



Model : SC-152G

CD-ROM service *manual*

CD-ROM DRIVE



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The design and part of this product is subject to change without prior notice for performance improvement.

● Specifications

1. General Specifications

- Drive type : Computer built-in
- Power consumption
SC-152G : DC + 5V, 1.3A
DC +12V, 1.5A
- Dimensions :
148.2mm(W)X42mm(H)X184mm(L)
- Net Weight : 740g

- Buffer Capacity : 1Mbit
- Error ratio : Mode 1: Below 10^{-12}
Mode 2: Below 10^{-9}
- Frequency response : 20Hz~20KHz (Limeout)
- Signal to noise ratio : 67dB(1KHz, Limeout)
- Distortion factor : 0.15% Less than(1KHz)
- Channel separation : 65dB(1KHz, Limeout)
- Used laser : Semiconductor laser

2. Electrical Features

- Interface : ATAPI BUS(IDE)
- Data transfer rate
SC-152G : 52X (MAX 7800KByte/Sec)
- ACCESS TIME
SC-152G : 85ms (Typical)

● Cautions at Service

1. General Items

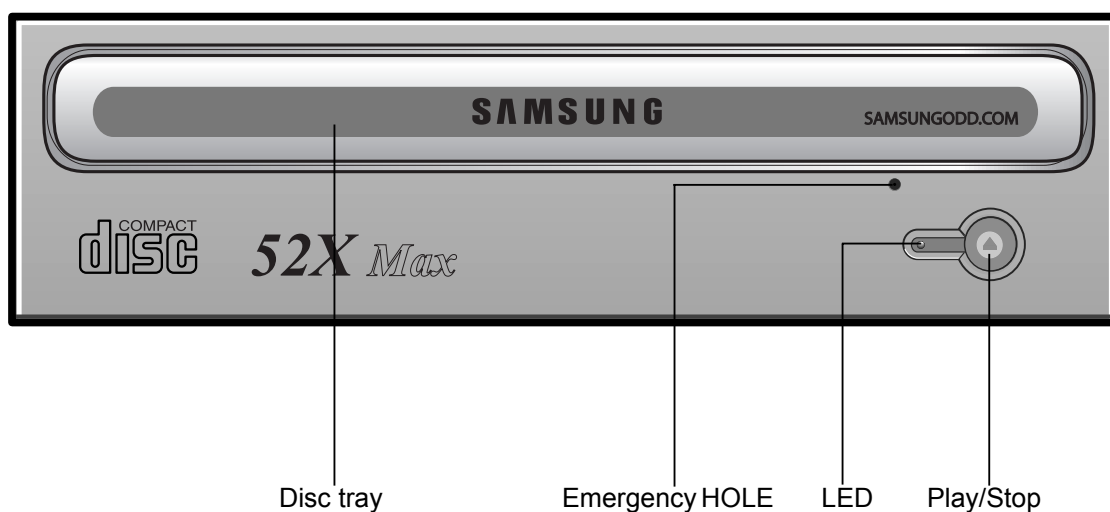
- 1) Be careful not to have your eyes or a part of body touch with laser diode at repair because this product uses laser diode.
- 2) Do not disassemble Pick-up at repair. If the laser diode is bad, replace the entire Pick-up.
- 3) Keep away from TV or other electrical units at repair to prevent influence from surrounding units.
- 4) If you replace the parts during repair, be sure to unplug the power cable before replacement.
- 5) If you insert a disc into the drive, be sure to load it correctly.
- 6) Because this unit can't be used by itself, surely mount it on PC (166 DMA support) and check the operations in use of private device driver floppy diskette. Refer to Instruction manual.
- 7) This unit has many parts with features related to safety and especially, for essential parts, the importance is indicated on circuit diagram and part list.
Be certain to use the parts with same specifications at replacing these parts.

2. Earthing cautions at handling Pick-up

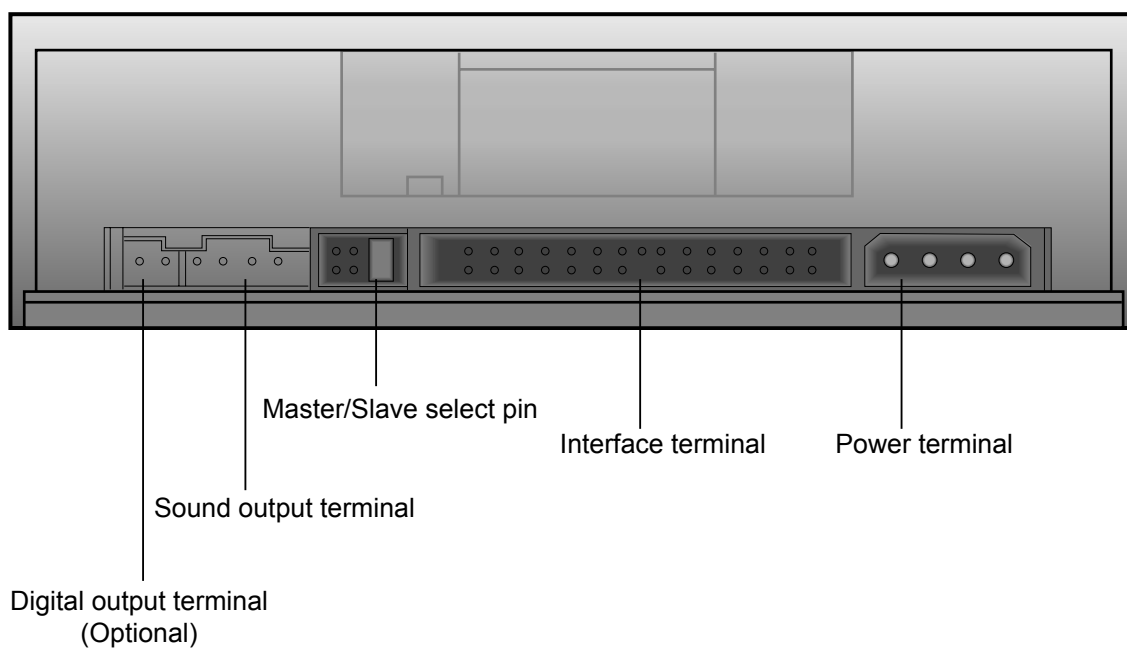
- Because the laser diode in optical Pick-up is subject to get out of order due to the potential difference occurring by electricity load charged in clothes or bodies, observe the following earthing items at handling.
- 1) Body earthing(hand) : Be sure to wear a wrist strip with one side earthed.(Impedance : Below 104). It removes the electricity formed in body.
- 2) Work table earthing : Put the earthed conductive plate(Impedance : Below 104) such as copper plate on work table.
- 3) Cautions for clothes : Do not have any clothes touch with Pick-up because the electricity formed in clothes is destroyed easily.

● External Part Name

1.Front



2.Rear



● Disassembly Method

1. COVER BOTTOM ASSY disassembly

Remove 4 screws ⑭ on the bottom of ASSY COVER BOTTOM ⑬, lift the back up and disassemble ASSY COVER BOTTOM ⑬ as shown in the figure of the next page.

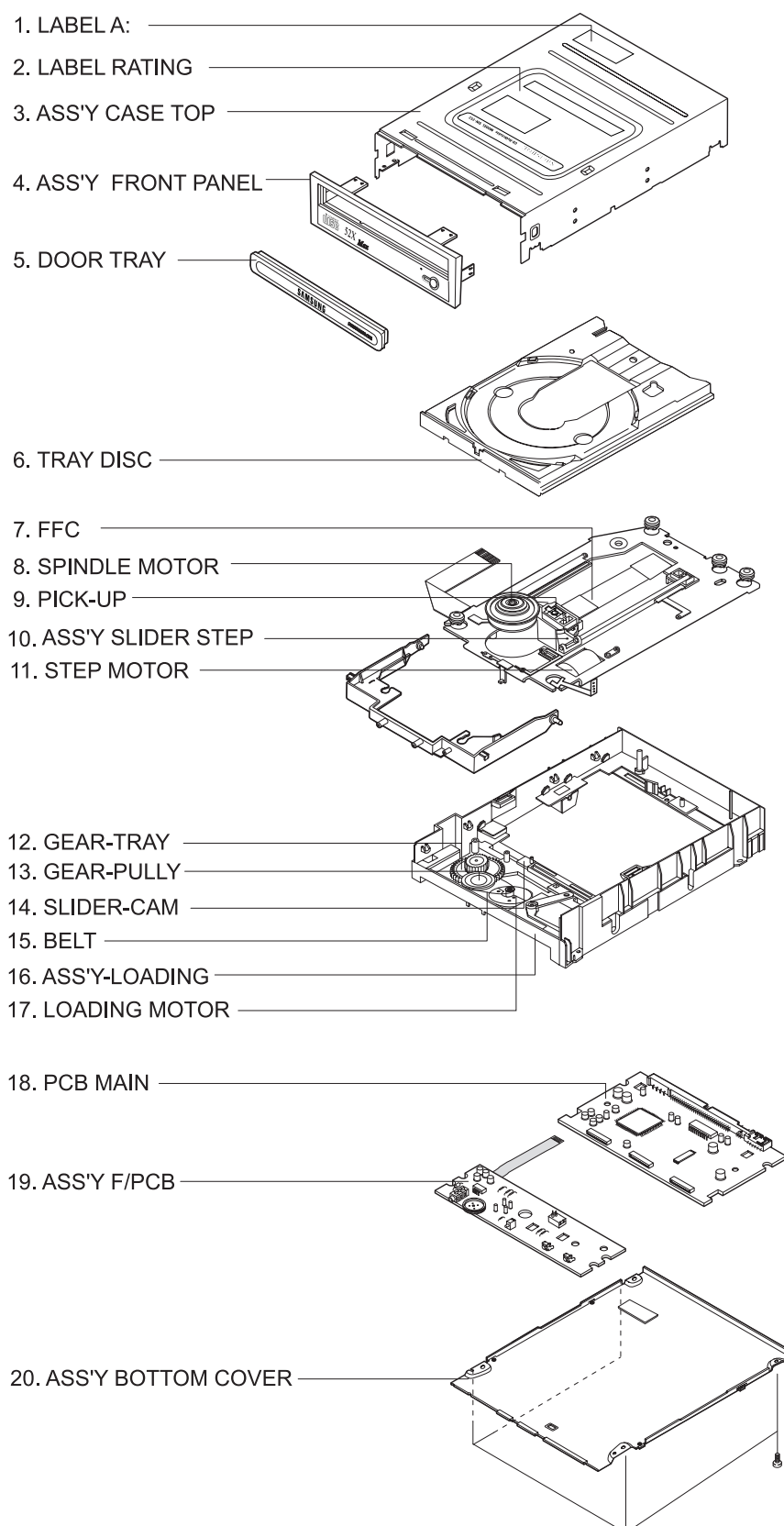
2. COVER-TOP disassembly

After disassembling 6 hooks of ASSY FRONT PANEL ② from ASSY COVER TOP ①, pull ASSY COVER TOP ①, forward and disassemble it.

3. ASSY DECK+PCB MAIN disassembly

Disassemble FFC PICK-UP and FFC MOTOR connected between assy deck and PCB main, then disassemble between deck and PCB main.

● Entire exploded view

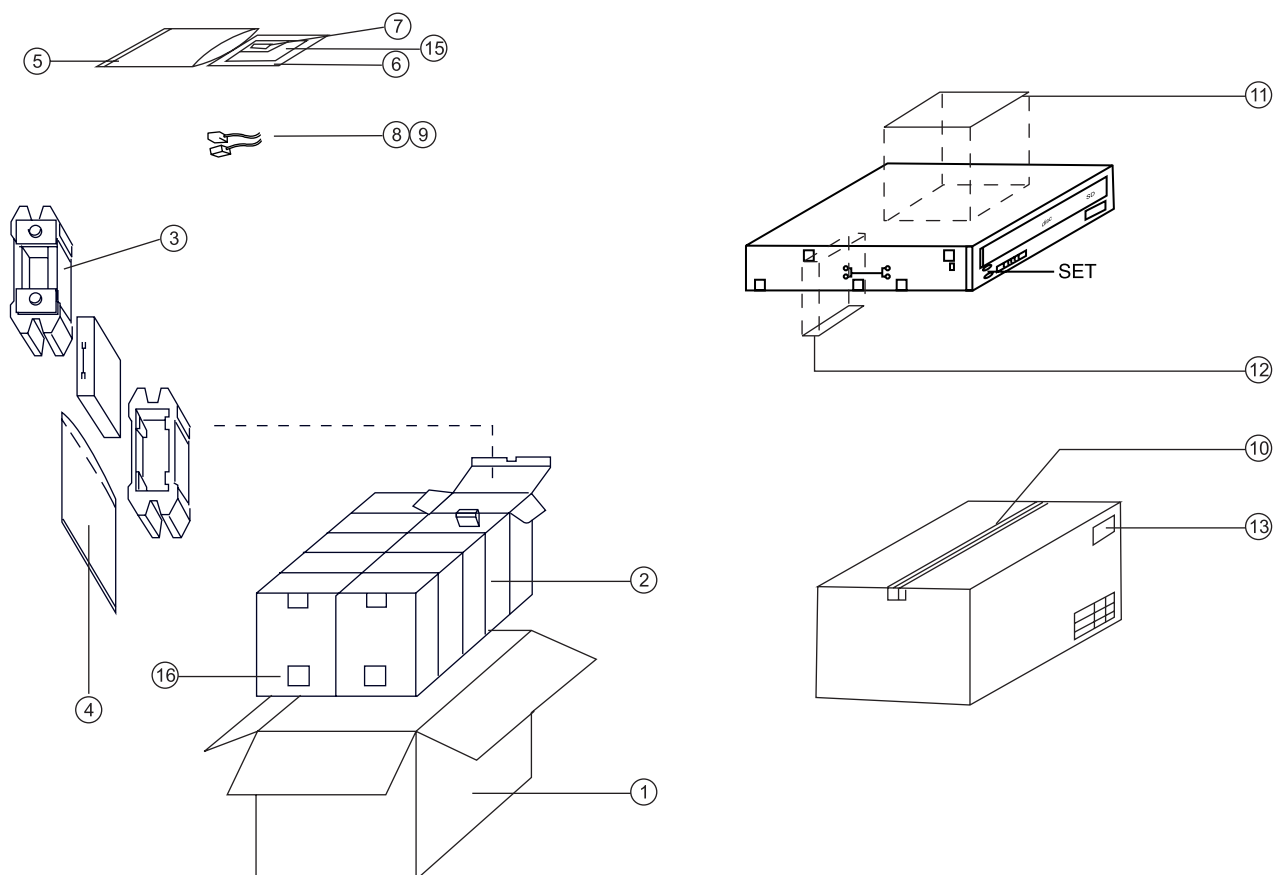


● Part List

- SC-152G

No	Code No	Description	Specification	Remark
1	BG97-00542A	LABEL RATING		
2	BG68-00077A	LABEL A		
3	BG97-01627C	ASSY COVER TOP		
4	BG97-03580G	ASSY FRONT PANNEL		
5	BG97-03593B	DOOR TRAY		
6	BG63-00109A	TRAY DISC	TRAY DISC; SW-232B. NH-0825S, -, -, -, -, IVORY	
7	BG41-00075A	FFC		
8	BG30-00026A	ASS'Y SPINDLE		
9	BG97-03340A	PICK-UP		
10	BG97-03064A	ASS'Y SLDER		
11	BG31-00055A	STEP MOTOR		
12	BG66-00061A	GEAR TRAY	GEAR TRAY; SC-152A, -, -, -, -, -, -, -	
13	BG66-00032A	GRAR-PULLY	GRAR-PULLY; -, POM, -, -, GEAR-PULLY, -, SC-148	
14	BG66-00062A	SLIDER-CAM	SLIDER-CAM; SC-152A, -, -, -, -, -, -, -	
15	BG66-00044A	BELT		
16	BG97-00789A	ASSY-LOADING		
17	BG31-00027A	LOADING MOTOR		
18	BG92-00405A	ASSY MAIN PCB		
19	BG92-00392A	ASSY FRONT PCB		
20	BG97-03224A	ASSY-COVER BOTTOM		

● Packing Option



NO	CODE No.	DISCRIPTION	SPEC	Q'TY	REMARK
1	BG69-40042A	MASTER CARTON -BOX	DM UV YEL	1/10EA	
2	BG69-00114A	PACKING-CASE	SW MANILA 250g	1EA	SC-152N/DOM
3	BG69-20327A	CUSHION-SET	EPS WHT	2EA	
4	BG69-30305A	BAG-PE	T0.05	1EA	
5	BG69-30307A	BAG-PE	T0.05	2EA	
6	BG68-00167A	MANUAL-USERS	ART PAPER	1EA	
7	BG64-30001J	DISC-FLOPPY	3.5INCH 1.2MB	1EA	
8	BG39-30002A	CABLE-IF	SR 380MM	1EA	
9	BG39-42001A	CABLE-WIRE HARNESS	4P, 3P, N, UL2547/UL1081	1EA	
10	0203-001222	MASKING-TAPE	TAPE	0.187M	
11	BG68-00155A	LABEL-RATING	POLY T0.08	1EA	
12	BG68-50005A	LABEL-QMS	MOJO 2S	1EA	
13	BG68-00296A	LABEL-BAR CODE	MOJO 2S	1/10EA	

● ODD SVC (Repair Process)

1. BOOTING

1-1. Connect SC-152G Drive with PC

(1). Connect the Connector with Interface Cable of PC

1-2. Turn on the Computer.

2. CD READ TEST

2-1. Open the Tray Disc and insert STD-200 Disc and close tray.

2-2. Move to AGI directory in DOS mode.

C:~~W~~ CD AGI (Enter)

2-3. Execute CDTPLS.EXE program and select Open of File menu.

[CD READ TEST]

2-4. Press Enter twice then pop up Open of File.

2-5. Find 52X_CD.AGI by executing the Open.

2-6. Press Enter the 52X_CD.AGI file.

2-7. Press F5

-F5 : Whole test

- [O] on the Screen : No defect.

-F6 : Case by Case test

- [N] on the Screen : Defect.

2-8. Finish the program by pressing Esc key twice and pressing OK.

3. FILE COMPARE

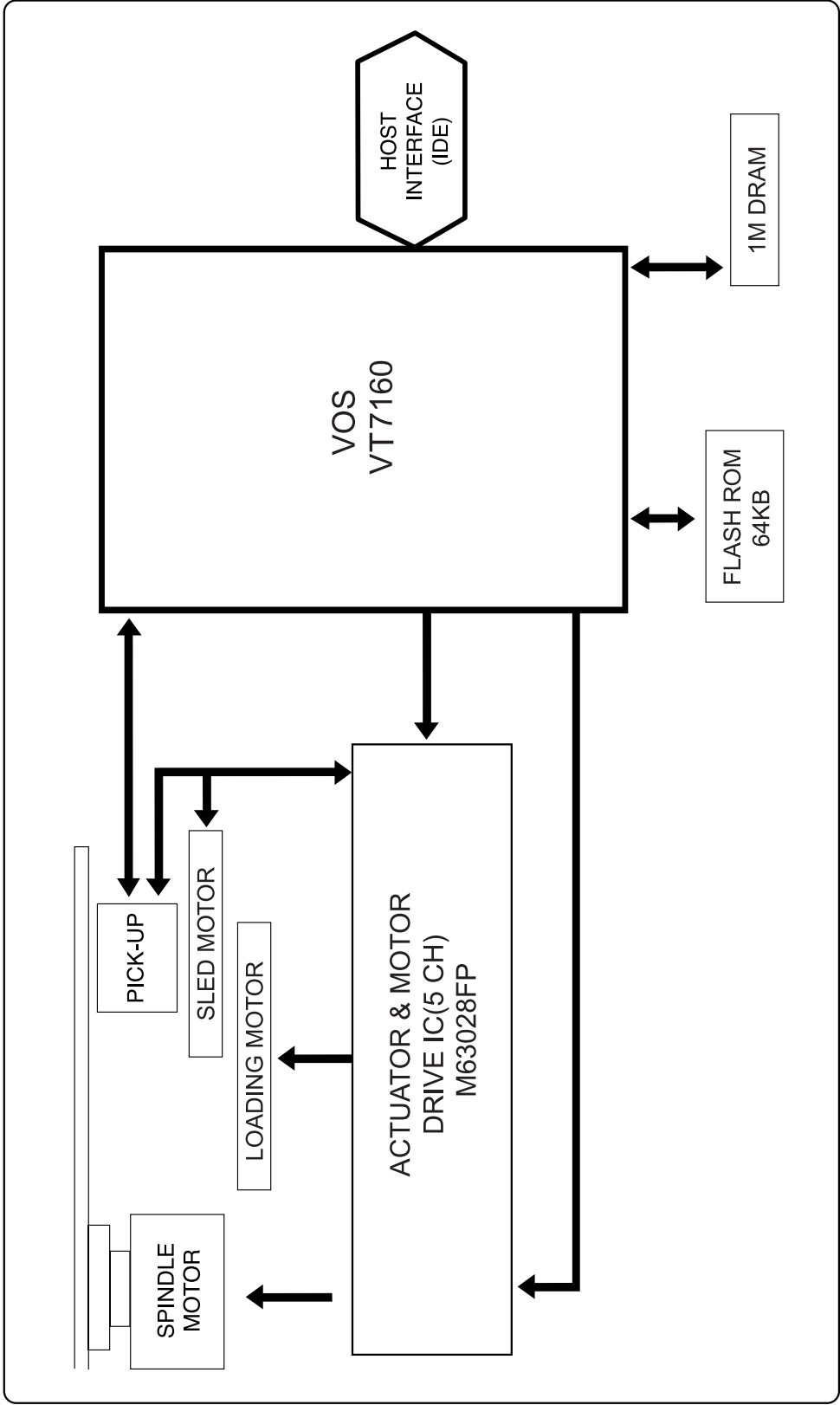
3-1. Press F and Enter in DOS Mode.

C:\w\FF3.COM (Enter)

3-2. Extract STD-200 Disc after Disc Tray open.

3-3. Turn off the PC and take off the Drive.

● Block Diagram

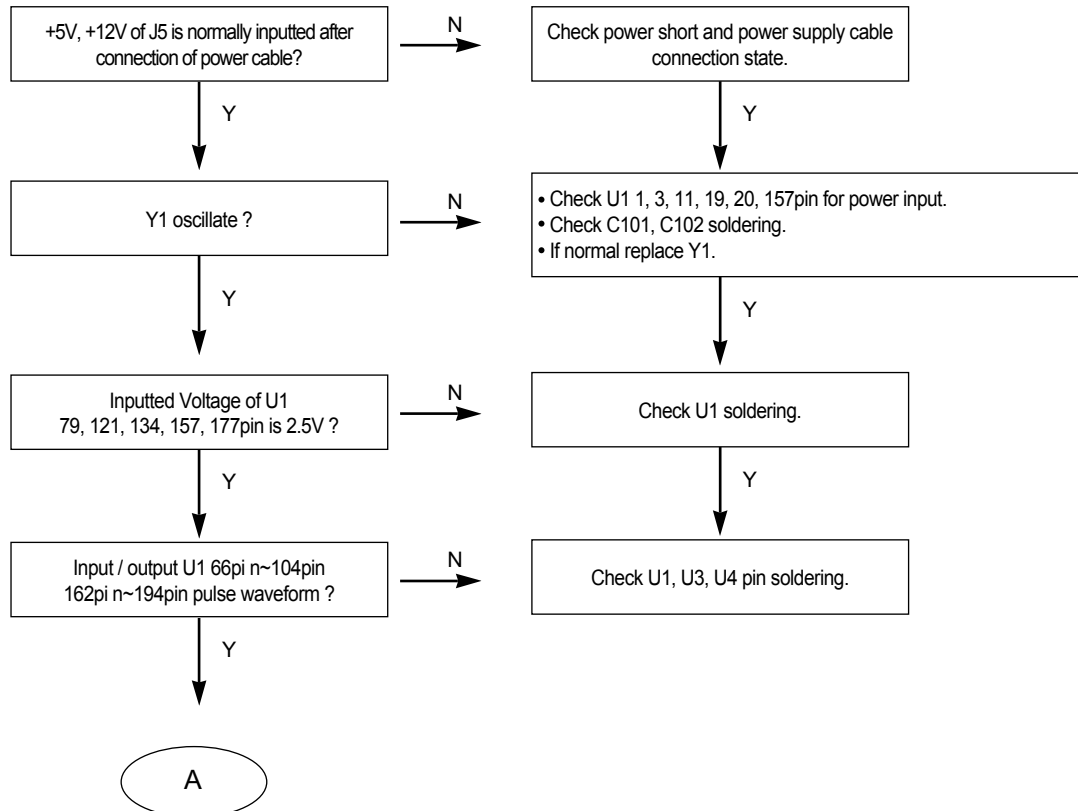


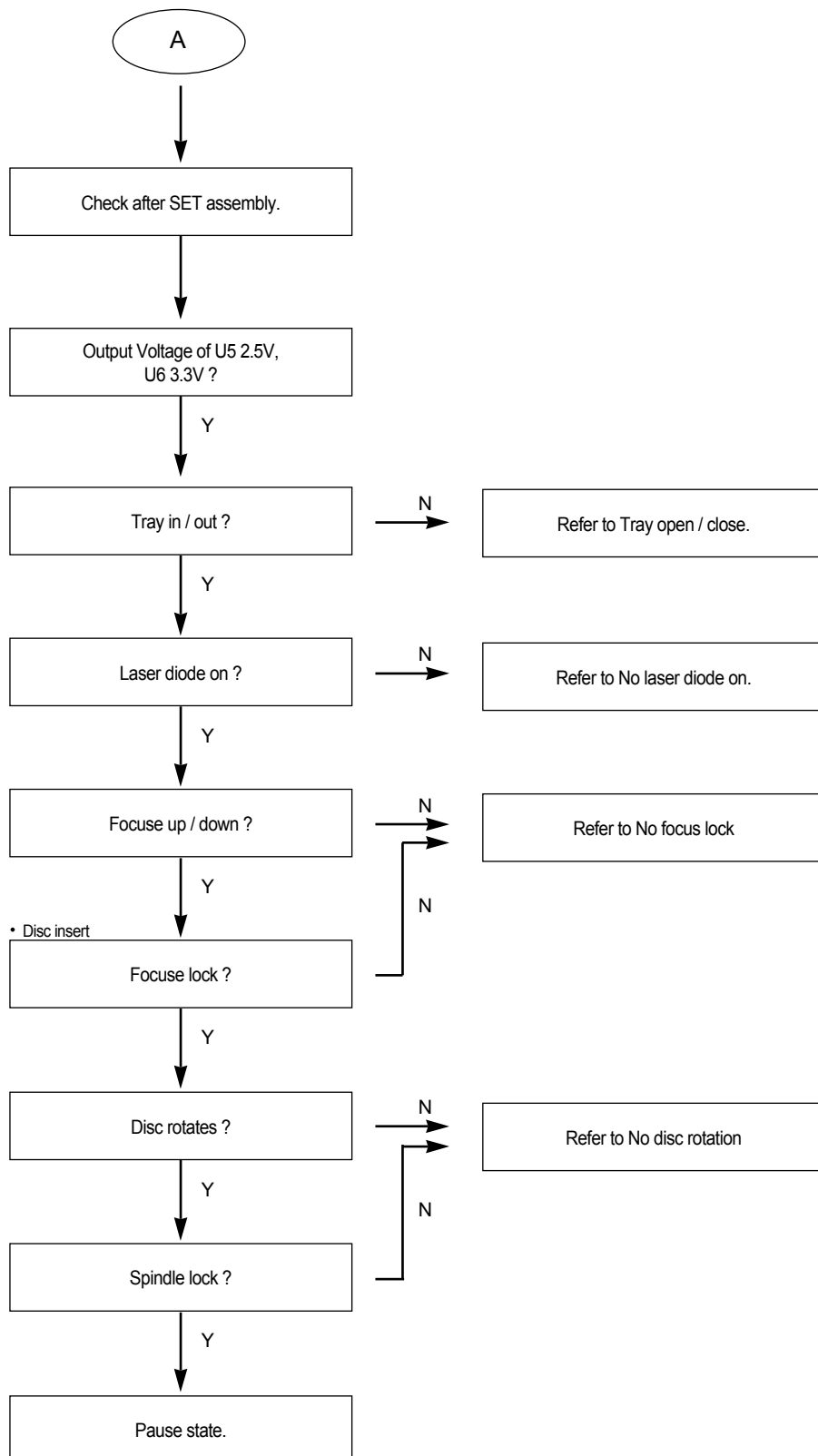
● Trouble Shooting

Equipments required at repair

1. Oscilloscope (100MHz or more)
2. Probe for Oscilloscope(10:1)
3. PC (166 or more)

Verify the circuit of power unit and the first status (Plug-in the power cable without I/F cable and verify.)

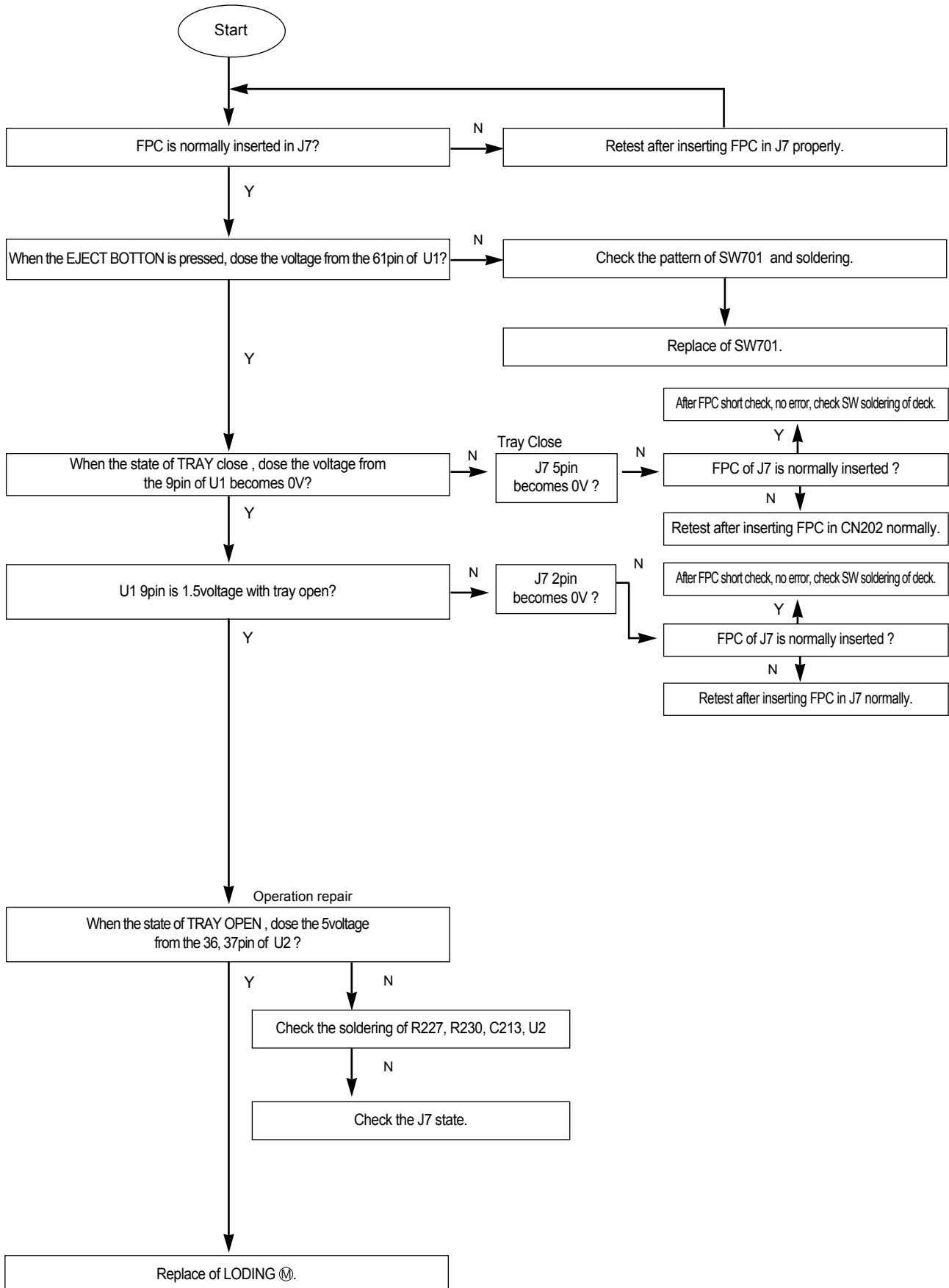




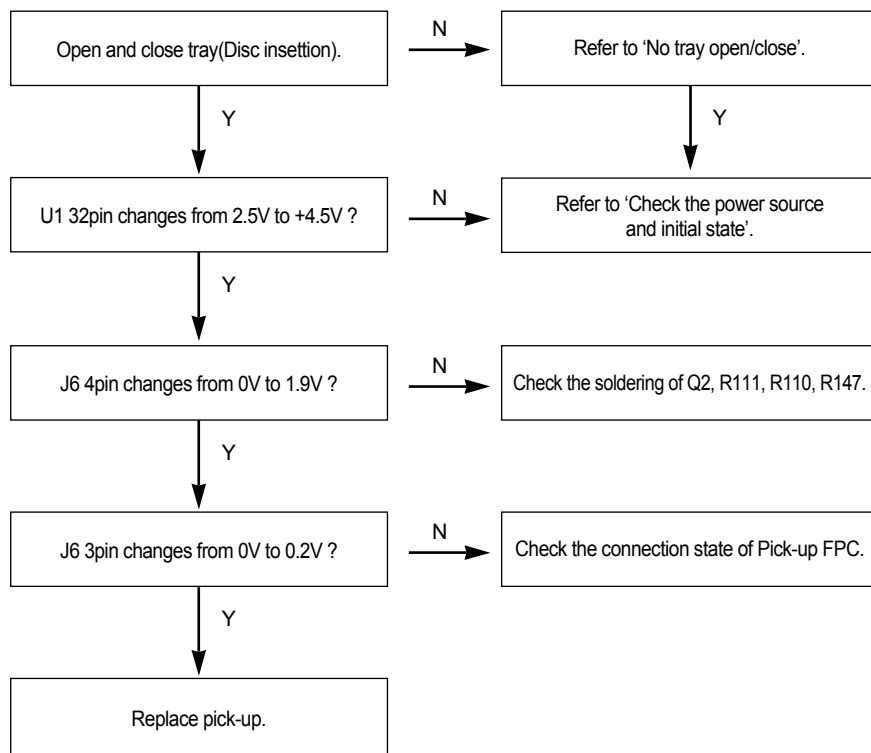
● Pause state : LED on as disc rotation state and continue 5 track jump

No tray open/close

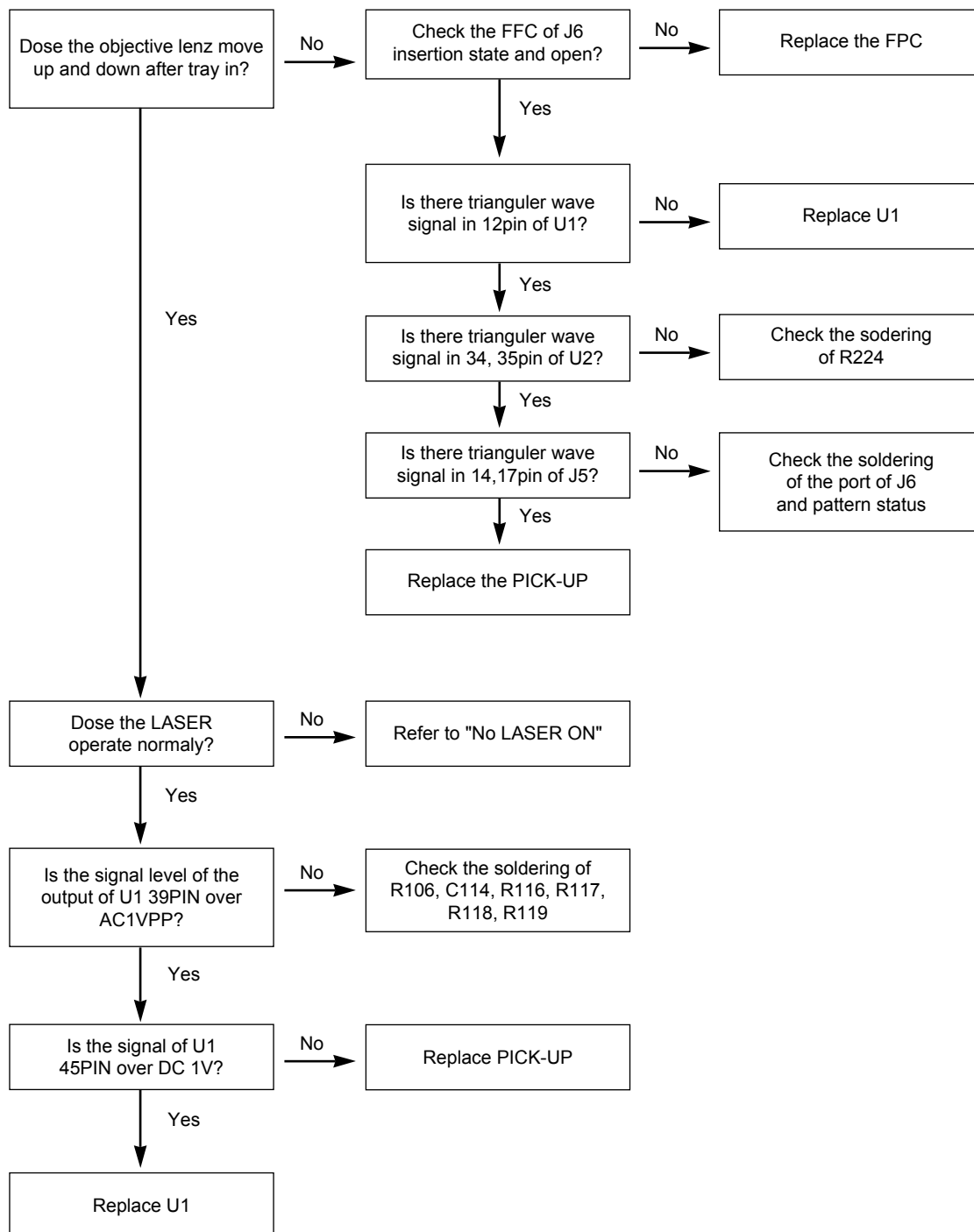
- FPC : Flexible Printed Circuit
- (M) : Motor



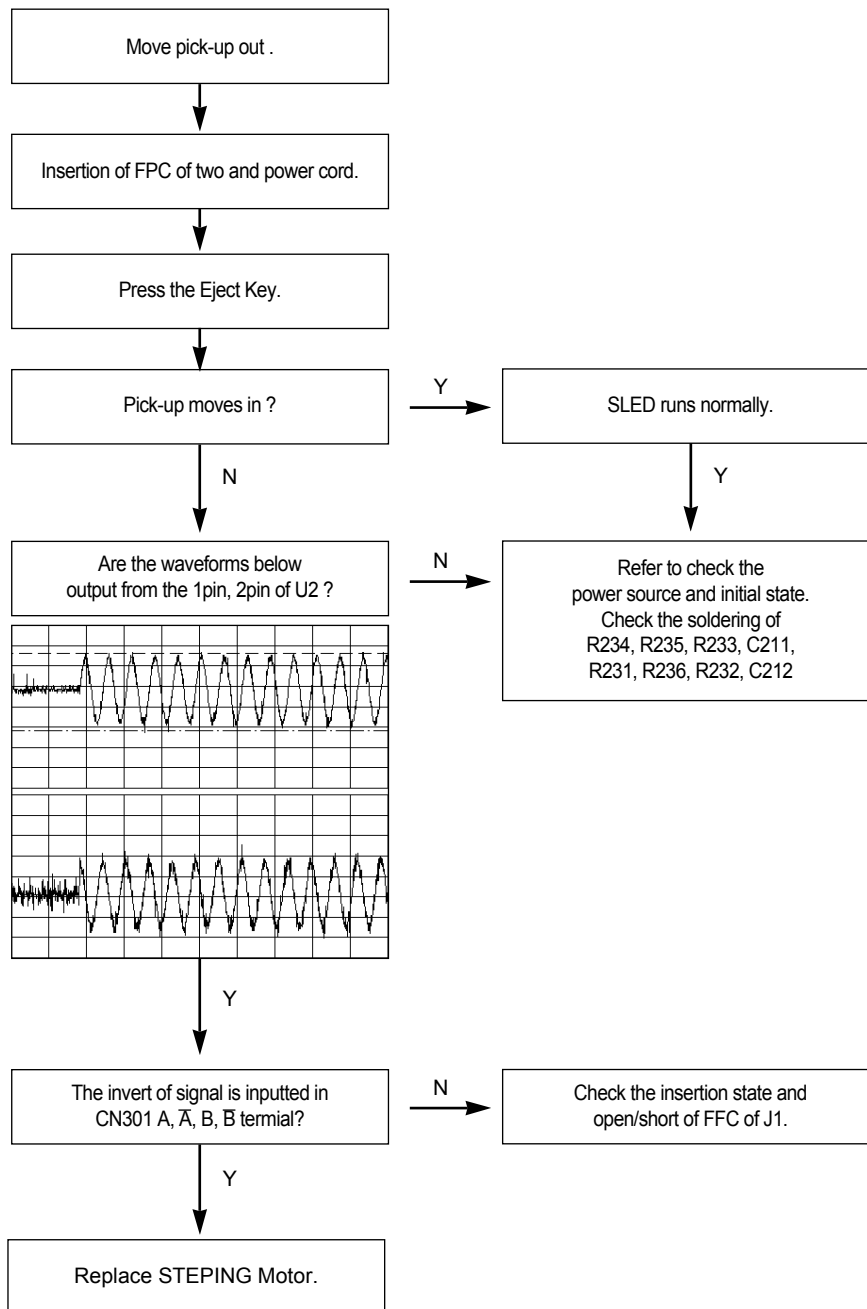
No laser on.



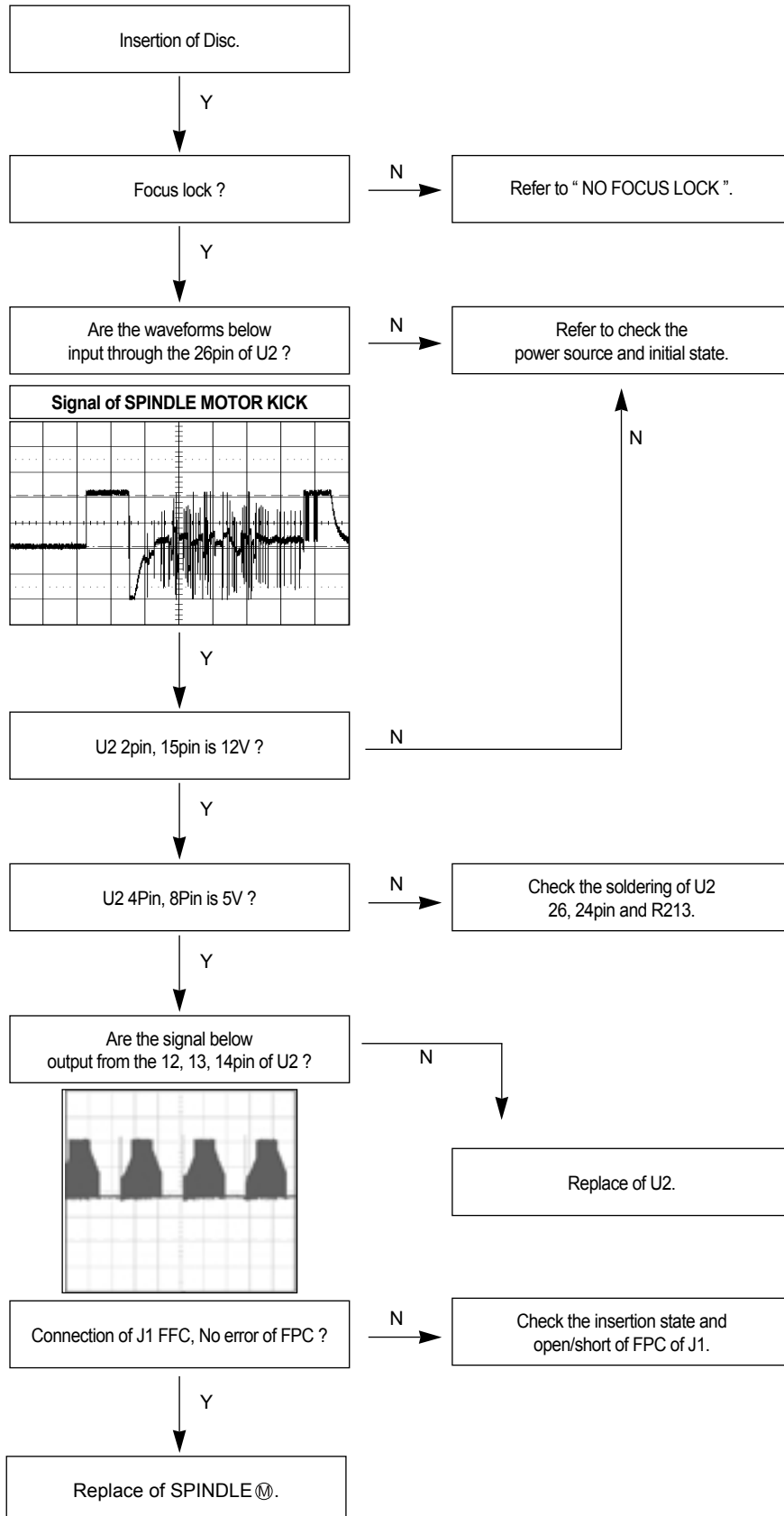
NO FOCUS LOCK



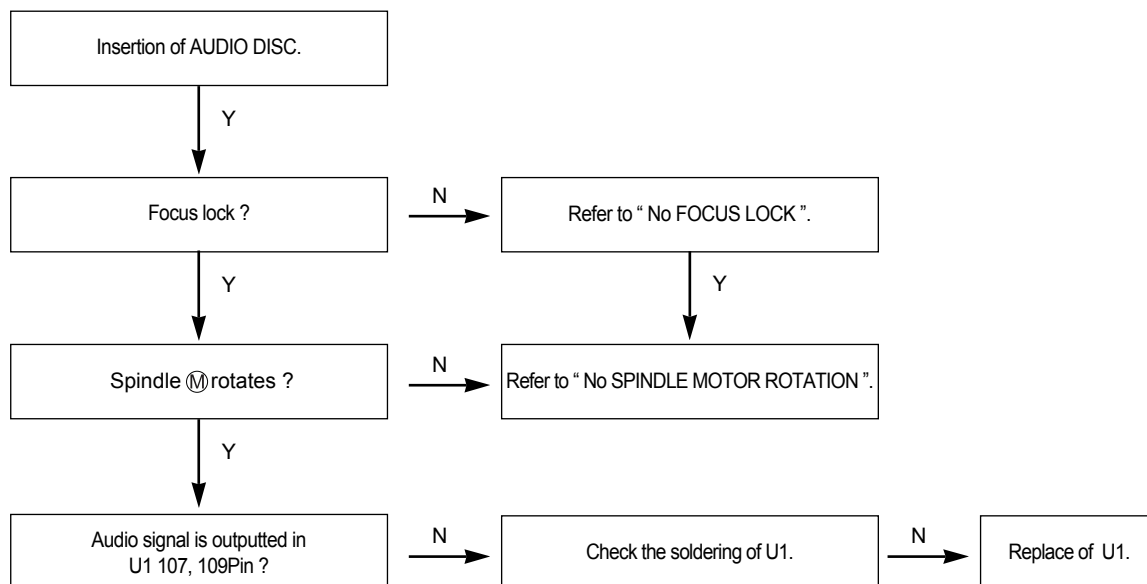
No sled operation



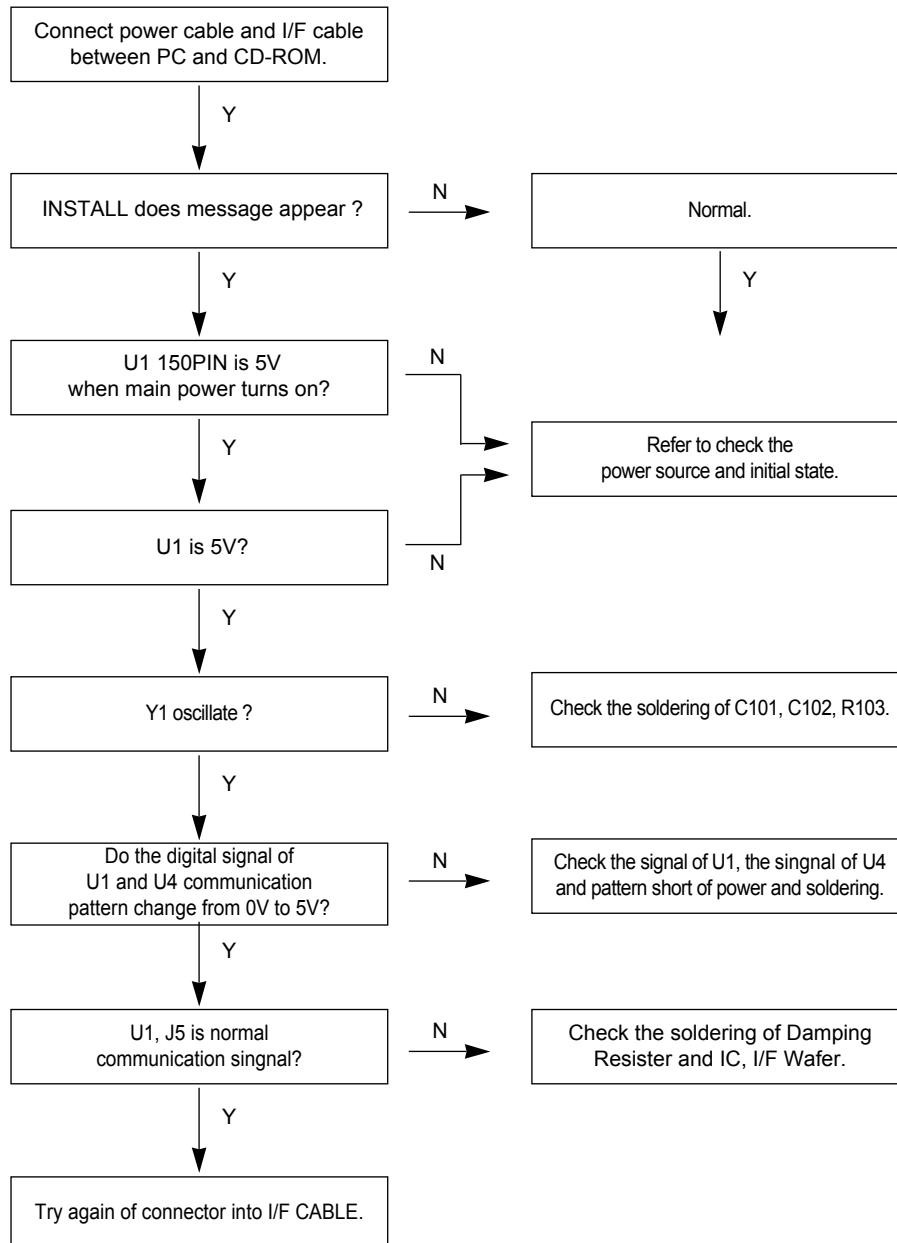
No spindle rotation.



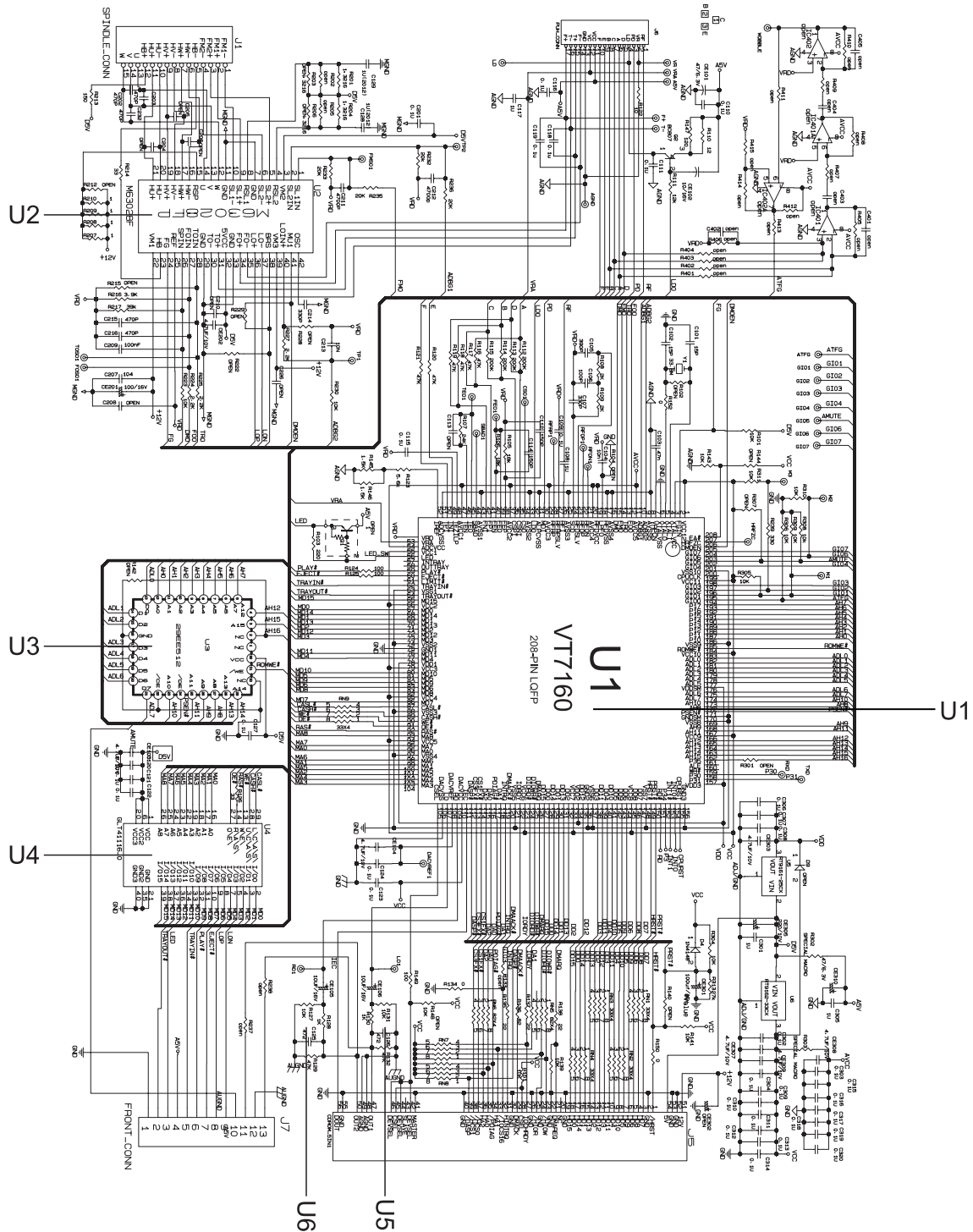
No audio output



When installing is impossible



● Circuit Diagram



「 Technical Assets 」

- This Document can not be used without Samsung's authorization.

● Part List

- Electrical Parts List

No	Code No	SPECIFICATION	QTY
U1	0904-001684	IC-DSP;VT7160,8BIT,PQFP,208P,28X28MM	
U2	1003-001499	IC-MOTOR	
U3	1103-001144	IC-EEPROM,29EE512,64K X 8BIT,PLCC,32P,-,70	
U4	1105-001240	IC-DRAM,GLT41116-40J4,64K X 16BIT,SOJ,40	
U5	1203-001924	IC-POSI,FIXED	
U6	1203-002534	IC-VOLTAGE	



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