

CITIZEN

Service Manual

**LINE THERMAL PRINTER
MODEL CBM-253**

Rev. 2.10 issued on Jan.11 1999

Japan CBM Corporation

REVISION

Rev.No.	Date	Comment
Rev.1.00	Mar 05 1996	Replacement of Parts list
Rev.2.00	Nov 22 1996	Replacement of Circuit Diagram, Parts Layout Drawing, and Parts List
Rev.2.10	Jan 07 1999	Added the parts number to the parts list

CONTENS

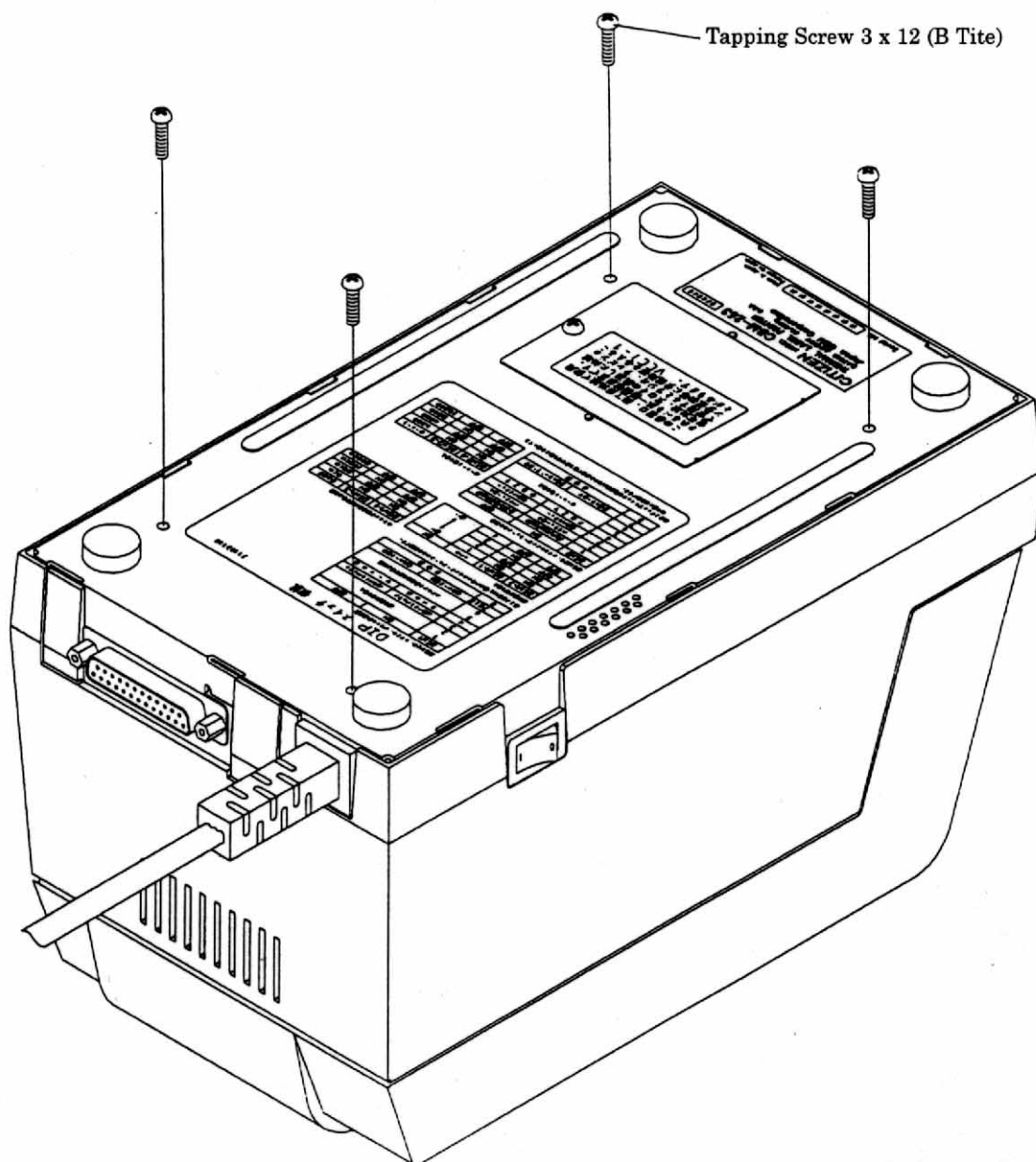
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1. DISASSEMBLY AND REASSEMBLY

1-1 Main Body Disassembly and Reassembly Methods

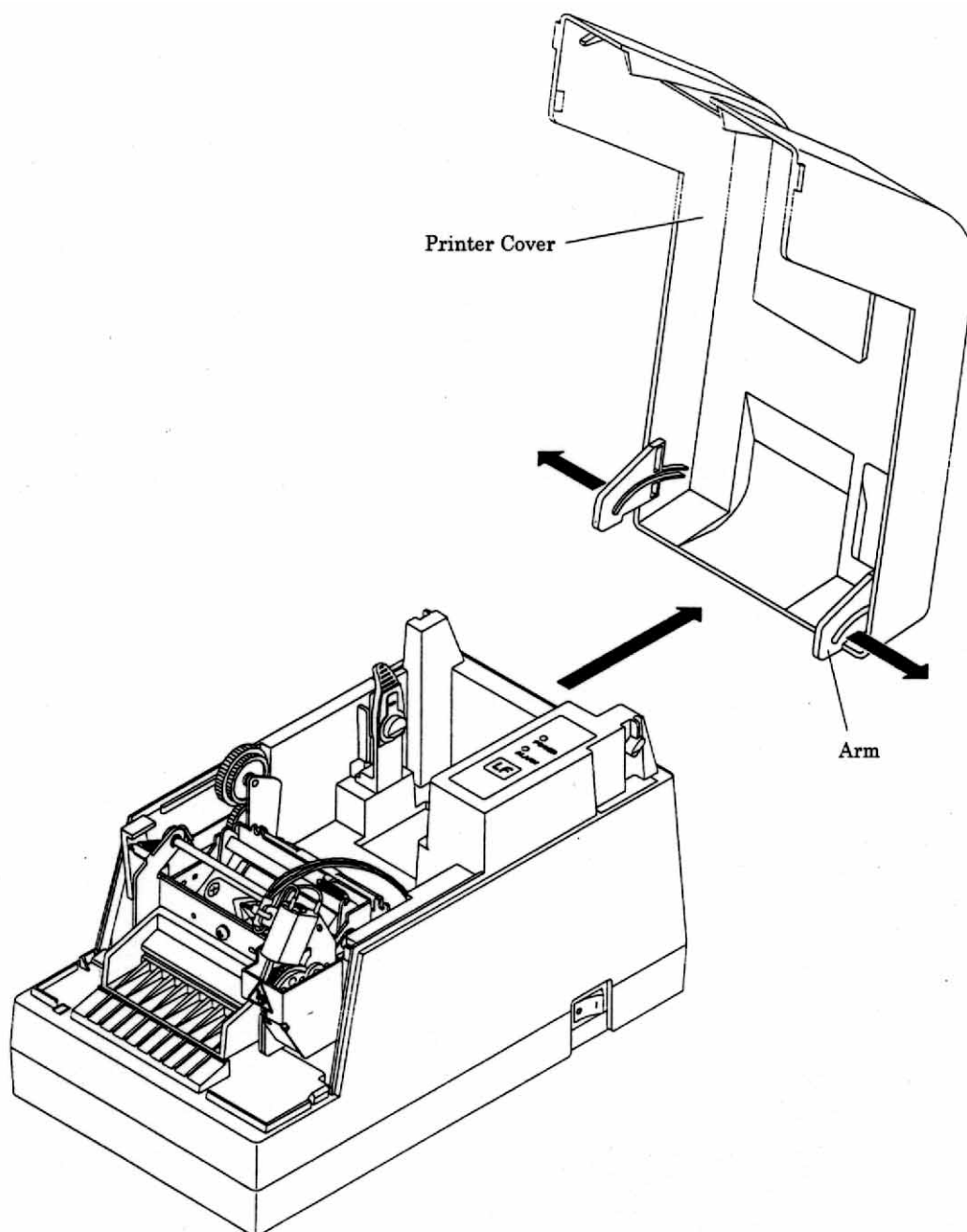
1. Removing the Upper Case I

- (1) Put the main body upside down, with the bottom facing up.
- (2) Remove four tapping screws 3 × 12 (B Tite).



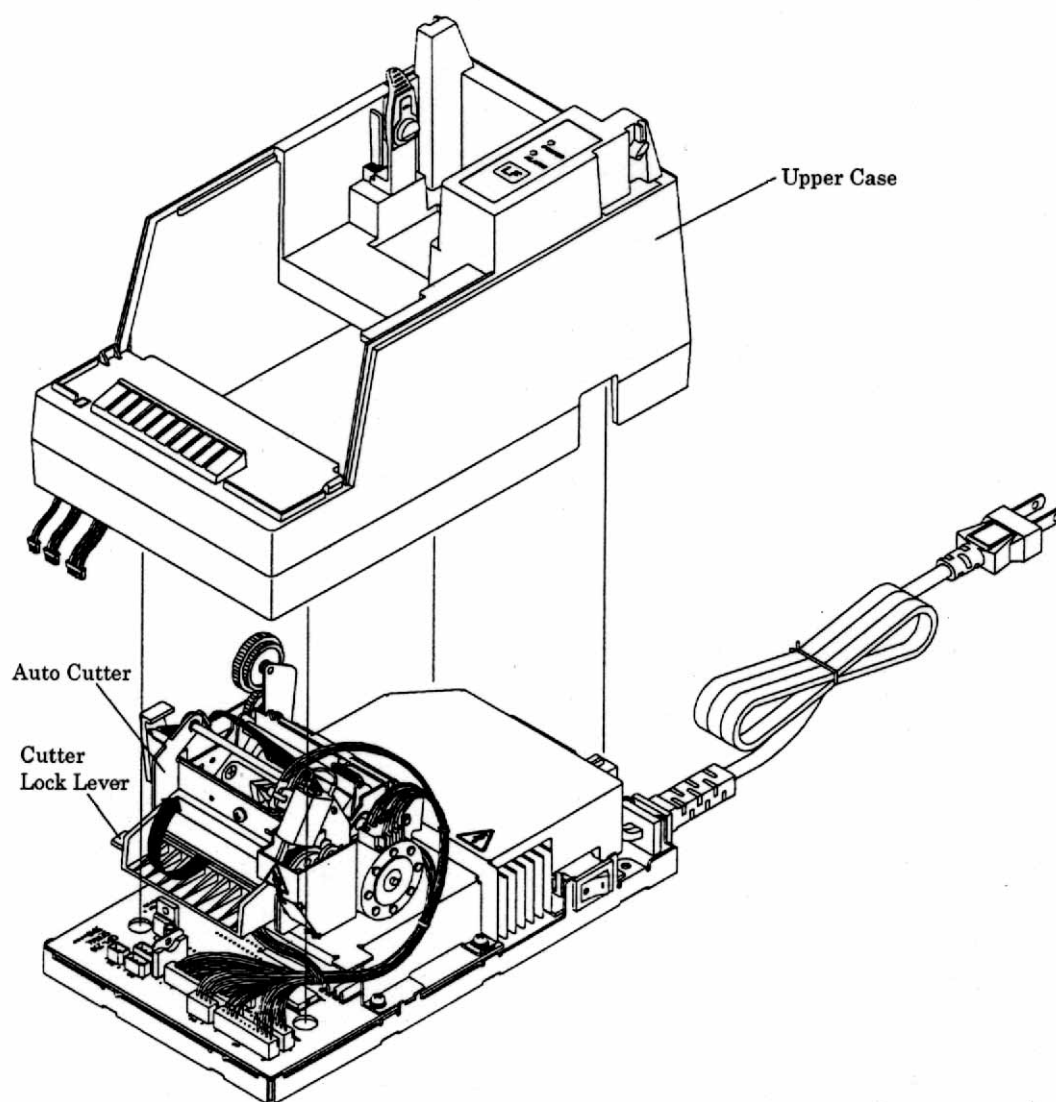
2. Removing the Printer Cover

- (1) Open a printer cover.
- (2) Remove an arm, opening it to the outside.



3. Removing the Upper Case II

- (1) Open an auto cutter. Unlock a cutter lock lever. Open the auto cutter in the arrow direction.
- (2) Lift an upper case.
- (3) Disconnect connectors for a near end sensor, operation panel PCB, and printer cover open sensor.



4-1 Removing the Operation Panel PCB

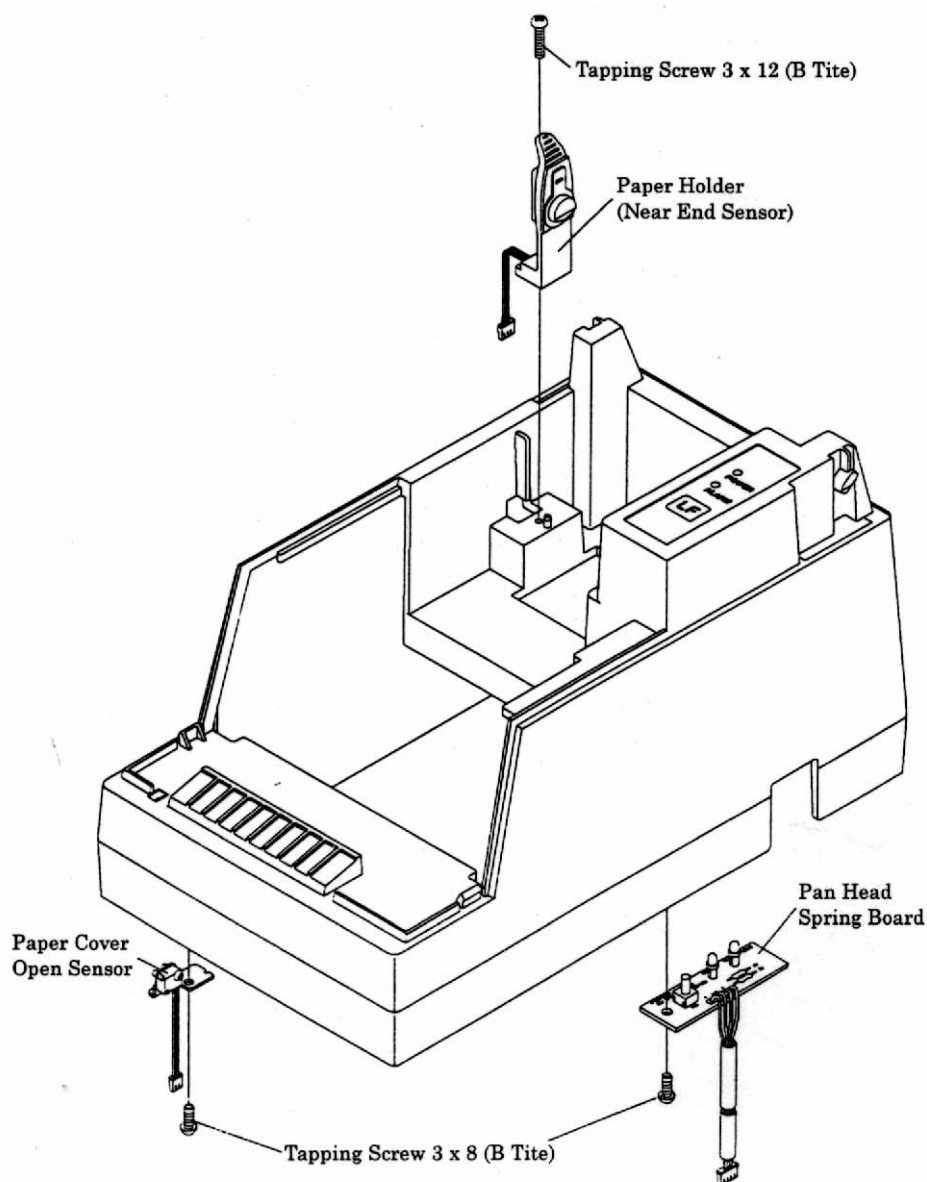
- (1) Remove tapping screws 3 x 8 (B tite) from the back of the upper case.

4-2 Removing the Printer Cover Open Sensor

- (1) Remove tapping screws 3 x 8 (B tite) from the back of the upper case.

4-3 Removing the Paper Holder(Near End Sensor)

- (1) Remove tapping screws 3 x 12 (B tite) from the top of the upper case.
- (2) Remove retaining tape pasted inside the upper case for fixation of a harness.
- (3) Disconnect a cord of a paper holder(near end sensor) from the upper case.



5-1 Removing the Printer Mechanism and Shielding Plate

- (1) Remove five tapping screws 3 x 8, Sems W(S tite).

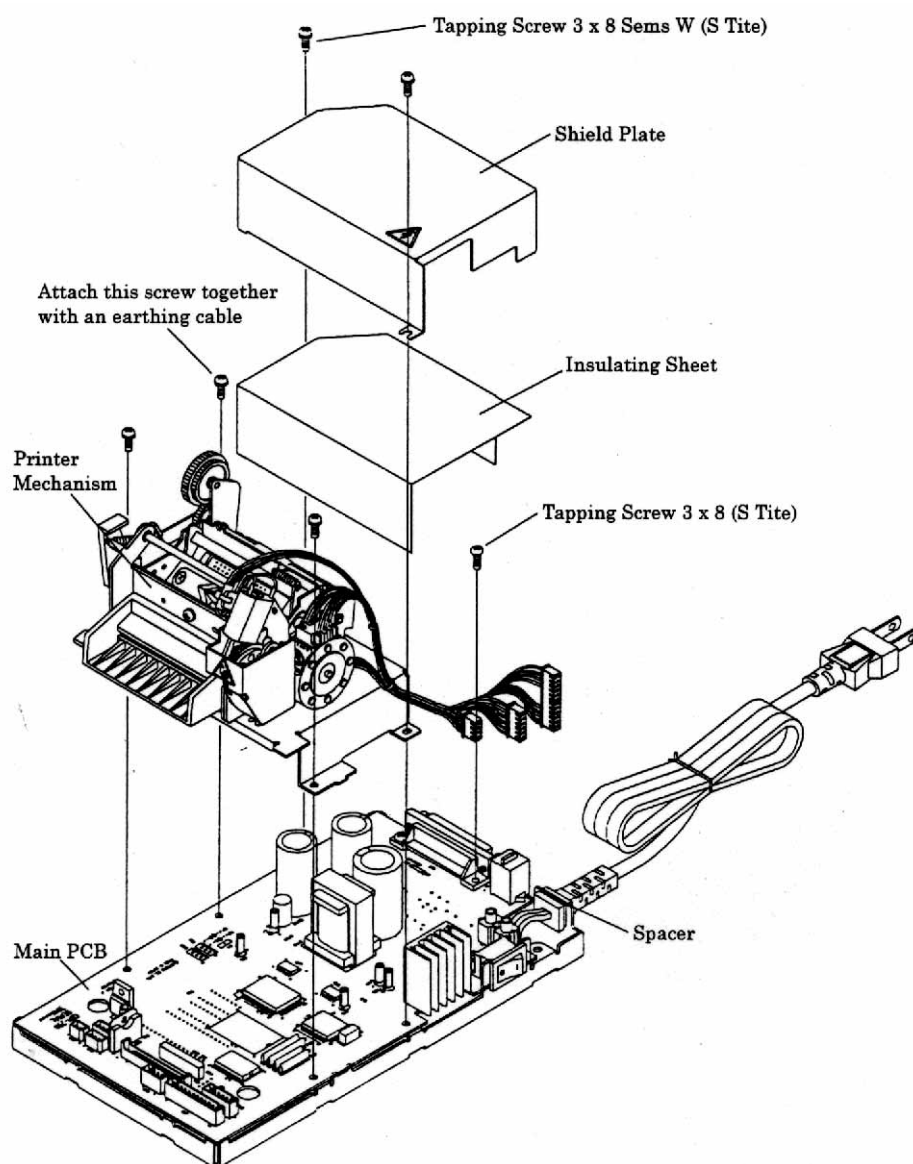
5-2 Removing the Main Board

- (1) Remove one tapping screw 3 x 8(S tite).

Note) • Serial interface: One fixing screw to a chassis
• Parallel interface: Two fixing screws to the chassis

- (2) Remove from the chassis.

Note) When removing the main board, be careful not to lose a spacer fit into a bushing of a power cord.

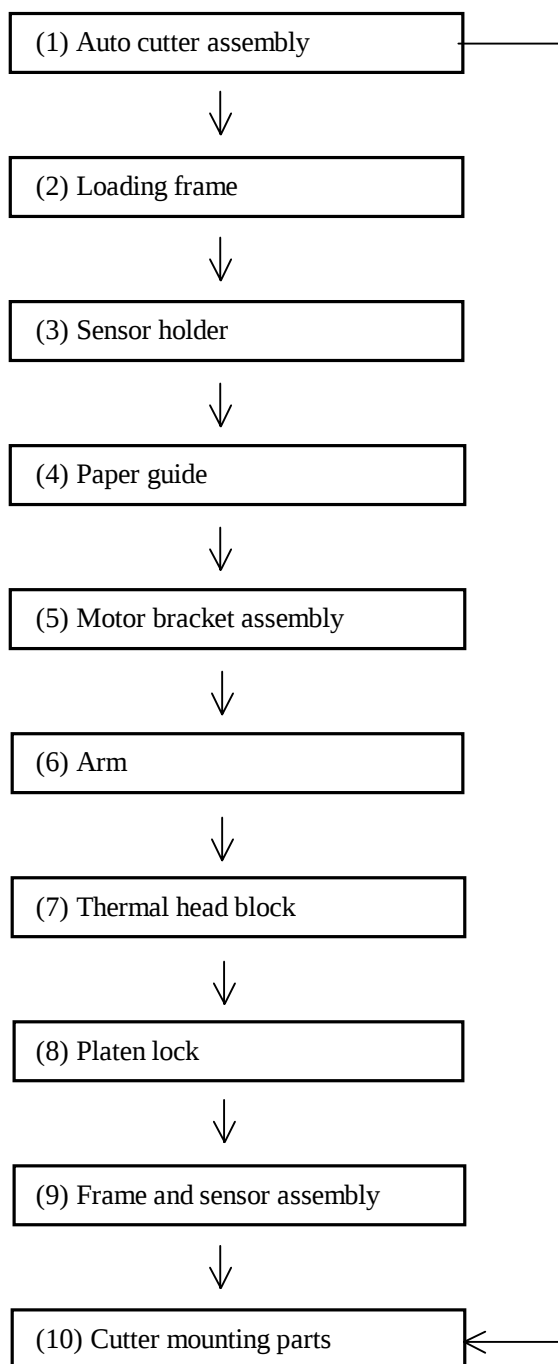


1-2 Mechanism Disassembly and Reassembly Methods

Disassembly/Reassembly Procedural Flow

Disassembly/reassembly the printer mechanism according to the following disassembly procedure.

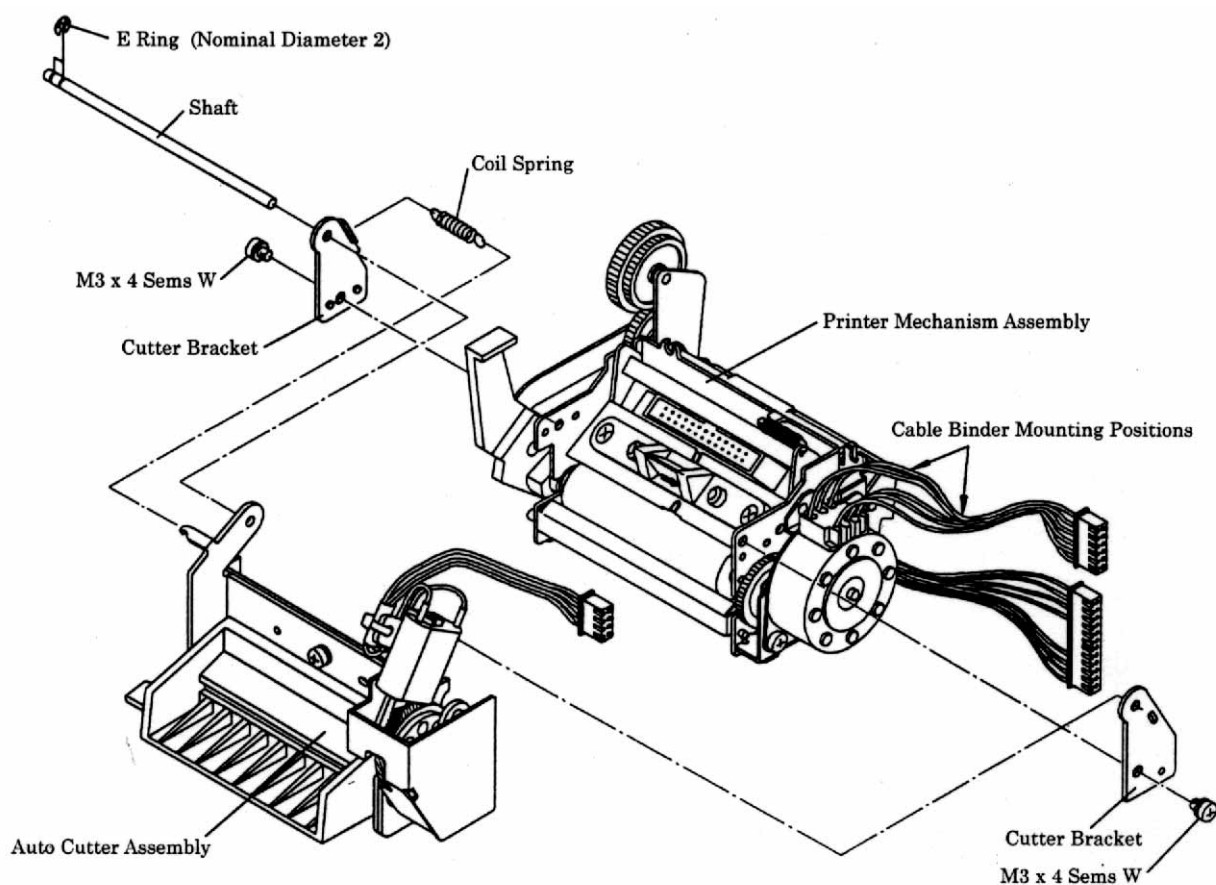
Reassembly should be done in the reverse order of the disassembly.



(1) Auto Cutter Assembly

[Disassembly Procedure]

- 1) Cut a cable binder which bundles the auto cutter, motor, and sensor harnesses.
Note) When cutting the cable binder, be fully careful not to damage the harnesses.
- 2) Detach an auto cutter holding coil spring.
- 3) Detach a shaft fixing E ring(Nominal diameter 2).
- 4) Detach the auto cutter while pulling out the shaft.
- 5) Remove one each of fixing screw M3 × 4, Sems W from the cutter brackets(left and right).

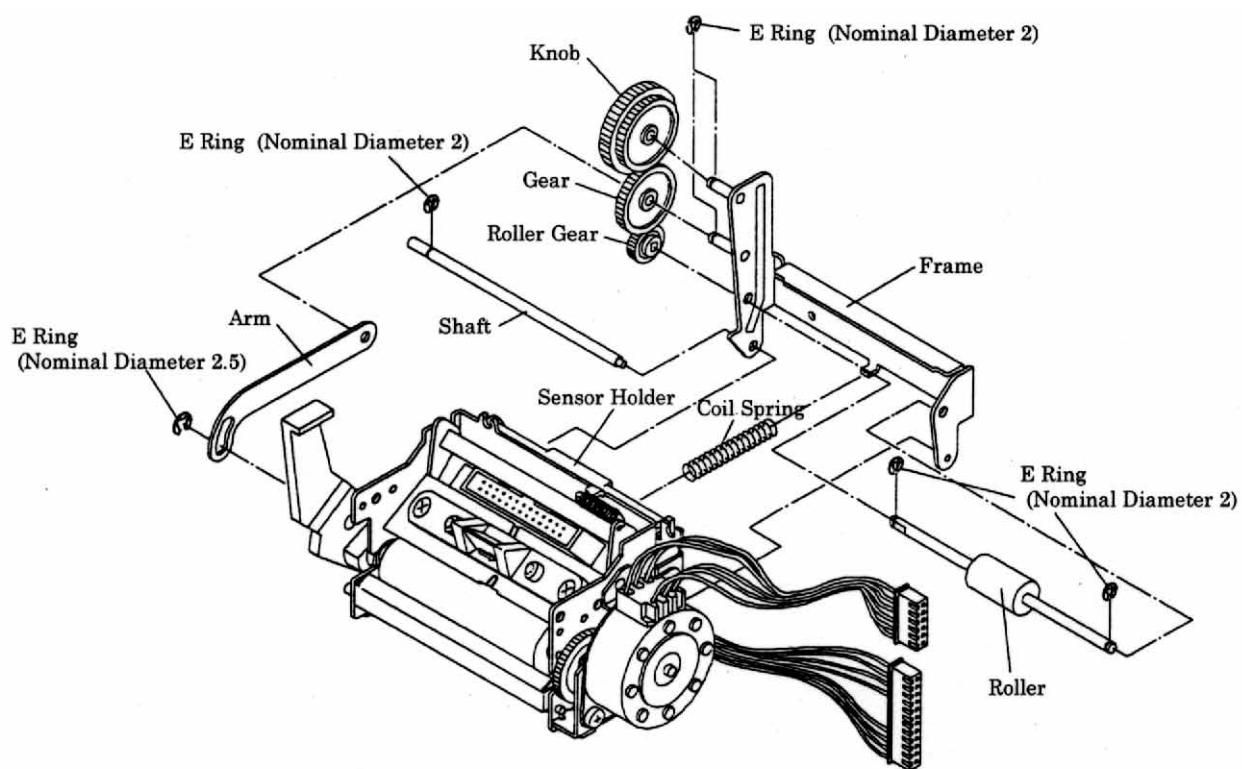


(2) Loading Frame

An iron plate attached to the back of the printer mechanism. It has three kinds of gears attached to it.

[Disassembly Procedure]

- 1) Detach an E ring(Nominal diameter 2.5) used to fix the arm on the lever side.
- 2) Detach an E ring(Nominal diameter 2) of the shaft which fixes the frame and sensor holder.
- 3) Remove the frame while pulling out the shaft.
- 4) Pull out a coil spring from the sensor holder.
- 5) Detach four E rings(Nominal diameter 2) from the frame to remove a knob, gear, roller gear, and roller.

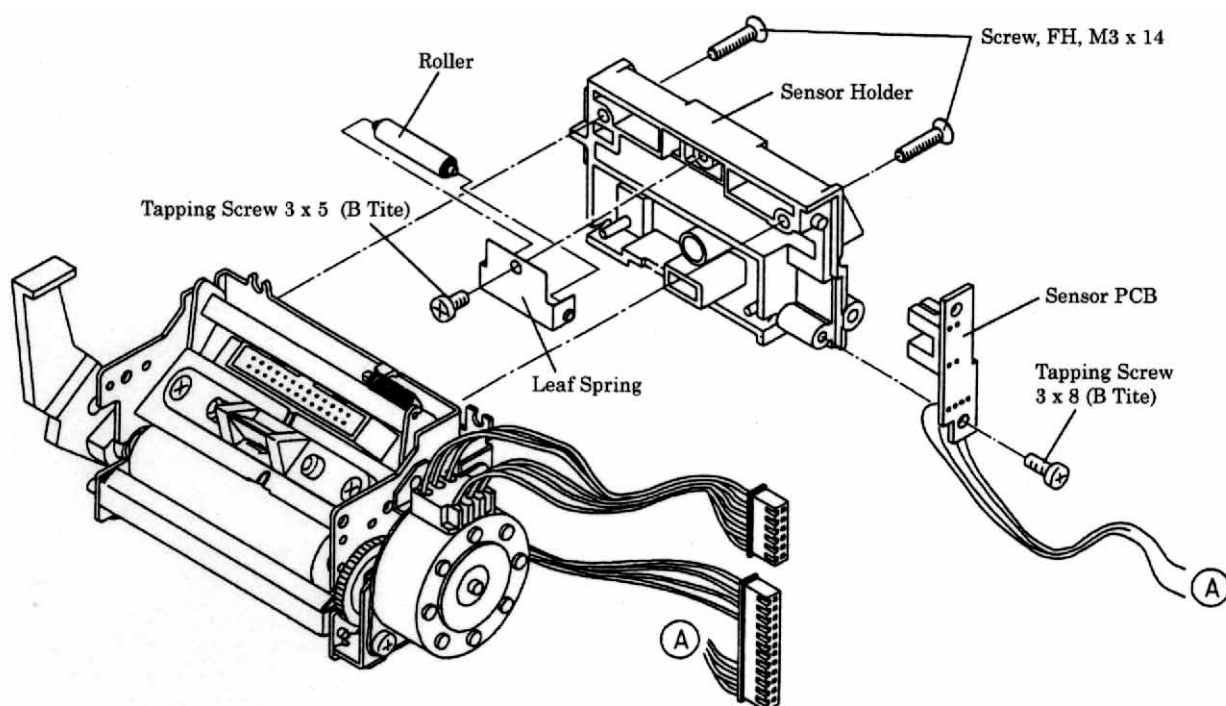


(3) Sensor Holder

A resin(black) part attached to the back of the printer mechanism

[Disassembly Procedure]

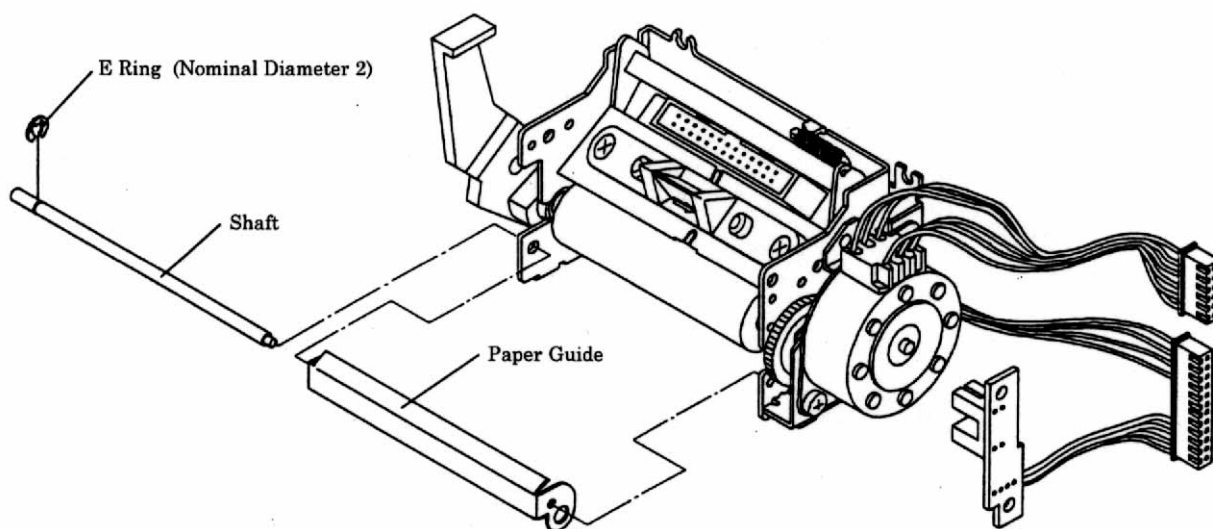
- 1) Remove two screws, FH, M3 × 14 used to fix the printer mechanism and sensor holder to take out the sensor holder.
- 2) Remove tapping screws 3 × 8 (B tite) from the sensor holder to detach the sensor board.
- 3) Remove tapping screws 3 × 5 (B tite) from the sensor holder to detach a flat spring.
- 4) Detach a roller while opening the flat spring.



(4) Paper Guide

[Disassembly Procedure]

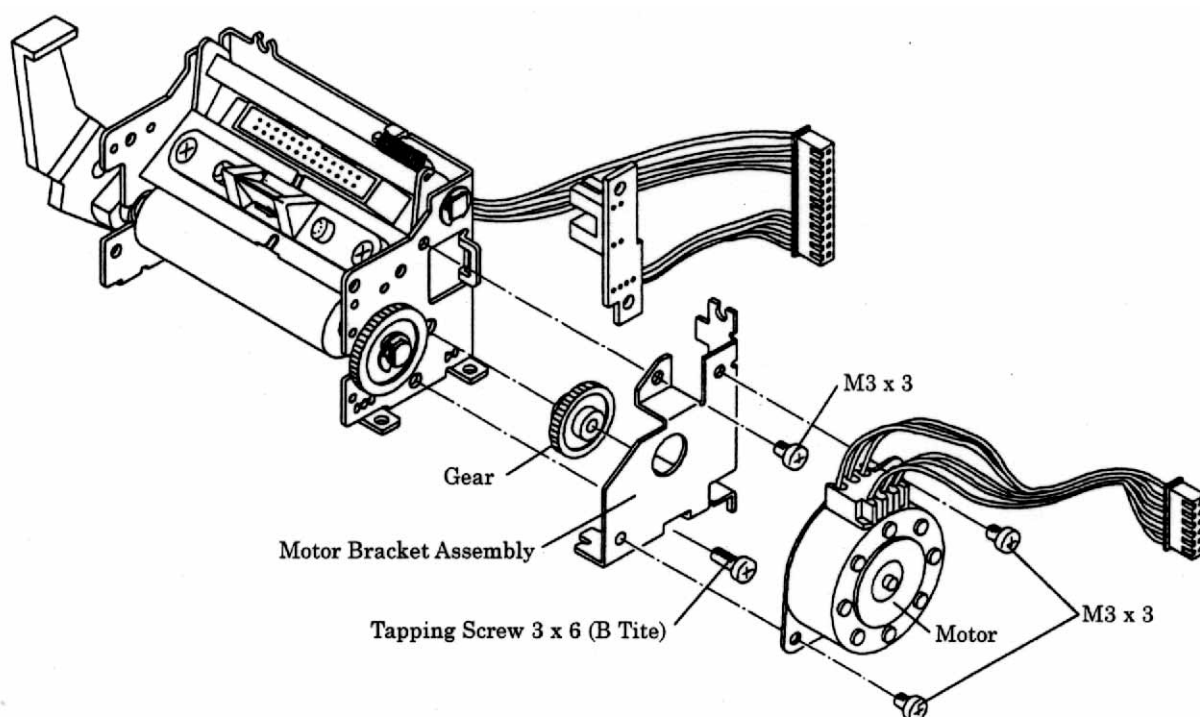
- 1) Detach an E ring (Nominal diameter 2) from a shaft inside the paper guide.
- 2) Pull the shaft to the left to detach a paper guide.



(5) Motor Bracket Assembly

[Disassembly Procedure]

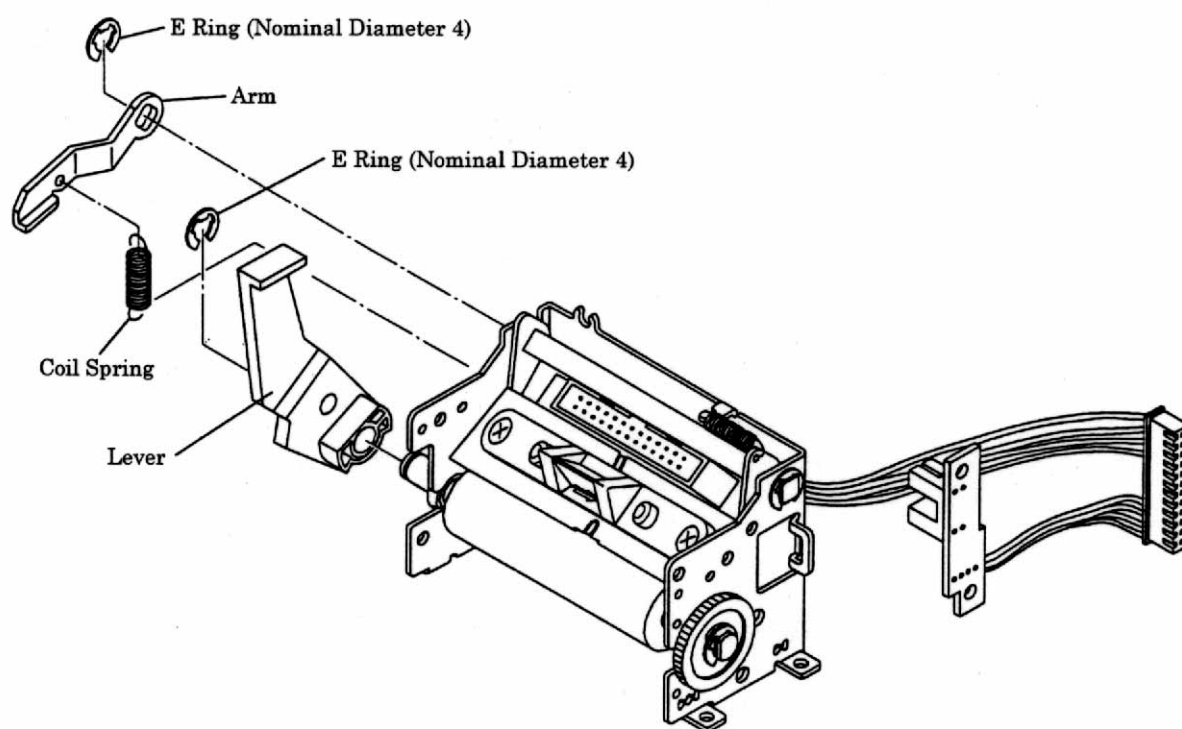
- 1) Remove two motor fixing screws $M3 \times 4$ to detach the motor.
- 2) Remove one each of screw $M3 \times 3$ and tapping screw 3×6 (B tite) used to fix the motor bracket assembly to detach the motor bracket assembly.
- 3) Detach a gear from the motor bracket assembly.



(6) Arm

[Disassembly Procedure]

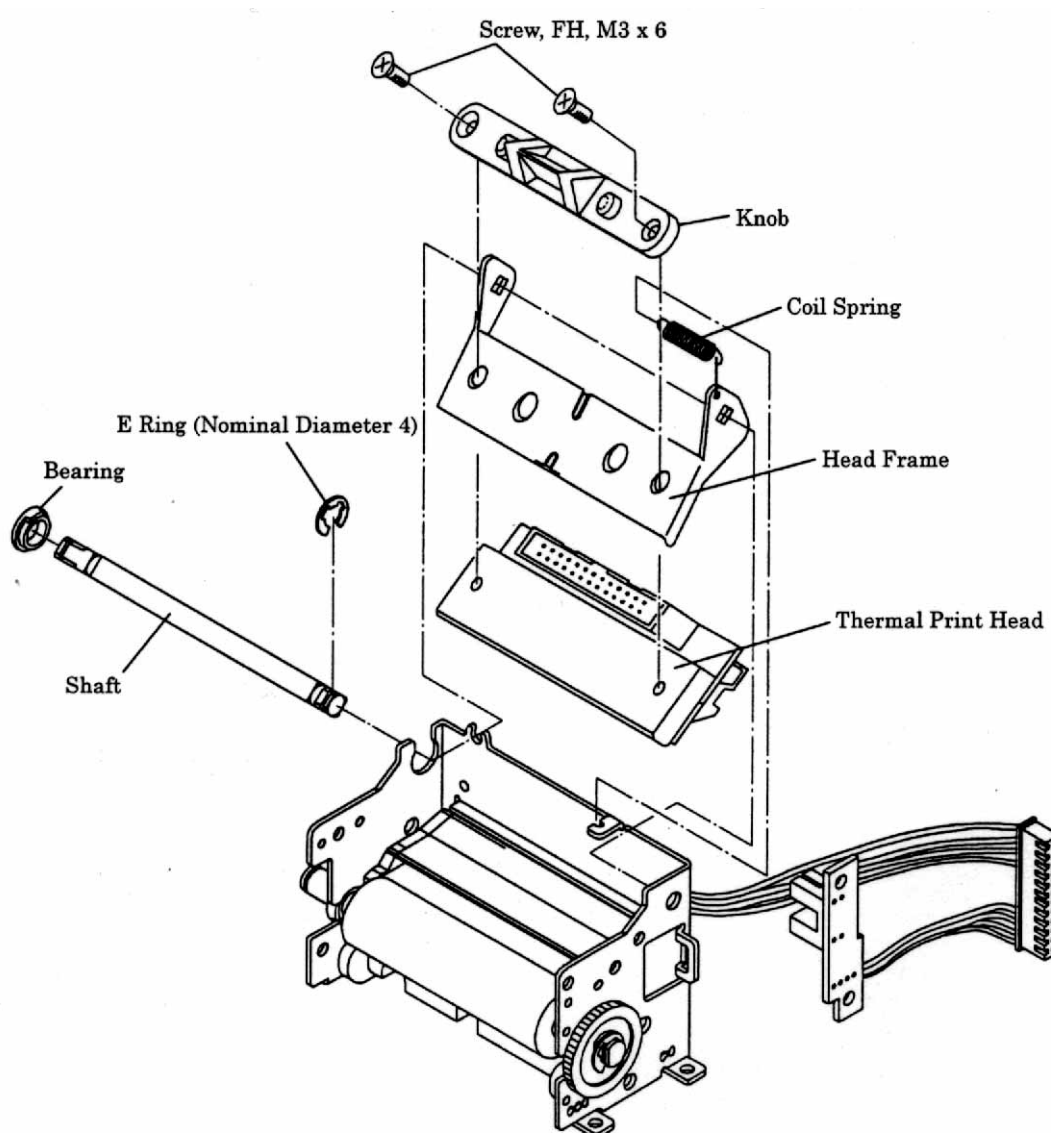
- 1) Detach a coil spring from the frame.
- 2) Detach an E ring (Nominal diameter 4) from a lever, and then, remove the lever.
- 3) Detach an E ring (Nominal diameter 4) from an arm shaft, and then, remove the arm.



(7) Thermal Print Head Block

[Disassembly Procedure]

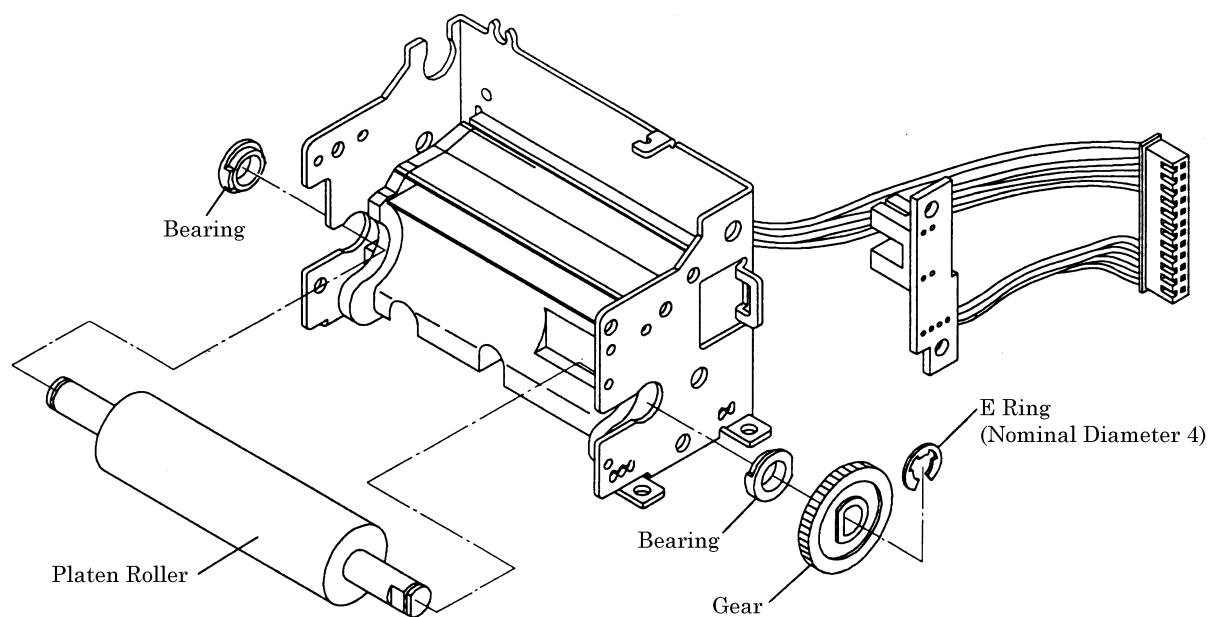
- 1) Detach a coil spring from the frame.
- 2) Detach an E ring (Nominal diameter 4) from a shaft.
- 3) Pull out the shaft to the left together with a bearing to detach a thermal print head, head frame, knob, and coil spring.
- 4) Remove two screws, FH, M3 × 6 used to fix the thermal print head.



(8) Platen Roller Block

[Disassembly Procedure]

- 1) Detach an E ring (Nominal diameter 4) of a platen gear, and then, remove the platen gear.
- 2) Shift the left and right bearings to the outside to detach a platen roller upward.



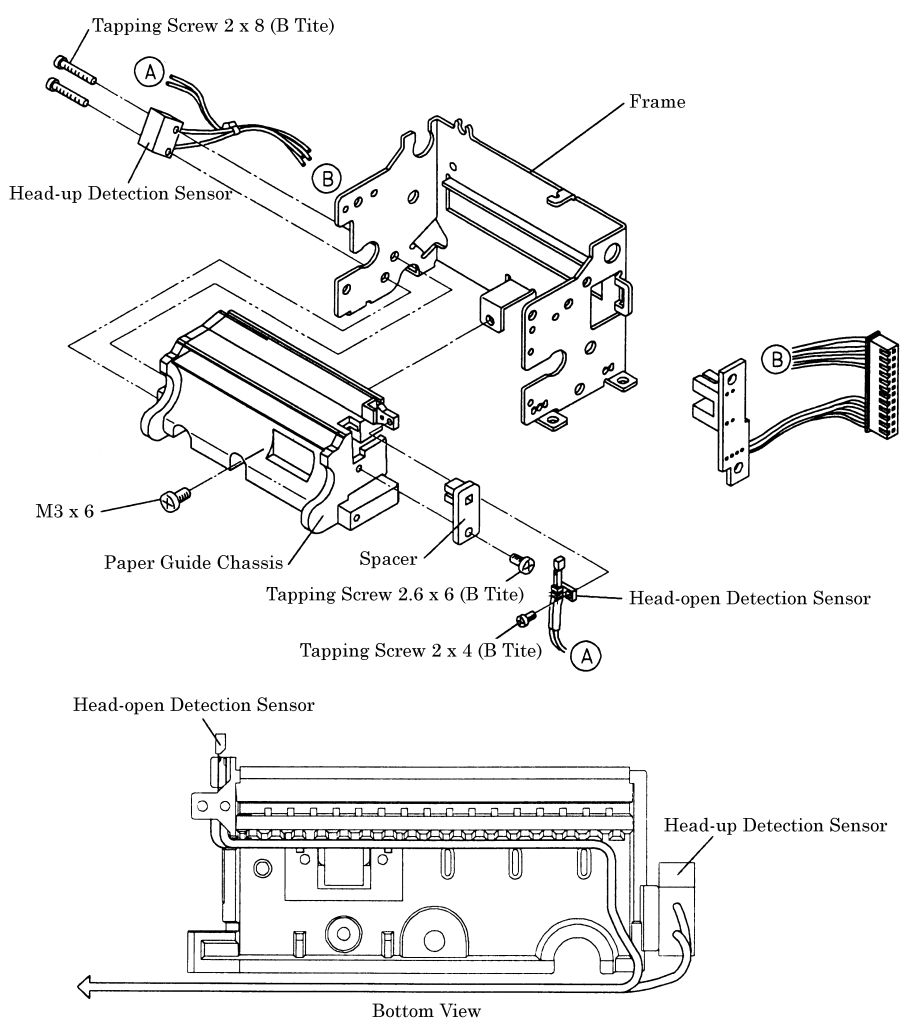
(9) Frame and Sensor Assembly

[Disassembly Procedure]

- 1) Cut a cable binder used to fix a sensor assembly's harness.
- Note) When cutting the cable binder, be fully careful not to damage the harness.
- 2) Remove two tapping screws (B tite) used to fix a head-up detection sensor.
- 3) Remove a screw $M3 \times 6$ used to fix a paper guide chassis.
- 4) Detach the paper guide chassis upward, paying attention to a lead wire.
- 5) Remove a tapping screw 2.6×6 (B tite) used to fix a spacer, and then, remove the spacer.
- 6) Remove a tapping screw 2×4 (B tite) used to fix a head open detection sensor, and then, remove the detection sensor.

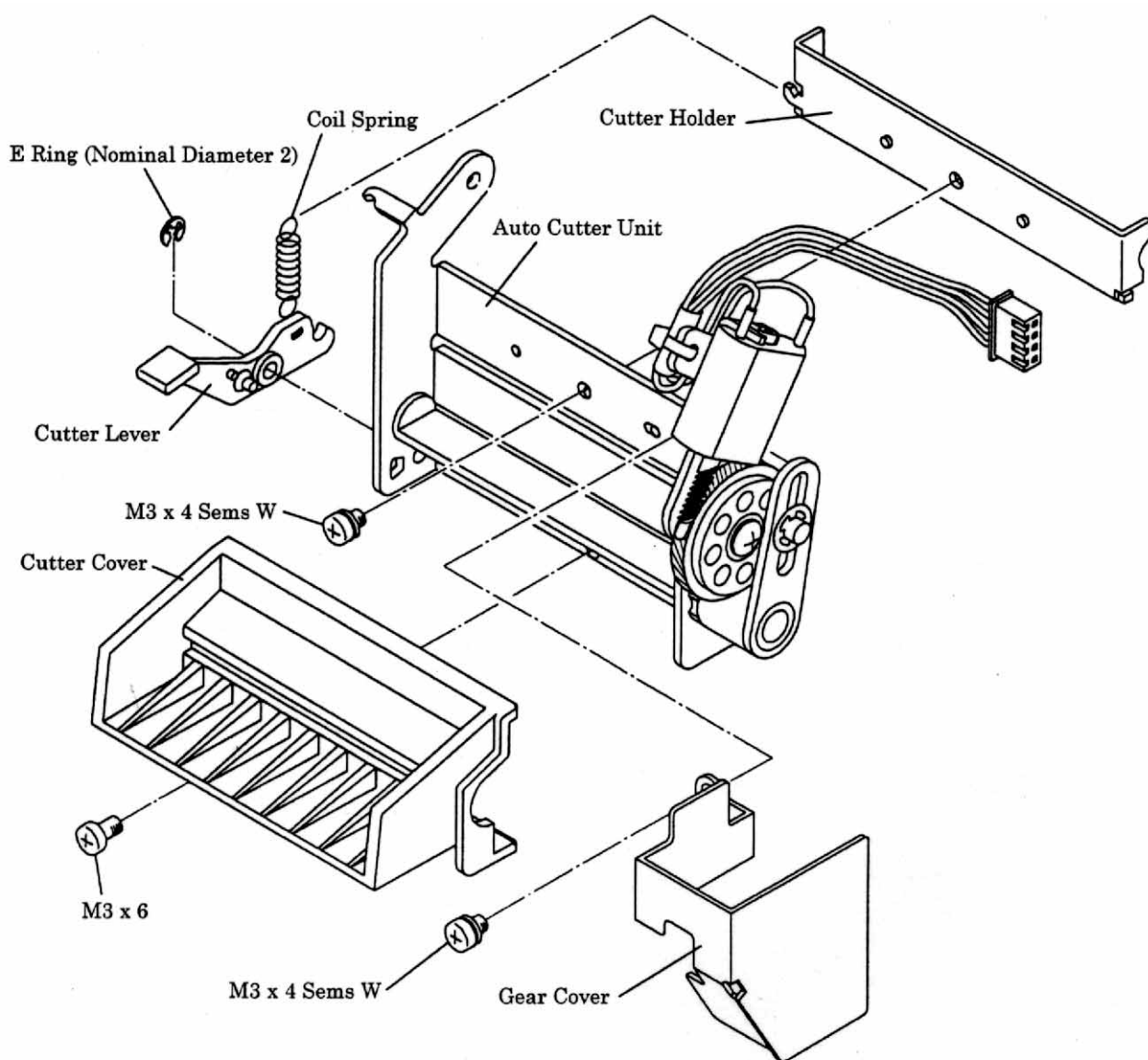
Note 1) When fixing the head-open detection sensor, be careful not to apply too much force to it. Its clamping part could be broken.

Note 2) See the figure below for harnessing of the sensors.



(10) Cutter Mounting Parts (Cutter Bracket, Cutter Holder, Cutter Lever, Cutter Cover, Gear Cover)**[Disassembly Procedure]**

- 1) Remove a coil spring from a cutter lever and cutter holder.
- 2) Remove a cutter lever fixing E ring (Nominal diameter 2) to remove the cutter lever.
- 3) Remove a cutter holder fixing screw M3 × 4, Sems W to remove the cutter holder.
- 4) Remove a cutter cover fixing screw M3 × 6 to remove the cutter cover.
- 5) Remove a gear cover fixing screw M3 × 4, Sems W to remove the gear cover.



1-3 Rearrangement of LT-280 Mechanism to CBM-253 Mechanism

<General Description>

When the printer mechanism gets out of order, you order new one. This section describes how to rearrange the printer mechanism for the LT-280 after its acceptance.

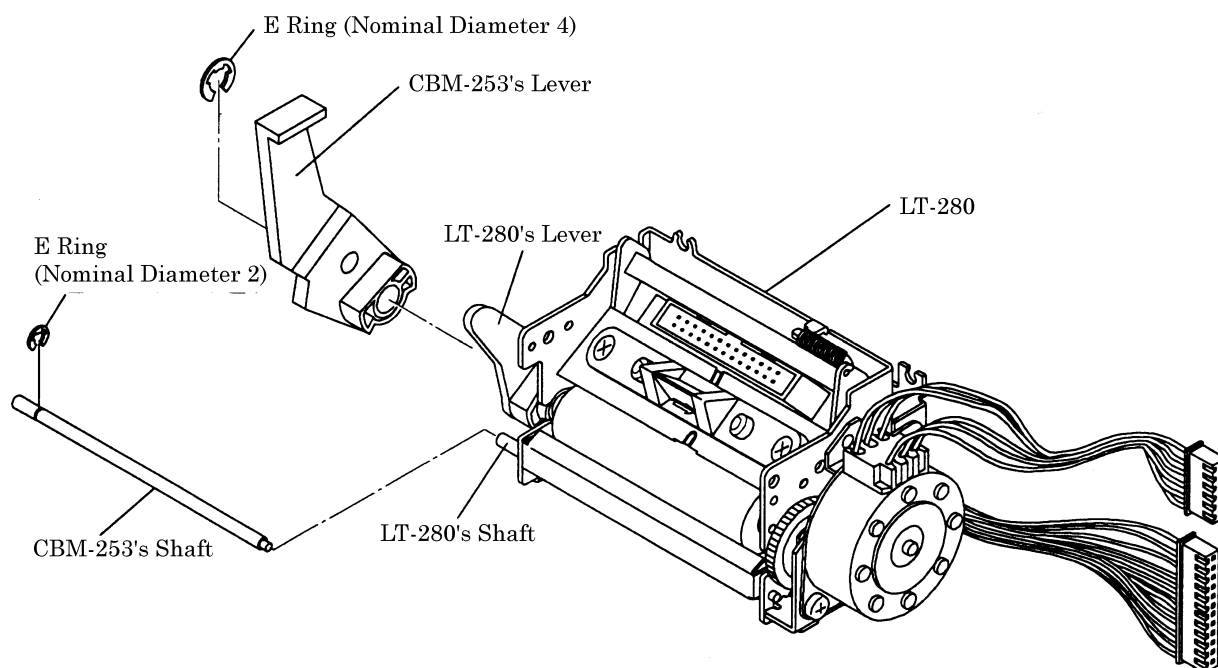
1-1 Replacing the Lever

Note) To rearrange for the CBM-253 mechanism, remove the loading arm and follow the procedure below.

- (1) Remove one E ring (Nominal diameter 4).
- (2) Remove the lever.(LT-280: White, CBM-253: Blue)
- (3) Attach the CBM-253's lever to the LT-280 mechanism.
- (4) Put back one E ring (Nominal diameter 4) to complete.

1-2 Replace the Shaft

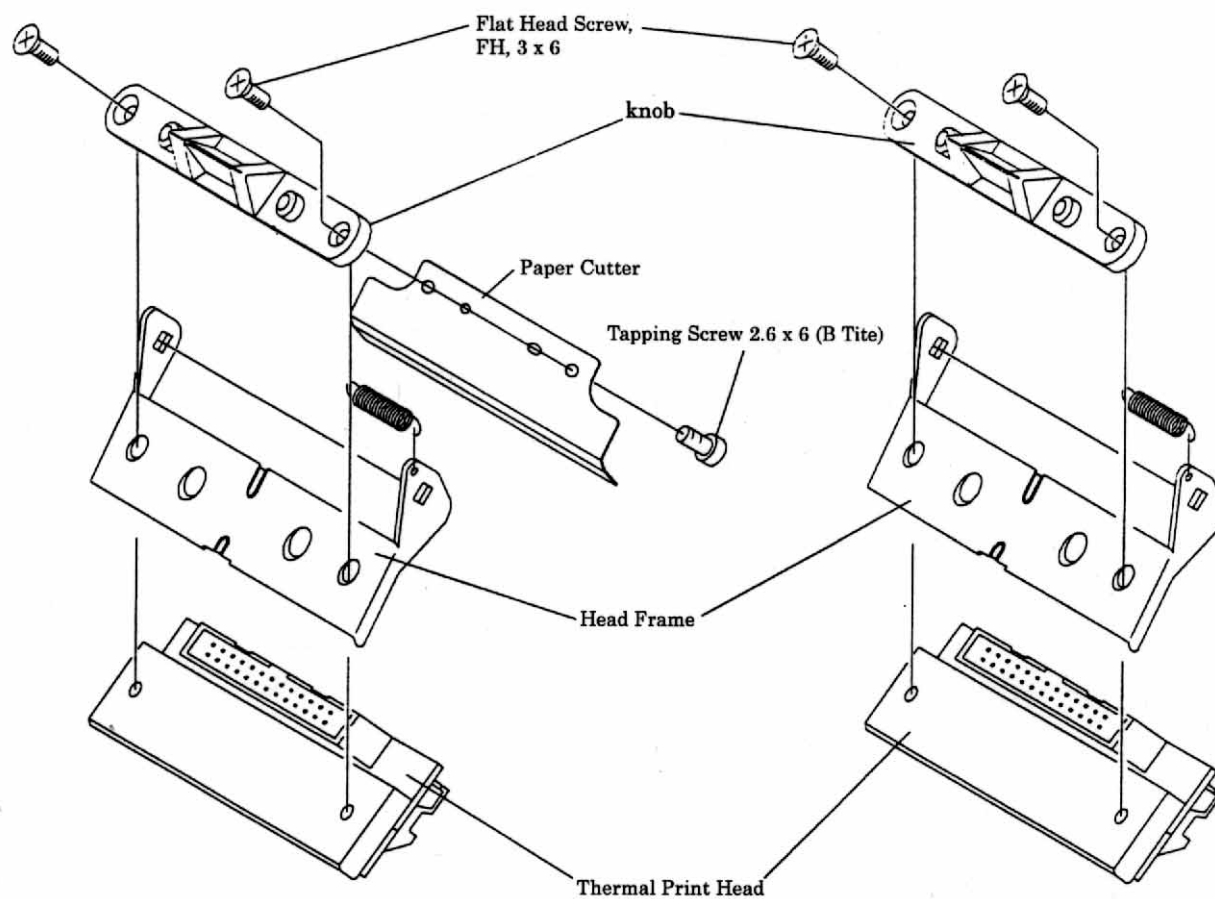
- (1) Remove one E ring (Nominal diameter 2) inside the paper guide.
- (2) Remove the shaft.
- (3) Fit the CBM-253's shaft into the LT-280 mechanism.
- (4) Put back one E ring(Nominal diameter 2) to inside the paper guide to complete.



2. Removing the Paper Cutter

- (1) Remove two screws, FH, M3 × 8 from the head.
- (2) Remove two tapping screws 2.6 × 6 (B tite) from the knob to remove the paper cutter.
- (3) Attach the knob to the head with two flat head screws M3 × 8 to complete.

Note) Insert the head frame in between the head and knob.

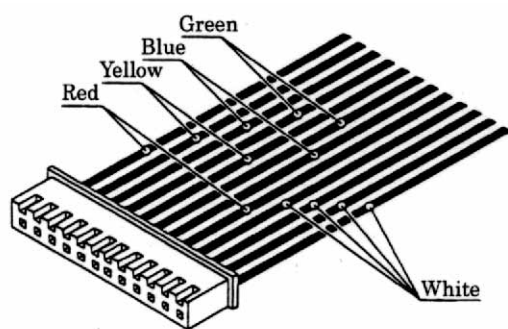


LT-280

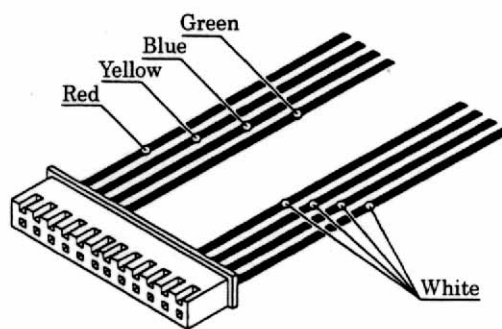
CBM-253

3. Rearranging the Sensor Harness

- (1) Disconnect two each of red, yellow, blue, and green wires (8 wires in total) from the LT-280's sensor connector (12-pin).
- (2) Disconnect one each of red, yellow, blue, and green wires (4 wires in total) from the CBM-253's sensor connector (12-pin).
- (3) Reconnect the wires disconnected in (2) to the LT-280 printer mechanism connector (12-pin).
(Note) See the figure below for a reconnecting order.
- (4) Bundle the wires disconnected in (1).



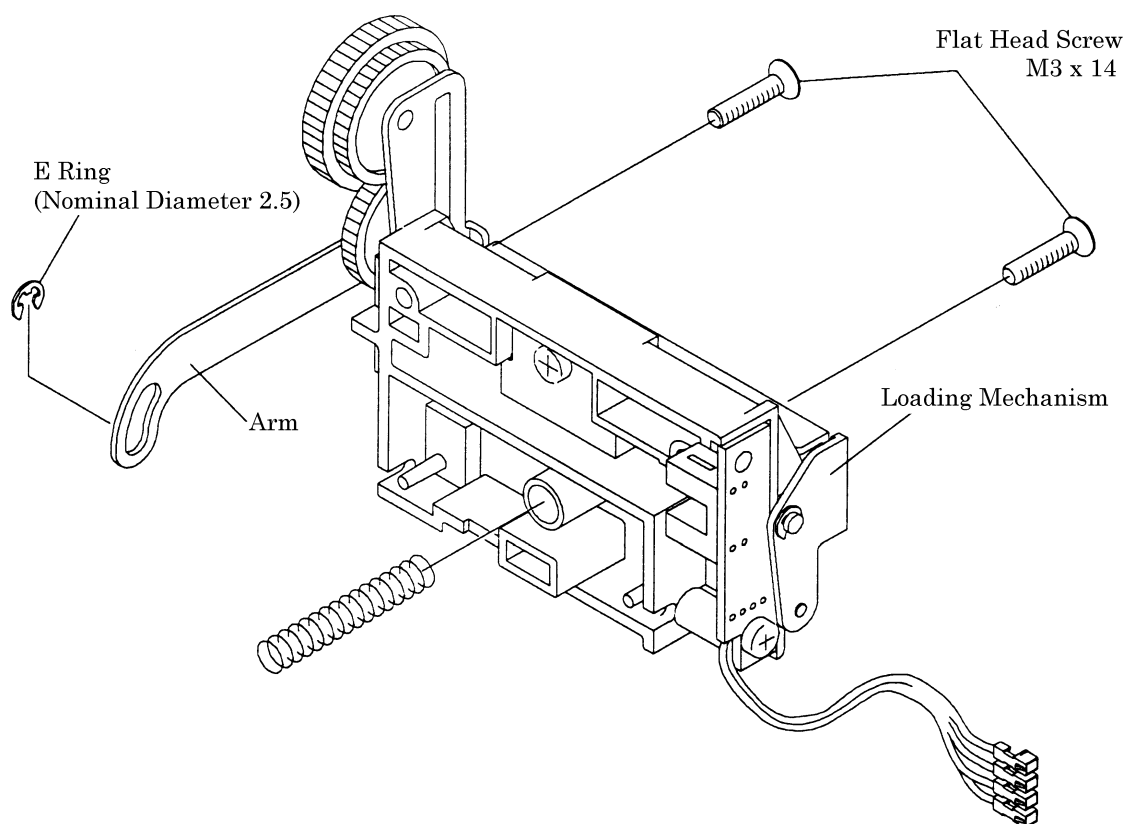
LT-280



CBM-253

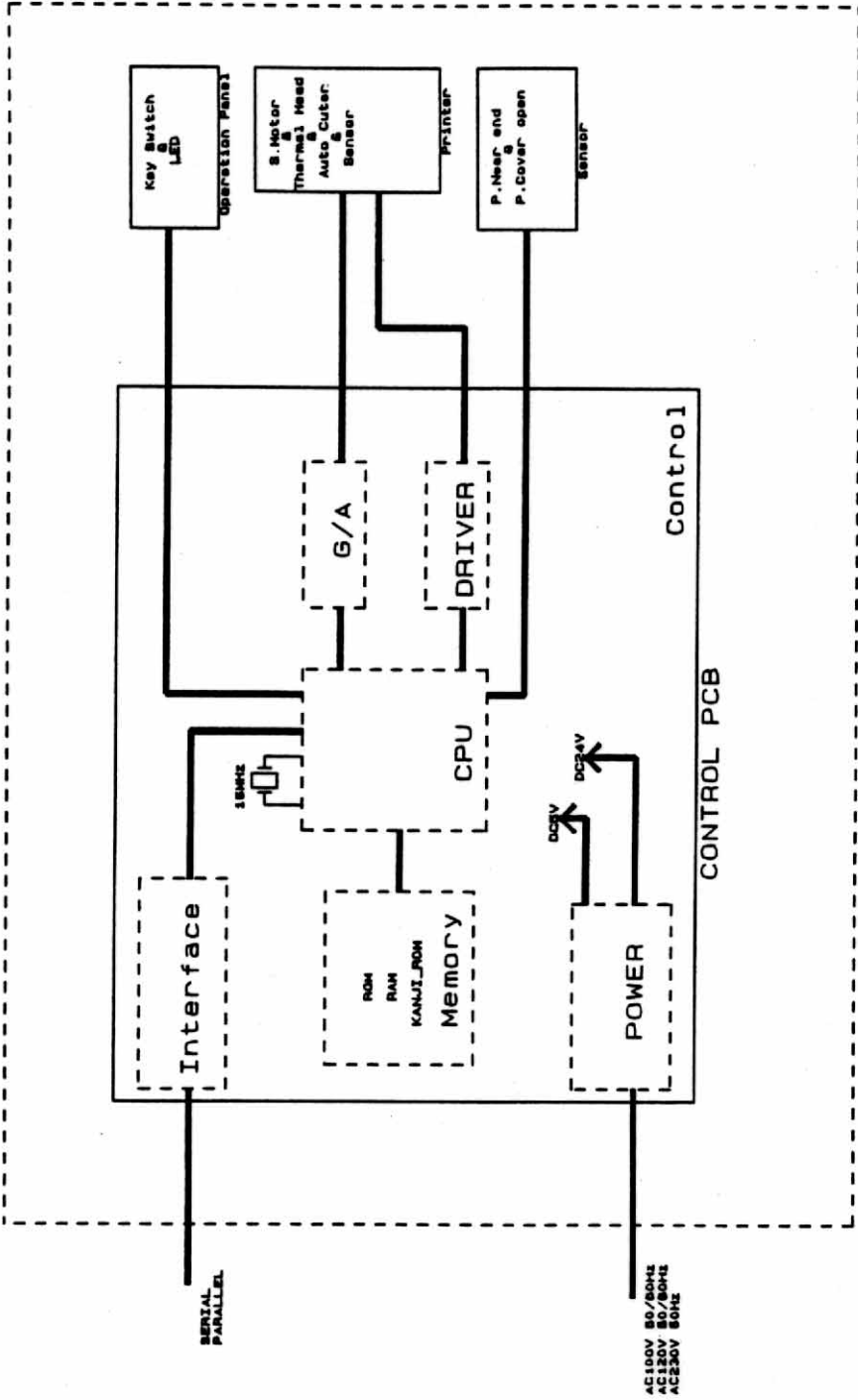
4. Mounting the Loading Mechanism

- (1) Connect the sensor connector according to the procedure described on the previous page.
- (2) Remove two screws, FH, M3 × 14 and remove the loading mechanism from the printer mechanism of the CBM-253.
- (3) Attach the loading mechanism removed in (2) to the printer mechanism of the LT-280, using two screws, FH, M3 × 14.
- (4) Set the arm onto the lever's pin and attach it with one E ring (Nominal diameter 2.5) to complete.

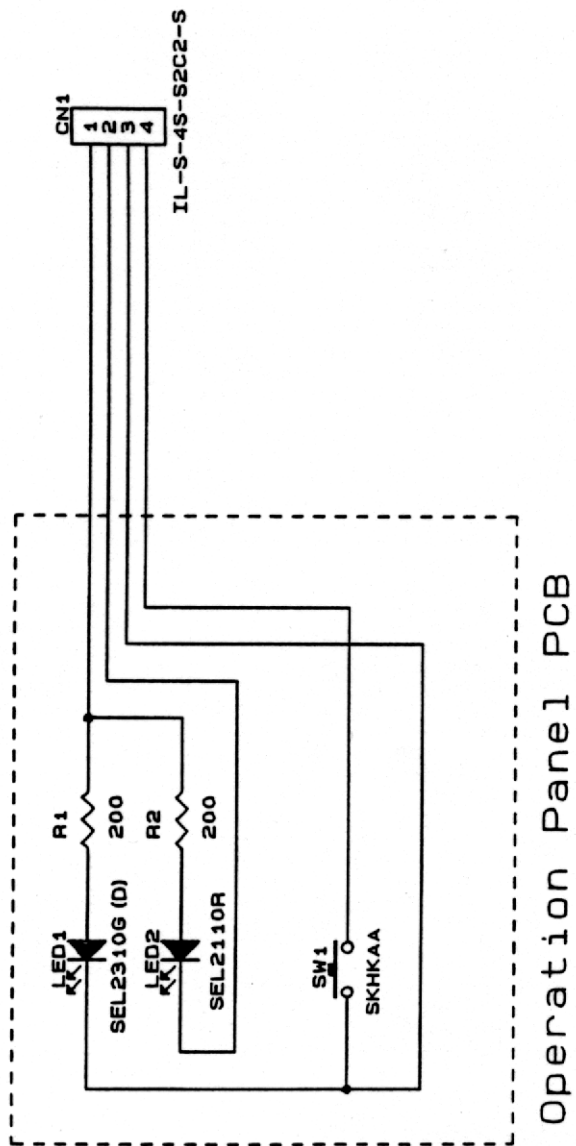


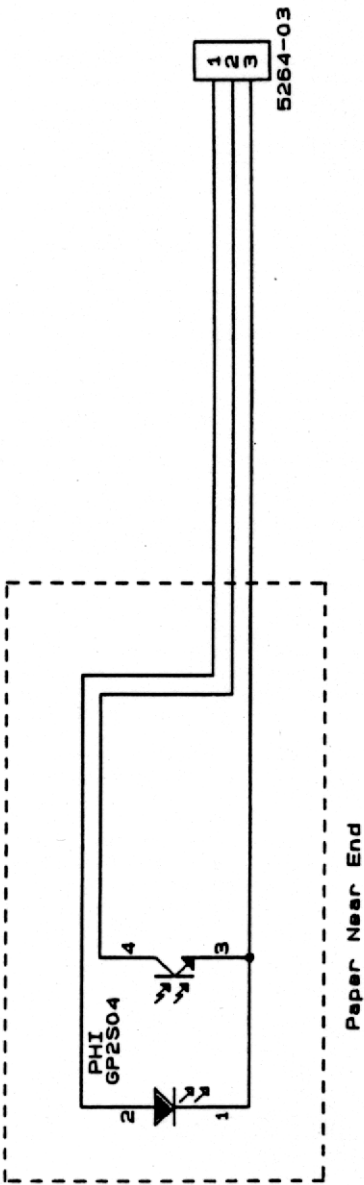
2. CIRCUITS

2-1 Block Diagram



2-2 Circuit Diagram





S.COMMUNICATION
RS-232C

DOROWER
(OPTION)

(OPTION)

PAPER NEAR END

P.COVER OPEN

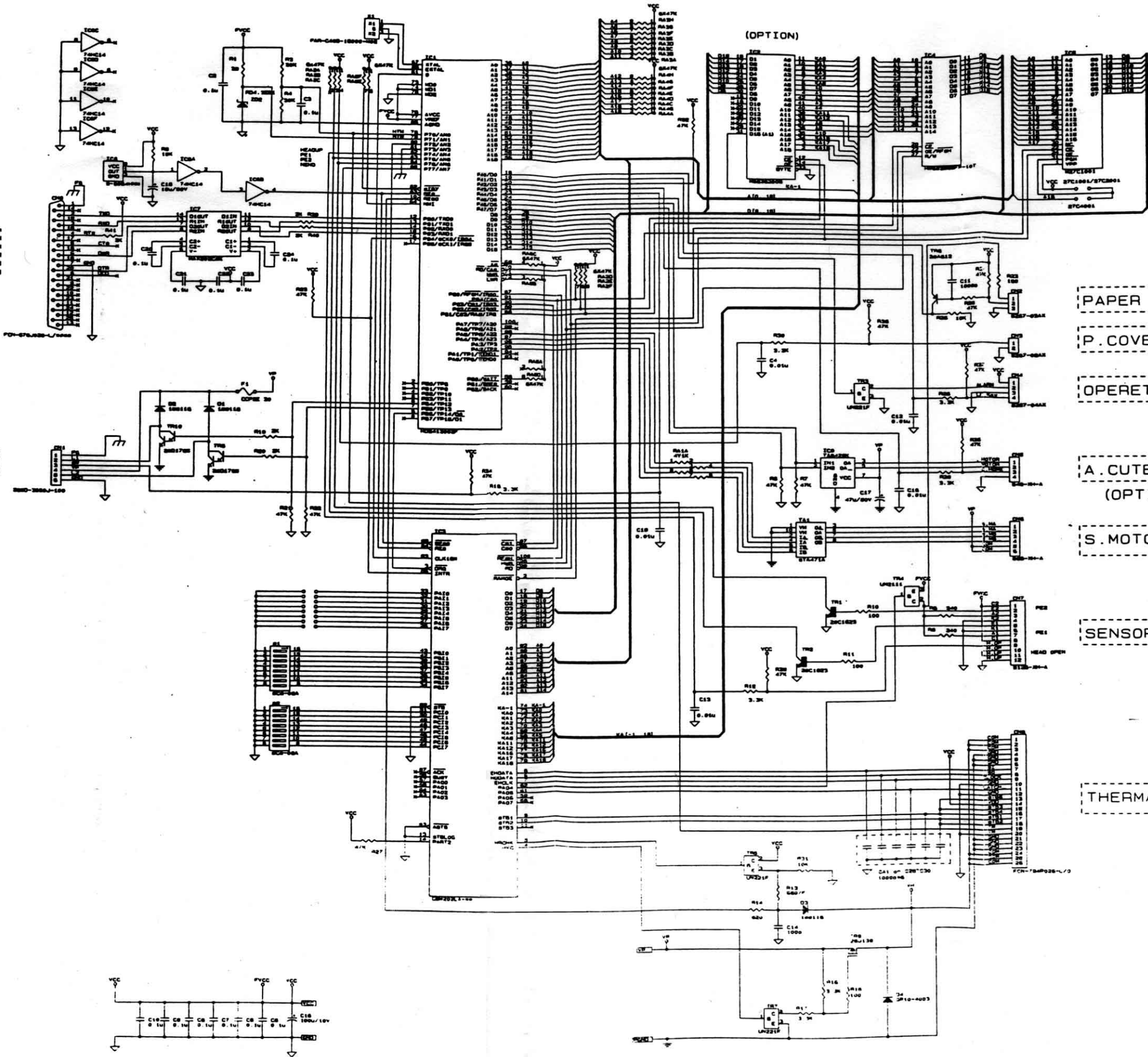
OPERATION PANEL

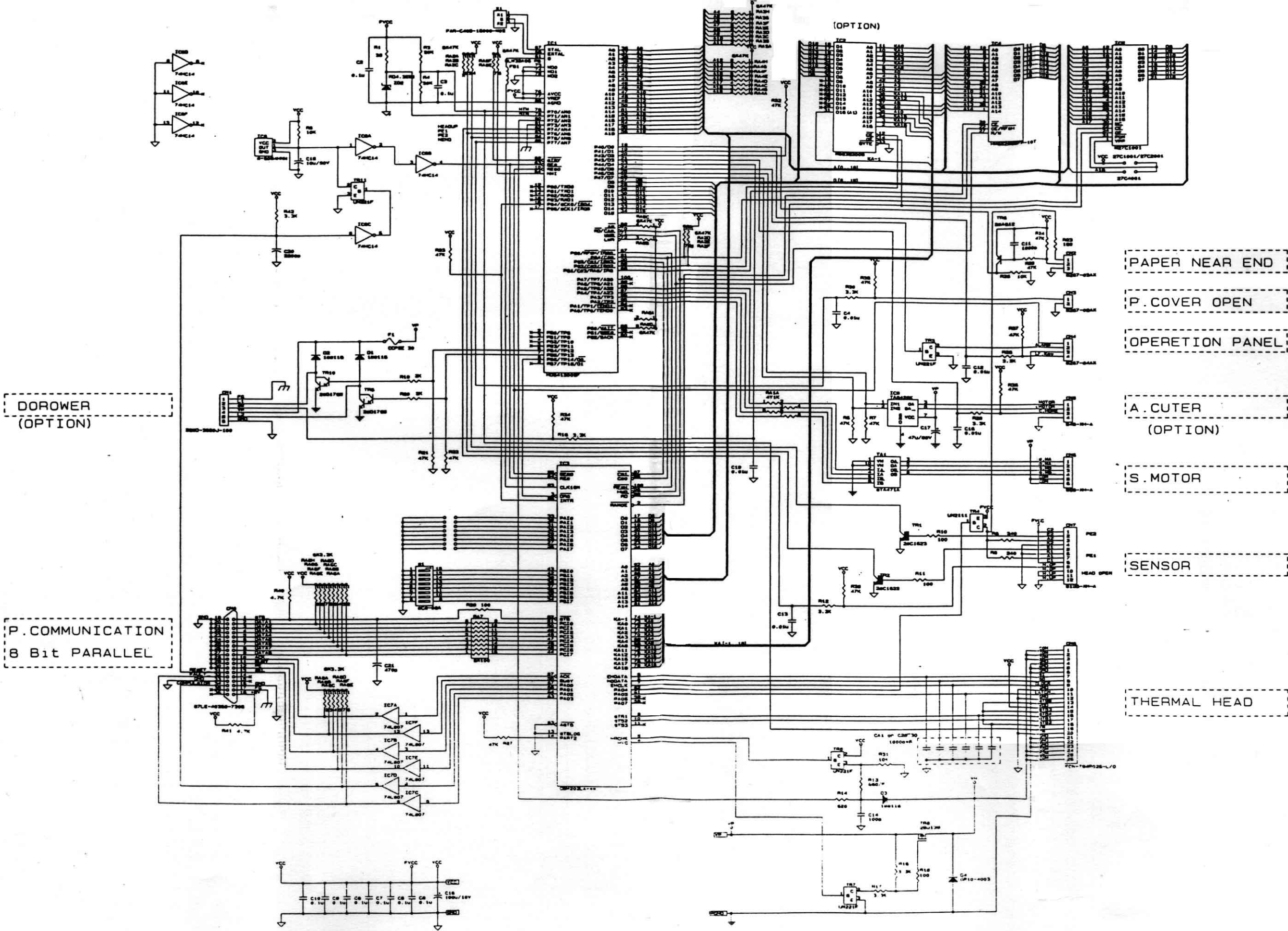
A.CUTER
(OPTION)

S.MOTOR

SENSOR

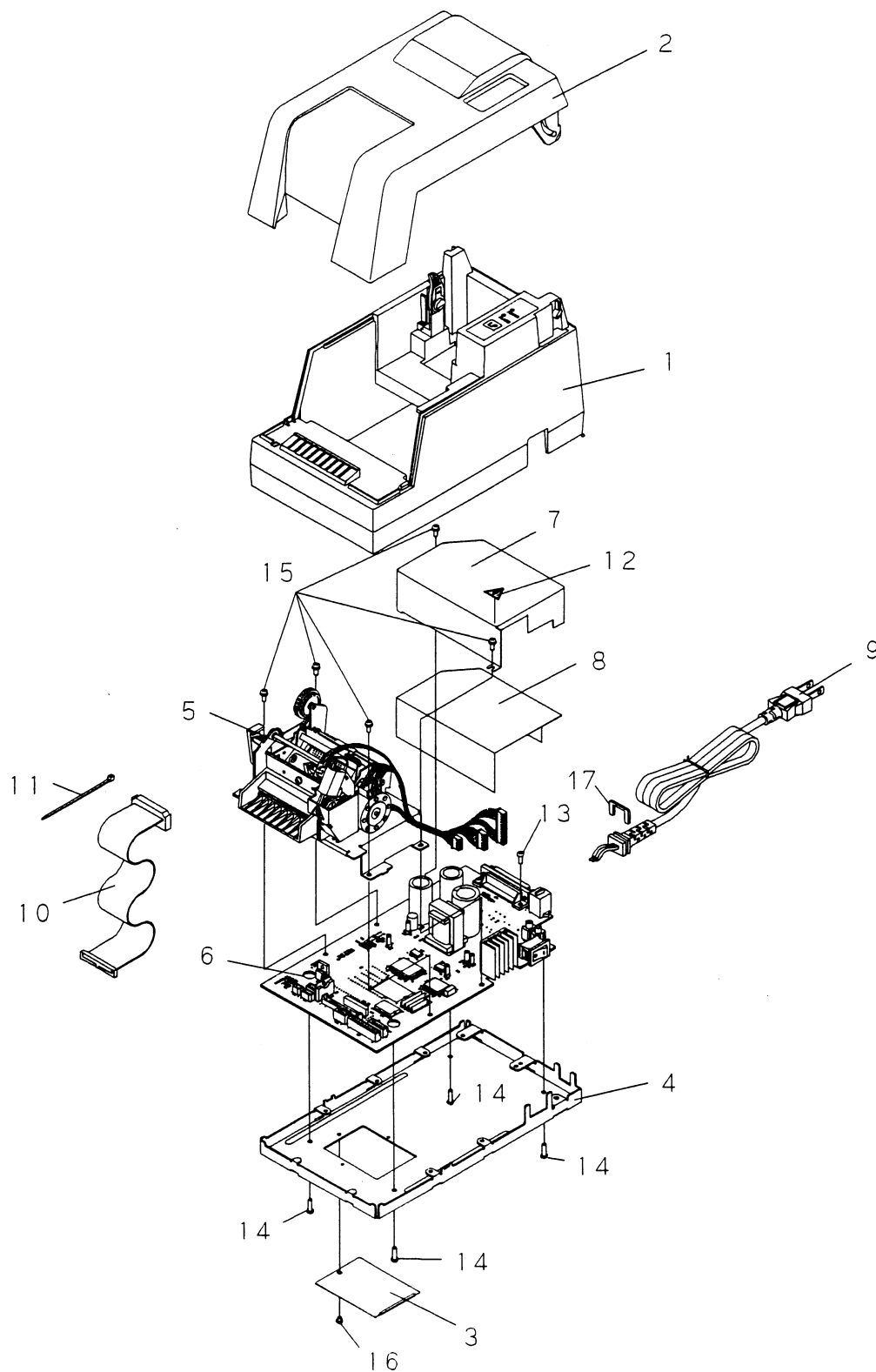
THERMAL HEAD



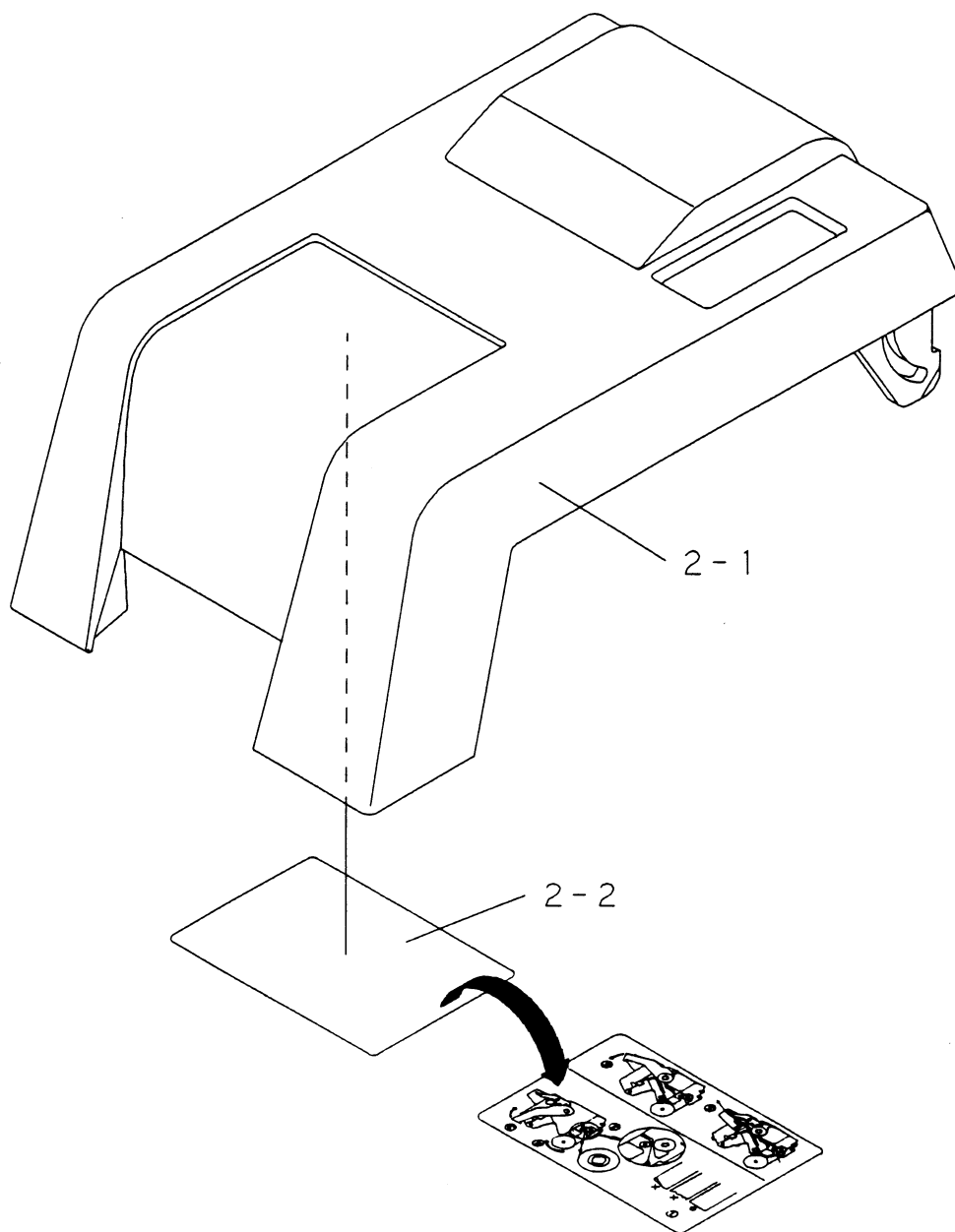


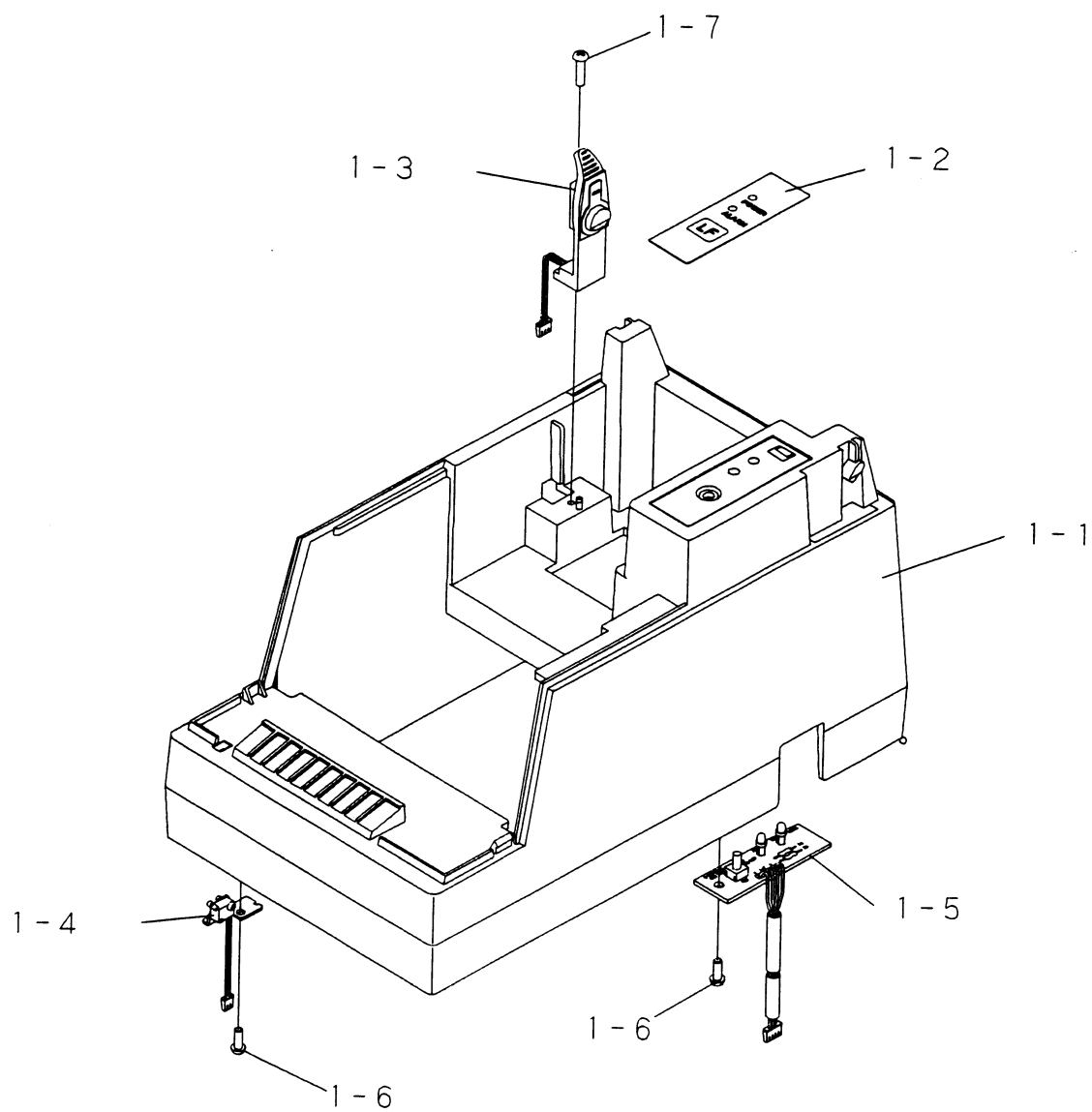
3. SERVICE PARTS LIST

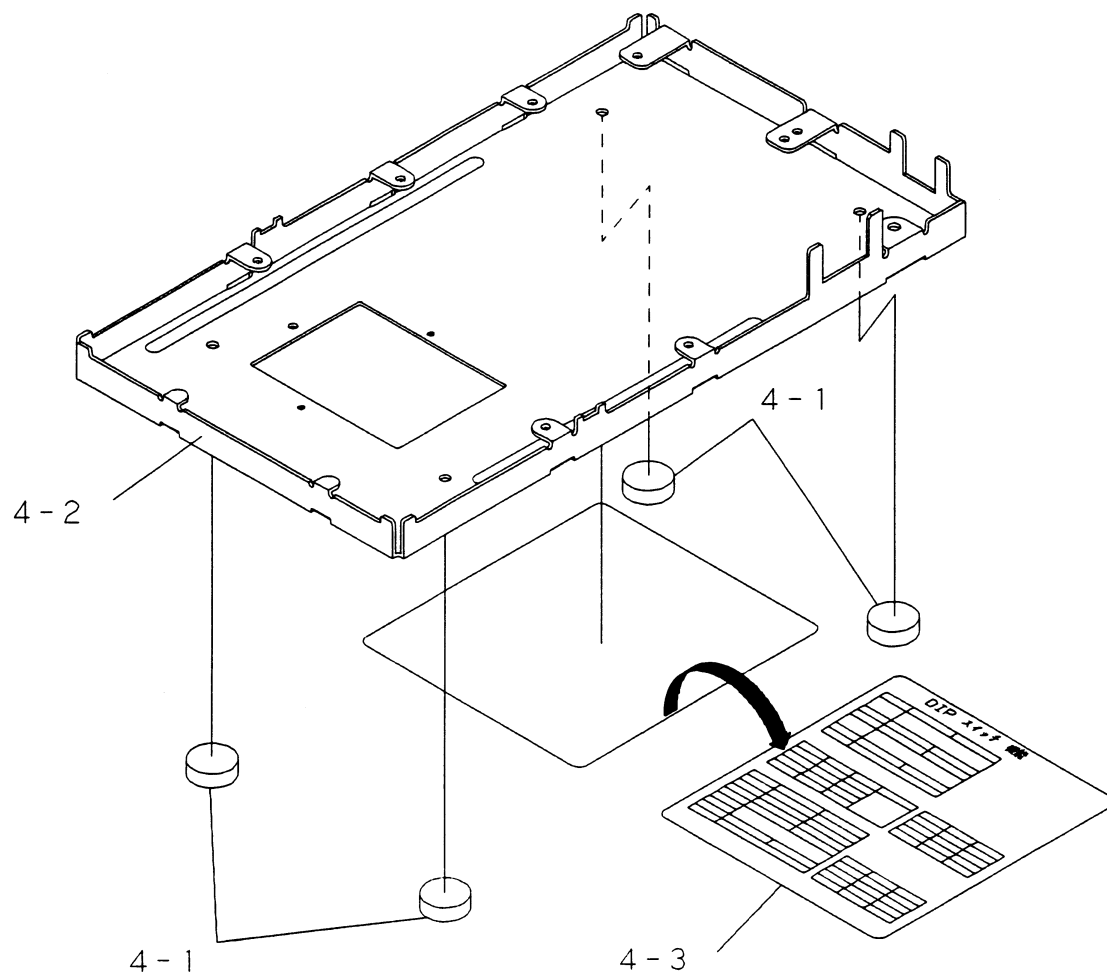
3-1 Main Body Disassembly Diagram and Parts List

Disassembly Diagram 1

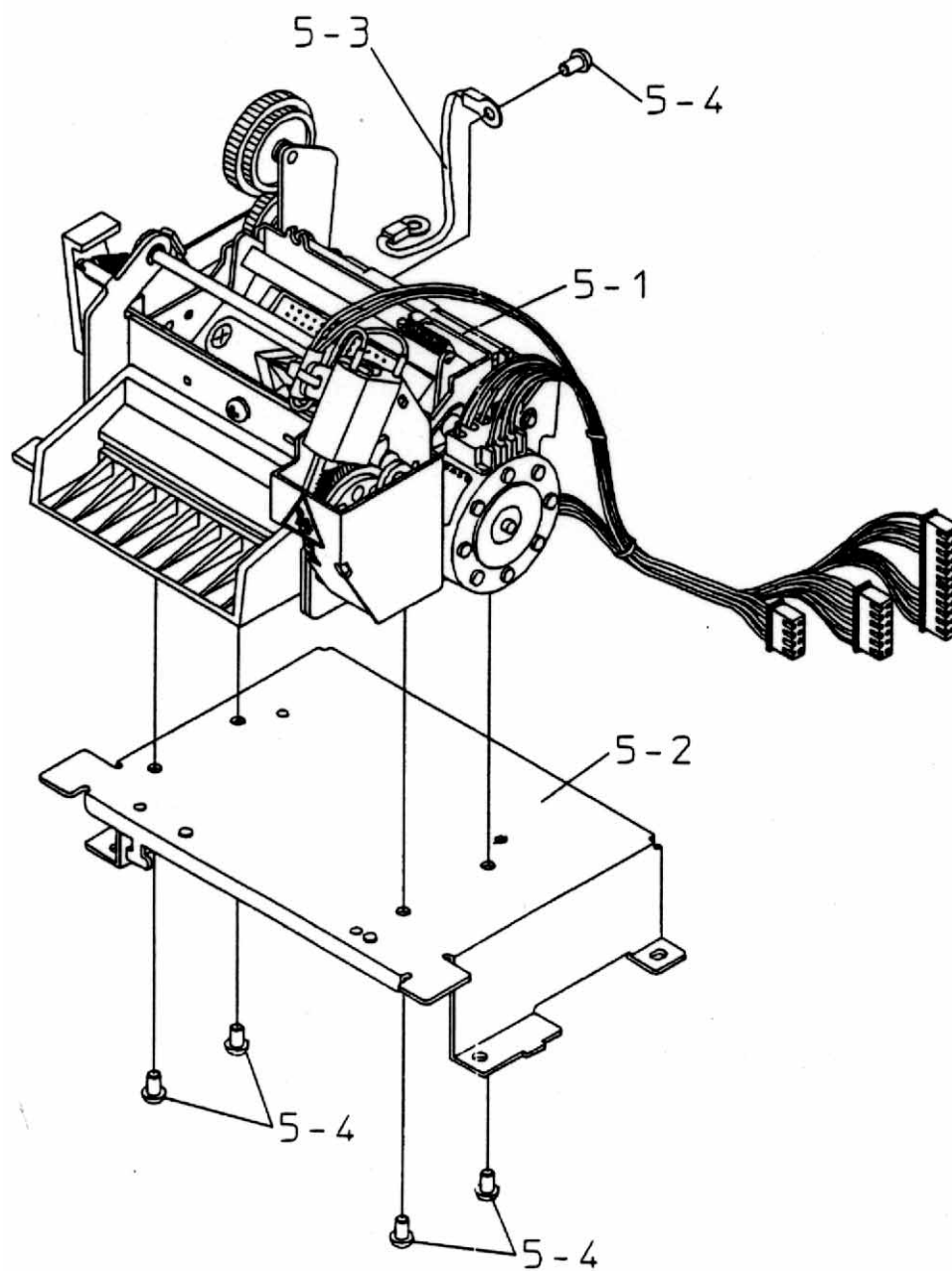
Disassembly Diagram 2

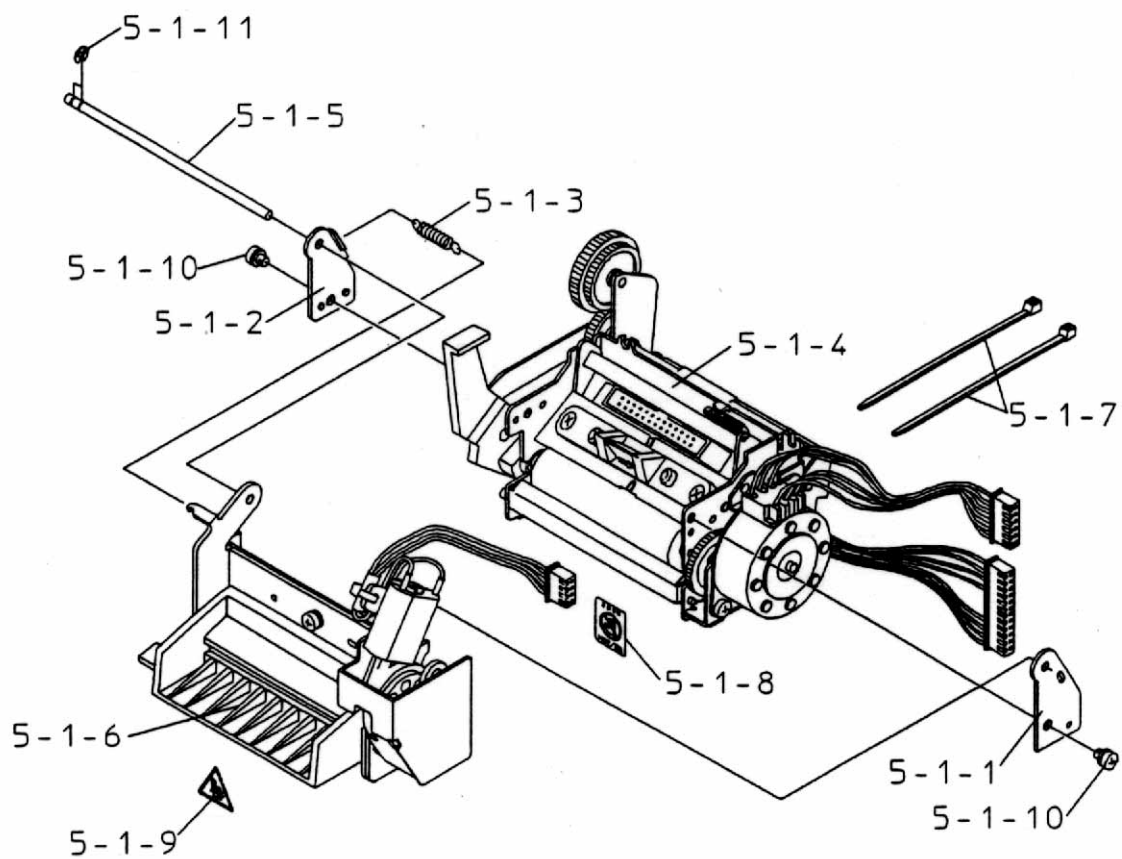


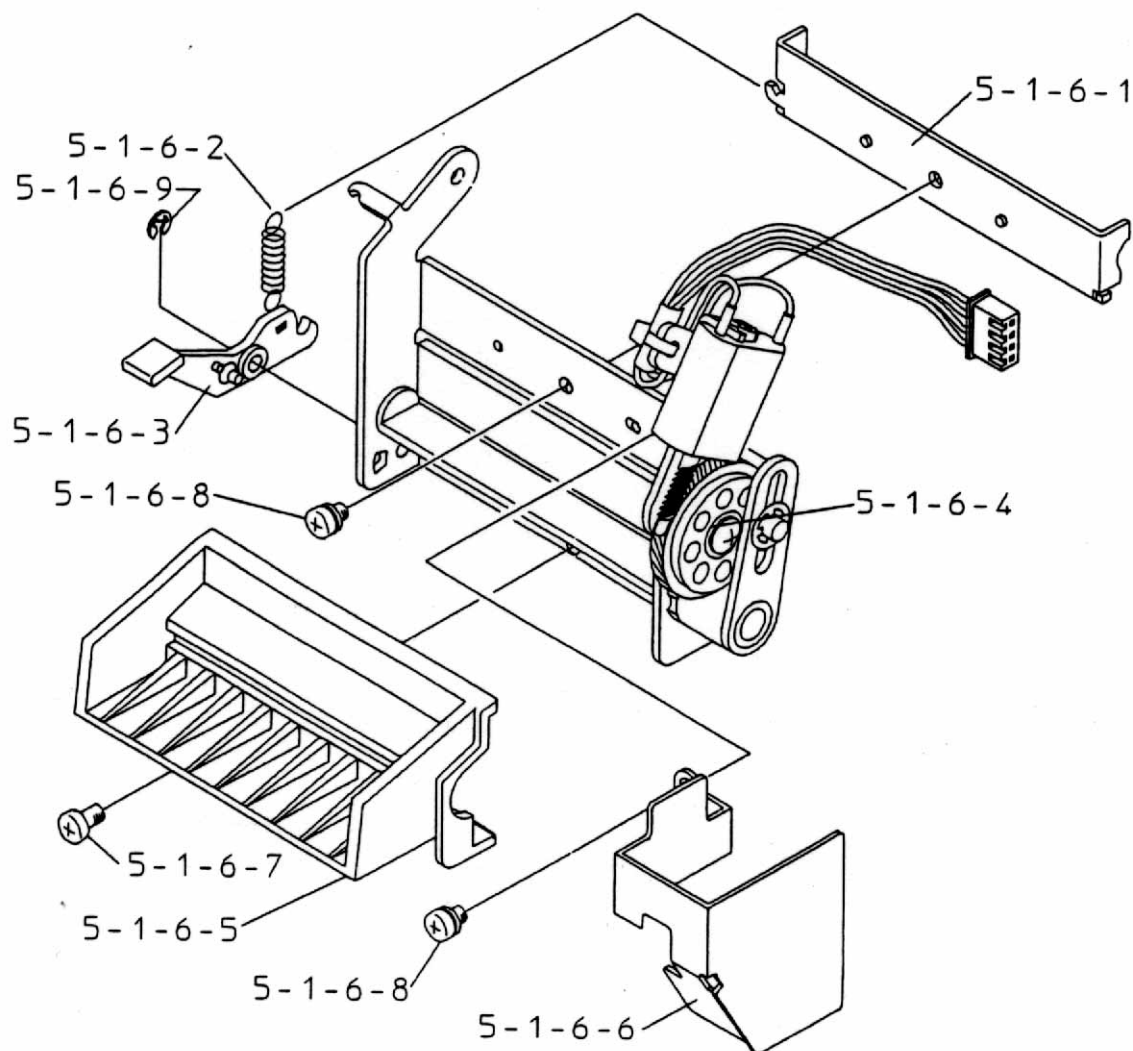
Disassembly Diagram 3

Disassembly Diagram 4

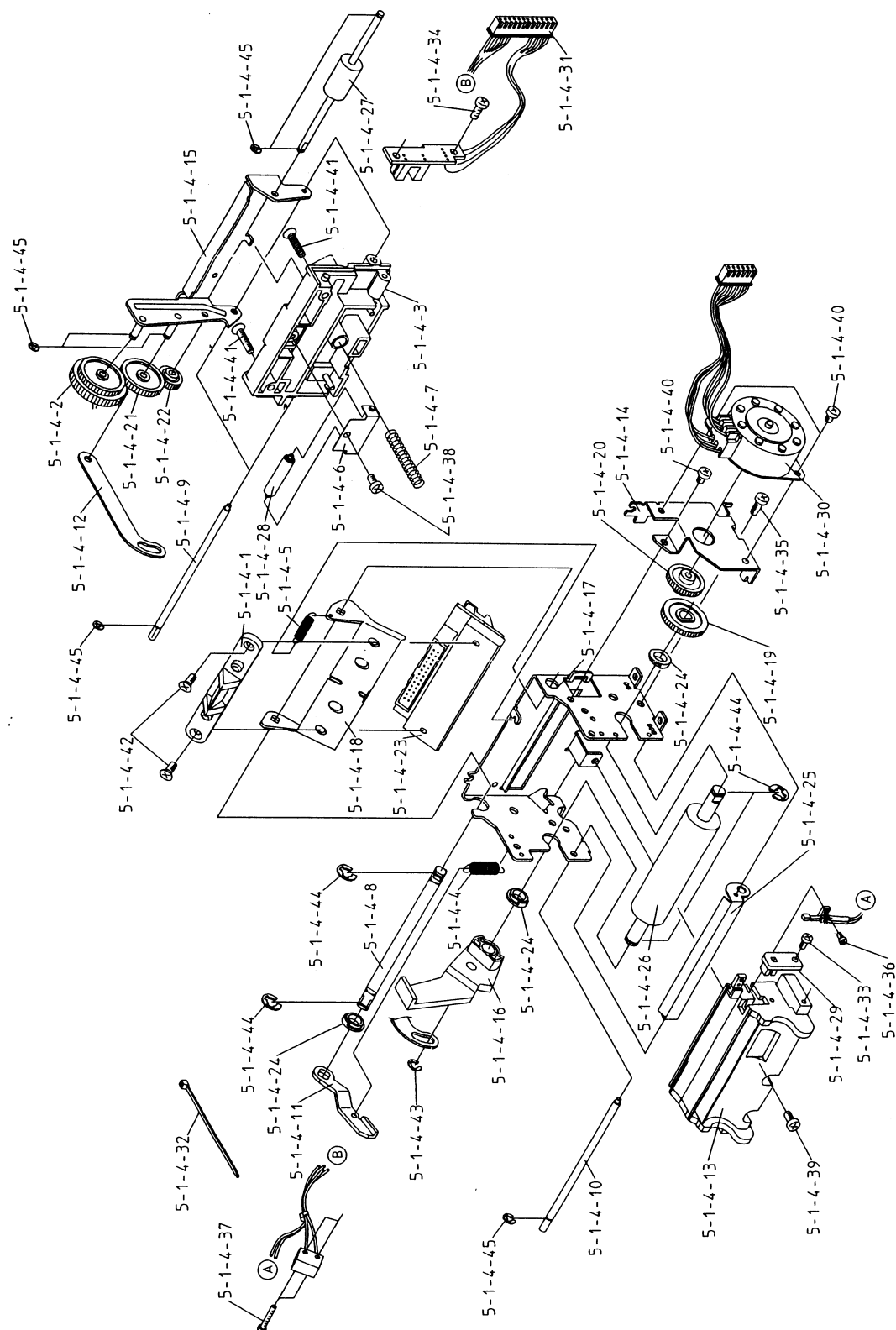
Disassembly Diagram 5



Disassembly Diagram 6

Disassembly Diagram 7

Disassembly Diagram 8



PART LIST for Disassemble Diagram 1

CBM-253-RF120

Ref. No.	Parts No.	Description	Qty
1	E62010680	Upper Case(Top Case) Assy	1
2	E62040190	Printer Cover Assy	1
3	E62020150	Back Hatch	1
4	E4002-46(8)0	Chassis Assy *	1
5	E8010-210	Frame Assy	1
6	E70010730	PCB Assy CBM-253-RF120	1
7	E4002-470	Shield Plate	1
8	E4035-750	Insulation Sheet	1
9	E6100-710	Power Cable(AC Cord) for 120V	1
10	E4900-200	Wiring Harness(Harness)	1
11	E8035-010	Cable Binder	1
12		Warning Label	1
13	90000300	Screw P/H Tapping STP3X 8	1
14	90000540	Screw P/H Tapping BTP3X12	4
15	90001360	Screw P/H Tapping STP3X8 Sems	5
16	90100280	Screw P/H SMP3X4	1
17	E6101-140	Spacer	1

PART LIST for Disassemble Diagram 1

CBM-253-RF230

Ref. No.	Parts No.	Parts Name	Qty
1	E62010750	Upper Case(Top Case) Assy for CE only	1
2	E62040190	Printer Cover Assy	1
3	E62020150	Back Hatch	1
4	E4002-460	Chassis Assy *	1
5	E8010-210	Frame Assy	1
6	E70010750	PCB Assy CBM-253-RF230	1
7	E4002-470	Shield Plate	1
8	E4035-750	Insulation Sheet	1
9	E6100-710	Power Cable(AC Cord) for 230V	1
10	E4900-200	Wiring Harness(Harness)	1
11	E8035-010	Cable Binder	1
12		Warning Label	1
13	90000300	Screw P/H Tapping STP3X 8	1
14	90000540	Screw P/H Tapping BTP3X12	4
15	90001360	Screw P/H Tapping STP3X8 Sems	5
16	90100280	Screw P/H SMP3X4	1
17	E6101-140	Spacer	1

PART LIST for Disassemble Diagram 1

CBM-253-PF120

Ref. No.	Parts No.	Parts Name	Qty
1	E62010680	Upper Case(Top Case) Assembly	1
2	E62040190	Printer Cover Assy	1
3	E62020150	Back Hatch	1
4	E4002-460	Chassis Assy *	1
5	E8010-210	Frame Assy	1
6	E70010740	PCB Assy CBM-253-PF120	1
7	E4002-470	Shield Plate	1
8	E4035-750	Insulation Sheet	1
9	E6100-710	Power Cable(AC Cord) for 120V	1
10	E4900-200	Wiring Harness(Harness)	1
11	E8035-010	Cable Binder	1
12		Warning Label	1
13	90000300	Screw P/H Tapping STP3X 8	1
14	90000540	Screw P/H Tapping BTP3X12	4
15	90001360	Screw P/H Tapping STP3X8 Sems	5
16	90100280	Screw P/H SMP3X4	1
17	E6101-140	Spacer	1

PART LIST for Disassemble Diagram 1

CBM-253-PF230

Ref. No.	Parts No.	Parts Name	Qty
1	E62010750	Upper Case(Top Case) Assy for CE only	1
2	E62040190	Printer Cover Assy	1
3	E62020150	Back Hatch	1
4	E4002-460	Chassis Assy *	1
5	E8010-210	Frame Assy	1
6	E70010760	PCB Assy CBM-253-PF230	1
7	E4002-470	Shield Plate	1
8	E4035-750	Insulating Sheet	1
9	E6100-710	Power Cable(AC Cord) for 230V	1
10	E4900-200	Wiring Harness(Harness)	1
11	E8035-010	Cable Binder	1
12		Warning Label	1
13	90000300	Screw P/H Tapping STP3X 8	1
14	90000540	Screw P/H Tapping BTP3X12	4
15	90001360	Screw P/H Tapping STP3X8 Sems	5
16	90100280	Screw P/H SMP3X4	1
17	E6101-140	Spacer	1

PART LIST for Disassembly Diagram 3(Upper Case Assembly)

CBM-253-RF120 / CBM-253-PF120

Ref. No.	Parts No.	Parts Name	Qty
1-1	E62010685	Upper Case(Top Case)	1
1-2	E5200-230	Operation Panel Sheet(OP Sheet)	1
1-3	E40000010	Near End Sensor Assy	1
1-4	E40000030	Printer Cover (Open) Sensor Assy	1
1-5	E40000020	Operation Panel(OP) PCB Assembly	1
1-6	90000120	Screw P/H Tapping BTP3X8	2
1-7	90000540	Screw P/H Tapping BTP3X12	1

PARTS LIST for Disassembly Diagram 3(Upper Case Assembly)

CBM-253-RF230 / CBM-253-PF230

Ref. No.	Parts No.	Parts Name	Qty
1-1	E62010685	Upper Case(Top Case)	1
1-2	E5200-230	Operation Panel Sheet(OP Sheet)	1
1-3	E40000010	Near End Sensor Assy	1
1-4	E40000030	Printer Cover (Open) Sensor Assy	1
1-5	E40000130	Operation Panel(OP) PCB Assembly for CE only	1
1-6	90000120	Screw P/H Tapping BTP3X8	2
1-7	90000540	Screw P/H Tapping BTP3X12	1

PART LIST for Disassemble Diagram 2

Ref. No.	Parts No.	Parts Name	Qty
2-1		Printer Cover	1
2-2		Operation Label	1

PART LIST for Disassemble Diagram 4(Chassis Assembly)

Ref. No.	Parts No.	Description	Qty
4	E4002-480	Chassis Assey	1
4-1	E6302-350	Rubber Foot	4
4-2	E4002-510	Chassis	1
4-3		Mode Label	1

PART LIST for Disassemble Diagram 5(Frame Assembly)

Ref. No.	Parts No.	Description	Qty
5-1		Printer Mechanism	1
5-2	E6601-300	Frame	1
5-3	E4035-740	Grounding Wire(Ground Wire)	1
5-4	90100280	Screw P/H SMP3X4	5

PART LIST for Disassemble Diagram 6(Printer Mechanism)

Ref. No.	Parts No.	Description	Qty
5-1-1	E8004-080	Cutter Bracket-L	1
5-1-2	E8004-090	Cutter Bracket-R	1
5-1-3	E8021-060	Coil Spring	1
5-1-4	LT280	Printer Mechanism AssyLT-280	1
5-1-5	E8024-100	Shaft	1
5-1-6	AC7	Auto Cutter Assy AC-7	1
5-1-7	E8035-010	Cable Binder	2
5-1-8		Warning Label	1
5-1-9		Warning Label	1
5-1-10	90100780	Screw P/H SMP3X4 Sems A	2
5-1-11	E2	E Ring E2	2

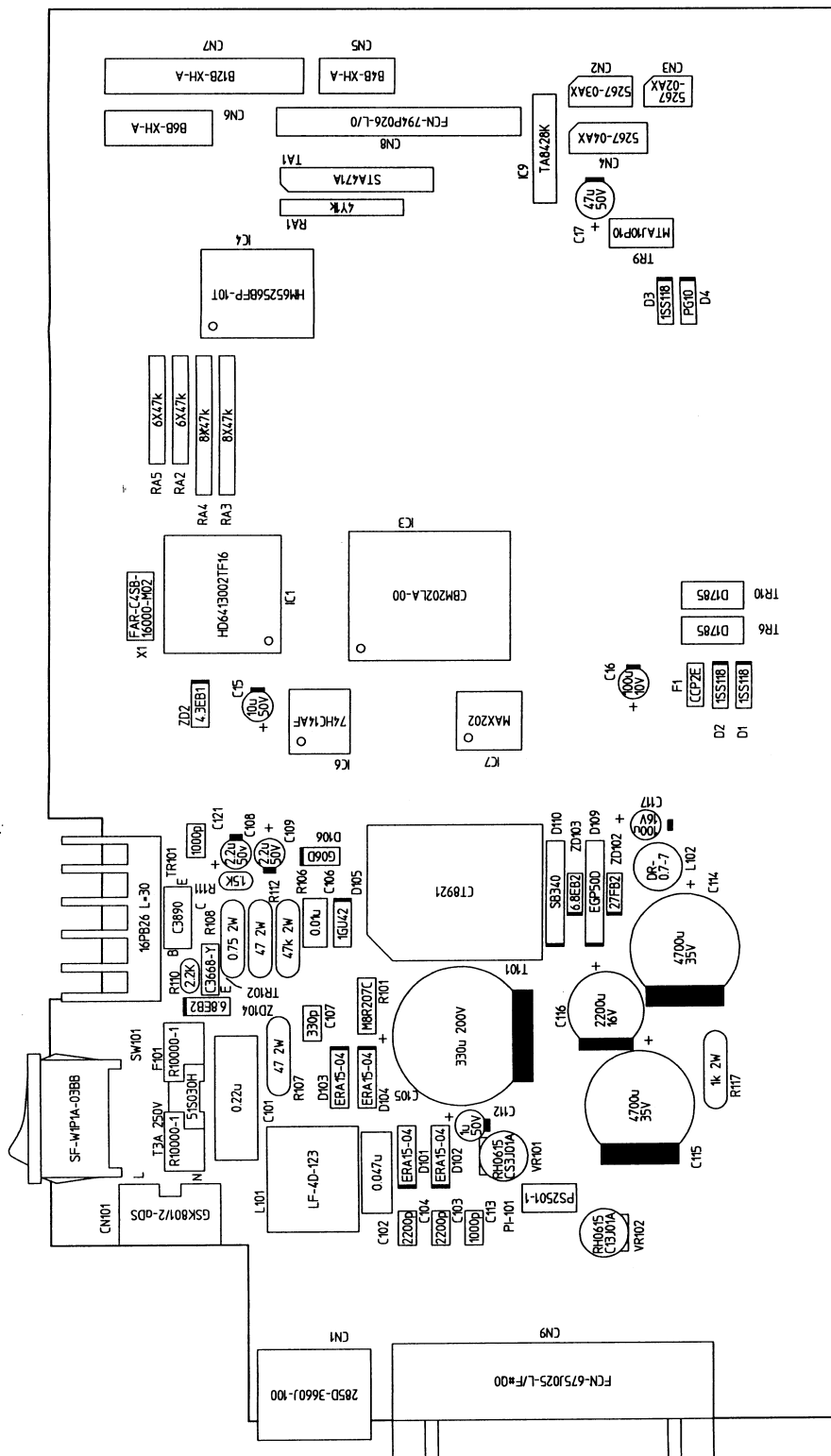
PART LIST for Disassemble Diagram 7(Auto Cutter Assy)

Ref. No.	Parts No.	Description	Qty
5-1-6-1	E8026-060	Cutter Holder	1
5-1-6-2	E8021-100	Coil Spring	1
5-1-6-3	E8032-090	Cutter Lever	1
5-1-6-4	YZ38288	Auto Cutter Unit	1
5-1-6-5	E8023-050	Cutter Cover	1
5-1-6-6	E8005-010	Gear Cover	1
5-1-6-7	90100020	Screw P/H SMP3X6	1
5-1-6-8	90100780	Screw P/H SMP3X4 Sems A	2
5-1-6-9	E2	E Ring E2	1

PART LIST for Disassemble Diagram 8(Printer Mechanism Assy)

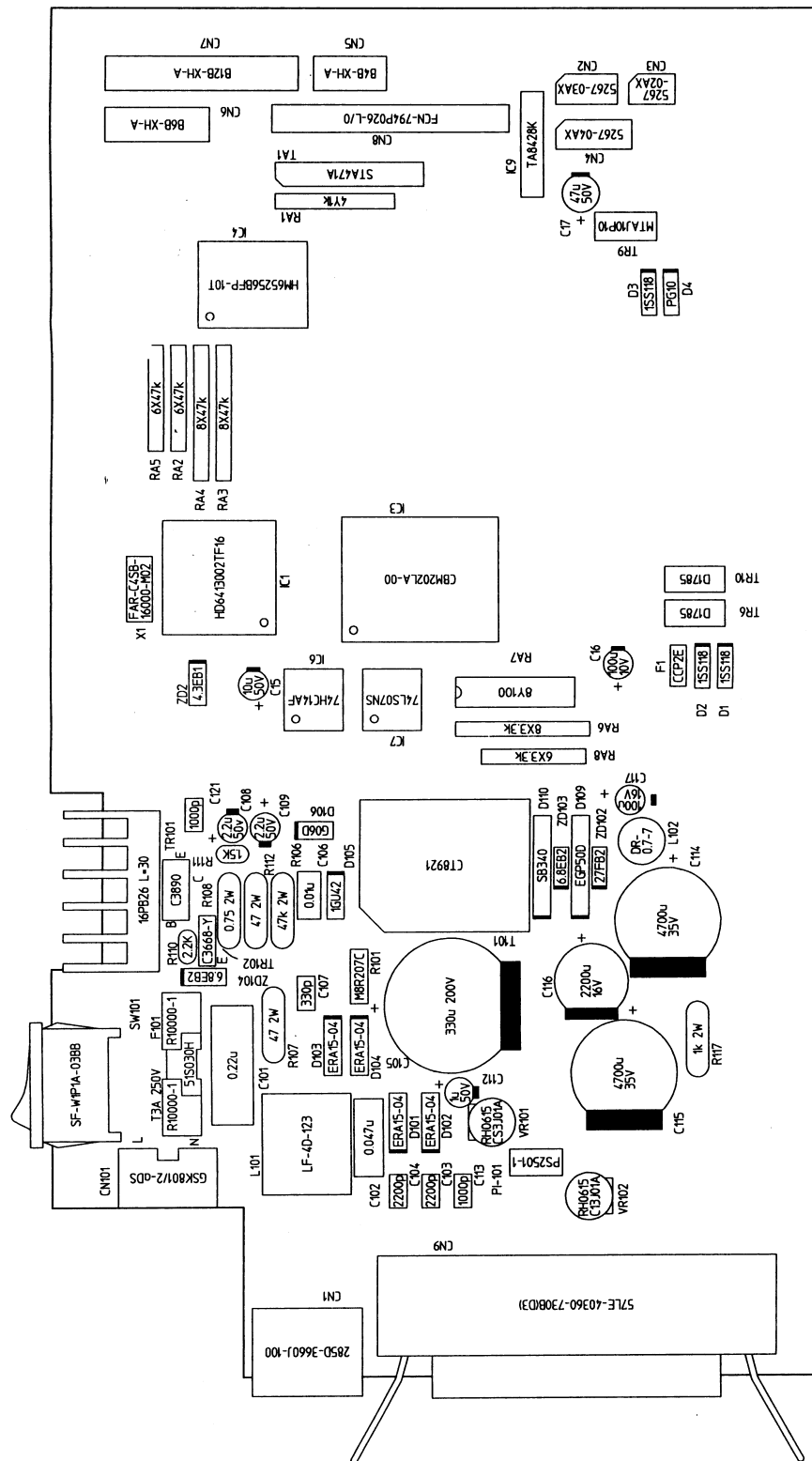
Ref. No.	Parts No.	Description	Qty
5-1-4-1	E8029-010	Knob	1
5-1-4-2	E8029-020	Knob	1
5-1-4-3	E8009-010	Sensor Holder	1
5-1-4-4	E8021-070	Coil Spring	1
5-1-4-5	E8021-100	Coil Spring	1
5-1-4-6	E8021-080	Plate Spring(Roller Holder)	1
5-1-4-7	E8021-090	Coil Spring	1
5-1-4-8	E8024-050	Shaft	1
5-1-4-9	E8024-080	Shaft	1
5-1-4-10	E8024-090	Shaft	1
5-1-4-11	E8032-040	Arm	1
5-1-4-12	E8032-080	Arm	1
5-1-4-13	E8011-040	Paper Guide Chassis Assy	1
5-1-4-14	E8010-220	Motor bracket Assy	1
5-1-4-15	E8010-230	Frame Assy	1
5-1-4-16	E8013-030	Lever Assy	1
5-1-4-17	E8002-030	Frame	1
5-1-4-18	E8002-040	Head Frame	1
5-1-4-19	E8019-020	Gear	1
5-1-4-20	E8019-030	Gear	1
5-1-4-21	E8019-060	Gear	1
5-1-4-22	E8019-070	Roller Gear	1
5-1-4-23	J0568S518	Thermal Print Head	1
5-1-4-24	E8025-020	Bearing(Bush)	3
5-1-4-25	E8022-030	Paper Guide	1
5-1-4-26	E8031-030	Platen Roller(Platen)	1
5-1-4-27	E8031-050	Roller	1
5-1-4-28	E8031-060	Roller	1
5-1-4-29	E8025-040	Spacer	1
5-1-4-30	E8017-040	Stepping Motor PM35S048-ZZB4	1
5-1-4-31	E8018-070	Sensor Assy	1
5-1-4-32	E8035-010	Cable Binder	1
5-1-4-33	90000050	Screw P/H Tapping BTP2.6X6	1
5-1-4-34	90000120	Screw P/H Tapping BTP3X8	1
5-1-4-35	90000150	Screw P/H Tapping BTP3X6	1
5-1-4-36	90000170	Screw P/H Tapping BTP2X4	1
5-1-4-37	90000830	Screw P/H Tapping BTP2X12	2
5-1-4-38	90001110	Screw P/H Tapping BTP3X5	1
5-1-4-39	90100020	Screw P/H SMP3X6	1
5-1-4-40	90100290	Screw P/H SMP3X3	3
5-1-4-41	90200080	Screw F/H SMF3X14	2
5-1-4-42	90200090	Screw F/H SMF3X8Ni	2
5-1-4-43	E2.5	E Ring E2.5	1
5-1-4-44	E4	E Ring E4	4
5-1-4-45	E2	E Ring E2	6

3.2 Parts Layout of PCBs and Parts List



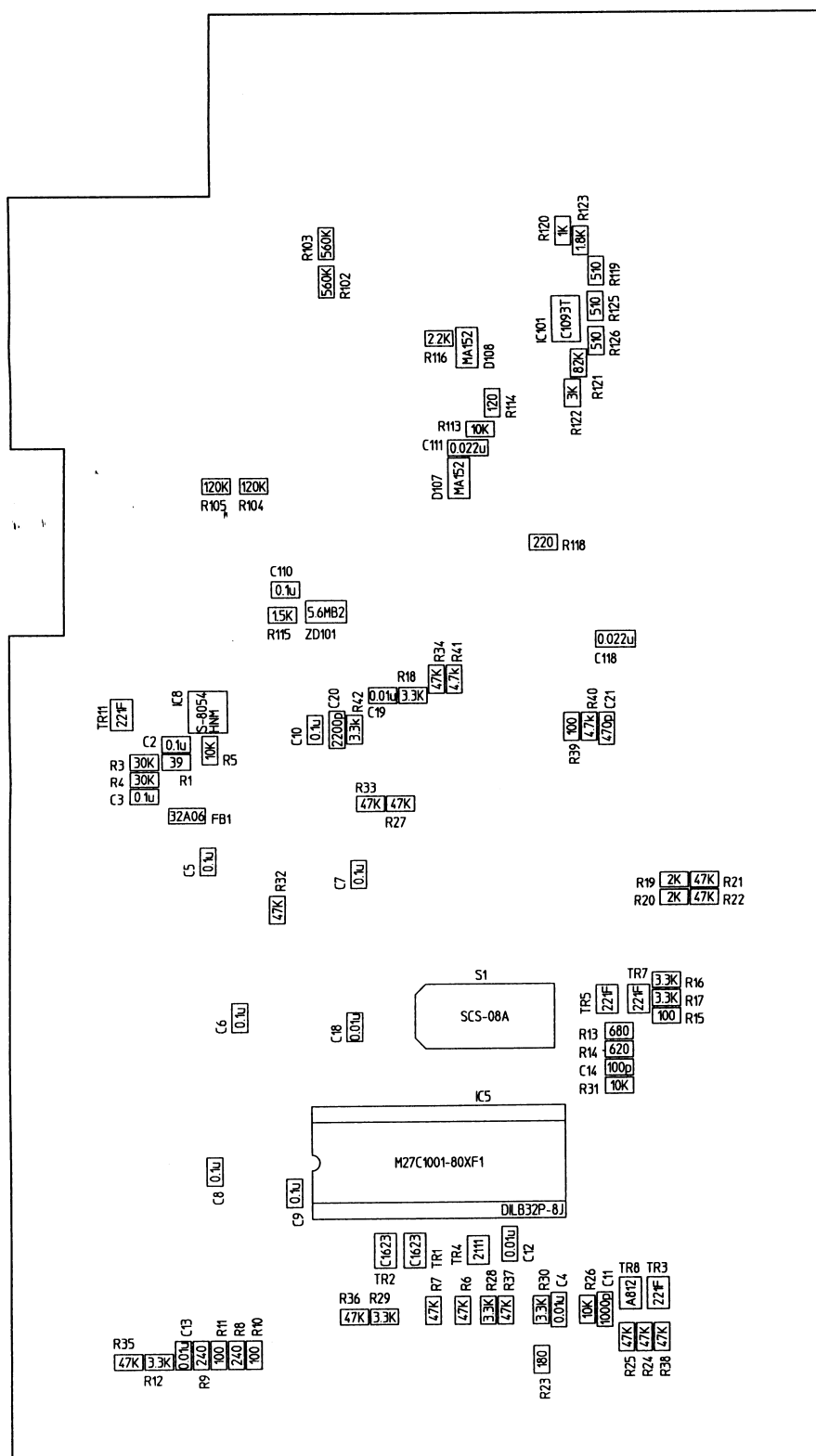
PARTS LAYOUT (PARTS SIDE)

SERIAL 120V



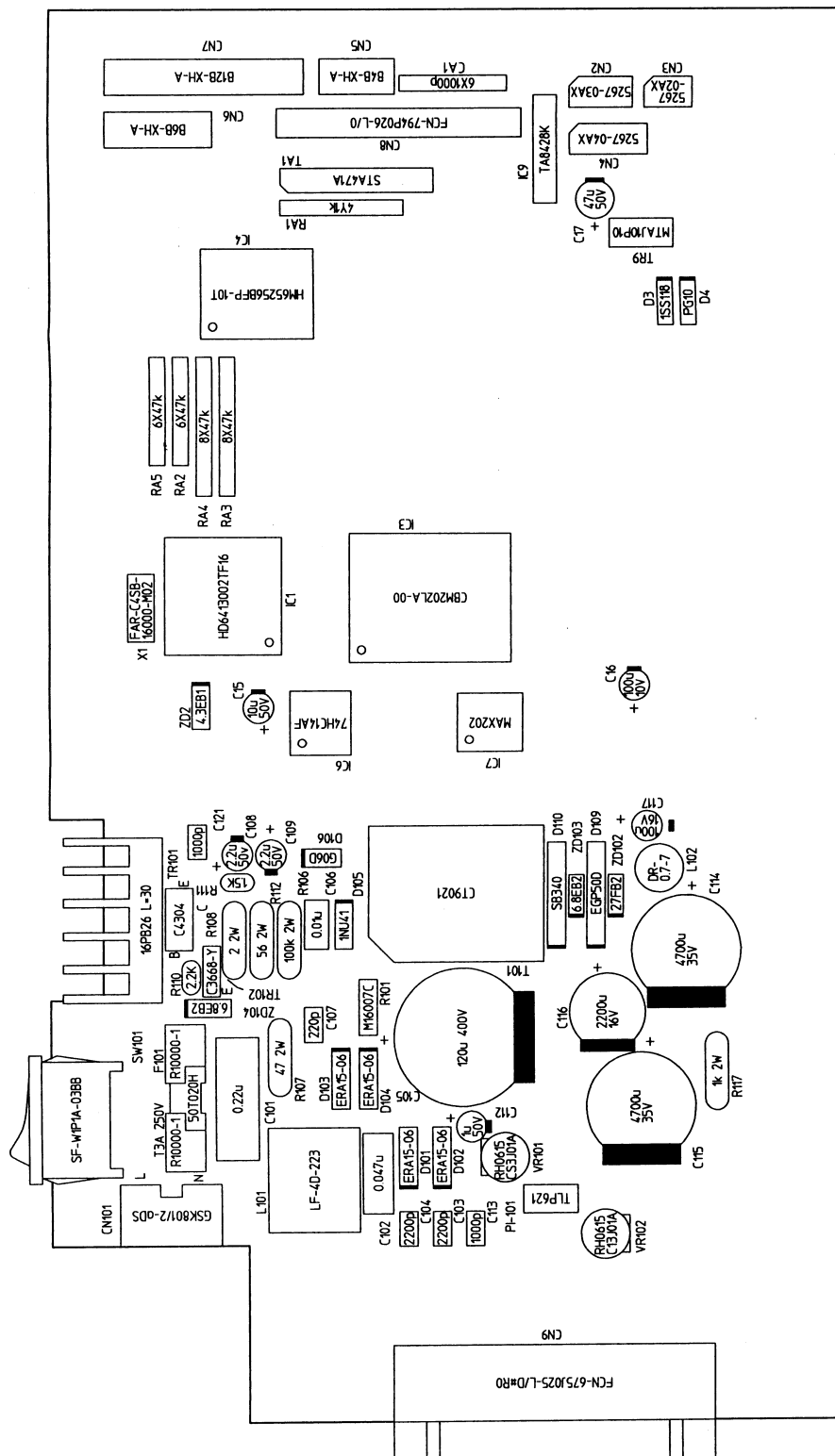
PARTS LAYOUT (PARTS SIDE)

PARALLEL 120V



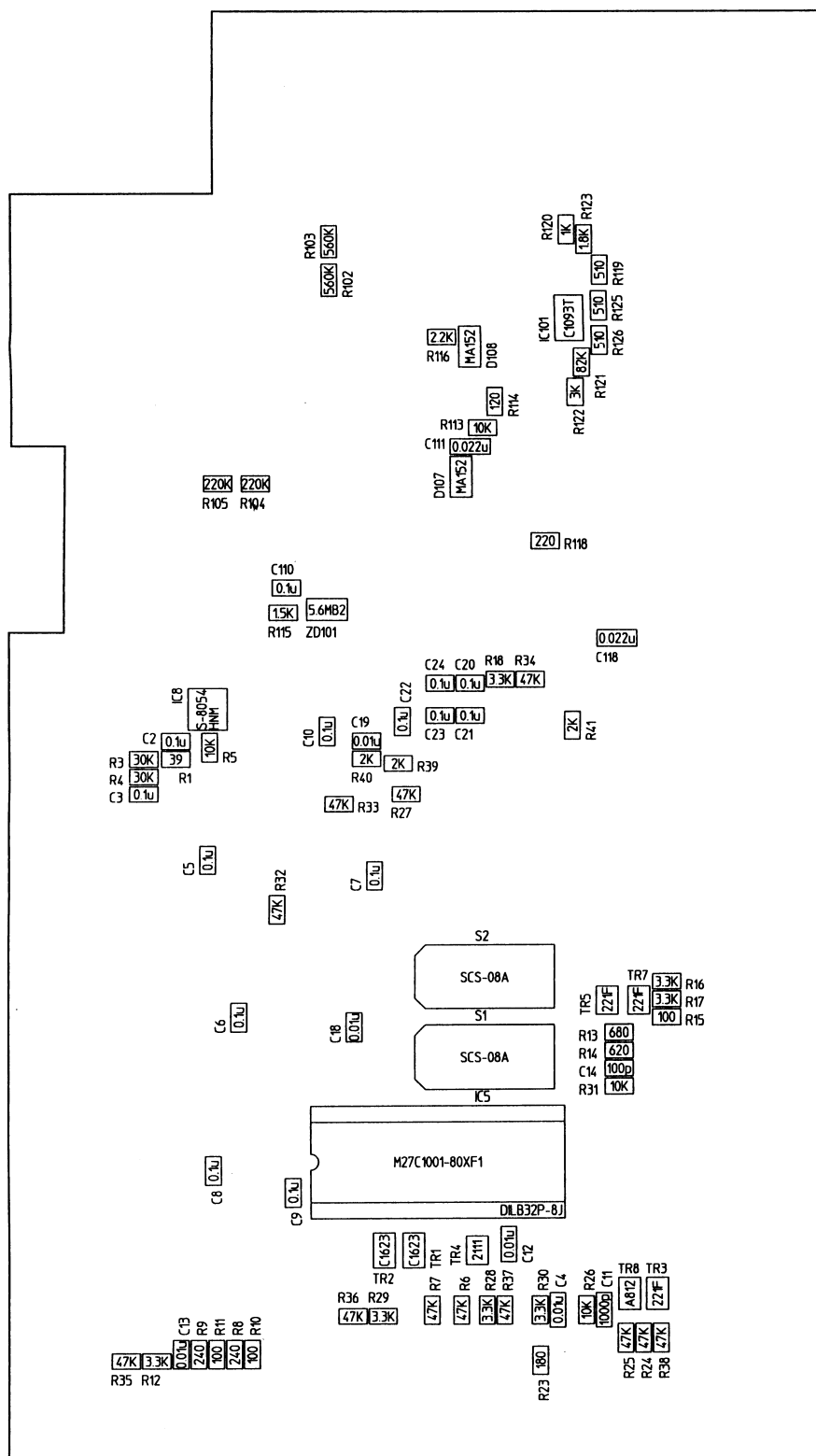
PARTS LAYOUT (SOLDER SIDE)

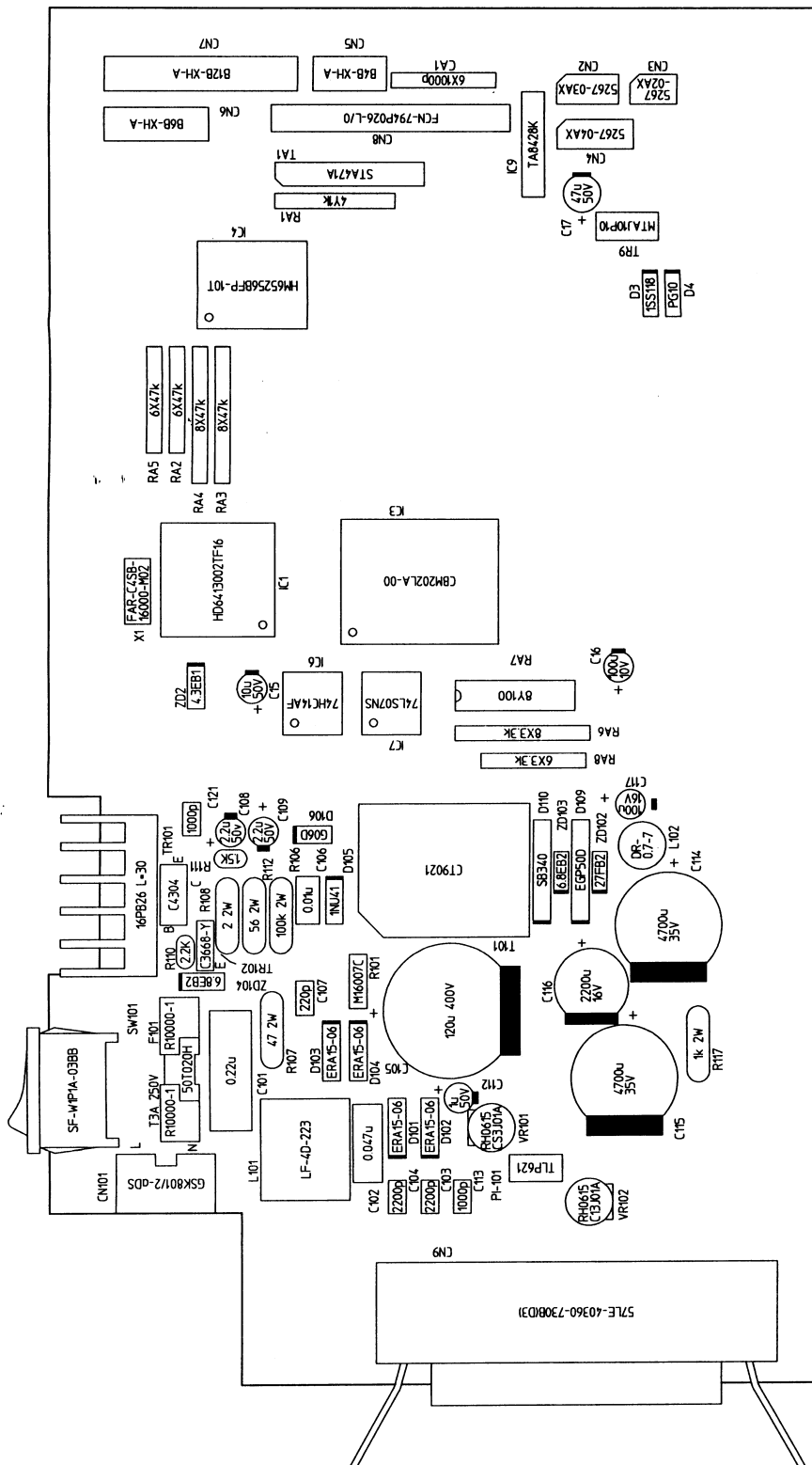
PARALLEL 120V



PARTS LAYOUT (PARTS SIDE)

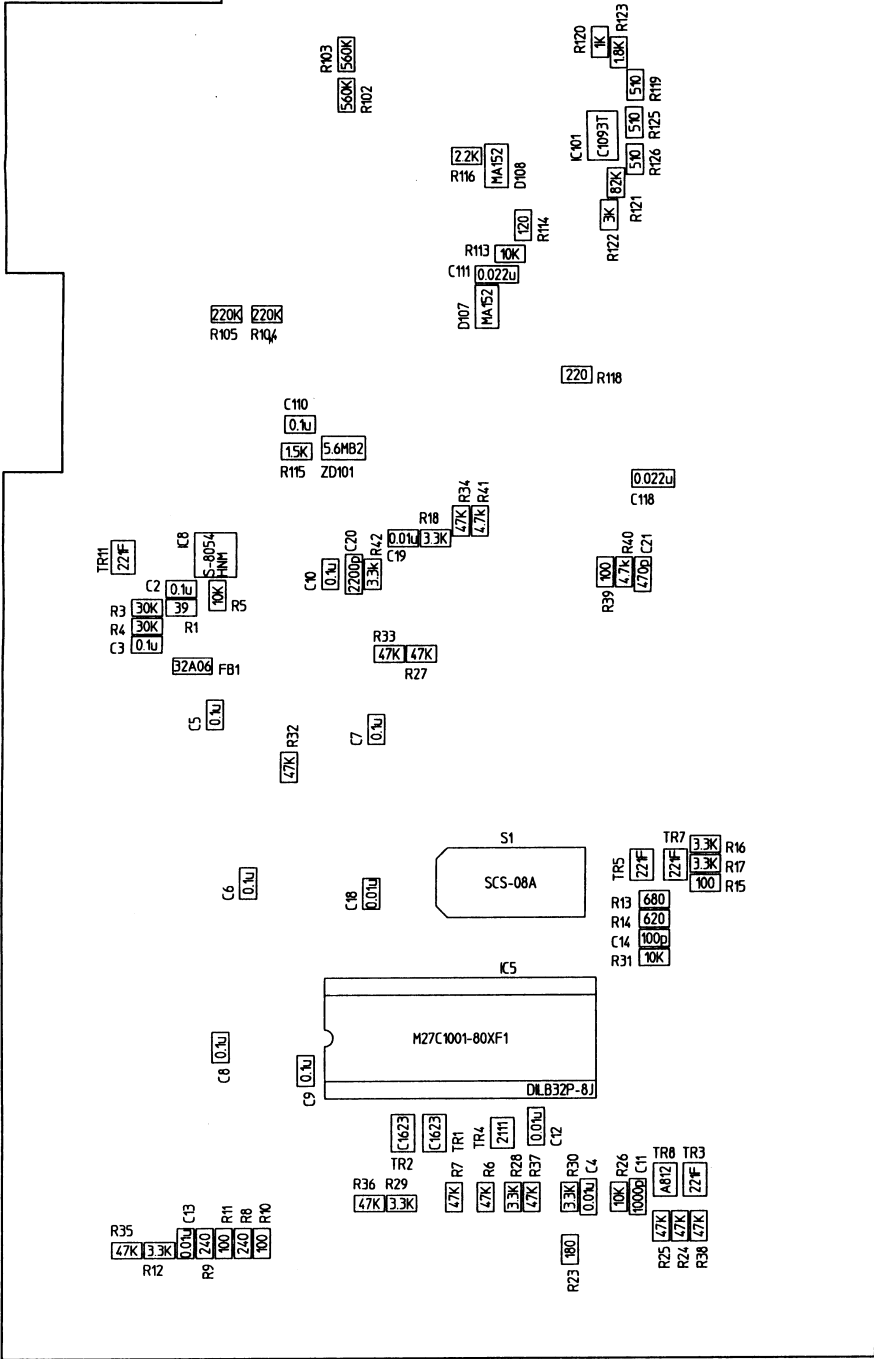
SERIAL 230V





PARTS LAYOUT (PARTS SIDE)

PARALLEL 230V



PARTS LAYOUT (SOLDER SIDE)

PARALLEL 230V

PART LIST for Main PCB Assembly

CBM-253-RF-120V (SERIAL)

1/3

Location No.	Parts No.	Description	Qty
1		Main PC Board	1
F101-1	E4006-260	Fuse Holder R10000-1	2
F1	E4005-780	Fuse CCP2E30	1
F101	E4005-785	Fuse 51S030H	1
5	E4010-460	Heat Sink	1
CN1	E48000685	Modular Jack 285D-3660J-100	1
CN2	E4800-950	Connector 5267-03AX	1
CN4	E4800-945	Connector 5267-04AX	1
CN3	E4800-940	Connector 5267-02AX	1
CN6	E48000655	Connector B6B-XH-A	1
CN5	E48000525	Connector B4B-XH-A	1
CN7	E48000660	Connector B12B-XH-A	1
CN8	E48000665	Connector FCN-794P026-L/0	1
CN9	E48000670	Interface Connector FCN-675J025-L/#Q0	1
CN101	E4014-280	Terminal GSK801-/2-aDS	1
SW101	E4003-520	Power Switch SF-W1P1A-03BB	1
S1.2	E5103-400	DIP Switch SCS-08A	2
IC5		IC Socket DILB32P-8J	1
IC1	E104-570	CPU HD6413002TF16	1
IC3	E104-530	Gate Array CBM202LA-00	1
IC101	E390-250	Regulator uPC1093T	1
IC6	E210-040	HC-MOS (FLAT) MC74HC14AF(Flat)	1
D101~104	E400-380	Diode ERA15-06 (MPG06J)	4
D105	E400-390	Diode 1GU42 (RMPG06G)	1
D106	E400-430	Diode RMPG06D	1
D109	E400-140	Diode EGP50D	1
D110	E400-420	Diode SB340	1
D107.108	E490-010	Chip Diode MA152WK	2
D4	E400-370	Diode GP10-4003E	1
D1.2.3	E400-570	Diode 1SS118	3
ZD102	E427-030	Zener Diode RD27FB2	1
ZD103.104	E406-060	Zener Diode RD6.8EB2	2
ZD101	E451-010	Chip Zener Diode RD5.6MB2	1
ZD2	E404-040	Zener Diode RD4.3EB1	1
TR8	E396-030	Chip Transistor 2SA812	1
TR4	E395-310	Chip Transistor UN2111	1
TR1.2	E395-020	Chip Transistor 2SC1623	2
TR3.5.7	E395-300	Chip Transistor UN221F	3
TR101	E359-140	Transistor 2SC3890/2SC4161/2SC4130	1
TR102	E359-150	Transistor 2SC3668-Y/2SD1835-S	1
TR6.10	E379-040	Transistor 2SD1785	2
TA1	E390-240	Transistor Array STA471A	1
R101	E600-010	Thermistor M8R207C(8D-9)	1
TR9	E392-010	FET MTAJ10P10	1
IC7	E210-050	Interface IC MAX202CSE	1
IC8	E202-930	Reset IC S-805HNM-CQ-T	1
IC9	E202-830	Motor Drive IC TA8428K	1
IC4	E104-530	PS-RAM HM65256BFP-10T	1
IC5	E104-59*	EP-ROM M27C1001-80F1	1

PART LIST for Main PCB Assembly

CBM-253-RF-120V (SERIAL)

2/3

Location No.	Parts No.	Description	Qty
PI-101	E391-130	Photo Coupler PS2501-1(MA)	1
C105	E2230-120	El.Capacitor SMH200VNSN300M22B	1
C108.109	E2230-130	El.Capacitor SMG50VB-2R2M	2
C112	E2230-140	El.Capacitor SMG50VB-1M	1
C114.115	E2230-150	El.Capacitor SMG35VB-4700M	2
C116	E2230-160	El.Capacitor SMG16VB-2200M	1
C117	E2230-170	El.Capacitor SMG16VB-100M	1
C15	E2230-090	El.Capacitor 50TWSS10	1
C17	E2230-110	El.Capacitor 50MR47	1
C16	E2230-100	El.Capacitor 10MR100	1
C113.121	E2220-150	C.Capacitor DE7090B102MVA-1KC	2
C107	E2220-140	C.Capacitor ECKDD3D221KBP (DE0807BN221K-2K)	1
C103.104	E2220-130	C.Capacitor DE7111F222MVA-1KC (ECKDRS222ME)	2
C102	E2240-040	F. Capacitor PA473-L (ECQU2A473M) (CFKC22E473M)	1
C101	E2240-030	F. Capacitor PA224-L (ECQU2A224MV) (CFKC22E224M)	1
C106	E2410-050	F. Capacitor ECQM4103KE	1
C4.12.13.18.19	E2600-050	Chip C.Capacitor GRM40F103Z50-PB	5
C2.3~5.10.20~24	E2600-040	Chip C.Capacitor GRM40F104Z50-PB	13
C14	E2600-070	Chip C.Capacitor GRM40SL101J50-PB	1
C11	E2600-060	Chip C.Capacitor GRM40SL102J50-PB	1
C111.118	E2600-110	Chip C.Capacitor GRM40B223K50PT	2
C110	E2600-100	Chip C.Capacitor GRM42-6B104K50PT	1
R111	E3911-020	Resistor RDMF14TB152J	1
R110	E3911-010	Resistor RDMF14TB222J	1
R108	E3910-030	Metal Film Resistor ERX2SJR75P	1
R107.112	E3910-020	Metal Film Resistor RSMF2BL470J (ERG2SJ470P)	2
R117	E3910-040	Metal Film Resistor RSMF2BL102J (ERG2GS102P)	1
R106	E3910-010	Metal Film Resistor RSMF2BL473J (ERG2SJ473P)	1
R19.20.39~41	E3900-210	Chip Resistor CRG10GGSJ202T	5
R10.11.15	E3900-160	Chip Resistor CRG10GSJ101T	3
R23	E3900-200	Chip Resistor CRG10GSJ181T	1
R8.9	E3900-150	Chip Resistor CRG10GSJ241T	2
R3.4	E3900-120	Chip Resistor CRG10GSJ303T	2
R6.7.21.22.24.25.	E3900-140	Chip Resistor CRG10GSJ473T	14
27.32~38	E3900-190	Chip Resistor CRG10GSJ621T	1
R14	E3900-180	Chip Resistor RGC201F 680ohmB	1
R13	E3900-280	Chip Resistor CRG8SGJ121T	1
R114	E3900-310	Chip Resistor CRG8GSJ221T	1
R118	E3900-320	Chip Resistor CRG8GSJ511T	3
R119.125.126	E3900-250	Chip Resistor CRG8SGJ564T	2
R102.103			

PART LIST for Main PCB Assembly

CBM-253-RF-120V (SERIAL)

3/3

Location No.	Parts No.	Description		Qty
R120	E3900-330	Chip Resistor	CRG10GSJ102T	1
R115	E3900-290	Chip Resistor	CRG10GSJ152T	1
R123	E3900-360	Chip Resistor	CRG10GSJ182T	1
R116	E3900-300	Chip Resistor	CRG10GSJ222T	1
R122	E3900-350	Chip Resistor	CRG10GSJ182T	1
R113	E3900-270	Chip Resistor	CRG10GSJ103T	1
R121	E3900-340	Chip Resistor	CRG10GSJ823T	1
R104.105	E3900-260	Chip Resistor	CRG8GSJ124T	2
R1	E3900-110	Chip Resistor	CRG10GSJ390T	1
R12.16~18.28~30	E3900-170	Chip Resistor	CRG10GSJ332T	7
R5.26.31	E3900-130	Chip Resistor	CRG10GSJ103J	3
VR101	E3000-030	Variable Resistor	RH0615CS3J01A	1
VR102	E3000-040	Variable Resistor	RH0615C13J01A	1
RA1	E3500-120	Resistor Array	RGLD4Y102J	1
RA3.4	E3500-140	Resistor Array	RGLD8X473J	2
RA2.5	E3500-130	Resistor Array	RGLD6X473J	2
T101	E4001-955	Transformer	CT8921	1
L102	E4009-400	Coil	DR-0.7-7	1
L101	E4009-450	Noise Filter	LF-4D-123	1
X1	E501-350	X'tal	FAR-C4S-16000-M02	1
3	90101000	Screw	SMP3X8	1
4	90400160	Nut	SS-3-2	1

PART LIST for Main PCB Assembly

CBM-253-PF-120V (PARALLEL)

1/3

Location No.	Parts No.	Description	Qty
1		Main PC Board	1
F101-1	E4006-260	Fuse Holder R10000-1	2
F1	E4005-780	Fuse CCP2E30	1
F101	E4005-785	Fuse 51S030H	1
5	E4010-460	Heat Sink	1
CN1	E48000685	Modular Jack 285D-3660J-100	1
CN2	E4800-950	Connector 5267-03AX	1
CN4	E4800-945	Connector 5267-04AX	1
CN3	E4800-940	Connector 5267-02AX	1
CN6	E48000655	Connector B6B-XH-A	1
CN5	E48000525	Connector B4B-XH-A	1
CN7	E48000660	Connector B12B-XH-A	1
CN8	E48000665	Connector FCN-794P026-L/0	1
CN9	E48000675	Interface Connector 57LE-40360-730B(D3)	1
CN101	E4014-280	Terminal GSK801-/2-aDS	1
SW101	E4003-520	Power Switch SF-W1P1A-03BB	1
S1	E5103-400	DIP Switch SCS-08A	1
IC5		IC Socket DILB32P-8J	1
IC1	E104-570	CPU HD6413002TF16	1
IC3	E104-530	Gate Array CBM202LA-00	1
IC101	E390-250	Regulator uPC1093T	1
IC6	E210-040	HC-MOS (FLAT) MC74HC14AF(Flat)	1
D101~104	E400-380	Diode ERA15-06 (MPG06J)	4
D105	E400-390	Diode 1GU42 (RMPG06G)	1
D106	E400-430	Diode RMPG06D	1
D109	E400-140	Diode EGP50D	1
D110	E400-420	Diode SB340	1
D107.108	E490-010	Chip Diode MA152WK	2
D4	E400-370	Diode GP10-4003E	1
D1.2.3	E400-570	Diode 1SS118	3
ZD102	E427-030	Zener Diode RD27FB2	1
ZD103.104	E406-060	Zener Diode RD6.8EB2	2
ZD101	E451-010	Chip Zener Diode RD5.6MB2	1
ZD2	E404-040	Zener Diode RD4.3EB1	1
TR8	E396-030	Chip Transistor 2SA812	1
TR4	E395-310	Chip Transistor UN2111	1
TR1.2	E395-020	Chip Transistor 2SC1623	2
TR3.5.7,11	E395-300	Chip Transistor UN221F	4
TR101	E359-140	Transistor 2SC3890/2SC4161/2SC4130	1
TR102	E359-150	Transistor 2SC3668-Y/2SD1835-S	1
TR6.10	E379-040	Transistor 2SD1785	2
TA1	E390-240	Transistor Array STA471A	1
R101	E600-010	Thermistor M8R207C(8D-9)	1
TR9	E392-010	FET MTAJ10P10	1
IC7	E210-060	TTL SN74LS07NS(Flat)	1
IC8	E202-930	Reset IC S-805HNM-CQ-T	1
IC9	E202-830	Motor Drive IC TA8428K	1
IC4	E104-530	PS-RAM HM65256BFP-10T	1
IC5	E104-59*	EP-ROM M27C1001-80F1	1

PART LIST for Main PCB Assembly

CBM-253-PF-120V (PARALLEL)

2/3

Location No.	Parts No.	Description	Qty
PI-101	E391-130	Photo Coupler PS2501-1(MA)	1
C105	E2230-120	El.Capacitor SMH200VNSN300M22B	1
C108.109	E2230-130	El.Capacitor SMG50VB-2R2M	2
C112	E2230-140	El.Capacitor SMG50VB-1M	1
C114.115	E2230-150	El.Capacitor SMG35VB-4700M	2
C116	E2230-160	El.Capacitor SMG16VB-2200M	1
C117	E2230-170	El.Capacitor SMG16VB-100M	1
C15	E2230-090	El.Capacitor 50TWSS10	1
C17	E2230-110	El.Capacitor 50MR47	1
C16	E2230-100	El.Capacitor 10MR100	1
C113.121	E2220-150	C.Capacitor DE7090B102MVA-1KC	2
C107	E2220-140	C.Capacitor ECKDD3D221KBP (DE0807BN221K-2K)	1
C103.104	E2220-130	C.Capacitor DE7111F222MVA-1KC (ECKDRS222ME)	2
C102	E2240-040	F. Capacitor PA473-L (ECQU2A473M) (CFKC22E473M)	1
C101	E2240-030	F. Capacitor PA224-L (ECQU2A224MV) (CFKC22E224M)	1
C106	E2410-050	F. Capacitor ECQM4103KE	1
C4.12.13.18.19	E2600-050	Chip C.Capacitor GRM40F103Z50-PB	5
C20	E2600-080	Chip C.Capacitor GRM40B222K50-PB	1
C21	E2600-090	Chip C.Capacitor GRM40B471K50-PB	1
C2.3.5-10	E2600-040	Chip C.Capacitor GRM40F104Z50-PB	8
C14	E2600-070	Chip C.Capacitor GRM40SL101J50-PB	1
C11	E2600-060	Chip C.Capacitor GRM40SL102J50-PB	1
C111.118	E2600-110	Chip C.Capacitor GRM40B223K50PT	2
C110	E2600-100	Chip C.Capacitor GRM42-6B104K50PT	1
R111	E3911-020	Resistor RDMF14TB152J	1
R110	E3911-010	Resistor RDMF14TB222J	1
R108	E3910-030	Metal Film Resistor ERX2SJR75P	1
R107.112	E3910-020	Metal Film Resistor RSMF2BL470J (ERG2SJ470P)	2
R117	E3910-040	Metal Film Resistor RSMF2BL102J (ERG2GS102P)	1
R106	E3910-010	Metal Film Resistor RSMF2BL473J (ERG2SJ473P)	1
R19.20	E3900-210	Chip Resistor CRG10GGSJ202T	2
R10.11.15.39	E3900-160	Chip Resistor CRG10GSJ101T	4
R23	E3900-200	Chip Resistor CRG10GSJ181T	1
R8.9	E3900-150	Chip Resistor CRG10GSJ241T	2
R3.4	E3900-120	Chip Resistor CRG10GSJ303T	2
R40.41	E3900-230	Chip Resistor CRG10GSJ472T	2
R6.7.21.22.24.25. 27.32~38	E3900-140	Chip Resistor CRG10GSJ473T	14
R14	E3900-190	Chip Resistor CRG10GSJ621T	1
R13	E3900-180	Chip Resistor RGC201F 680ohmB	1
R114	E3900-280	Chip Resistor CRG8SGJ121T	1

PART LIST for Main PCB Assembly

CBM-253-PF-120V (PARALLEL)

3/3

Location No.	Parts No.	Description		Qty
R118	E3900-310	Chip Resistor	CRG8GSJ221T	1
R119.125.126	E3900-320	Chip Resistor	CRG8GSJ511T	3
R102.103	E3900-250	Chip Resistor	CRG8SGJ564T	2
R120	E3900-330	Chip Resistor	CRG10GSJ102T	1
R115	E3900-290	Chip Resistor	CRG10GSJ152T	1
R123	E3900-360	Chip Resistor	CRG10GSJ182T	1
R116	E3900-300	Chip Resistor	CRG10GSJ222T	1
R122	E3900-350	Chip Resistor	CRG10GSJ182T	1
R113	E3900-270	Chip Resistor	CRG10GSJ103T	1
R121	E3900-340	Chip Resistor	CRG10GSJ823T	1
R104.105	E3900-260	Chip Resistor	CRG8GSJ124T	2
R1	E3900-110	Chip Resistor	CRG10GSJ390T	1
R12.16~18.28~30	E3900-170	Chip Resistor	CRG10GSJ332T	8
R5.26.31	E3900-130	Chip Resistor	CRG10GSJ103J	3
VR101	E3000-030	Variable Resistor	RH0615CS3J01A	1
VR102	E3000-040	Variable Resistor	RH0615C13J01A	1
RA7	E3500-160	Resistor Array	MARD08E 100ohmJ	1
RA1	E3500-120	Resistor Array	RGLD4Y102J	1
RA3.4	E3500-140	Resistor Array	RGLD8X473J	2
RA2.5	E3500-130	Resistor Array	RGLD6X473J	2
RA6	E3500-150	Resistor Array	RGLD8X332J	1
RA8	E3500-170	Resistor Array	RGLD6X332J	1
T101	E4001-955	Transformer	CT8921	1
L102	E4009-400	Coil	DR-0.7-7	1
FB1	E4009-410	Ferrite Beads	BLM32A06 PB	1
L101	E4009-450	Noise Filter	LF-4D-123	1
X1	E501-350	X'tal	FAR-C4S-16000-M02	1

PART LIST for Main PCB Assembly

CBM-253-RF-230V (SERIAL)

1/3

Location No.	Parts No.	Description	Qty
1		Main PC Board	1
F101-1	E4006-260	Fuse Holder R10000-1	2
F1	E4005-780	Fuse CCP2E30	1
F101	E4005-785	Fuse 51S030H	1
5	E4010-460	Heat Sink	1
CN1	E48000685	Modular Jack 285D-3660J-100	1
CN2	E4800-950	Connector 5267-03AX	1
CN4	E4800-945	Connector 5267-04AX	1
CN3	E4800-940	Connector 5267-02AX	1
CN6	E48000655	Connector B6B-XH-A	1
CN5	E48000525	Connector B4B-XH-A	1
CN7	E48000660	Connector B12B-XH-A	1
CN8	E48000665	Connector FCN-794P026-L/0	1
CN9	E48000670	Interface Connector FCN-675J025-L/#Q0	1
CN101	E4014-280	Terminal GSK801-/2-aDS	1
SW101	E4003-520	Power Switch SF-W1P1A-03BB	1
S1.2	E5103-400	DIP Switch SCS-08A	2
IC5		IC Socket DILB32P-8J	1
IC1	E104-570	CPU HD6413002TF16	1
IC3	E104-530	Gate Array CBM202LA-00	1
IC101	E390-250	Regulator uPC1093T	1
IC6	E210-040	HC-MOS (FLAT) MC74HC14AF(Flat)	1
D101~104	E400-380	Diode ERA15-06 (MPG06J)	4
D105	E400-390	Diode 1GU42 (RMPG06G)	1
D106	E400-430	Diode RMPG06D	1
D109	E400-140	Diode EGP50D	1
D110	E400-420	Diode SB340	1
D107.108	E490-010	Chip Diode MA152WK	2
D4	E400-370	Diode GP10-4003E	1
D1.2.3	E400-570	Diode 1SS118	3
ZD102	E427-030	Zener Diode RD27FB2	1
ZD103.104	E406-060	Zener Diode RD6.8EB2	2
ZD101	E451-010	Chip Zener Diode RD5.6MB2	1
ZD2	E404-040	Zener Diode RD4.3EB1	1
TR8	E396-030	Chip Transistor 2SA812	1
TR4	E395-310	Chip Transistor UN2111	1
TR1.2	E395-020	Chip Transistor 2SC1623	2
TR3.5.7	E395-300	Chip Transistor UN221F	3
TR101	E359-140	Transistor 2SC3890/2SC4161/2SC4130	1
TR102	E359-150	Transistor 2SC3668-Y/2SD1835-S	1
TR6.10	E379-040	Transistor 2SD1785	2
TA1	E390-240	Transistor Array STA471A	1
R101	E600-010	Thermistor M8R207C(8D-9)	1
TR9	E392-010	FET MTAJ10P10	1
IC7	E210-050	Interface IC MAX202CSE	1
IC8	E202-930	Reset IC S-805HNM-CQ-T	1
IC9	E202-830	Motor Drive IC TA8428K	1
IC4	E104-530	PS-RAM HM65256BFP-10T	1
IC5	E104-59*	EP-ROM M27C1001-80F1	1

PART LIST for Main PCB Assembly

CBM-253-RF-230V (SERIAL)

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Location No.	Parts No.	Description	Qty
PI-101	E391-130	Photo Coupler PS2501-1(MA)	1
C105	E2230-120	El.Capacitor SMH200VNSN300M22B	1
C108.109	E2230-130	El.Capacitor SMG50VB-2R2M	2
C112	E2230-140	El.Capacitor SMG50VB-1M	1
C114.115	E2230-150	El.Capacitor SMG35VB-4700M	2
C116	E2230-160	El.Capacitor SMG16VB-2200M	1
C117	E2230-170	El.Capacitor SMG16VB-100M	1
C15	E2230-090	El.Capacitor 50TWSS10	1
C17	E2230-110	El.Capacitor 50MR47	1
C16	E2230-100	El.Capacitor 10MR100	1
C113.121	E2220-150	C.Capacitor DE7090B102MVA-1KC	2
C107	E2220-140	C.Capacitor ECKDD3D221KBP (DE0807BN221K-2K)	1
C103.104	E2220-130	C.Capacitor DE7111F222MVA-1KC (ECKDRS222ME)	2
C102	E2240-040	F. Capacitor PA473-L (ECQU2A473M) (CFKC22E473M)	1
C101	E2240-030	F. Capacitor PA224-L (ECQU2A224MV) (CFKC22E224M)	1
C106	E2410-050	F. Capacitor ECQM4103KE	1
C4.12.13.18.19	E2600-050	Chip C.Capacitor GRM40F103Z50-PB	5
C2.3~5.10.20~24	E2600-040	Chip C.Capacitor GRM40F104Z50-PB	13
C14	E2600-070	Chip C.Capacitor GRM40SL101J50-PB	1
C11	E2600-060	Chip C.Capacitor GRM40SL102J50-PB	1
C111.118	E2600-110	Chip C.Capacitor GRM40B223K50PT	2
C110	E2600-100	Chip C.Capacitor GRM42-6B104K50PT	1
CA1		Capacitor Array CGSD 6X102M	1
R111	E3911-020	Resistor RDMF14TB152J	1
R110	E3911-010	Resistor RDMF14TB222J	1
R108	E3910-030	Metal Film Resistor ERX2SJR75P	1
R107	E3910-020	Metal Film Resistor RSMF2BL470J (ERG2SJ470P)	2
R112	E3910-070	Metal Film Resistor RSMF2B560J	1
R117	E3910-040	Metal Film Resistor RSMF2BL102J (ERG2GS102P)	1
R106	E3910-010	Metal Film Resistor RSMF2BL473J (ERG2SJ473P)	1
R19.20.39~41	E3900-210	Chip Resistor CRG10GGSJ202T	5
R10.11.15	E3900-160	Chip Resistor CRG10GSJ101T	3
R23	E3900-200	Chip Resistor CRG10GSJ181T	1
R8.9	E3900-150	Chip Resistor CRG10GSJ241T	2
R3.4	E3900-120	Chip Resistor CRG10GSJ303T	2
R6.7.21.22.24.25.	E3900-140	Chip Resistor CRG10GSJ473T	14
27.32~38	E3900-190	Chip Resistor CRG10GSJ621T	1
R14	E3900-180	Chip Resistor RGC201F 680ohmB	1
R13	E3900-280	Chip Resistor CRG8SGJ121T	1
R114	E3900-310	Chip Resistor CRG8GSJ221T	1
R118			

PART LIST for Main PCB Assembly

CBM-253-RF-230V (SERIAL)

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Location No.	Parts No.	Description		Qty
R119.125.126	E3900-320	Chip Resistor	CRG8GSJ511T	3
R104.105	E3900-370	Chip Resistor	CRG8SGJ224T	2
R102.103	E3900-250	Chip Resistor	CRG8SGJ564T	2
R120	E3900-330	Chip Resistor	CRG10GSJ102T	1
R115	E3900-290	Chip Resistor	CRG10GSJ152T	1
R123	E3900-360	Chip Resistor	CRG10GSJ182T	1
R116	E3900-300	Chip Resistor	CRG10GSJ222T	1
R122	E3900-350	Chip Resistor	CRG10GSJ182T	1
R113	E3900-270	Chip Resistor	CRG10GSJ103T	1
R121	E3900-340	Chip Resistor	CRG10GSJ823T	1
R1	E3900-110	Chip Resistor	CRG10GSJ390T	1
R12.16~18.28~30	E3900-170	Chip Resistor	CRG10GSJ332T	7
R5.26.31	E3900-130	Chip Resistor	CRG10GSJ103J	3
VR101	E3000-030	Variable Resistor	RH0615CS3J01A	1
VR102	E3000-040	Variable Resistor	RH0615C13J01A	1
RA1	E3500-120	Resistor Array	RGLD4Y102J	1
RA3.4	E3500-140	Resistor Array	RGLD8X473J	2
RA2.5	E3500-130	Resistor Array	RGLD6X473J	2
T101	E4001-955	Transformer	CT8921	1
L102	E4009-400	Coil	DR-0.7-7	1
L101	E4009-450	Noise Filter	LF-4D-123	1
X1	E501-350	X'tal	FAR-C4S-16000-M02	1
3	90101000	Screw	SMP3X8	1
4	90400160	Nut	SS-3-2	1

PART LIST for Main PCB Assembly

CBM-253-PF-230V (PARALLEL)

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Location No.	Parts No.	Description	Qty
1		Main PC Board	1
F101-1	E4006-260	Fuse Holder R10000-1	2
F1	E4005-780	Fuse CCP2E30	1
F101	E4005-785	Fuse 51S030H	1
5	E4010-460	Heat Sink	1
CN1	E48000685	Modular Jack 285D-3660J-100	1
CN2	E4800-950	Connector 5267-03AX	1
CN4	E4800-945	Connector 5267-04AX	1
CN3	E4800-940	Connector 5267-02AX	1
CN6	E48000655	Connector B6B-XH-A	1
CN5	E48000525	Connector B4B-XH-A	1
CN7	E48000660	Connector B12B-XH-A	1
CN8	E48000665	Connector FCN-794P026-L/0	1
CN9	E48000675	Interface Connector 57LE-40360-730B(D3)	1
CN101	E4014-280	Terminal GSK801-/2-aDS	1
SW101	E4003-520	Power Switch SF-W1P1A-03BB	1
S1	E5103-400	DIP Switch SCS-08A	1
IC5		IC Socket DILB32P-8J	1
IC1	E104-570	CPU HD6413002TF16	1
IC3	E104-530	Gate Array CBM202LA-00	1
IC101	E390-250	Regulator uPC1093T	1
IC6	E210-040	HC-MOS (FLAT) MC74HC14AF(Flat)	1
D101~104	E400-380	Diode ERA15-06 (MPG06J)	4
D105	E400-390	Diode 1GU42 (RMPG06G)	1
D106	E400-430	Diode RMPG06D	1
D109	E400-140	Diode EGP50D	1
D110	E400-420	Diode SB340	1
D107.108	E490-010	Chip Diode MA152WK	2
D4	E400-370	Diode GP10-4003E	1
D1.2.3	E400-570	Diode 1SS118	3
ZD102	E427-030	Zener Diode RD27FB2	1
ZD103.104	E406-060	Zener Diode RD6.8EB2	2
ZD101	E451-010	Chip Zener Diode RD5.6MB2	1
ZD2	E404-040	Zener Diode RD4.3EB1	1
TR8	E396-030	Chip Transistor 2SA812	1
TR4	E395-310	Chip Transistor UN2111	1
TR1.2	E395-020	Chip Transistor 2SC1623	2
TR3.5.7,11	E395-300	Chip Transistor UN221F	4
TR101	E359-140	Transistor 2SC3890/2SC4161/2SC4130	1
TR102	E359-150	Transistor 2SC3668-Y/2SD1835-S	1
TR6.10	E379-040	Transistor 2SD1785	2
TA1	E390-240	Transistor Array STA471A	1
R101	E600-010	Thermistor M8R207C(8D-9)	1
TR9	E392-010	FET MTAJ10P10	1
IC7	E210-060	TTL SN74LS07NS(Flat)	1
IC8	E202-930	Reset IC S-805HNM-CQ-T	1
IC9	E202-830	Motor Drive IC TA8428K	1
IC4	E104-530	PS-RAM HM65256BFP-10T	1
IC5	E104-59*	EP-ROM M27C1001-80F1	1

PART LIST for Main PCB Assembly

CBM-253-PF-230V (PARALLEL)

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Location No.	Parts No.	Description	Qty
PI-101	E391-130	Photo Coupler PS2501-1(MA)	1
C105	E2230-120	El.Capacitor SMH200VNSN300M22B	1
C108.109	E2230-130	El.Capacitor SMG50VB-2R2M	2
C112	E2230-140	El.Capacitor SMG50VB-1M	1
C114.115	E2230-150	El.Capacitor SMG35VB-4700M	2
C116	E2230-160	El.Capacitor SMG16VB-2200M	1
C117	E2230-170	El.Capacitor SMG16VB-100M	1
C15	E2230-090	El.Capacitor 50TWSS10	1
C17	E2230-110	El.Capacitor 50MR47	1
C16	E2230-100	El.Capacitor 10MR100	1
C113.121	E2220-150	C.Capacitor DE7090B102MVA-1KC	2
C107	E2220-140	C.Capacitor ECKDD3D221KBP (DE0807BN221K-2K)	1
C103.104	E2220-130	C.Capacitor DE7111F222MVA-1KC (ECKDRS222ME)	2
C102	E2240-040	F. Capacitor PA473-L (ECQU2A473M) (CFKC22E473M)	1
C101	E2240-030	F. Capacitor PA224-L (ECQU2A224MV) (CFKC22E224M)	1
C106	E2410-050	F. Capacitor ECQM4103KE	1
C4.12.13.18.19	E2600-050	Chip C.Capacitor GRM40F103Z50-PB	5
C20	E2600-080	Chip C.Capacitor GRM40B222K50-PB	1
C21	E2600-090	Chip C.Capacitor GRM40B471K50-PB	1
C2.3.5-10	E2600-040	Chip C.Capacitor GRM40F104Z50-PB	8
C14	E2600-070	Chip C.Capacitor GRM40SL101J50-PB	1
C11	E2600-060	Chip C.Capacitor GRM40SL102J50-PB	1
C111.118	E2600-110	Chip C.Capacitor GRM40B223K50PT	2
C110	E2600-100	Chip C.Capacitor GRM42-6B104K50PT	1
CA1		Capacitor Array CGSD 6X102M	1
R111	E3911-020	Resistor RDMF14TB152J	1
R110	E3911-010	Resistor RDMF14TB222J	1
R108	E3910-030	Metal Film Resistor ERX2SJR75P	1
R107	E3910-020	Metal Film Resistor RSMF2BL470J (ERG2SJ470P)	1
R112	E3910-070	Metal Film Resistor RSMF2B560J	1
R117	E3910-040	Metal Film Resistor RSMF2BL102J (ERG2GS102P)	1
R106	E3910-010	Metal Film Resistor RSMF2BL473J (ERG2SJ473P)	1
R19.20	E3900-210	Chip Resistor CRG10GGSJ202T	2
R10.11.15.39	E3900-160	Chip Resistor CRG10GSJ101T	4
R23	E3900-200	Chip Resistor CRG10GSJ181T	1
R8.9	E3900-150	Chip Resistor CRG10GSJ241T	2
R3.4	E3900-120	Chip Resistor CRG10GSJ303T	2
R40.41	E3900-230	Chip Resistor CRG10GSJ472T	2
R6.7.21.22.24.25. 27.32~38	E3900-140	Chip Resistor CRG10GSJ473T	14
R14	E3900-190	Chip Resistor CRG10GSJ621T	1

PART LIST for Main PCB Assembly

CBM-253-PF-230V (PARALLEL)

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Location No.	Parts No.	Description		Qty
R13	E3900-180	Chip Resistor	RGC201F 680ohmB	1
R114	E3900-280	Chip Resistor	CRG8SGJ121T	1
R118	E3900-310	Chip Resistor	CRG8GSJ221T	1
R119.125.126	E3900-320	Chip Resistor	CRG8GSJ511T	3
R104.105	E3900-370	Chip Resistor	CRG8SGJ224T	2
R102.103	E3900-250	Chip Resistor	CRG8SGJ564T	2
R120	E3900-330	Chip Resistor	CRG10GSJ102T	1
R115	E3900-290	Chip Resistor	CRG10GSJ152T	1
R123	E3900-360	Chip Resistor	CRG10GSJ182T	1
R116	E3900-300	Chip Resistor	CRG10GSJ222T	1
R122	E3900-350	Chip Resistor	CRG10GSJ182T	1
R113	E3900-270	Chip Resistor	CRG10GSJ103T	1
R121	E3900-340	Chip Resistor	CRG10GSJ823T	1
R1	E3900-110	Chip Resistor	CRG10GSJ390T	1
R12.16~18.28~30	E3900-170	Chip Resistor	CRG10GSJ332T	8
R5.26.31	E3900-130	Chip Resistor	CRG10GSJ103J	3
VR101	E3000-030	Variable Resistor	RH0615CS3J01A	1
VR102	E3000-040	Variable Resistor	RH0615C13J01A	1
RA7	E3500-160	Resistor Array	MARD08E 100ohmJ	1
RA1	E3500-120	Resistor Array	RGLD4Y102J	1
RA3.4	E3500-140	Resistor Array	RGLD8X473J	2
RA2.5	E3500-130	Resistor Array	RGLD6X473J	2
RA6	E3500-150	Resistor Array	RGLD8X332J	1
RA8	E3500-170	Resistor Array	RGLD6X332J	1
T101	E4001-955	Transformer	CT8921	1
L102	E4009-400	Coil	DR-0.7-7	1
FB1	E4009-410	Ferrite Beads	BLM32A06 PB	1
L101	E4009-450	Noise Filter	LF-4D-123	1
X1	E501-350	X'tal	FAR-C4S-16000-M02	1