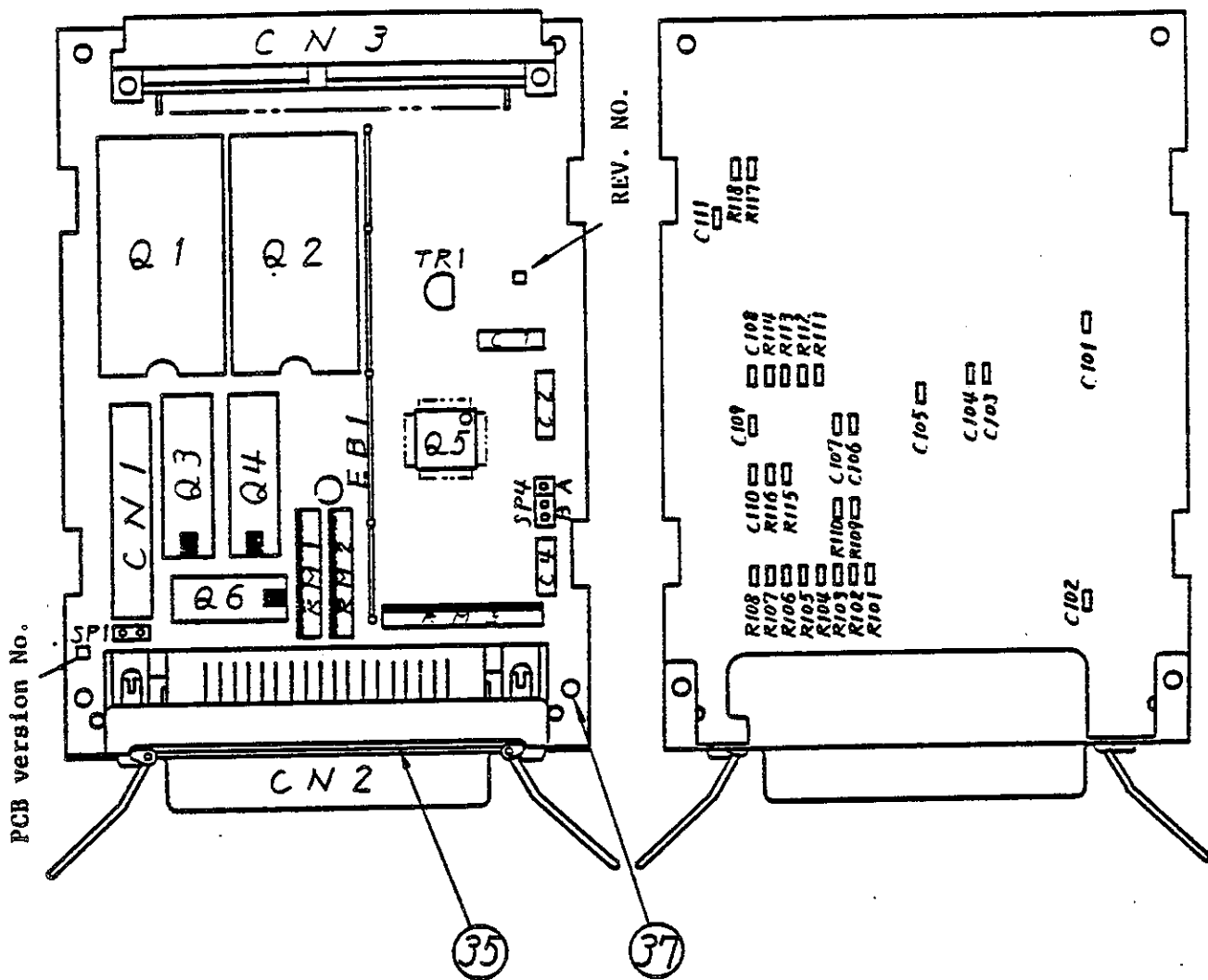
MLCE-Printed Circuit Board (4YA4042-1063GXXX) 1/2 1st Version

MLCE-Printed Circuit Board (4YA4042-1063Gxxx) 2/2(1/2) 1st Version

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1	R15,R16	RD1/4Y100ΩJ RD resistance (CP)	321A1421J0101	2	
2	R10,R17,R18	RD1/4Y5. 1KΩJ RD resistance	321A1421J0512	3	
3	R1-R8,R11,R12	RD1/4Y10KΩJ RD resistance	321A1421J0103	10	
4	R14	RD1/4Y30ΩJ RD resistance	321A1421J0300	1	
5	R9,R13	RD1/4Y1KΩJ RD resistance	321A1421J0102	1	
6	RM3	IHR-8-332JA Block resistance	334A3212J0332	1	
7	RM2	IHR-6-1/8W-332JS Block resistance	334A3214J0332	1	
8	RM1	IHR-6-1/8W-102JS Block resistance	334A3214J0102	1	
9					
10					
11	C1-C6,C9-C11, C14	C2SEC1H103K 50V CQ-M capacitor 0.01μ	306A2022K1103	10	
12	C8	RPE122-127C102M50 50V CK capacitor 0.001μ	303A4115M3102	1	
13	C13	TCK45F2E103ZYA 250V CK capacitor 10000P	302A4027Z5103	1	
14	C7,C15	CC45L1H561KYR CC capacitor	C4LP-8611-561	2	
15					
16					
17	Q5,Q6	TMS4416-15NL MOS-D-RAM	802A2050M6311	2	
18	Q8	7406P BIP digital IC	700A0003M0006	1	
19	Q7	MSM60360GS-VK MOS digital IC (FP)	702A4924F3060V	1	
20	Q1,Q2,Q3,Q4	DL2-28A-05 IC socket	245A1155P0280	4	
21					
22					
23	TR1	2SC458/458K NPN-HF-TR	602A1003M0003	1	

MLCE-Printed Circuit Board (4YA4042-1063Gxxx) 2/2(2/2) 1st Version

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
24					
25					
26	CN1	HKP-26FD2 PC connector	224A3131P0260	1	
27	CN2	00-8346-3600-90-858 Angular head connector	220A1615P0361	1	
28	CN3	00-8272-244001112-05 PC connector	224A3606P0440	1	
29					
30					
31	SP5	FFC-2AMEP1 FC connector	225A3123P0020	1	
32	SP1-SP4,SP6	FFC-3AMEP1 FC connector	225A3123P0030	5	
33	SB1-SB4,SB6	DIC-252 PC connector	224A3182P0020	1	
34					
35		FG bracket (centoro)	4PP4043-1997P001	1	
36					
37		Round head rivet	4LB-180200-2	2	
38					
39	EB1	Power bar L=76.2	3LH-31313-62	1	



Part name	PCB version no.	Rev. no.	Remarks
MLCE-	3	2	2YU5005-1051G1

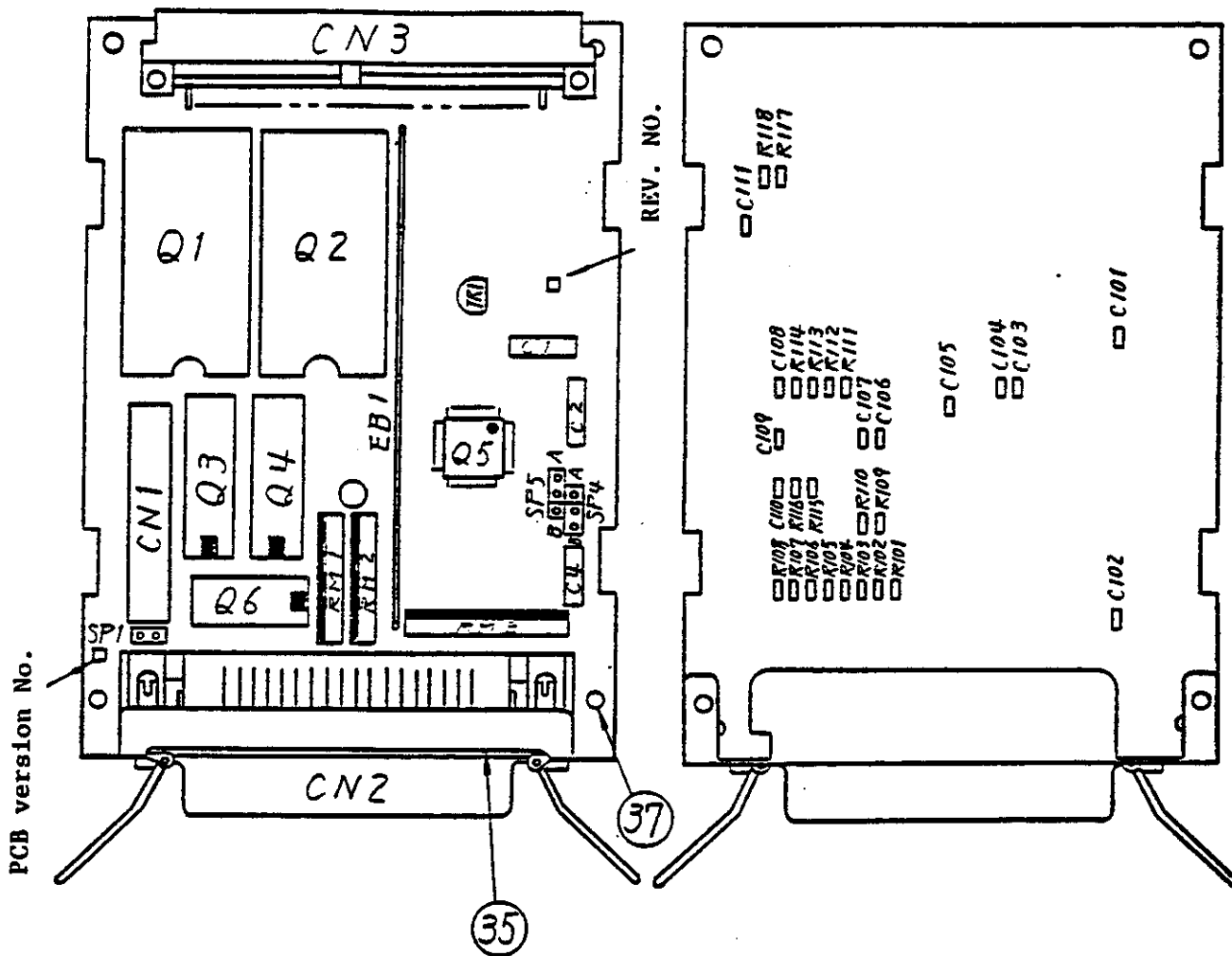
MLCE-Printed Circuit Board (4YA4042-1063Gxxx) 1/2 2nd Version

MLCE-Printed Circuit Board (4YA4042-1063Gxxx) 2/2(1/2) 2nd Version

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1	R109,R110	RM73B2B101J RN resistance (CP)	323A5015J0101	2	
2	R112,R117,R118	RM73B2B512J RN resistance (CP)	323A5015J0512	3	
3	R101-R108,R111,	RM73B2B103J RN resistance (CP)	323A5015J0103	10	
4	R116	RM73B2B300J RN resistance (CP)	323A5015J0300	1	
5	R113,R114	RM73B2B102J RN resistance (CP)	323A5015J0102	2	
6	RM3	MR-8-332JA Block resistance	334A3212J0332	1	
7	RM2	MR-6-332JG Block resistance	334A3214J0332	1	
8	RM1	MR-6-332JG Block resistance	334A3214J0102	1	
9					
10					
11	C101-C104,C106 -C111	CK3216B1H103K CK capacitor (CP)	303A6009K3103	10	
12	C105	CK3216B1H102K CK capacitor (CP)	303A6009K3102	1	
13	C4	TCK45F2E103ZYA 25V CK capacitor 10000P	302A4027Z5103	1	
14	C1,C2	CC45L1H561KYR CC capacitor	C4LP-8611-561	2	
15					
16					
17	Q3,Q4	TMS4416-15NL MOS-D-RAM	802A2050M6311	2	
18	Q6	7406P BIP digital IC	700A0003M0006	1	
19	Q5	MSM60360GS-VK MOS digital IC (FP)	702A492F3060V	1	
20	Q1,Q2	DL2-28A-05	245A1155P0280	2	
21					
22					
23	TR1	2SC458/458K NPN-HF-TR	602A1003M0003	1	
24					

MLCE-Printed Circuit Board (4YA4042-1063Gxxx) 2/2(2/2) 2nd Version

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
25					
26	CN1	HKP-26FD2 PC connector	224A3131P0260	1	
27	CN2	00-8346-3600-90-858 Angular head connector	220A1615P0361	1	
28	CN3	00-8272-244001112-05 PC connector	224A3606P0440	1	
29					
30					
31	SP1	FFC-2AMEP1 FC connector	225A3123P0020	1	
32	SP4	FFC-3AMEP1 FC connector	225A3123P0030	5	
33	SB4	DIC-252 PC connector	224A3182P0020	1	
34					
35		FG bracket (centoro)	4PP4043-2263P001	1	
36					
37		Round head rivet	4LB-180200-2	2	
38					
39	EB1	Power bar L=76.2	3LH-31313-62	1	



Part name	PCB version no.	Rev. no.	Remarks
MLCE-	4	2	2YU5005-1051G1

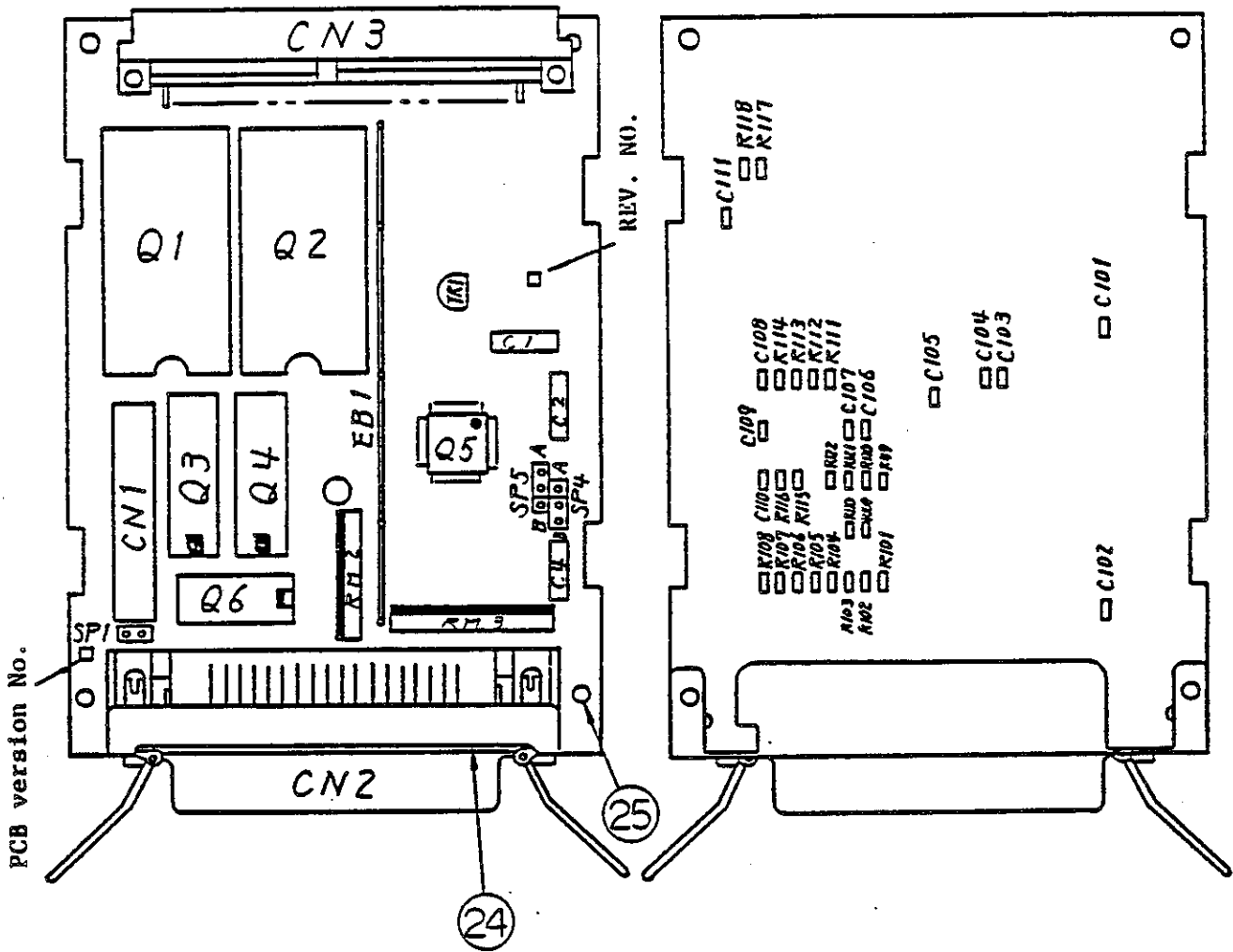
MLCE-Printed Circuit Board (4YA4042-1063Gxxx) 1/2 3rd Version

MLCE-Printed Circuit Board (4YA4042-1063Gxxx) 2/2(1/2) 3rd Version

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1	R109,R110	RM73B2B101J RN resistance (CP)	323A5015J0101	2	
2	R112,R117,R118	RM73B2B512J RN resistance (CP)	323A5015J0512	3	
3	R101-R108,R111, R115	RM73B2B103J RN resistance (CP)	323A5015J0103	10	
4	R116	RM73B2B300J RD resistance	323A5015J0300	1	
5	R113,R114	RM73B2B102J RN resistance (CP)	323A5015J0102	1	
6	RM3	MR-8-332JA Block resistance	334A3212J0332	1	
7	RM2	MR-6-332JG Block resistance	334A3214J0332	1	
8	RM1	MR-6-102JG Block resistance	334A3214J0102	1	
9					
10					
11	C101-C104,C106 -C111	CK3216B1H103K CK capacitor (CP)	303A6009K3103	10	
12	C105	CK3216B1H102K2M50 CK capacitor (CP)	303A6009K3102	1	
13	C4	TCK45F2E103ZYA 250V CK capacitor 10000P	302A4027Z5103	1	
14	C1,C2	CC45L1H561KYR 250V CC capacitor	C4LP-8611-561	2	
15					
16					
17	Q3,Q4	TMS4416-15NL MOS-DRAM	802A2050M6311	2	
18	Q6	7406P BIP digital IC	700A0003M0006	1	
19	Q3	MSM60360GS-VK MOS digital IC (FP)	702A4924F3060V	1	
20	Q1,Q2	DL2-28A-05 IC socket	245A1155P0280	2	
21					
22					
23	TR1	2SC458/458K NPN-HF-TR	602A1003M0003	1	

MLCE-Printed Circuit Board (4YA4042-1063Gxxx) 2/2(2/2) 3rd Version

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
24					
25					
26	CN1	HKP-26FD2 PC connector	224A3131P0260	1	
27	CN2	00-8346-3600-90-858 Angular head connector	220A1615P0362	1	
28	CN3	00-8272-244001112-05 PC connector	224A3606P0440	1	
29					
30					
31	SP1	FFC-2AMEP1 FC connector	225A3123P0020	1	
32	SP4,SP5	FFC-3AMEP1 FC connector	225A3123P0030	2	
33	SB4,SB5	DIC-252 PC connector	224A3182P0020	2	
34					
35		FG bracket (centoro)	4PP4043-2263P001	1	
36					
37		Round head rivet	4LB-180200-2	2	
38					
39	EB1	Power bar L=76.2	3LH-31313-62	1	



Part name	PCB version no.	Rev. no.	Remarks
MLCE-	5	2	2YU5005-1051G1

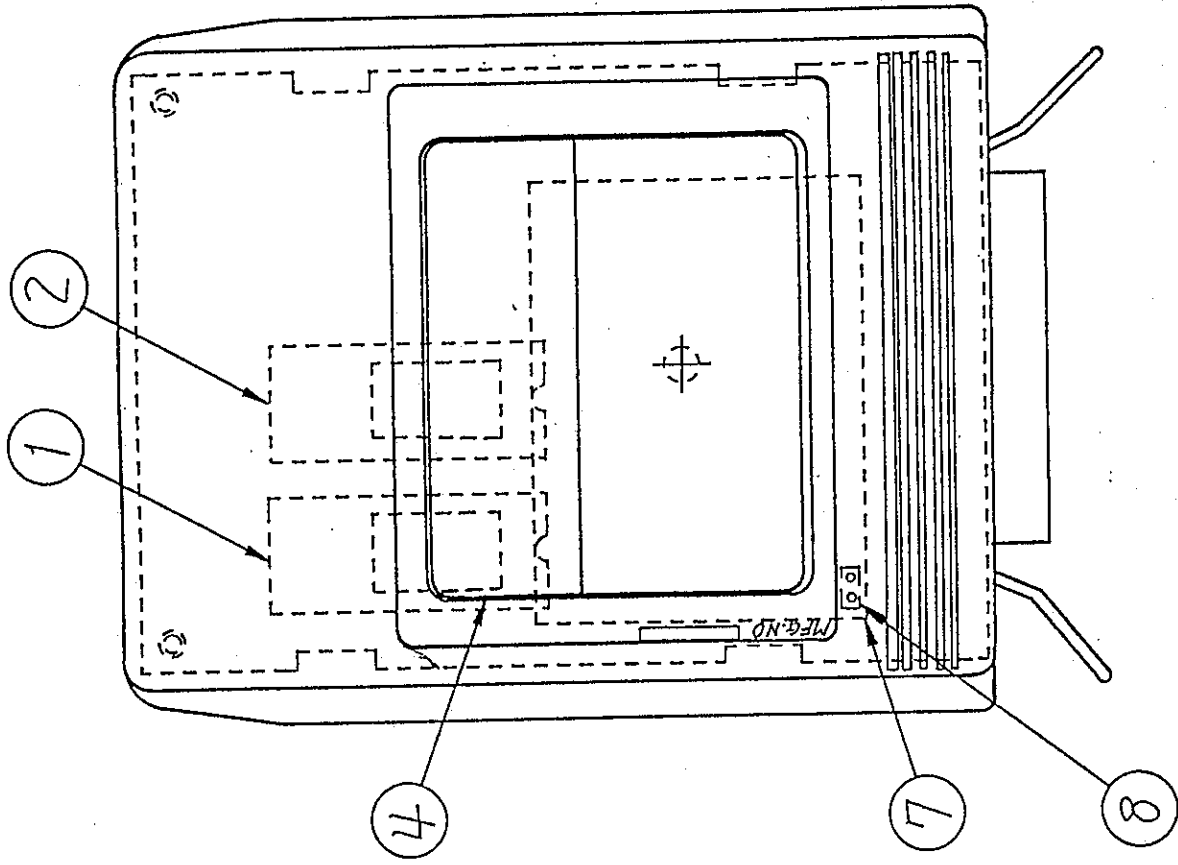
MLCE-Printed Circuit Board (4YA4042-1063Gxxx) 1/2 4th Version

MLCE-Printed Circuit Board (4YA4042-1063Gxxx) 2/2(1/2) 4th Version

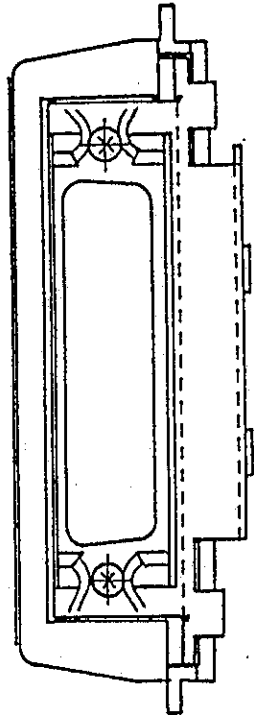
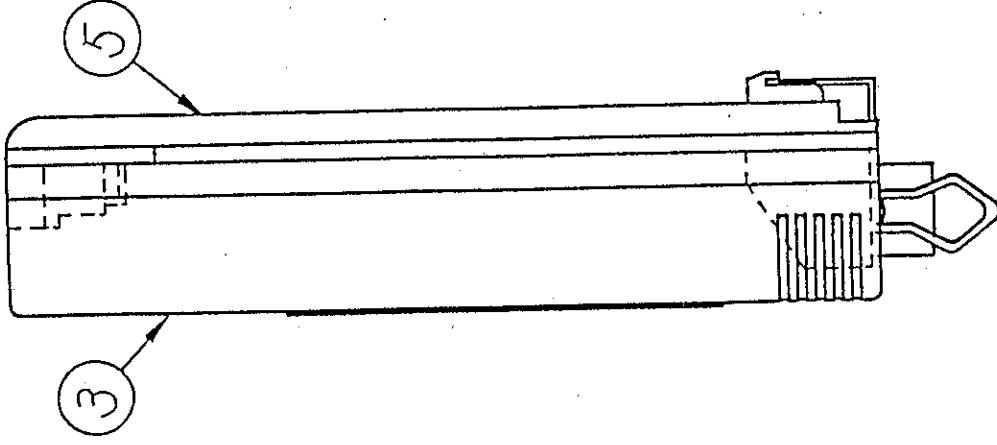
No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1	R109,R110	RM73B2B101J RN resistance (CP)	323A5015J0101	2	
2	R112,R117,R118	RM73B2B512J RN resistance (CP)	323A5015J0512	3	
3	R101-R108,R111, R115	RM73B2B103J RN resistance (CP)	323A5015J0103	10	
4	R116	RM73B2B300J RN resistance (CP)	323A5015J0300	1	
5	R113,R114,R120	RM73B2B102J RN resistance (CP)	323A5015J0102	3	
6	R119,R121,R122	RM73B2B332J RN resistance (CP)	323A5015J0332	3	
7	RM3	MR-8-332JA Block resistance	334A3212J0332	1	
8	RM2	MR-6-332JG Block resistance	334A3214J0332	1	
9	C101-C104,C106 -C111	CK3216B1H103K CK capacitor (CP)	303A6009K3103	10	
10	C105	CK3216B1H102K2M50 CK capacitor (CP)	303A6009K3102	1	
11	C4	TCK45F2E103ZYA 250V CK capacitor 10000P	302A4027Z5103	1	
12	C1,C2	CC45L1H561KYR 250V CC capacitor	C4LP-8611-561	2	
13	Q3,Q4	TMS4416-15NL MOS-DRAM	802A2050M6311	2	
14	Q6	7406P BIP digital IC	700A0003M0006	1	
15	Q5	MSM60360GS-VK MOS digital IC (FP)	702A4924F3060V	1	
16	Q1,Q2	DL2-28A-05 IC socket	245A1155P0280	2	
17	TR1	2SC458/458K NPN-HF-TR	602A1003M0003	1	
18	CN1	HKP-26FD2 PC connector	224A3131P0260	1	
19	CN2	00-8346-3600-93-858 Angular head connector	220A1615P0362	1	
20	CN3	00-8272-244001112-05 PC connector	224A3606P0440	1	
21	SP1	FPC-2AMEP1 FC connector	225A3123P0020	1	

MLCE-Printed Circuit Board (4YA4042-1063Gxxx) 2/2(2/2) 4th Version

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
22	SP4,SP5	FFC-3AMEP1 FC connector	225A3123P0030	2	
23	SB4,SB5	DIC-252 PC connector	224A3182P0020	2	
24		FG bracket (centoro)	4PP4043-2263P001	1	
25		Round head rivet	4LB-180200-2	2	
26	EB1	Power bar L=76.2	3LH-31313-62	1	



G. no.	ROM no.	ROM code no.	Product name
G104			
	Q1	"77-1063"	27512
G105	Q2	"67-1329"	27256
	Q1	"77-1064"	27512
G106			
	Q1	"77-1063"	27512
G107	Q2	"67-1329"	27256
	Q1	"77-1064"	27512



MLCE-Printed Circuit Board Assembly
 (4YA4042-1343Gxxx) 1/2 (1/2)

MLCE-Printed Circuit Board Assembly (4YA4042-1343G104) - 2/2

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4077-1063G1	1	
2					
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5745P100	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1343G105) - 2/2

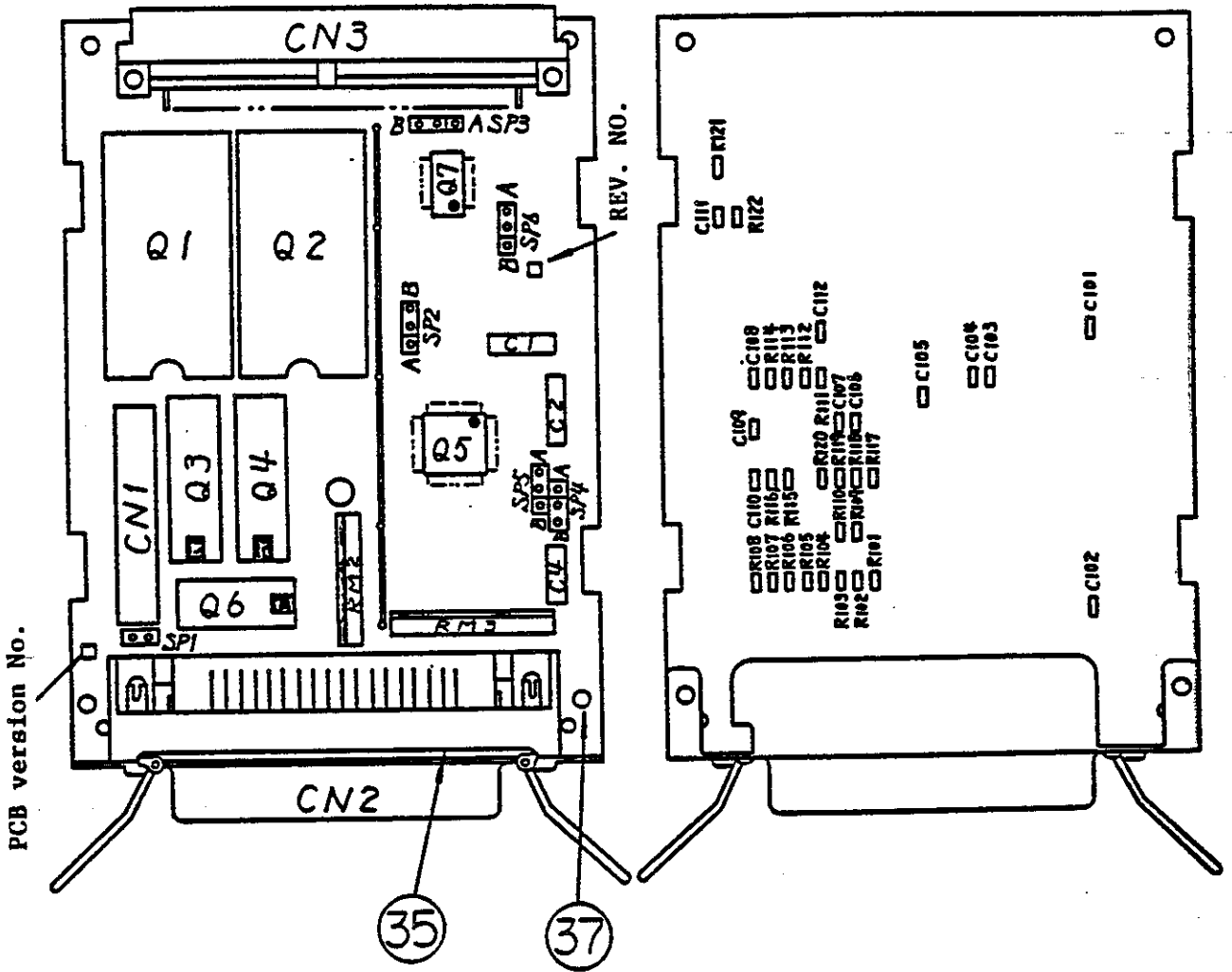
No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4077-1064G1	1	
2		CG ROM	4YR4067-1329G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5745P101	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1343G106) - 2/2

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4077-1063G1	1	
2					
3		Personal card cover (U)	2PB4043-2265F1	1	
4		Label for PM	3PB4012-5745F100	1	
5		Personal card case (L)	2PB4043-2266F1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4YA4042-1065G3	1	
8		DIC-252 PC connector	224A3182P0020	1	

MLCE-Printed Circuit Board Assembly (4YA4042-1343G107) - 2/2

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4077-1064G1	1	
2		CG ROM	4YR4067-1329G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5745P101	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4YA4042-1065G3	1	
8		DIC-252 PC connector	224A3182P0020	1	



Part name	PCB version No.	Rev. No.	Remarks
MLCE-	6	3	ZYU5005-1051G1

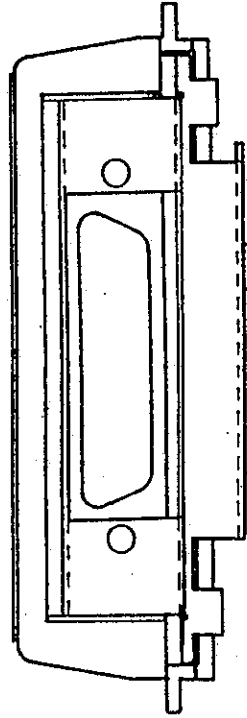
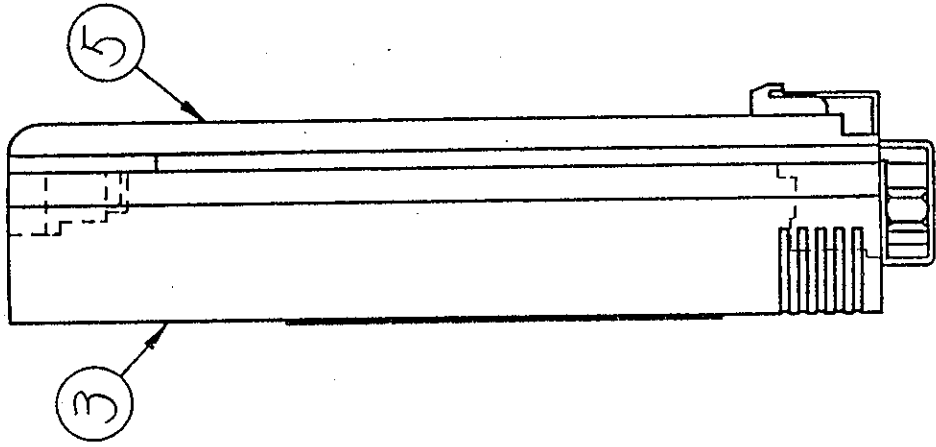
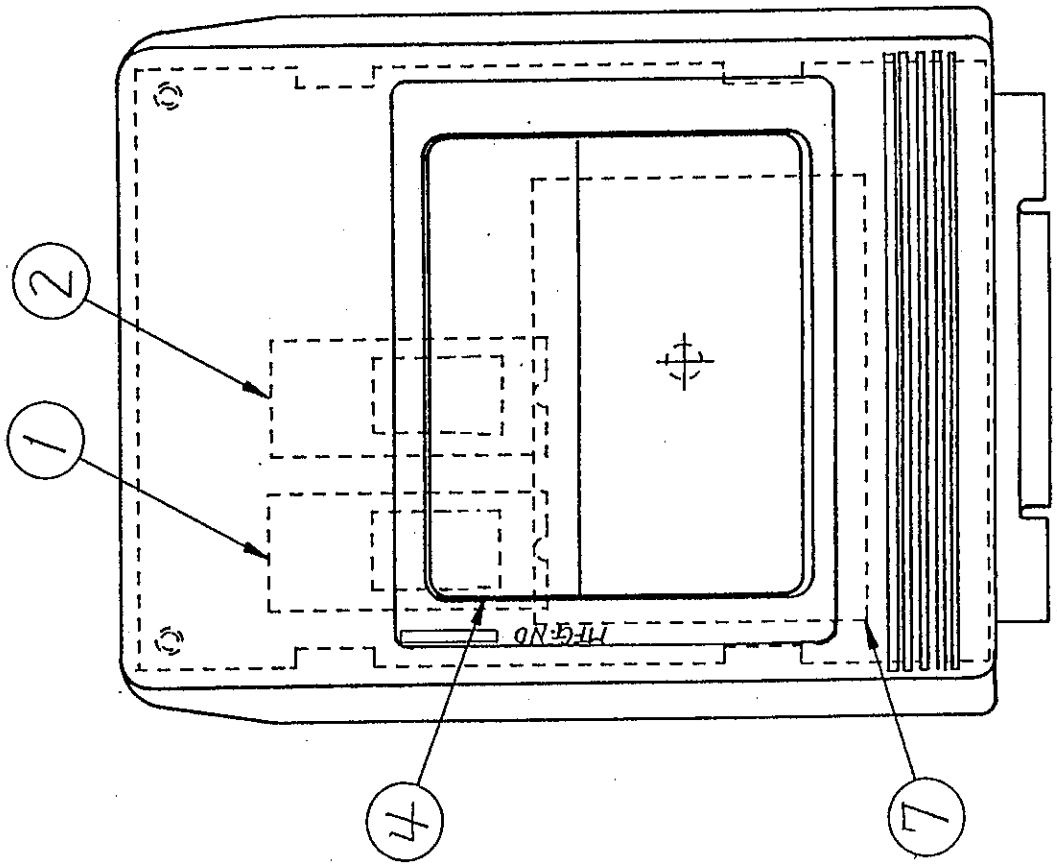
MLCE-Printed Circuit Board (4YA4042-1343Gxxx) 1/2 5th Version

MLCE-Printed Circuit Board (4YA4042-1343Gxxx) 2/2 (1/2) 5th Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1	R109,110	RM73B2B10LJ RN resistance (CP)	323A5015J0101	2	
2	R112,121,122	RM73B2B512J RN resistance (CP)	323A5015J0512	3	
3	R101-108,111, 115	RM73B2B103J RN resistance (CP)	323A5015J0103	10	
4	R116	RM73B2B300J RN resistance (CP)	323A5015J0300	1	
5	R113,114,118	RM73B2B102J RN resistance (CP)	323A5015J0102	3	
6	R117,119,120	RM73B2B332J RN resistance (CP)	323A5015J0332	3	
7	RM3	MR-8-332JA Block resistance	334A3212J0332	1	
8	RM2	MR-6-332JG Block resistance	334A3214J0332	1	
9					
10					
11	C101-104, 106-111	CK3216B1H103K CK capacitor (CP)	303A6009K3103	10	
12	C105	CK3216B1H102K CK capacitor (CP)	303A6009K3102	1	
13	C4	TCK45F2E103ZYA 250V CK capacitor 10000P	302A4027Z5103	1	
14	C1,2	CC45L1H561KYR CC capacitor	C4LP-8611-561	2	
15	C112	CC3216SL1H220J CC capacitor (CP)	303A3008K0220	1	
16					
17	Q3,4	TMS4416-15NL MOS-D-RAM	802A2050M6311	2	
18	Q6	7406P BIP digital IC	700A0003M0006	1	
19	Q5	MSM60360GS-VK MOS digital IC (FP)	702A4924F3060V	1	
20	Q1,2	DL2-28A-05 IC socket	245A1155P0280	2	

MLCE-Printed Circuit Board (4YA4042-1343Gxxx) 2/2 (2/2) 5th Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
21	Q7	74LS02FP BIP digital IC	700A0503N0002	1	
22					
23					
24					
25					
26	CN1	HKP-26FD2 PC connector	224A3131P0260	1	
27	CN2	00-8346-3600-93-858 Square connector	220A1615P0362	1	
28	CN3	00-8272-244001112-05 PC connector	224A3606P0440	1	
29					
30					
31	SP1	FFC-2AMEP1 FC connector	225A3123P0020	1	
32	SP2-6	FFC-3AMEP1 FC connector	225A3123P0030	5	
33	SB2-6	DIC-252 PC connector	224A3182P0020	5	
34					
35		FG bracket (By centronics)	4PP4043- 2263P001	1	
36					
37		Round rivet	4LB-180200-2	2	
38					
39	EB1	Power source bar L=76.2	3LH-31313-62	1	



G. no.	ROM no.	ROM code no.	Product name
G100	Q2	"67-1019"	27256
	Q1	"67-1018"	27256
G101	Q2	"67-1021"	27256
	Q1	"67-1020"	27256
G102	Q2	"67-1019"	27256
	Q1	"67-1018"	27256
G103	Q2	"67-1021"	27256
	Q1	"67-1020"	27256
G104	Q2	"67-1025"	27256
	Q1	"67-1024"	27256
G105	Q2	"67-1027"	27256
	Q1	"67-1026"	27256
G106	Q2	"67-1025"	27256
	Q1	"67-1024"	27256
G107	Q2	"67-1027"	27256
	Q1	"67-1026"	27256
G108	Q2	"67-1023"	27256
	Q1	"67-1022"	27256
G109	Q2	"67-1023"	27256
	Q1	"67-1022"	27256
G110	Q2	"67-1032"	27256
	Q1	"67-1031"	27256
G111	Q2	"67-1032"	27256
	Q1	"67-1031"	27256

MLRC-Printed Circuit Board
 Assembly (4YA4042-1064Gxxx)

MLRC-Printed Circuit Board Assembly (4YA4042-1064G100)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1018G1	1	
2		CG ROM	4YR4067-1019G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P200	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	
7					

MLRC-Printed Circuit Board Assembly (4YA4042-1064G101)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1020G1	1	
2		CG ROM	4YR4067-1021G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P201	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	
7					

MLRC-Printed Circuit Board Assembly (4YA4042-1064G102)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1018G1	1	
2		CG ROM	4YR4067-1019G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P200	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	
7		RAM	4YA4042-1065G3	1	

MLRC-Printed Circuit Board Assembly (4YA4042-1064G103)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1020G1	1	
2		CG ROM	4YR4067-1021G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P201	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	
7		RAM	4YA4042-1065G3	1	

MLRC-Printed Circuit Board Assembly (4YA4042-1064G104)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1024G1	1	
2		CG ROM	4YR4067-1025G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5525P200	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	
7					

MLRC-Printed Circuit Board Assembly (4YA4042-1064G105)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1026G1	1	
2		CG ROM	4YR4067-1027G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5525P201	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	
7					

MLRC-Printed Circuit Board Assembly (4YA4042-1064G106)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1024G1	1	
2		CG ROM	4YR4067-1025G1	1	
3		Personal card cover (U)	2PB4043-5525P1	1	
4		Label for PM	3PB4012-5422P200	1	
5		Personal card case (L)	2PB4043-2265P1	1	
6		Locking cover	2PB4016-3146P1	1	
7		RAM	4Y4042-1065G3		

MLRC-Printed Circuit Board Assembly (4YA4042-1064G107)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1026G1	1	
2		CG ROM	4YR4067-1027G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5525P201	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	
7		RAM	4YA4042-1065G3	1	

MLRC-Printed Circuit Board Assembly (4YA4042-1064G108)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1022G1	1	
2		CG ROM	4YR4067-1023G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P204	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	
7					

MLRC-Printed Circuit Board Assembly (4YA4042-1064G109)

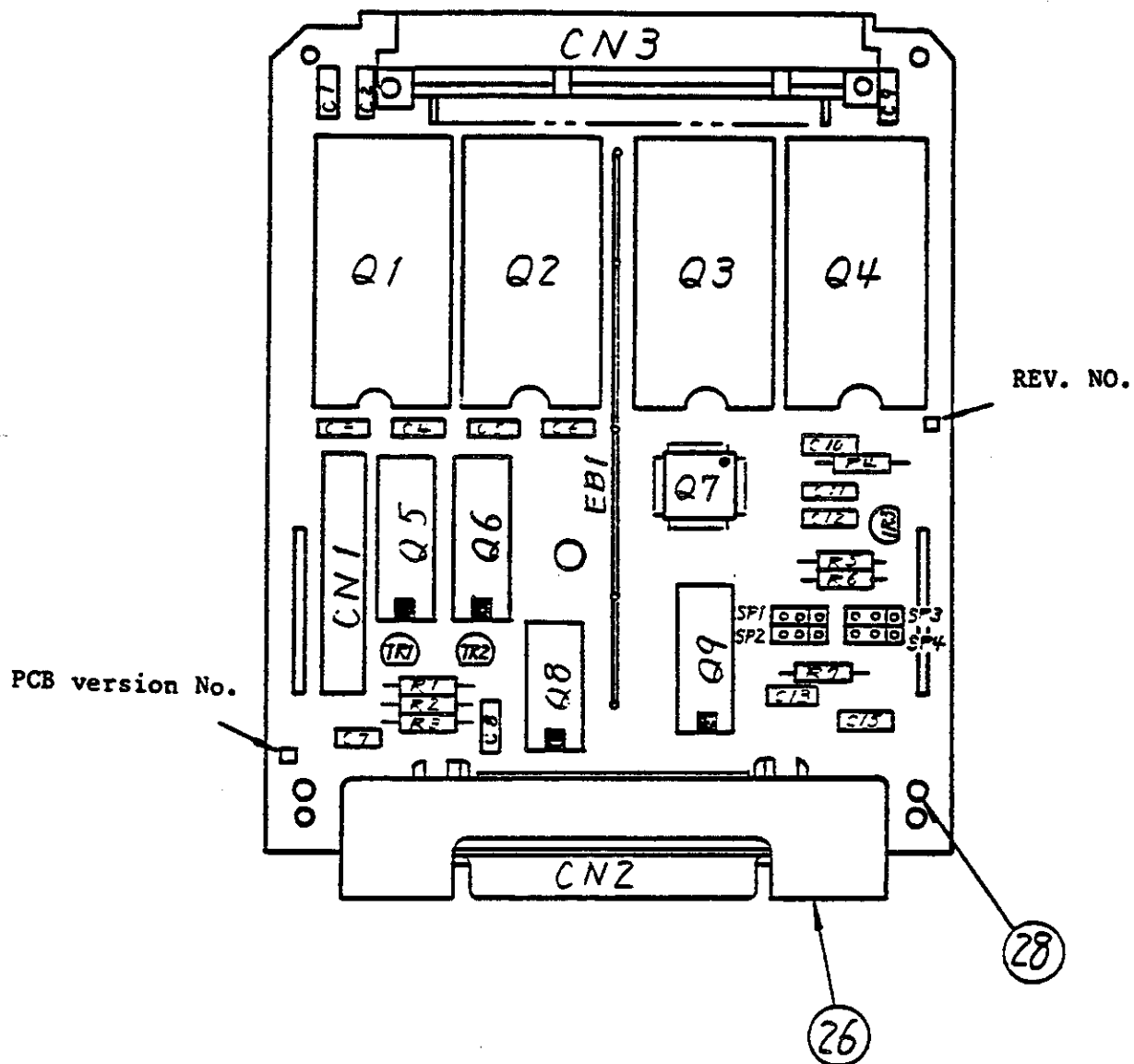
No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1022G1	1	
2		CG ROM	4YR4067-1023G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P204	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	
7		RAM	4YA4042-1065G3	1	

MLRC-Printed Circuit Board Assembly (4YA4042-1064G110)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1031G1	1	
2		CG ROM	4YR4067-1032G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P205	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	

MLRC-Printed Circuit Board Assembly (4YA4042-1064G111)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1031G1	1	
2		CG ROM	4YR4067-1032G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P205	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	
7		RAM	4YA4042-1065G3	1	



Part name	PCB version no.	Rev. no.	Remarks
MLRC-	2	1	2YU5005-1052G1

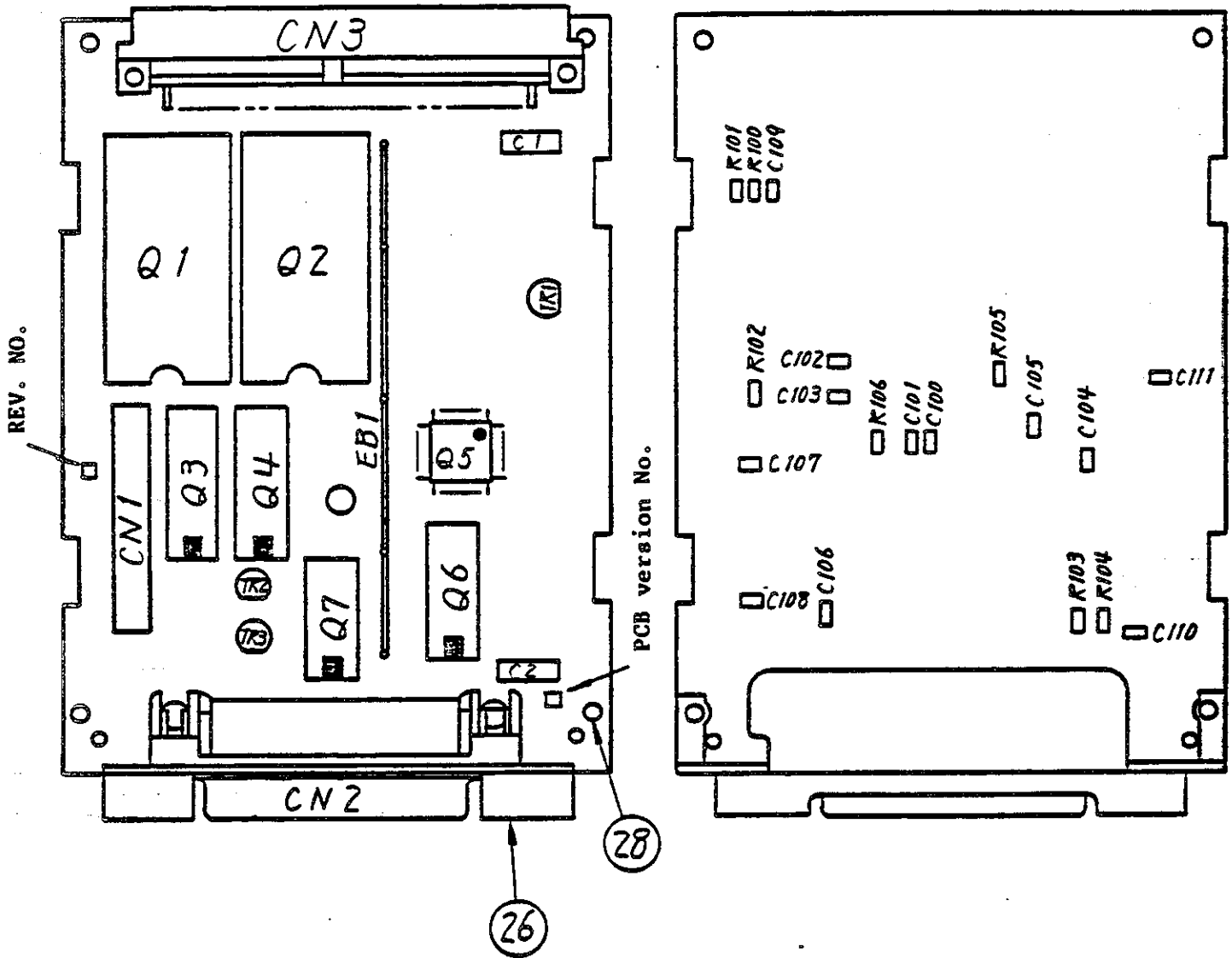
MLRC-Printed Circuit Board Assembly (4YA4042-1064GXXX) 1/2 1st Version

MLRC-Printed Circuit Board (4YA4042-1064GXXX) 2/2 (1/2) 1st Version

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1	R2,R4	RD1/4Y3. 6KΩJ RD resistance	321A1421J0362	2	
2	R1,R5	RD1/4Y2KΩJ RD resistance	321A1421J0202	2	
3	R3,R6,R7	RD1/4Y5. 1KΩJ RD resistance	321A1421J0512	3	
4					
5					
6	C1-C9,C11-C13	C2SEC1H103K 50V CQ-M capacitor 0.01μ	306A2022K1103	12	
7	C15	TCK45F2E103ZYA 250V CK capacitor 10000P	302A4027Z5103	1	
8	C10	CC45L1H561KYR CC capacitor	C4LP-8611-561	1	
9					
10					
11	Q5,Q6	TMS4416-15NL MOS-D-RAM	802A2050M6311	2	
12	Q8	75188P BIP-INF-IC	710A0003M0188	1	
13	Q9	75154P BIP-INF-IC	710A0003M0154	1	
14	Q7	MSM60360GS-VK MOS digital IC (FP)	702A4924F3060V	1	
15	Q1-Q4	DL2-28A-05 IC socket	245A1155P0280	4	
16					
17					
18	TR1	2SC458/458K NPN-HF-TR	602A1003M0003	1	
19	TR2,TR3	2SA952 PNP-HF-TR	600A1123M0014	2	
20					
21					
22	CN1	HKP-26FD2 PC connector	224A3131P0260	1	
23	CN2	D25S-LLD-Hexagonal (#4-40) Angular head connector	220A121P0250	1	
24	CN3	00-8272-244001112-05 PC connector	224A3606P0440	1	
25					
26		FG bracket (RS232C)	3PP4043-2084P001	1	

MLRC-Printed Circuit Board (4YA4042-1064GXXX) 2/2 (2/2) 1st Version

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
27					
28		Round head rivet	4LB-180200-2	2	
29					
30	SP1-SP4	FFC-3AMEP1 FC connector	225A3123P0030	4	
31	SB1-SB4	DIC-252 PC connector	224A3182P0020	4	
32					
33	EB1	Power bar L=76.2	3LH-31313-62	1	



Part name	PCB version no.	Rev. no.	Remarks
MLRC-	3	2	2YU5005-1052G1

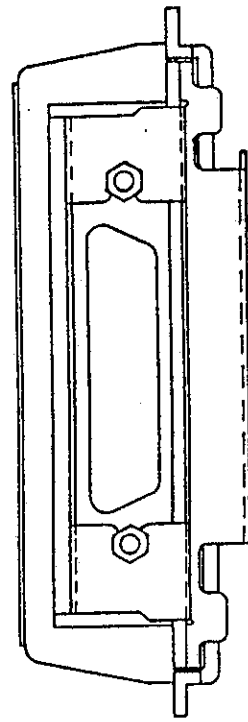
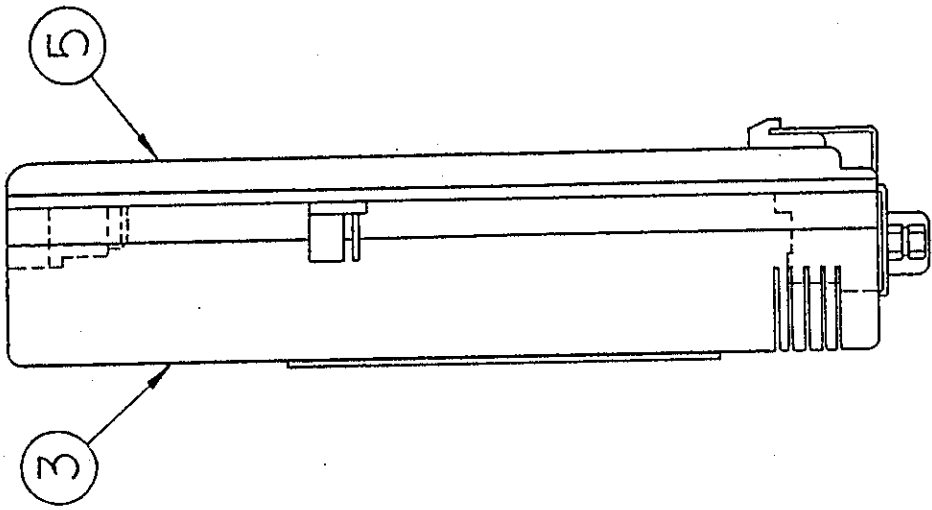
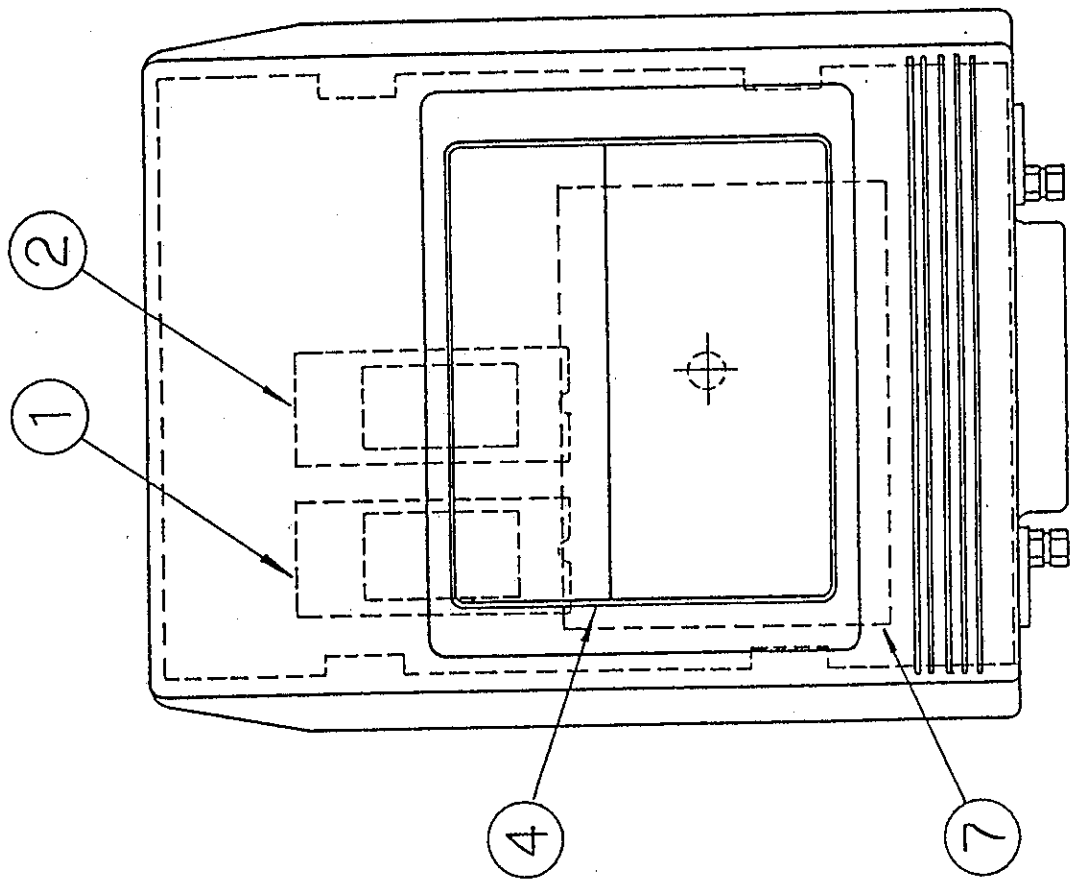
MLRC-Printed Circuit Board (4YA4042-1064GXXX) 1/2 2nd Version

MLRC-Printed Circuit Board (4YA4042-1064GXXX) 2/2 (1/2) 2nd Version

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1	R100,R103	RM73B2B362J RN resistance	323A5015J0362	2	
2	101,R104	RM73B2B202J RN resistance	323A5015J0202	2	
3	R102,R105,R106	RM73B2B512J RN resistance	323A5015J0512	3	
4					
5					
6	C100-C111	CK3216B1H103K CK capacitor (CP)	303A6009K3103	12	
7	C2	TCK45F2E103ZYA 250V CK capacitor 10000P	302A4027Z5103	1	
8	C1	CC45L1H561KYR CC capacitor	C4LP-8611-561	1	
9					
10					
11	Q3,Q4	TMS4416-15NL MOS-D-RAM	802A2050M6311	2	
12	Q7	75188P BIP-INF-IC	710A0003M0188	1	
13	Q6	75154P BIP-INF-IC	710A0003M0154	1	
14	Q5	MSM60360GS-VK MOS digital IC (FP)	702A4924F3060V	1	
15	Q1,Q2	DL2-28A-05 IC socket	245A1155P0280	4	
16					
17					
18	TR2	2SC458/458K NPN-HF-TR	602A1003M0003	1	
19	TR1,TR3	2SA952 PNP-HF-TR	600A1123M0014	2	
20					
21					
22	CN1	HKP-26FD2 PC connector	224A3131P0260	1	
23	CN2	D25S-LLD-Hexagonal (#4-40) Angular head connector	220A121P0250	1	
24	CN3	00-8272-244001112-05 PC connector	224A3606P0440	1	
25					

MLRC-Printed Circuit Board (4YA4042-1064GXXX) 2/2 (2/2) 2nd Version

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
26		FG bracket (RS232C)	3PP4043-2264P002	1	
27					
28		Round head rivet	4LB-180200-2	2	
29					
30					
31					
32					
33	EB1	Power bar L=76.2	3LH-31313-62	1	



G. no.	ROM no.	ROM code no.	Product name
G104			
	Q1	"77-1063"	27512
G105	Q2	"67-1329"	27256
	Q1	"77-1064"	27512
G106			
	Q1	"77-1063"	27512
G107	Q2	"67-1329"	27256
	Q1	"77-1064"	27512

M,RC-Printed Circuit Board Assembly
 (4YA4042-1344Gxxx) 1/2 (1/2)

MIRC-Printed Circuit Board Assembly (4YA4042-1344G104) - 2/2

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4077-1063G1	1	
2					
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5745P200	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	

MIRC-Printed Circuit Board Assembly (4YA4042-1344G105) - 2/2

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4077-1064G1	1	
2		CG ROM	4YR4067-1329G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5745P201	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	

MLRC-Printed Circuit Board Assembly (4YA4042-1344G106) - 2/2

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4077-1063G1	1	
2					
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5745P200	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	
7		RAM	4YA4042-1065G3	1	

MIRC-Printed Circuit Board Assembly (4YA4042-1344G107) - 2/2

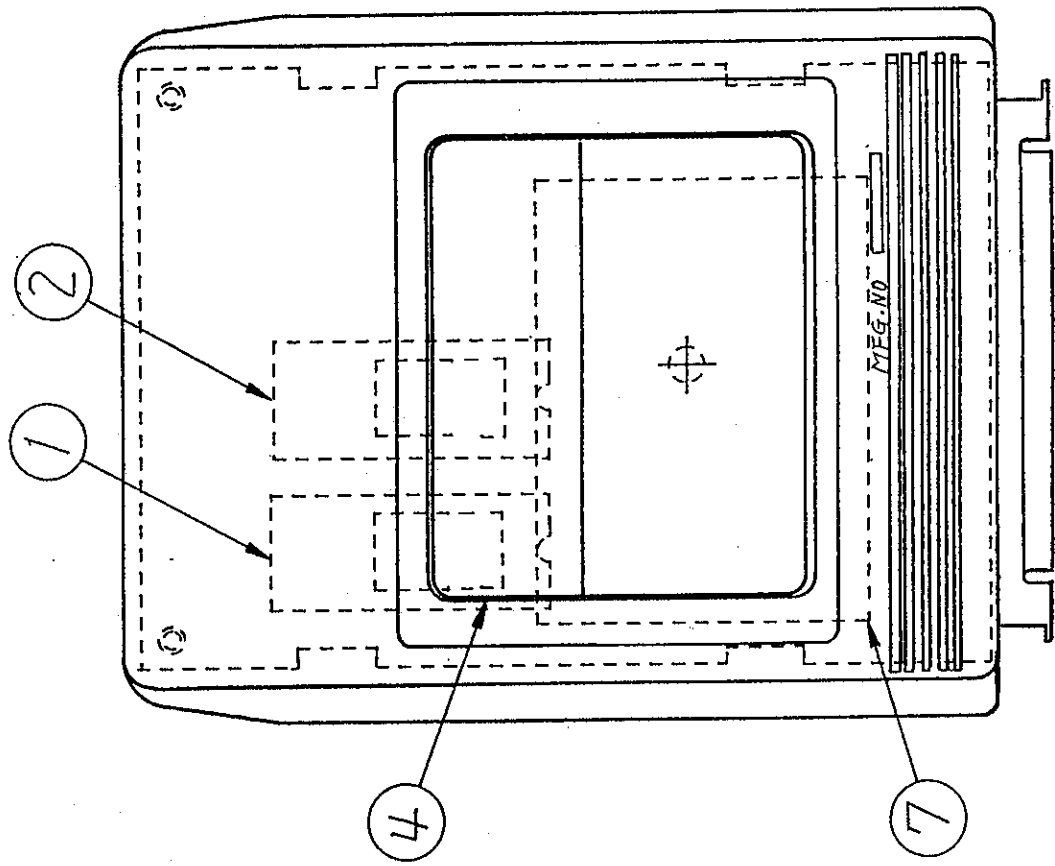
No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4077-1064G1	1	
2		CG ROM	4YR4067-1329G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5745P201	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3146P1	1	
7		RAM	4YA4042-1065G3	1	

MIRC-Printed Circuit Board (4YA4042-1344Gxxx) 2/2 (1/2) 3rd Version

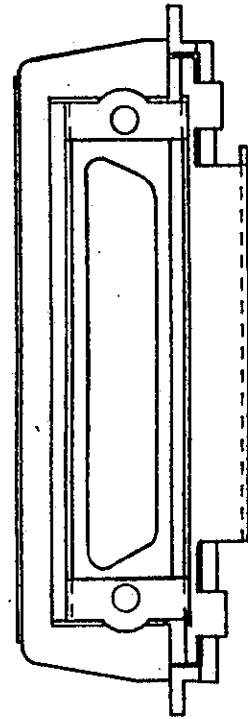
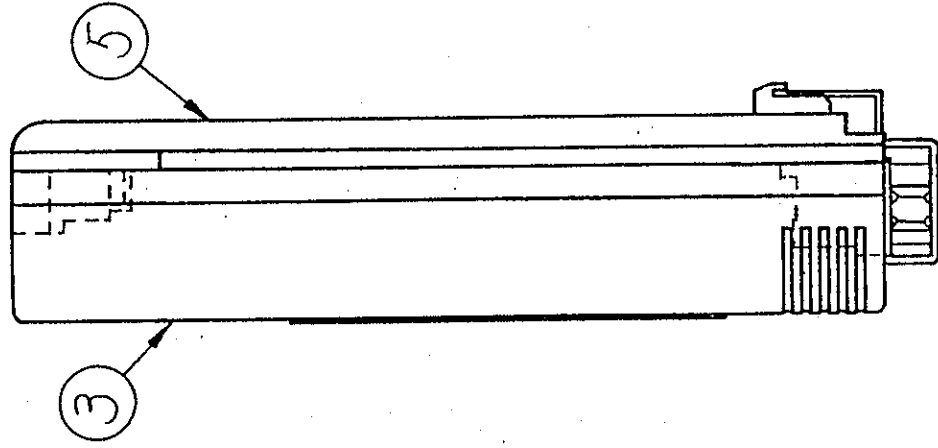
No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1	R100,103	RM73B2B362J RN resistance (CP)	323A5015J0362	2	
2	R101,104	RM73B2B202J RN resistance (CP)	323A5015J0202	2	
3	R102,105,106, 107,108	RM73B2B512J RN resistance (CP)	323A5015J0512	5	
4					
5					
6	C100-111	CK3216B1H103K CK capacitor (CP)	303A6009K3103	12	
7	C2	TCK45F2E103ZYA 250V CK capacitor 10000P	302A4027Z5103	1	
8	C1	CC45L1H561KYR CC capacitor	C4LP-8611-561	1	
9	C112	CC3216S1L1H220J CC capacitor (CP)	303A3008K0220	1	
10					
11	Q3,4	TMS4416-15NL MOS-D-RAM	802A2050M6311	2	
12	Q7	75188P BIP-INF-IC	710A0003M0188	1	
13	Q6	75154P BIP-INF-IC	710A0003M0154	1	
14	Q5	MSM60360GS-VK MOS digital IC (FP)	702A4924F3060V	1	
15	Q1,2	DL2-28A-05 IC socket	245A1155P0280	2	
16	Q8	74LS02FP BIP digital IC (SO)	700A0503N0002	1	
17					
18	TR2	2SC458/458K NPN-HF-TR	602A1003M0003	1	
19	TR1,3	2SA952 PNP-HF-TR	600A1123M0014	2	
20					

MLRC-Printed Circuit Board (4YA4042-1344Gxxx) 2/2 (2/2) 3rd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
21					
22	CN1	HKP-26FD2 PC connector	224A3131P0260	1	
23	CN2	D25S-LLD-6hexagonal (#4-40) Square connector	220A0121P0250	1	
24	CN3	00-8272-244001112-05 PC connector	224A3606P0440	1	
25					
26					
27		FG bracket (RS232C)	3PP4043- 2800P001	1	
28					
29		Round rivet	4LB-180200-2	2	
30					
31					
32	EB1	Power source bar L=76.2	3LH-31313-62	1	
33					
34	SP1-3	FFC-3AMEP1 FC connector	225A3123P0030	3	
35	SB1-3	DIC-252 PC connector	224A3182P0020	3	



G. no.	ROM no.	ROM code no.	Product name
G100	Q2	"67-1019"	27256
	Q1	"67-1018"	27256
G101	Q2	"67-1021"	27256
	Q1	"67-1020"	27256
G102	Q2	"67-1019"	27256
	Q1	"67-1018"	27256
G103	Q2	"67-1021"	27256
	Q1	"67-1020"	27256
G104	Q2	"67-1025"	27256
	Q1	"67-1024"	27256
G105	Q2	"67-1027"	27256
	Q1	"67-1026"	27256
G106	Q2	"67-1025"	27256
	Q1	"67-1024"	27256
G107	Q2	"67-1027"	27256
	Q1	"67-1026"	27256
G108	Q2	"67-1023"	27256
	Q1	"67-1022"	27256
G109	Q2	"67-1023"	27256
	Q1	"67-1022"	27256
G110	Q2	"67-1032"	27256
	Q1	"67-1031"	27256
G111	Q2	"67-1032"	27256
	Q1	"67-1031"	27256



MSI-Printed Circuit Board
 Assembly (4YA4042-1067Gxxx)

MLSI-Printed Circuit Board Assembly (4YA4042-1067G100)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1018G1	1	
2		CG ROM	4YR4067-1019G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P300	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	

MLCE-Printed Circuit Board (4YA4042-1067G101)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1020G1	1	
2		CG ROM	4YR4067-1021G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM .	3PB4012-5422P301	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					

MLSI-Printed Circuit Board Assembly (4YA4042-1067G102)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1018G1	1	
2		CG ROM	4YR4067-1019G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P300	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4YA4042-1065G3	1	

MLSI-Printed Circuit Board Assembly (4YA4042-1067G103)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1020G1	1	
2		CG ROM	4YR4067-1021G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P301	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4YA4042-1065G3	1	

MLSI-Printed Circuit Board Assembly (4YA4042-1067G104)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1024G1	1	
2		CG ROM	4YR4067-1025G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5525P300	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					

MLRC-Printed Circuit Board Assembly (4YA4042-1067G105)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1026G1	1	
2		CG ROM	4YR4067-1027G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5525P301	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					

MIRC-Printed Circuit Board Assembly (4YA4042-1067G106)

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1024G1	1	
2		CG ROM	4YR4067-1025G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5525P300	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4Y4042-1065G3		

MLRC-Printed Circuit Board Assembly (4YA4042-1067G107)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1026G1	1	
2		CG ROM	4YR4067-1027G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5525P301	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4Y4042-1065G3	1	

MLSI-Printed Circuit Board Assembly (4YA4042-1067G108)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1022G1	1	
2		CG ROM	4YR4067-1023G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P304	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					

MLSI-Printed Circuit Board Assembly (4YA4042-1067G109)

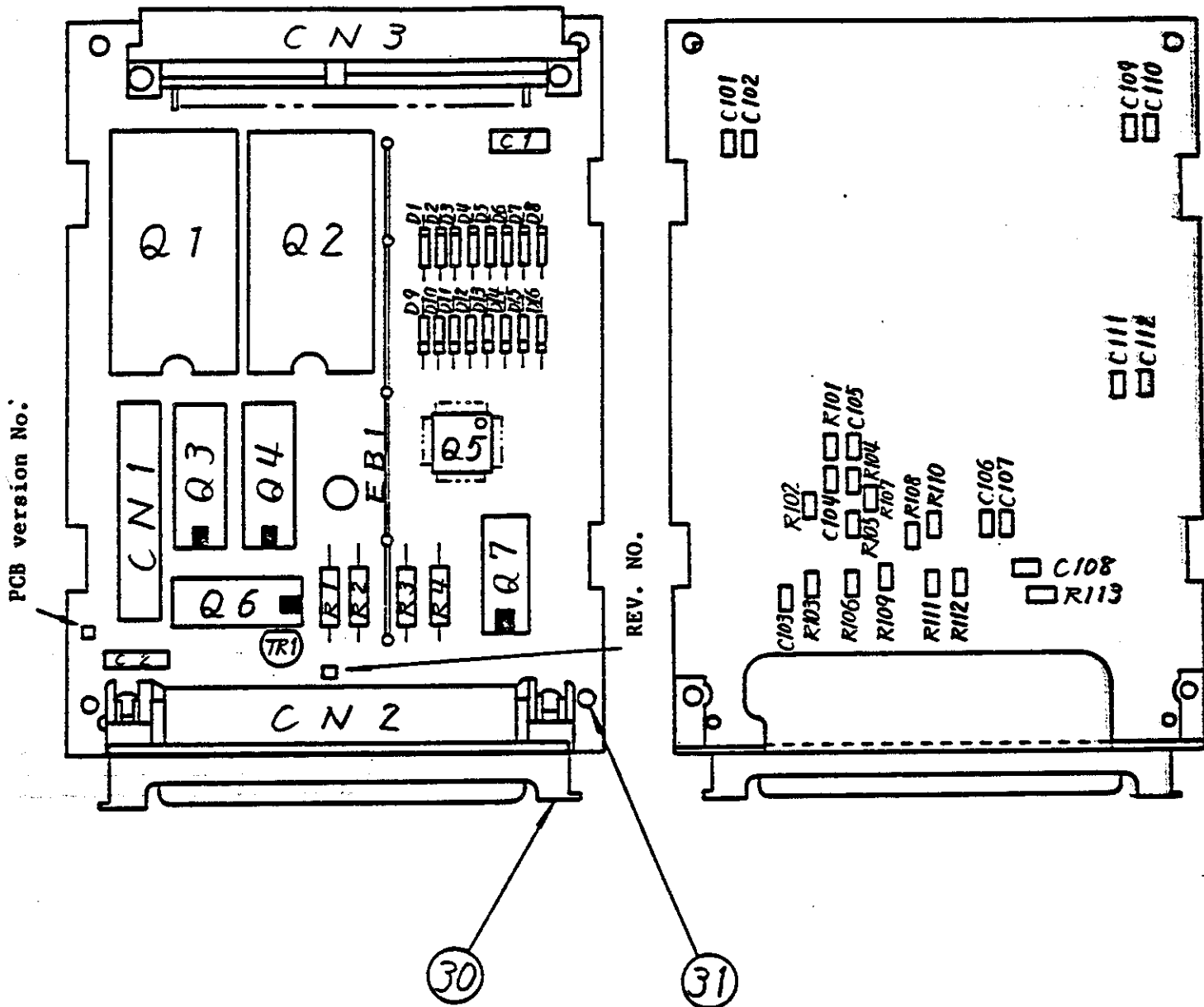
No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1022G1	1	
2		CG ROM	4YR4067-1023G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P304	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4YA4042-1065G3	1	

MLRC-Printed Circuit Board Assembly (4YA4042-1064G110)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1031G1	1	
2		CG ROM	4YR4067-1032G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P305	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	

MLSI-Printed Circuit Board Assembly (4YA4042-1067G111)

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4067-1031G1	1	
2		CG ROM	4YR4067-1032G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5422P305	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4YA4042-1065G3	1	



Part name	PCB version No.	Rev. No.	Remarks
MLSI-	2	2	2YU5005-1027G1

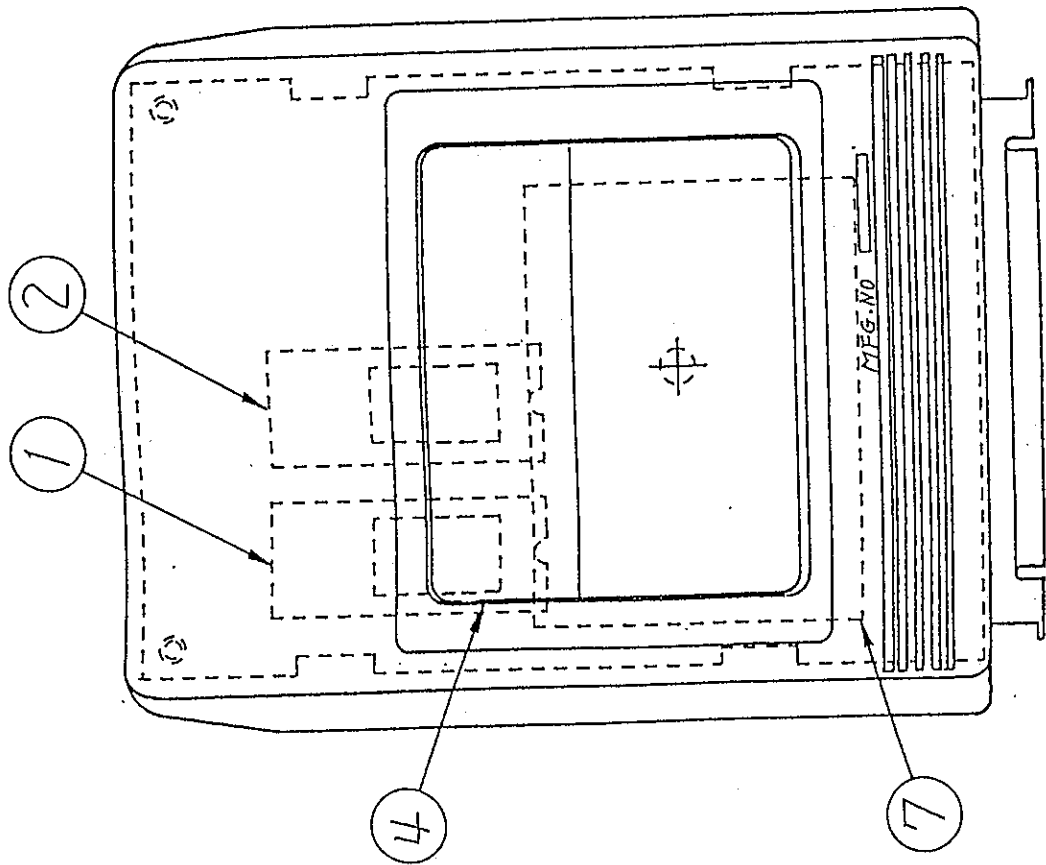
MLSI-Printed Circuit Board Assembly (4YA4042-1067GXXX) 1/2 1st Version

MLSI-Printed Circuit Board (4YA4042-1067GXXX) 2/2 (1/2) 1st Version

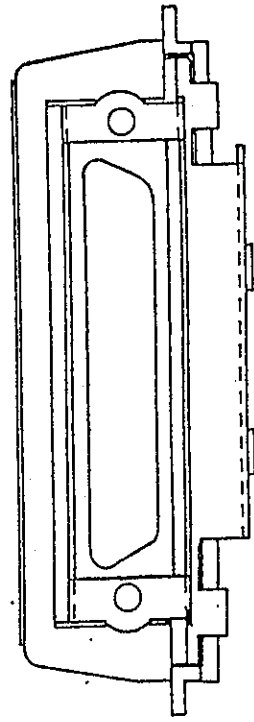
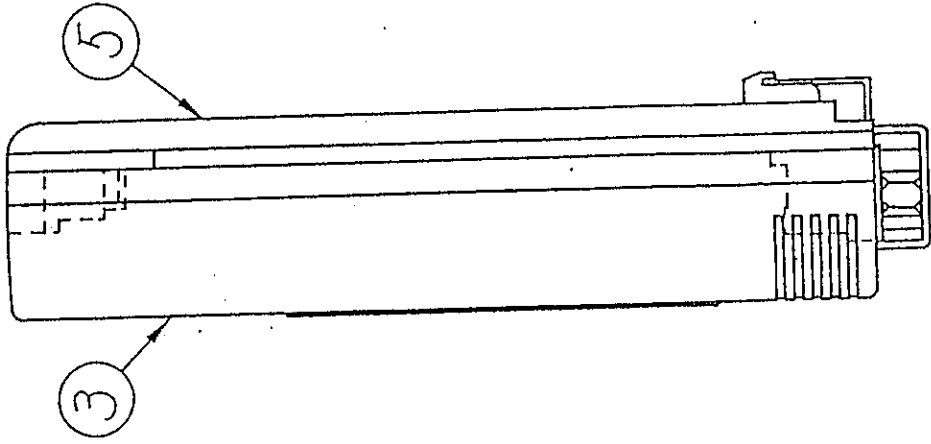
No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
1	D1-D16	RD20E-B Zener DI	613A1231L0252	16	
2					
3	R104,R107,R113	RM73B2B362J RN resistance (CP)	323A5015J0362	3	
4	R102,R103,R105, R106,R108-R111	RM73B2B102J RN resistance (CP)	323A5015J0102	8	
5	R112	RM73B2B202J RN resistance (CP)	323A5015J0202	1	
6	R1-R4	RD1/2Y120ΩJ RD resistance	321A1431J0121	4	
7	R101	RM73B2B512J RN resistance (CP)	323A5015J0512	1	
8					
9	C101-C112	CK3216B1H103K CK capacitor (CP)	303A6009K3103	12	
10	C2	TCK45F2E1032YA 250V CK capacitor 10000P	302A4027Z5103	1	
11	C1	CC45L1H561KYR CC capacitor	C4LP-8611-561	1	
12					
13	Q5	MSM60360GS-VK MOS digital IC (FP)	702A4924F3060V	1	
14	Q3,Q4	TMS4416-15NL MOS-D-RAM	802A2050M6311	2	
15	Q6	AM26LS31PC BIP-INF-IC	710A0854M0001	1	
16	Q7	AM26LS32PC BIP-INF-IC	710A0854M0002	1	
17					
18					
19	TR1	2SA952 PNP-HF-TR	600A1123M0014	1	
20					

MLSI-Printed Circuit Board (4YA4042-1067GXXX) 2/2 (2/2) 1st Version

No.	Symbol	Name Standard	Part No.	Q'ty	Remarks
21					
22	Q1,Q2	DL2-28A-05 IC socket	245A1155P0280	2	
23	CN2	17LE-13370-27 (D3CC) Angular head connector	220A1450P0370	1	
24	CN1	HKP-26FD2 PC connector	224A3131P0260	1	
25	CN3	00-8272-244001112-05 PC connector	224A3606P0440	1	
26					
27	EB1	Power bar L=76.2	3LH-31313-62	1	
28					
29					
30		FG bracket (RS422A)	3PP4043-2286P001	1	
31		Round head rivet	4LB-180200-2	2	



G. no.	ROM no.	ROM code no.	Product name
G104			
	Q1	"77-1063"	27512
	Q2	"67-1329"	27256
G105	Q1	"77-1064"	27512
G106			
	Q1	"77-1063"	27512
G107	Q2	"67-1329"	27256
	Q1	"77-1064"	27512



MSI-Printed Circuit Board Assembly
 (4YA4042-1346Gxxx) 1/2 (1/2)

MSI-Printed Circuit Board Assembly (4YA4042-1346G104) - 2/2

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4077-1063G1	1	
2					
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5745P300	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					

MSI-Printed Circuit Board Assembly (4YA4042-1346G105) - 2/2

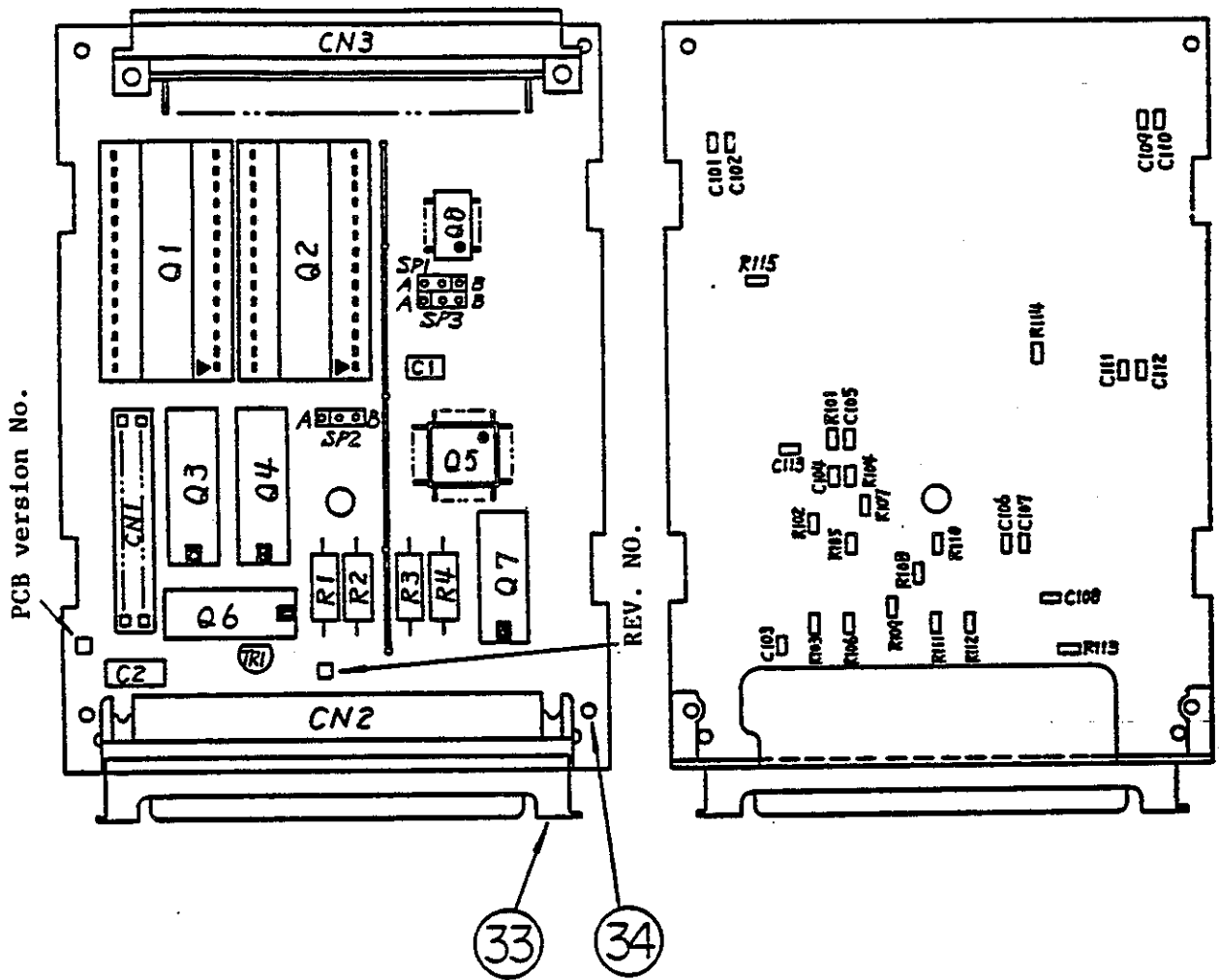
No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4077-1064G1	1	
2		CG ROM	4YR4067-1329G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5745P301	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7					

MSI-Printed Circuit Board Assembly (4YA4042-1346G106) - 2/2

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4077-1063G1	1	
2					
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5745P300	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4YA4042-1065G3	1	

MSI-Printed Circuit Board Assembly (4YA4042-1346G107) - 2/2

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1		PG ROM	4YR4077-1064G1	1	
2		CG ROM	4YR4067-1329G1	1	
3		Personal card cover (U)	2PB4043-2265P1	1	
4		Label for PM	3PB4012-5745P301	1	
5		Personal card case (L)	2PB4043-2266P1	1	
6		Locking cover	2PB4016-3121P1	1	
7		RAM	4YA4042-1065G3	1	



Part name	PCB version No.	Rev. No.	Remarks
MSI-	3, 4	3	ZYU5005-1027G1

MSI-Printed Circuit Board (4YA4042-1346Gxxx) 1/2 2nd Version

MLSI-Printed Circuit Board (4YA4042-1346Gxxx) 2/2 (1/2) 2nd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
1	R104,107,113	RM73B2B362J RN resistance (CP)	323A5015J0362	3	
2	R102,103,105, R106,108-111	RM73B2B102J RN resistance (CP)	323A5015J0102	8	
3	R112	RM73B2B202J RN resistance (CP)	323A5015J0202	1	
4	R1-4	RD1/2Y120RJ RD resistance	321A1431J0121	4	
5	R101,114,115	RM73B2B512J RN resistance (CP)	323A5015J0512	3	
6					
7					
8	C101-112	CK3216B1H103K CK capacitor (CP)	303A6009K3103	12	
9	C2	TCK45F2E103ZYA 250V CK capacitor 10000P	302A4027Z5103	1	
10	C1	CC45L1H561KYR CC capacitor	C4LP-8611-561	1	
11	C113	CC3216SL1H220J CC capacitor (CP)	303A3008K0220	1	
12					
13					
14	Q5	MSM60360GS-VK MOS digital IC (FP)	702A4924F3060V	1	
15	Q3,4	TMS4416-15NL MOS-D-RAM	802A2050M6311	2	
16	Q6	AM26LS31PC BIP-INF-IC	710A0854M0001	1	
17	Q7	AM26LS32PC BIP-INF-IC	710A0854M0002	1	
18	Q8	74LS02FP BIP digital IC (SQ)	700A0503N0002	1	
19					
20					
21	TR1	2SA952 PNP-HF-TR	600A1123M0014	1	
22					
23					

MISI-Printed Circuit Board (4YA4042-1046Gxxx) 2/2 (2/2) 2nd Version

No.	Symbol	Name standard	Part No.	Q'ty	Remarks
24	Q1,2	DL2-28A-05 IC socket	225A1155P0280	2	
25	CN2	17LE-13370-27(D3CC) Square connector	220A1450P0370	1	
26	CN1	HKP-26FD6 PC connector	224A3131P0260	1	
27	CN3	00-8272-244001112-05 PC connector	224A3606P0440	1	
28					
29					
30	EB1	Power source bar L=76.2	3LH-31313-62	1	
31					
32					
33		FG bracket (RS422A)	3PP4043- 2286P001	1	
34		Round rivet	4LB-180200-2	2	
35					
36					
37	SP1-3	FFC-3AMEP1 FC connector	225A3123P0030	3	
38	SB1-3	DIC-252 PC connector	224A3182P0020	3	

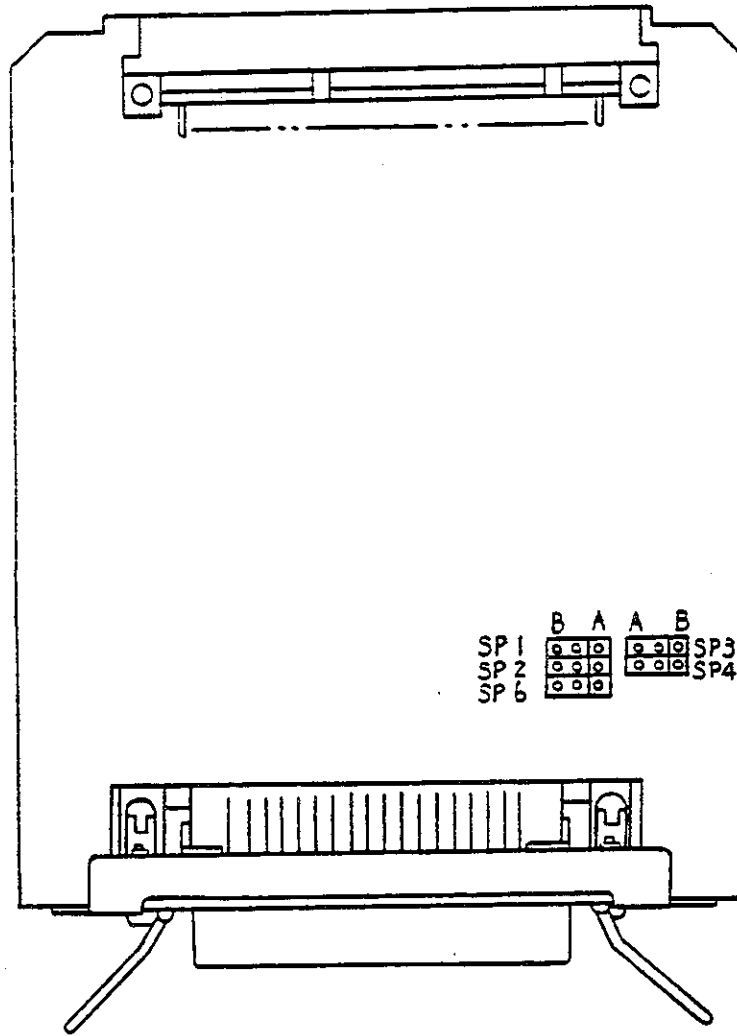
APPENDIX

Appendix Explanation of the personality module short plug (2/2)

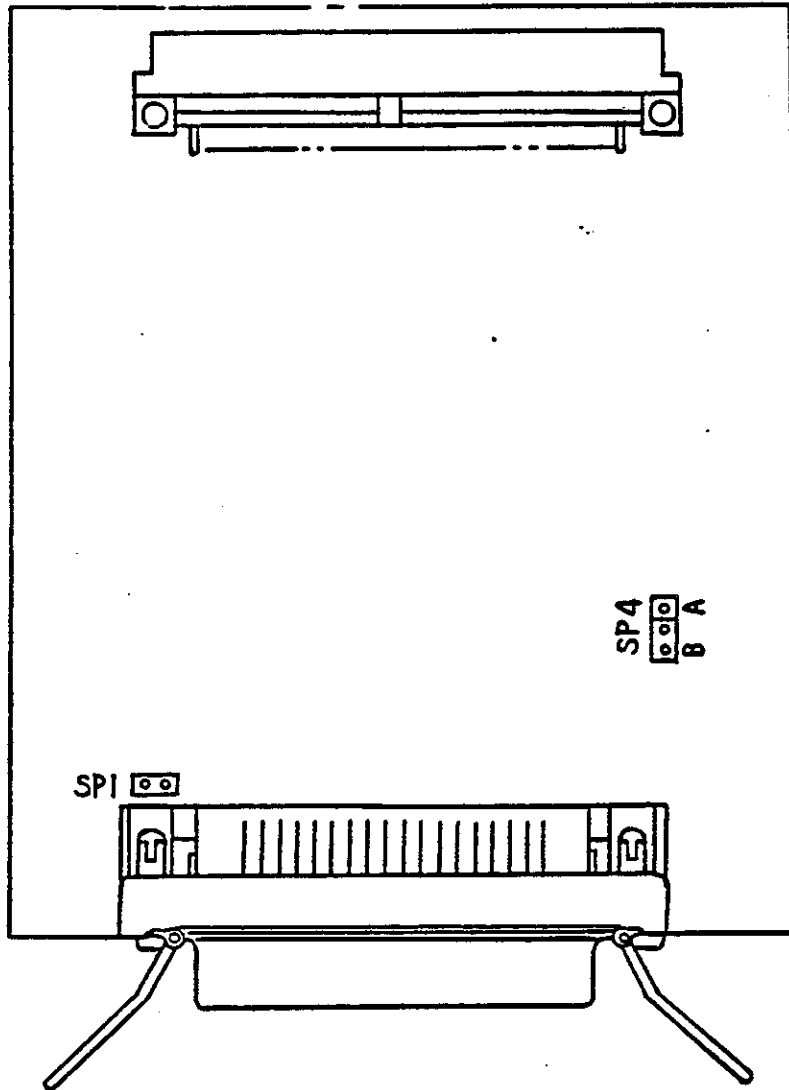
Module type		Rev. 3		
Centronics parallel interface personality module (MLCE printed circuit board of Version 6 or later)	SP1	Short	Output +5V to interface connector pin 18. - standard	
		Open	Interface connector pin 18 open.	
	SP2	A		Q1 27256
		B		Q1 27512 - standard
	SP3	A		Q1 27256
		B		Q1 27512 - standard
	SP4	A		I-PRIME signal ineffective.
		B		J PRIME signal effective. - standard
	SP5	A		Interface connector pin 14 grounded - standard
		B		Interface connector pin 14 connected to input port
SP6	A		Q2 27256 - standard	
	B		Q2 27128	
RS-232-C Serial interface personality module (MLRC printed circuit board of Version 4 or later)	SP1	A	Q2 27128	
		B	Q2 27256 - standard	
	SP2	A		Q1 27256
		B		Q1 27512 - standard
	SP3	A		Q1 27256
		B		Q1 27512 - standard
RS-422-A Serial interface personality Module (MLSI printed circuit board of Version 3 or later)	SP1	A	Q2 27256 - standard	
		B	Q2 27128	
	SP2	A		Q1 27256
		B		Q1 27512 - standard
	SP3	A		Q1 27256
		B		Q1 27512 - standard

Appendix Explanation of the personality module short plug (1/2)

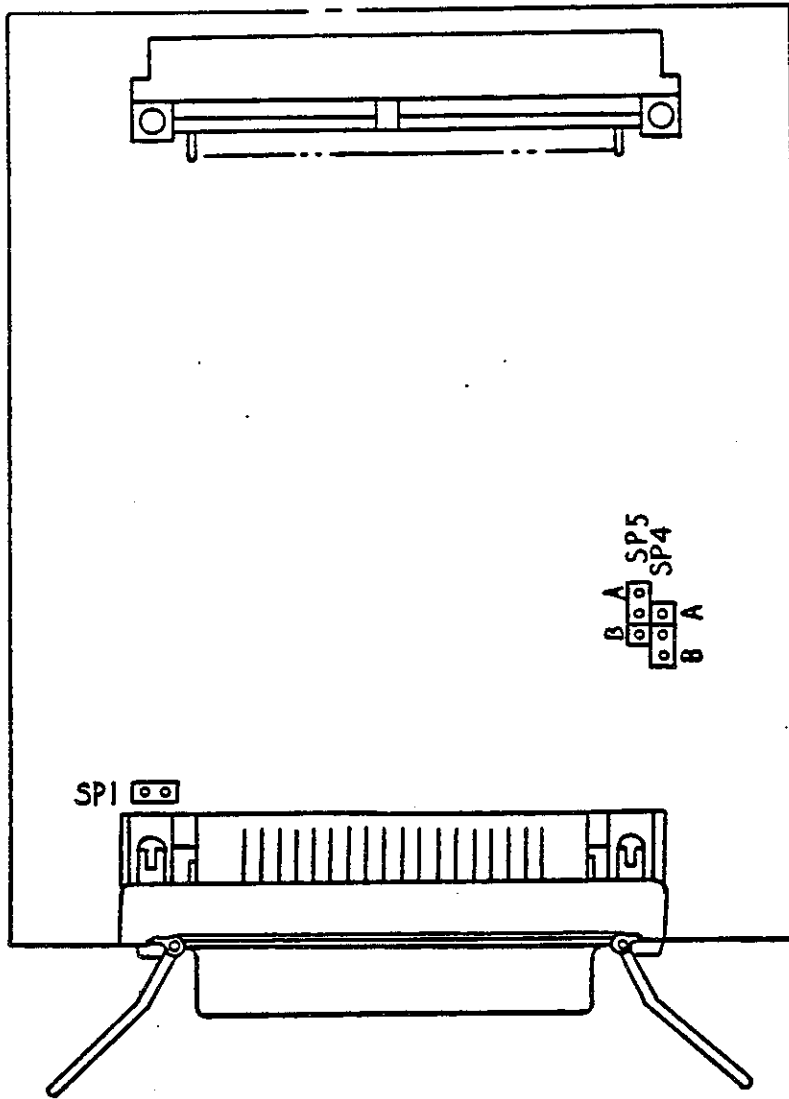
Module type	Rev. 1				Rev. 2			
	SP1	A	Q1 27256	Short	SP1	Short	Output +5 V to the interface connector 18 pin. - standard	SP1
Electronics parallel interface personality module	B		Q1 27128 - standard	Open		Open	Open the interface connector 18 pin	
	SP2	A	Q2 27256		SP2	A	Not mounted	
	B		Q2 27128 - standard			B		
	SP3	A	Q3 27256 - standard		SP3	A	Not mounted	
	B		Q3 27128			B		
	SP4	A	Q4 27256 - standard		SP4	A	I - PRIME signal ineffective	
	B		Q4 27128			B	I - PRIME signal effective - standard	
	SP5	Short	Output +5 V to the interface connector 18 pin. - standard		SP5	A	The interface connector 14 pin is connected with ground - standard	
		Open	Open the interface connector 18 pin			B	Interface connector 14 pin to the input port	
		SP6	A	I - PRIME signal effective				Note: For SP5, the PCB version number 3 is not mounted. At this time, the interface connector 14 pin is fixed to the ground.
		B		I - PRIME signal ineffective - standard				
	RS-232-C Serial interface personality module	SP1	A	Q1 27256				
B			Q1 27128 - standard					
SP2		A	Q2 27256					
B			Q2 27128 - standard					
SP3		A	Q3 27256 - standard					
B			Q3 27128					
SP4		A	Q4 27256 - standard					
B			Q4 27128					
RS-422A-Serial interface personality module								



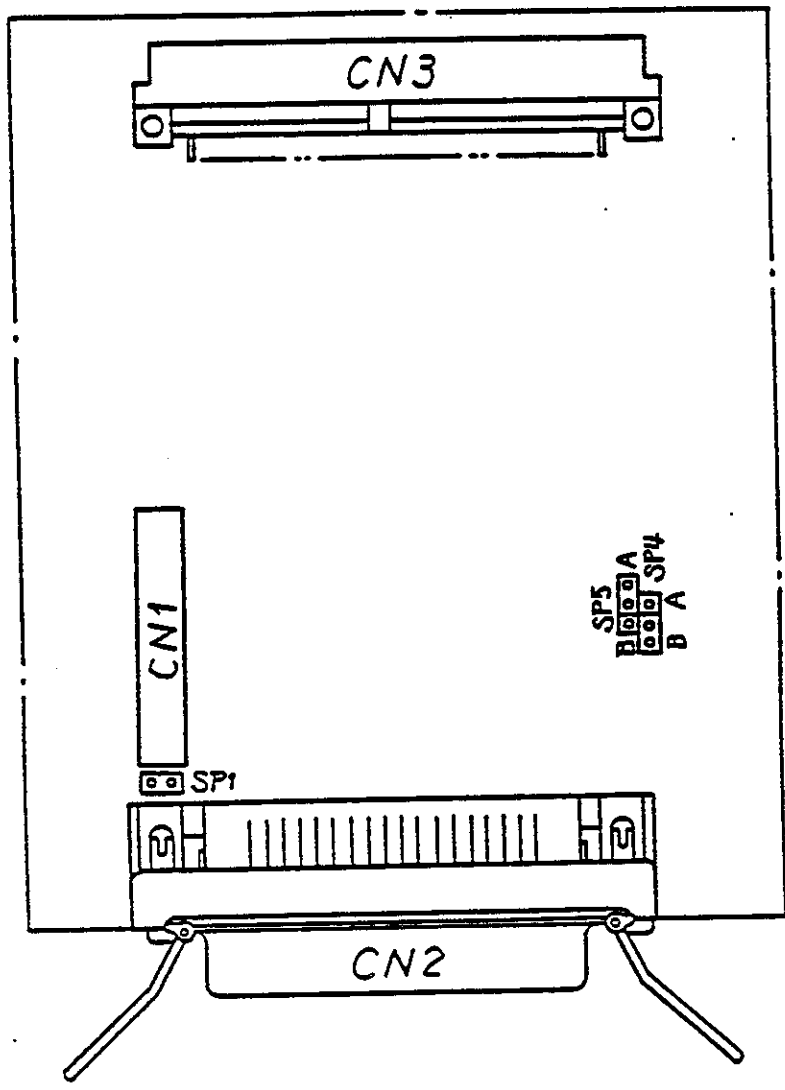
Centronics parallel interface personality module Rev.1



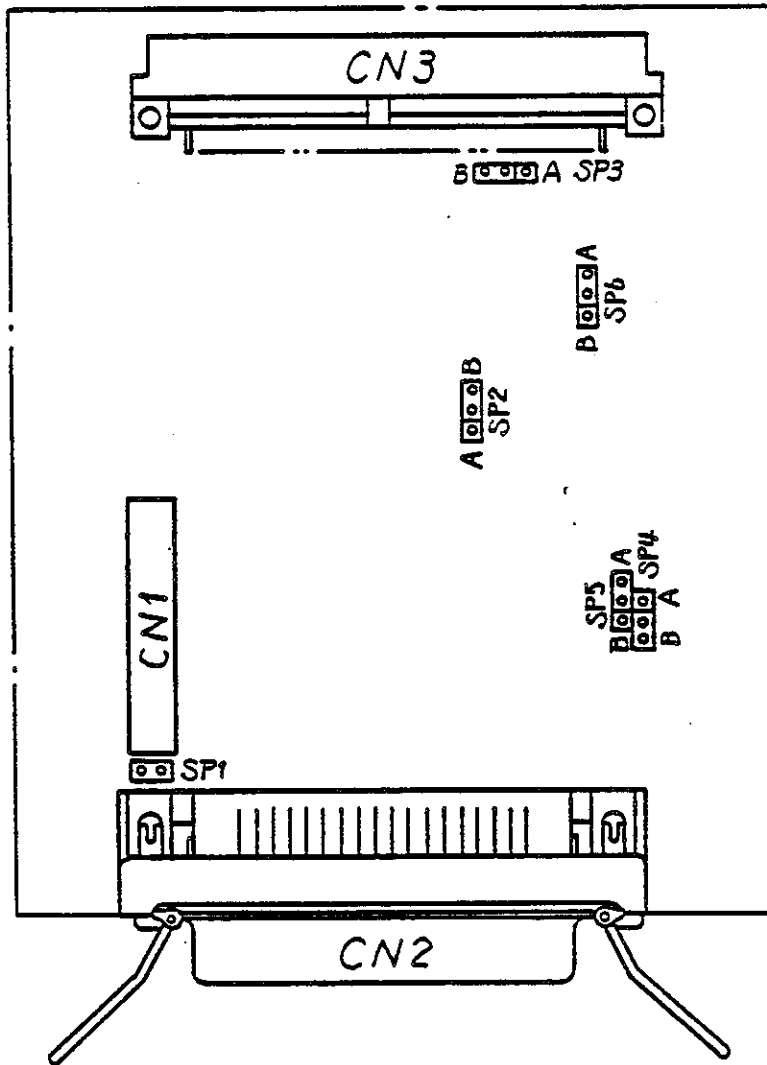
Centronics parallel interface personality module REV2
(Board version number 3)



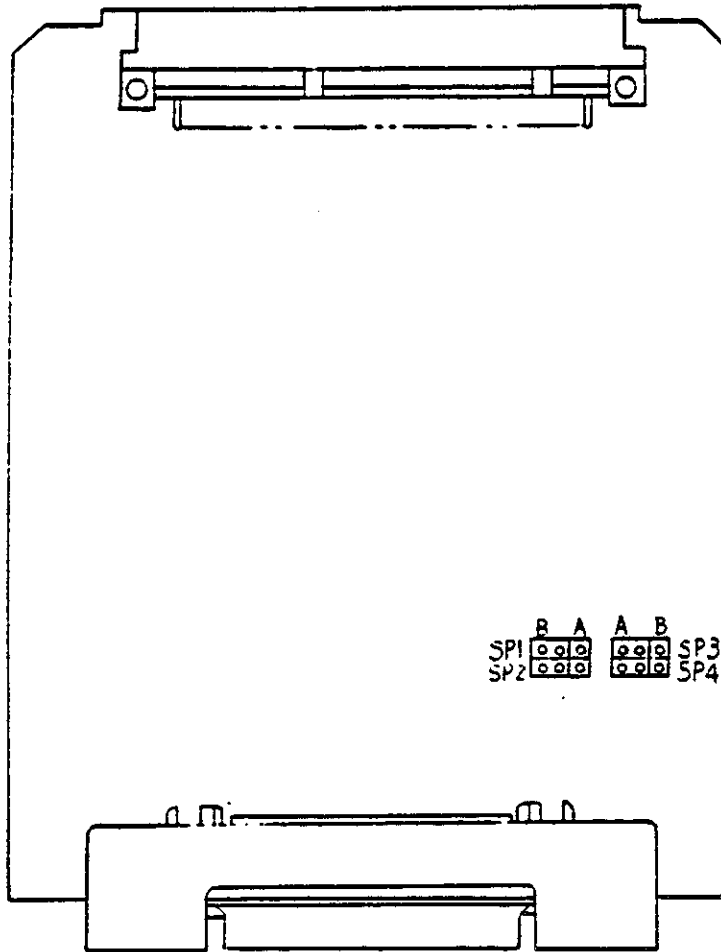
Centronics parallel interface personality module REV2
(Board version number 4)



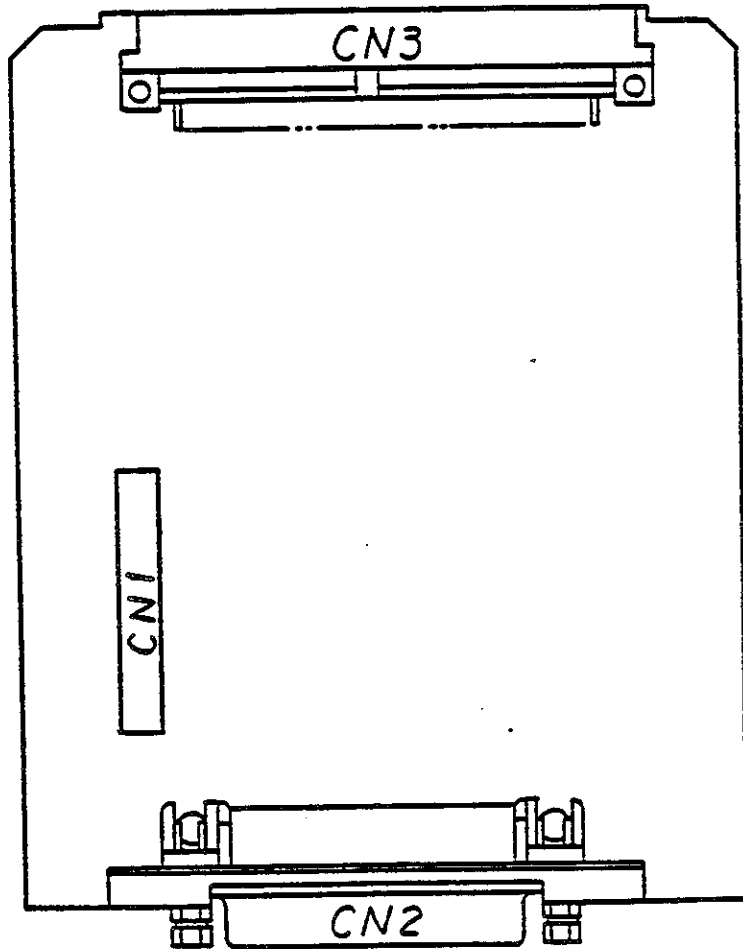
Centronics parallel interface personality module Rev.2
 (PCB version number 5)



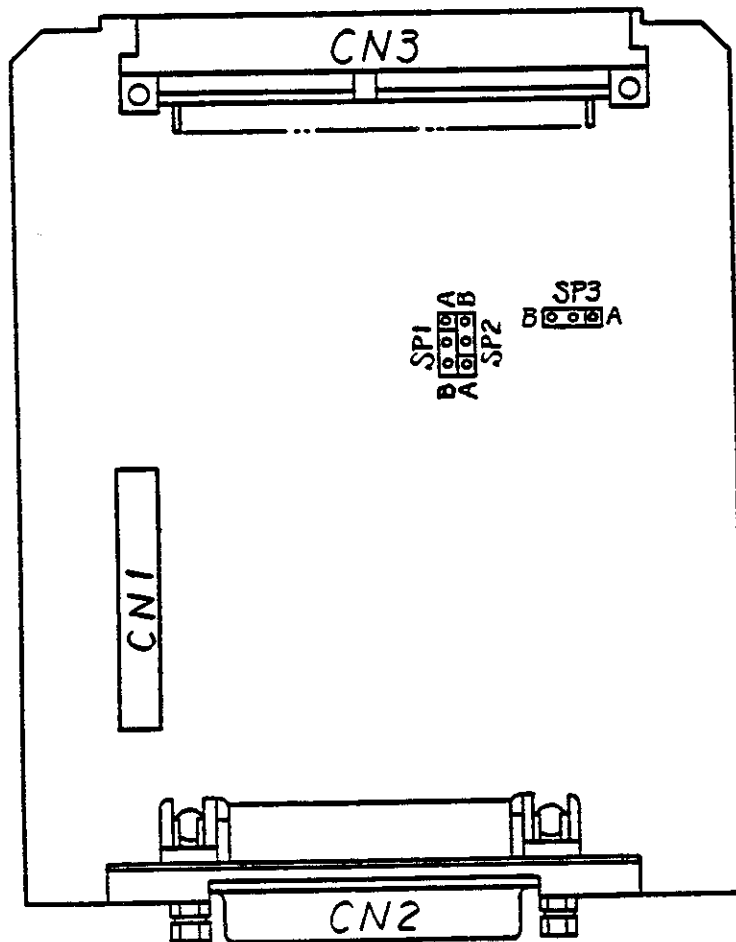
Centronics parallel interface personality module Rev.3
 (PCB version number 6)



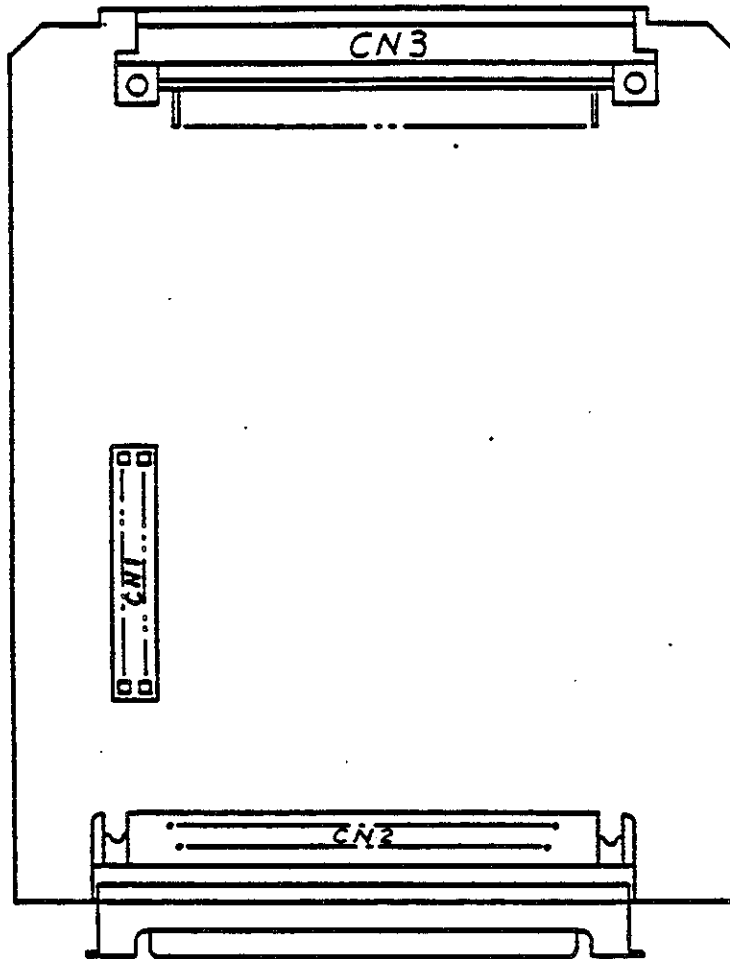
RS-232-C Serial interface personality module Rev.1



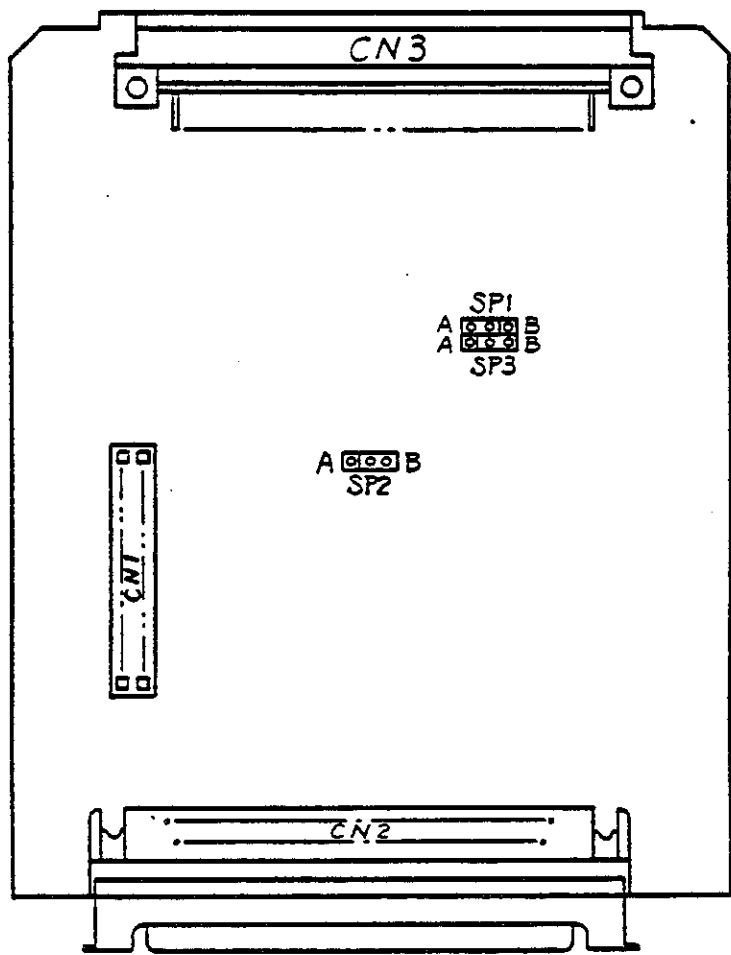
RS-232-C Serial interface personality module Rev.2
(PCB version number 3)



RS-232-C Serial interface personality module Rev.3
 (PCB version number 4)



RS-422-A Serial interface personality module Rev.2
(PCB version number 2)



RS-422-A Serial interface personality module Rev.3
 (PCB version number 3, 4)

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