

Service manual

LM2302W

— CATALOG —

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1. Safety item which should be paid attention to when maintaining

1.1 Before connecting the AC power to the monitor, please make sure the monitor specified voltage can work with the local voltage.

1.2 LCD monitor should be placed in a low moisture and low dust environment

1.3 Place the monitor onto the hard surface with great care. Because the LCD monitor surface is made of Plastic parts and thin glass, so dropping, shocking, or scratching can cause the damage of the LCD monitor.

1.4 When clear the monitor surface, please don't use ketone(such as acetone), ethanol, toluol, acetic acid, methane, chloride and etc. Because these materials can cause damage to the LCD monitor surface.

1.5 When the LCD monitor happens the abnormal situation, especially abnormal sound and smell can be identified, please unplug the socket immediately.

1.6 When maintaining the LCD monitor, to avoid the danger, one must completely finish the monitor assembly(including driving the screws into the monitor covers), and then turn on the monitor and test

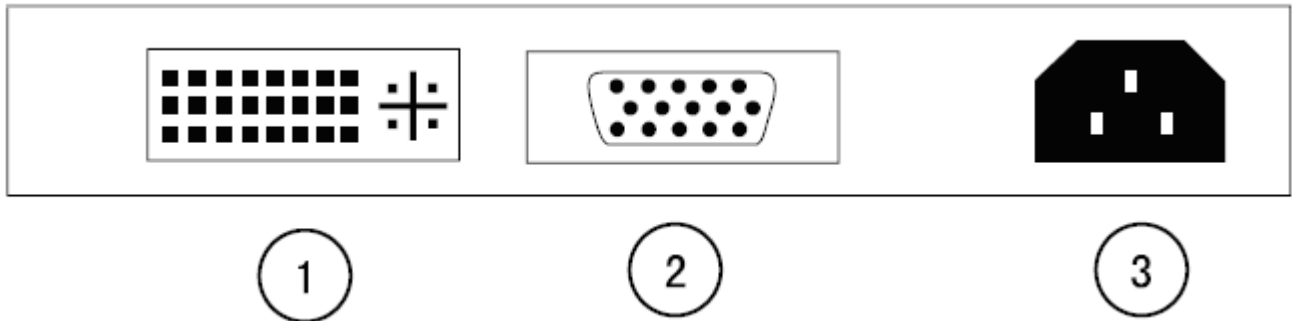
2. Monitor appearance and hardware structure introduction

2-1 Front appearance drawing



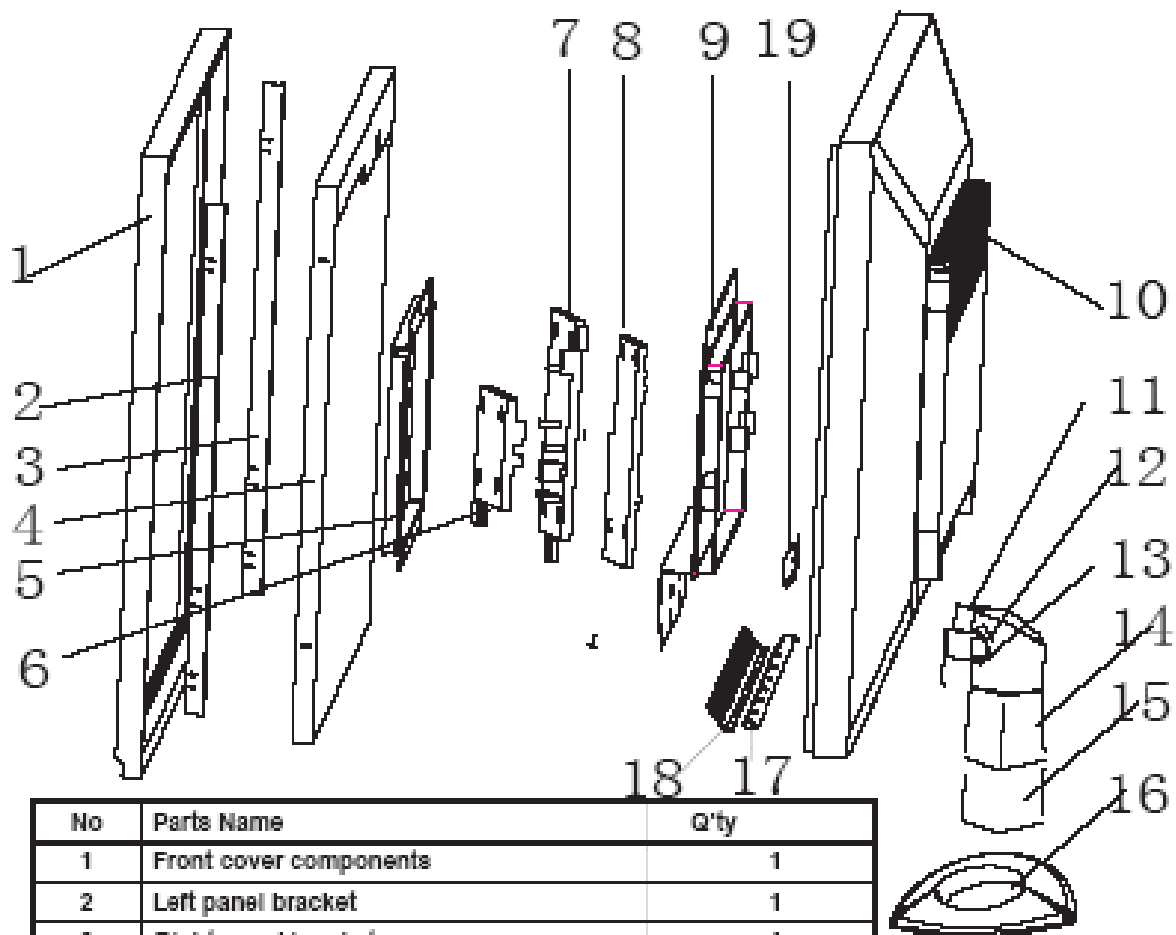
No		Function	
1		It can show and change model 16:10/AUTO/4/3 when OSD is not shown.	
2	AUTO	Automatically adjust clock and phase when OSD is not shown, or press in three consecutive seconds to switch VGA/DVI signal.	
3	MENU	Press it to open the OSD Menu, to select Menu options when the OSD Menu is displayed.	
4	POWER	Power on or off	
	Indicator light	Normal/ No signal/ Over frequency	Blue
		Standby Status	Blue and flicker
		Power off Standby Status	LED OFF
5	EXIT	Volume adjust hot key when OSD is not displayed, used for returning to former OSD when OSD menu is displayed.	
6	DOWN	Contrast ratio key when OSD is not displayed, move the selected menu down when OSD is displayed, decrease the value when enter into the OSD.	
7	UP	Brightness key when OSD is not displayed, move the selected menu up, increase the value when enter into the OSD.	

2-2 Back Appearance Drawing



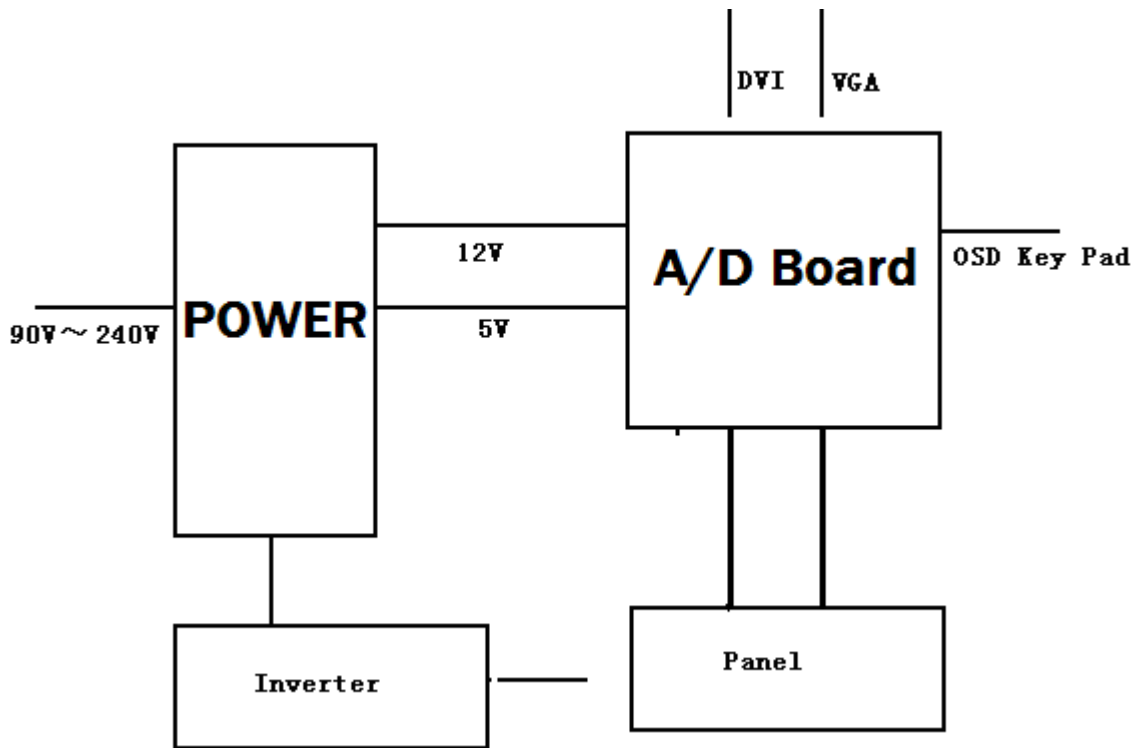
N O	Name
1	DVI input
2	VGA input
3	Power input

2-3 Explosion Drawing

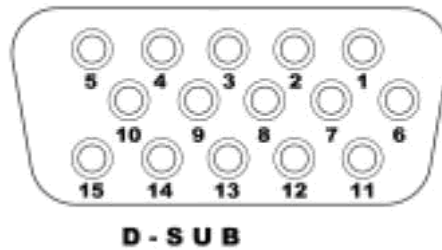


No	Parts Name	Q'ty
1	Front cover components	1
2	Left panel bracket	1
3	Right panel bracket	1
4	Panel	1
5	Shield Cover up	1
6	A/D Board	1
7	Power Board	1
8	Inverter	1
9	Shield Cover up	1
10	Back cover	1
11	Left HING	1
12	Right HING	1
13	Cover up	1
14	Hing	1
15	Cover Down	1
16	Stand base	1
17	Button cover	1
18	Key board	1
19	LED board	1

2-4 System Block Diagram

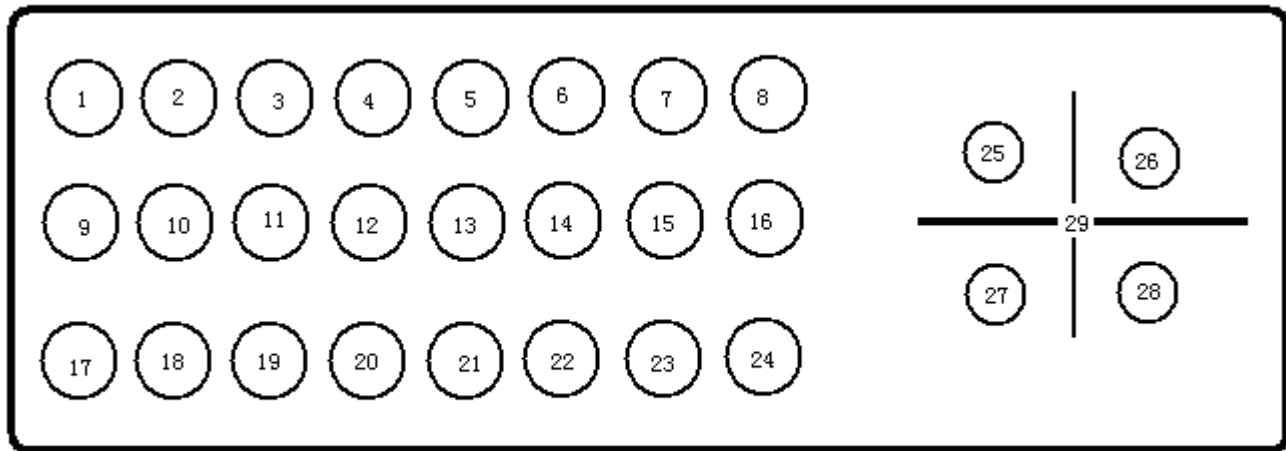


2-5 D-SUB Pin Definition



Pin No.	15-Pin	Pin No.	15-Pin
1	R	9	NC
2	G	10	GND
3	B	11	NC
4	NC	12	SDA
5	GND	13	HSYNC
6	GND-R	14	VSYNC
7	GND-G	15	SCL
8	GND-B		



2-6 DVI Pin Definition



DVI

Pin No.	Function	Pin No.	Function	Pin No.	Function	Pin No.	Function
1	DATA2-	2	DATA2+	3	GND	4	DATA4-
5	DATA4+	6	DDC CLK	7	DDC DATA	8	A-VSYNC
9	DATA1-	10	DATA1+	11	GND	12	DATA3-
13	DATA3+	14	VCC (5V)	15	GND	16	H-PLUG
17	DATA0-	18	DATA0+	19	GND	20	DATA5-
21	DATA5+	22	GND	23	CLK-	24	CLK+
25	NC	26	NC	27	NC	28	NC
29	NC						

2-7 OSD Key Function

- : It can show and change model 16:10/AUTO/4/3 when OSD is not shown.
- Auto** (automatic adjustment key): automatically adjust clock and phase key when OSD is displayed; press in consecutive seconds to switch VGA/DVI signal.
- MENU**: Press it to open OSD menu, to select Menu options when the OSD menu is displayed
- POWER** : Power on or off
- EXIT**: Volume adjust hot key when OSD is not displayed, used for returning to former OSD when OSD

menu is displayed.

6. **DOWN** ◀ : Contrast ratio key when OSD is not displayed, move the selected menu down when OSD is displayed, decrease the value when enter into the OSD.

7. **UP** ▶ : Brightness key when OSD is not displayed, move the selected menu up, increase the value when enter into the OSD.



* Press the “MENU” button to start the OSD function.

* Press “◀” or “▶” button to select adjusting function

* Press “MENU” button to enter into the function which is going to be adjusted.

* Press “◀” or “▶” button to change the present setting value of the function.

* Press “Exit” to leave the OSD menu or return to the former action, and it can store the change points

Attention:

* Press ▶ button to move OSD in a numerical order.

* Press ◀ button to move OSD in a reverse numerical order.

* Language: ENGLISH, Français, Deutsch, Español, Italiano, Japanese, Korean, simplified Chinese.

* Input signal choice: VGA input signal is analogue; DVI input signal is digital

3.Maintaining Instruments and Test Equipment

Definition: Defect circuit board and the inside signal cable change.

3-1 Instruments

1.Multimet



2.Electric screwdriver



3.
Cross head driver
Hex screw driver

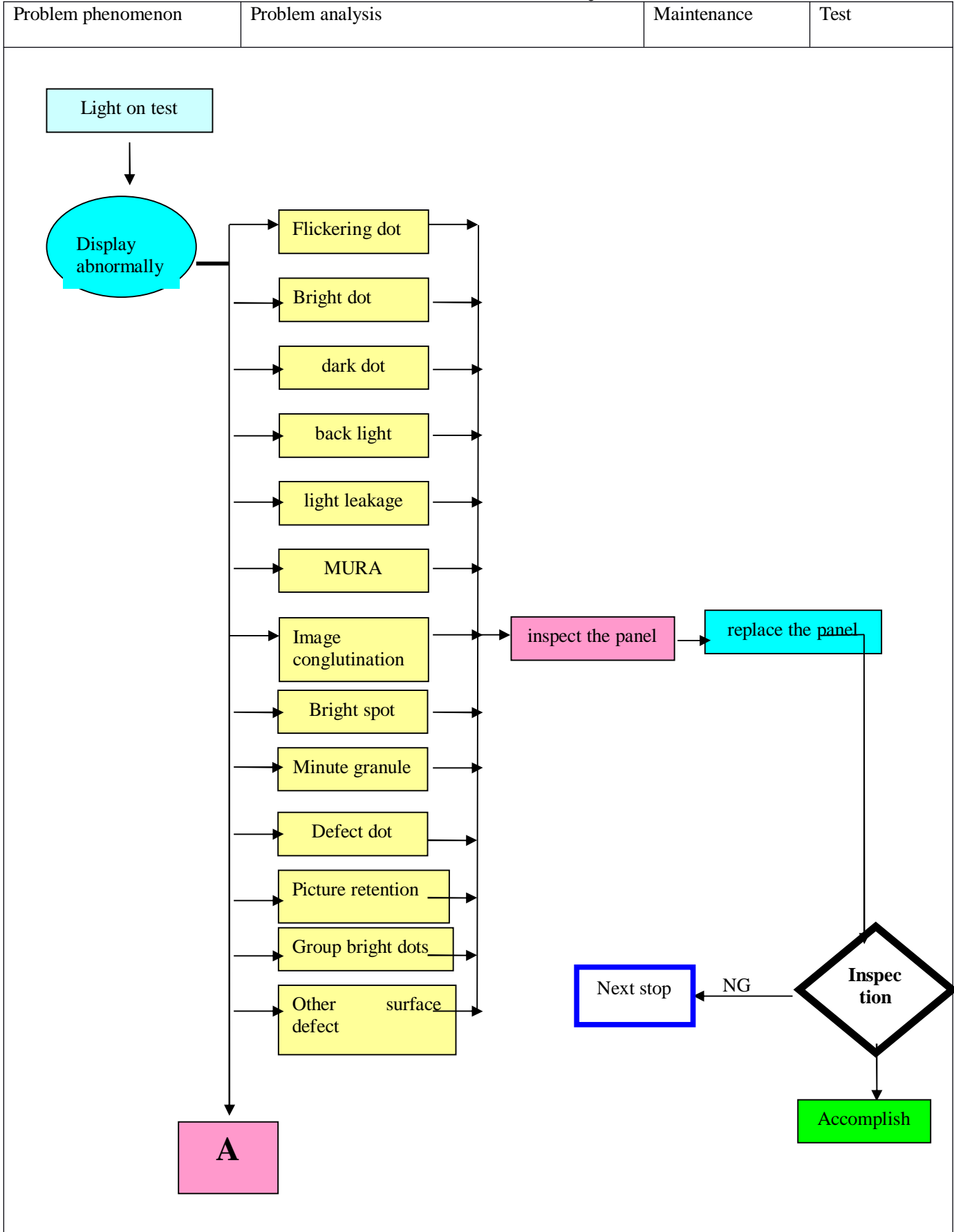


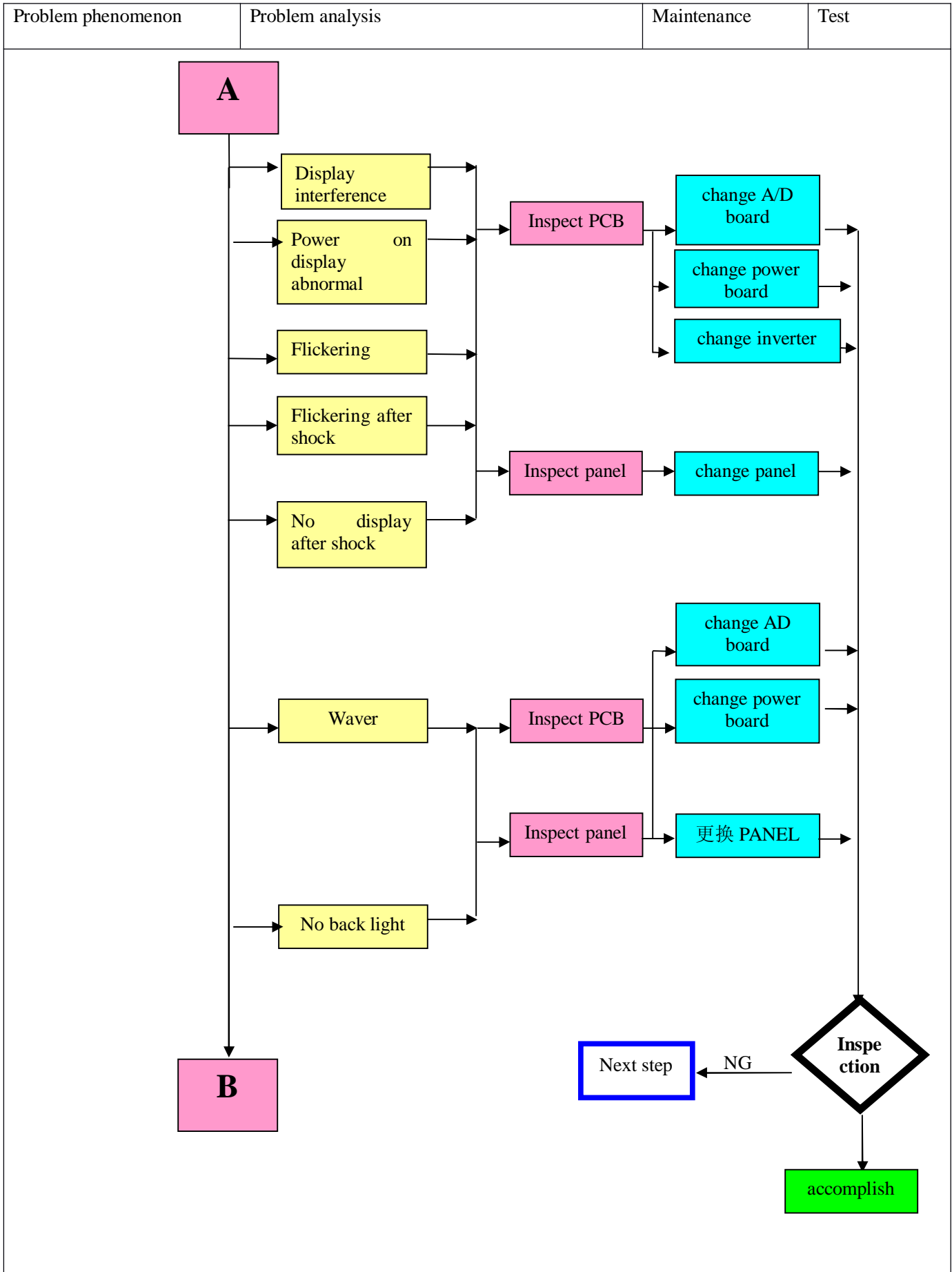
3-2 Test equipment

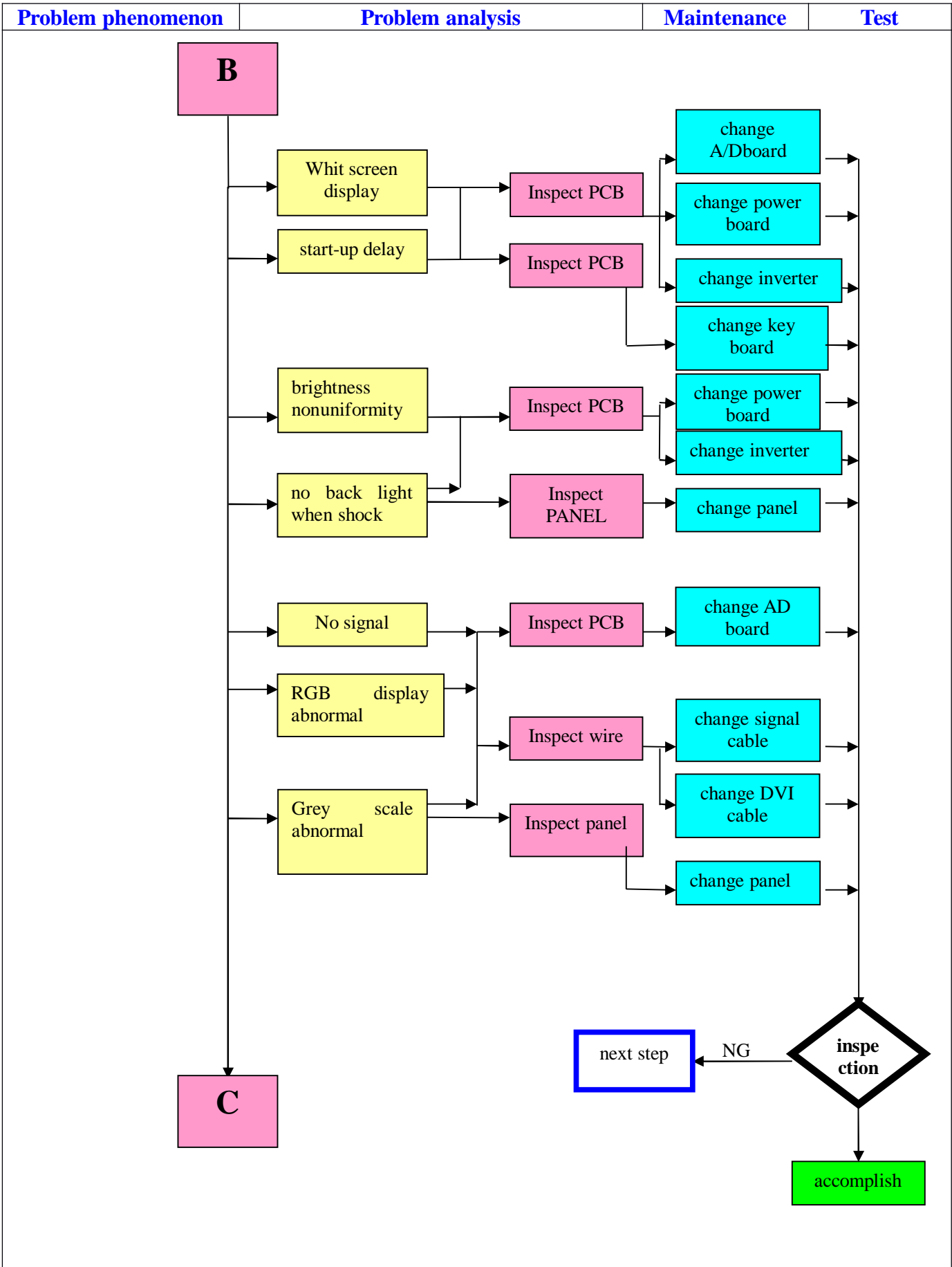
PC for test

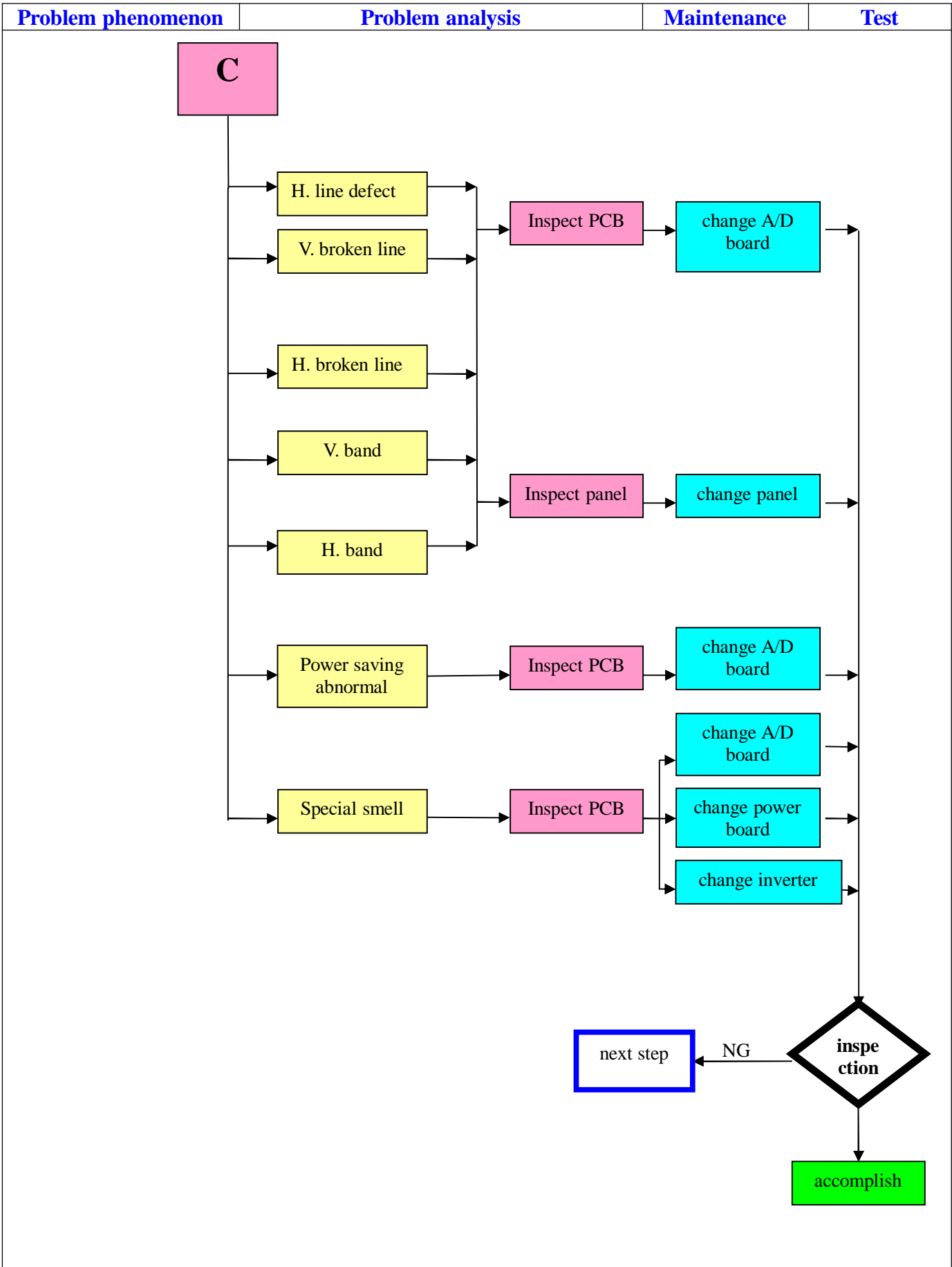


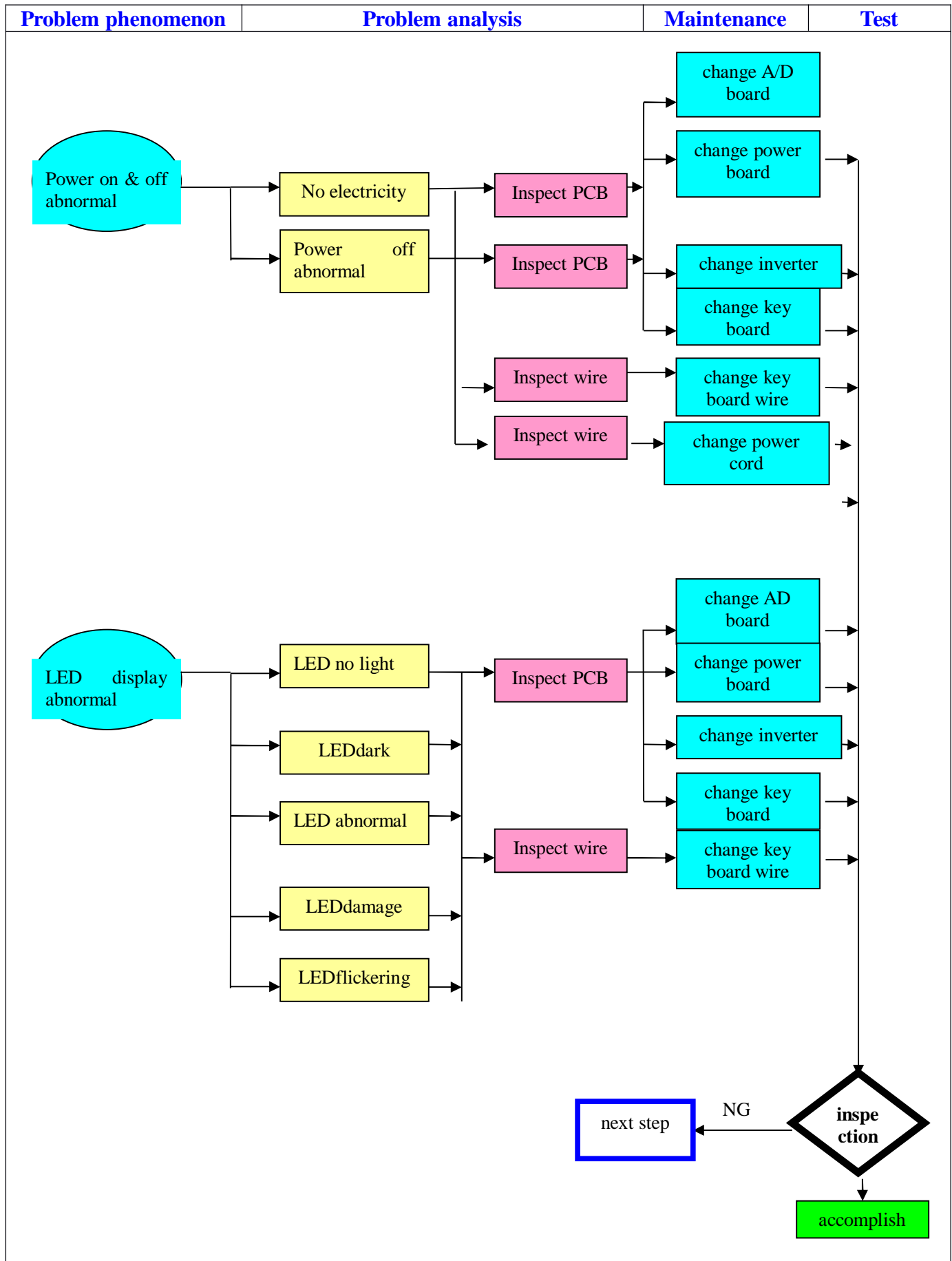
4. Problem analysis











5. Monitor Disassembly and Assembly Flow



※ Must avoid panel scratch

※ Must prevent static problems

1. Disassemble the support neck
2. Disassemble the front cover
3. Disassemble the panel
4. Disassemble A/D board, power board and inverter board
5. Disassemble the speaker cover

1. Put the monitor flat on the cushion as shown in following picture, press cover latch softly

With hands and take out monitor stand base.



2. Please Use hands take the Hing R cover and Hing L cover out



Hing Cover



M4*8 4

3. Take out screws on back cover and turn over monitor on frontispiece.



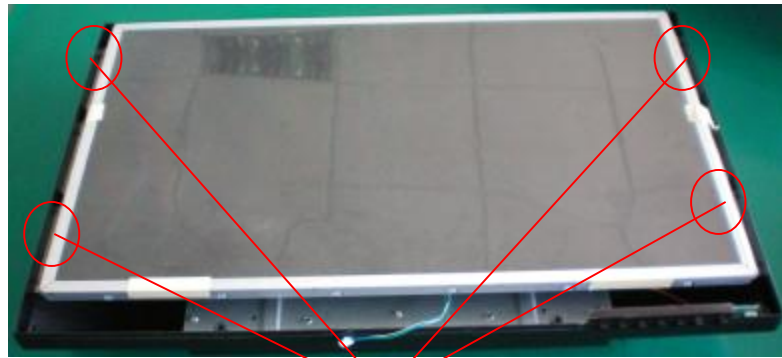
TP3*8 4



4. Take away front cover by hand and pull out key board wire as picture.

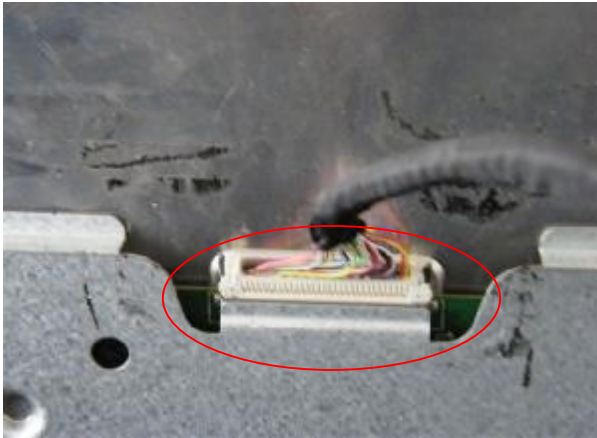


5. Remove screws used for fixing panel



TP3*8 4

6. Lift up the panel softly and pull out panel wire and inverter wire



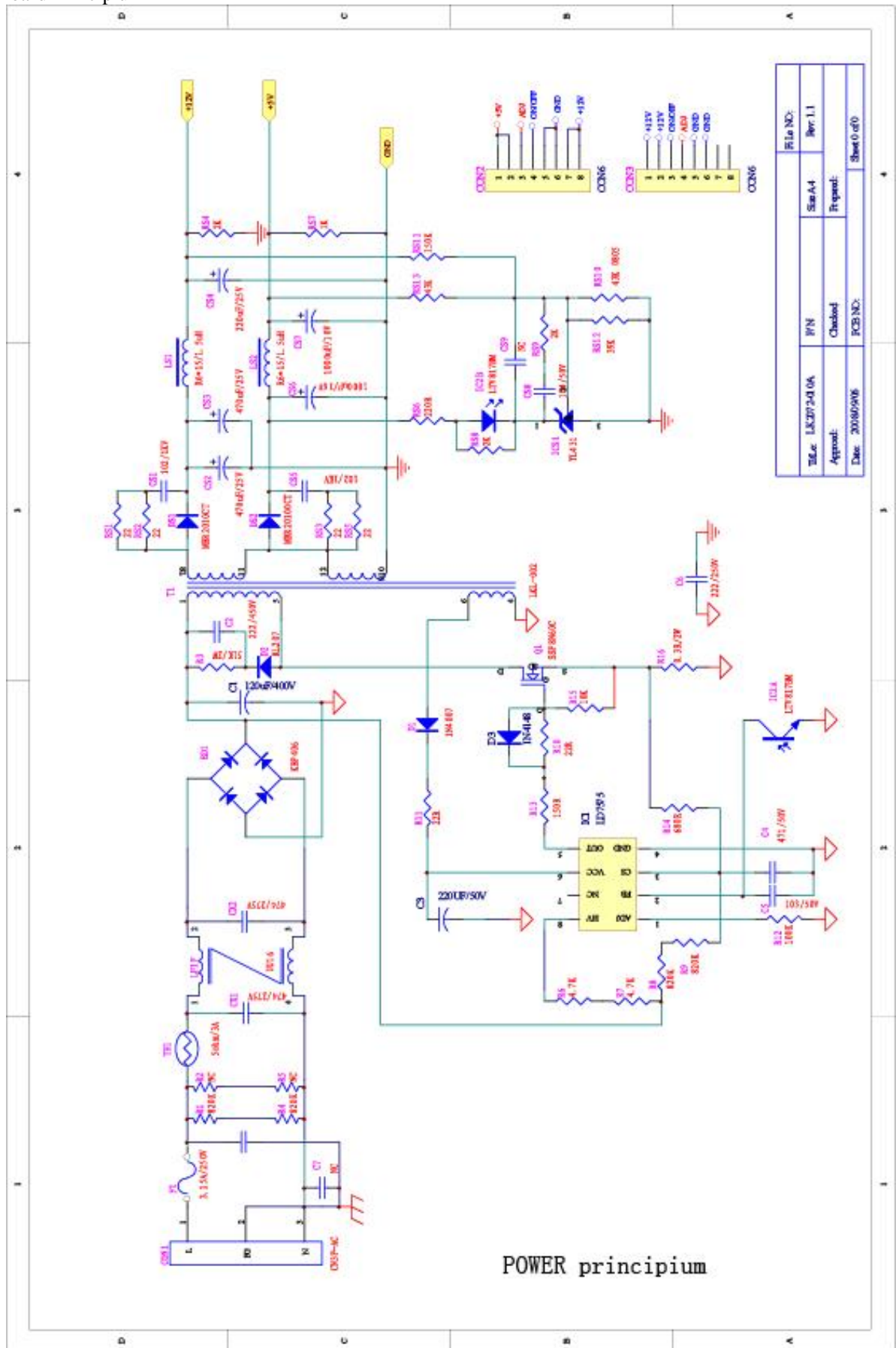
7. Remove screws used for fixing AD board and power board, and unplug lamp wire on inverter board.



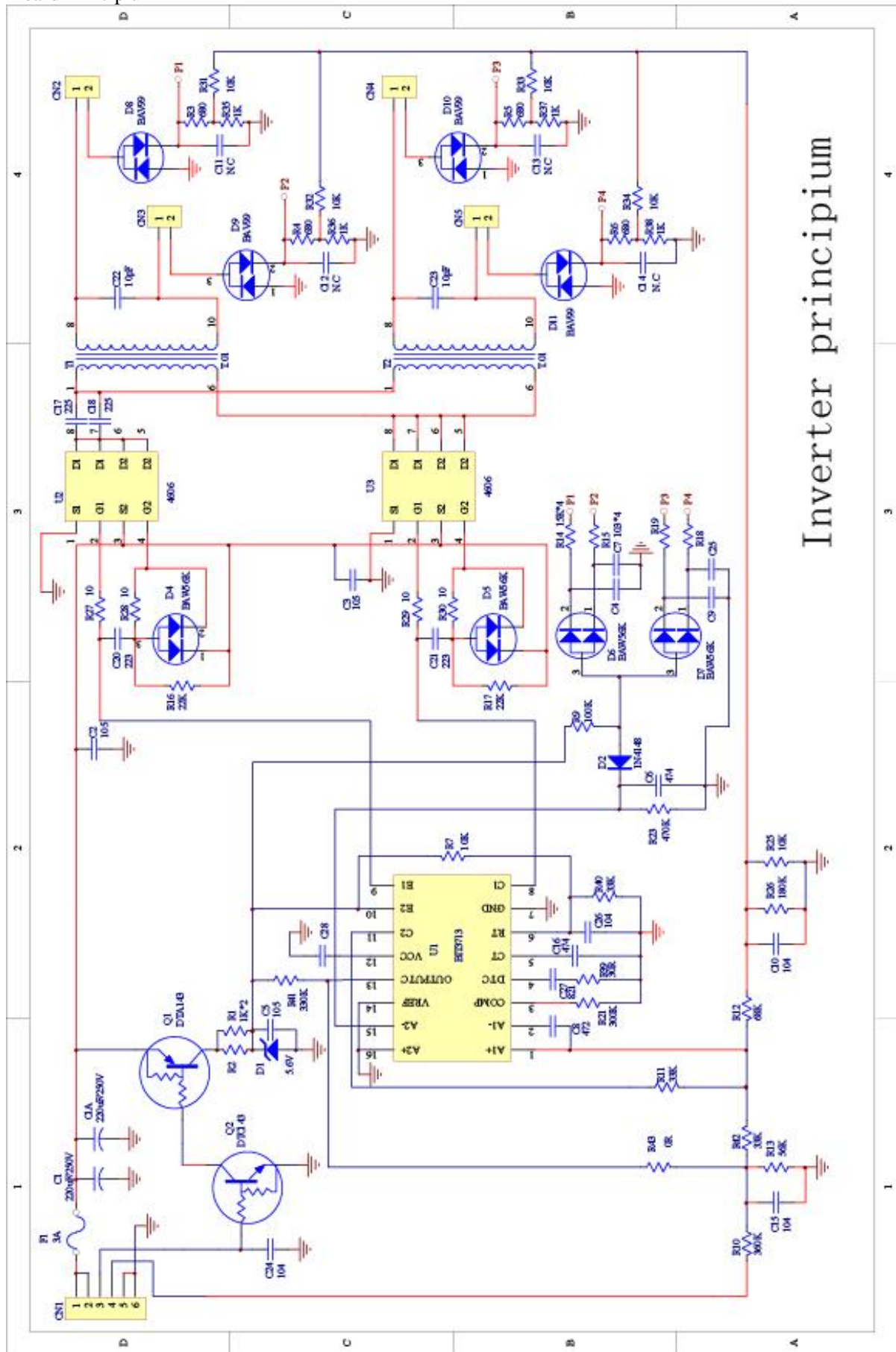
6. Maintaining Parts Form

Item	Part name
1	A/D board
2	Inverter board
3	Power board
3	Key board
4	Front cover
5	Back cover
6	Stand base
7	Stand base support up cover
8	Stand base support down cover
9	Button knob

2.Power Board Principium



3. Inverter Board Principium



Inverter principium

8. Test Method after Maintenance



※ Assure the Burn-in 4 hours after change the PCB board.

8-1 Test Method When Disconnected With the PC

1. Connect VGA Cable with PC on monitor

2. Windows system environment test