

CITIZEN

Service Manual

Model: iDP-3545/3546

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Japan CBM Corporation

Information Systems Div.

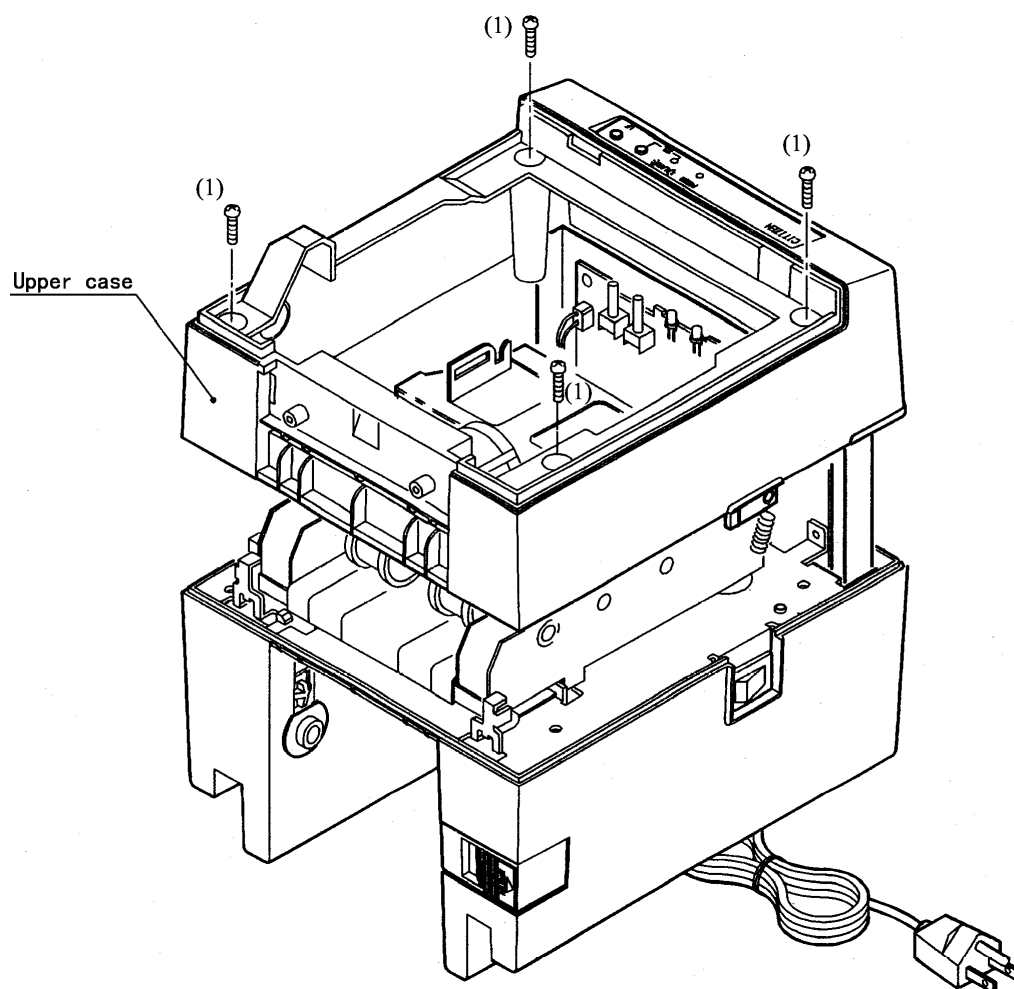
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1. Disassembly and Assembly

1. How to remove the Upper Case

- 1) Remove the Printer Cover.
- 2) Unfasten 4 screws((1) M3x12) as shown in the figure and lift the Upper Case.

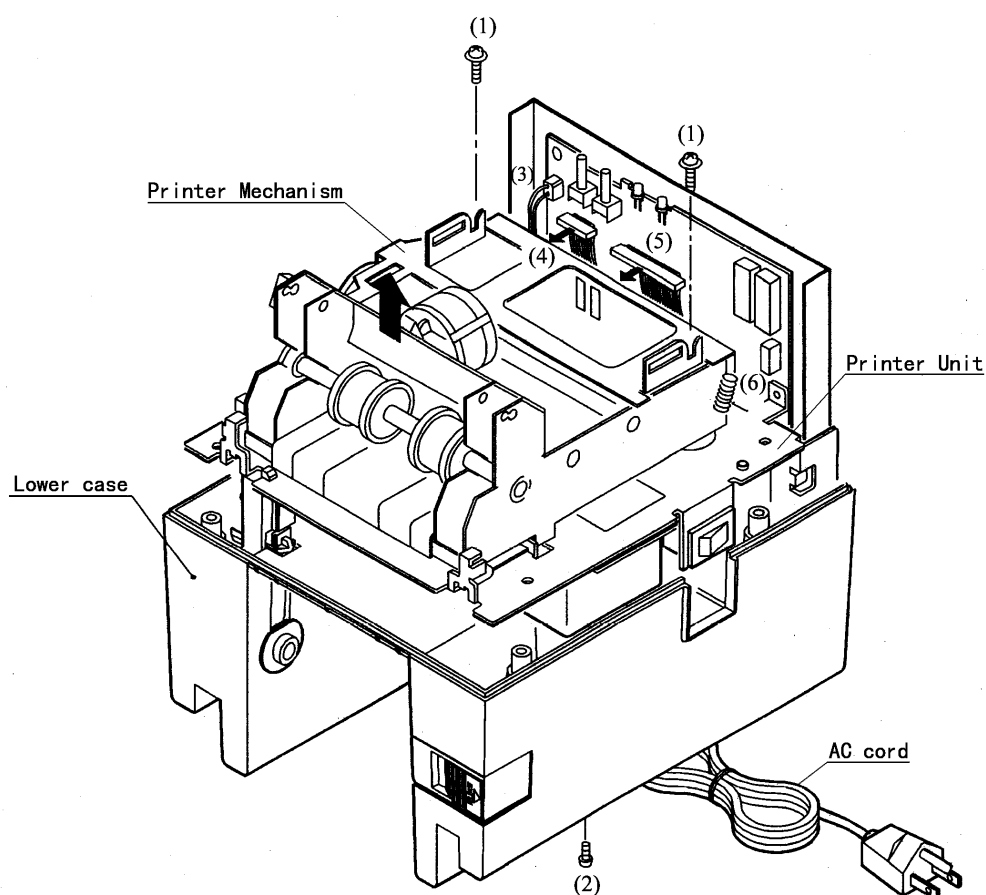


2. How to remove the Printer Unit

- 1) Remove the Upper case.
- 2) Unfasten a screw((2) M3x6) as shown in the figure.
- 3) Lift the Printer Unit in the arrow position for removal.
- 4) Remove the AC Cord form the Lower Case.

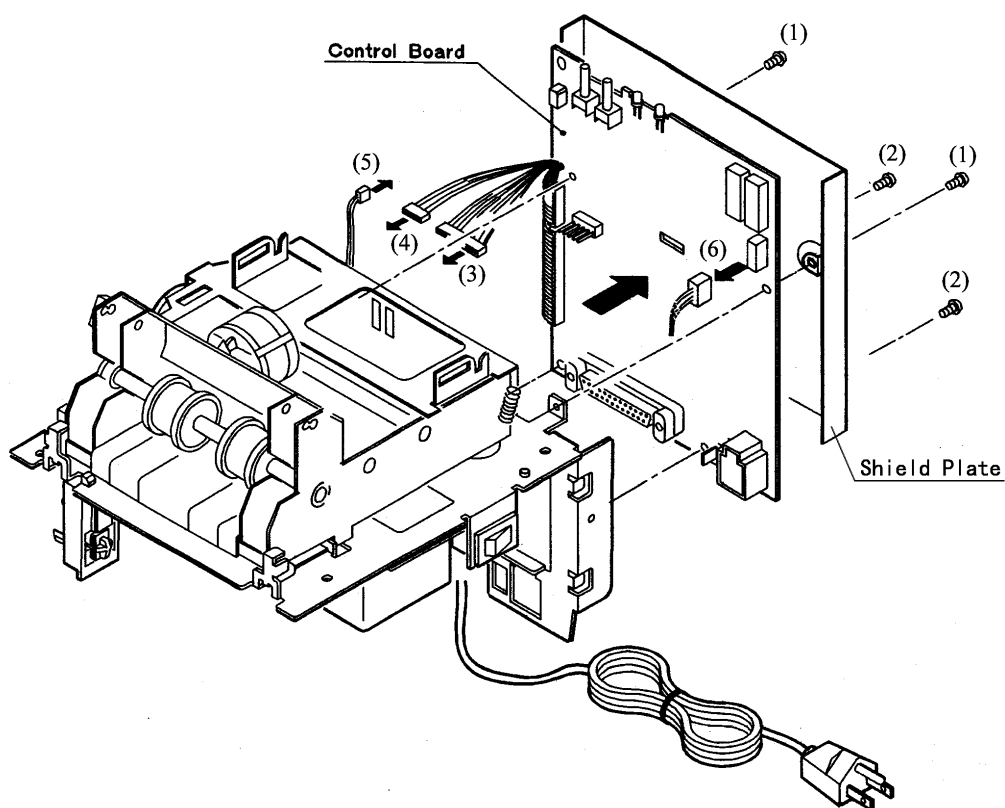
3. How to remove the Printer Mechanism

- 1) Unfasten 2 screws((1) M3x14) as shown in the figure.
- 2) Disconnect 4 connectors which are for the Control Board.((3).(4).(5).(6).)
- 3) Lift the Printer Mechanism in the arrow position for removal.



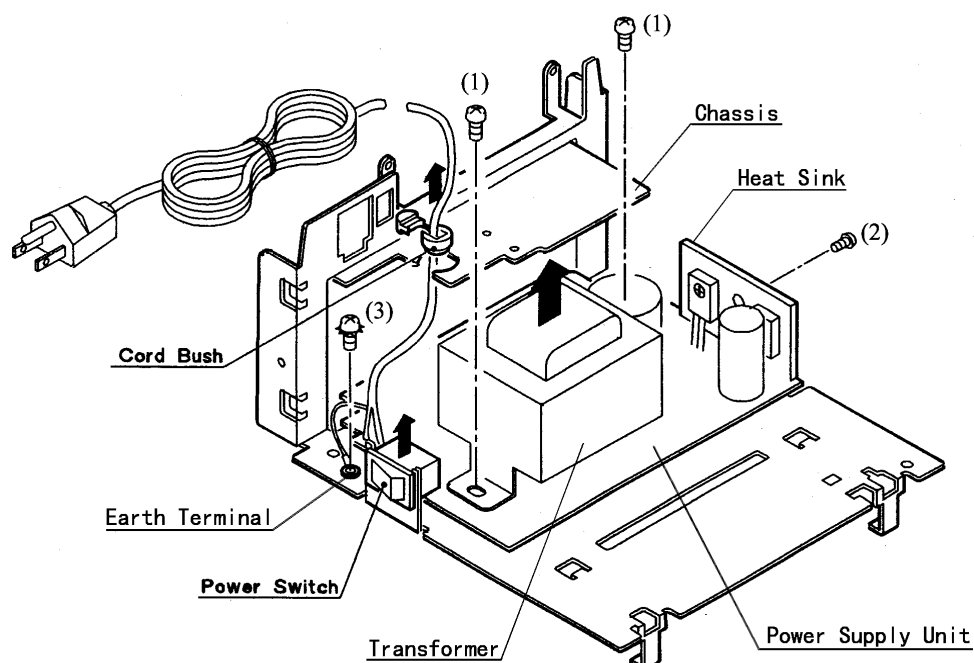
4. How to remove the Control Board

- 1) Remove the Printer Unit.
- 2) Unfasten 2 screws((2) M3x6) and remove the Shield plate.
- 3) To remove the Control Board, unfasten 2 screws(1).
- 4) Disconnect some connectors as below.
 - IDP-3545 For Printer Mechanism((3) 17pin, (4) 7pin)
 - For PE sensor((5) 2pin)
 - IDP-3546 For Printer Mechanism((3) 17pin, (4) 7pin)
 - For PE sensor((5) 2pin)
 - For Auto Cutter(AC-134) ((6) 4pin)
- 5) Pull the Control Board in the arrow position removal.



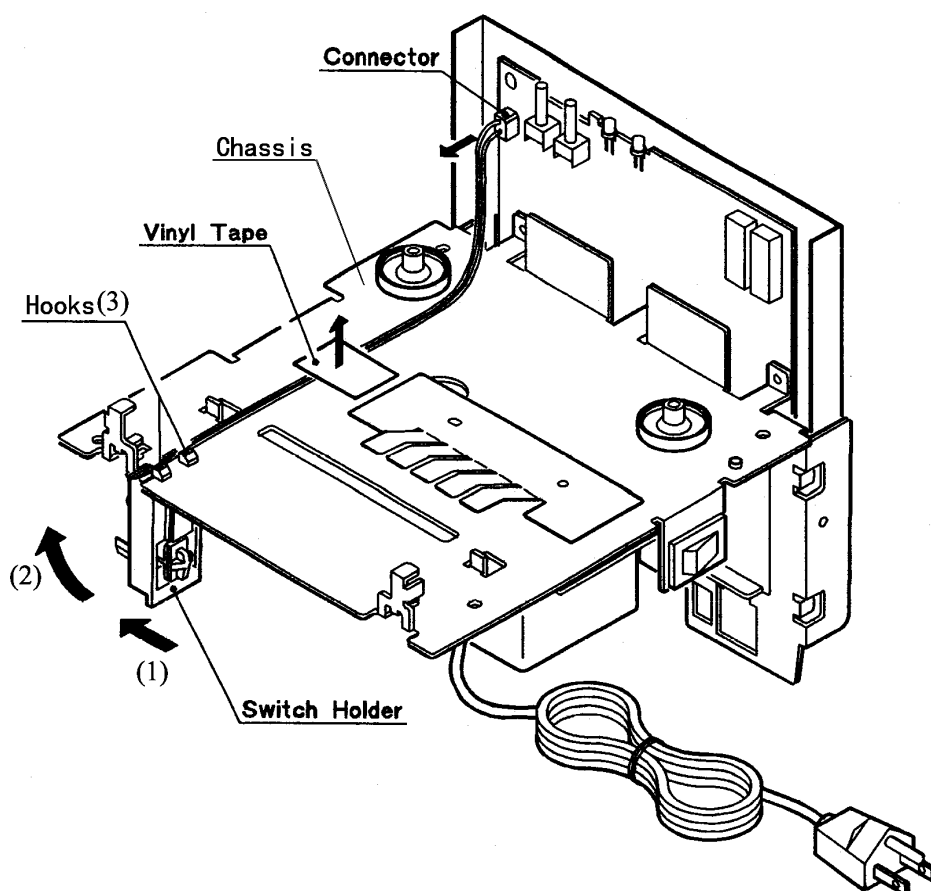
5. How to remove the Power Supply Unit

- 1) Remove the Printer Unit.
- 2) Remove the Control Board.
- 3) Remove the AC Cord(Cord bush) from the Chassis by some tool.
- 4) Unfasten 2 screws((1) M4x6) which are for Transformer mounting.
- 5) Unfasten a screw((2) M3x8) which is for Heat Sink.
- 6) Unfasten a screw((3) M4x6) which is for Earth Terminal.
- 7) Lift up the Power Switch during lifting up the Power Supply Unit above, then you can remove the Power Supply Unit.



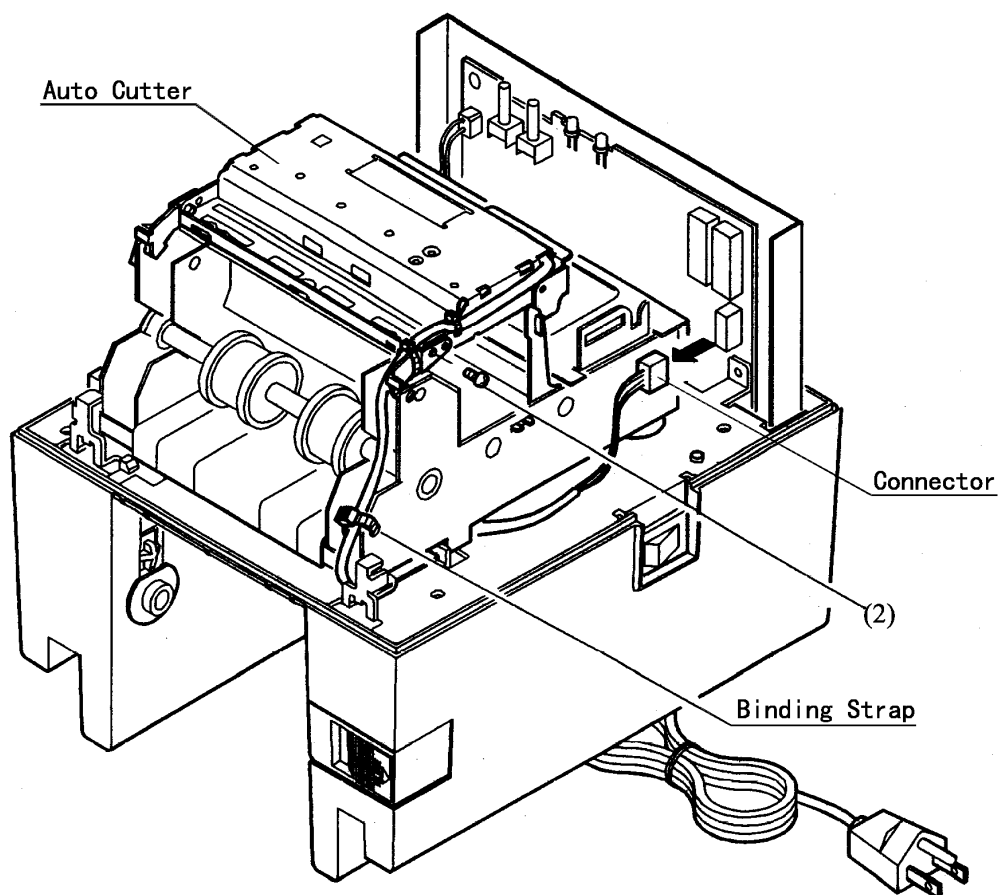
6. How to remove the PE Switch

- 1) Remove the Printer Unit.
- 2) Remove the Printer Mechanism.
- 3) Remove the PE sensor connector(2pin) from the Control Board.
- 4) Remove the Vinyl Tape.
- 5) Push the Switch Holder the arrow(1) direction to remove the Hooks(3) from the Chassis.
- 6) Rotate the Switch Holder the arrow(2) direction, then it can be removed easily.



7. How to remove the Auto Cutter(AC-134)

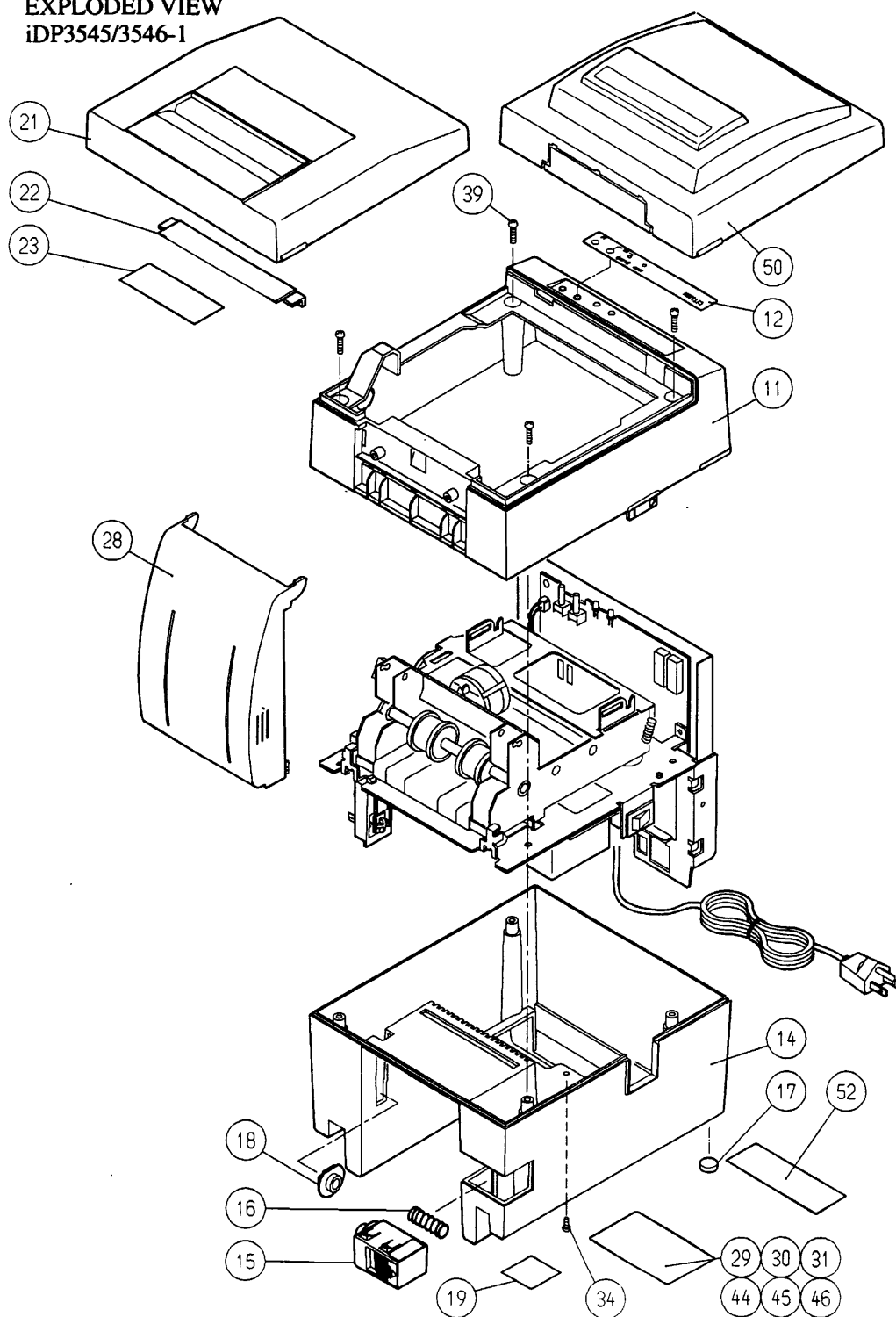
- 1) Remove the Upper Case.
- 2) Remove the Binding Strap as shown in the figure by some tools.
- 3) Disconnect the connector from the Control Board.
- 4) Unfasten a screw((2) M2.6x6) as shown in the figure.
- 5) Remove the Auto Cutter from the Printer Mechanism.

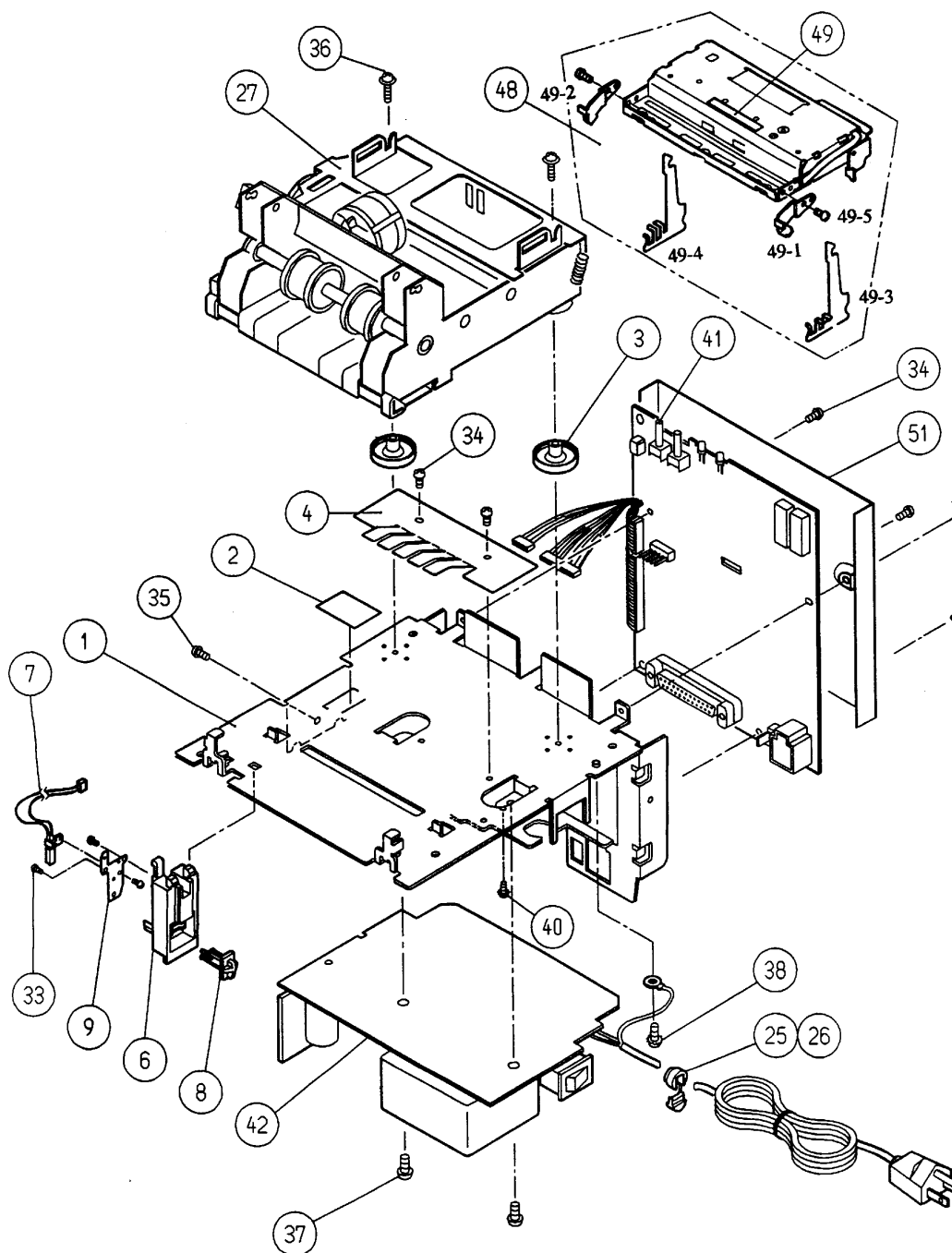


2. Parts list

PARTS LIST EXPLODED VIEW

Ref. No.	Parts No.	Description	3545	3546
11	E 62010650	Top case	1	1
12	E 5200-280	OP sheet	1	1
14	E 62020110	Bottom case	1	1
15	E 6611-470	Paper holder	1	1
16	E 6612-040	Spring, paper holder	1	1
17	E 6302-240	RB foot	2	2
18	E 6611-480	Paper hook	1	1
19		Caution paper		
21	E 62040140	Printer cover	1	
22	E 6220-220	Paper cutter	1	
23		Caution paper		
28	E 6310-010	Rear cover	1	1
29-31		Rating label		
44-46		Rating label		
50	E 62040340	Printer cover		1
1	E 4002-430	Chassis	1	1
2		Vinyl tape		
3	E 6601-220	Pinter stand	2	2
4	E 4035-690	FG plate	1	1
6	E 5117-050	Switch holder	1	1
7	E 5102-480	PE, Switch	1	1
8	E 5071-130	Switch knob	1	1
9	E 5101-390	PE spring	1	1
25	E 6101-115	Bush SR4N4 for 120V	1	1
26	E 6101-120	Bush SR5N4 for 230V	1	1
27		Printer DP6**		
33	ST2M2x4	Screw M2x4	3	3
34	ST3M3x6	Screw M3x6	7	7
35	ST2M3x8	Screw M3x8	1	1
36	ST3M3x14PW	Screw M3x14/Washer	2	2
37	ST3M4x6	Screw M4x6	2	2
38	SWT4x6	Screw M4x6/TW	1	1
39	S3x12	Screw M3x12	4	4
40	SWT3x6	Screw M3x6/TW	1	1
41		Main PCB Assy *Please refer page 17and 20.	1	1
42		PS PCB Assy *Please refer page 14.	1	1
49	AC-134	Cutter(120V)		1
	AC-134-E	Cutter for CE version(230V)		1
49-1	E 8004-050	Cutter BRT L		1
49-2	E 8004-040	Cutter BRT R		1
49-3	E 8026-050	Hook L		1
49-4	E 8026-040	Hook R		1
49-5	M3M2.6X6-S	Screw M2.6x6		2
51	E 4002-560	Shield plate	1	1

EXPLODED VIEW
iDP3545/3546-1

EXPLODED VIEW
iDP3545/3546-2

PARTS LIST

POWER SUPPLY

Ref. No.	Parts No.	Description	120V	230V
SW	E 4003-590	Power SW. T883SIBBR1-AL	1	1
FH 1,3	E 4006-240	Fuse holder 030210	2	2
F 1,3	E 4005-620	Fuse 235001	2	
F 1	E 4005-615	Fuse 218500		1
F 3	E 4005-620	Fuse 235001		1
NF	E 4009-390	Noise filter PLAA3221R0D01	1	1
IC 1	E 390-150	Regulator M5231TL	1	1
IC 2	E 390-160	Regulator uPC2405HF	1	1
TR	E 324-011	Transistor 2SB1340	1	1
DS 1	E 450-360	Diode PBP203	1	1
DS 2	E 450-370	Diode PBP153	1	1
C 1,2	E 2240-010	M. cap. FPFC-104 +/-20%	2	2
C 5	E 2230-050	El. cap. FAC-228M, 63V	1	1
C 6	E 2220-050	C. cap. FCC-101-J, 50V	1	1
C 7	E 2230-060	El. cap. FAC-105-M, 50V	1	1
C 8	E 2230-070	El. cap. FAC-477-M, 35V	1	1
C 9	E 2230-080	El. cap. FAC-338-M, 16V	1	1
C 10	E 2230-020	El. cap. FAC-107-M, 16V	1	1
C 11	E 2240-020	M. cap. FPFC-104+/-5%	1	1
R 1	E 3331-041	Re. 1/4W 330 J	1	1
R 2	E 3561-041	Re. 1/4W 560 J	1	1
R 3	E 3203-100	Re. 1/4W 20KF	1	1
R 4	E 3152-100	Re. RN-1.543F	1	1
CN	E 48000355	Conn. F5P-SHVQ	1	1
TR	E 4001-940	Trans. 25-0290		1
	E 4001-945	Trans. 25-0289	1	
ACC	E 6100-690	AC cord		1
	E 6100-675	AC cord	1	
CB	E 6101-120	Bush		1
	E 6101-115	Bush	1	
TA	E 4014-230	Tarminal GSK801		1

PCB ASSY

	Parts No.	Despriction	120V	230V
	E40000190	Power Supply PCB Assy 230V		O
	E40000200	Power Supply PCB Assy 120V	O	

PARTS LIST CONTROL BOARD ASSY

Ref. No.	Parts No.	Description	3545-PF/IF	3545-RF/TF
IC 1	E 101-990	IC CBM606PC2-4	1	1
IC 2	E 390-200	IC MTA001M(F4102)	1	1
IC 3	E 390-401	Tr. array STA401A	1	1
IC 4	E 2010570	IC HD74LS368A (SN74LS368A)	1	1
IC 5,6	E 201-611	IC HD74LS04P	2	2
IC 7	E 2010580	IC HD74LS122P) (NS74LS122N)	1	1
IC 8	E 202-670	IC M51943BSL	1	1
IC 9	E 2010590	IC HD74LS73AP	1	
IC 9	E 2010600	IC MAX236CNG (ADM236L) (HIN236CP)		1
IC 10,11	E 2010201	IC HD7406P	2	
IC 10	E 2010201	IC HD7406P		1
IC 12,102	E 201-811	IC HD74LS373P	2	
IC 101	E 202-830	IC TA8428K	1	1
IC 103	E 101007*	IC M5M28C64 (XLS28C64P-150) (28C64A-15P)	1	1
TR 1-4,101	E 359-041	Tr. 2SC945P	5	
TR 1-7,101	E 359-041	Tr. 2SC945P		8
TR 102,103	E 359-180	Tr. 2SC4671	2	2
LED 1,2	E 480-270	LED SEL2310G	2	2
ZD 1,2	E 420-070	Z. diode 2Z20	2	2
PS 1	E 391-080	Photo PC837		1
D 1-5	E 400-041	Diode 1S2076		5
R 1,2,7,8,13,17,19 22,101,102,105 106,107	E 3332-041	Re. 1/4W 3.3KJ *R17 should be not assembled for only 3545-IF.	13/12	
R 1,2,7,8,13,17,20 21,25,29,30 101,102,105,106	E 3332-041	Re. 1/4W 3.3KJ		15
R 3,20	E 3101-041	Re. 1/4W 100 J	2	
R 3,22,26	E 3101-041	Re. 1/4W 100 J		3
R 4,5	E 3331-041	Re. 1/4W 330 J	2	2

PARTS LIST CONTROL BOARD ASSY

Ref. No.	Parts No.	Description	3545-PF/IF	3545-RF/TF
R 6,11,12,15,23 24,104	E 3103-041	Re. 1/4W 10KJ	8	
R 6,11,12,15,16 31,32,104	E 3103-041	Re. 1/4W 10KJ		8
R 9,21,103	E 3472-041	Re. 1/4W 4.7KJ	3	
R 9,103	E 3472-041	Re. 1/4W 4.7KJ		2
R 10	E 3104-041	Re. 1/4W 100KJ	1	1
R 14	E 3151-010	Re. 1W 1.5 J	1	1
R 18,27	E 3221-041	Re. 1/4W 220 J		2
R 19,24,28	E 3102-041	Re. 1/4W 1KJ		3
R 23	E 3471-041	Re. 1/4W 470 J		1
RA 1	E 3500-230	Re. array AR-103*9	1	1
RA 2	E 3500-270	Re. array AR-102*4	1	1
RA 3,4	E 3500-240	Re. array AR-103*6	2	2
RA 5	E 3500-250	Re. array AR-103*3	1	1
RA 6,7	E 3500-260	Re. array AR-332*8	2	
RA 8	E 3500-280	Re. array AR-332*6	1	
C 1	E 2230-200	El. cap. FAC-476-M,35V-6.3*11	1	1
C 2	E 2230-020	EL.cap. FAC-107-M,16V-6.3*7	1	1
C 11	E 2230-190	El. cap. FAC-226-M,16V-4*7	1	1
C 13-17	E 2230-060	El. cap. FAC-105-M,50V-4*7		5
C 3,13-18	E 2220-040	C. cap. FCC-104-Z, 50V	7	
C 3,18-21	E 2220-040	C. cap. FCC-104-Z, 50V		5
C 4,5,7-10	E 2220-010	C. cap. FCC-102-K, 50V	6	6
C 6	E 2220-020	C. cap. FCC-103-M, 25V	1	
C 6,12	E 2220-020	C. cap. FCC-103-M, 25V		2
C 12,19,20	E 2220-070	C. cap. FCC-471-K, 50V	3	
C 22,23	E 2220-070	C. cap. FCC-471-K, 50V		2
C 102	E 2220-060	C. cap. FCC-222-K, 50V	1	
CA 1	E 48000275	Harness 25-0176	1	1
CA 2	E 48000290	Harness 25-0177	1	1
BZ	E 7151-140	Buzzer MEB-12C5	1	1
Bl 1-17	E 4009-500	Fe. beads BL01RN1-A62B1	17	
Bl 1-15	E 4009-500	Fe. beads BL01RN1-A62B1		15

PARTS LIST CONTROL BOARD ASSY

Ref. No.	Parts No.	Description	3545-PF/IF	3545-RF/TF
OSC 1	E 501-390	X'tal CST5.00MGW	1	1
S 1,2	E 5102-450	Key switch SKHHNH	2	2
CN 1	E 48000260	Connector B5P-SHF-1	1	1
CN 2	E 4800-690	Connector 5267-02A	1	1
CN 3	E 48000265	Connector 5045-04A	1	1
CN 4	E 48000600	Connector 57GE40360-751	1	
CN 4	E 48000280	Connector FCN-674J025-L/C		1
CN 6	E 48000565	Connector 285D-9660J-101	1	1
DS 1	E 5103-520	Dip SW. KSD-10	1	1
DS 2	E 5103-460	Dip SW. SD-08ZL		1
NLCB	E 8035-010	Cable tie	1	1
	0D000002M	Screw M3x10 for CN4	2	
	0D003501	Screw M3x6 for IC2	2	2
	02000207M	Nut M3 for IC2,CN4	4	
	02000207M	Nut M3 for IC2		2

PCB ASSY

	Parts No.	Description	3545-PF/IF	3545-RF/TF
	E70010920	iDP-3545F-40PF 230V IEB	O	
	E70010910	iDP-3545F-40RF 230V IEB		O
	E70010930	iDP-3545F-40IF 120V INB	O	
	E70010911	iDP-3545F-40TF 120V INB		O

PARTS LIST CONTROL BOARD ASSY

Ref. No.	Parts No.	Description	3546-PF/IF	3546-RF/TF
IC 1	E 101-990	IC CBM606PC2-4	1	1
IC 2	E 390-200	IC MTA001M(F4102)	1	1
IC 3	E 390-401	Tr. array STA401A	1	1
IC 4	E 2010570	IC HD74LS368A (SN74LS368A)	1	1
IC 5,6	E 201-611	IC HD74LS04P	2	2
IC 7	E 2010580	IC HD74LS122P) (NS74LS122N)	1	1
IC 8	E 202-670	IC M51943BSL	1	1
IC 9	E 2010590	IC HD74LS73AP	1	
IC 9	E 2010600	IC MAX236CNG (ADM236L) (HIN236CP)		1
IC 10,11	E 2010201	IC HD7406P	2	
IC 10	E 2010201	IC HD7406P		1
IC 12,102	E 201-811	IC HD74LS373P	2	
IC 101	E 202-830	IC TA8428K		1
IC 103	E 101007*	IC M5M28C64 (XLS28C64P-150) (28C64A-15P)	1	1
TR 1-4,101	E 359-041	Tr. 2SC945P	5	
TR 1-7,101	E 359-041	Tr. 2SC945P		8
TR 102,103	E 359-180	Tr. 2SC4671	2	2
LED 1,2	E 480-270	LED SEL2310G	2	2
ZD 1,2	E 420-070	Z. diode 2Z20	2	2
PS 1	E 391-080	Photo PC837		1
D 1-5	E 400-041	Diode 1S2076		5
R 1,2,7,8,13,17,19 22,101,102,105 106,107	E 3332-041	Re. 1/4W 3.3KJ *R17 should be not assembled for only 3546-IF	13/12	
R 1,2,7,8,13,17,20 21,25,29,30 101,102,105,106	E 3332-041	Re. 1/4W 3.3KJ		15
R 3,20	E 3101-041	Re. 1/4W 100 J	2	
R 3,22,26	E 3101-041	Re. 1/4W 100 J		3
R 4,5	E 3331-041	Re. 1/4W 330 J	2	2

PARTS LIST CONTROL BOARD ASSY

Ref. No.	Parts No.	Description	3546-PF/IF	3546-RF/TF
R 6,11,12,15,23,24	E 3103-041	Re. 1/4W 10KJ	6	
R 6,11,12,15,16 31,32,104	E 3103-041	Re. 1/4W 10KJ		8
R 9,21,103	E 3472-041	Re. 1/4W 4.7KJ	3	
R 9,103	E 3472-041	Re. 1/4W 4.7KJ		2
R 10	E 3104-041	Re. 1/4W 100KJ	1	1
R 14	E 3151-010	Re. 1W 1.5 J	1	1
R 18,27	E 3221-041	Re. 1/4W 220 J		2
R 19,24,28	E 3102-041	Re. 1/4W 1KJ		3
R 23	E 3471-041	Re. 1/4W 470 J		1
RA 1	E 3500-230	Re. array AR-103*9	1	1
RA 2	E 3500-270	Re. array AR-102*4	1	1
RA 3,4	E 3500-240	Re. array AR-103*6	2	2
RA 5	E 3500-250	Re. array AR-103*3	1	1
RA 6,7	E 3500-260	Re. array AR-332*8	2	
RA 8	E 3500-280	Re. array AR-332*6	1	
C 1	E 2230-200	El. cap. FAC-476-M,35V-6.3*11	1	1
C 2	E 2230-020	EL.cap. FAC-107-M,16V-6.3*7	1	1
C 11	E 2230-190	El. cap. FAC-226-M,16V-4*7	1	1
C 13-17	E 2230-060	El. cap. FAC-105-M,50V-4*7		5
C 3,13-18	E 2220-040	C. cap. FCC-104-Z, 50V	7	
C 3,18-21	E 2220-040	C. cap. FCC-104-Z, 50V		5
C 4,5,7-10	E 2220-010	C. cap. FCC-102-K, 50V	6	
C 6	E 2220-020	C. cap. FCC-103-M, 25V	1	
C 6,12	E 2220-020	C. cap. FCC-103-M, 25V		2
C 12,19,20	E 2220-070	C. cap. FCC-471-K, 50V	3	
C 22,23	E 2220-070	C. cap. FCC-471-K, 50V		2
C 102	E 2220-060	C. cap. FCC-222-K, 50V	1	
C 4,5,7,101	E 2220-010	C. cap. FCC-102-K, 50V		7
CA 1	E 48000275	Harness 25-0176	1	1
CA 2	E 48000290	Harness 25-0177	1	1
BZ	E 7151-140	Buzzer MEB-12C5	1	1
Bl 1-17	E 4009-500	Fe. beads BL01RN1-A62B1	17	
Bl 1-15	E 4009-500	Fe. beads BL01RN1-A62B1		15

PARTS LIST CONTROL BOARD ASSY

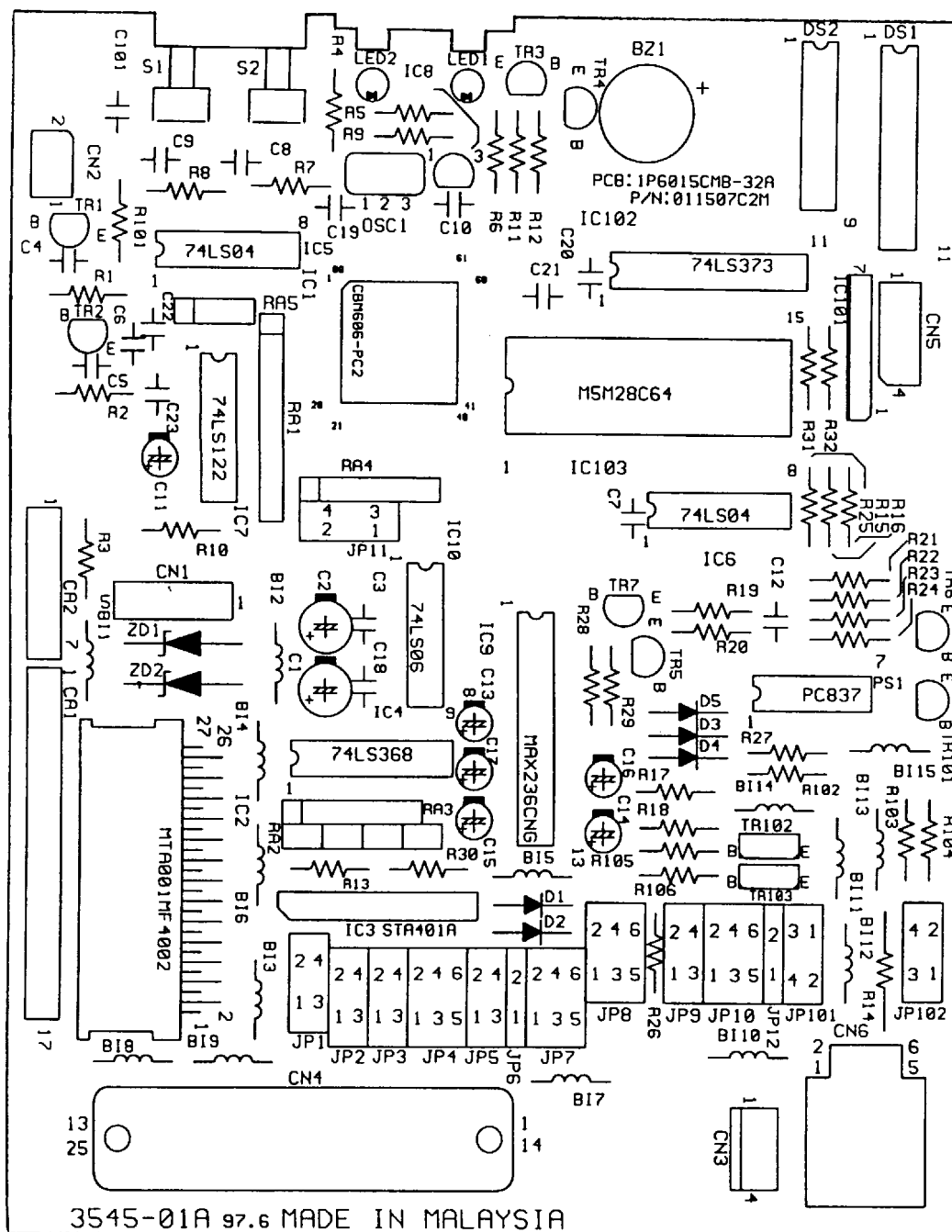
Ref. No.	Parts No.	Description	3546-PF/IF	3546-RF/TF
OSC 1	E 501-390	X'tal CST5.00MGW	1	1
S 1,2	E 5102-450	Key switch SKHHNH	2	2
CN 1	E 48000260	Connector B5P-SHF-1	1	1
CN 2	E 4800-690	Connector 5267-02A	1	1
CN 3	E 48000265	Connector 5045-04A	1	1
CN 4	E 48000600	Connector 57GE40360-751	1	
CN 4	E 48000280	Connector FCN-674J025-L/C		1
CN 5		Connector 5267-04A	1	1
CN 6	E 48000565	Connector 285D-9660J-101	1	1
DS 1	E 5103-520	Dip SW. KSD-10	1	1
DS 2	E 5103-460	Dip SW. SD-08ZL		1
NLCB	E 8035-010	Cable tie	1	1
	0D000002M	Screw M3x10 for CN4	2	
	0D003501	Screw M3x6 for IC2	2	2
	02000207M	Nut M3 for IC2,CN4	4	
	02000207M	Nut M3 for IC2		2

PCB ASSY

	Parts No.	Description	3546-PF/IF	3546-RF/TF
	E70010950	iDP-3546F-PF 230V IEB	O	
	E70010940	iDP-3546F-RF 230V IEB		O
	E70010960	iDP-3546F-IF 120V INB	O	
	E70010941	iDP-3546F-TF 120V INB		O

3. Parts Position

2) SERIAL



*Please refer the parts list regarding actual parts assembling location.

JUMPER SET1) iDP-3545/3546F-40PF/IF 120V/230V IN A/B

FOR EMULATION

	PF (CBM mode)	CF (STAR mode)	IF (ESC/POS mode)
JP1	X		
JP2	X		
JP3			X
JP4	X	X	
R17	X	X	

FOR DRAWER

	A (CBM mode)	A (STAR mode)	B (ESC/POS mode)
JP101	1-2	1-2	3-4
JP102	1-2	1-2	3-4

2) iDP-3545/3546F-40RF/TF 120V/230V IE A/B

FOR EMULATION

	RF (CBM mode)	SF (STAR mode)	TF (ESC/POS mode)
JP1		1-2	3-4
JP2	1-2	3-4	
JP3	1-2	3-4	
JP4	1-2 5-6	3-4	
JP5	1-2(RS-232C) 3-4(CURRENT)	1-2	1-2
JP6		1-2	
JP7	1-2	3-4 5-6	
JP8	5-6	1-2 3-4	
JP9	1-2	3-4	
JP10	1-2 5-6	3-4	
JP11	1-2(RS-232C) 3-4(CURRENT)	1-2(RS-232C) 3-4(CURRENT)	1-2
JP12	1-2		

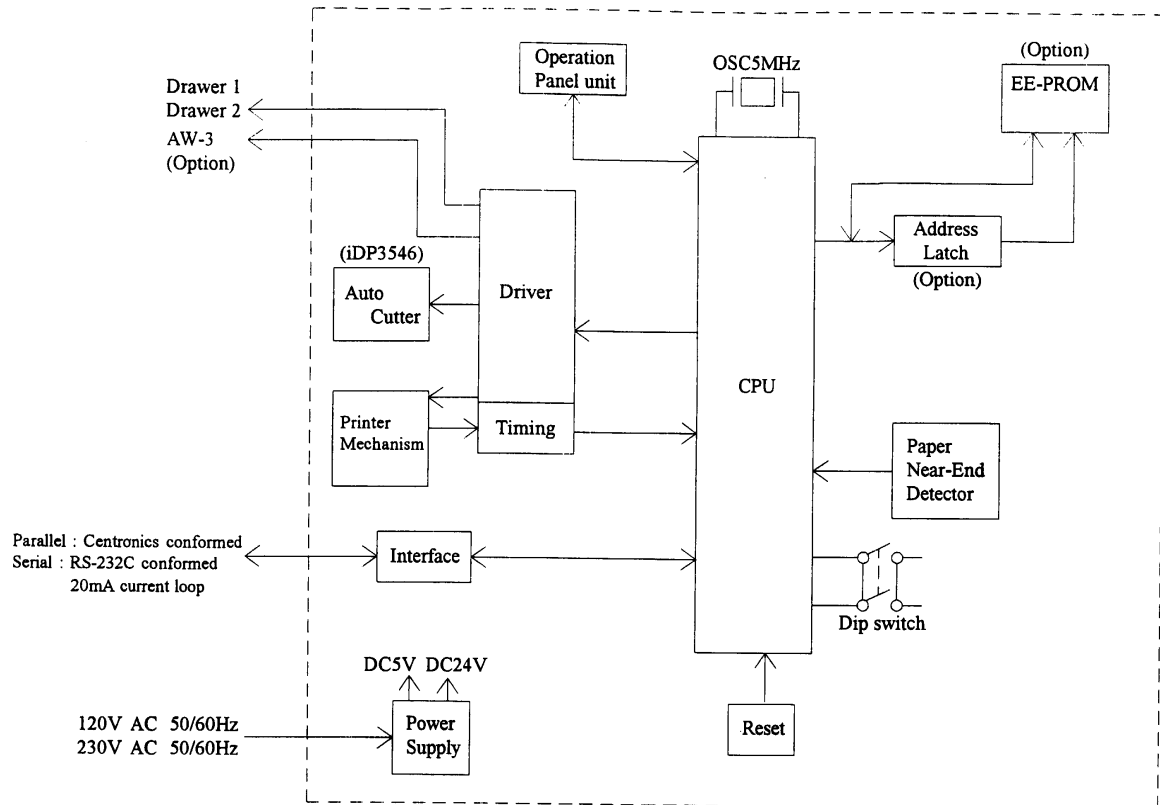
FOR DRAWER

	A (CBM mode)	A (STAR mode)	B (ESC/POS mode)
JP101	1-2	1-2	3-4
JP102	1-2	1-2	3-4

*Currently, STAR mode is just for reference.

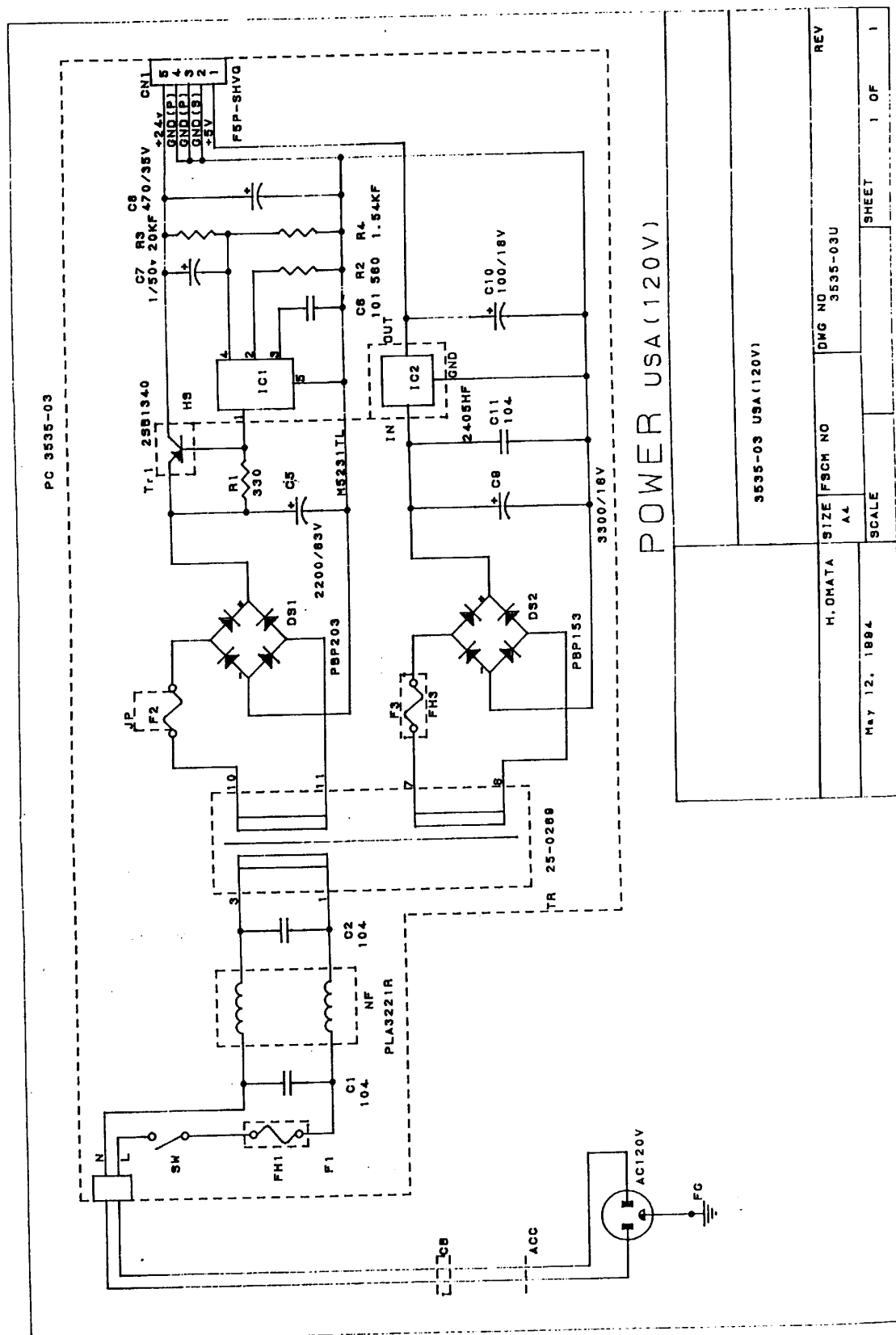
4. Circuit Diagram

BLOCK DIAGRAM



CIRCUIT DIAGRAM

POWER SUPPLY (120V)



CIRCUIT DIAGRAM
POWER SUPPLY (230V)

