SERVICE MANUAL

15” LCD MONITOR
DELL E152FPc

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MANUFACTURE DATA: MAR.-20-2005

Table of Contents

Revision List

Revision	Date	Revision History	TPV model
A00	Mar-20-2005	Initial Release	
A01	April-25-2006	Add" **Max Brightness measurement**" on Page36	

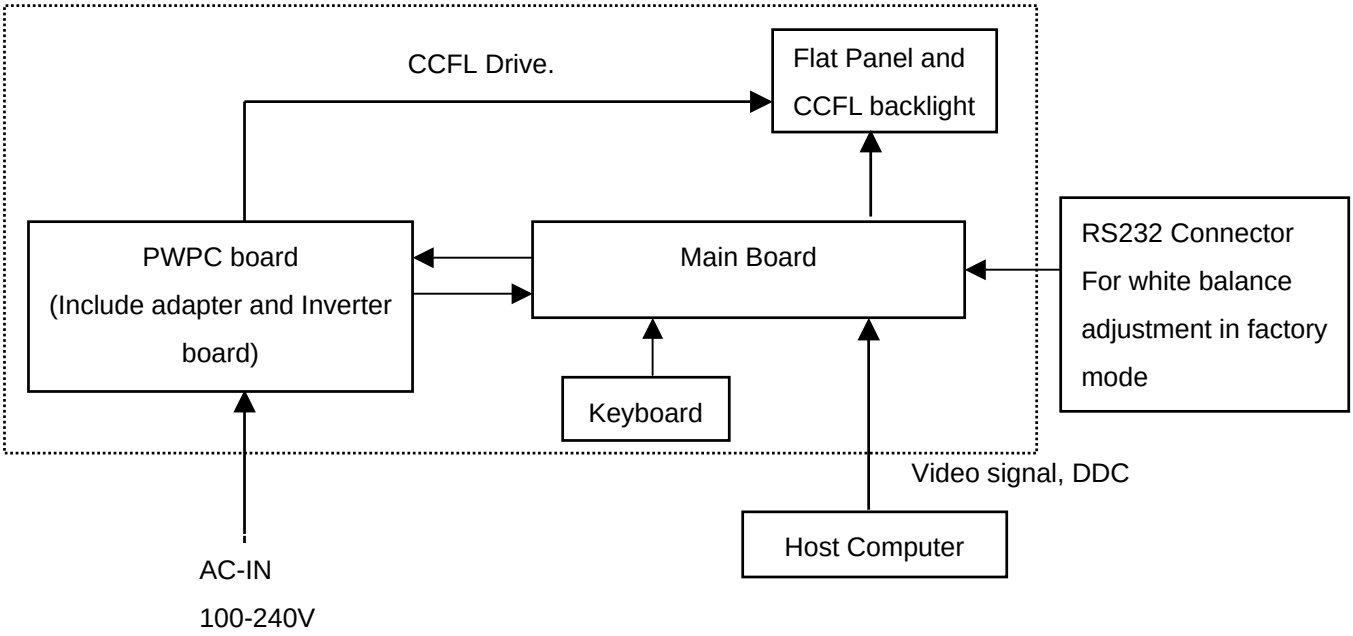
1. MONITOR SPECIFICATIONS

Flat Panel	Driving system	TFT Color LCD
	Size	38.1mm(15.0")
	Pixel pitch	0.297mm(H) x 0.297mm(V)
	Viewable angle	120˚ (H) 100˚ (V)
	Response time (typ.)	25 ms
Input	Video	Analog Only
	Sync. Type	H/V TTL Separate and Composite Sync.
	H-Frequency	30kHz – 63kHz
	V-Frequency	56-76Hz
Display Colors		Over 16.2 million Colors
Dot Clock		80MHz
Max. Resolution		1024 x 768
Plug & Play		VESA DDC2B™
Power Consumption	ON Mode	<25W <35W(For Samsung XH panel)
	OFF Mode	≤1W
Maximum Screen Size		Horizontal : 11.9”(304.1mm) Vertical:8.9”(228.1mm)
Power Source		110~240VAC,50~60Hz
Environmental Considerations		Operating Temp: 5°C to35°C Storage Temp.:-20°C to80°C
Weight (N. W.)	Packaged	5.31Kgs Unit
	Unpackaged	3.50Kgs Unit

2. LCD MONITOR DESCRIPTION

The LCD MONITOR will contain a main board, an internal PWPC board, keypad board, which house the flat panel control logic, brightness control logic and DDC.The internal PWPC board will drive the backlight of panel and the DC-DC conversion. and provides the 5V DC-power to main board.

Monitor Block Diagram



3. OPERATING INSTRUCTIONS

3.1 GENERAL INSTRUCTIONS

Press the power button to turn the monitor on or off. The other control buttons are located at front panel of the monitor. By changing these settings, the picture can be adjusted to your personal preferences.

-The power cord should be connected.

-Connect the video cable from the monitor to the video card.

-Press the power button to turn on the monitor, the power indicator will light up.

3.2 CONTROL BUTTONS

-**Power Button:**

When pressed, the monitor enters the off mode, and the LED turns blank. Press again to restore normal status.

-**Brightness Button:**

The Brightness Button is used to select the Brightness/Contrast adjust functions. Press to switch functions or adjust settings.

-Auto Adjust Key:

The Auto Adjust Key is used to automatically set the H Position, V Position, Clock and Phase.

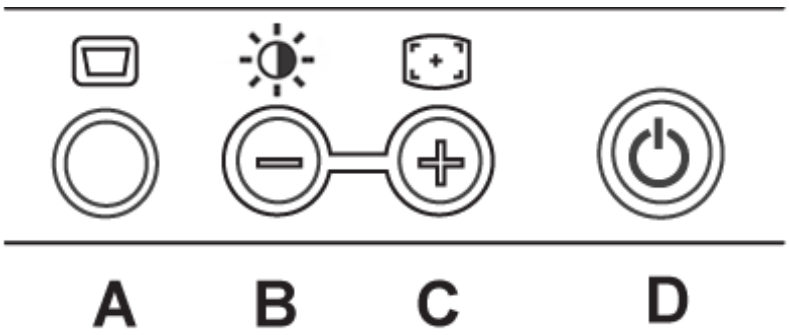
-Power Indicator:

Green — Power On mode.

Orange — Power Saving mode.

Blank —Power Off Mode.

Control Buttons



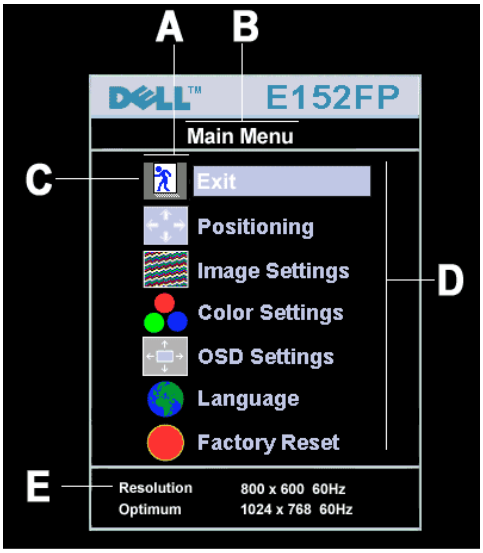
A.Buttons for the OSD menu (On-Screen-display)
B. Brightness/Contrast menu Button
C. Auto Adjust Button
D. Power On/Off Button and indicator

3.3 ADJUSTING THE PICTURE

To set the OSD menu, perform the following steps:

Briefly press the SELCT / MENU button to activate the OSD menu.

The main menu appears on the screen with icons for the setting functions.

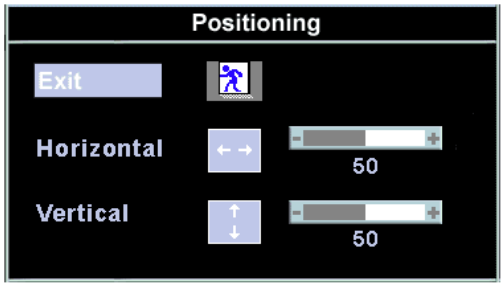


The first symbol (*Exit*) is highlighted.

Necessary, press the- or + button to mark another icon (e.g. *Positioning*).

Press the SELECT/MENU button to select the highlighted icon.

The corresponding setting window (here: *Positioning***) is displayed.**



The first symbol (Exit) is highlighted.

If necessary, press the – or + button to mark the desired icon.

Press the SELECT/MENU button to select the highlighted function.

Press the – or + button to adjust the value for the selected function.

Press the SELECT/MENU button to exit the function.

Press the SELECT/MENU button to exit the sub-menu when “Exit” function is highlighted;

All changes are stored automatically.

Adjusting the brightness and contrast

	Calling the *Brightness / Contrast* setting window using Brightness button.
Brightness	Setting the brightness of the display With this function you change the brightness of the background lighting.
Contrast	Setting the contrast of the display With this function you modify the contrast of bright colour tones.

Adjusting size and position

	Calling the Positioning setting window
H-Position	Adjusting the horizontal position With this function you move the picture to the left or to the right.
V-Position	Adjusting the vertical position With this function you move the picture up or down.

Setting Image

	Calling the Image setting window
Auto Adjust	Auto adjust will produce best image automatically, The information of " Auto Adjust In Progress" will show;
Pixel clock	Adjusting the pixel clock
Phase	Adjusting the phase

Setting colour temperature and colours

	Calling the Color setting window
	Selecting the colour temperature The colour temperature is measured in K (= Kelvin). You can select from Normal Preset, Blue Preset, Red Preset to User Preset; Normal preset = Original colour of the LCD display, it's 6500K; Blue preset =5700Kcolour of the LCD display, it's 9300K; Red preset =9300K colour of the LCD display, it's 5700K; User preset = Setting user-defined colours In the user preset setting you can change the colour ratios of the basic colours (red, green, blue) as required.

Setting display of the OSD menu

	Calling the *OSD Set up* setting window
Horizontal Position	Setting the horizontal position of the OSD menu With this function you move the OSD menu to the left or to the right.

Vertical Position	Setting the vertical position of the OSD menu With this function you move the OSD menu up or down.
OSD Hold Time	Setting the display duration of the OSD menu, the default value is 20s; With this function you select a value from 0 to 60 seconds. If the set time expires without a setting being made, the OSD menu is automatically faded out.
OSD Lock	Setting the display of the OSD menu lock or unlock. With this function you select Yes to lock OSD, NO to unlock it.

Setting Language

	Calling the Language setting window
	With this function you choose between English (default setting), French, German, Spanish and Japanese as the language for the OSD menu.

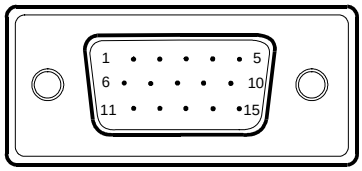
Factory Reset

	Activating the factory settings
	With this function all settings except Language of OSD are reset to the factory settings without prompting for confirmation.

4. INPUT/OUTPUT SPECIFICATION

4.1 INPUT SIGNAL CONNECTOR

15-pin D-sub connector

PIN NO.	DESCRIPTION	PI N NO.	DESCRIPTION
1.	Red	9.	+5V
2.	Green	10.	Detect Cable
3.	Blue	11.	Ground
4.	Ground	12.	DDC-Serial Data
5.	Ground	13.	H-Sync
6.	R-Ground	14.	V-Sync
7.	G-Ground	15.	DDC-Serial Clock
8.	B-Ground		
VGA Connector layout			
			

4.2 FACTORY PRESET DISPLAY MODES

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (Horizontal / Vertical)
DOS 720 x 400	31.5	70.1	28.3	-/+
VGA 640 x 480	31.5	60.0	25.18	-/-
VESA 640 x 480	37.5	75.0	31.5	-/-
VESA 800 x 600	37.9	60.3	40.0	+/+
VESA 800 x 600	46.9	75.0	49.5	+/+
VESA 1024 x 768	48.4	60.0	65.0	-/-
VESA 1024 x 768	60.0	75.0	78.8	+/+

For ergonomic reasons, a screen resolution of 1024 x 768 pixels is recommended. Because of the technology used (active matrix) an LCD monitor provides a totally flicker-free picture even with a refresh rate of 60 Hz.

4.3 POWER SUPPLY REQUIREMENTS

4.3.1 INPUT REQUIREMENTS

AC INPUT VOLTAGE: 100V ~ 240V

AC INPUT FREQUENCY: 50 ~ 60 HZ

AC INPUT CURRENT: 1.5A MAX

INRUSH CURRENT: 50A MAX AT 220V

LEAKAGE CURRENT: 3.5 mA Max.

4.3.2 OUTPUT REQUIREMENTS

ITEM	MIN.	TYP.	MAX.	UNIT	REMARK
Output voltage (12V)	**11.4**	**12**	**12.6**	**V**	
Output current (12V)	**0**	**1.5**	**2.0**	**A**	
Output voltage (5V)	**4.75**	**5.0**	**5.25**	**V**	
Output current (5V)	**0**	**1.5**	**2.0**	**A**	
Ripple & Noise (12V)			**200**	**mV**	
Ripple & Noise (5V)			**100**	**mV**	

4.4 PANEL SPECIFICATION

4.4.1 PANEL FEATURE

- High contrast ratio, high aperture structure
- TN (Twisted Nematic) mode
- Wide viewing angle
- High speed response
- XGA (1024 x 768 pixels) resolution
- Low power consumption
- 2 dual CCFTs (Cold Cathode Fluorescent Tube)
- DE (Data Enable) mode
- LVDS (Low Voltage Differential Signaling) interface (1pixel/clock)

4.4.2 DISPLAY CHARACTERISTICS

Items	Specification	Unit	Note
Display area	304.128(H) x 228.096(V)	mm	
Driver element	a-Si TFT active matrix		
Display colors	16.2M	colors	
Number of pixels	1028 x 768	pixel	
Pixel arrangement	RGB vertical stripe		
Pixel pitch	0.297(H) x 0.297(W)	mm	
Display mode	Normally White		
Surface treatment	Haze 25% , Hard-coating (3H)		

4.4.3 OPTICAL CHARACTERISTICS

The following items are measured under stable conditions. The optical characteristics should be measured in a dark room or equivalent state with the methods shown in Note (1).

Measuring equipment : TOPCON BM-5A, BM-7, PHOTO RESEARCH PR650
Eldim EZ-Contrast

* Ta = 25 ± 2°C, VDD=3.3V, fv= 60Hz, f_{DCLK}=65MHz, I_L = 6.0mA$_{rms}$

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Contrast Ratio (Center of screen)		C/R	Normal $\phi = 0$ $\theta = 0$ Viewing Angle	200	300	-		(3) BM-5A
Response Time	Rising	Tr		-	5	7	msec	(5) BM-7
	Falling	Tf		-	20	24		
Luminance of White (Center of screen)		YL		200	250	-	cd/m2	(6) BM-5A
Color Chromaticity (CIE 1931)	Red	Rx		0.598	0.628	0.658		(7) PR650
		Ry		0.323	0.353	0.383		
	Green	Gx		0.260	0.290	0.320		
		Gy		0.565	0.595	0.625		
	Blue	Bx		0.114	0.144	0.174		
		By		0.058	0.088	0.118		
	White	Wx		0.274	0.304	0.334		
		Wy		0.295	0.325	0.355		
Viewing Angle	Hor.	θ L	CR≥10	60	65	-	Degrees	(8) BM-5A
		θ R		60	65	-		
	Ver.	ϕ H		45	50	-		
		ϕ L		50	55	-		
Brightness Uniformity (9 Points)		Buni		-	-	28	%	(4) BM-5A

4.4.4 PARAMETER GUIDE LINE FOR CCFL INVERTER

Ta = 25°C

ITEM		SYMBOL	MIN.	TYP.	MAX.	UNIT	NOTE
Voltage of Power Supply		VCC	3.0V	3.3V	3.6V	V	(1)
Differential Input Threshold Voltage		VH	-	-	+100	mA	VCM =1.2V
		VL	-100	-	-	mA	
Current of Power Supply	(a) White	IDD	-	360	-	mA	(2),(3)
	(b) Black		-	400	-	mA	
	(c) Sparse dot moire		-	450	600	mA	
Vsync Frequency		fV	-	60	75	Hz	-
Hsync Frequency		fH	-	48.4	60	KHz	
Main Frequency		fDCLK	-	65	78.75	MHz	
Rush Current		IRUSH	-	-	1.5	A	(5)

BACKLIGHT

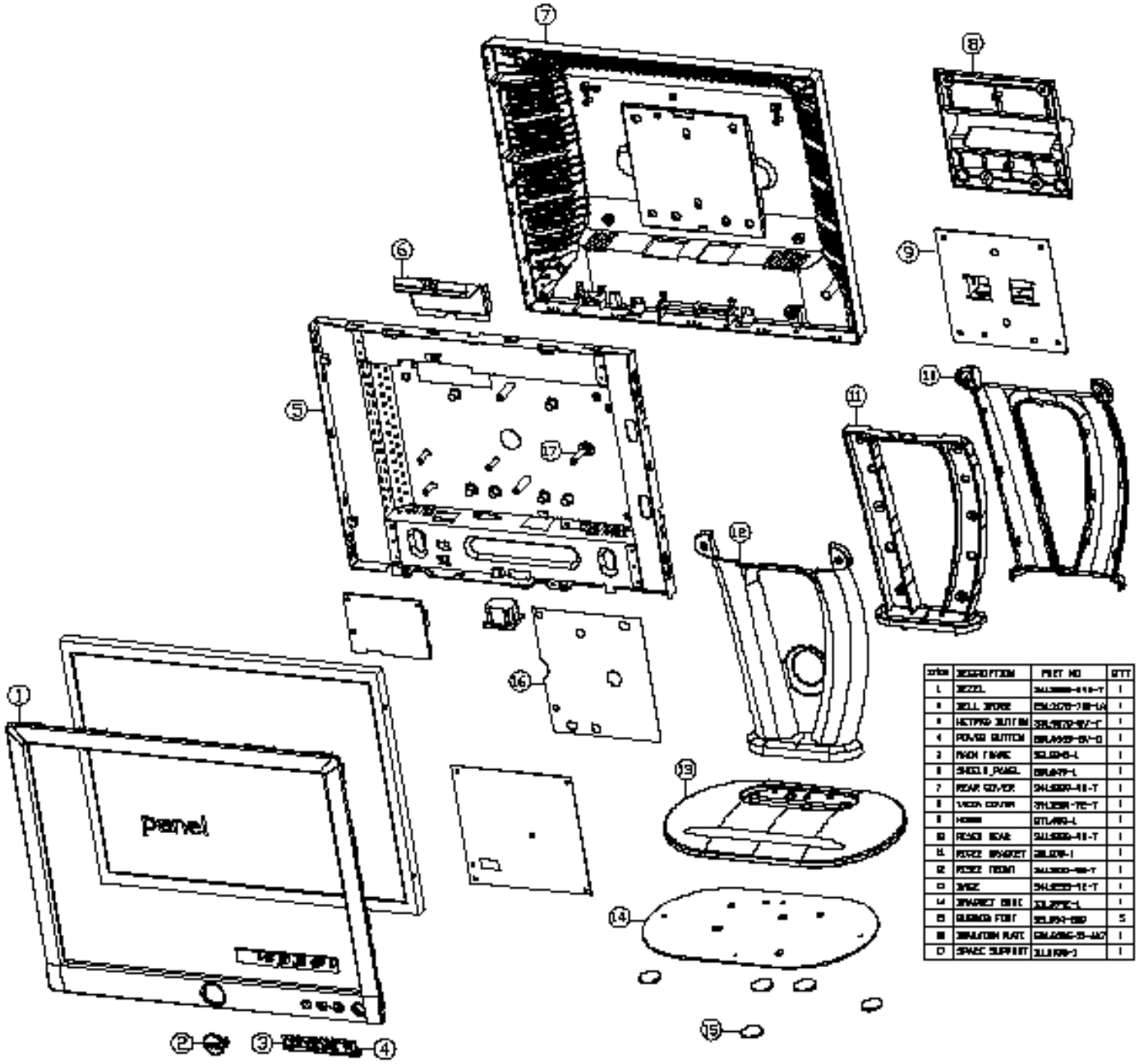
The back-light system is an edge - lighting type with 2 dual CCFTs (Cold Cathode Fluorescent Tube) The characteristics of two dual lamps are shown in the following tables.

Ta=25 ± 2°C

Item	Symbol	Min.	Typ.	Max.	Unit	Note
Lamp Current	IL	3.0	6.0	6.5	mArms	(1)
Lamp Voltage	VL	-	655	-	Vrms	
Lamp Frequency	fL	40	-	80	kHz	(2)
Operating Life Time	Hr	25,000	-	-	Hour	(3)
Startup Voltage	Vs	-	-	25℃ : 1,220	Vrms	(4)
				0°C : 1,710		

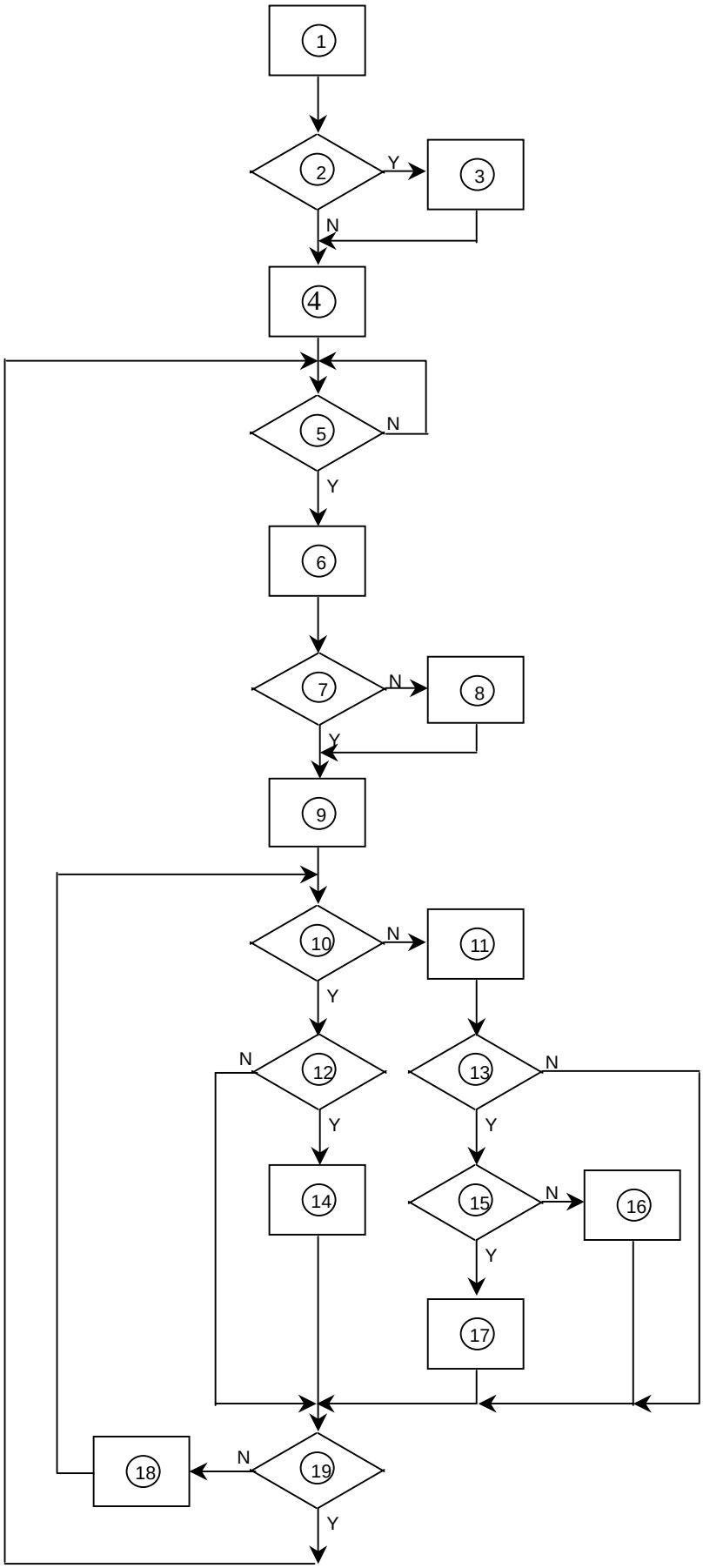
5. BLOCK DIAGRAM

5.1 MONITOR EXPLODED VIEW



SYMBOL	DESCRIPTION	PART NO	QTY
L	BEZEL	[illegible]	1
A	DELL BADGE	[illegible]	1
B	HEIGHT ADJUSTMENT	[illegible]	1
C	POWER BUTTON	[illegible]	1
D	MAIN FRAME	[illegible]	1
E	SHIELD_PANEL	[illegible]	1
F	REAR COVER	[illegible]	1
G	VESA COVER	[illegible]	1
H	HOUSE	[illegible]	1
J	FOOT REAR	[illegible]	1
K	FOOT BRACKET	[illegible]	1
M	FOOT FRONT	[illegible]	1
N	BASE	[illegible]	1
P	BRACKET BASE	[illegible]	1
R	RUBBER FOOT	[illegible]	5
S	INSULATION PLATE	[illegible]	1
T	SPACE SUPPORT	[illegible]	1

5.2 SOFTWARE FLOW CHART



1) MCU Initializes.

2) Is the EEprom blank?

3) Program the EEprom by default values.

4) Get the PWM value of brightness from EEprom.

5) Is the power key pressed?

6) Clear all global flags.

7) Are the AUTO and SELECT keys pressed?

8) Enter factory mode.

9) Save the power key status into EEprom.

Turn on the LED and set it to green color.

Scalar initializes.

10) In standby mode?

11) Update the lifetime of back light.

12) Check the analog port, are there any signals coming?

13) Does the scalar send out an interrupt request?

14) Wake up the scalar.

15) Are there any signals coming from analog port?

16) Display "No connection Check Signal Cable" message. And go into standby mode after the message disappears.

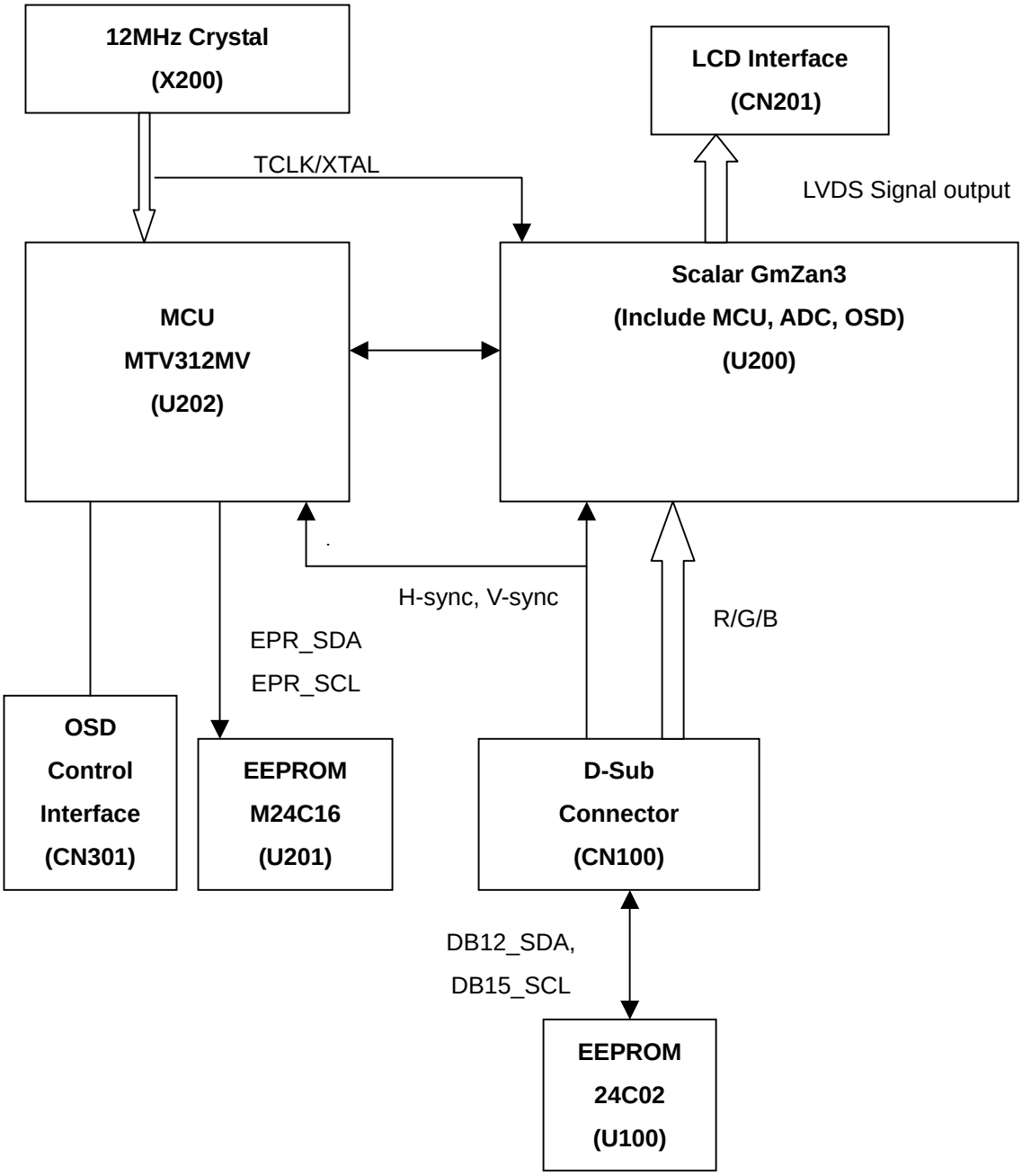
17) Program the scalar to be able to show the coming mode.

18) Process the OSD display.

19) Read the keyboard. Is the power key pressed?

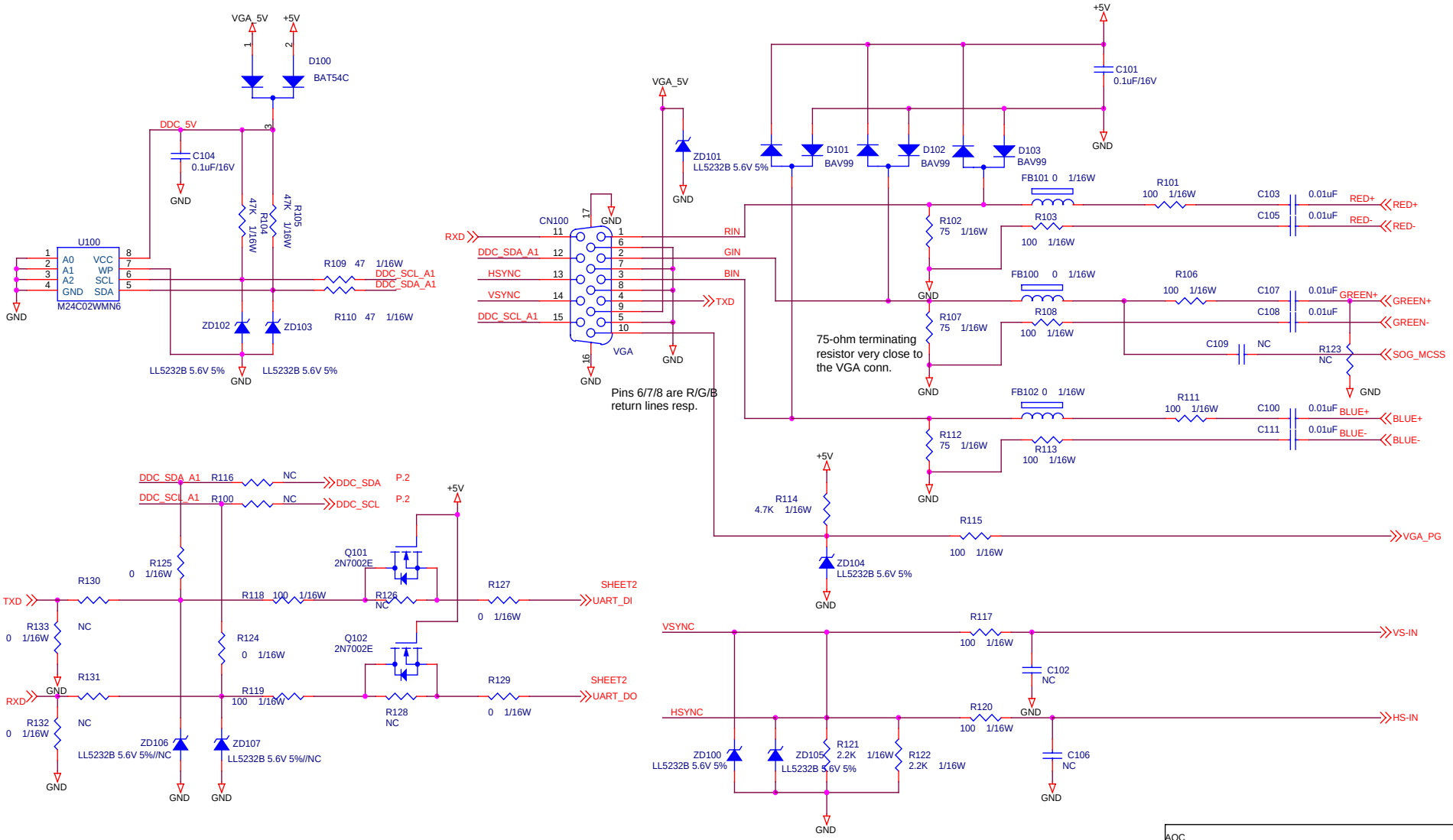
5.3 ELECTRICAL BLOCK DIAGRAM

Main Board



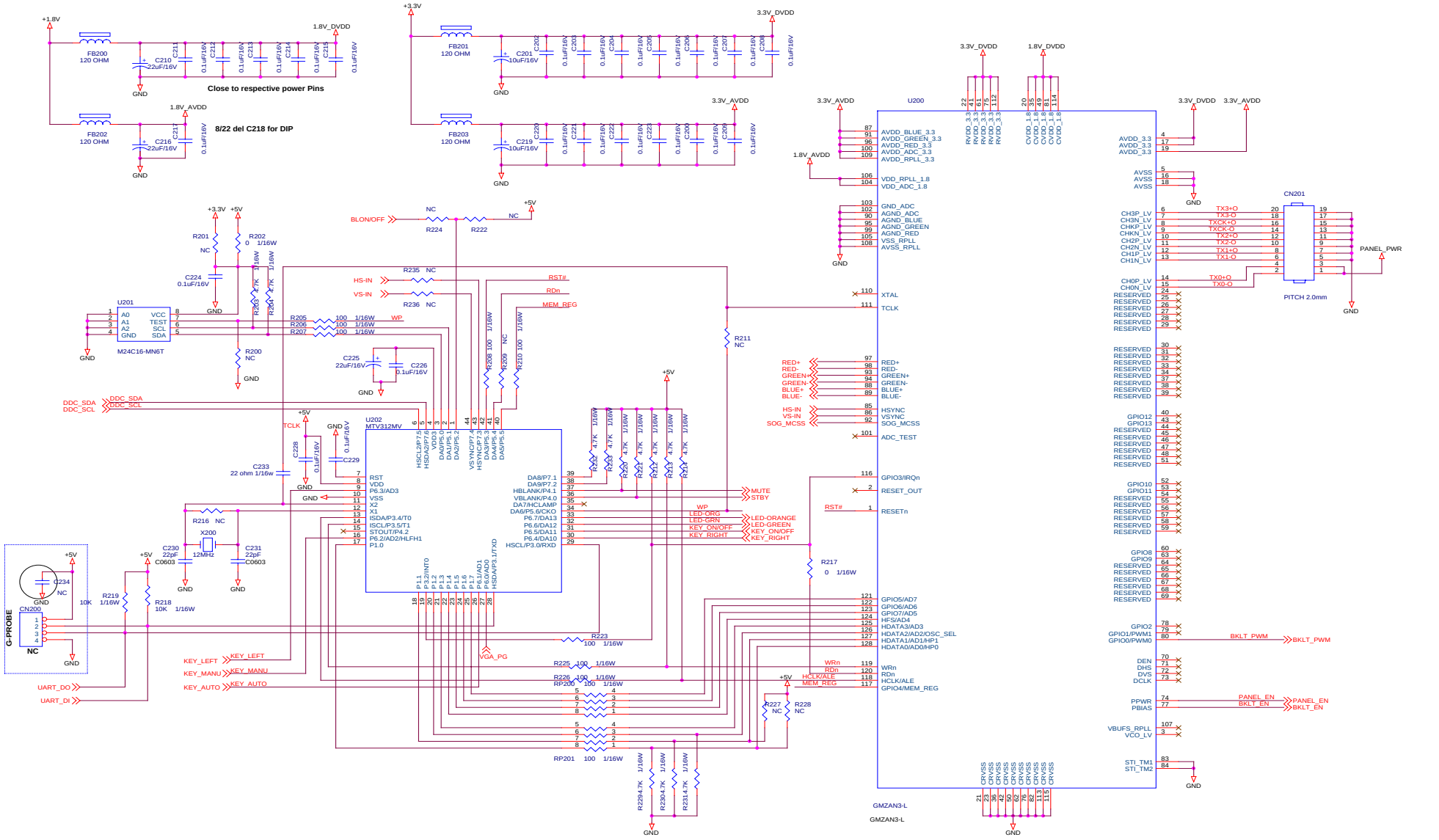
6. SCHEMATIC

6.1 MAIN BOARD



1. TO SUPPORT SOG -->ADD R123 1M OHM

AOC		
Title	ZAN3 LCD Control Board	
Size	Document Number: Analog Input	Rev: H
Date: 星期五, 十月 03, 2003	Sheet 1 of 4	



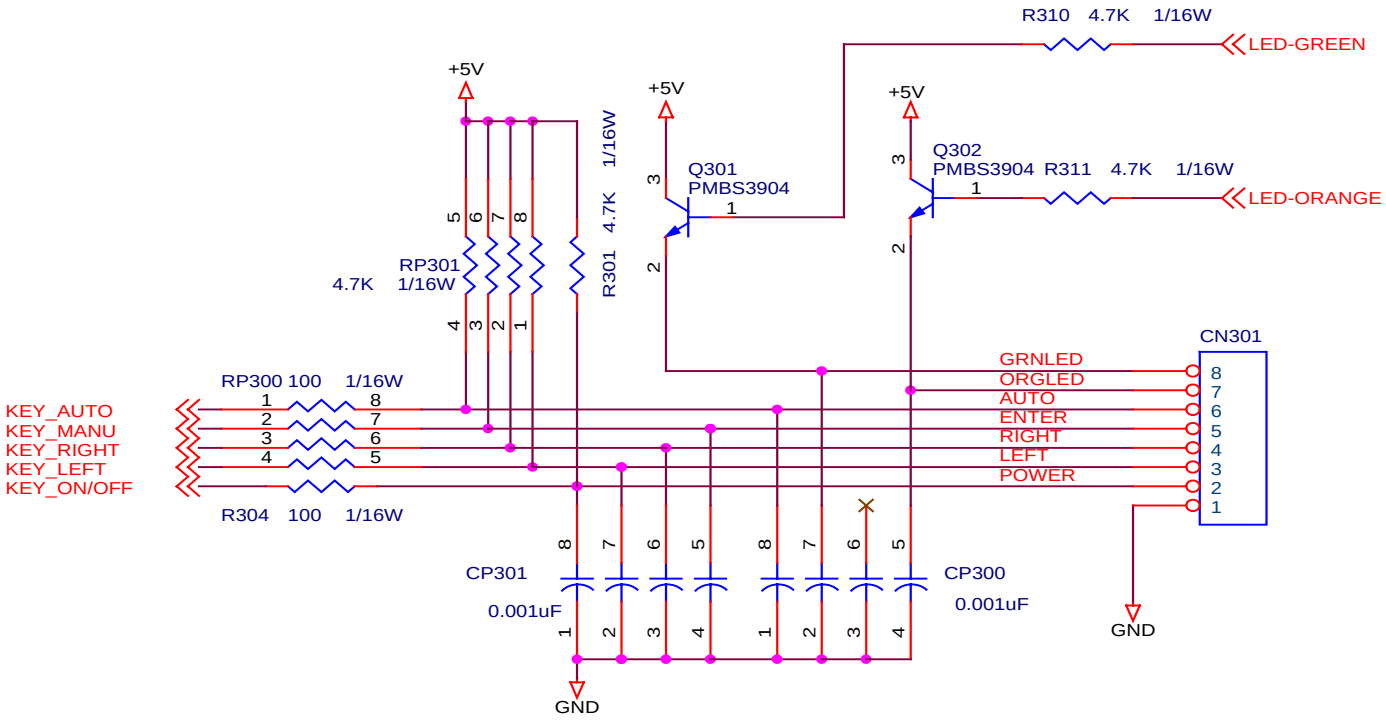
BOOTSTRAP OPTIONS

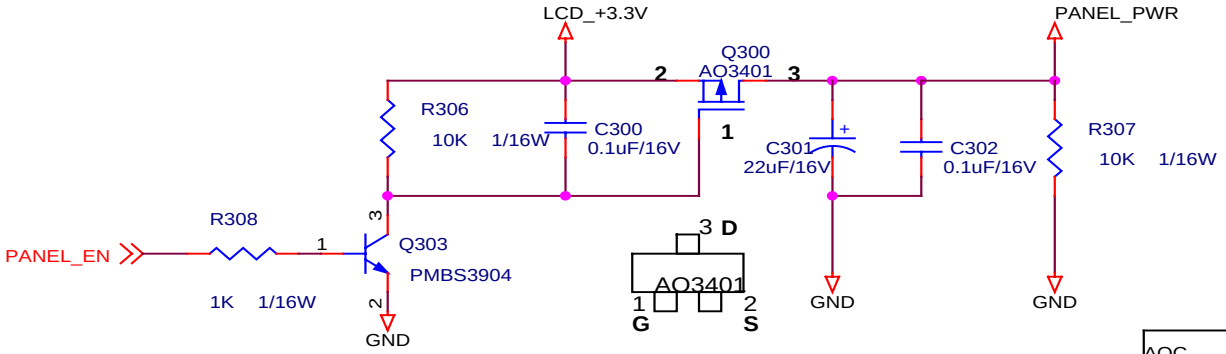
HDATA1	HDATA0	
LOW	LOW	N/A
LOW	HIGH	Reserved
HIGH	LOW	2-wire I/F
HIGH	HIGH	6-wire Genesis I/F

OSC_SEL (HDATA2)	
LOW	EXTERNAL OSC.
HIGH	XTAL and INTERNAL OSC

When X2 is used to drive ZAN3 (the optional X1 crystal is not used) remove the shunt from JP1.

AOC		
Title	ZAN3 LCD Control Board	
Size	Document Number ZAN3	Rev H
Date: 星期五, 十月 03, 2003	Sheet 2 of 4	





AOC		
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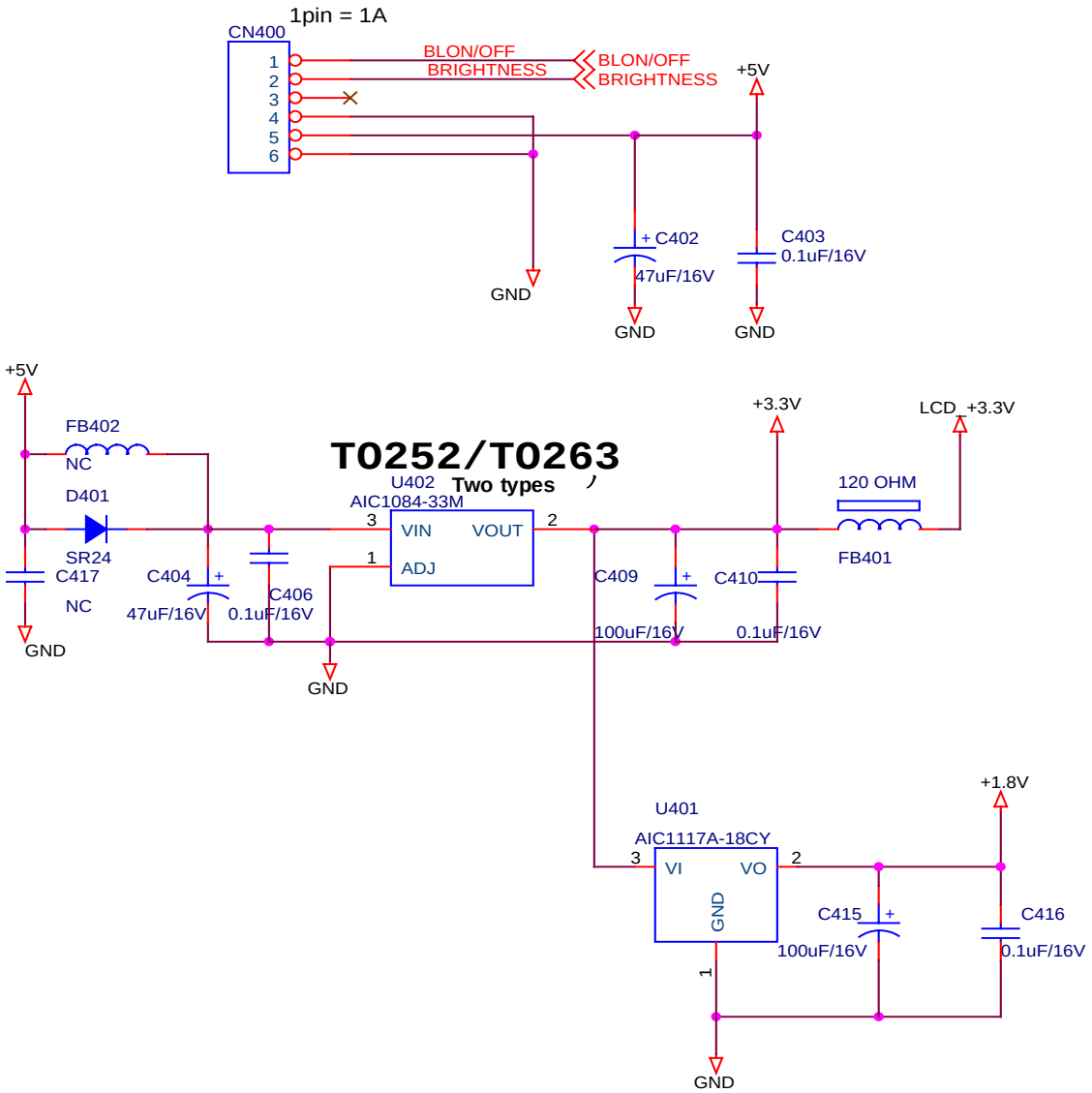
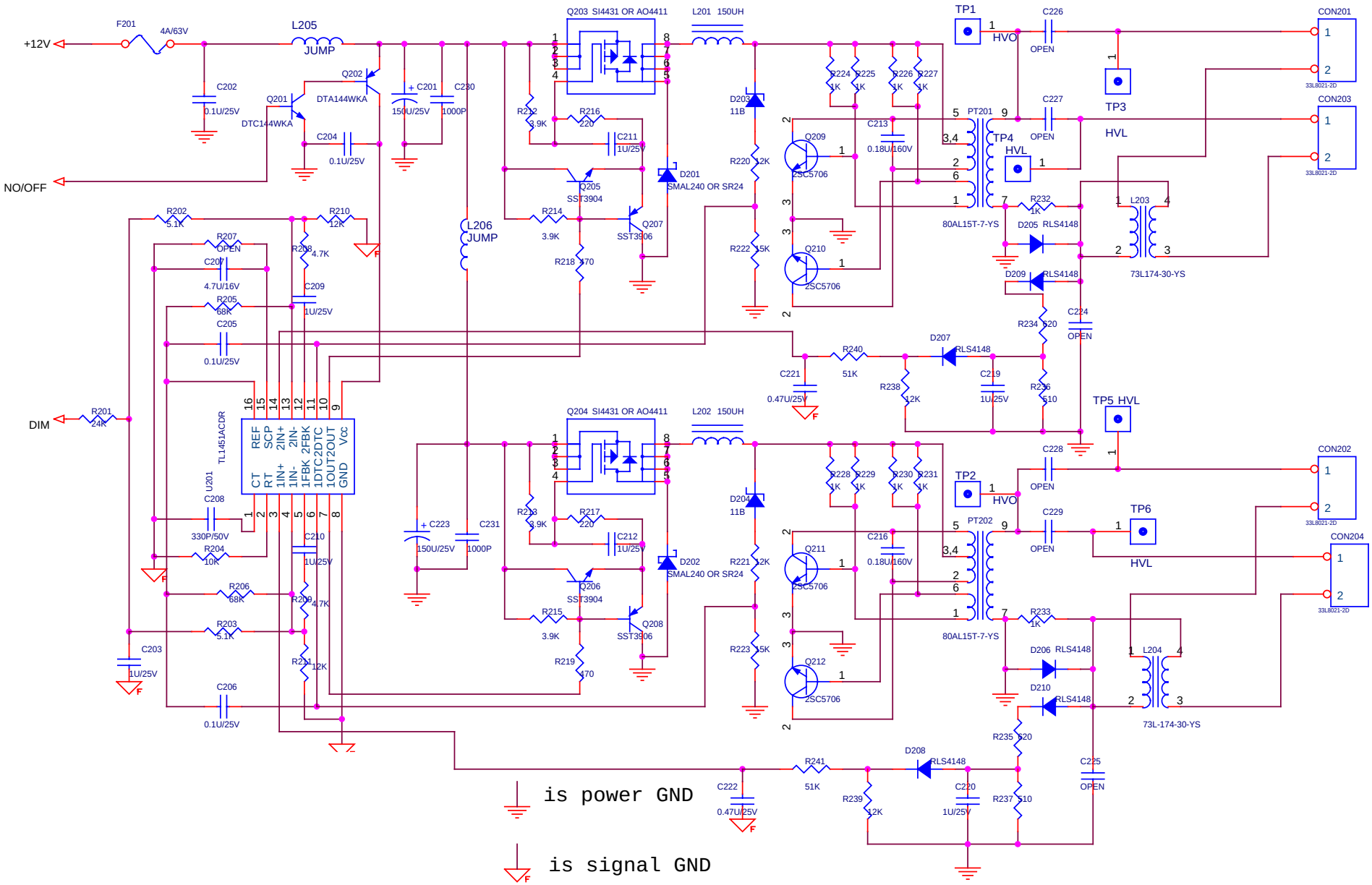
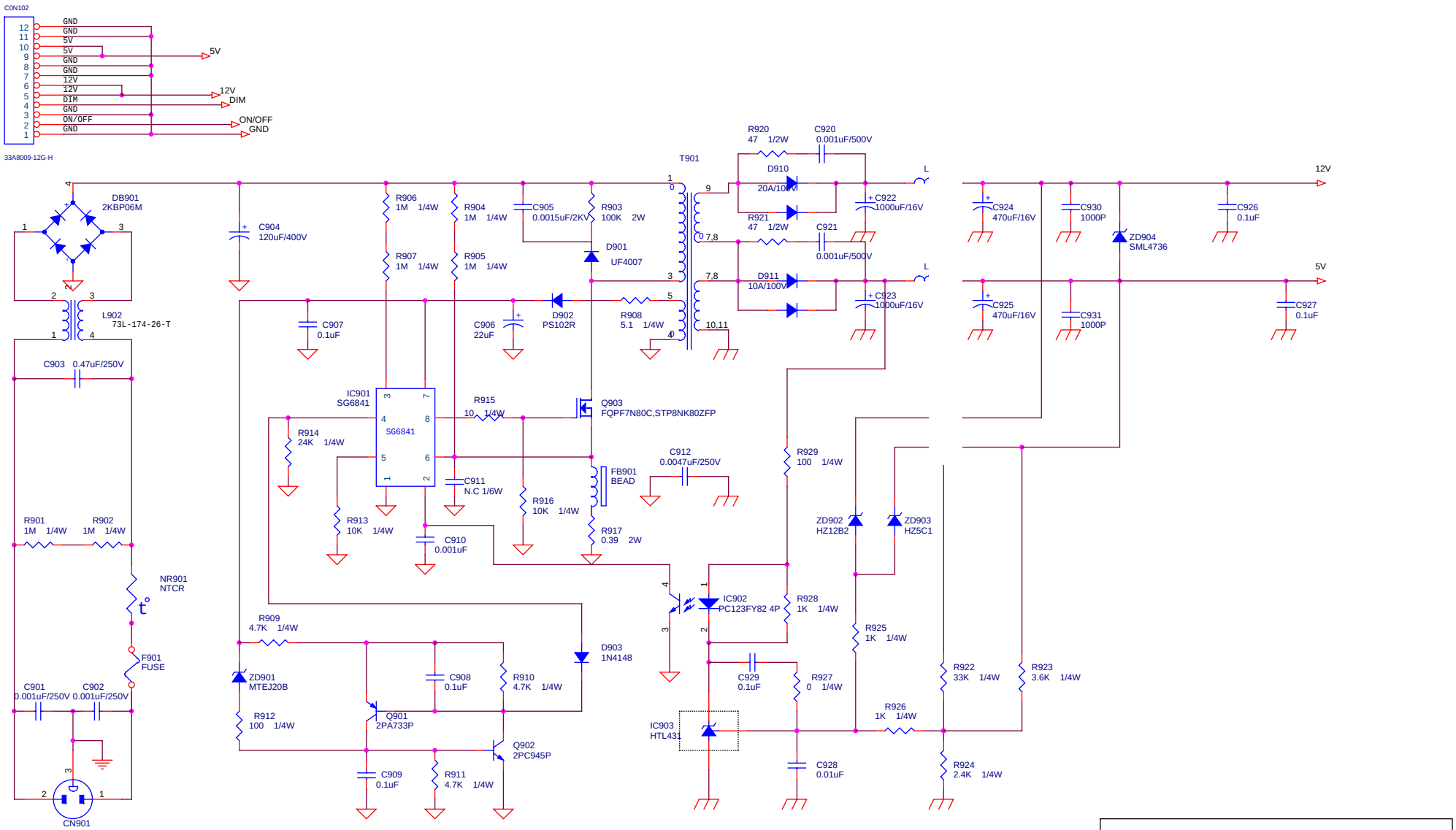
Size	Document Number: keyboard&panel power	Rev: H
Date: 星期五, 十月 03, 2003	Sheet 3 of 4	



AOC		
Title	ZAN3 LCD Control Board	
Size	Document Number Board Power Supply	Rev H
Date: 星期五, 十月 03, 2003	Sheet 4 of 4	

6.2 PWPC BOARD

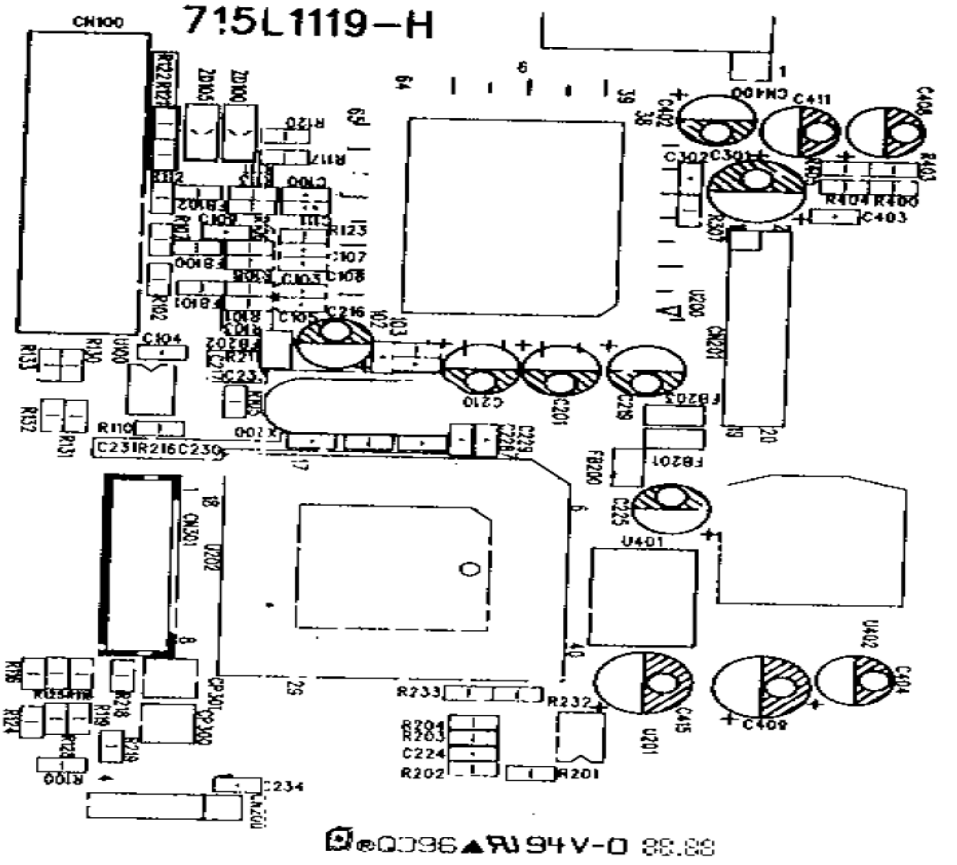


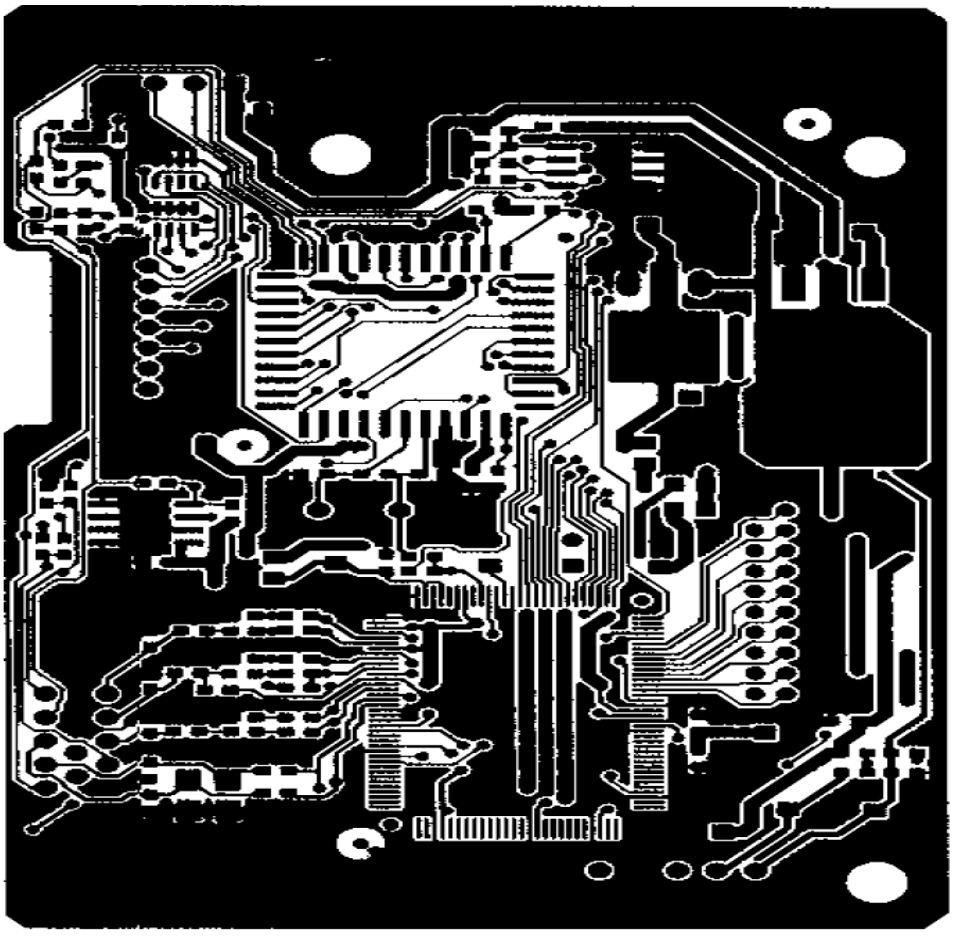


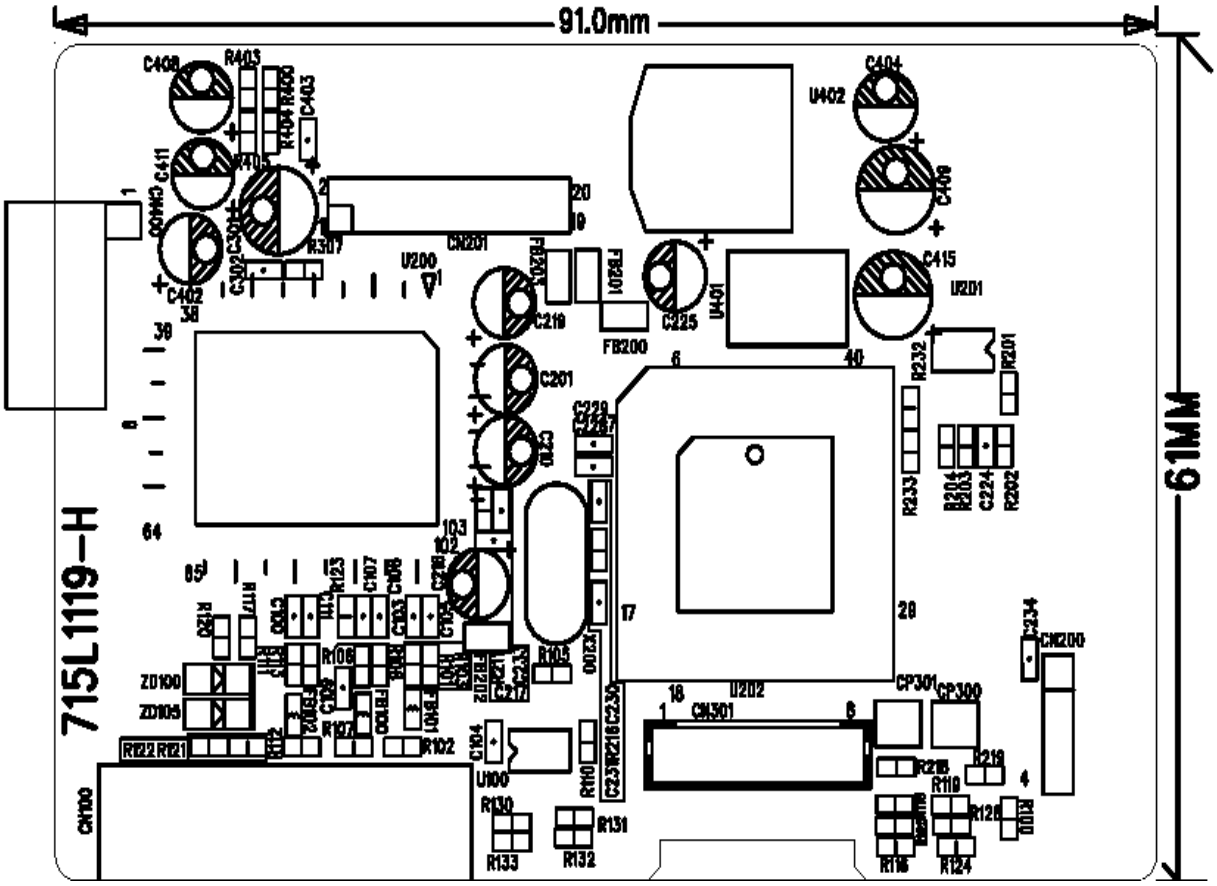
AOC (Top Victory) Electronics Co., Ltd.		
Title: 1.POWER 12V&5V OUTPUT		
Size	Document Number: PWPC1742CPD1(715L-1283-1)	Rev: A
Date: Tuesday, June 01, 2004	Sheet 2 of 2	

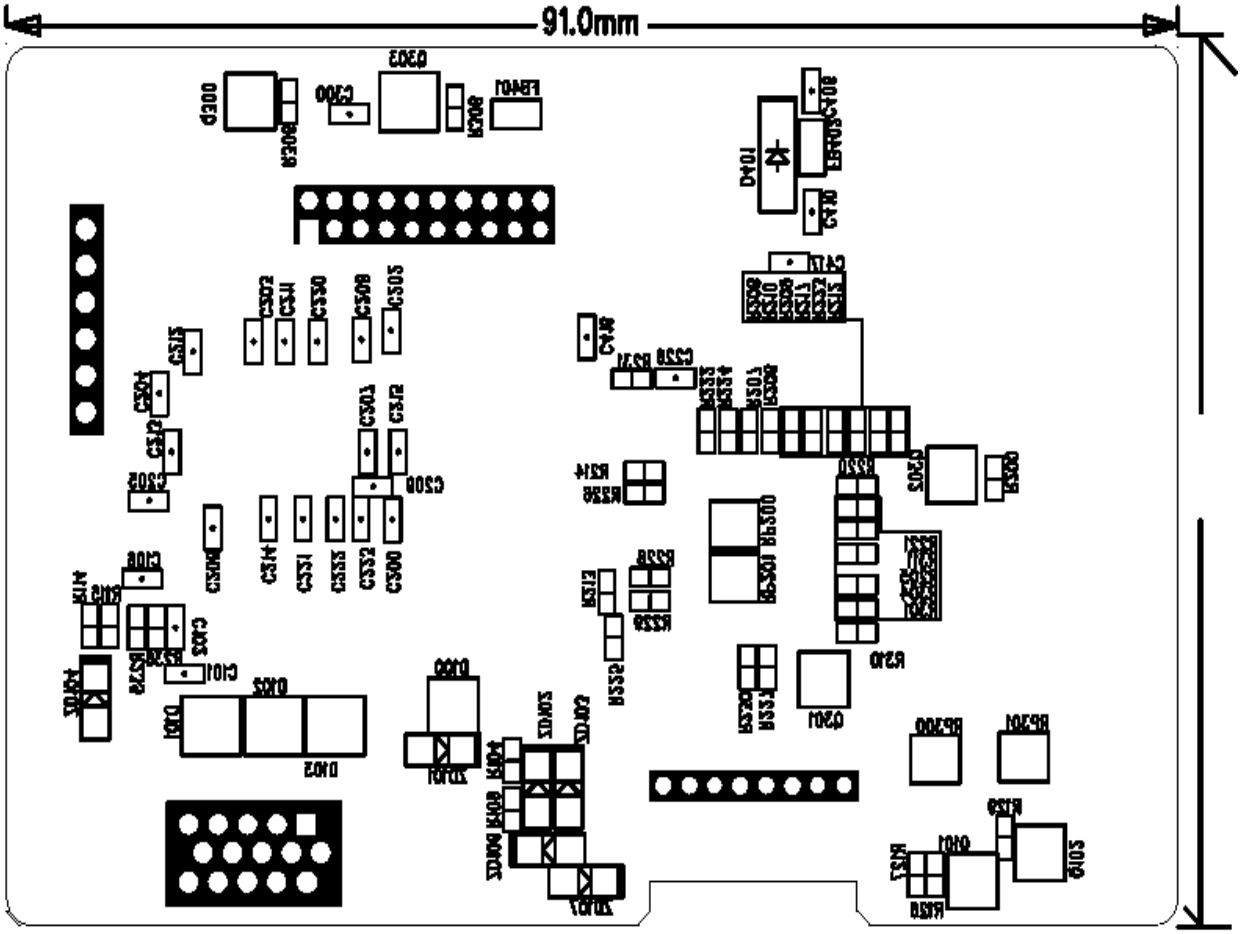
7. PCB LAYOUT

7.1 MAIN BOARD

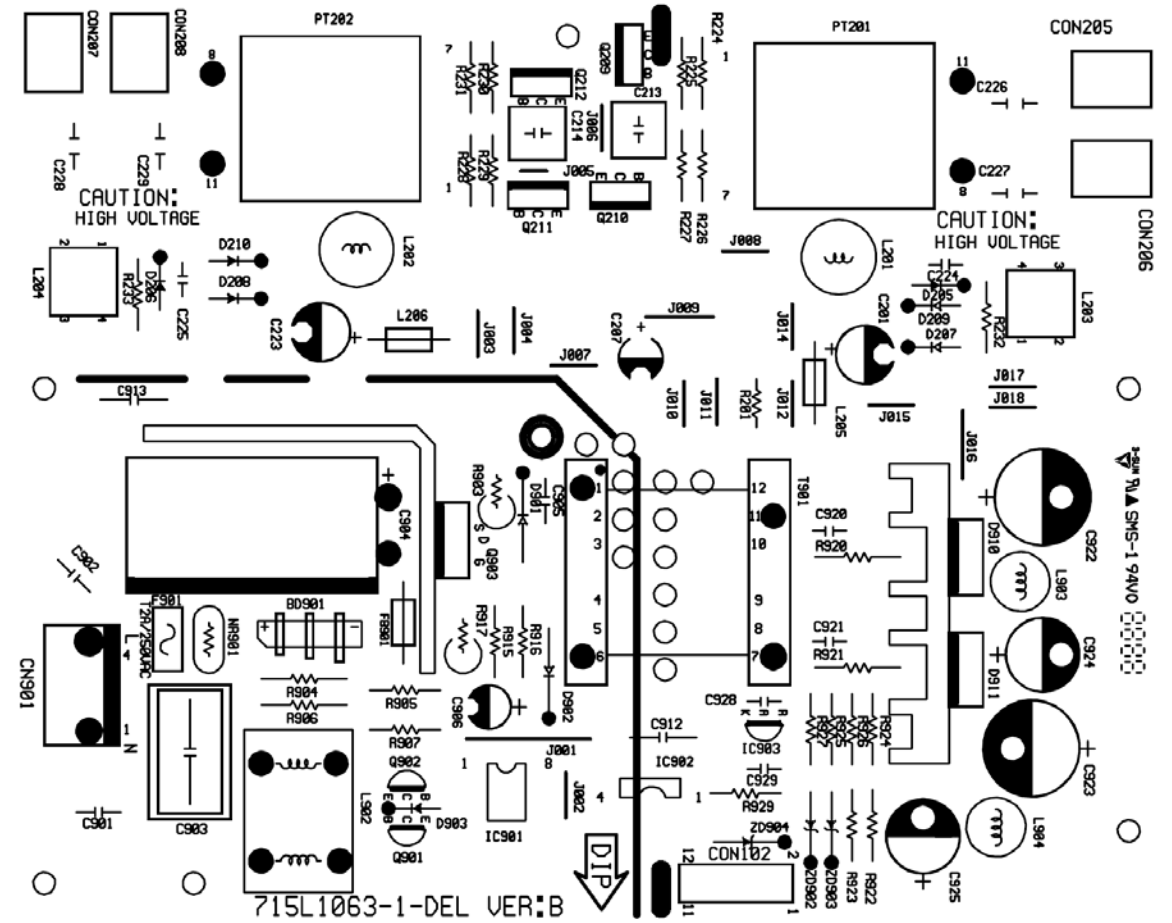


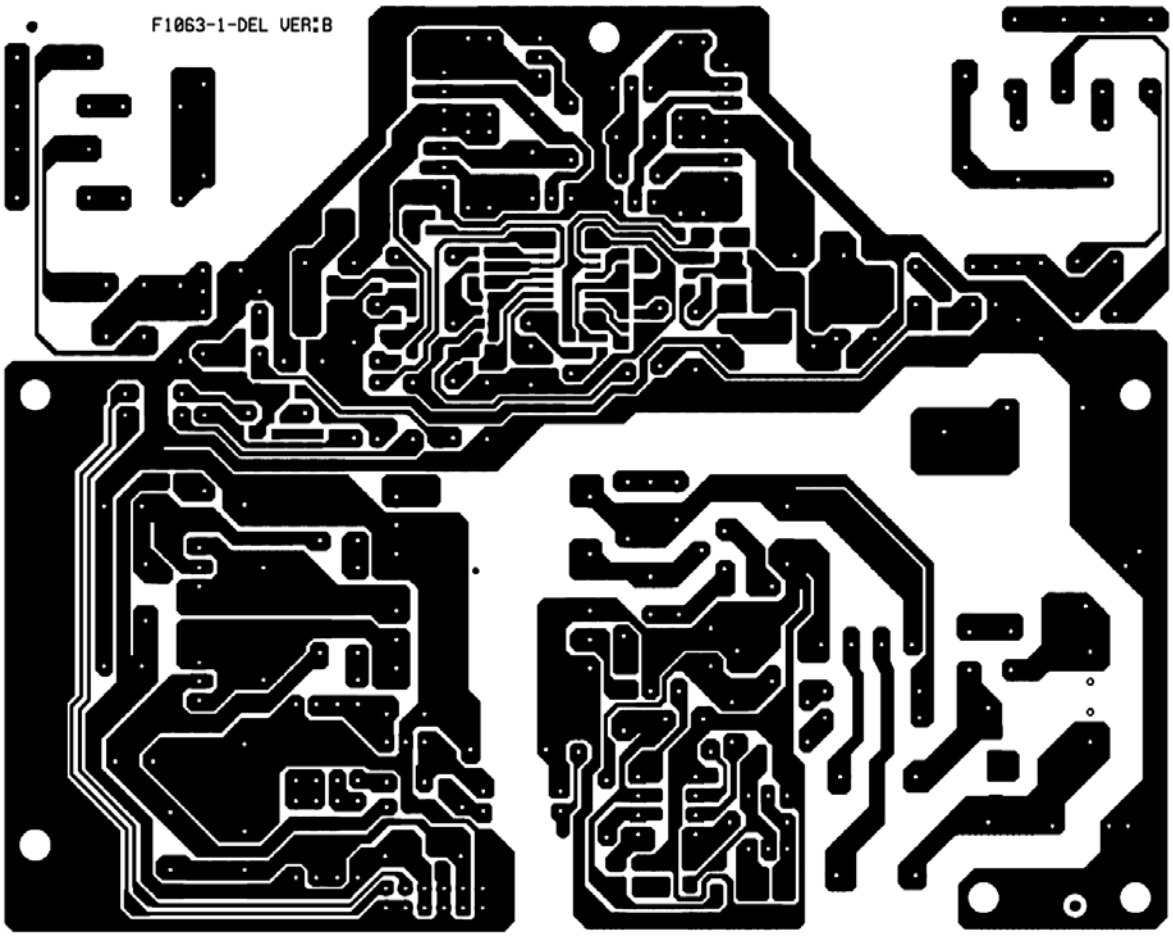



91.0mm
61MM
715L1119-H

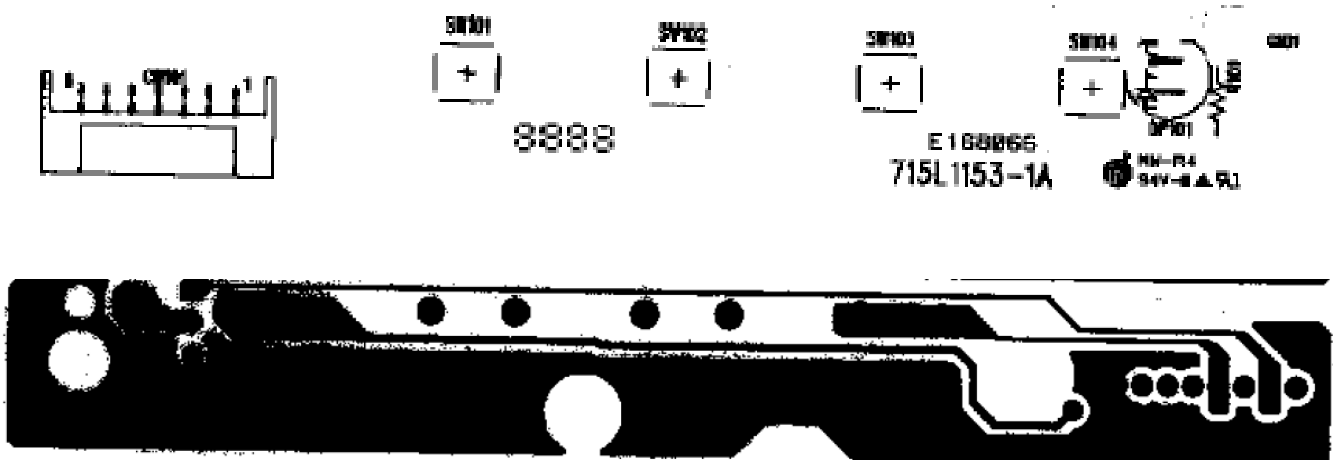

91.0mm

7.2 PWPC BOARD





7.3 KEYPAD BOARD



8. MAINTAINABILITY

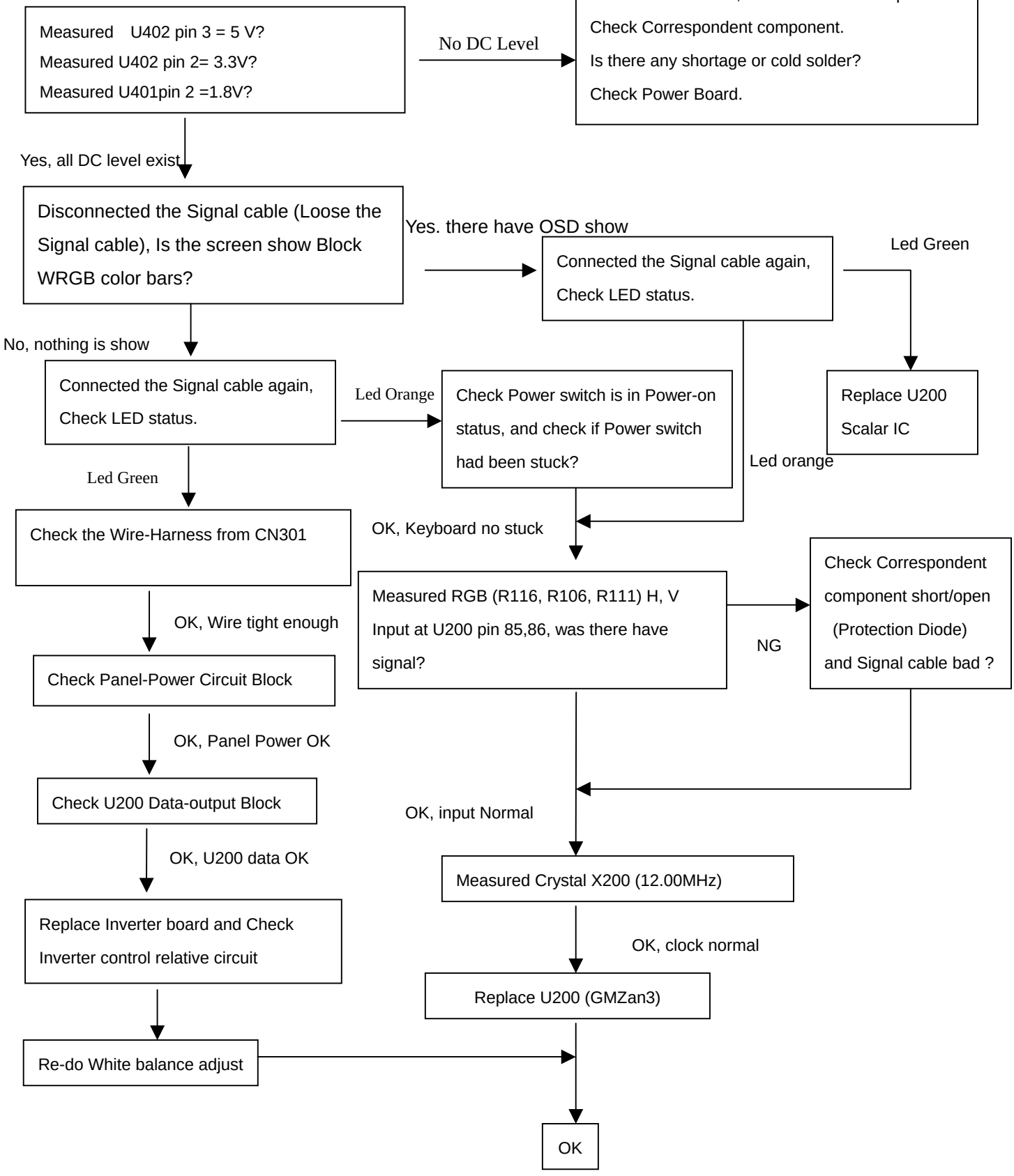
8.1 EQUIPMENTS AND TOOLS REQUIREMENT

- Voltage meter.
- Oscilloscope.
- Pattern Generator.
- DDC Tool with a IBM Compatible Computer.
- Alignment Tool.
- LCD Color Analyzer.
- Service Manual.
- User Manual.

8.2 TROUBLE SHOOTING

8.2.1 MAIN BOARD

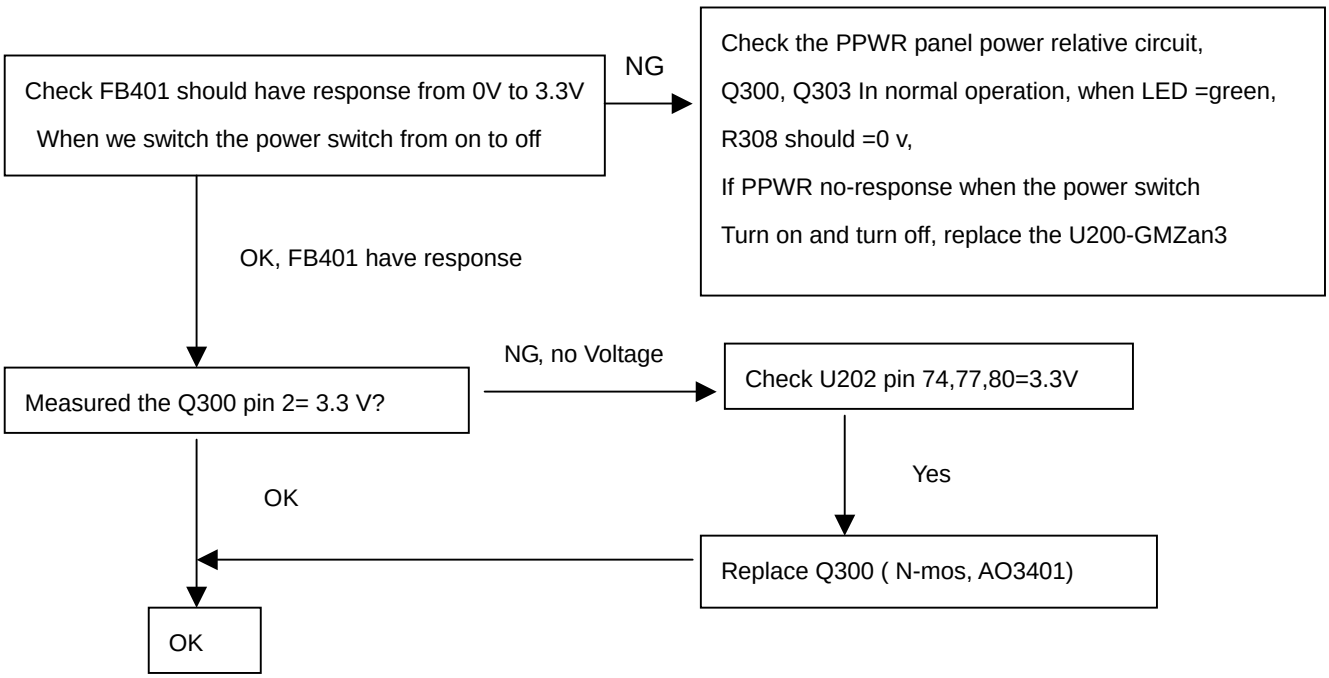
1.NO SCREEN APPEAR



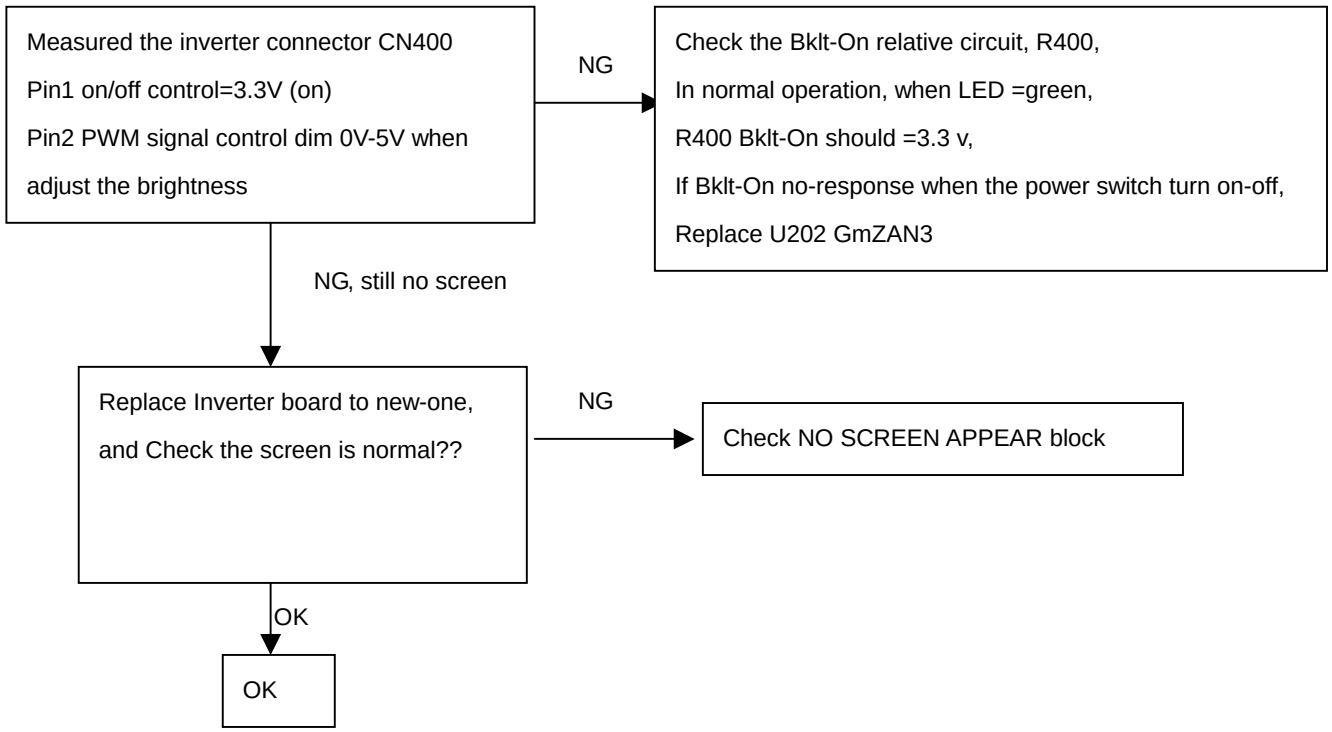
Note: 1. If Replace "**MAIN-BOARD**", Please re-do "DDC-content" programmed & "WHITE-Balance".

2. If Replace "**Inverter Board**" only, Please re-do " WHITE-Balance"

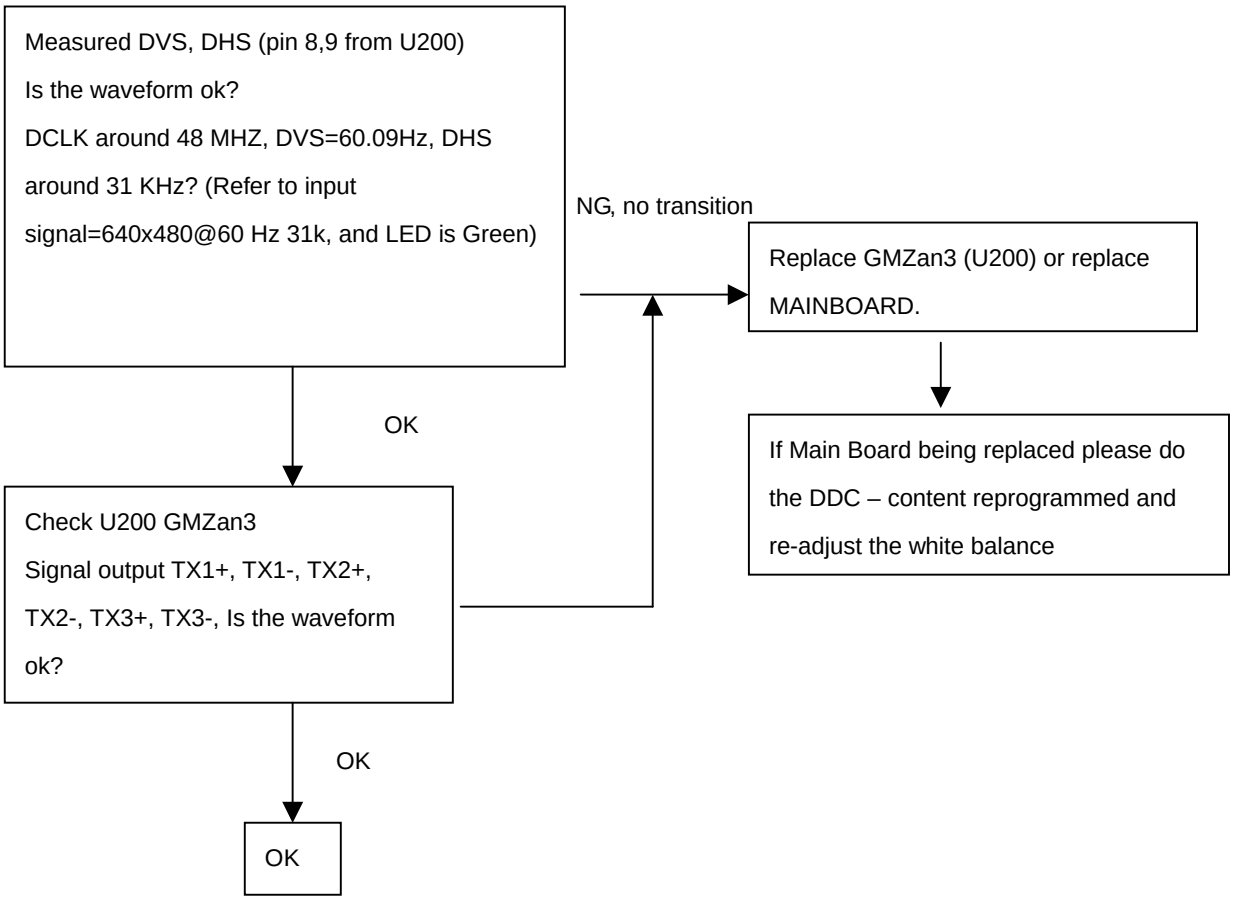
2.PANEL-POWER CIRCUIT



3. INVERTER CONTROL RELATIVE CIRCUIT

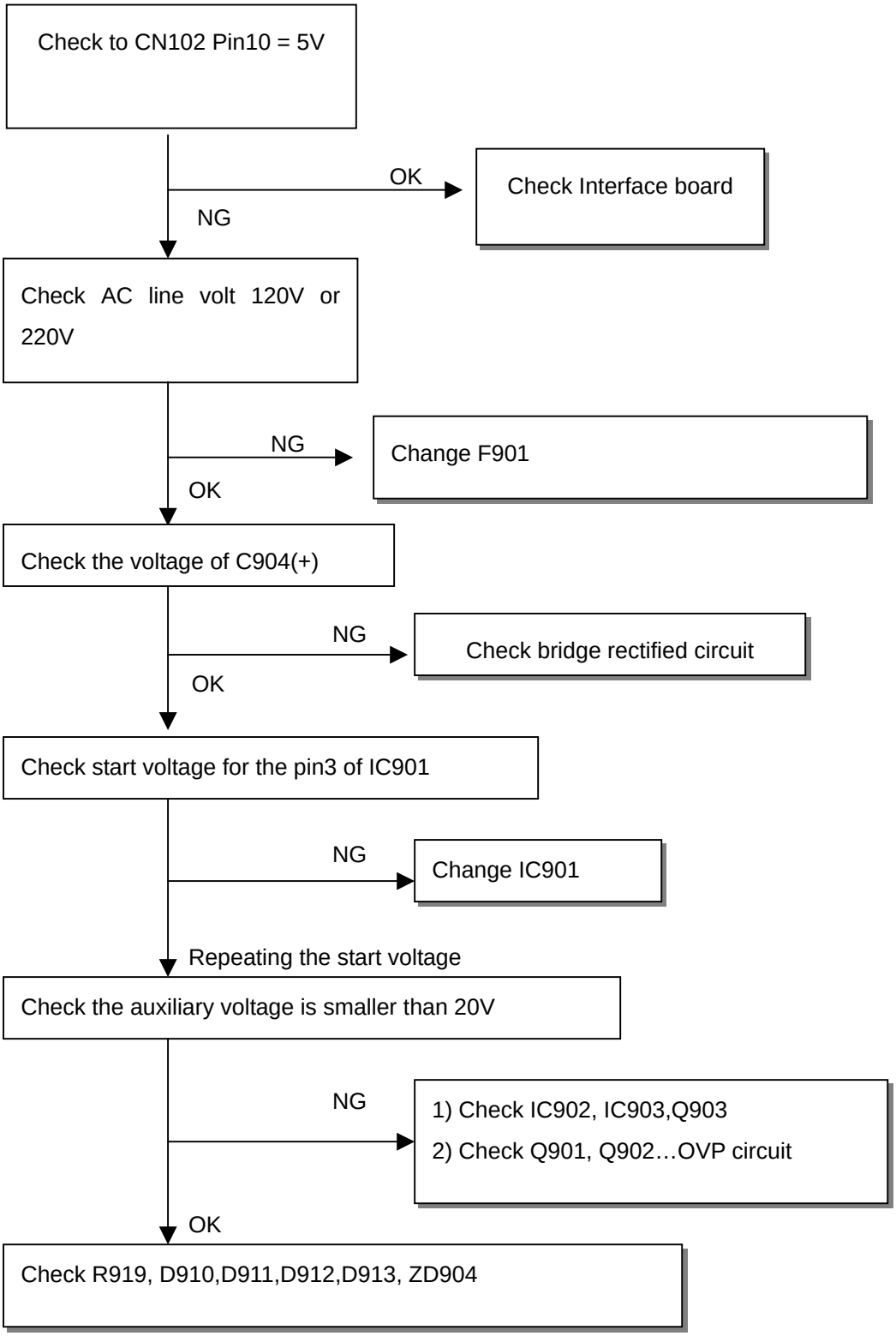


4.U200-DATA OUTPUT

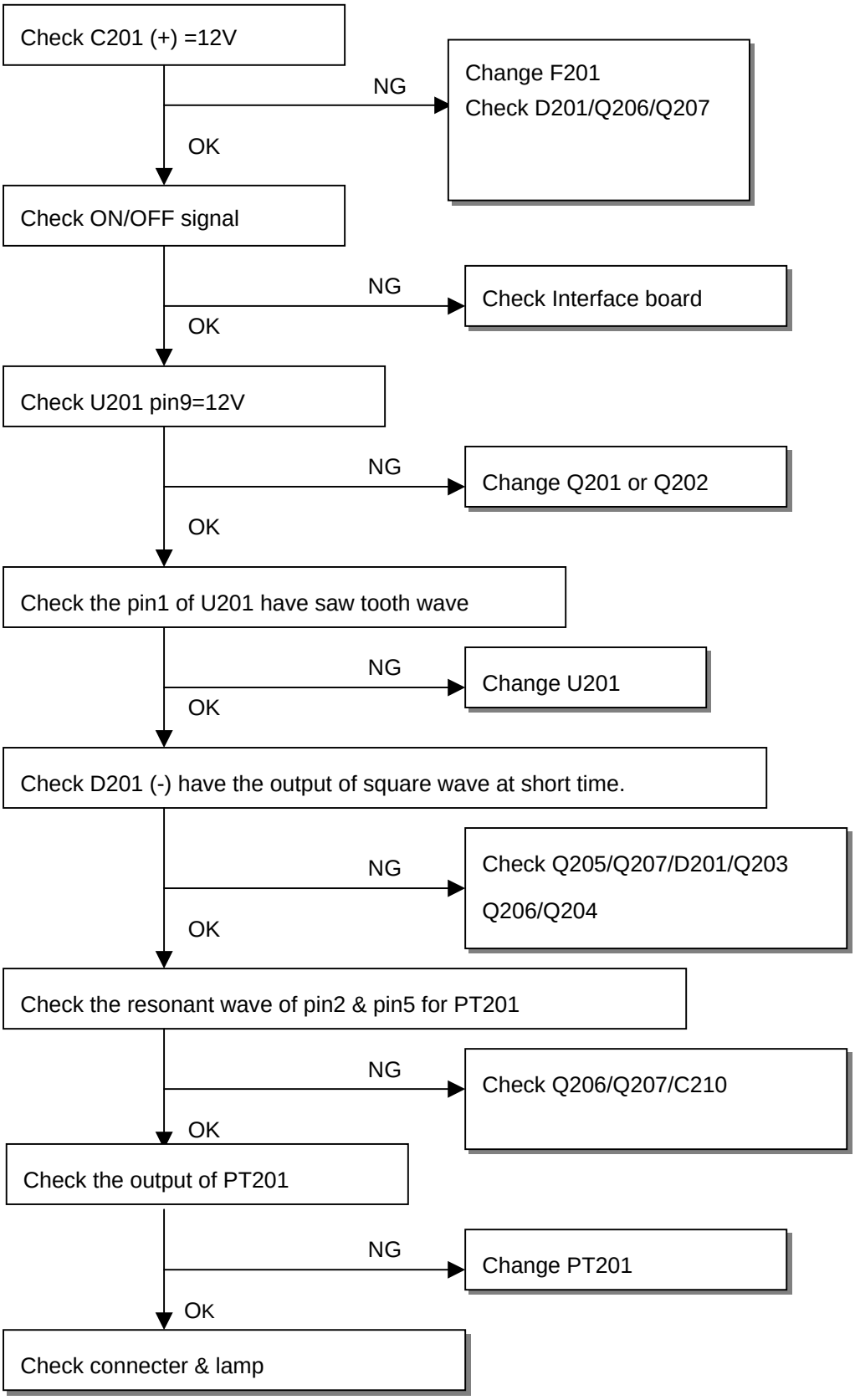


8.2.2 PWPC BOARD

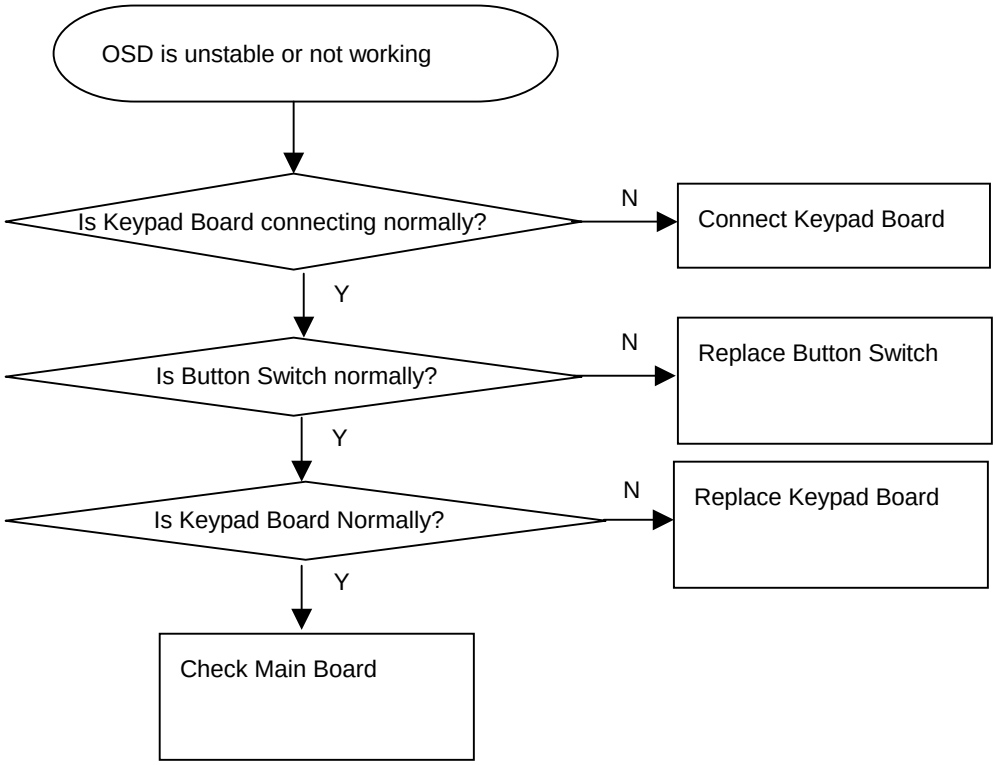
1.) No power



2.) W / LED, No Backlight



8.2.3 Keypad Board



9.WHITE-BALANCE, LUMINANCE ADJUSTMENT

Before started adjust white balance, please setting the Chroma-7120 **MEM. Channel 3 to 6500^{0}K** colors, **MEM. Channel 4 to 9300^{0}K** colors, **MEM. Channel 9 to 5700^{0}K** (our 9300 parameter is x = 283 ±28, y = 297 ±28, Y = 175±20 cd/m^2, 6500 parameter is x = 313 ±28, y = 329 ±28, Y = 180 ±20 cd/m^2, and 5700 parameter is x = 328 ±28, y = 344 ±28, Y = 180 ±20 cd/m^2)

How to setting MEM.channel you can reference to chroma 7120 user guide or simple use " **SC"** key and " **NEXT"** key to modify xyY value and use **"ID"** key to modify the TEXT description Following is the procedure to do white-balance adjust Press MENU and AUTO-ADJUST button during press Power button will activate the factory mode,

Gain adjustment:

Move cursor to "-Factory Setting-" and press MENU key to enter this sub-menu;

Move cursor to " Factory" and press MENU key;

Move cursor to " Auto Level" and press MENU key to adjust Gain and Offset automatically;

a. Adjust sRGB (6500^{0}K) color-temperature

1. Switch the chroma-7120 to **RGB-mode** (with press "MODE" button)
2. Switch the MEM.channel to Channel 3 (with up or down arrow on chroma 7120)
3. The LCD-indicator on chroma 7120 will show x = 313 ±28, y = 329 ±28, Y = 180 ±20 cd/m^2
4. Adjust the RED on OSD window until chroma 7120 indicator reached the value R=100
5. Adjust the GREEN on OSD, until chroma 7120 indicator reached G=100
6. Adjust the BLUE on OSD, until chroma 7120 indicator reached B=100
7. repeat above procedure (item 5,6,7) until chroma 7120 RGB value meet the tolerance =100±2

b. Adjust **Color1** (9300^{0}K) color-temperature

8. Switch the chroma-7120 to **RGB-mode** (with press "MODE" button)
9. Switch the MEM.channel to Channel 4 (with up or down arrow on chroma 7120)
10. The LCD-indicator on chroma 7120 will show x = 283 ±28, y = 297 ±28, Y = 175 ±20 cd/m^2
11. Adjust the RED on OSD window until chroma 7120 indicator reached the value R=100
12. Adjust the GREEN on OSD, until chroma 7120 indicator reached G=100
13. Adjust the BLUE on OSD, until chroma 7120 indicator reached B=100
14. Repeat above procedure (item 5,6,7) until chroma 7120 RGB value meet the tolerance =100±2

c. Adjust **Color2** (5700^{0}K) color-temperature

15. Switch the chroma-7120 to **RGB-mode** (with press "MODE" button)
16. Switch the MEM.channel to Channel 9 (with up or down arrow on chroma 7120)
17. The LCD-indicator on chroma 7120 will show x = 328 ±28, y = 344 ±28, Y = 180 ±20cd/m^2
18. Adjust the RED on OSD window until chroma 7120 indicator reached the value R=100
19. Adjust the GREEN on OSD, until chroma 7120 indicator reached G=100
20. Adjust the BLUE on OSD, until chroma 7120 indicator reached B=100
21. Repeat above procedure (item 5,6,7) until chroma 7120 RGB value meet the tolerance 100±2
22. Move cursor to " Exit/Save" sub-menu and press MENU key to save adjust value and exit.

Turn the POWER-button off to on to quit from factory mode. Turn the POWER-button off to on to quit from factory mode.

Max Brightness measurement:

a. Switch to the full white pattern, in user mode main menu:

1. Set <Color Settings> Red, Green, and Blue to the max.
2. Set <Brightness> Brightness, Contrast to the max.

b. The Minimum brightness is 200cd/m^2 ±20.

10. EDIT CONTENT

D-SUB Connector (Analog)

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
00:	00	FF	FF	FF	FF	FF	FF	00	10	AC	09	A0	44	43	42	41
16:	32	0D	01	03	68	1E	17	78	2E	B0	30	A1	58	4F	95	26
32:	1C	50	54	AF	CE	00	01	01	01	01	01	01	01	01	01	01
48:	01	01	01	01	01	01	64	19	00	40	41	00	26	30	18	88
64:	36	00	30	E4	10	00	00	18	00	00	00	FF	00	36	34	31
80:	38	30	33	39	39	41	42	43	44	0A	00	00	00	FD	00	38
96:	4C	1E	3F	08	00	0A	20	20	20	20	20	20	00	00	00	FC
112:	00	44	45	4C	4C	20	45	31	35	32	46	50	0A	20	00	36

11. BILL OF MATERIAL LIST

CBPC560KSLDLN	CONVERSION BOARD FOR DL	M	1	PCS
KEPC560KDE1	KEY BOARD FOR T560K*DEL	M	1	PCS
PWPC1542SED1	POWER BOARD	M	1	PCS
11G6036 1	SPACER SUPPORT SCC-24	P	1	PCS
15G5996 1	REAR COVER	P	1	PCS
23L3178700 1A	LOGO	P	1	PCS
26L 800700 4A6444	BARCODE	P	1	PCS
33L4669 GV C	POWER BUTTON	P	1	PCS
33L4670 GV T	KEY PAD	P	1	PCS
34L1228AY2 2T	BEZEL	P	1	PCS
34L1229 Y2 2T	REAR COVER	P	1	PCS
40L 150700 1D	ID LABEL	P	1	PCS
40L 581700 3A	CARTON LABEL	P	1	PCS
41L7800700 1B	QSG	P	1	PCS
44L3231 12 A	EVA WASHER	P	2	PCS
44L3535700 1B	CARTON	P	1	PCS
44L3574 1	EPS(L R)	P	1	PCS
44L3574 2	EPS (L R)	P	1	PCS
45L 88607DE3	PE BAG	P	1	PCS
52L 1186	SMALL TAPE	P	8	CM
52L 1207 A	ALUMINIUM TAPE	P	2	PCS
52L6020 2DE5	Protect film	P	1	PCS
52L6025 11629	INSULATION PLATE	P	1	PCS
52L6025 11659	MYLAR	P	1	PCS
52L6025 11660	MYLAR	P	1	PCS
70L1500700 1B	cd manual	P	1	PCS
85L 649 1	SHIELD	P	1	PCS
89L1738GAA 10	SIGNAL CABLE	P	1	PCS
89L401A18NISA	SP 18C+IS14	P	1	PCS
95G8018 20 2	HARNESS 120mm	P	1	PCS
D1L 330 4128	SCREW M3X4	P	1	PCS
M1G1740 6128	SCREW	P	1	PCS
M1L 340 10225	SCREW	P	4	PCS
M1L1030 3128	SCREW	P	6	PCS

	M1L1030 10128	SCREW	P	4	PCS
	M1L1430 6128	SCREW M3X6	P	8	PCS
	Q1L 330 8120	SCREW 3X8mm	P	3	PCS
	705L 560 87 02	CN901 ASS'Y	X	1	PCS
	750LLS50 XH	SEC 15" PANEL(XH-L01)	P	1	PCS
	CBPC560KSLDLN				
	AIC560KCLDL	MAIN BOARD	M	1	PCS
	40L 457624 1B	CPU LABEL	P	1	PCS
	40L 45762412B	CBPC LABEL	P	1	PCS
C201	67L309V100 3	10uf =_20% 16v	P	1	PCS
C210	67L309V220 3	22UF +-20% 16V	P	1	PCS
C216	67L305S220 3H	22UF 16V MINI TYPE	P	1	PCS
C219	67L309V100 3	10uf =_20% 16v	P	1	PCS
C225	67L309V220 3	22UF +-20% 16V	P	1	PCS
C301	67L309V220 3	22UF +-20% 16V	P	1	PCS
C402	67L309V470 3	47UF 16V 85C	P	1	PCS
C404	67L309V470 3	47UF 16V 85C	P	1	PCS
C408	67L309V229 7	2.2UF +-20% 50V	P	1	PCS
C409	67L309V101 3	100UF 16V	P	1	PCS
C411	67L309V229 7	2.2UF +-20% 50V	P	1	PCS
C415	67L309V101 3	100UF 16V	P	1	PCS
CN100	88L 35315F H	D-SUB 15PIN	P	1	PCS
CN201	33L8027 20 H	20AFER	P	1	PCS
CN301	33L3802 8H	WAFER 8P RIGHT ANGLE PI	P	1	PCS
CN400	33L8013 6 H	6P PLUG R/A	P	1	PCS
U202	56L1125148SD2	MTU312M U64	P	1	PCS
X200	93G 22 51	CRYSTAL 12MHz HC-49US A	P	1	PCS
	715L1119 H	PCB	P	1	PCS
C100	65L0603103 32	0.01UF+-10% 50V X7R	P	1	PCS
C101	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C103	65L0603103 32	0.01UF+-10% 50V X7R	P	1	PCS
C104	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C105	65L0603103 32	0.01UF+-10% 50V X7R	P	1	PCS
C107	65L0603103 32	0.01UF+-10% 50V X7R	P	1	PCS
C108	65L0603103 32	0.01UF+-10% 50V X7R	P	1	PCS
C111	65L0603103 32	0.01UF+-10% 50V X7R	P	1	PCS
C200	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C202	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C203	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C204	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS

C205	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C206	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C207	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C208	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C209	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C211	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C212	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C213	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C214	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C215	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C217	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C220	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C221	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C222	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C224	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C226	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C228	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C229	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C230	65L0603220 31	CHIP 22PF 50V NPO	P	1	PCS
C231	65L0603220 31	CHIP 22PF 50V NPO	P	1	PCS
C233	61L0603220	CHIPR 22 OHM+-5% 1/10W	P	1	PCS
C300	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C302	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C403	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C406	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C410	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
C416	65L0603104 12	0.1UF +-10% 16V X7R	P	1	PCS
CP300	65L600M102 8T	1000PF+-20% 50V 8P X7R	P	1	PCS
CP301	65L600M102 8T	1000PF+-20% 50V 8P X7R	P	1	PCS
D100	93L 60230	BAT54C(L43)	P	1	PCS
D101	93G 6433P	BAV99	P	1	PCS
D102	93G 6433P	BAV99	P	1	PCS
D103	93G 6433P	BAV99	P	1	PCS
D401	93L2004 2	SR24/PANJIT-SMT	P	1	PCS
FB100	71L 59C600	CHIP BEAD	P	1	PCS
FB101	71L 59C600	CHIP BEAD	P	1	PCS
FB102	71L 59C600	CHIP BEAD	P	1	PCS
FB200	71L 56K121 M	CHIP BEAD	P	1	PCS
FB201	71L 56K121 M	CHIP BEAD	P	1	PCS
FB202	71L 56K121 M	CHIP BEAD	P	1	PCS

FB203	71L 56K121 M	CHIP BEAD	P	1	PCS
FB401	71L 56K121 M	CHIP BEAD	P	1	PCS
Q101	57G 759 2	RK7002	P	1	PCS
Q102	57G 759 2	RK7002	P	1	PCS
Q300	57L 763 1	A03401 SOT23 BY AOS(A1)	P	1	PCS
Q301	57G 417 4	PMBS3904/PHILIPS-SMT(04	P	1	PCS
Q302	57G 417 4	PMBS3904/PHILIPS-SMT(04	P	1	PCS
Q303	57G 417 4	PMBS3904/PHILIPS-SMT(04	P	1	PCS
R101	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R102	61L0603750 9F	75OHM 1% 1/10W	P	1	PCS
R103	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R104	61L0603473	CHIP 47K OHM 1/10W	P	1	PCS
R105	61L0603473	CHIP 47K OHM 1/10W	P	1	PCS
R106	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R107	61L0603750 9F	75OHM 1% 1/10W	P	1	PCS
R108	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R109	61L0603470	CHIPR 47 OHM +-5% 1/10W	P	1	PCS
R110	61L0603470	CHIPR 47 OHM +-5% 1/10W	P	1	PCS
R111	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R112	61L0603750 9F	75OHM 1% 1/10W	P	1	PCS
R113	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R114	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R115	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R117	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R118	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R119	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R120	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R121	61L0603222	CHIPR 2.2K OHM+-5% 1/10	P	1	PCS
R122	61L0603222	CHIPR 2.2K OHM+-5% 1/10	P	1	PCS
R124	61L0603000	CHIPR 0OHM +-5% 1/10W	P	1	PCS
R125	61L0603000	CHIPR 0OHM +-5% 1/10W	P	1	PCS
R127	61L0603000	CHIPR 0OHM +-5% 1/10W	P	1	PCS
R129	61L0603000	CHIPR 0OHM +-5% 1/10W	P	1	PCS
R132	61L0603000	CHIPR 0OHM +-5% 1/10W	P	1	PCS
R133	61L0603000	CHIPR 0OHM +-5% 1/10W	P	1	PCS
R202	61L0603000	CHIPR 0OHM +-5% 1/10W	P	1	PCS
R203	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R204	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R205	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R206	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS

R207	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R208	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R210	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R212	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R213	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R214	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R217	61L0603000	CHIPR 0OHM +-5% 1/10W	P	1	PCS
R218	61L0603103	CHIPR 10K OHM +-5% 1/10	P	1	PCS
R219	61L0603103	CHIPR 10K OHM +-5% 1/10	P	1	PCS
R220	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R221	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R223	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R225	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R226	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R229	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R230	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R231	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R232	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R233	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R301	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R304	61L0603101	CHIPR 100 OHM +-5% 1/10	P	1	PCS
R306	61L0603103	CHIPR 10K OHM +-5% 1/10	P	1	PCS
R307	61L0603103	CHIPR 10K OHM +-5% 1/10	P	1	PCS
R308	61L0603103	CHIPR 10K OHM +-5% 1/10	P	1	PCS
R310	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R311	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R400	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R404	61L0603102	CHIPR 1K OHM +-5% 1/10W	P	1	PCS
R405	61L0603102	CHIPR 1K OHM +-5% 1/10W	P	1	PCS
RP200	61L 125101 8	CHIP ARRAY 100 OHM 1/16	P	1	PCS
RP201	61L 125101 8	CHIP ARRAY 100 OHM 1/16	P	1	PCS
RP300	61L 125101 8	CHIP ARRAY 100 OHM 1/16	P	1	PCS
RP301	61L 125472 8	CHIP AR 8P4R 4.7K OHM+-	P	1	PCS
U100	56L1133 34	M24C02-WMN6T SMT	P	1	PCS
U200	56L 562 42	GMZAN3L PQFP-128	P	1	PCS
U201	56L1133 33	M24C16-MN6T	P	1	PCS
U202A	87L 202 44	PLCC SMT CONN PD41C-441	P	1	PCS
U401	56G 563 27	AIC1117A-18CY SOT-223	P	1	PCS
U402	56L 563 7	AIC1084-33CM	P	1	PCS
ZD100	93G 39147	TZMC5V6	P	1	PCS

ZD101	93G 39147	TZMC5V6	P	1	PCS
ZD102	93G 39147	TZMC5V6	P	1	PCS
ZD103	93G 39147	TZMC5V6	P	1	PCS
ZD104	93G 39147	TZMC5V6	P	1	PCS
ZD105	93G 39147	TZMC5V6	P	1	PCS
ZD106	93G 39147	TZMC5V6	P	1	PCS
ZD107	93G 39147	TZMC5V6	P	1	PCS
	KEPC560KDE1				
	715L1153 1A	PCB	P	1	PCS
CN101	95G8014 8 6	HARNESS 28CM	P	1	PCS
DP101	81L 12 1A GP	LED	P	1	PCS
R101	61L 60210152T	100OHM +- 5% 1/6W	P	1	PCS
SW101	77L 600 4 HJ	TACT SWITCH TSPE-1	P	1	PCS
SW102	77L 600 4 HJ	TACT SWITCH TSPE-1	P	1	PCS
SW103	77L 600 4 HJ	TACT SWITCH TSPE-1	P	1	PCS
SW104	77L 600 4 HJ	TACT SWITCH TSPE-1	P	1	PCS
	PWPC1542SED1				
	PW1542SED1SMT	POWER BOARD FOR SMT	M	1	PCS
	40L 45762420A	ID LABEL	P	1	PCS
	71L 55 2 A	FERRITE BEAD 6.5*5*1.7	P	1	PCS
	705L 560 57 18	Q903 ASS'Y	X	1	PCS
	705L 560 57 DL	D910/D911 ASS'Y	X	1	PCS
	705L 560 61 05	R917 ASS'Y	X	1	PCS
	705L 560 61 06	R903 ASS'Y	X	1	PCS
BD901	93G 50460502	KBP206G	P	1	PCS
C213	63L210J1842A2	PMS 0.18UF 250V	P	1	PCS
C214	63L210J1842A2	PMS 0.18UF 250V	P	1	PCS
C226	65L 3J2206ET	22PF 5% 3KV TDK	P	1	PCS
C227	65L 3J2206ET	22PF 5% 3KV TDK	P	1	PCS
C228	65L 3J2206ET	22PF 5% 3KV TDK	P	1	PCS
C229	65L 3J2206ET	22PF 5% 3KV TDK	P	1	PCS
C901	65L305M1022E3	1000PF +-20% 400VAC BY	P	1	PCS
C902	65L305M1022E3	1000PF +-20% 400VAC BY	P	1	PCS
C903	63L 107474 HS	0.47UF +-10% 250VAC	P	1	PCS
C904	67L215S10115N	100UF+-20% 450V	P	1	PCS
C905	65L 2K152 5E6921	1500 PF 10% 2KV Y5P	P	1	PCS
C913	65L305M3322F2	3300PF +-20% 250VAC/400	P	1	PCS
C922	67L215C102 3H	EC LESR 1000UF16V HERME	P	1	PCS
C923	67L215C102 3H	EC LESR 1000UF16V HERME	P	1	PCS
CN901	33G8029 4A	PLUG	P	1	PCS

CON102	95G8014 6 19	WIRE HARNESS	P	1	PCS
CON205	33L8021 2D AC	CONN.2P R/A 87210-0236	P	1	PCS
CON206	33L8021 2D AC	CONN.2P R/A 87210-0236	P	1	PCS
CON207	33L8021 2D AC	CONN.2P R/A 87210-0236	P	1	PCS
CON208	33L8021 2D AC	CONN.2P R/A 87210-0236	P	1	PCS
IC901	56G 379 32	SG6841DZ DIP-8	P	1	PCS
IC902	56L 139 3A	PC123Y22	P	1	PCS
L201	73L 253139 YL	CHOKE	P	1	PCS
L202	73L 253139 YL	CHOKE	P	1	PCS
L203	73L 174 30YSA	FILTER	P	1	PCS
L204	73L 174 30YSA	FILTER	P	1	PCS
L902	73L 174 26 T1	LINE LILTER 0.45mm	P	1	PCS
L903	73L 253 91 LS	CHOKE BY LI SHIN	P	1	PCS
L904	73L 253 91 LS	CHOKE BY LI SHIN	P	1	PCS
NR901	61L 58120 WT	NTCR 12OHM 20% 2A SCK-1	P	1	PCS
PT201	80LL15T 7YSG	X'FMR	P	1	PCS
PT202	80LL15T 7YSG	X'FMR	P	1	PCS
Q209	57G 761 6	2SC5706-P-E	P	1	PCS
Q210	57G 761 6	2SC5706-P-E	P	1	PCS
Q211	57G 761 6	2SC5706-P-E	P	1	PCS
Q212	57G 761 6	2SC5706-P-E	P	1	PCS
T901	80LL17T 2 T	X'FMR	P	1	PCS
	PW1542SED1AI	POWER BOARD FOR AI	M	1	PCS
C202	65L0805104 22	0.1UF +-10% 25V X7R 080	P	1	PCS
C203	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C204	65L0805104 22	0.1UF +-10% 25V X7R 080	P	1	PCS
C205	65L0805104 22	0.1UF +-10% 25V X7R 080	P	1	PCS
C206	65L0805104 22	0.1UF +-10% 25V X7R 080	P	1	PCS
C208	65L0805331 31	CHIP 330pF 50V NPO	P	1	PCS
C209	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C210	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C211	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C212	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C219	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C220	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C221	65L0805474 22	CHIP 0.47UF 25V X7R 080	P	1	PCS
C222	65L0805474 22	CHIP 0.47UF 25V X7R 080	P	1	PCS
C230	65L0805102 32	CHIP 1000P 50VX7R 0805	P	1	PCS
C231	65L0805102 32	CHIP 1000P 50VX7R 0805	P	1	PCS
C907	65L0805104 32	CHIP 0.1UF 50V X7R	P	1	PCS

C908	65L0805104 32	CHIP 0.1UF 50V X7R	P	1	PCS
C909	65L0805104 32	CHIP 0.1UF 50V X7R	P	1	PCS
C910	65L0805102 32	CHIP 1000P 50VX7R 0805	P	1	PCS
C926	65L0805104 32	CHIP 0.1UF 50V X7R	P	1	PCS
C927	65L0805104 32	CHIP 0.1UF 50V X7R	P	1	PCS
D201	93G2004 2A	SM240A DO-214AC	P	1	PCS
D202	93G2004 2A	SM240A DO-214AC	P	1	PCS
D203	93G 39S 8 T	RLZ11B LLDS	P	1	PCS
D204	93G 39S 8 T	RLZ11B LLDS	P	1	PCS
F201	61L1206000 4	0 OHM 4A 1/4W	P	1	PCS
Q201	57G 760 5B	PDTC144WK SOT346	P	1	PCS
Q202	57G 760 4B	PDTA144WK SOT346	P	1	PCS
Q203	57L 763 3	AO4411 SO-8 BY AOS SMT	P	1	PCS
Q204	57L 763 3	AO4411 SO-8 BY AOS SMT	P	1	PCS
Q205	57G 417 4	PMBS3904/PHILIPS-SMT(04	P	1	PCS
Q206	57G 417 4	PMBS3904/PHILIPS-SMT(04	P	1	PCS
Q207	57G 417 6	PMBS3906/PHILIPS-SMT(06	P	1	PCS
Q208	57G 417 6	PMBS3906/PHILIPS-SMT(06	P	1	PCS
R202	61L0603512	CHIP 5.1K OHM 1/10W	P	1	PCS
R203	61L0603512	CHIP 5.1K OHM 1/10W	P	1	PCS
R204	61L0603103	CHIPR 10K OHM +-5% 1/10	P	1	PCS
R205	61L0603473	CHIP 47K OHM 1/10W	P	1	PCS
R206	61L0603473	CHIP 47K OHM 1/10W	P	1	PCS
R208	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R209	61L0603472	CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R210	61L0603123	CHIP 12K OHM 1/10W	P	1	PCS
R211	61L0603123	CHIP 12K OHM 1/10W	P	1	PCS
R212	61L0603392	CHIP 3.9K OHM 1/10W	P	1	PCS
R213	61L0603392	CHIP 3.9K OHM 1/10W	P	1	PCS
R214	61L0603392	CHIP 3.9K OHM 1/10W	P	1	PCS
R215	61L0603392	CHIP 3.9K OHM 1/10W	P	1	PCS
R216	61L0603221	CHIPR 220 OHM+-5% 1/10W	P	1	PCS
R217	61L0603221	CHIPR 220 OHM+-5% 1/10W	P	1	PCS
R218	61L0603471	CHIPR 470 OHM+-5% 1/10W	P	1	PCS
R219	61L0603471	CHIPR 470 OHM+-5% 1/10W	P	1	PCS
R220	61L0603123	CHIP 12K OHM 1/10W	P	1	PCS
R221	61L0603123	CHIP 12K OHM 1/10W	P	1	PCS
R222	61L0603153	CHIPR 15KOHM+-5% 1/10W	P	1	PCS
R223	61L0603153	CHIPR 15KOHM+-5% 1/10W	P	1	PCS
R234	61L0603621	CHIPR 620 OHM+-5% 1/10W	P	1	PCS

R235	61L0603621	CHIPR 620 OHM+-5% 1/10W	P	1	PCS
R236	61L0603511	CHIPR 510 OHM+-5% 1/10W	P	1	PCS
R237	61L0603511	CHIPR 510 OHM+-5% 1/10W	P	1	PCS
R238	61L0603123	CHIP 12K OHM 1/10W	P	1	PCS
R239	61L0603123	CHIP 12K OHM 1/10W	P	1	PCS
R240	61L0603513	CHIP 51K OHM 1/10W	P	1	PCS
R241	61L0603513	CHIP 51K OHM 1/10W	P	1	PCS
R901	61L1206105	CHIP 1MOHM 5% 1/4W	P	1	PCS
R902	61L1206105	CHIP 1MOHM 5% 1/4W	P	1	PCS
R908	61L1206519	CHIPR 5.1OHM +-5% 1/4W	P	1	PCS
R909	61L1206472	CHIP 4.7KOHM 5% 1/4W	P	1	PCS
R910	61L1206472	CHIP 4.7KOHM 5% 1/4W	P	1	PCS
R911	61L1206472	CHIP 4.7KOHM 5% 1/4W	P	1	PCS
R912	61L1206101	CHIP 100 OHM 5% 1/4W	P	1	PCS
R913	61L1206103	CHIP 10KOHM 5% 1/4W	P	1	PCS
R914	61L1206243	CHIP 24K OHM 5% 1/4W	P	1	PCS
R928	61L1206102	CHIP 1K OHM 5% 1/4W	P	1	PCS
U201	56L 608 1	TL1451ACD	P	1	PCS
ZD901	93G 39S 23 T	GLZ22B	P	1	PCS
ZD904	93L 39S 19 T	PTZ7.5B	P	1	PCS
	715L1063 1DEL	INVERTER BOARD	P	1	PCS
C201	67L215C1514HT	LOW ESR 150UF 25V 8*7MM	P	1	PCS
C207	67L 305330 7T	33UF 105	P	1	PCS
C223	67L215C1514HT	LOW ESR 150UF 25V 8*7MM	P	1	PCS
C904	6G 31502	1.5MM RIVET	P	2	PCS
C906	67L 305220 7T	22UF +-20% 50V	P	1	PCS
C920	65L517K102 5T6213	1000PF 10% Y5P 500V	P	1	PCS
C921	65L517K102 5T6213	1000PF 10% Y5P 500V	P	1	PCS
C924	67L215B4713HT	470UF 16V LTR471M1CF11V	P	1	PCS
C925	67L215B4713HT	470UF 16V LTR471M1CF11V	P	1	PCS
C929	64L700J1040AT	0.1UF 50V PEN	P	1	PCS
CN901	6G 31500	EYELET	P	2	PCS
D205	93L 64 1152T	1N4148	P	1	PCS
D206	93L 64 1152T	1N4148	P	1	PCS
D207	93L 64 1152T	1N4148	P	1	PCS
D208	93L 64 1152T	1N4148	P	1	PCS
D209	93L 64 1152T	1N4148	P	1	PCS
D210	93L 64 1152T	1N4148	P	1	PCS
D901	93G 6026T52T	RECTIFIER DIODE FR107	P	1	PCS
D902	93G 6038T52T	FR103	P	1	PCS

D903	93L 64 1152T	1N4148	P	1	PCS
F901	84G 56 1	FUSE 2A 250V WICKMANN	P	1	PCS
FB901	71L 55 29	FERRITE BEAD	P	1	PCS
IC903	56L 158 4 T A	H431BA	P	1	PCS
L902	6G 31502	1.5MM RIVET	P	4	PCS
PT201	6G 31502	1.5MM RIVET	P	2	PCS
PT202	6G 31502	1.5MM RIVET	P	2	PCS
Q901	57L 420 PP T	2PA733P	P	1	PCS
Q902	57L 419 PP T	2PC945P	P	1	PCS
R201	61L 60230352T	30KOHM 5% 1/6W	P	1	PCS
R224	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R225	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R226	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R227	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R228	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R229	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R230	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R231	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R232	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R233	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R904	61L214Y10552T	1M,1/4W	P	1	PCS
R905	61L214Y10552T	1M,1/4W	P	1	PCS
R906	61L214Y10552T	1M,1/4W	P	1	PCS
R907	61L214Y10552T	1M,1/4W	P	1	PCS
R915	61L 17210052T	100HM 5% 1/4W	P	1	PCS
R916	61L 17210352T	CFR 10KOHM +-5% 1/4W	P	1	PCS
R920	61L175L47052T	47OHM +-5% 1/2W	P	1	PCS
R921	61L175L47052T	47OHM +-5% 1/2W	P	1	PCS
R922	61G 20033352T	33KOHM 1% 1/4W	P	1	PCS
R923	61G 20036252T	3.6KOHM 1% 1/4W	P	1	PCS
R924	61G 20024252T	2.4KOHM 1% 1/4W	P	1	PCS
R925	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R926	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R929	61L 17210152T	100 OHM 5% 1/4W	P	1	PCS
T901	6G 31502	1.5MM RIVET	P	4	PCS
ZD902	93L 39 5452T	ZENER HZ12B2	P	1	PCS
ZD903	93G 39 7752T	HZ5C1-E	P	1	PCS
	90L 407 2	HEAT SINK	P	1	PCS
	M1L1730 8128	SCREW M3x8	P	1	PCS
Q903	57G 600 35	STP8NK80ZFP	P	1	PCS

	90L6064 1	HEAT SINK	P	1	PCS
	M1L1730 8128	SCREW M3x8	P	2	PCS
D910	93G 60245	SP10150	P	1	PCS
D911	93G 60217	FMB-29L	P	1	PCS
	96L 29 6	SHRINK TUBE UL/CSA	P	1	PCS
R917	61L 2J39858H	0.390OHM 5% 2W	P	1	PCS
	96L 29 6	SHRINK TUBE UL/CSA	P	1	PCS
R903	61L152M10458F	100K OHM 5% 2W	P	1	PCS
	PW1542SED1QSMT	POWER BOARD FOR SMT	M	1	PCS
	40L 45762420A	ID LABEL	P	1	PCS
	71L 55 2 A	FERRITE BEAD 6.5*5*1.7	P	1	PCS
	705L 560 57 22	Q903 ASS'Y	X	1	PCS
	705L 560 57 DL	D910/D911 ASS'Y	X	1	PCS
	705L 560 61 05	R917 ASS'Y	X	1	PCS
	705L 560 61 06	R903 ASS'Y	X	1	PCS
BD901	93G 50460502	KBP206G	P	1	PCS
C213	63L210J1842A2	PMS 0.18UF 250V	P	1	PCS
C214	63L210J1842A2	PMS 0.18UF 250V	P	1	PCS
C226	65L 3J2206ET	22PF 5% 3KV TDK	P	1	PCS
C227	65L 3J2206ET	22PF 5% 3KV TDK	P	1	PCS
C228	65L 3J2206ET	22PF 5% 3KV TDK	P	1	PCS
C229	65L 3J2206ET	22PF 5% 3KV TDK	P	1	PCS
C901	65L305M1022E3	1000PF +-20% 400VAC BY	P	1	PCS
C902	65L305M1022E3	1000PF +-20% 400VAC BY	P	1	PCS
C903	63L 107474 HS	0.47UF +-10% 250VAC	P	1	PCS
C904	67L215S10115N	100UF+-20% 450V	P	1	PCS
C905	65L 2K152 5E6921	1500 PF 10% 2KV Y5P	P	1	PCS
C913	65L305M3322F2	3300PF +-20% 250VAC/400	P	1	PCS
C922	67L215C102 3H	EC LESR 1000UF16V HERME	P	1	PCS
C923	67L215C102 3H	EC LESR 1000UF16V HERME	P	1	PCS
CN901	33G8029 4A	PLUG	P	1	PCS
CON102	95G8014 6 19	WIRE HARNESS	P	1	PCS
CON205	33L8021 2D AC	CONN.2P R/A 87210-0236	P	1	PCS
CON206	33L8021 2D AC	CONN.2P R/A 87210-0236	P	1	PCS
CON207	33L8021 2D AC	CONN.2P R/A 87210-0236	P	1	PCS
CON208	33L8021 2D AC	CONN.2P R/A 87210-0236	P	1	PCS
IC901	56G 379 32	SG6841DZ DIP-8	P	1	PCS
IC902	56L 139 3A	PC123Y22	P	1	PCS
L201	73L 253139 YL	CHOKE	P	1	PCS
L202	73L 253139 YL	CHOKE	P	1	PCS

L203	73L 174 30YSA	FILTER	P	1	PCS
L204	73L 174 30YSA	FILTER	P	1	PCS
L902	73L 174 26 T1	LINE LILTER 0.45mm	P	1	PCS
L903	73L 253 91 LS	CHOKE BY LI SHIN	P	1	PCS
L904	73L 253 91 LS	CHOKE BY LI SHIN	P	1	PCS
NR901	61L 58120 WT	NTCR 12OHM 20% 2A SCK-1	P	1	PCS
PT201	80LL15T 7YSG	X'FMR	P	1	PCS
PT202	80LL15T 7YSG	X'FMR	P	1	PCS
Q209	57G 761 6	2SC5706-P-E	P	1	PCS
Q210	57G 761 6	2SC5706-P-E	P	1	PCS
Q211	57G 761 6	2SC5706-P-E	P	1	PCS
Q212	57G 761 6	2SC5706-P-E	P	1	PCS
T901	80LL17T 2 T	X'FMR	P	1	PCS
	PW1542SED1QAI	POWER BAORD FOR AI	M	1	PCS
C202	65L0805104 22	0.1UF +-10% 25V X7R 080	P	1	PCS
C203	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C204	65L0805104 22	0.1UF +-10% 25V X7R 080	P	1	PCS
C205	65L0805104 22	0.1UF +-10% 25V X7R 080	P	1	PCS
C206	65L0805104 22	0.1UF +-10% 25V X7R 080	P	1	PCS
C208	65L0805331 31	CHIP 330pF 50V NPO	P	1	PCS
C209	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C210	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C211	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C212	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C219	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C220	65L0805105 22	CHIP 1UF 25V X7R 0805	P	1	PCS
C221	65L0805474 22	CHIP 0.47UF 25V X7R 080	P	1	PCS
C222	65L0805474 22	CHIP 0.47UF 25V X7R 080	P	1	PCS
C230	65L0805102 32	CHIP 1000P 50VX7R 0805	P	1	PCS
C231	65L0805102 32	CHIP 1000P 50VX7R 0805	P	1	PCS
C907	65L0805104 32	CHIP 0.1UF 50V X7R	P	1	PCS
C908	65L0805104 32	CHIP 0.1UF 50V X7R	P	1	PCS
C909	65L0805104 32	CHIP 0.1UF 50V X7R	P	1	PCS
C910	65L0805102 32	CHIP 1000P 50VX7R 0805	P	1	PCS
C926	65L0805104 32	CHIP 0.1UF 50V X7R	P	1	PCS
C927	65L0805104 32	CHIP 0.1UF 50V X7R	P	1	PCS
D201	93G2004 2A	SM240A DO-214AC	P	1	PCS
D202	93G2004 2A	SM240A DO-214AC	P	1	PCS
D203	93G 39S 8 T	RLZ11B LLDS	P	1	PCS
D204	93G 39S 8 T	RLZ11B LLDS	P	1	PCS

F201	61L1206000	4	0 OHM 4A 1/4W	P	1	PCS
Q201	57G 760 5B		PDTC144WK SOT346	P	1	PCS
Q202	57G 760 4B		PDTA144WK SOT346	P	1	PCS
Q203	57L 763 3		AO4411 SO-8 BY AOS SMT	P	1	PCS
Q204	57L 763 3		AO4411 SO-8 BY AOS SMT	P	1	PCS
Q205	57G 417 4		PMBS3904/PHILIPS-SMT(04	P	1	PCS
Q206	57G 417 4		PMBS3904/PHILIPS-SMT(04	P	1	PCS
Q207	57G 417 6		PMBS3906/PHILIPS-SMT(06	P	1	PCS
Q208	57G 417 6		PMBS3906/PHILIPS-SMT(06	P	1	PCS
R202	61L0603512		CHIP 5.1K OHM 1/10W	P	1	PCS
R203	61L0603512		CHIP 5.1K OHM 1/10W	P	1	PCS
R204	61L0603103		CHIPR 10K OHM +-5% 1/10	P	1	PCS
R205	61L0603473		CHIP 47K OHM 1/10W	P	1	PCS
R206	61L0603473		CHIP 47K OHM 1/10W	P	1	PCS
R208	61L0603472		CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R209	61L0603472		CHIPR 4.7K OHM +-5% 1/1	P	1	PCS
R210	61L0603123		CHIP 12K OHM 1/10W	P	1	PCS
R211	61L0603123		CHIP 12K OHM 1/10W	P	1	PCS
R212	61L0603392		CHIP 3.9K OHM 1/10W	P	1	PCS
R213	61L0603392		CHIP 3.9K OHM 1/10W	P	1	PCS
R214	61L0603392		CHIP 3.9K OHM 1/10W	P	1	PCS
R215	61L0603392		CHIP 3.9K OHM 1/10W	P	1	PCS
R216	61L0603221		CHIPR 220 OHM+-5% 1/10W	P	1	PCS
R217	61L0603221		CHIPR 220 OHM+-5% 1/10W	P	1	PCS
R218	61L0603471		CHIPR 470 OHM+-5% 1/10W	P	1	PCS
R219	61L0603471		CHIPR 470 OHM+-5% 1/10W	P	1	PCS
R220	61L0603123		CHIP 12K OHM 1/10W	P	1	PCS
R221	61L0603123		CHIP 12K OHM 1/10W	P	1	PCS
R222	61L0603153		CHIPR 15KOHM+-5% 1/10W	P	1	PCS
R223	61L0603153		CHIPR 15KOHM+-5% 1/10W	P	1	PCS
R234	61L0603621		CHIPR 620 OHM+-5% 1/10W	P	1	PCS
R235	61L0603621		CHIPR 620 OHM+-5% 1/10W	P	1	PCS
R236	61L0603511		CHIPR 510 OHM+-5% 1/10W	P	1	PCS
R237	61L0603511		CHIPR 510 OHM+-5% 1/10W	P	1	PCS
R238	61L0603123		CHIP 12K OHM 1/10W	P	1	PCS
R239	61L0603123		CHIP 12K OHM 1/10W	P	1	PCS
R240	61L0603513		CHIP 51K OHM 1/10W	P	1	PCS
R241	61L0603513		CHIP 51K OHM 1/10W	P	1	PCS
R901	61L1206105		CHIP 1MOHM 5% 1/4W	P	1	PCS
R902	61L1206105		CHIP 1MOHM 5% 1/4W	P	1	PCS

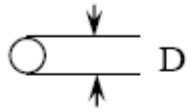
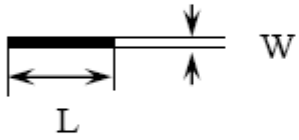
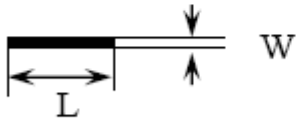
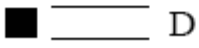
R908	61L1206519	CHIPR 5.1OHM +-5% 1/4W	P	1	PCS
R909	61L1206472	CHIP 4.7KOHM 5% 1/4W	P	1	PCS
R910	61L1206472	CHIP 4.7KOHM 5% 1/4W	P	1	PCS
R911	61L1206472	CHIP 4.7KOHM 5% 1/4W	P	1	PCS
R912	61L1206101	CHIP 100 OHM 5% 1/4W	P	1	PCS
R913	61L1206103	CHIP 10KOHM 5% 1/4W	P	1	PCS
R914	61L1206243	CHIP 24K OHM 5% 1/4W	P	1	PCS
R928	61L1206102	CHIP 1K OHM 5% 1/4W	P	1	PCS
U201	56L 608 1	TL1451ACD	P	1	PCS
ZD901	93G 39S 23 T	GLZ22B	P	1	PCS
ZD904	93L 39S 19 T	PTZ7.5B	P	1	PCS
	715L1063 1DEL	INVERTER BOARD	P	1	PCS
C201	67L215C1514HT	LOW ESR 150UF 25V 8*7MM	P	1	PCS
C207	67L 305330 7T	33UF 105	P	1	PCS
C223	67L215C1514HT	LOW ESR 150UF 25V 8*7MM	P	1	PCS
C904	6G 31502	1.5MM RIVET	P	2	PCS
C906	67L 305220 7T	22UF +-20% 50V	P	1	PCS
C920	65L517K102 5T6213	1000PF 10% Y5P 500V	P	1	PCS
C921	65L517K102 5T6213	1000PF 10% Y5P 500V	P	1	PCS
C924	67L215B4713HT	470UF 16V LTR471M1CF11V	P	1	PCS
C925	67L215B4713HT	470UF 16V LTR471M1CF11V	P	1	PCS
C929	64L700J1040AT	0.1UF 50V PEN	P	1	PCS
CN901	6G 31500	EYELET	P	2	PCS
D205	93L 64 1152T	1N4148	P	1	PCS
D206	93L 64 1152T	1N4148	P	1	PCS
D207	93L 64 1152T	1N4148	P	1	PCS
D208	93L 64 1152T	1N4148	P	1	PCS
D209	93L 64 1152T	1N4148	P	1	PCS
D210	93L 64 1152T	1N4148	P	1	PCS
D901	93G 6026T52T	RECTIFIER DIODE FR107	P	1	PCS
D902	93G 6038T52T	FR103	P	1	PCS
D903	93L 64 1152T	1N4148	P	1	PCS
F901	84G 56 1	FUSE 2A 250V WICKMANN	P	1	PCS
FB901	71L 55 29	FERRITE BEAD	P	1	PCS
IC903	56L 158 4 T A	H431BA	P	1	PCS
L902	6G 31502	1.5MM RIVET	P	4	PCS
PT201	6G 31502	1.5MM RIVET	P	2	PCS
PT202	6G 31502	1.5MM RIVET	P	2	PCS
Q901	57L 420 PP T	2PA733P	P	1	PCS
Q902	57L 419 PP T	2PC945P	P	1	PCS

R201	61L 60230352T	30KOHM 5% 1/6W	P	1	PCS
R224	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R225	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R226	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R227	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R228	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R229	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R230	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R231	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R232	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R233	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R904	61L214Y10552T	1M,1/4W	P	1	PCS
R905	61L214Y10552T	1M,1/4W	P	1	PCS
R906	61L214Y10552T	1M,1/4W	P	1	PCS
R907	61L214Y10552T	1M,1/4W	P	1	PCS
R915	61L 17247052T	47OHM 5% 1/4W	P	1	PCS
R916	61L 17210352T	CFR 10KOHM +-5% 1/4W	P	1	PCS
R920	61L175L47052T	47OHM +-5% 1/2W	P	1	PCS
R921	61L175L47052T	47OHM +-5% 1/2W	P	1	PCS
R922	61G 20033352T	33KOHM 1% 1/4W	P	1	PCS
R923	61G 20036252T	3.6KOHM 1% 1/4W	P	1	PCS
R924	61G 20024252T	2.4KOHM 1% 1/4W	P	1	PCS
R925	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R926	61L 17210252T	1K OHM 5% 1/4W	P	1	PCS
R929	61L 17210152T	100 OHM 5% 1/4W	P	1	PCS
T901	6G 31502	1.5MM RIVET	P	4	PCS
ZD902	93L 39 5452T	ZENER HZ12B2	P	1	PCS
ZD903	93G 39 7752T	HZ5C1-E	P	1	PCS
	90L 407 2	HEAT SINK	P	1	PCS
	M1L1730 8128	SCREW M3x8	P	1	PCS
Q903	57L 667 15	FQPF7N80 TO-220F	P	1	PCS
	90L6064 1	HEAT SINK	P	1	PCS
	M1L1730 8128	SCREW M3x8	P	2	PCS
D910	93G 60245	SP10150	P	1	PCS
D911	93G 60217	FMB-29L	P	1	PCS
	96L 29 6	SHRINK TUBE UL/CSA	P	1	PCS
R917	61L 2J39858H	0.390OHM 5% 2W	P	1	PCS
	96L 29 6	SHRINK TUBE UL/CSA	P	1	PCS
R903	61L152M10458F	100K OHM 5% 2W	P	1	PCS
	87L 501 14 RF	AC SOCKET	P	1	PCS

95G 900 42	WIRE HARNESS	P	1	PCS
95L8021 2504	WIRE HARNESS	P	1	PCS
96L 29 6	SHRINK TUBE UL/CSA	P	3	PCS
15G5942 1 B	BASE BRACKET	P	1	PCS
20L 008 1	BRACKET RISER	P	1	PCS
34L1230 Y2 T	VESA COVER	P	1	PCS
34L1231 Y2 T	RISER FRONT	P	1	PCS
34L1232 Y2 T	RISER REAR	P	1	PCS
34L1233 Y2 2T	BASE	P	1	PCS
37L 483 1	HINGE	P	1	PCS
M1L 130 6125	SCREW	P	1	PCS
M1L 130 8125	SCREW	P	2	PCS
M1L 140 8 47	SRCEW	P	4	PCS
Q1L 130 6 47	SCREW	P	1	PCS
Q1L 330 8 47	SCREW 3X8mm	P	6	PCS
Q1L 330 8 47	SCREW 3X8mm	P	2	PCS
4F0612052 00	METAL WASHER	P	4	PCS
4F061210M 00	METAL WASHERS12.0*6.03*	P	2	PCS
4F061210T 00	METAL WASHERS12.0*8.00*	P	2	PCS
4F061210T 01	METAL WASHERS12.0*4.72*	P	4	PCS
15F 483110	BRACKETS	P	1	PCS
15F 483130	BRACKETS	P	1	PCS
28F0618070	SHAFTS	P	2	PCS
4L0612052 00	METAL WASHERS	P	4	PCS
4L061210M 00	METAL WASHERS12.0*6.03*	P	2	PCS
4L061210T 00	METAL WASHERS12.0*8.00*	P	2	PCS
4L061210T 01	METAL WASHERS12.0*4.72*	P	4	PCS
15G 483110	BRACKETS	P	1	PCS
15G 483130	BRACKETS	P	1	PCS
28L0618070	SHAFTS	P	2	PCS

12.DEFINITION OF PIXEL DEFECTS

12.1 VISUAL INSPECTION

Defect Type	Accept (mm)	Reject (mm)
Dark / bright spot *1 *(foreign material,Stain,Dust)* 	0.1 < D <= 0.6 N <= 4	D > 0.6 N > 4
Bright line (light lint), or *dark line (dark lint / hair)* 	0.01 < W <= 0.08 0.3 < L <= 2.0 N <= 4	W > 0.08 L > 2.0 N > 4
Polarizer scratch 	0.05 < W <= 0.1 0.3 < L <= 5.0 N <= 3	W > 0.1 L > 5.0 N > 3
Polarizer dent/bubble 	D <= 0.6 N <= 3	D > 0.6 N > 3
Maximum allowable number of defects	N <= 7	N > 7

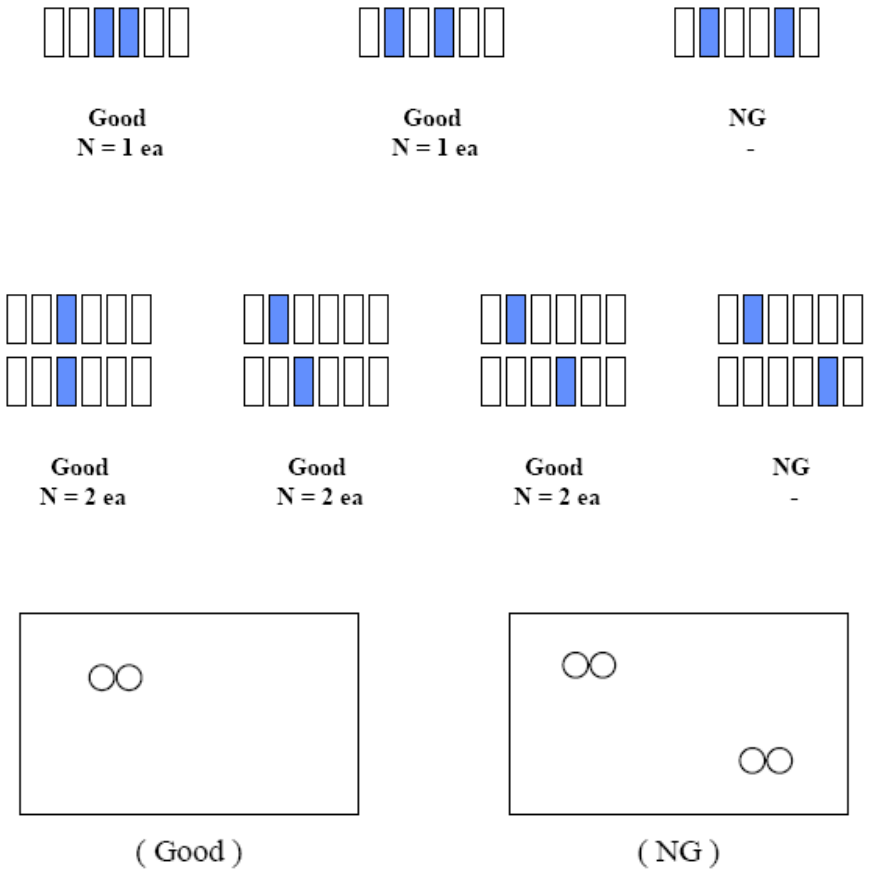
12.2 ELECTRICAL INSPECTION

Defect Type	Accept	Reject
*Bright dot(**Fig. 1**)*		
Random	N <= 2	N > 2
Two Adjacent	N <= 1	N > 1
Three Adjacent	N <= 0	N > 0
*Dark dot (**Fig. 2**)*		
Random	N <= 5	N > 5
Two Adjacent	N <= 2	N > 2
Three Adjacent	N <= 0	N > 0
Maximum allowable number of dot defect	N <= 5	N > 5
*Minimum distance between defects, **(Fig. 3)***		
dark dot - to - dark dot	L >= 15mm	L < 15mm
dark dot - to - dark dot	L >= 5mm	L < 5mm

Definitions/ Notes:

- A bright dot any Red, Green, or Blue pixel sucks in the “On” mode.
- A dark dot any Red, Green, or Blue pixel sucks in the “Off ” mode.
- Inspection pattern for electrical defect should be pure R, G, B, and Black and White.
- Adjacent two dots in horizontal direction will be considered as one dot

Fig. 1. Bright dot defect description (two adjacent)



* Adjacent two dots in horizontal direction will be considered as one dot

Fig. 2. Dark dot defect description (two adjacent)

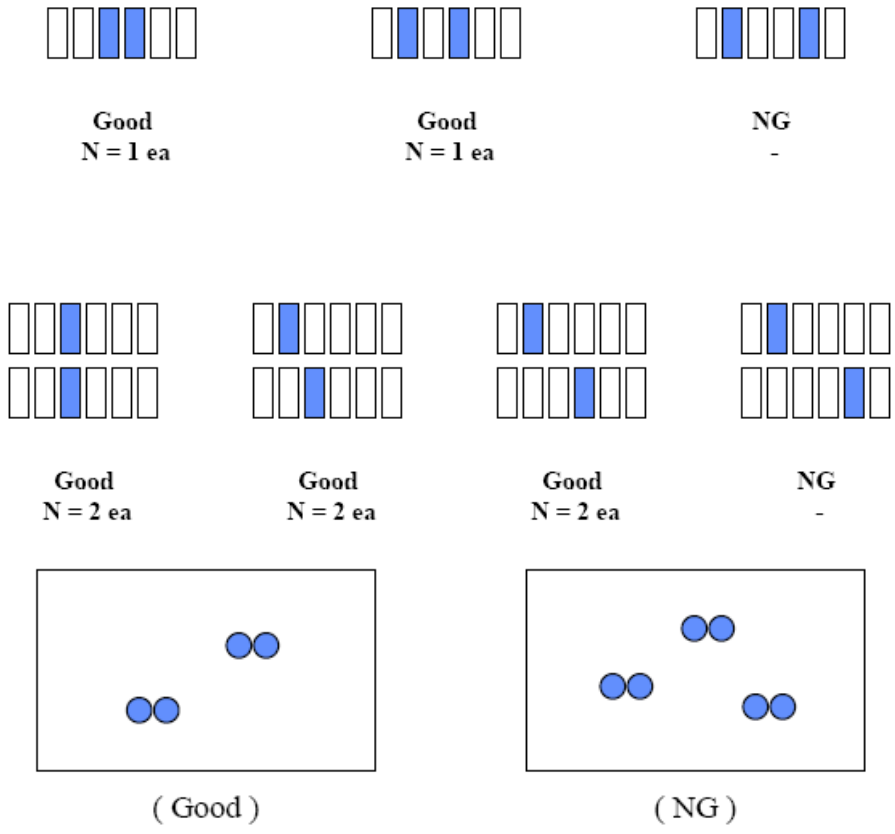


Fig. 3. Minimum distance between dot defects

bright dot - to - bright dot

dark dot - to - dark dot

* Adjacent two dots in horizontal direction will be considered as one dot.
* A minimum distance criterion is applied for dots defect only.
* Will be not considered the distance between dot & mechanical defect.
* Will be not considered the distance between bright dot & dark dot.
* A dot which is over the half (50%) of pixel size will be considered as one bright dot.