

Service
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Service Manual

Horizontal Frequency
30- 63KHz

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SAFETY NOTICE

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS
AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING
ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFORMER FOR THIS UNIT WHEN SERVICING

Revision List

[illegible]

Important Safety Notice

Proper service and repair is important to the safe, reliable operation of all Philips Company Equipment. The service procedures recommended by Philips and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Philips could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Philips has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Philips must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

Hereafter throughout this manual, Philips Company will be referred to as Philips.

WARNING

Use of substitute replacement parts, which do not have the same, specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from Philips. Philips assumes no liability, express or implied, arising out of any unauthorized modification of design.

Servicer assumes all liability.

FOR PRODUCTS CONTAINING LASER:

DANGER-Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.

CAUTION-Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION -The use of optical instruments with this product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.

Take care during handling the LCD module with backlight unit

- Must mount the module using mounting holes arranged in four corners.
- Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
- Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
- Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
- Make certain that treatment person's body is grounded through wristband.
- Do not leave the module in high temperature and in areas of high humidity for a long time.
- Avoid contact with water as it may a short circuit within the module.
- If the surface of panel becomes dirty, please wipe it off with a soft material. (Cleaning with a dirty or rough cloth may damage the panel.)

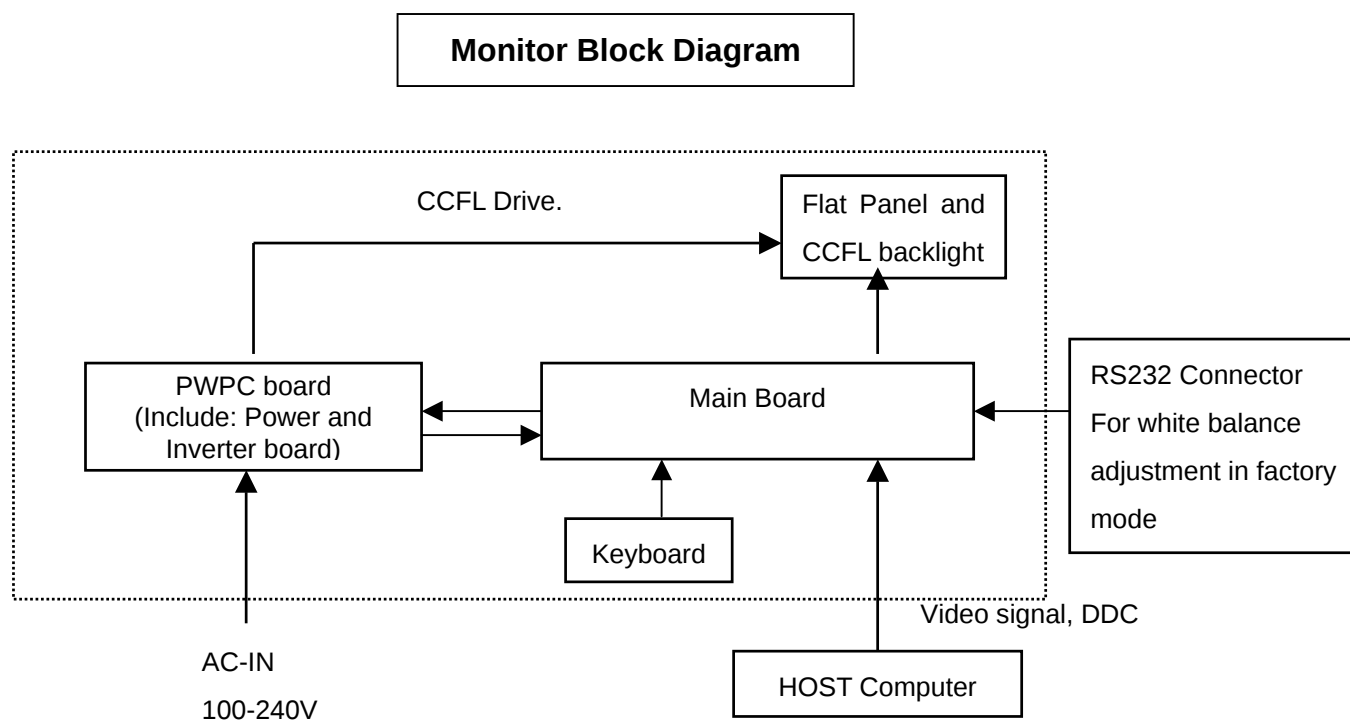
1. Monitor Specifications

LCD Panel	Screen type	Active matrix - TFT LCD
	Size	380mm (15.0")
	Pixel pitch	0.297mm(H) x 0.297mm(V)
Input	Video	R, G, B Analog Interface
	Separate Sync	TTL level, input impedance 2.2k OHM terminate
	H-Frequency	30kHz – 63kHz
	V-Frequency	56 - 76Hz
Display Colors		16.2 M
Video dot rate		80MHz
Maximum Resolution		1024 x 768 at 76Hz (analog input)
Recommended Resolution		1024 x 768 at 60Hz (analog input)
Plug & Play		VESA DDC2B
Power Consumption		Power on: < 23 W Power off: < 1 W
Input Connector		D-Sub 15pin Analog R/G/B separate inputs, H/V sync separated, Composite (H+V) TTL level, SOG sync
Input Video Signal		0.7 Vp-p, input impedance, 75 ohm @DC
Tilt		- 5° ~ 25°
Maximum Screen Size		Horizontal: 304.1mm; Vertical: 228.1mm
Power Source		90-264 V AC, 50/60 ± 2 Hz
Environmental Considerations		Operating Temp: 0° to 35°C Operating Humidity: 80%Max Storage Temp.: -20° to 60°C Storage Humidity: 85%Max
Weight (Net)		2.8 kg
Cabinet color		150S7FG: Light Gray 150S7FB: Black 150S7FS: Silver

2. LCD Monitor Description

The LCD MONITOR will contain a main board, PWPC board, keypad board, which house the flat panel control logic, brightness control logic and DDC.

The power board will provide AC to DC Inverter voltage to drive the backlight of panel and the main board chips each voltage.



3. Operation instructions

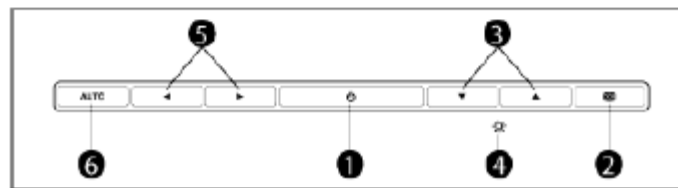
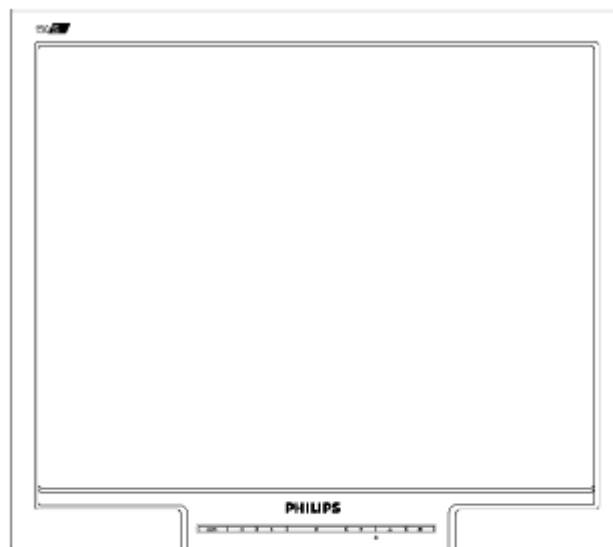
3.1 General Instructions

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.

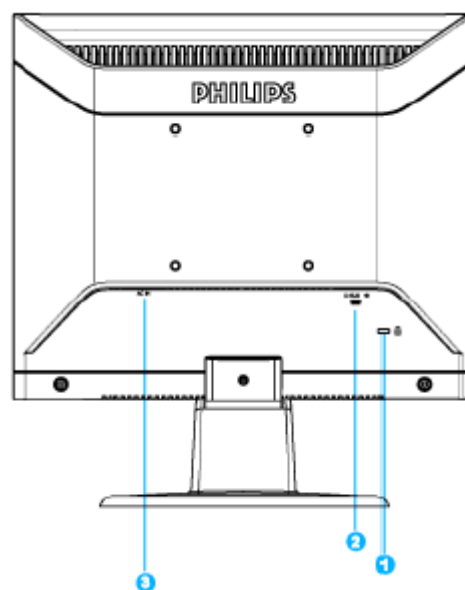
3.2 Control Buttons

Front View



- | | | |
|---|---|--|
| 1 |  | To switch monitor's power On and Off |
| 2 |  | To access OSD menu |
| 3 |  | To adjust the OSD |
| 4 |  | To adjust brightness of the display |
| 5 |  | To adjust the OSD |
| 6 | AUTO | Automatically adjust the horizontal position, vertical position, phase and clock settings. |

Back View

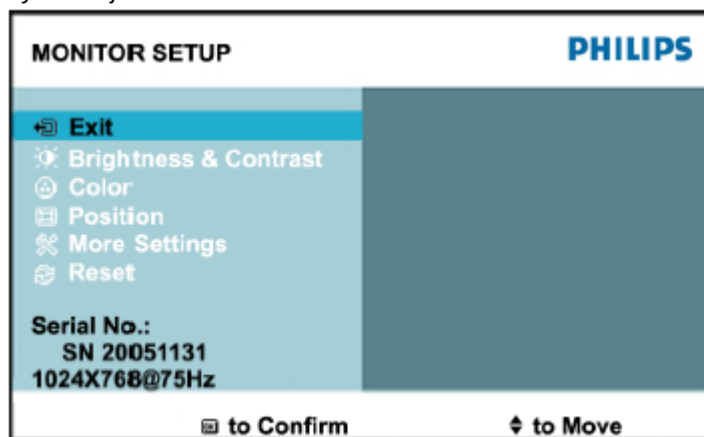


- 1 Kensington anti-thief lock
- 2 VGA input
- 3 AC power input

3.3 Adjusting the Picture

This is a feature in all Philips LCD monitors. It allows an end user to adjust screen performance of the monitors directly through an on-screen instruction window. The user interface provides user-friendliness and ease-of-use when operating the monitor.

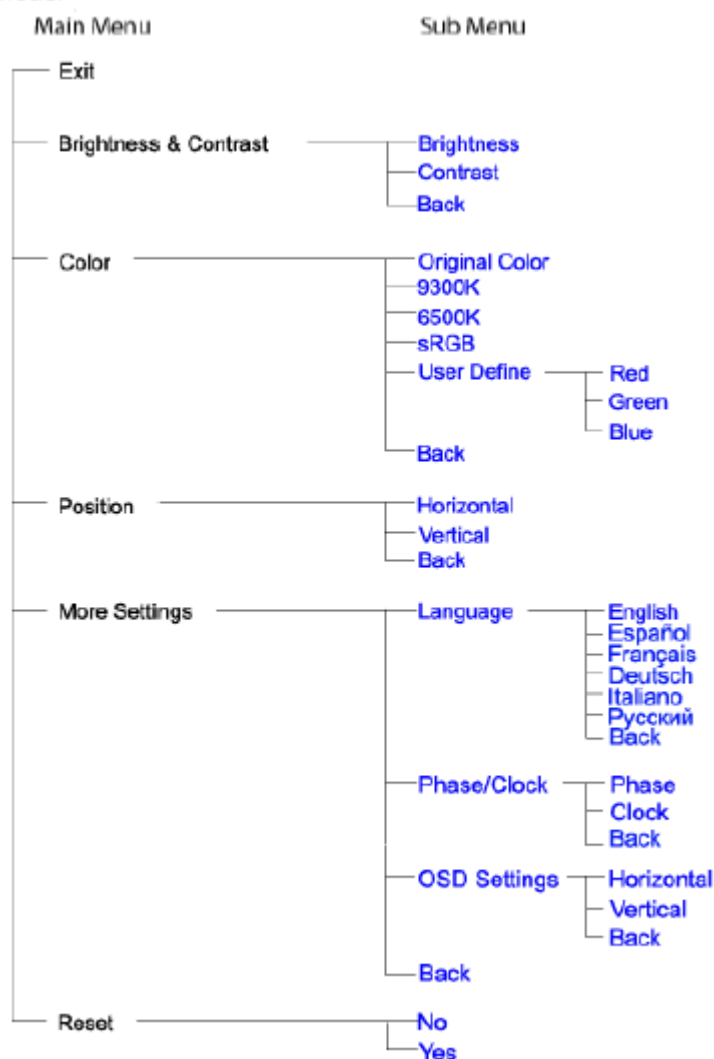
When you press the  button on the front control of your monitor, the On-Screen Display (OSD) main controls window will pop up and you can then start making adjustments to your monitor's various features. Use the  or the  keys to make your adjustments.



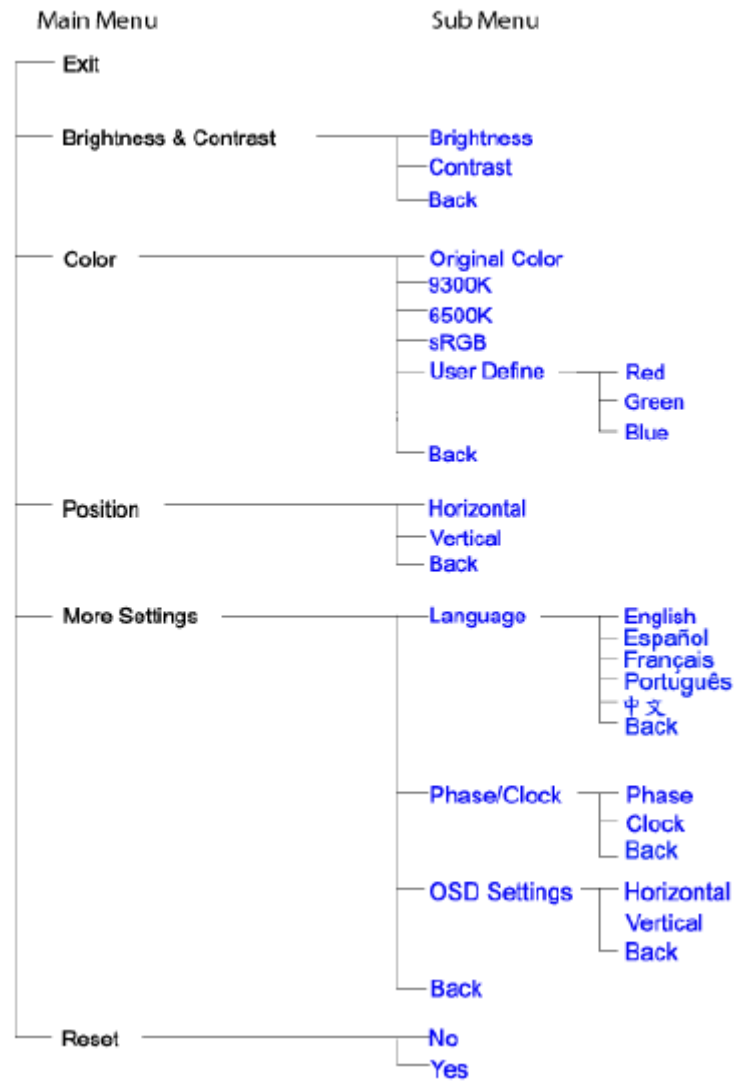
The OSD tree

Below is an overall view of the structure of the On-Screen Display. You can use this as a reference when you want to work your way around the different adjustments later on.

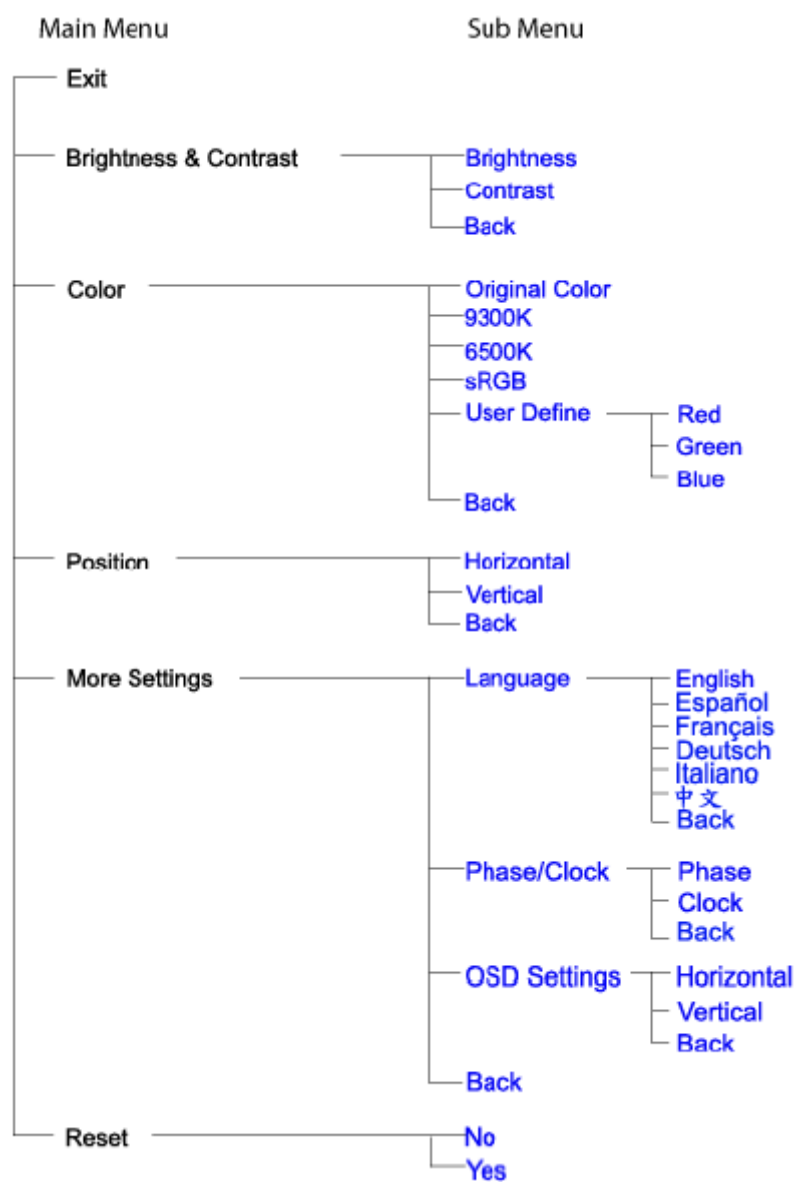
Only available for Europe Model



Only available for Nafta Model

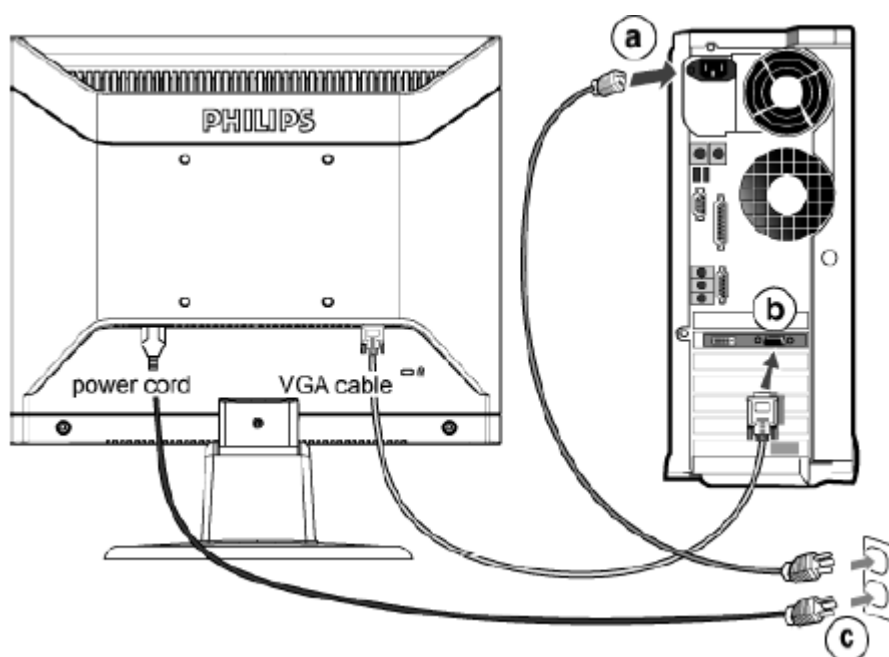
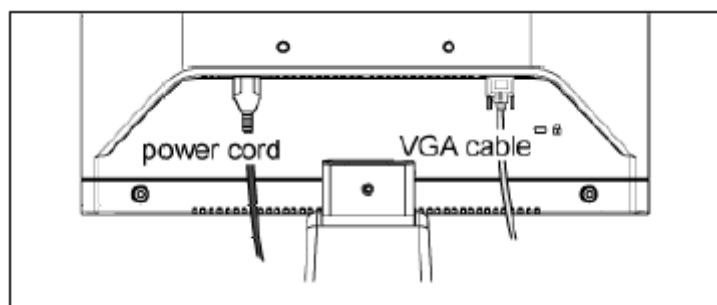


Only available for Asia Pacific Model



3.4 Connecting to the PC

1) Connect the power cord to the back of the monitor firmly. (Philips has pre-connected) VGA cable for the first installation.)

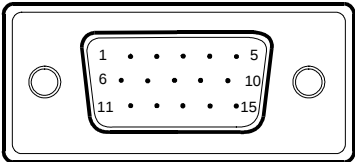


2) Connect to PC

- (a) Turn off your computer and unplug its power cable.
- (b) Connect the monitor signal cable to the video connector on the back of your computer.
- (c) Plug the power cord of your computer and your monitor into a nearby outlet.
- (d) Turn on your computer and monitor. If the monitor displays an image, installation is complete.

4. Input/Output Specification

4.1 Input Signal Connector

Pin NO.	Description	Pin NO.	Description
1.	Red Video	9.	DDC +5V
2.	Green Video (SOG)	10.	Logic GND
3.	Blue Video	11.	Ground
4.	Sense (GND)	12.	Serial data line (SDA)
5.	Cable Detect	13.	H.sync/H + V.sync
6.	Red Ground	14.	V.Sync
7.	Green Ground	15.	Data Clock Line (SCL)
8.	Blue Ground		
VGA Connector layout			
			

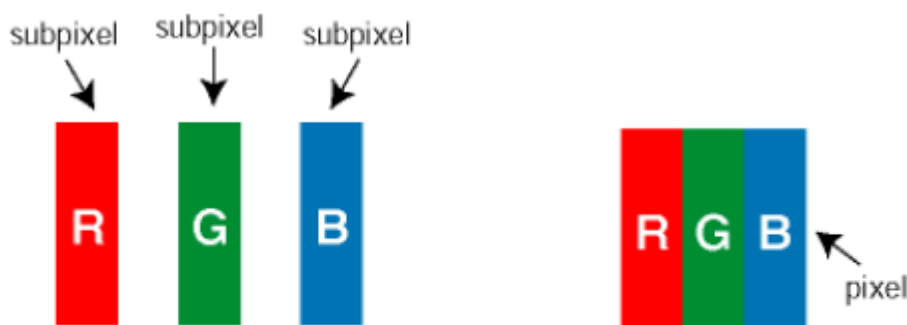
4.2 Factory Preset Display Modes

H. freq (kHz)	Resolution	V. freq (Hz)
31.469	720*400	70.087
31.469	640*480	59.940
37.861	640*480	72.809
37.500	640*480	75.000
35.156	800*600	56.250
37.879	800*600	60.317
48.077	800*600	72.188
46.875	800*600	75.000
48.363	1024*768	60.004
56.476	1024*768	70.069
60.023	1024*768	75.029
35.000	640*480	67.000
49.700	832*624	75.000

4.3 Pixel Defect Policy

Philips' Flat Panel Monitors Pixel Defect Policy

Philips strives to deliver the highest quality products. We use some of the industry's most advanced manufacturing processes and practice stringent quality control. However, pixel or sub pixel defects on the TFT LCD panels used in flat panel monitors are sometimes unavoidable. No manufacturer can guarantee that all panels will be free from pixel defects, but Philips guarantees that any monitor with an unacceptable number of defects will be repaired or replaced under warranty. This notice explains the different types of pixel defects and defines acceptable defect levels for each type. In order to qualify for repair or replacement under warranty, the number of pixel defects on a TFT LCD panel must exceed these acceptable levels. For example, no more than 0.0004% of the sub pixels on a 15" XGA monitor may be defective. Furthermore, Philips sets even higher quality standards for certain types or combinations of pixel defects that are more noticeable than others. This policy is valid worldwide.



Pixels and Sub pixels

A pixel, or picture element, is composed of three sub pixels in the primary colors of red, green and blue. Many pixels together form an image. When all sub pixels of a pixel are lit, the three colored sub pixels together appear as a single white pixel. When all are dark, the three colored sub pixels together appear as a single black pixel. Other combinations of lit and dark sub pixels appear as single pixels of other colors.

Types of Pixel Defects

Pixel and sub pixel defects appear on the screen in different ways. There are two categories of pixel defects and several types of sub pixel defects within each category.

Bright Dot Defects Bright dot defects appear as pixels or sub pixels that are always lit or 'on'. That is, a *bright dot* is a sub-pixel that stands out on the screen when the monitor displays a dark pattern. There are the types of bright dot defects:



One lit red, green or blue sub pixel

Two adjacent lit sub pixels:

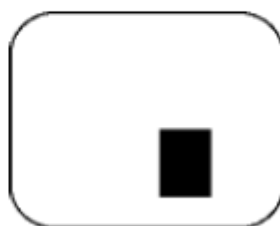
- Red + Blue = Purple
- Red + Green = Yellow
- Green + Blue = Cyan (Light Blue)

Three adjacent lit sub pixels (one white pixel)

Black Dot Defects Black dot defects appear as pixels or sub pixels that are always dark or 'off'. That is, a *dark dot* is a sub-pixel that stands out on the screen when the monitor displays a light pattern. These are the types of black dot defects:



One dark sub pixel



Two or three adjacent dark sub pixels

Proximity of Pixel Defects

Because pixel and sub pixels defects of the same type that are near to one another may be more noticeable, Philips also specifies tolerances for the proximity of pixel defects.

Pixel Defect Tolerances

In order to qualify for repair or replacement due to pixel defects during the warranty period, a TFT LCD panel in a Philips flat panel monitor must have pixel or sub pixel defects exceeding the tolerances listed in the following tables.

BRIGHT DOT DEFECTS		ACCEPTABLE LEVEL
MODEL		150S7
1 lit subpixel		2
2 adjacent lit subpixels		1
3 adjacent lit subpixels (one white pixel)		0
Distance between two bright dot defects*		<15 mm
Total bright dot defects of all types		2
BLACK DOT DEFECTS		ACCEPTABLE LEVEL
MODEL		150S7
1 dark subpixel		5
2 adjacent dark subpixels		2
3 adjacent dark subpixels		0
Distance between two black dot defects*		<15 mm
Total black dot defects of all types		5
TOTAL DOT DEFECTS		ACCEPTABLE LEVEL
MODEL		150S7
Total bright or black dot defects of all types		5

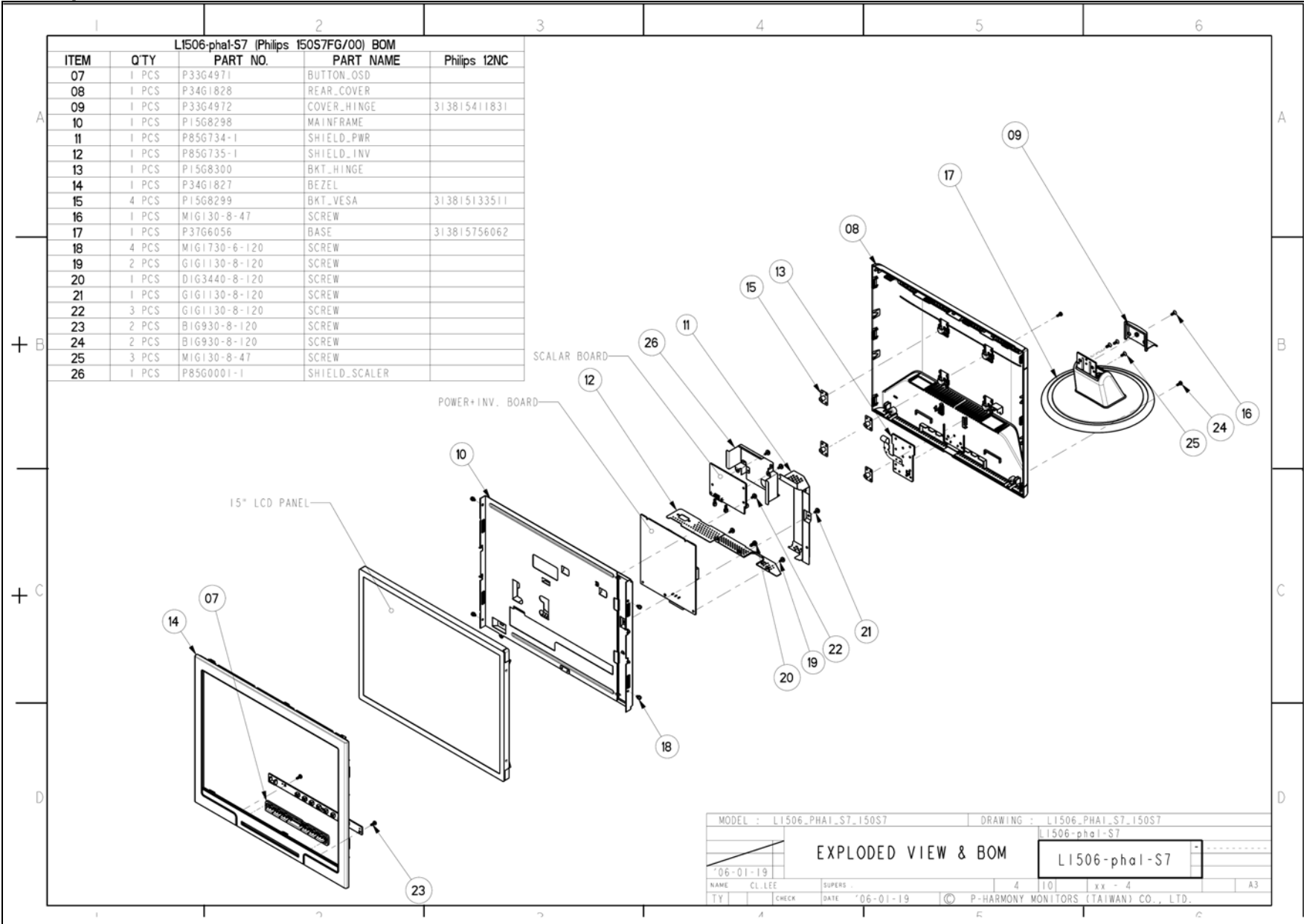
Note:

* 1 or 2 adjacent sub pixel defects = 1 dot defect

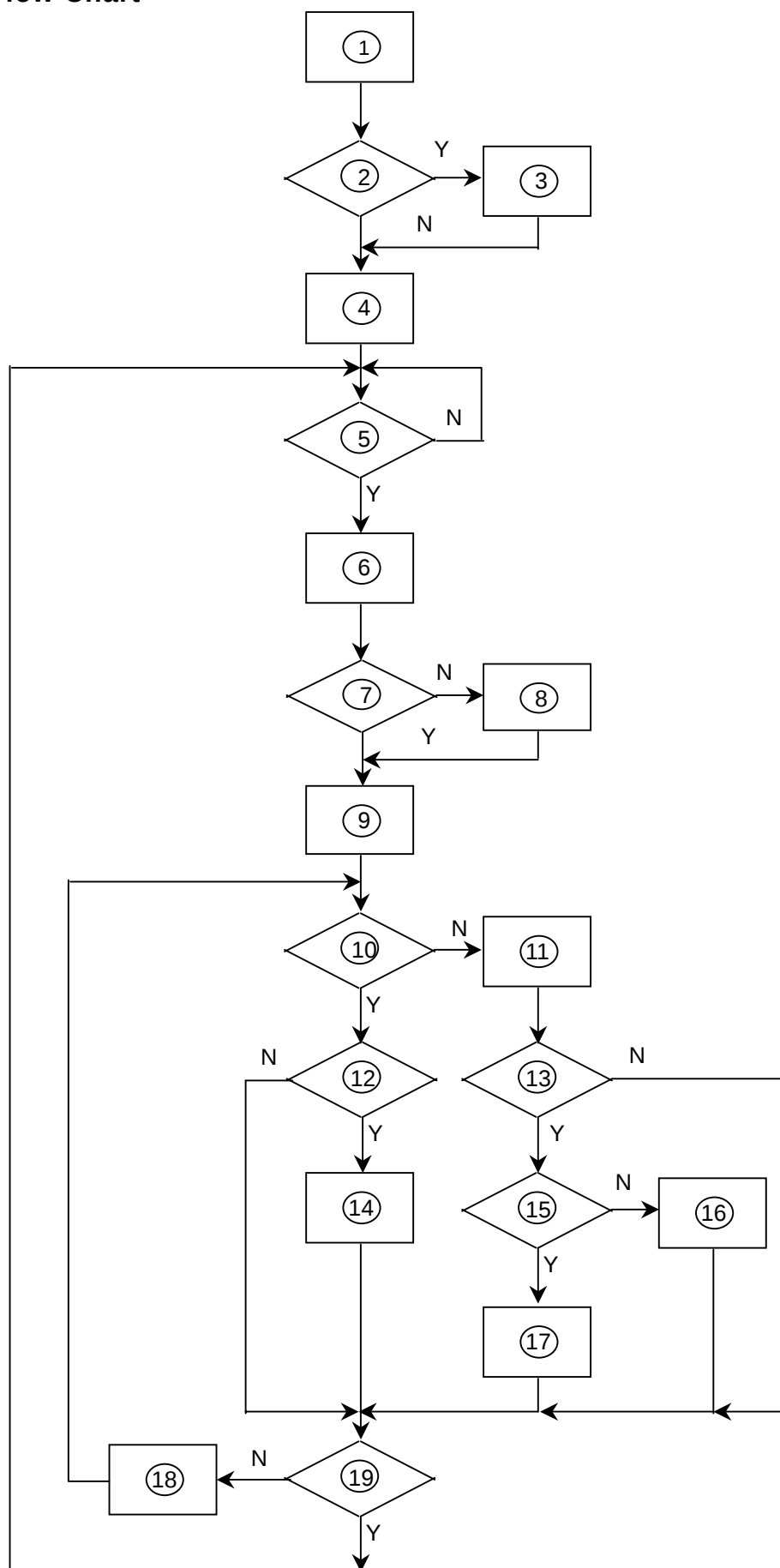
Your Philips monitor is ISO13406-2 Compliant

5. Block Diagram

5.1 Monitor Exploded View



5.2 Software Flow Chart

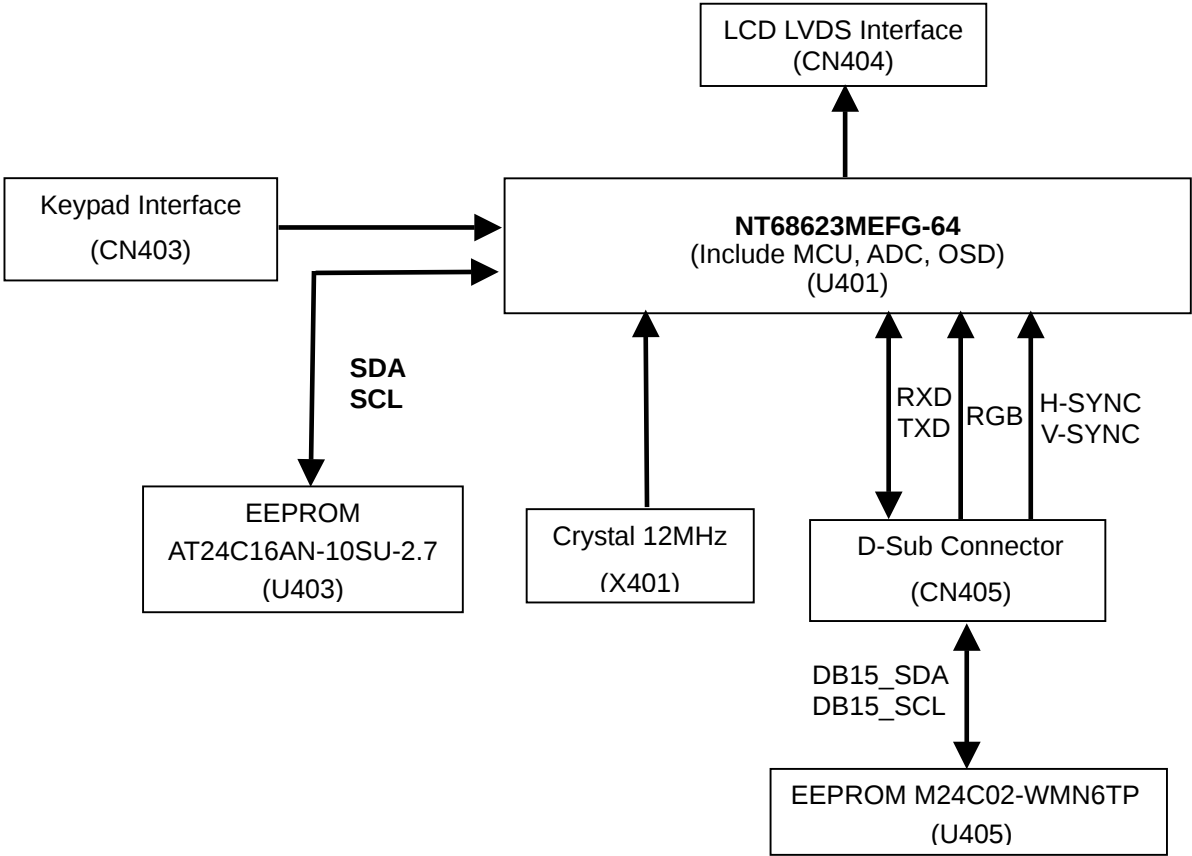


- 1) MCU Initializes.
- 2) Is the EEprom blank?
- 3) Program the EEprom by default values.
- 4) Get the PWM value of brightness from EEprom.
- 5) Is the power key pressed?
- 6) Clear all global flags.
- 7) Are the AUTO and SELECT keys pressed?
- 8) Enter factory mode.
- 9) Save the power key status into EEprom.

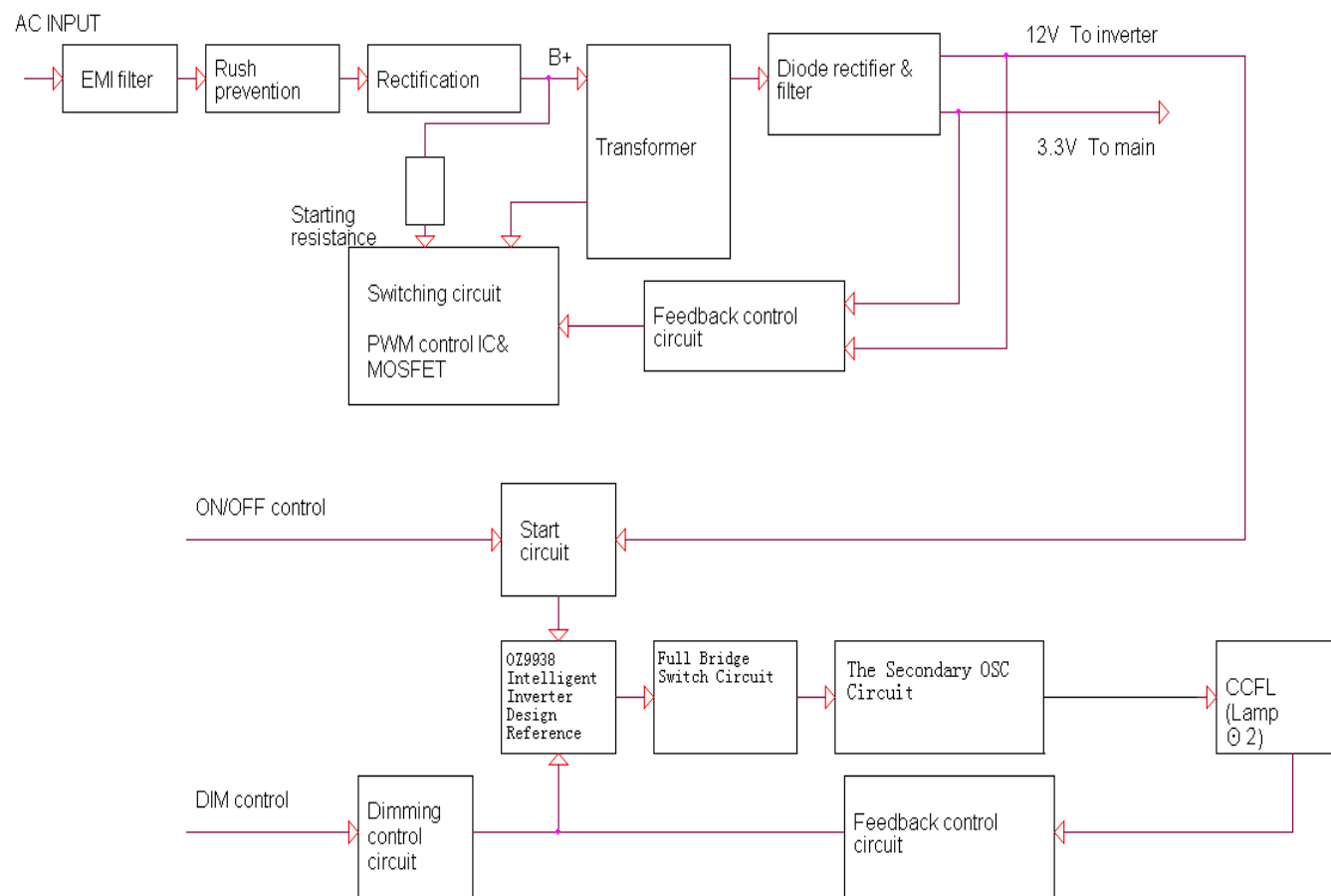
Turn on the LED and set it to green color. Scalar initializes.

- 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
5.3.1 Main Board

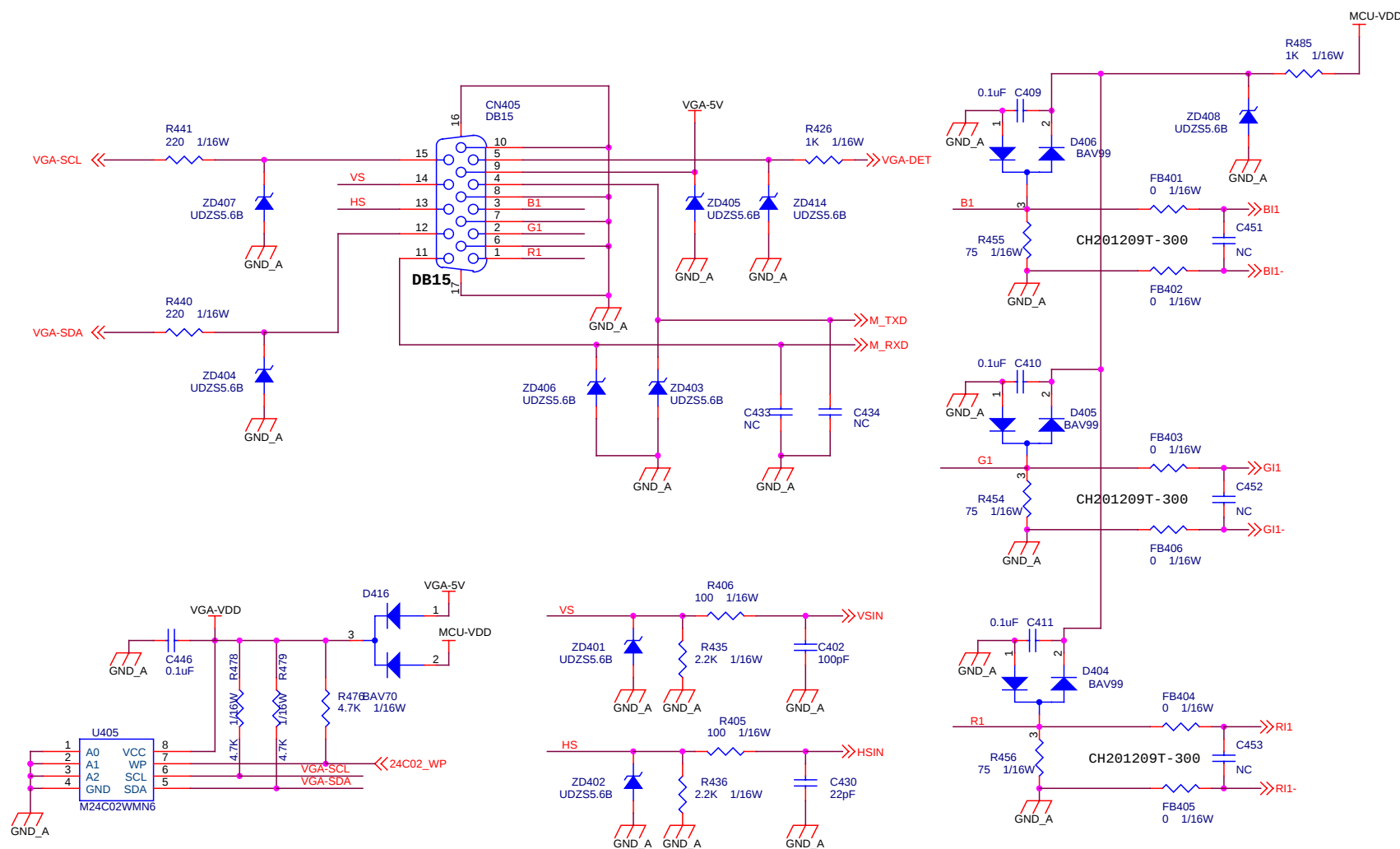


5.3.2 Inverter/Power Board

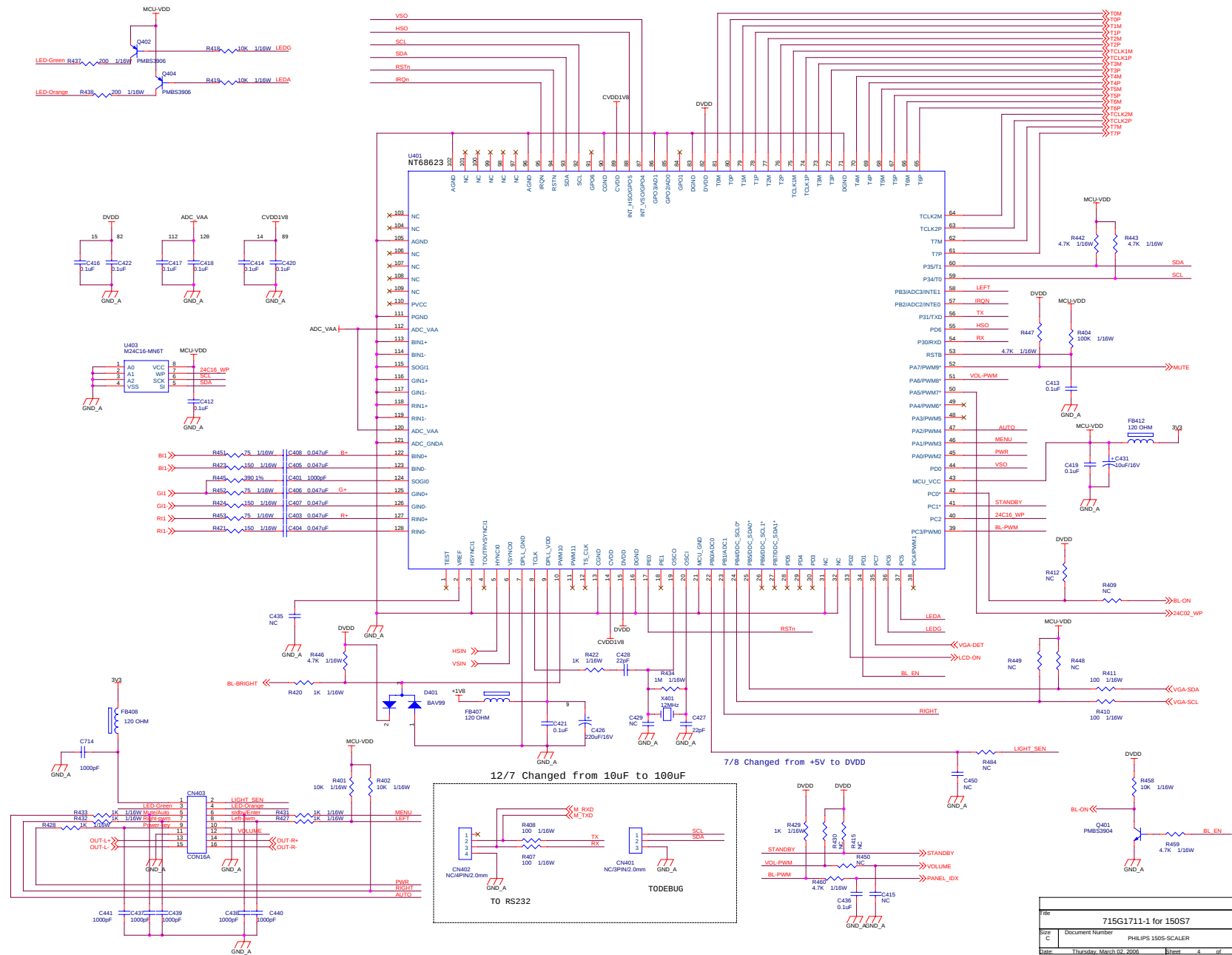


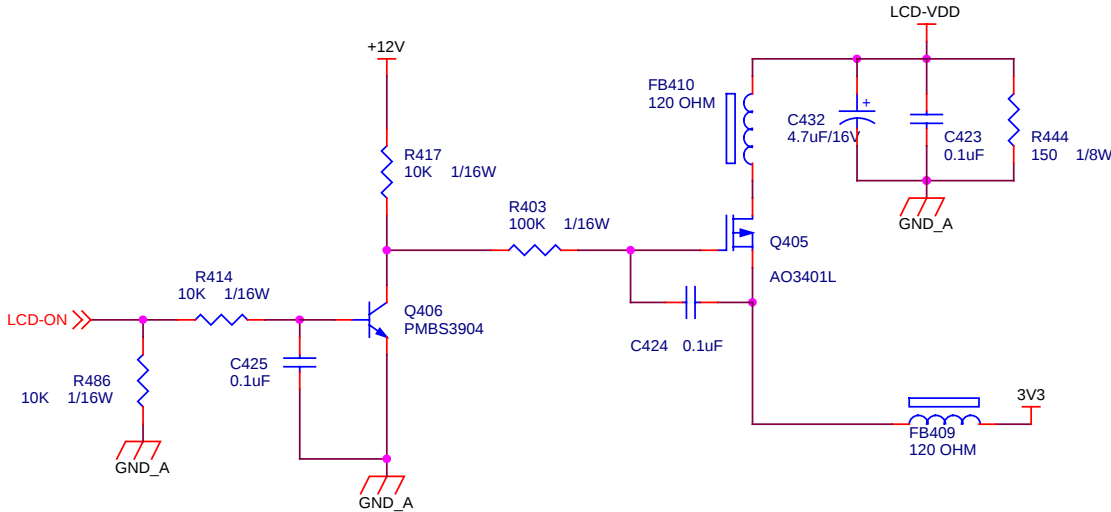
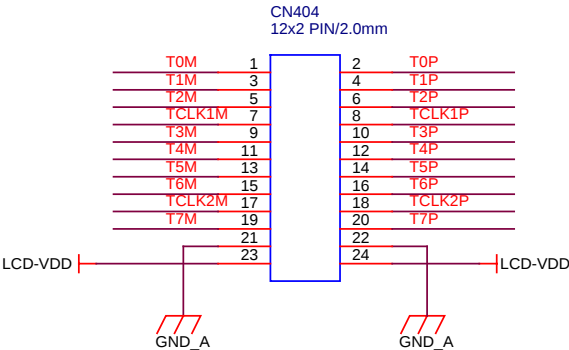
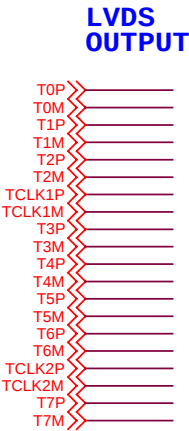
6. Schematic Diagram

6.1 Main Board

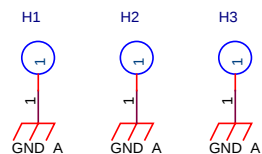


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715G1711-1 for 150S7		
Size A4	Document Number	Rev C
PHILIPS 150S-ADC Input		
Date: Thursday, March 02, 2006	Sheet 5	of 5



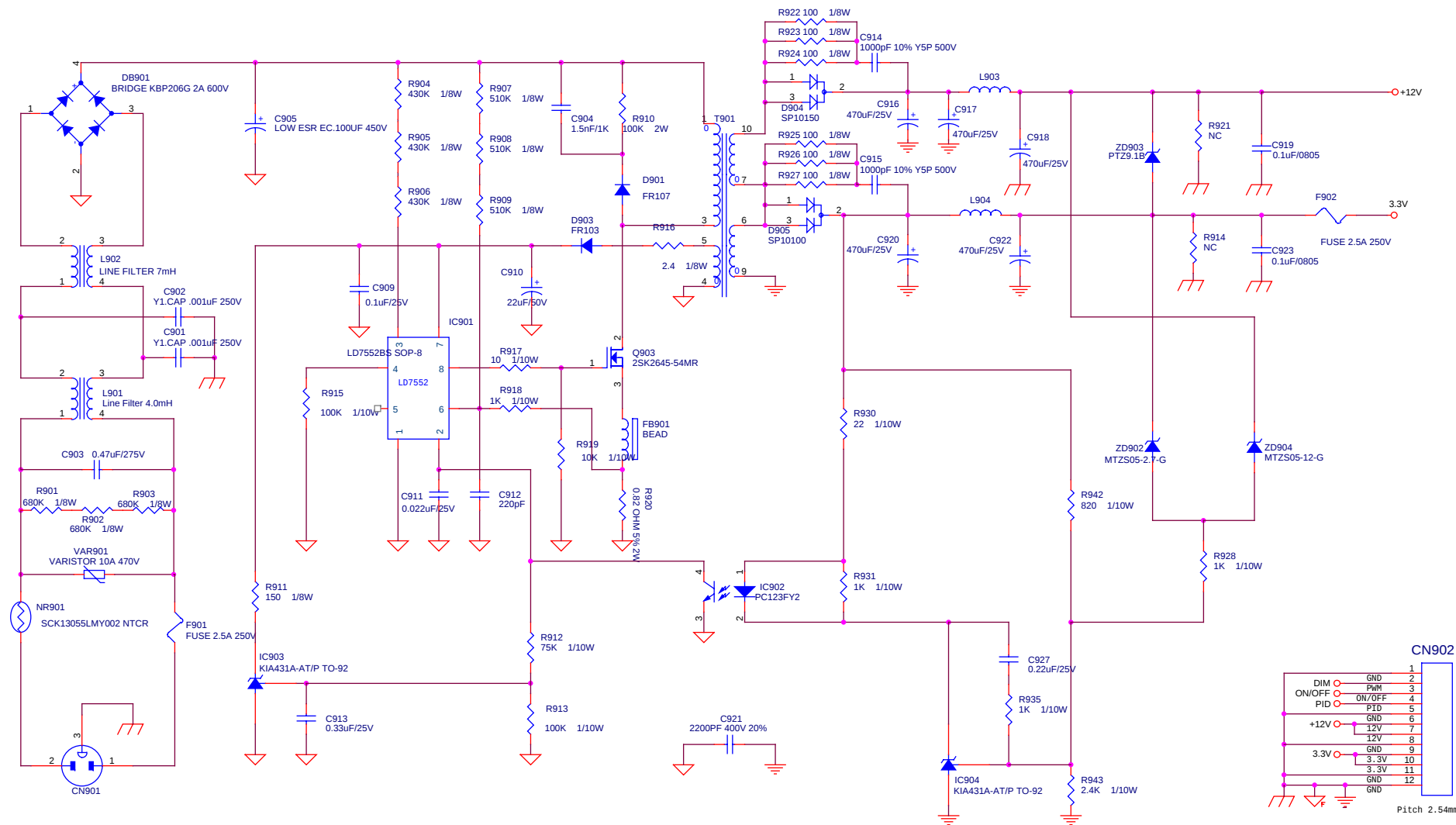


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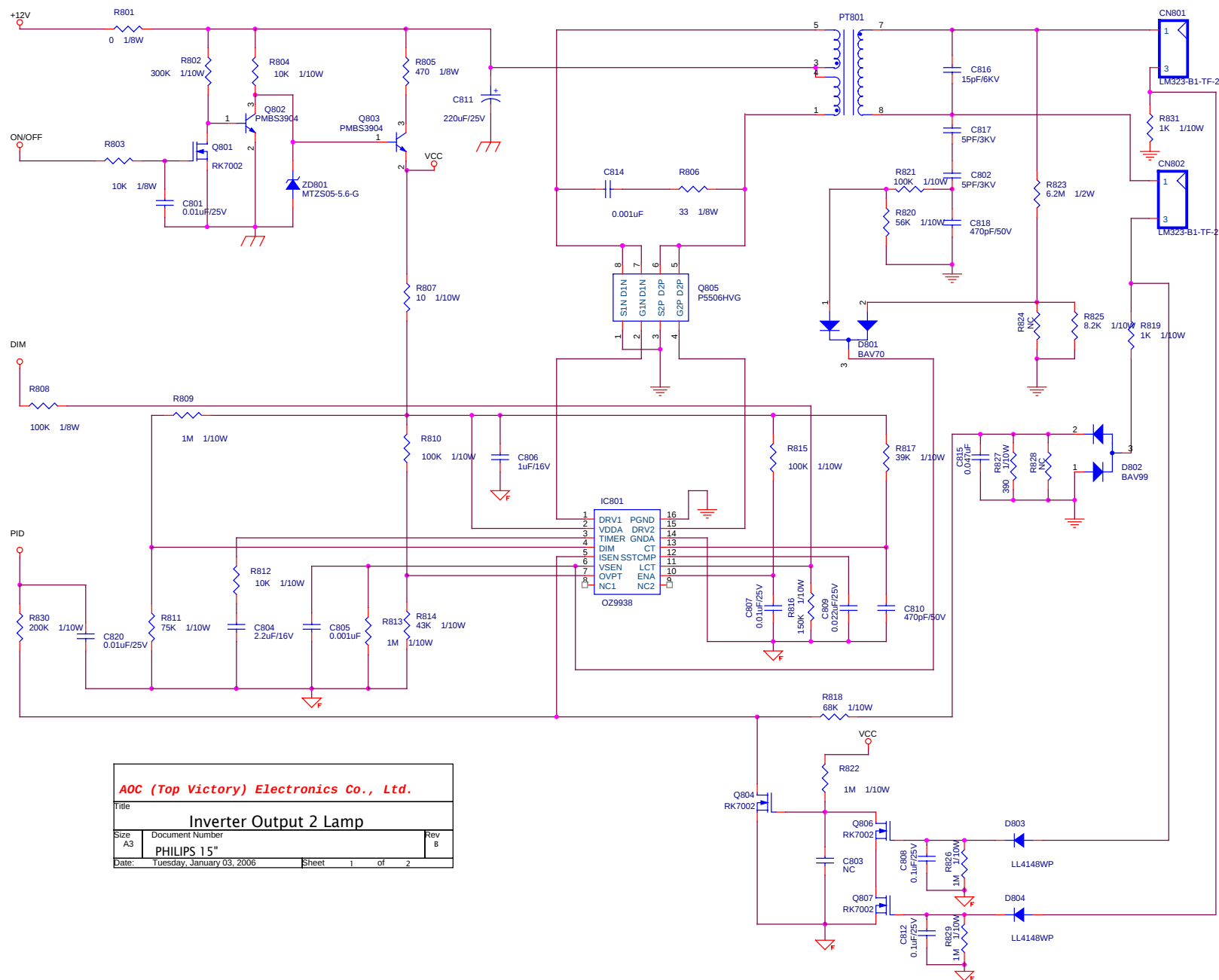
Title			
715G1711-1 for 150S7			
Size A4	Document Number PHILIPS 150S-Scaler Power		Rev C
Date:	Thursday, March 02, 2006	Sheet	2 of 5

6.2 Power Board



MODEL : PWPC1521LPR1

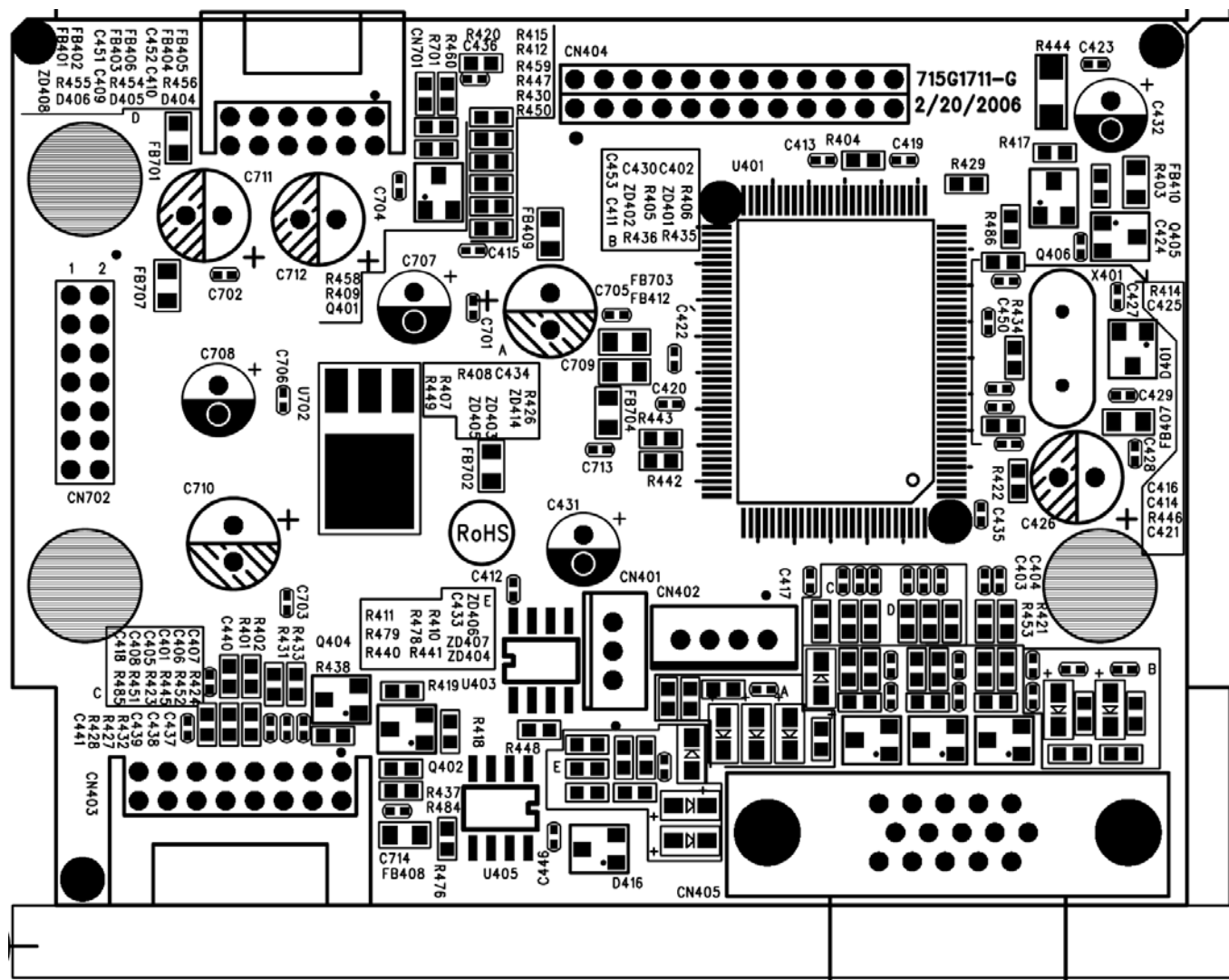
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1.POWER OUTPUT 12V & 3.3 V		
Size	Document Number	Rev
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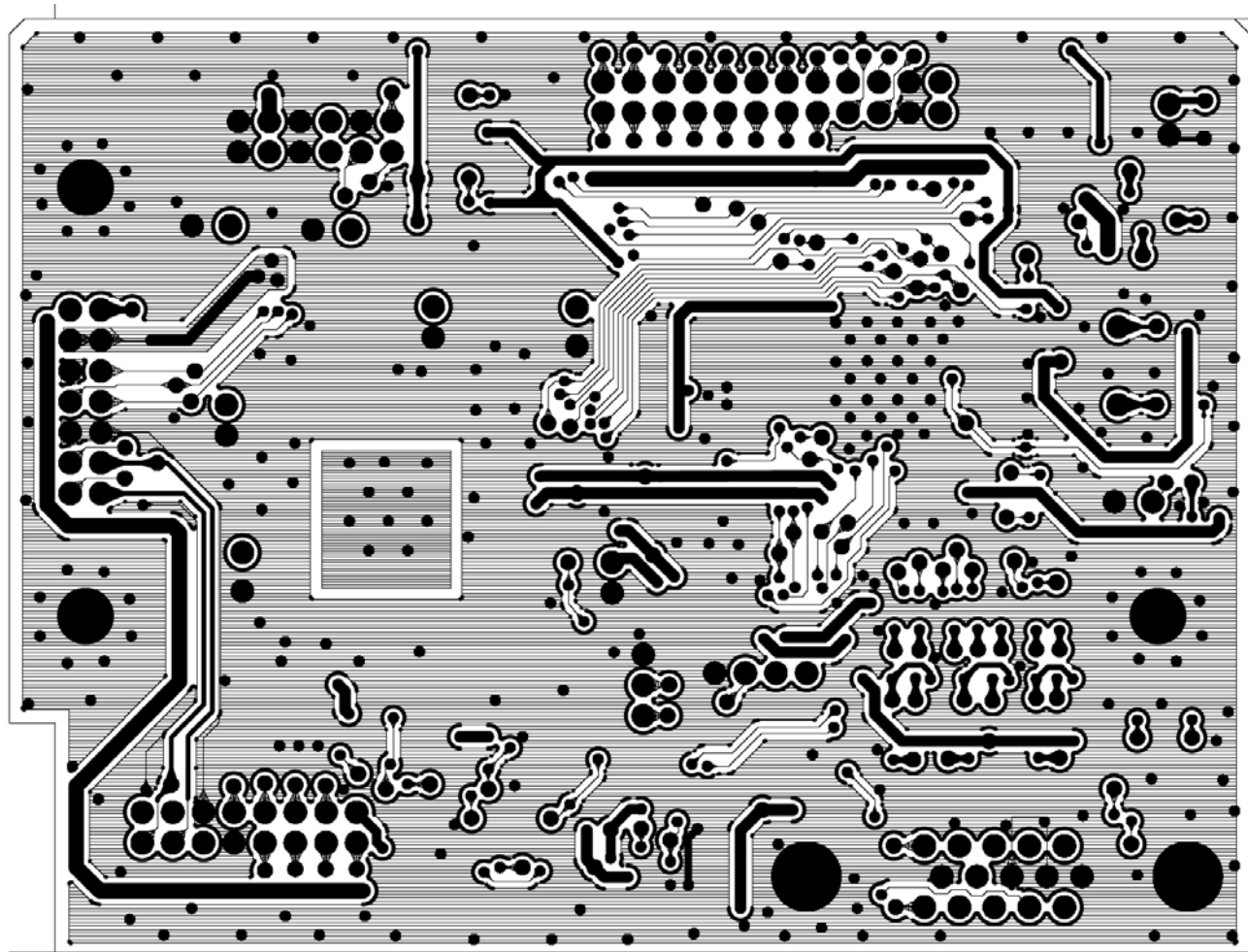
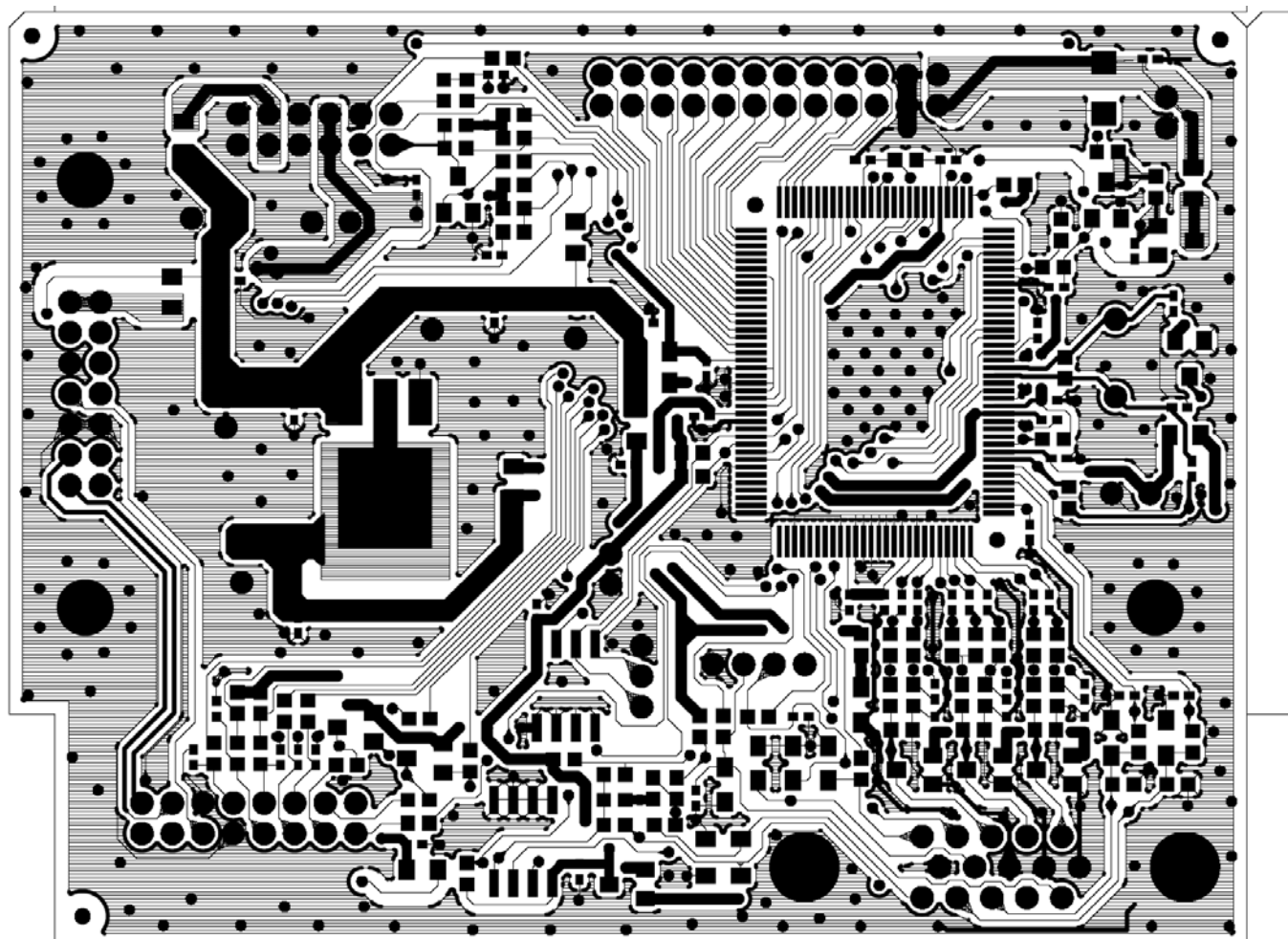


AOC (Top Victory) Electronics Co., Ltd.			
Title			
Inverter Output 2 Lamp			
Size	Document Number	Rev	
A3	PHILIPS 15"	B	
Date:	Tuesday, January 03, 2006	Sheet	1 of 2

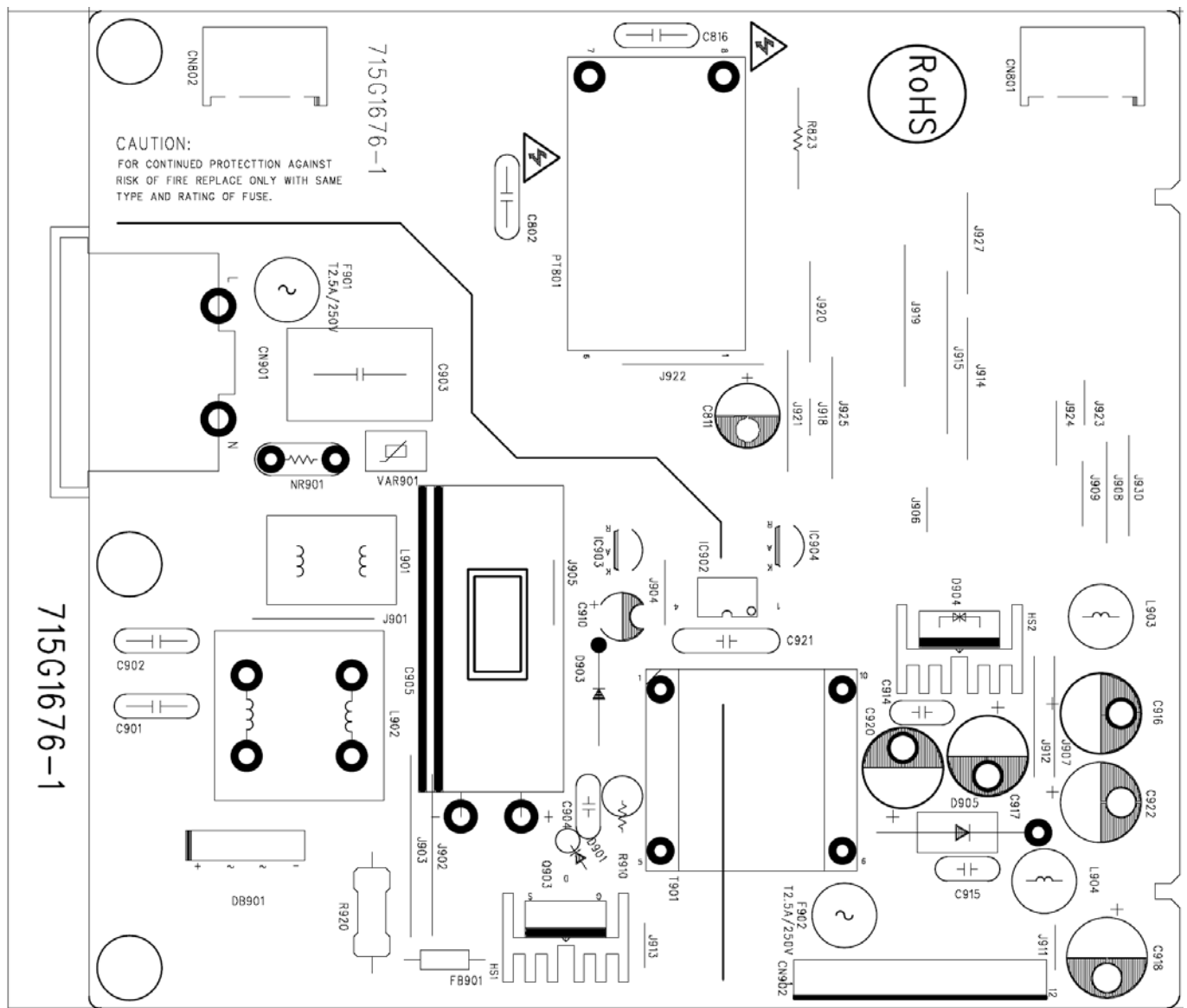
7. PCB Layout

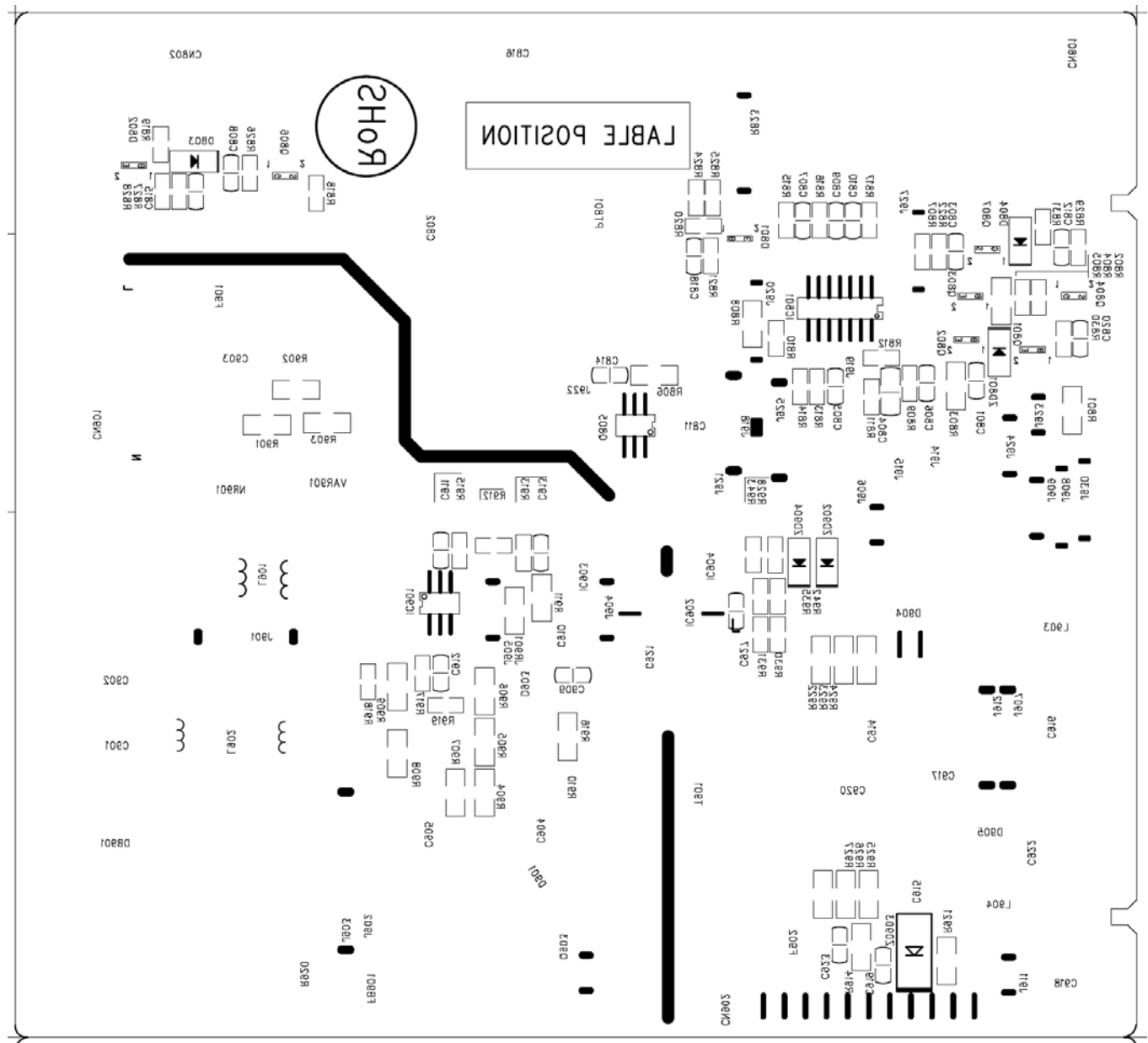
7.1 Main Board

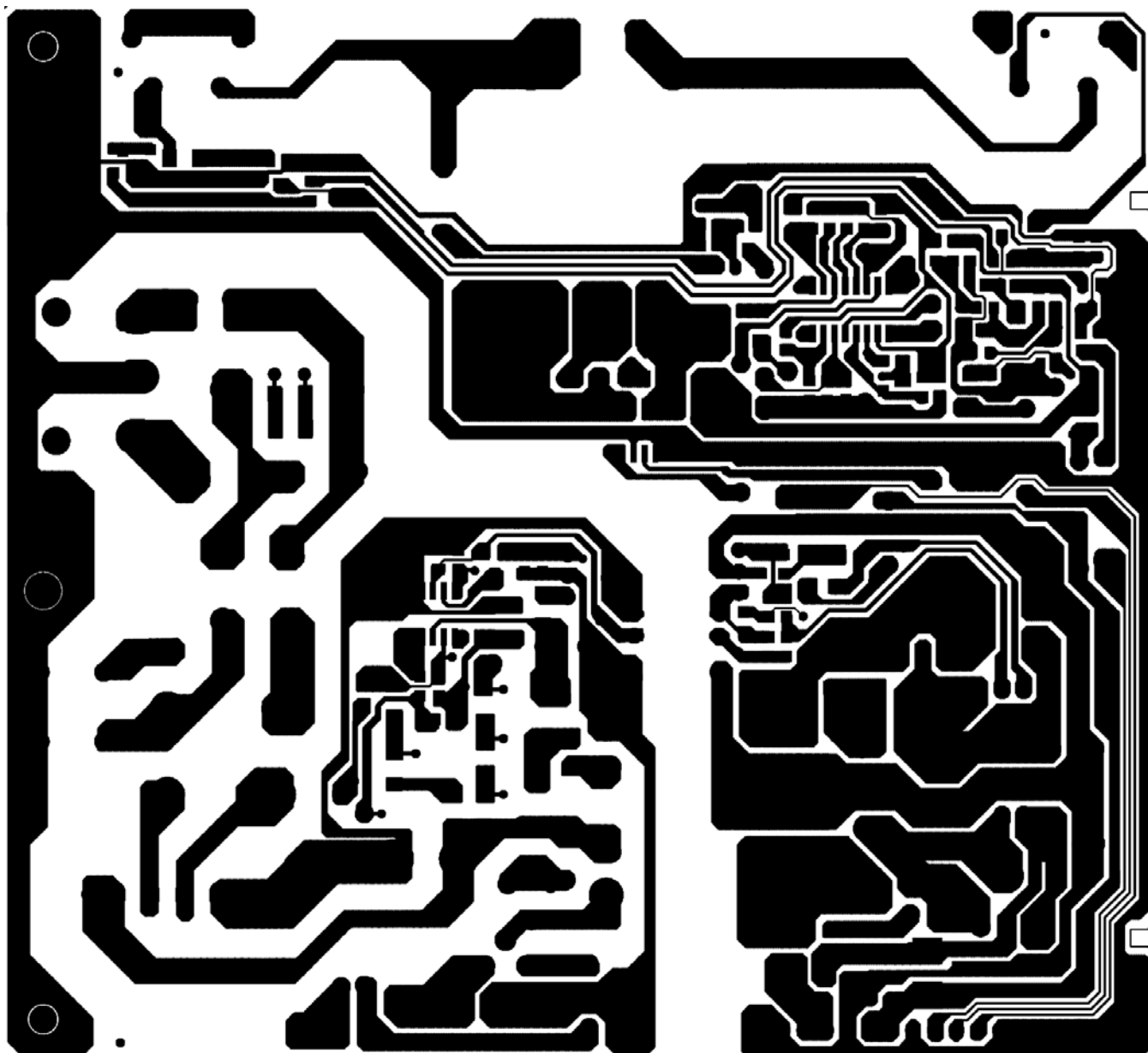




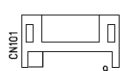
7.2 Power Board







7.3 Key Board



SMS-2 94V0 0000

SW8
AUTO

SW7
LEFT

SW6
RIGHT

SW5
LIGHT



SW4
POWER

SW3
DOWN

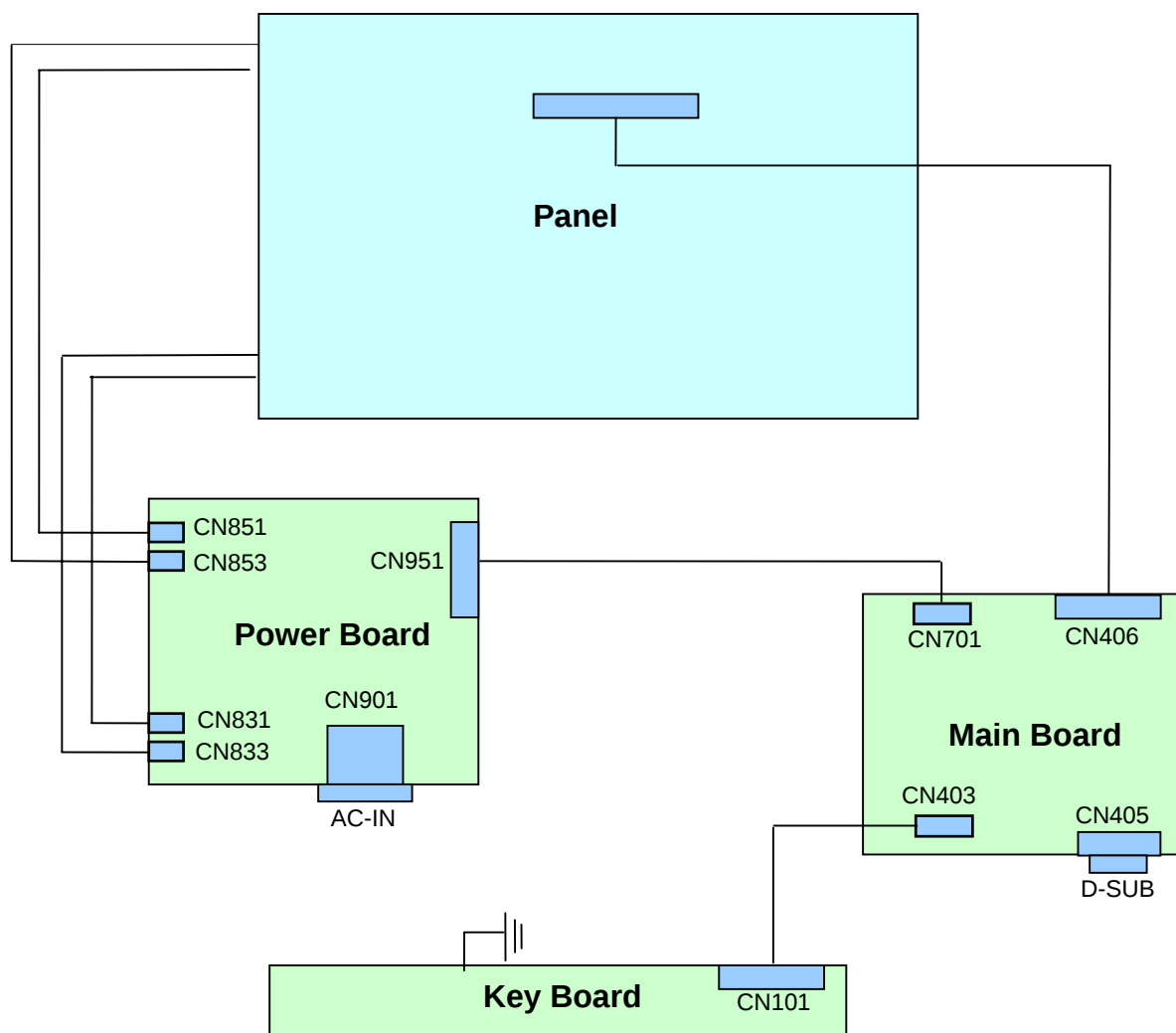
SW2
UP

SW1
MENU

71561755-1
RoHS



8. Wiring Diagram



9. Mechanical Instructions

1. Back View as Fig.1



Fig.1

2. Remove base as Fig.2- Fig.3

- a. Remove 1 screw for hinge cover as Fig.2
- b. Remove 5 screws for base as Fig.3



Fig.2



Fig.3

3. Remove rear cover as Fig.4- Fig.6

- a. Remove 2 screws for back cover as Fig.4
- b. Using the "1" type screwdriver to open the 3 clicks on bottom side as Fig.5



Fig.4



Fig.5



Fig.6

4. Remove shield as Fig.7

Remove 6 screws as Fig.7



Fig.7

5. Remove main and Power board as Fig.8

Remove 13 screws for main and Power board as Fig.8

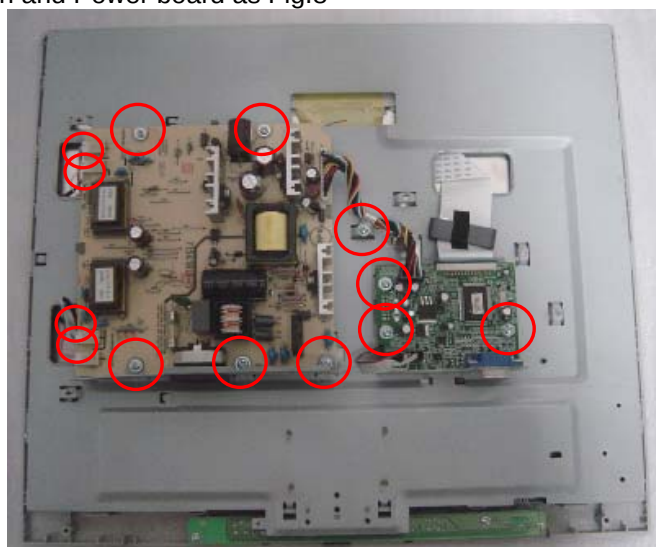


Fig.8

6. Remove the bezel as Fig.9- Fig.11

- a. Remove 2 screws at the right of bezel as Fig.9
- b. Remove 2 screws at the left of bezel as Fig.10
- c. Remove connect wire between main and key board as Fig.11

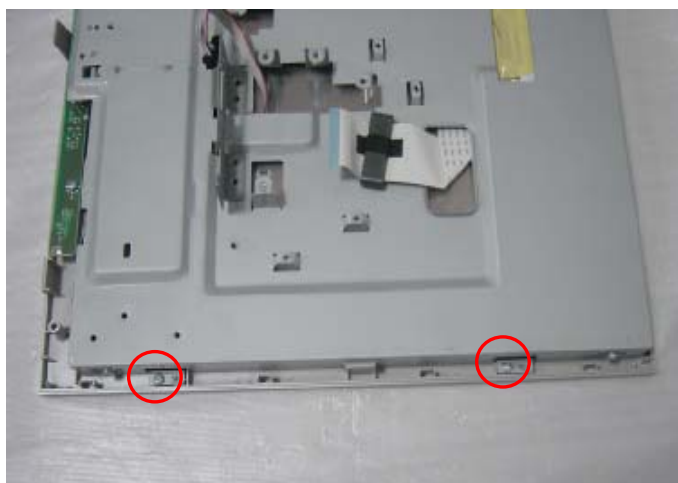


Fig.9

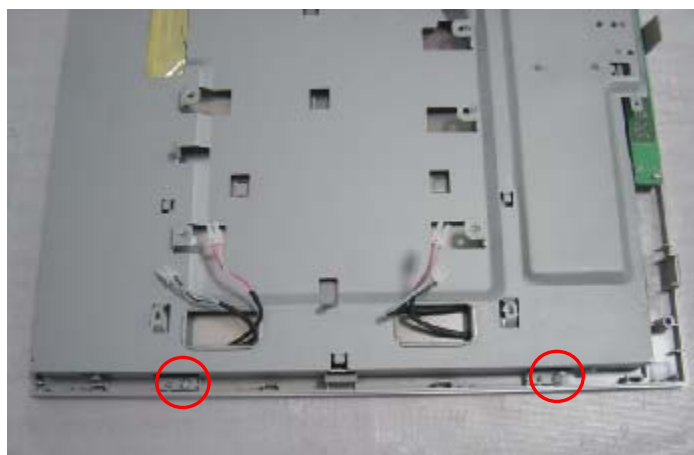


Fig.10



Fig.11

7. Remove the main frame as Fig.12- Fig.14

- a. Remove 2 screws at the right of main frame Fig.12
- b. Remove 2 screws at the left of main frame Fig.13



Fig.12



Fig.13



Fig.14

10. Trouble Shooting

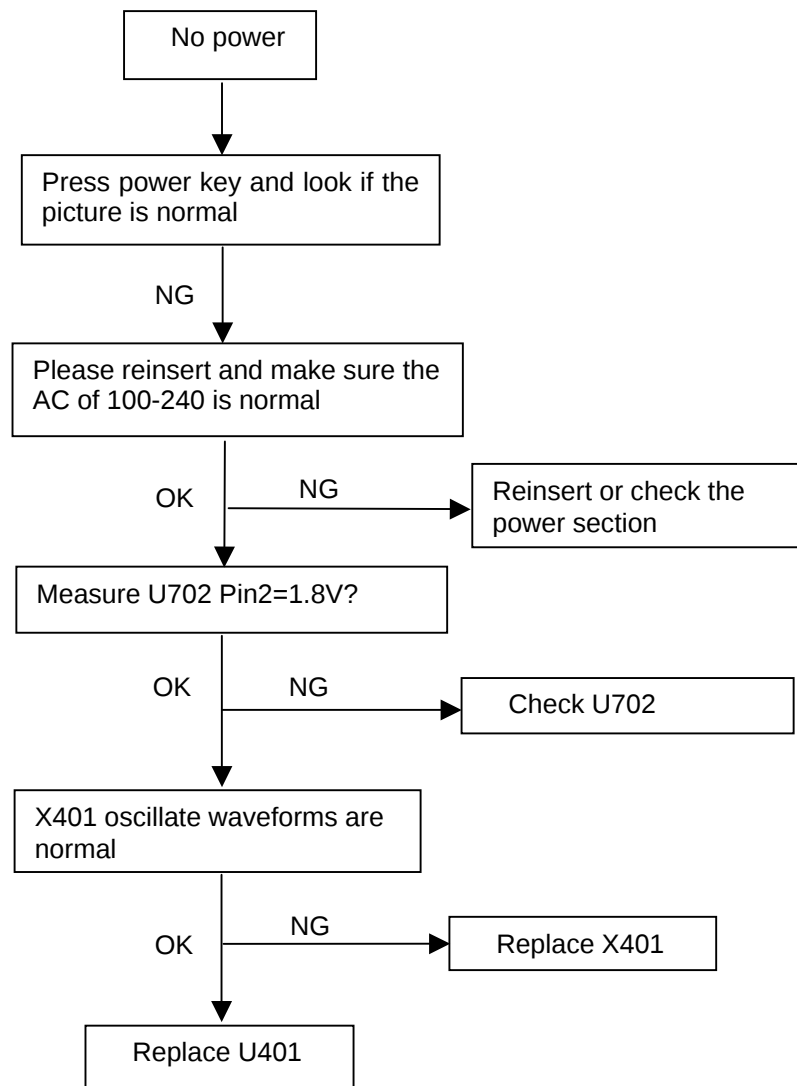
This page deals with problems that can be corrected by a user. If the problem still persists after you have tried these solutions, contact Philips customer service representative.

Common Problems	
Having this problem	Check these items
No Picture (Power LED not lit)	• Make sure the power cord is plugged into the power outlet and into the back of the monitor. • First, ensure that the power button on the front of the monitor is in the OFF position, then press it to the ON position.
No Picture (Power LED is amber or yellow)	• Make sure the computer is turned on. • Make sure the signal cable is properly connected to your computer. • Check to see if the monitor cable has bent pins. • The Energy Saving feature may be activated
Screen says 	• Make sure the monitor cable is properly connected to your computer. (Also refer to the Quick Set-Up Guide). • Check to see if the monitor cable has bent pins. • Make sure the computer is turned on.
AUTO button not working properly	• The Auto Function is designed for use on standard Macintosh or IBM-compatible PCs running Microsoft Windows. • It may not work properly if using nonstandard PC or video card.
Imaging Problems	
Display position is incorrect	• Press the Auto button. • Adjust the image position using the Phase/Clock of More Settings in OSD Main Controls.
Image vibrates on the screen	• Check that the signal cable is properly connected to the graphics board or PC.

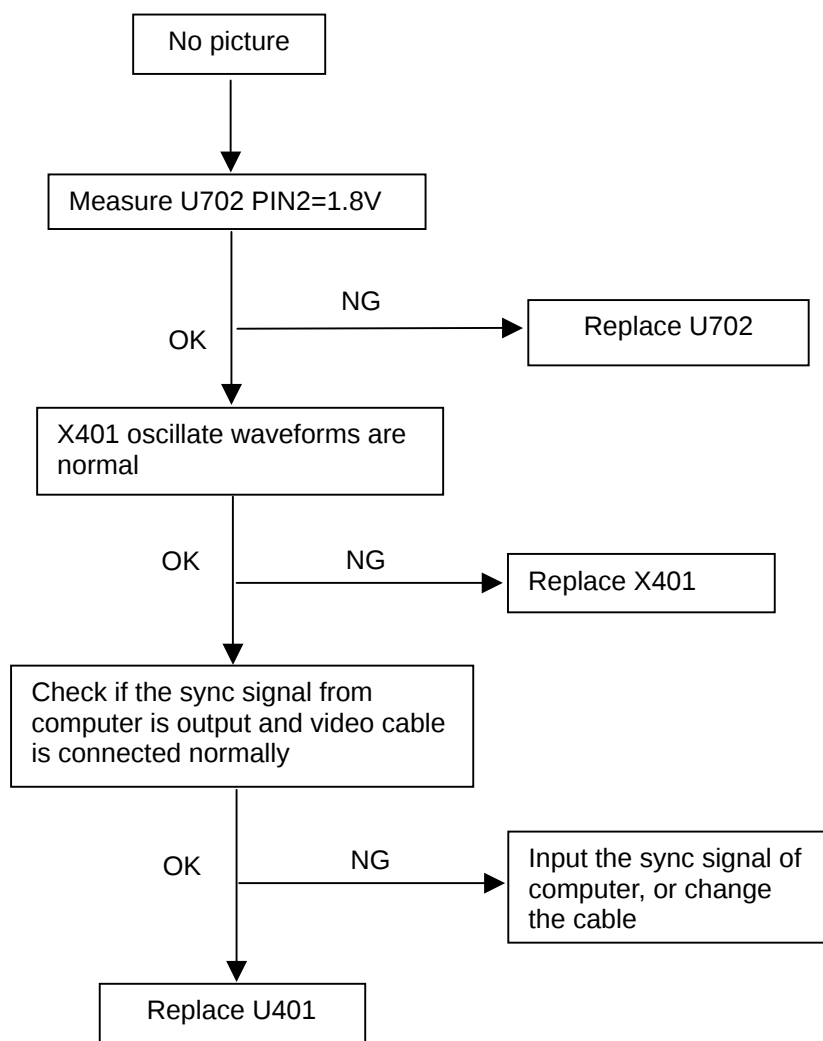
Vertical flicker appears 	• Press the Auto button. • Eliminate the vertical bars using the Phase/Clock of More Settings in OSD Main Controls.
Horizontal flicker appears 	• Press the Auto button. • Eliminate the vertical bars using the Phase/Clock of More Settings in OSD Main Controls.
The screen is too bright or too dark	• Adjust the contrast and brightness on On-Screen Display. (The backlight of the LCD monitor has a fixed life span. When the screen becomes dark or begins to flicker, please contact your sales representative).
An after-image appears	• If an image remains on the screen for an extended period of time, it may be imprinted in the screen and leave an after-image. This usually disappears after a few hours
An after-image remains after the power has been turned off.	• This is characteristic of liquid crystal and is not caused by a malfunction or deterioration of the liquid crystal. The after-image will disappear after a period of time.
Green, red, blue, dark, and white dots remains	• The remaining dots are normal characteristic of the liquid crystal used in today's technology.

11. Repair Flow Chart

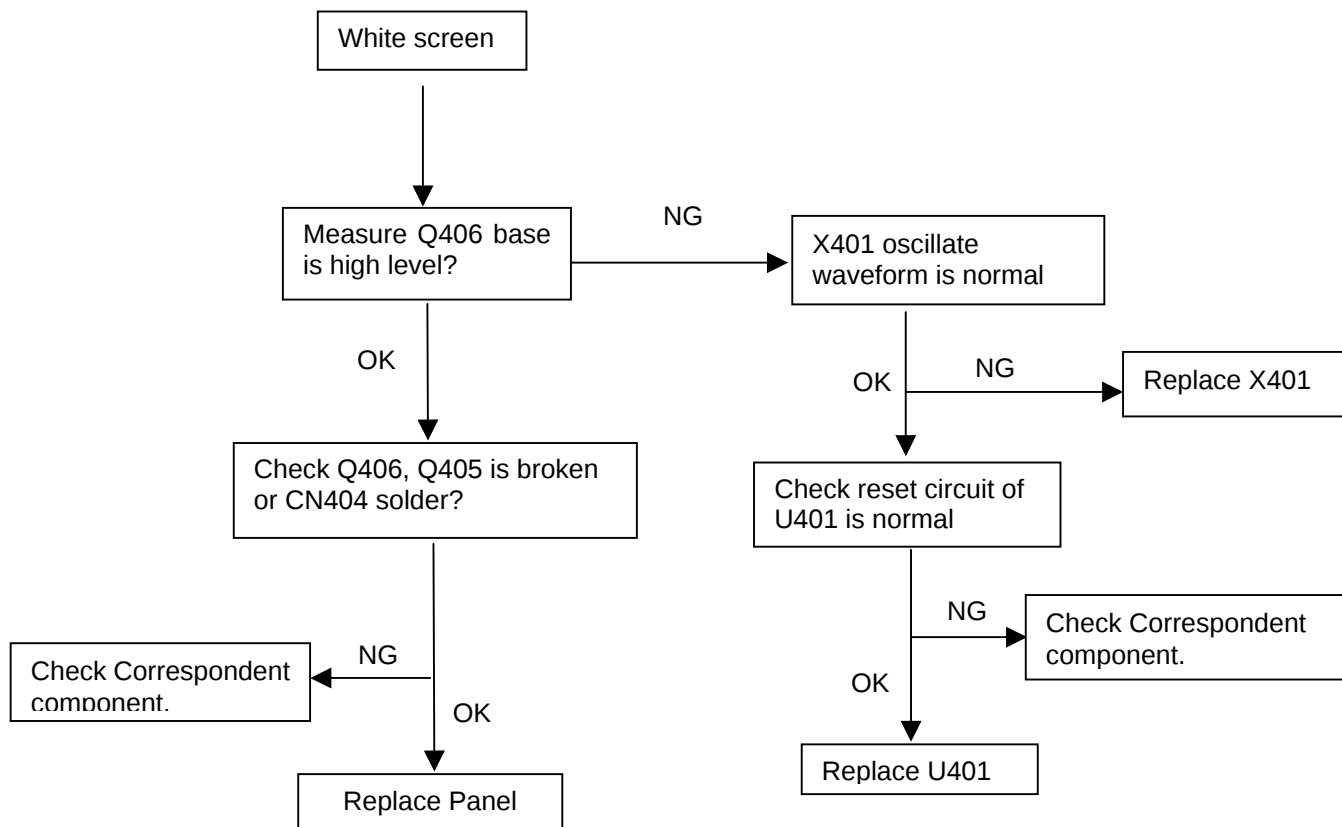
(1). No Power



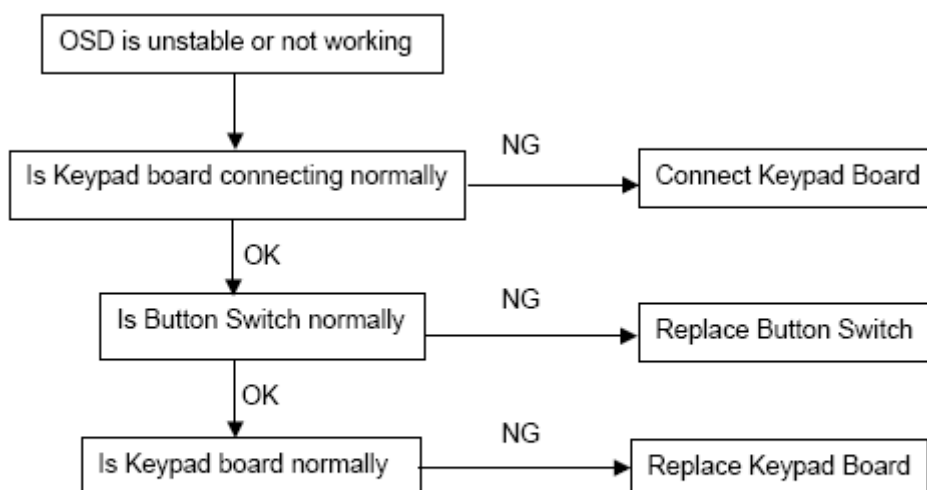
(2). No Picture



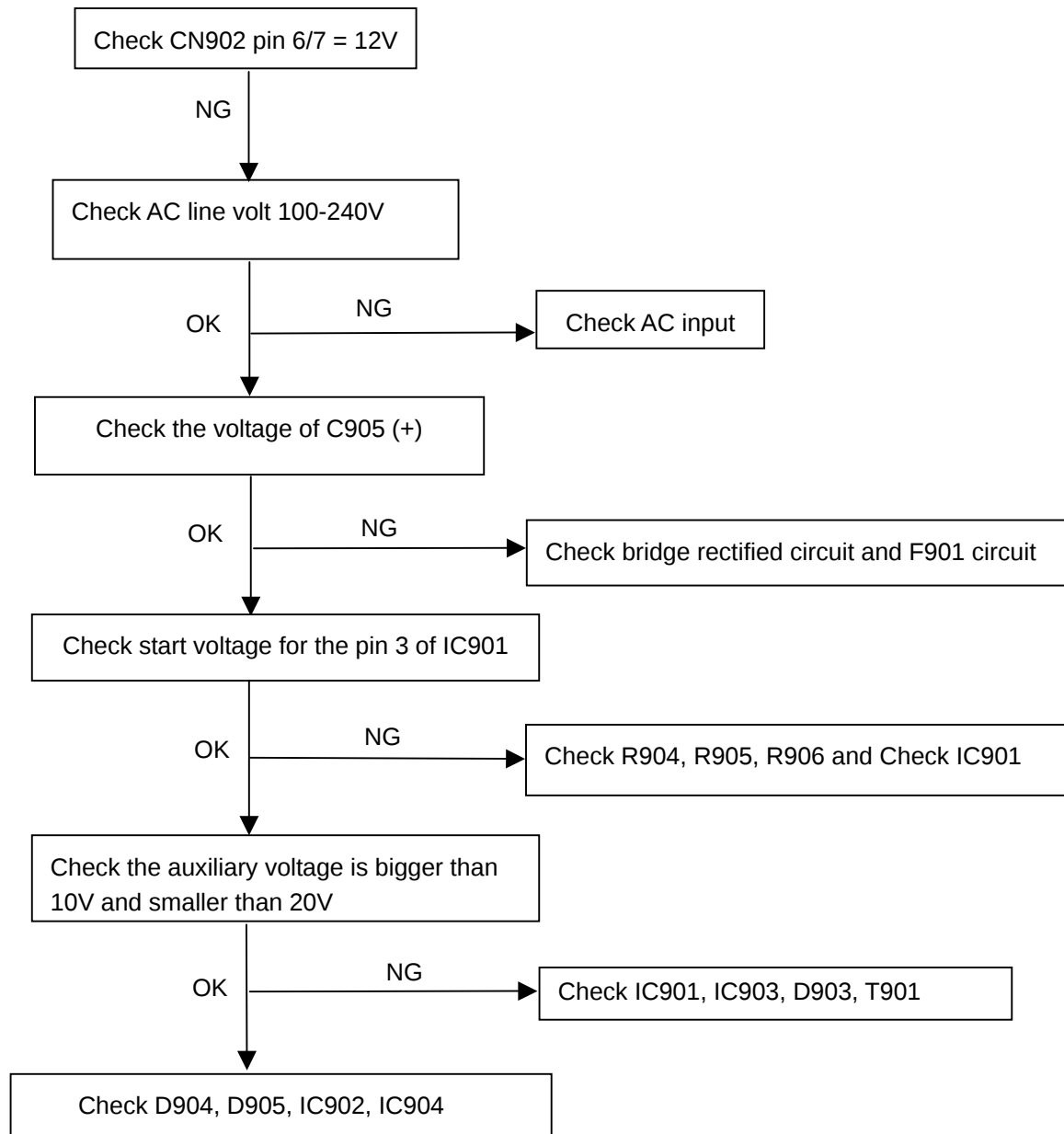
(3). White screen



(4). Keypad Board

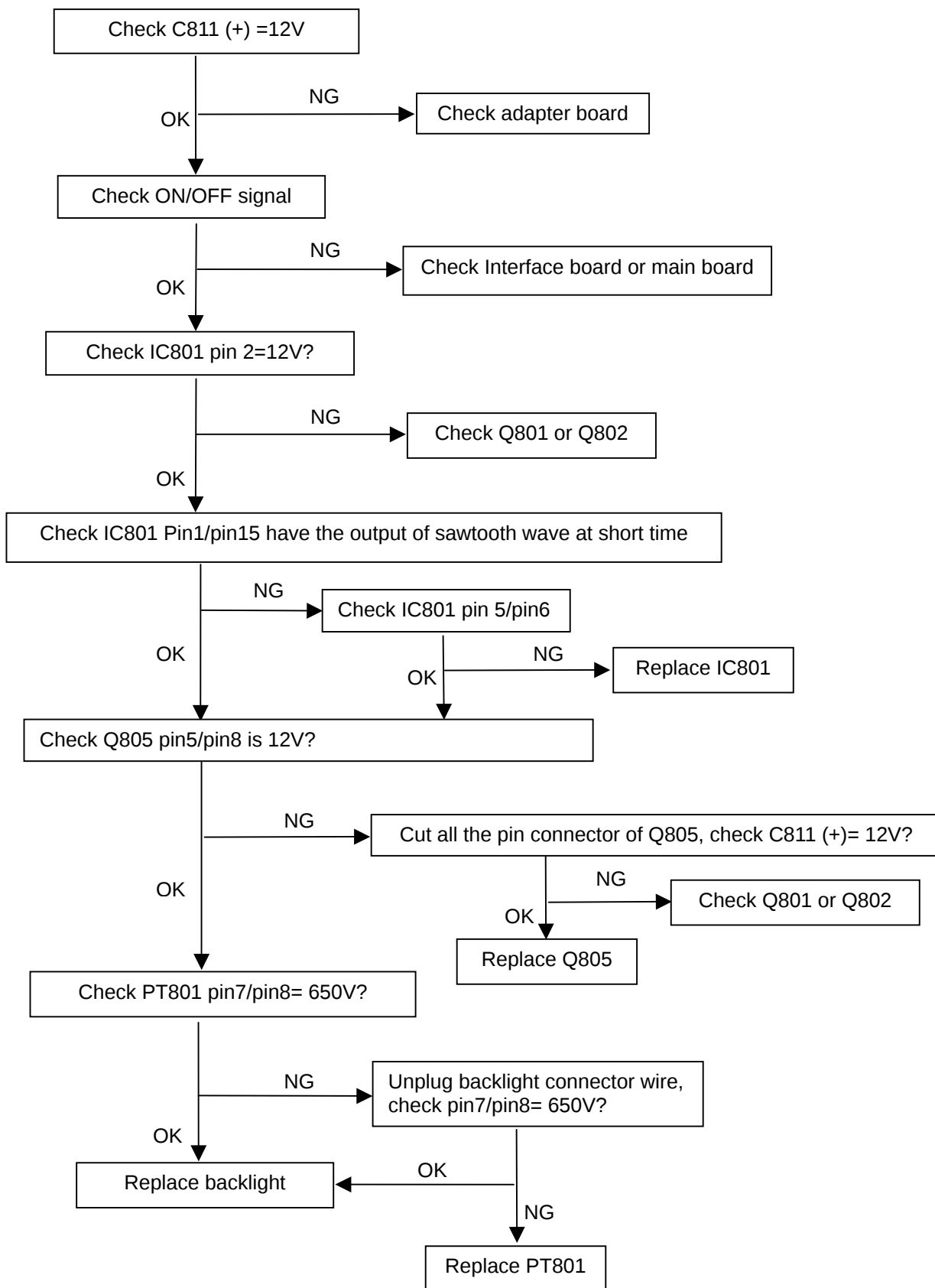


Power/Inverter Board

No power
Adapter Board

Inverter Board

No power



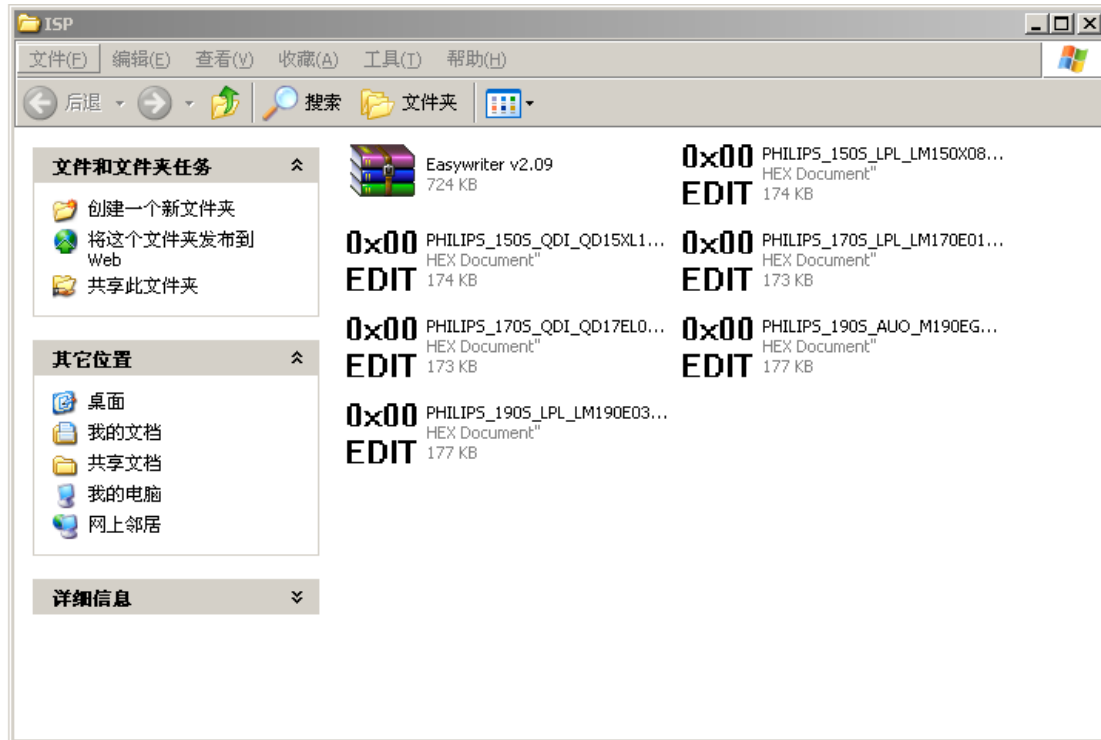
12. ISP Instruction (Take 170S model for example)

Configurations and Procedure

- 1). "Easywriter" The software is provided by Novatek to upgrade the firmware of CPU.
- 2). It is a windows-based program, which cannot be run in MS-DOS.

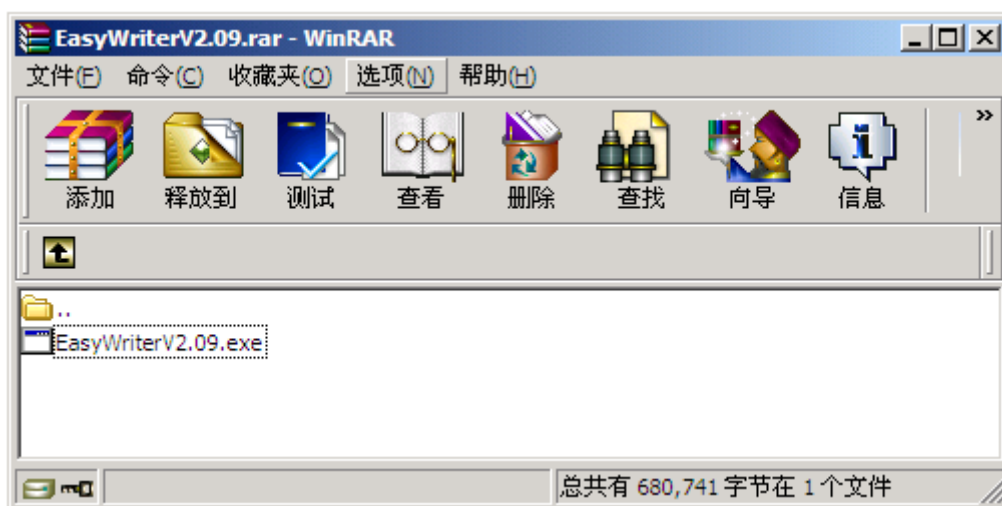
System and equipment requirements

- 1). An i486 (or above) personal computer or compatible.
- 2). Microsoft operation system Windows 95/98/2000/XP.
- 3). ISP Software "Easywriter" and "*****.hex"

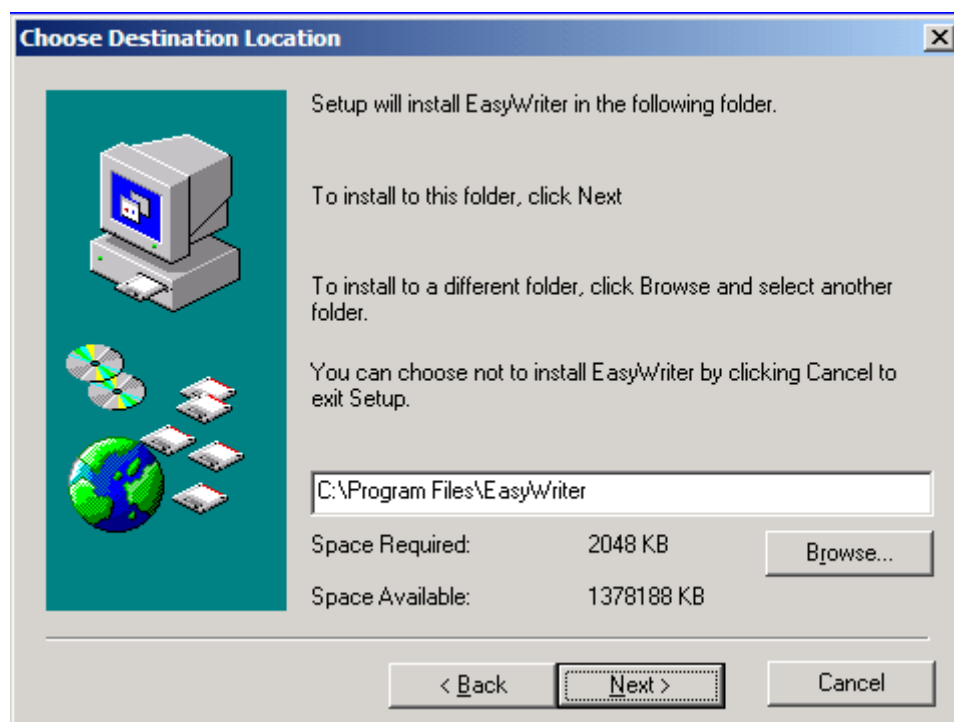
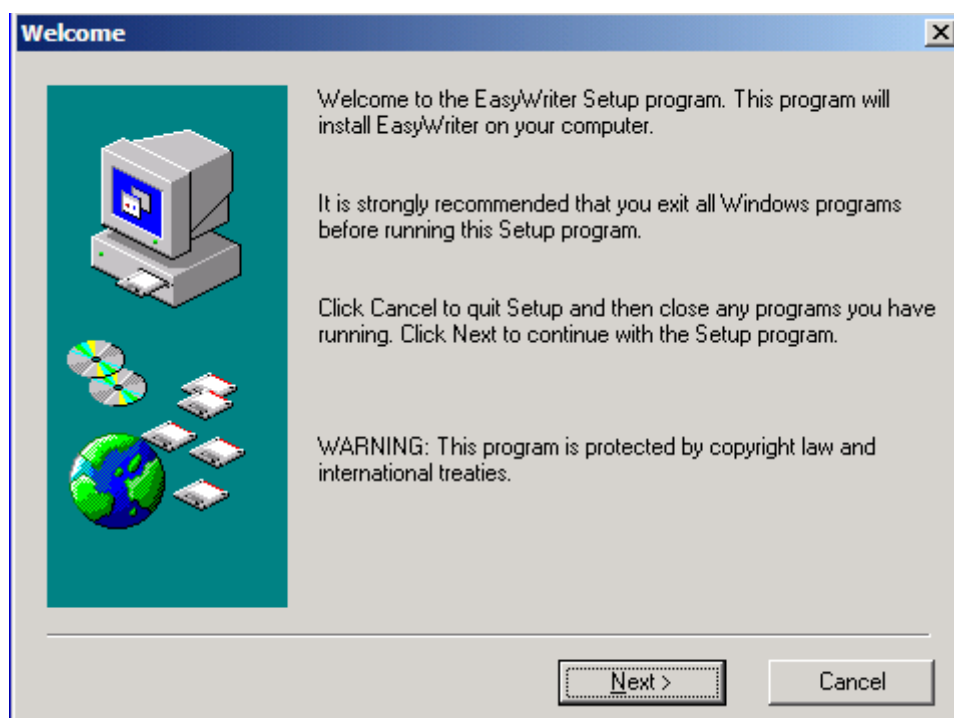


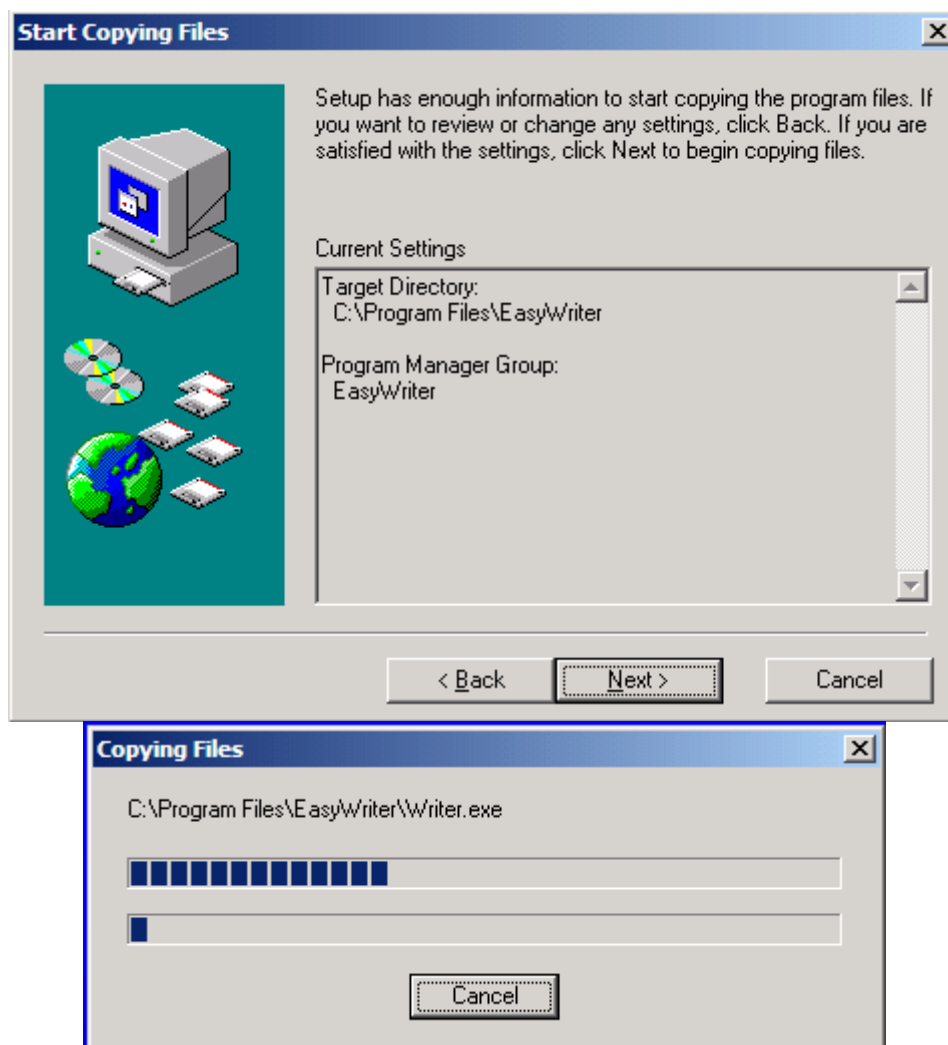
(1). Install the program software

- a. First decompressing files  , as follow:



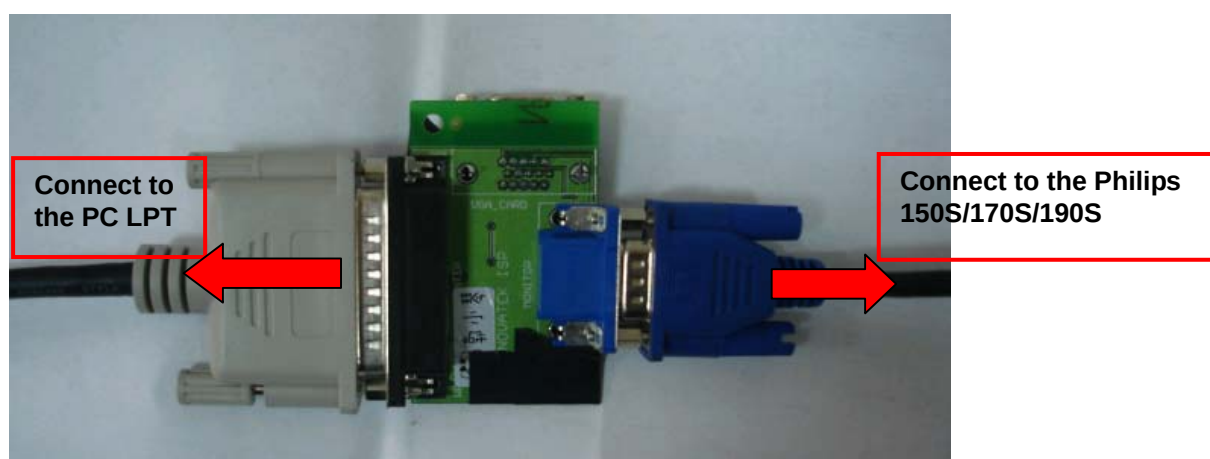
- b. Double – click  , start to install as follows:



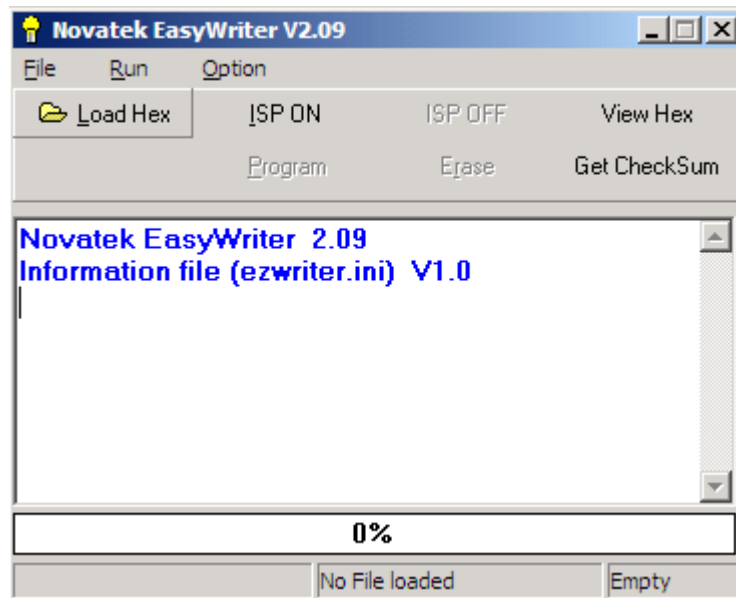


c. There will be a shortcut key  appears on the desktop.

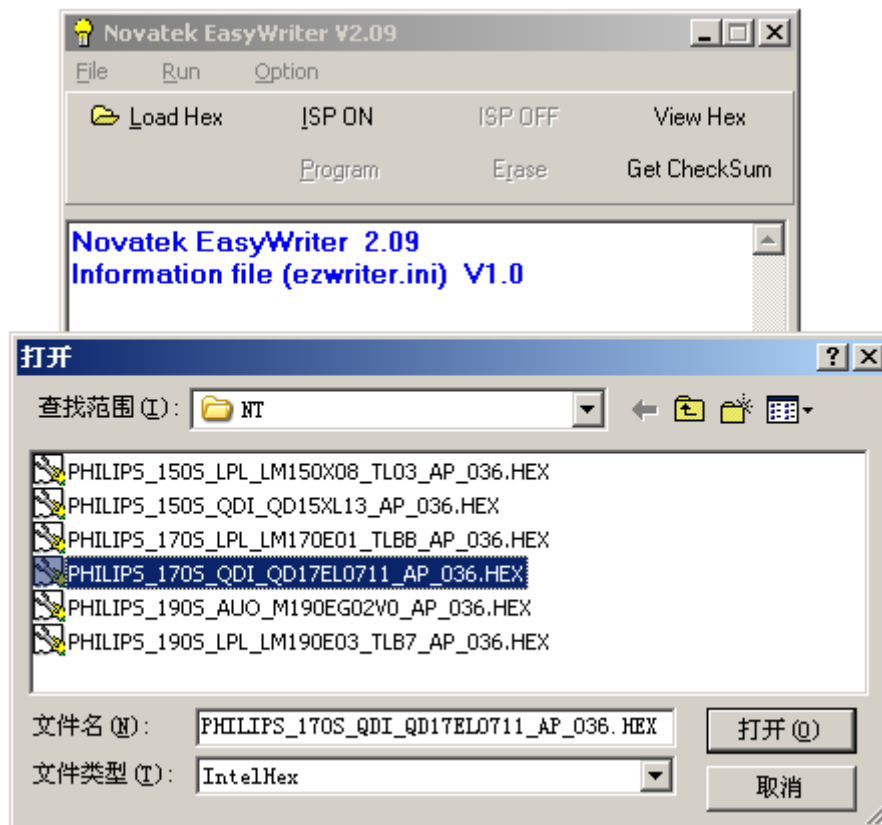
(2). Connect the ISP board as follow:



a. Double-click , running the program as follows:

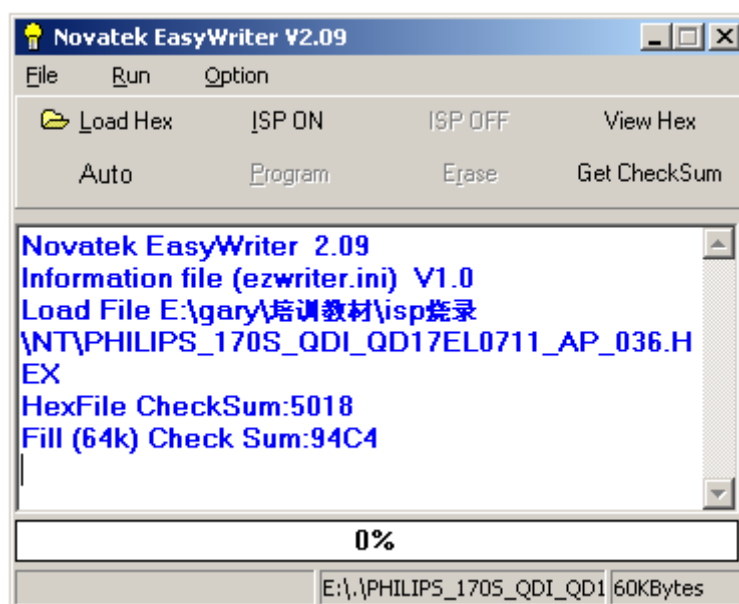
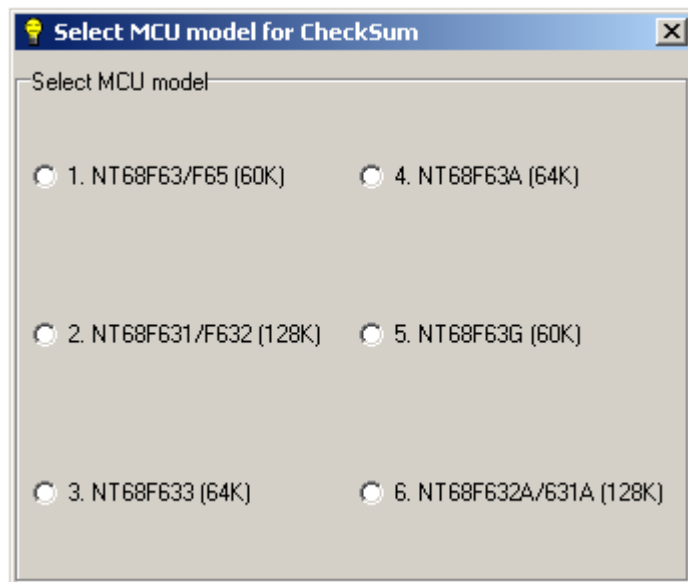


- b. Click  **Load Hex** icon, search the program" PHILIPS_170S_QDI_QD17EL0711_AP_036.HEX", and click **open**:

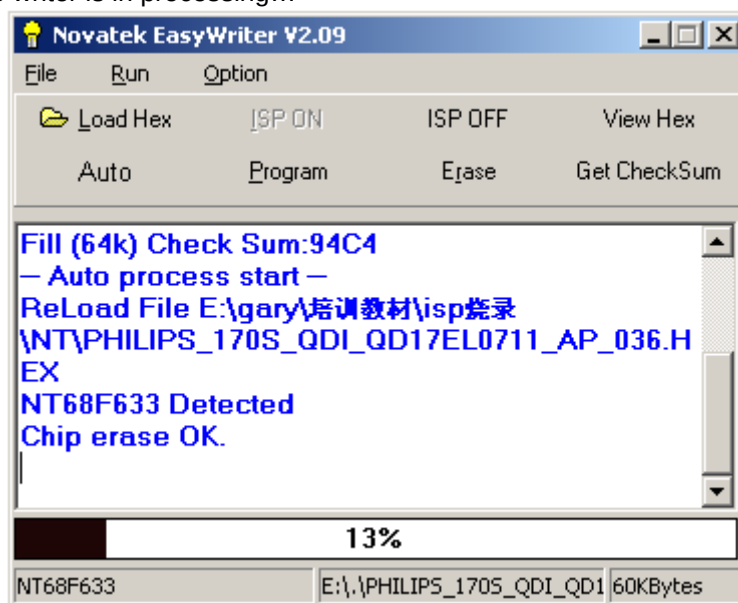


Note: When it is 150s model, you can select  PHILIPS_150S_LPL_LM150X08_TL03_AP_036.HEX (for LPL panel) or  PHILIPS_150S_QDI_QD15XL13_AP_036.HEX (for QDI panel)

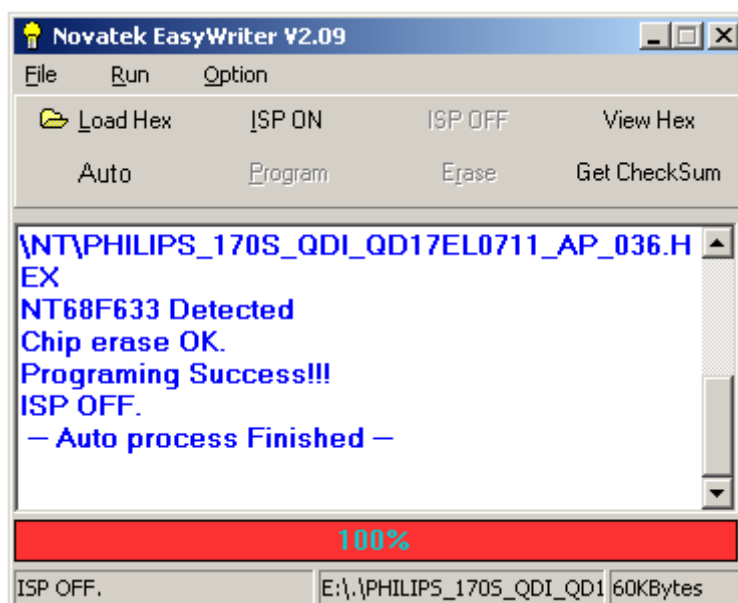
- c. After click "OPEN", there would be a dialog box, select  3. NT68F633 (64K).



c. Click **Auto** icon, the writer is in processing...



d. Until appears the follow Fig, writer completed.



13. DDC Instruction (Take 170S model for example)

General

DDC Data Re-programming

In case the main EEPROM with Software DDC which store all factory settings were replaced because a defect, repaired monitor the serial numbers have to be re-programmed.

It is advised to re-soldered the main EEPROM with Software DDC from the old board onto the new board if circuit board have been replaced, in this case the DDC data does not need to be re-programmed.

Additional information Additional information about DDC (Display Data Channel) may be obtained from Video Electronics Standards Association (VESA). Extended Display Identification Data (EDID) information may be also obtained from VESA.

System and equipment requirements

1. An i486 (or above) personal computer or compatible.
2. Microsoft operation system Windows 95/98/2000/XP.
3. "WinDDC, PORT95NT, config, W, CHECK, Philips 170S EDID" program.
4. Software DDC Alignment kits

The kit contents:

- a. DDC Board x1
- b. Printer cable x1
- c. D-Sub cable x1
- d. 12V DC power source



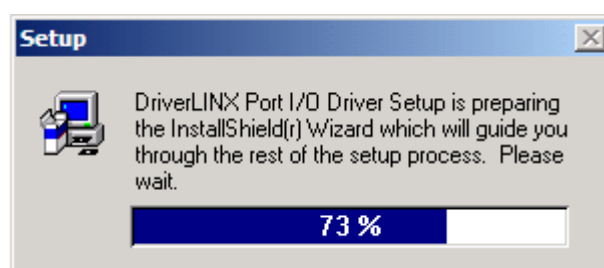
(1). Install software

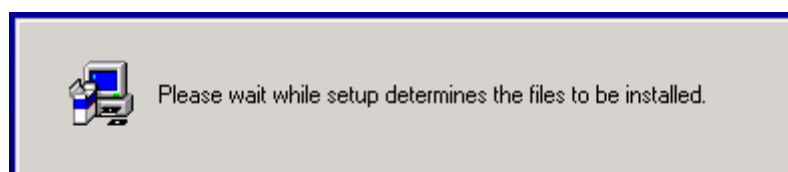
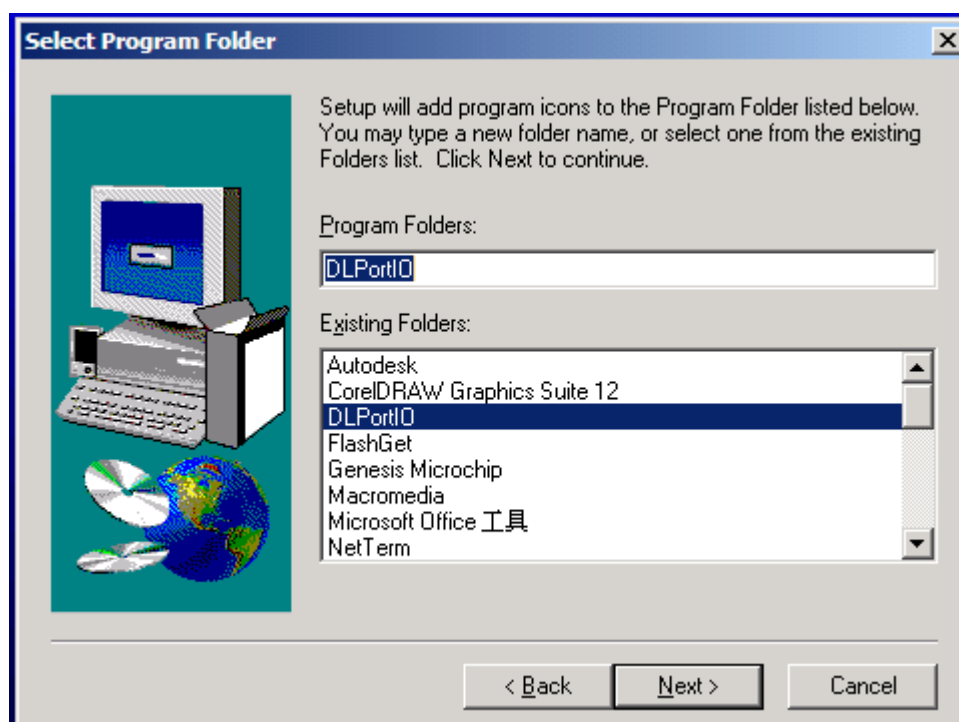
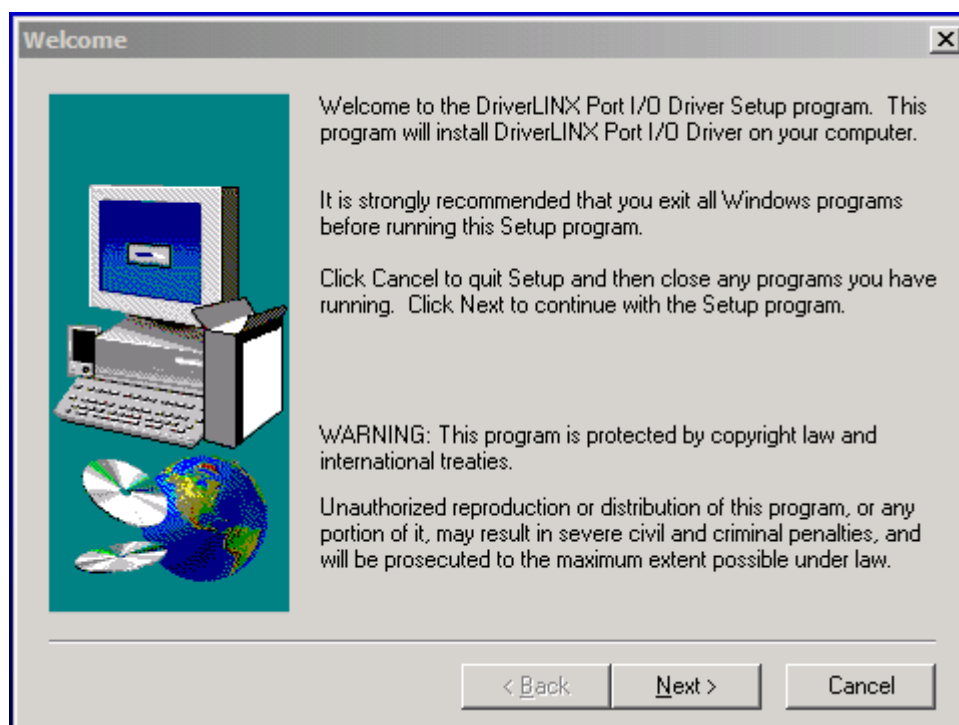


PORT95NT.EXE
PackageForTheWeb Stub
InstallShield Software Corpora...

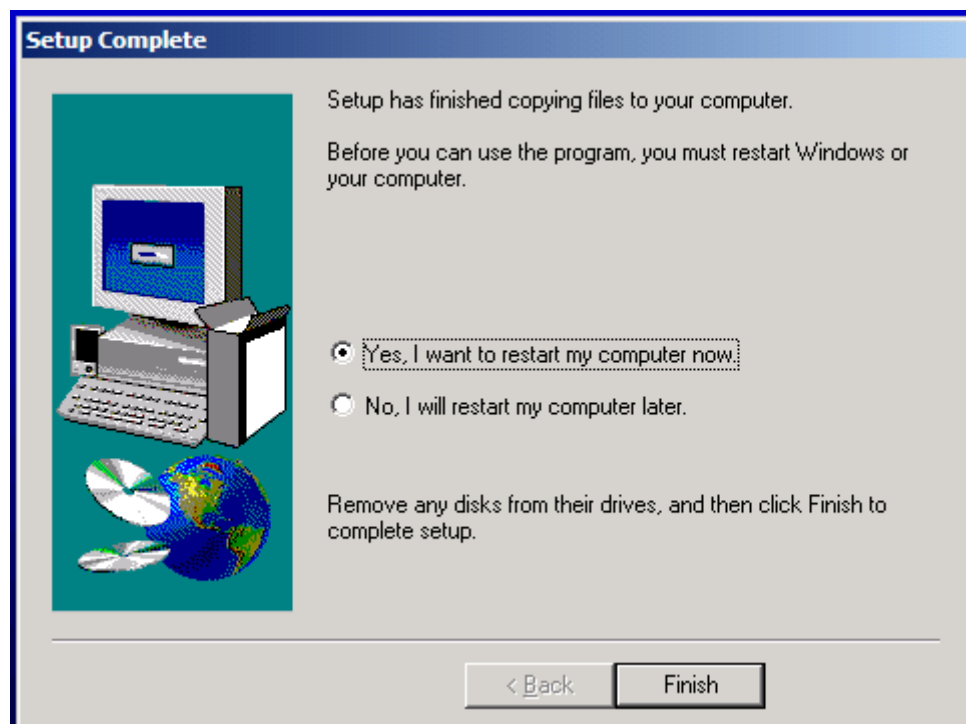
You must install the

at the first. The processing as follows:



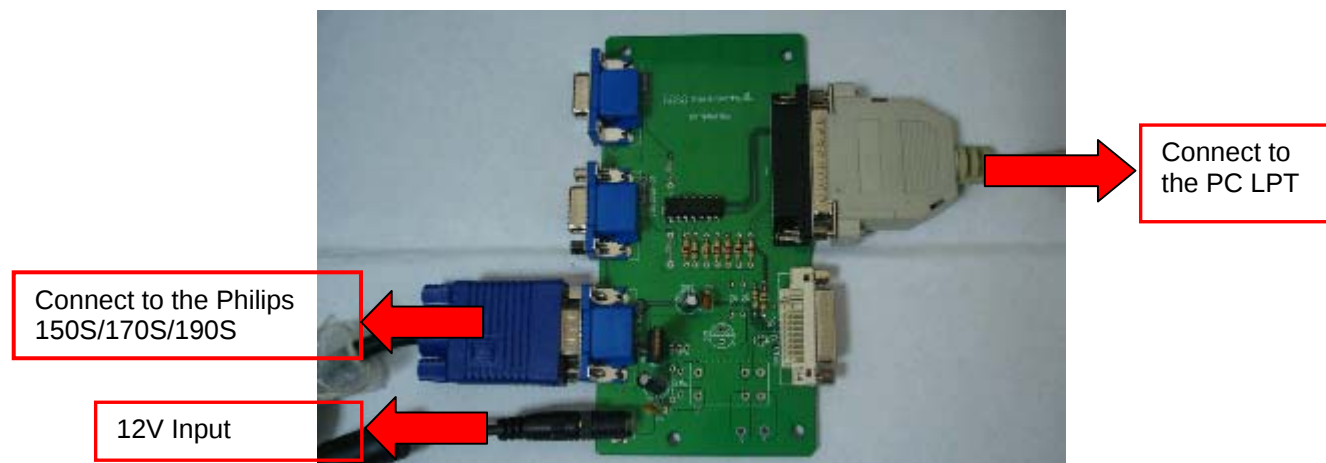


Click **Finish** to complete the installation.

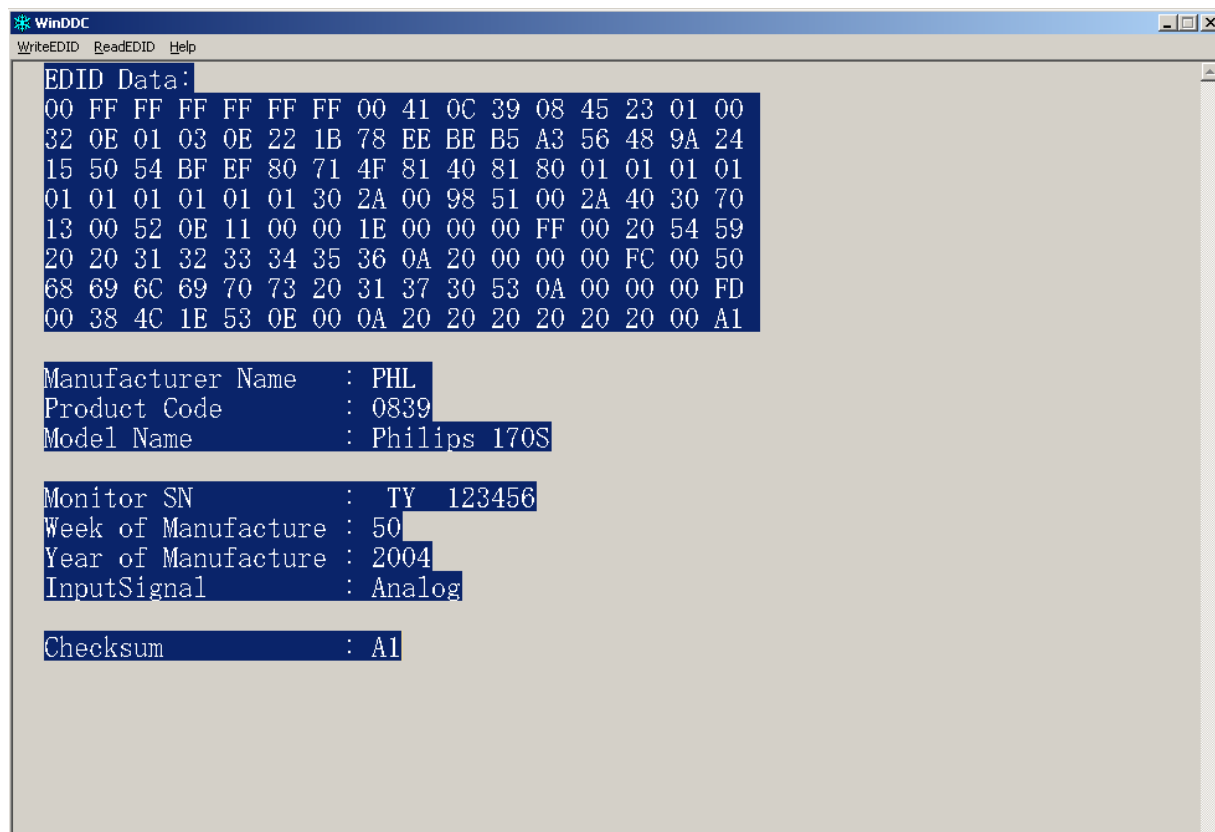


Note: After installation, you must restart the PC to take the setup effect.

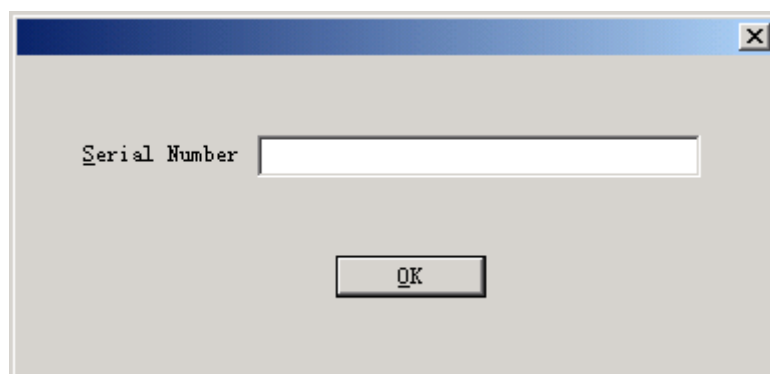
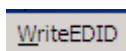
(2). Connect the DDC board as follow:



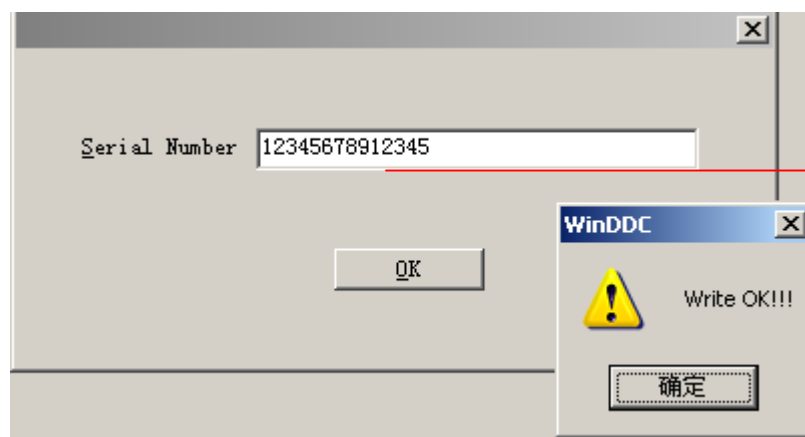
a. Double-click `WinDDC.exe`, appear as follow Figs:



b. Click

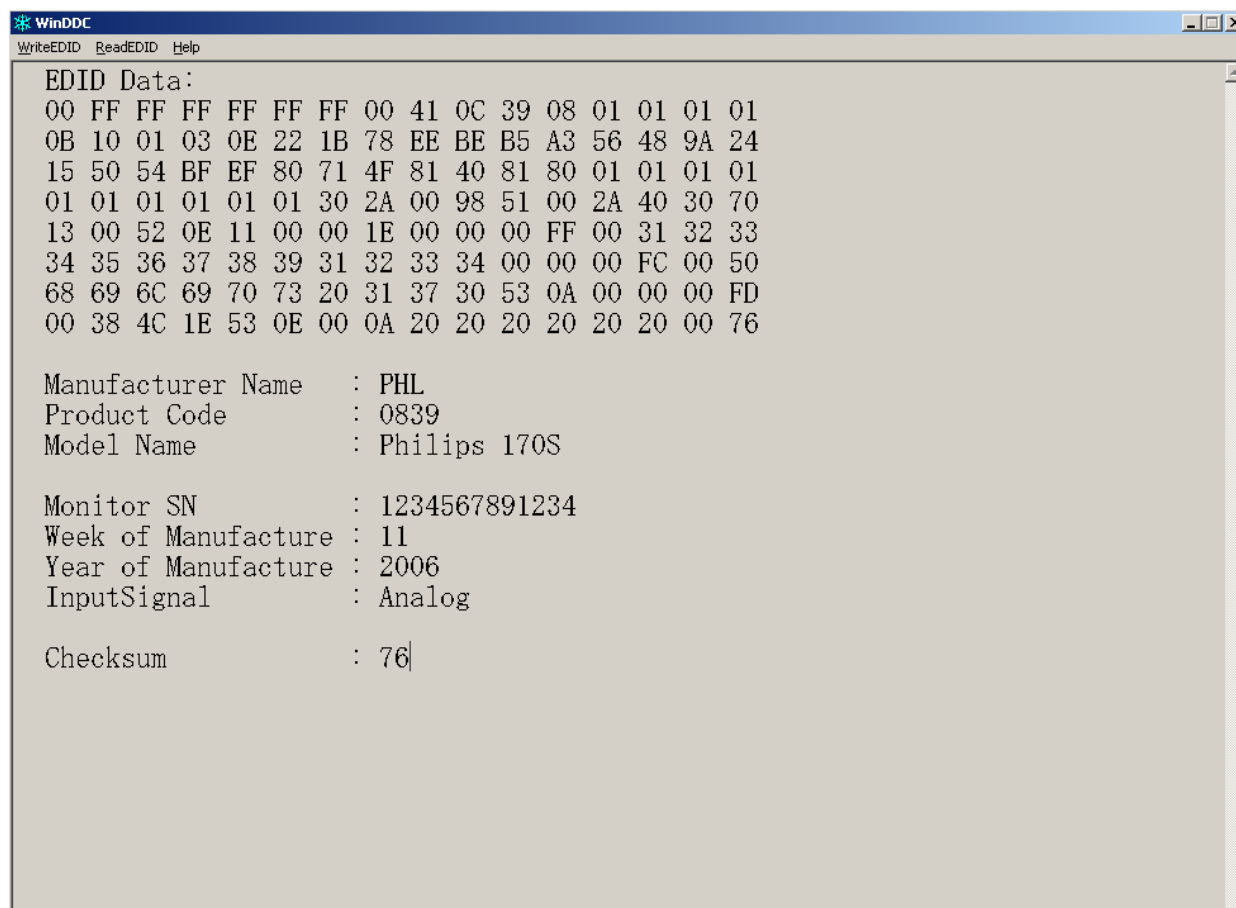


c. Key in the Serial Number printed on the barcode label, then click "OK"



14 codes,
for example.

d. Unit appears the following Fig, writer completed.



150S EDID Program:

128 bytes EDID Data (Hex):

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15

```

0:  00 FF FF FF FF FF FF 00 41 0C 38 08 0E AE 0B 00
16: 62 0E 01 03 0E 1E 17 78 EE B1 A5 A1 58 4F 95 26
32: 16 50 54 BF EE 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 33 E6 10 00 00 18 00 00 00 FF 00 32 33 31
80: 35 36 34 39 38 37 36 35 34 35 00 00 00 FC 00 50
96: 68 69 6C 69 70 73 20 31 35 30 53 0A 00 00 00 FD
112: 00 38 4C 1E 3F 08 00 0A 20 20 20 20 20 20 00 12

```

Decoded EDID data

<---Header--->

Header: 00 FF FF FF FF FF FF 00

<-x-Header-x->

<---Vendor/Product Identification--->

```

ID Manufacturer Name:  PHL
ID Product Code:       0838
ID Serial Number:      000bae0e
Week of Manufacture:   98
Year of Manufacture:   2004

```

<-x-Vendor/Product Identification-x->

<---EDID Structure Version/Revision--->

```

EDID Version#:        01
EDID Revision#:       03

```

<-x-EDID Structure Version/Revision-x->

<---Basic Display Parameters/Features--->

```

Video i/p definition:  Analog
Signal Level Standard: 0.700V/0.300V(1.000Vpp)
Setup:                 Blank-to-Black not expected
Separate Sync Support: Yes
Composite Sync Support: Yes
Sync. on green video supported: Yes
Serration of the Vsync.Pulse is not required.
Max. H. Image Size :   30cm.
Max. V. Image Size :   23cm.
Display Gamma:         2.2
DPMS Features, Stand-by: Yes.
DPMS Features, Suspend: Yes.
DPMS Features, Active off: Yes.
Display Type: R.G.B color display.
Standard Default Color Space: Primary color space.
Preferred Timing Mode:  In First Detailed Timing.
GTF supported:         No.

```

<---Basic Display Parameters/Features--->

<---Color Characteristics--->

```

Red x:    0.6308593750
Red y:    0.3466796875
Green x:  0.3085937500
Green y:  0.5830078125
Blue x:   0.1503906250
Blue y:   0.0878906250
White x:  0.3125000000
White y:  0.3291015625

```

<-x-Color Characteristics-x->

<---Established Timings--->

Established Timings 1: BF

-720x400 @70Hz VGA,IBM

-640x480 @60Hz VGA,IBM

-640x480 @67Hz Apple,Mac II

-640x480 @72Hz VESA

-640x480 @75Hz VESA

-800x600 @56Hz VESA

-800x600 @60Hz VESA

Established Timings 2: EE

-800x600 @72Hz VESA

-800x600 @75Hz VESA

-832x624 @75Hz Apple,Mac II

-1024x768 @60Hz VESA

-1024x768 @70Hz VESA

-1024x768 @75Hz VESA

Established Timings 3: 00

<-x-Established Timings-x->

<---Standard Timing Identification--->

<-x-Standard Timing Identification-x->

<---Detailed Timing Descriptions--->

Detailed Timing: 1024x768 @ 60Hz.

<-x-Detailed Timing Descriptions-x->

<---Detailed Timing Descriptions--->

Detailed Timing: FF (Monitor SN) '231564987654'

Detailed Timing: FC (Monitor Name) 'Philips 150S'

Detailed Timing: FD (Monitor limits)

Min. V. rate: 56Hz

Max. V. rate: 76Hz

Min. H. rate: 30KHz

Max. H. rate: 63KHz

Max. Pixel Clock: 80MHz

<-x-Detailed Timing Descriptions-x->

Extension Flag: 00

Checksum: 12

14. White Balance, Luminance Adjustment

Approximately 30 minutes should be allowed for warm up before proceeding White-Balance adjustment.

1. Required instruments: Chroma 7120、Chroma 2325 (BGA265A)。
2. First connect the instruments together and turn on the LCD power.
3. Set Chroma 2325 (BGA265A) to be T139 (1024*768/60HZ) and P105 of full white screen.
4. **Enter into the factory mode:**
 Firstly, turn off the power, press the AUTO and OK at one time, and then turn the power on (AUTO and OK are still pressed, about 10s), release, press the menu again will activate the factory mode, the factory OSD will be at the left top of the screen.
 Move the cursor to select the Hyson 150S7*****, press OK button to enter into the sub-menu; Move the cursor again to select " Cool/warm ".
5. Set Chroma-7120 CH3 as 9300 color temperature by ID key, press SC and Next key set 9300: $x=283\pm20$, $y=297\pm20$, $Y>230$.
 Set Chroma-7120 CH4 as 6500 color temperature by ID key, press SC and Next key set 6500: $x=313\pm20$, $y=329\pm20$, $Y>200$.
6. Adjust 9300 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). Adjust the **R** of Cool item on factory window until chroma 7120 indicator reached the value $R=100\pm5$
 - 4). Adjust the **G** of Cool item on factory window until chroma 7120 indicator reached the value $G=100\pm5$
 - 5). Adjust the **B** of Cool item on factory window until chroma 7120 indicator reached the value $B=100\pm5$
 - 6). Switch the Chroma-7120 to x, y, Y Mode (with press "MODE" button), check whether the color-temperature value is within Spec (the Spec is 9300: $x=283\pm20$, $y=297\pm20$, $Y>230$). If not in the SPEC, repeat step 3,4,5.
7. Adjust 6500/SRGB color temperature:
 - 1). Switch the Chroma-7120 to RGB-Mode (with press "MODE" button)
 - 2). Switch the MEM. Channel to Channel 4 (with up or down arrow on chroma 7120)
 - 3). Adjust the **R** of Warm item on factory window until chroma 7120 indicator reached the value $R=100\pm5$
 - 4). Adjust the **G** of Warm item on factory window until chroma 7120 indicator reached the value $G=100\pm5$
 - 5). Adjust the **B** of Warm item on factory window until chroma 7120 indicator reached the value $B=100\pm5$
 - 6). Switch the Chroma-7120 to x, y, Y Mode, check whether the color-temperature value is within Spec.
 the Spec is 6500: $x=313\pm20$, $y=329\pm20$, $Y>200$. If not in the SPEC, repeat step 3,4,5.

Turn the Power-button off to quit and save the factory mode.

15. Spare Parts List

150S7FS/00

PCB

Part No for TPV	Description	Philips 12NC
CBPC560KGMPHP	CONVERSION BOARD (LPL)	9965 000 35888
CBPC560KQMPHP	CONVERSION BOARD (QDI)	9965 000 35889
PWPC1521LGR1P	POWER ASS'Y (LPL)	9965 000 35890
PWPC1521QDR2P	POWER ASS'Y (QDI)	9965 000 35891
KEPC780KE7P	KEY BOARD	9965 000 35900

Panel

Part No for TPV	Description	Philips 12NC
750GLG50X0871	LPL 15" TL03 PANEL (LPL)	9965 000 35898
750GLQ50L1311	QDI 15" L13 PANEL (QDI)	9965 000 35899

Accessory and Mechanical

Part No for TPV	Description	Philips 12NC
050G6002	HANDLE1	9965 000 35904
050G6003	HANDLE2	9965 000 35905
089G728GAA550	SIGNAL CABLE D-SUB GREATIAND	9965 000 35909
089G404A18NLS	POWER CORD	9965 000 35910
P15G82981	MAIN FRAME	9965 000 35918
P15G82991	BKT-VESA	9965 000 35919
P15G83001	BKT-HINGE	9965 000 35920
P33G4971VPA1C	BUTTON_OSD	9965 000 35922
P33G4972VB1L	COVER_HINGE	9965 000 35921
P34G1827VOA1T	BEZEL	9965 000 35923
P34G1828VB1T	REAR COVER	9965 000 35924
P37G60561VO	HINGE ASS'Y	9965 000 35925
P44G35941	EPS(R)	9965 000 35926
P44G35942	EPS(L)	9965 000 35927
P44G35948131A	CARTON	9965 000 35928
P45G8860936	PE BAG FOR MONITOR	9965 000 35929
Q40G15N8131A	RATING LABEL	9965 000 35930
Q40G15N8132A	RATING LABEL	9965 000 35931
Q40G5818138A	EPA LABEL	9965 000 35932
Q45G7628A04	PHILIPS PE BAG	9965 000 35940
Q70G15008131A	CD MANUAL	9965 000 35941
S95G801814506	LVDS ASS'Y	9965 000 35945
705G153301	Q903 ASS'Y	9965 000 35947
705G153302	D904 ASS'Y	9965 000 35948
034FPE19P03	CASE EEL19	9965 000 35950

Main Board (LPL)

Location	Part No for TPV	Description	Philips 12NC
	CBPC560KGMPPH	CONVERSION BOARD (LPL)	9965 000 35888
CN701	033G802712	WAFER 2*6P 2.0MM R/A	9965 000 35955
CN404	033G802714H	WAFER 14P 2.0MM DIP	9965 000 35956
CN403	033G802716	WAFER 16PIN 2.0MM DIP	9965 000 35957
C426	067G215L1014N	KY25VB100M-L 6.3*11	9965 000 35958
C712	067G215L1014N	KY25VB100M-L 6.3*11	9965 000 35958
C711	067G215L1014N	KY25VB100M-L 6.3*11	9965 000 35958
C710	067G215L1014N	KY25VB100M-L 6.3*11	9965 000 35958
C709	067G215L1014N	KY25VB100M-L 6.3*11	9965 000 35958
C432	067G215Y4797N	LOW ESR EC 4.7 UF 50V NCC	9965 000 35959
CN405	088G35315FH	D-SUB 15PIN	9965 000 35960
X401	093G2251	CRYSTAL 12MHZ HC-49US ARG6-120	9965 000 35961
U401	056G562112	NT68623MEFG-64	9965 000 35962
U702	056G56331	AI1117D-1.8-EI	9965 000 35963
U403	056G113324	AT24C16AN-10SU-2.7	9965 000 35964
U405	056G113334	M24C02-WMN6TP	9965 000 35965
Q401	057G4174	PMBS3904/PHILIPS-SMT(04)	9965 000 35966
Q406	057G4174	PMBS3904/PHILIPS-SMT(04)	9965 000 35966
Q404	057G41713T	KEC 2N3906S-RTK/PS	9965 000 35967
Q402	057G41713T	KEC 2N3906S-RTK/PS	9965 000 35967
Q405	057G7631	A03401 SOT23 BY AOS(A1)	9965 000 35968
R411	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R410	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R408	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R407	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R406	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R405	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R420	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R485	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R433	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R432	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R431	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R428	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R427	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R426	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R486	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R458	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R419	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R418	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971

R417	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R414	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R402	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R401	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R403	061L0603104	RST SM 0603 RC0603 100K PM5 R	9965 000 35972
R404	061L0603104	RST SM 0603 RC0603 100K PM5 R	9965 000 35972
R434	061L0603105	RST SM 0603 RC0603 1M PM5 R	9965 000 35973
R424	061L0603151	CHIPR 150 OHM -5% 1/16W	9965 000 35974
R423	061L0603151	CHIPR 150 OHM -5% 1/16W	9965 000 35974
R422	061L0603151	CHIPR 150 OHM -5% 1/16W	9965 000 35974
R421	061L0603151	CHIPR 150 OHM -5% 1/16W	9965 000 35974
R437	061L0603201	CHIP 200 OHM 1/16W	9965 000 35975
R438	061L0603201	CHIP 200 OHM 1/16W	9965 000 35975
R440	061L0603221	CHIPR 220 OHM -5% 1/16W	9965 000 35976
R441	061L0603221	CHIPR 220 OHM -5% 1/16W	9965 000 35976
R436	061L0603222	CHIPR 2.2K OHM -5% 1/16W	9965 000 35977
R435	061L0603222	CHIPR 2.2K OHM -5% 1/16W	9965 000 35977
R442	061L0603332	CHIP 3.3K OHM 1/10W	9965 000 35978
R443	061L0603332	CHIP 3.3K OHM 1/10W	9965 000 35978
R445	061L06033900F	CHIP 390 OHM 1/10W 1%	9965 000 35979
R701	061L0603470	CHIPR 47 OHM -5% 1/16W	9965 000 35980
R479	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R478	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R476	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R460	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R459	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R449	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R448	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R447	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R446	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R451	061L0603750	CHIPR 75 OHM -5% 1/16W	9965 000 35982
R452	061L0603750	CHIPR 75 OHM -5% 1/16W	9965 000 35982
R453	061L0603750	CHIPR 75 OHM -5% 1/16W	9965 000 35982
R456	061L06037509F	75OHM 1% 1/10W	9965 000 35983
R455	061L06037509F	75OHM 1% 1/10W	9965 000 35983
R454	061L06037509F	75OHM 1% 1/10W	9965 000 35983
FB410	061L0805000	CHIPR 0OHM -5% 1/10W	9965 000 35984
R444	061L1206121	RST CHIPR 120OHM -5% 1/4W	9965 000 35985
C402	065G040210131T	0402 MLCC 100PF J 50V	9965 000 35986
C714	065G040210232T	0402 MLCC 1000PF K 50V	9965 000 35987
C713	065G040210232T	0402 MLCC 1000PF K 50V	9965 000 35987
C441	065G040210232T	0402 MLCC 1000PF K 50V	9965 000 35987

C440	065G040210232T	0402 MLCC 1000PF K 50V	9965 000 35987
C439	065G040210232T	0402 MLCC 1000PF K 50V	9965 000 35987
C438	065G040210232T	0402 MLCC 1000PF K 50V	9965 000 35987
C437	065G040210232T	0402 MLCC 1000PF K 50V	9965 000 35987
C701	065G040210232T	0402 MLCC 1000PF K 50V	9965 000 35987
C401	065G040210232T	0402 MLCC 1000PF K 50V	9965 000 35987
C422	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C423	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C424	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C425	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C436	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C446	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C702	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C706	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C703	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C704	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C705	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C409	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C410	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C411	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C413	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C414	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C416	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C417	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C418	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C419	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C420	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C421	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C430	065G040222031T	0402 MLCC 22PF J 50V	9965 000 35989
C429	065G040222031T	0402 MLCC 22PF J 50V	9965 000 35989
C428	065G040222031T	0402 MLCC 22PF J 50V	9965 000 35989
C427	065G040222031T	0402 MLCC 22PF J 50V	9965 000 35989
C412	065G0402224A5T	MLCC 0402 0.22UF K 10V X5R	9965 000 35990
C403	065G040247312T	0402 MLCC 47NF K 16V	9965 000 35991
C404	065G040247312T	0402 MLCC 47NF K 16V	9965 000 35991
C405	065G040247312T	0402 MLCC 47NF K 16V	9965 000 35991
C406	065G040247312T	0402 MLCC 47NF K 16V	9965 000 35991
C407	065G040247312T	0402 MLCC 47NF K 16V	9965 000 35991
C408	065G040247312T	0402 MLCC 47NF K 16V	9965 000 35991
FB407	071G56F102K	CHIP BEAD 1KOHM	9965 000 35992
FB409	071G56K121	CHIP BEAD	9965 000 35993
FB412	071G56K121	CHIP BEAD	9965 000 35993

FB701	071G56K121	CHIP BEAD	9965 000 35993
FB702	071G56K121	CHIP BEAD	9965 000 35993
FB703	071G56K121	CHIP BEAD	9965 000 35993
FB704	071G56K121	CHIP BEAD	9965 000 35993
FB408	071G56K121	CHIP BEAD	9965 000 35993
D401	093G6433	DIO SIG SM BAV99 (PHSE)R	9965 000 35994
D406	093G6433	DIO SIG SM BAV99 (PHSE)R	9965 000 35994
D405	093G6433	DIO SIG SM BAV99 (PHSE)R	9965 000 35994
D404	093G6433	DIO SIG SM BAV99 (PHSE)R	9965 000 35994
D416	093G6442PP	BAV70 SOT-23	9965 000 35995
ZD414	093G39S34T	UDZS5.6B	9965 000 35996
ZD408	093G39S34T	UDZS5.6B	9965 000 35996
ZD407	093G39S34T	UDZS5.6B	9965 000 35996
ZD406	093G39S34T	UDZS5.6B	9965 000 35996
ZD405	093G39S34T	UDZS5.6B	9965 000 35996
ZD404	093G39S34T	UDZS5.6B	9965 000 35996
ZD403	093G39S34T	UDZS5.6B	9965 000 35996
ZD402	093G39S34T	UDZS5.6B	9965 000 35996

Main Board (QDI)

Location	Part No for TPV	Description	Philips 12NC
	CBPC560KQMPHP	CONVERSION BOARD (QDI)	9965 000 35889
CN701	033G802712	WAFER 2*6P 2.0MM R/A	9965 000 35955
CN404	033G802714H	WAFER 14P 2.0MM DIP	9965 000 35956
CN403	033G802716	WAFER 16PIN 2.0MM DIP	9965 000 35957
C712	067G215L1014N	KY25VB100M-L 6.3*11	9965 000 35958
C711	067G215L1014N	KY25VB100M-L 6.3*11	9965 000 35958
C710	067G215L1014N	KY25VB100M-L 6.3*11	9965 000 35958
C709	067G215L1014N	KY25VB100M-L 6.3*11	9965 000 35958
C432	067G215Y4797N	LOW ESR EC 4.7 UF 50V NCC	9965 000 35959
C426	067G305V2213	220UF/16V	9965 000 35998
CN405	088G35315FH	D-SUB 15PIN	9965 000 35960
X401	093G2251	CRYSTAL 12MHZ HC-49US ARG6-120	9965 000 35961
U401	056G562112	NT68623MEFG-64	9965 000 35962
U702	056G56331	AI1117D-1.8-EI	9965 000 35963
U405	056G113320	AT24C02N-10SU-2.7	9965 000 35997
U403	056G113324	AT24C16AN-10SU-2.7	9965 000 35964
U405	056G113334	M24C02-WMN6TP	9965 000 35965
Q401	057G4174	PMBS3904/PHILIPS-SMT (04)	9965 000 35966
Q406	057G4174	PMBS3904/PHILIPS-SMT (04)	9965 000 35966
Q404	057G41713T	KEC 2N3906S-RTK/PS	9965 000 35967

Q402	057G41713T	KEC 2N3906S-RTK/PS	9965 000 35967
Q405	057G7631	A03401 SOT23 BY AOS (A1)	9965 000 35968
R411	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R410	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R408	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R407	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R406	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R405	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R422	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R420	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R485	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R433	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R432	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R431	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R428	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R427	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R426	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R486	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R458	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R419	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R418	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R417	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R414	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R402	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R401	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R403	061L0603104	RST SM 0603 RC0603 100K PM5 R	9965 000 35972
R404	061L0603104	RST SM 0603 RC0603 100K PM5 R	9965 000 35972
R434	061L0603105	RST SM 0603 RC0603 1M PM5 R	9965 000 35973
R424	061L0603151	CHIPR 150 OHM -5% 1/16W	9965 000 35974
R423	061L0603151	CHIPR 150 OHM -5% 1/16W	9965 000 35974
R421	061L0603151	CHIPR 150 OHM -5% 1/16W	9965 000 35974
R437	061L0603201	CHIP 200 OHM 1/16W	9965 000 35975
R438	061L0603201	CHIP 200 OHM 1/16W	9965 000 35975
R440	061L0603221	CHIPR 220 OHM -5% 1/16W	9965 000 35976
R441	061L0603221	CHIPR 220 OHM -5% 1/16W	9965 000 35976
R436	061L0603222	CHIPR 2.2K OHM -5% 1/16W	9965 000 35977
R435	061L0603222	CHIPR 2.2K OHM -5% 1/16W	9965 000 35977
R442	061L0603332	CHIP 3.3K OHM 1/10W	9965 000 35978
R443	061L0603332	CHIP 3.3K OHM 1/10W	9965 000 35978
R445	061L06033900F	CHIP 390 OHM 1/10W 1%	9965 000 35979
R701	061L0603470	CHIPR 47 OHM -5% 1/16W	9965 000 35980
R479	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981

R478	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R476	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R460	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R459	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R449	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R448	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R447	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R446	061L0603472	CHIPR 4.7K OHM -5% 1/16W	9965 000 35981
R453	061L0603750	CHIPR 75 OHM -5% 1/16W	9965 000 35982
R452	061L0603750	CHIPR 75 OHM -5% 1/16W	9965 000 35982
R451	061L0603750	CHIPR 75 OHM -5% 1/16W	9965 000 35982
R454	061L06037509F	75OHM 1% 1/10W	9965 000 35983
R455	061L06037509F	75OHM 1% 1/10W	9965 000 35983
R456	061L06037509F	75OHM 1% 1/10W	9965 000 35983
FB410	061L0805000	CHIPR 0OHM -5% 1/10W	9965 000 35984
R444	061L1206121	RST CHIPR 120OHM -5% 1/4W	9965 000 35985
C402	065G040210131T	0402 MLCC 100PF J 50V	9965 000 35986
C401	065G040210232T	0402 MLCC 1000PF K 50V	9965 000 35987
C701	065G040210232T	0402 MLCC 1000PF K 50V	9965 000 35987
C420	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C421	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C422	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C423	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C424	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C425	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C436	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C446	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C703	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C704	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C705	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C702	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C706	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C409	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C410	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C411	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C413	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C414	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C416	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C417	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C418	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C419	065G040210415T	0402 MLCC 0.1UF K 16V	9965 000 35988
C427	065G040222031T	0402 MLCC 22PF J 50V	9965 000 35989

C428	065G040222031T	0402 MLCC 22PF J 50V	9965 000 35989
C430	065G040222031T	0402 MLCC 22PF J 50V	9965 000 35989
C412	065G0402224A5T	MLCC 0402 0.22UF K 10V X5R	9965 000 35990
C403	065G040247312T	0402 MLCC 47NF K 16V	9965 000 35991
C404	065G040247312T	0402 MLCC 47NF K 16V	9965 000 35991
C405	065G040247312T	0402 MLCC 47NF K 16V	9965 000 35991
C406	065G040247312T	0402 MLCC 47NF K 16V	9965 000 35991
C407	065G040247312T	0402 MLCC 47NF K 16V	9965 000 35991
C408	065G040247312T	0402 MLCC 47NF K 16V	9965 000 35991
FB407	071G56F102K	CHIP BEAD 1KOHM	9965 000 35992
FB704	071G56K121	CHIP BEAD	9965 000 35993
FB703	071G56K121	CHIP BEAD	9965 000 35993
FB702	071G56K121	CHIP BEAD	9965 000 35993
FB701	071G56K121	CHIP BEAD	9965 000 35993
FB412	071G56K121	CHIP BEAD	9965 000 35993
FB409	071G56K121	CHIP BEAD	9965 000 35993
D401	093G6433	DIO SIG SM BAV99 (PHSE)R	9965 000 35994
D406	093G6433	DIO SIG SM BAV99 (PHSE)R	9965 000 35994
D405	093G6433	DIO SIG SM BAV99 (PHSE)R	9965 000 35994
D404	093G6433	DIO SIG SM BAV99 (PHSE)R	9965 000 35994
D416	093G6442PP	BAV70 SOT-23	9965 000 35995
ZD414	093G39S34T	UDZS5.6B	9965 000 35996
ZD408	093G39S34T	UDZS5.6B	9965 000 35996
ZD407	093G39S34T	UDZS5.6B	9965 000 35996
ZD406	093G39S34T	UDZS5.6B	9965 000 35996
ZD405	093G39S34T	UDZS5.6B	9965 000 35996
ZD404	093G39S34T	UDZS5.6B	9965 000 35996
ZD403	093G39S34T	UDZS5.6B	9965 000 35996
ZD402	093G39S34T	UDZS5.6B	9965 000 35996
ZD401	093G39S34T	UDZS5.6B	9965 000 35996

Power Board (LPL)

Location	Part No for TPV	Description	Philips 12NC
	PWPC1521LGR1P	POWER ASS'Y (LPL)	9965 000 35890
CN801	033G80202DU	WAFER	9965 000 36008
CN802	033G80202DU	WAFER	9965 000 36008
IC902	056G1393A	PC123Y22FZOF	9965 000 36055
NR901	061G58050WT	NTC 5 OHM 5A	9965 000 36009
R910	061G152M10458F	100K OHM 5% 2W	9965 000 36010
R920	061G152M68864	0.68OHM -5% 2W	9965 000 36011
C802	065G3J2096ET	2PF 5% SL 3KV	9965 000 36005
C816	065G6J1506ET	15PF 5% SL 6KV	9965 000 36049
C901	065G305M1022EM	Y2 1000PF -20% 250VAC	9965 000 36006
C902	065G305M1022EM	Y2 1000PF -20% 250VAC	9965 000 36006
C921	065G306M2222BP	2200PF -20% 400VAC	9965 000 36050
C916	067G215D4714K	ED 470UF 25V	9965 000 36007
C922	067G215D4714K	ED 470UF 25V	9965 000 36007
C920	067G215D4714K	ED 470UF 25V	9965 000 36007
C918	067G215D4714K	ED 470UF 25V	9965 000 36007
C917	067G215D4714K	ED 470UF 25V	9965 000 36007
C905	067G215S10115H	100UF 450V 18*36 105 BY HERMEI	9965 000 36051
L902	073G17465LS	LINE FILTER BY LISHIN	9965 000 36025
L903	073G25391H	CHOKE COIL	9965 000 36026
L904	073G25391H	CHOKE COIL	9965 000 36026
L901	073L17450HH	LINE FITER	9965 000 36027
T901	080GL15T26L	ADAPTER TRANS BY LITAI	9965 000 36056
CN901	087G50132S	AC SOCKET	9965 000 36028
DB901	093G50460502	KBP206G	9965 000 36029
D901	093G6026T52T	RECTIFIER DIODE FR107	9965 000 36030
D905	093G60272	DIODE_5A/40V_SR540	9965 000 36036
CN902	095G80131216	HARNESS	9965 000 36057
Q903	057G66730	2SK2645	9965 000 36031
HS1	090G60841GP	HEAT SINK	9965 000 36058
HS2	090G60841GP	HEAT SINK	9965 000 36058
D904	093G60245	SP10150	9965 000 36034
IC901	056G37952	LD7552BS	9965 000 36037
IC801	056G60810	OZ9938	9965 000 36059
Q802	057G4174	PMBS3904/PHILIPS-SMT(04)	9965 000 35966
Q803	057G4174	PMBS3904/PHILIPS-SMT(04)	9965 000 35966
Q805	057G60055	P5506 HVG SO-8	9965 000 36032
Q801	057G7592	RK7002	9965 000 36033
Q804	057G7592	RK7002	9965 000 36033

Q806	057G7592	RK7002	9965 000 36033
Q807	057G7592	RK7002	9965 000 36033
R935	061L0805000	CHIPR 0OHM -5% 1/10W	9965 000 35984
R917	061L0805100	CHIPR 10 OHM -5% 1/10W	9965 000 36012
R807	061L0805100	CHIPR 10 OHM -5% 1/10W	9965 000 36012
R931	061L08051001F	RST CHIPR 1KOHM -1% 1/8W	9965 000 36021
R928	061L08051001F	RST CHIPR 1KOHM -1% 1/8W	9965 000 36021
R918	061L08051001F	RST CHIPR 1KOHM -1% 1/8W	9965 000 36021
R804	061L08051002F	CHIP 10K OHM 1/8W 1%	9965 000 36020
R812	061L08051002F	CHIP 10K OHM 1/8W 1%	9965 000 36020
R919	061L08051002F	CHIP 10K OHM 1/8W 1%	9965 000 36020
R915	061L08051003F	CHIP 100KOHM -1% 1/8W	9965 000 36014
R913	061L08051003F	CHIP 100KOHM -1% 1/8W	9965 000 36014
R821	061L08051003F	CHIP 100KOHM -1% 1/8W	9965 000 36014
R815	061L08051003F	CHIP 100KOHM -1% 1/8W	9965 000 36014
R810	061L08051003F	CHIP 100KOHM -1% 1/8W	9965 000 36014
R819	061L0805102GP	CHIPR 1K OHM -5% 1/8W	9965 000 36060
R831	061L0805102GP	CHIPR 1K OHM -5% 1/8W	9965 000 36060
R829	061L0805105	CHIP 1M OHM 5% 1/8W	9965 000 36013
R826	061L0805105	CHIP 1M OHM 5% 1/8W	9965 000 36013
R822	061L0805105	CHIP 1M OHM 5% 1/8W	9965 000 36013
R813	061L0805105	CHIP 1M OHM 5% 1/8W	9965 000 36013
R809	061L0805105	CHIP 1M OHM 5% 1/8W	9965 000 36013
R816	061L08051503FG	150KOHM F 1/8W	9965 000 36061
R830	061L08052003F	200K OHM 1%	9965 000 36141
R930	061L0805220	CHIP 22 OHM 5% 0805 1/8W	9965 000 36062
R943	061L08052401F	CHIPR 2.4KOHM -1% 1/8W	9965 000 36142
R802	061L0805304	300K OM 1/8W	9965 000 36063
R817	061L08053902F	CHIP 39K OHM 1/10W 1%	9965 000 36143
R827	061L08053910F	CHIP 390 OHM 1/10W 1%	9965 000 36064
R814	061L0805433	CHIP 43KOHM 1/8W	9965 000 36144
R820	061L0805563	CHIP 56K OHM 1/8W	9965 000 36065
R818	061L08056802F	CHIP 68K OHM 1/10W 1%	9965 000 36019
R912	061L08057502F	CHIP 75KOHM 1% 1/8W	9965 000 36015
R811	061L08057502F	CHIP 75KOHM 1% 1/8W	9965 000 36015
R942	061L08058210F	CHIP 820 OHM 1/10W 1%	9965 000 36066
R825	061L0805822	CHIP 8.2KOHM 5% 1/10W	9965 000 36145
JR901	061L1206000	CHIPR 0 OHM -5% 1/8W	9965 000 36067
R801	061L1206000	CHIPR 0 OHM -5% 1/8W	9965 000 36067
R927	061L1206101	CHIP 100 OHM 5% 1/8W	9965 000 36022
R926	061L1206101	CHIP 100 OHM 5% 1/8W	9965 000 36022
R925	061L1206101	CHIP 100 OHM 5% 1/8W	9965 000 36022

R924	061L1206101	CHIP 100 OHM 5% 1/8W	9965 000 36022
R923	061L1206101	CHIP 100 OHM 5% 1/8W	9965 000 36022
R922	061L1206101	CHIP 100 OHM 5% 1/8W	9965 000 36022
R803	061L1206103	CHIP 10KOHM 5% 1/4W	9965 000 36016
R808	061L1206104	CHIP 100KOHM 5% 1/4W	9965 000 36218
R911	061L1206151	CHIP 150OHM 1/4W	9965 000 36068
R916	061L1206249	CHIPR 2.4OHM -5% 1/4W	9965 000 36017
R806	061L1206330GP	33 OHM /1206	9965 000 36023
R904	061L1206434	430K 1206 1/4W 5%	9965 000 36069
R905	061L1206434	430K 1206 1/4W 5%	9965 000 36069
R906	061L1206434	430K 1206 1/4W 5%	9965 000 36069
R805	061L1206471	CHIPR 470 OHM -5% 1/8W	9965 000 36070
R907	061L1206514	CHIPR 510KOHM -5% 1/4W	9965 000 36018
R908	061L1206514	CHIPR 510KOHM -5% 1/4W	9965 000 36018
R909	061L1206514	CHIPR 510KOHM -5% 1/4W	9965 000 36018
R903	061L1206684	CHIPR 680K OHM -5% 1/8W	9965 000 36024
R902	061L1206684	CHIPR 680K OHM -5% 1/8W	9965 000 36024
R901	061L1206684	CHIPR 680K OHM -5% 1/8W	9965 000 36024
C814	065G080510222	CHIP 0.001UF 25V X7R 0805	9965 000 36071
C805	065G080510232	CHIP 1000P 50VX7R 0805	9965 000 36038
C801	065G080510322	CHIP 0.01UF 25V X7R 0805	9965 000 36039
C807	065G080510322	CHIP 0.01UF 25V X7R 0805	9965 000 36039
C820	065G080510322	CHIP 0.01UF 25V X7R 0805	9965 000 36039
C911	065G080510422	0.1UF -10% 25V X7R 080	9965 000 36040
C909	065G080510422	0.1UF -10% 25V X7R 080	9965 000 36040
C812	065G080510422	0.1UF -10% 25V X7R 080	9965 000 36040
C808	065G080510422	0.1UF -10% 25V X7R 080	9965 000 36040
C919	065G080510432	CHIP 0.1U 50V X7R	9965 000 36041
C923	065G080510432	CHIP 0.1U 50V X7R	9965 000 36041
C806	065G080510512	1UF -10% 6V X7R	9965 000 36072
C927	065G080510522	CHIP 1UF 25V X7R 0805	9965 000 36073
C912	065G080522132	CHIP 220PF 50V X7R 0805	9965 000 36042
C809	065G080522322	CHIP 0.022UF 25V X7R 0805	9965 000 36043
C913	065G080533422	0.33UF -10% 25V X7R 0805	9965 000 36074
C810	065G080547131	CHIP 470PF 50V NPO	9965 000 36044
C818	065G080547131	CHIP 470PF 50V NPO	9965 000 36044
C815	065G080547332	CHIP 0.047UF 50V X7R	9965 000 36045
C804	065G120622517	1206 2.2UF -20%~ 80% 16V Y5V	9965 000 36075
D802	093G6433	DIO SIG SM BAV99 (PHSE) R	9965 000 35994
D801	093G6442PP	BAV70 SOT-23	9965 000 35995
D803	093G6444S	LL4148WP	9965 000 36035
D804	093G6444S	LL4148WP	9965 000 36035

ZD904	093G39S17T	RLZ12B LLDS	9965 000 36078
ZD801	093G39S24T	RLZ 5.6B LLDS	9965 000 36079
ZD903	093G39S38T	PTZ 9.1B	9965 000 36080
ZD902	093G39S505	TZMC24	9965 000 36081
CN901	006G31500	EYELET	9965 000 36082
L902	006G31502	1.5MM RIVET	9965 000 36046
PT801	006G31502	1.5MM RIVET	9965 000 36046
T901	006G31502	1.5MM RIVET	9965 000 36046
NR901	006G31502	1.5MM RIVET	9965 000 36046
C905	006G31502	1.5MM RIVET	9965 000 36046
R823	061G212Y625KT	MGFR 6.2MOHM -5% 1/2W	9965 000 36083
C811	067G215B2214KT	LOW E,S,R 220UF -20% 25V	9965 000 36076
D903	093T6038T52T	FR103	9965 000 36052
F902	084G552GP	FUSE	9965 000 36084
FB901	071G5529	FERRITE BEAD	9965 000 36053
F901	084G552GP	FUSE	9965 000 36084
IC903	056G15812	KIA431A-AT/P TO-92	9965 000 36054
IC904	056G15812	KIA431A-AT/P TO-92	9965 000 36054
C904	065G1K1521T	1.5NF/1KV Z5F -10%	9965 000 36047
C914	065G517K1025T	1000PF 10% Y5P 500V	9965 000 36077
C915	065G517K1025T	1000PF 10% Y5P 500V	9965 000 36077
C910	067G215Y2207KT	ED 105 ⁻⁻⁻⁻ 22UF M 50V KINGNICH	9965 000 36048

Power Board (QDI)

Location	Part No for TPV	Description	Philips 12NC
	PWPC1521QDR2P	POWER ASS'Y (QDI)	9965 000 35891
CN801	033G80202DU	WAFER	9965 000 36008
CN802	033G80202DU	WAFER	9965 000 36008
IC902	056G1393A	PC123Y22FZOF	9965 000 36055
NR901	061G58050WT	NTC 5 OHM 5A	9965 000 36009
R910	061G152M10458F	100K OHM 5% 2W	9965 000 36010
R920	061G152M68864	0.68OHM -5% 2W	9965 000 36011
C802	065G3J2096ET	2PF 5% SL 3KV	9965 000 36005
C816	065G6J1506ET	15PF 5% SL 6KV	9965 000 36049
C901	065G305M1022EM	Y2 1000PF -20% 250VAC	9965 000 36006
C902	065G305M1022EM	Y2 1000PF -20% 250VAC	9965 000 36006
C921	065G306M2222BP	2200PF -20% 400VAC	9965 000 36050
C916	067G2154714R	LOWER ESR EC 470UF 25V	9965 000 36085
C917	067G2154714R	LOWER ESR EC 470UF 25V	9965 000 36085
C918	067G2154714R	LOWER ESR EC 470UF 25V	9965 000 36085
C920	067G2154714R	LOWER ESR EC 470UF 25V	9965 000 36085
C916	067G215D4714K	ED 470UF 25V	9965 000 36007
C922	067G215D4714K	ED 470UF 25V	9965 000 36007
C920	067G215D4714K	ED 470UF 25V	9965 000 36007
C918	067G215D4714K	ED 470UF 25V	9965 000 36007
C917	067G215D4714K	ED 470UF 25V	9965 000 36007
C905	067G215S10115H	100UF 450V 18*36 105 BY HERMEI	9965 000 36051
C905	067G215S10115K	100UF 450V	9965 000 36086
C922	067G215S4714K	ED470UF 25V	9965 000 36087
C920	067G215S4714K	ED470UF 25V	9965 000 36087
C918	067G215S4714K	ED470UF 25V	9965 000 36087
C917	067G215S4714K	ED470UF 25V	9965 000 36087
C916	067G215S4714K	ED470UF 25V	9965 000 36087
L902	073G17465H	LINE FILTER	9965 000 36088
L902	073G17465LS	LINE FILTER BY LISHIN	9965 000 36025
L904	073G25391H	CHOKE COIL	9965 000 36026
L903	073G25391H	CHOKE COIL	9965 000 36026
L903	073G25391L	CHOKE BY LI TA	9965 000 36089
L904	073G25391L	CHOKE BY LI TA	9965 000 36089
L901	073L17450HH	LINE FITER	9965 000 36027
L901	073L17450LH	LINE FILTER	9965 000 36090
L901	073L17450LSH	LINE FILTER	9965 000 36091
T901	080GL15T26L	ADAPTER TRANS BY LITAI	9965 000 36056
T901	080GL15T26N	XFMR FOR POWER YUVA	9965 000 36092

PT801	080GL19T8DN1	X'FMR DARFONTK.2006M.101	9965 000 36093
CN901	087G50132S	AC SOCKET	9965 000 36028
DB901	093G50460502	KBP206G	9965 000 36029
D901	093G6026T52T	RECTIFIER DIODE FR107	9965 000 36030
D905	093G60272	DIODE_5A/40V_SR540	9965 000 36036
D905	093G30061	31DQ06FC	9965 000 36094
CN902	095G80131216	HARNESS	9965 000 36057
Q903	057G66730	2SK2645	9965 000 36031
Q903	057G667515	FET FQPF7N65C FAIRCHILD	9965 000 36099
HS1	090G60841GP	HEAT SINK	9965 000 36058
HS2	090G60841GP	HEAT SINK	9965 000 36058
D904	093G60245	SP10150	9965 000 36034
IC901	056G37952	LD7552BS	9965 000 36037
IC801	056G60810	0Z9938	9965 000 36059
Q802	057G4174	PMBS3904/PHILIPS-SMT(04)	9965 000 35966
Q803	057G4174	PMBS3904/PHILIPS-SMT(04)	9965 000 35966
Q805	057G60055	P5506 HVG SO-8	9965 000 36032
Q807	057G7592	RK7002	9965 000 36033
Q806	057G7592	RK7002	9965 000 36033
Q804	057G7592	RK7002	9965 000 36033
Q801	057G7592	RK7002	9965 000 36033
Q805	057G76314	AM9945N	9965 000 36100
R935	061L0805000	CHIPR 0OHM -5% 1/10W	9965 000 35984
R917	061L0805100	CHIPR 10 OHM -5% 1/10W	9965 000 36012
R807	061L0805100	CHIPR 10 OHM -5% 1/10W	9965 000 36012
R918	061L08051001F	RST CHIPR 1KOHM -1% 1/8W	9965 000 36021
R928	061L08051001F	RST CHIPR 1KOHM -1% 1/8W	9965 000 36021
R931	061L08051001F	RST CHIPR 1KOHM -1% 1/8W	9965 000 36021
R804	061L08051002F	CHIP 10K OHM 1/8W 1%	9965 000 36020
R812	061L08051002F	CHIP 10K OHM 1/8W 1%	9965 000 36020
R919	061L08051002F	CHIP 10K OHM 1/8W 1%	9965 000 36020
R915	061L08051003F	CHIP 100KOHM -1% 1/8W	9965 000 36014
R913	061L08051003F	CHIP 100KOHM -1% 1/8W	9965 000 36014
R821	061L08051003F	CHIP 100KOHM -1% 1/8W	9965 000 36014
R815	061L08051003F	CHIP 100KOHM -1% 1/8W	9965 000 36014
R810	061L08051003F	CHIP 100KOHM -1% 1/8W	9965 000 36014
R819	061L0805102GP	CHIPR 1K OHM -5% 1/8W	9965 000 36060
R831	061L0805102GP	CHIPR 1K OHM -5% 1/8W	9965 000 36060
R809	061L0805105	CHIP 1M OHM 5% 1/8W	9965 000 36013
R813	061L0805105	CHIP 1M OHM 5% 1/8W	9965 000 36013
R822	061L0805105	CHIP 1M OHM 5% 1/8W	9965 000 36013
R826	061L0805105	CHIP 1M OHM 5% 1/8W	9965 000 36013

R829	061L0805105	CHIP 1M OHM 5% 1/8W	9965 000 36013
R816	061L08051503FG	150KOHM F 1/8W	9965 000 36061
R830	061L08052003F	200K OHM 1%	9965 000 36141
R930	061L0805220	CHIP 22 OHM 5% 0805 1/8W	9965 000 36062
R943	061L08052401F	CHIPR 2.4KOHM -1% 1/8W	9965 000 36142
R802	061L0805304	300K OM 1/8W	9965 000 36063
R817	061L08053902F	CHIP 39K OHM 1/10W 1%	9965 000 36143
R827	061L08053910F	CHIP 390 OHM 1/10W 1%	9965 000 36064
R814	061L0805433	CHIP 43KOHM 1/8W	9965 000 36144
R820	061L0805563	CHIP 56K OHM 1/8W	9965 000 36065
R818	061L08056802F	CHIP 68K OHM 1/10W 1%	9965 000 36019
R811	061L08057502F	CHIP 75KOHM 1% 1/8W	9965 000 36015
R912	061L08057502F	CHIP 75KOHM 1% 1/8W	9965 000 36015
R942	061L08058210F	CHIP 820 OHM 1/10W 1%	9965 000 36066
R825	061L0805822	CHIP 8.2KOHM 5% 1/10W	9965 000 36145
JR901	061L1206000	CHIPR 0 OHM -5% 1/8W	9965 000 36067
R801	061L1206000	CHIPR 0 OHM -5% 1/8W	9965 000 36067
R925	061L1206101	CHIP 100 OHM 5% 1/8W	9965 000 36022
R926	061L1206101	CHIP 100 OHM 5% 1/8W	9965 000 36022
R927	061L1206101	CHIP 100 OHM 5% 1/8W	9965 000 36022
R924	061L1206101	CHIP 100 OHM 5% 1/8W	9965 000 36022
R923	061L1206101	CHIP 100 OHM 5% 1/8W	9965 000 36022
R922	061L1206101	CHIP 100 OHM 5% 1/8W	9965 000 36022
R803	061L1206103	CHIP 10KOHM 5% 1/4W	9965 000 36016
R808	061L1206104	CHIP 100KOHM 5% 1/4W	9965 000 36218
R911	061L1206151	CHIP 150OHM 1/4W	9965 000 36068
R916	061L1206249	CHIPR 2.4OHM -5% 1/4W	9965 000 36017
R806	061L1206330GP	33 OHM /1206	9965 000 36023
R906	061L1206434	430K 1206 1/4W 5%	9965 000 36069
R905	061L1206434	430K 1206 1/4W 5%	9965 000 36069
R904	061L1206434	430K 1206 1/4W 5%	9965 000 36069
R805	061L1206471	CHIPR 470 OHM -5% 1/8W	9965 000 36070
R907	061L1206514	CHIPR 510KOHM -5% 1/4W	9965 000 36018
R908	061L1206514	CHIPR 510KOHM -5% 1/4W	9965 000 36018
R909	061L1206514	CHIPR 510KOHM -5% 1/4W	9965 000 36018
R903	061L1206684	CHIPR 680K OHM -5% 1/8W	9965 000 36024
R902	061L1206684	CHIPR 680K OHM -5% 1/8W	9965 000 36024
R901	061L1206684	CHIPR 680K OHM -5% 1/8W	9965 000 36024
C814	065G080510222	CHIP 0.001UF 25V X7R 0805	9965 000 36071
C805	065G080510232	CHIP 1000P 50VX7R 0805	9965 000 36038
C801	065G080510322	CHIP 0.01UF 25V X7R 0805	9965 000 36039
C807	065G080510322	CHIP 0.01UF 25V X7R 0805	9965 000 36039

C820	065G080510322	CHIP 0.01UF 25V X7R 0805	9965 000 36039
C911	065G080510422	0.1UF -10% 25V X7R 080	9965 000 36040
C909	065G080510422	0.1UF -10% 25V X7R 080	9965 000 36040
C812	065G080510422	0.1UF -10% 25V X7R 080	9965 000 36040
C808	065G080510422	0.1UF -10% 25V X7R 080	9965 000 36040
C919	065G080510432	CHIP 0.1U 50V X7R	9965 000 36041
C923	065G080510432	CHIP 0.1U 50V X7R	9965 000 36041
C806	065G080510512	1UF -10% 6V X7R	9965 000 36072
C927	065G080510522	CHIP 1UF 25V X7R 0805	9965 000 36073
C912	065G080522132	CHIP 220PF 50V X7R 0805	9965 000 36042
C809	065G080522322	CHIP 0.022UF 25V X7R 0805	9965 000 36043
C913	065G080533422	0.33UF -10% 25V X7R 0805	9965 000 36074
C818	065G080547131	CHIP 470PF 50V NPO	9965 000 36044
C810	065G080547131	CHIP 470PF 50V NPO	9965 000 36044
C815	065G080547332	CHIP 0.047UF 50V X7R	9965 000 36045
C804	065G120622517	1206 2.2UF -20%~ 80% 16V Y5V	9965 000 36075
D802	093G6433	DIO SIG SM BAV99 (PHSE)R	9965 000 35994
D801	093G6442PP	BAV70 SOT-23	9965 000 35995
D804	093G6444S	LL4148WP	9965 000 36035
D803	093G6444S	LL4148WP	9965 000 36035
ZD904	093G39S17T	RLZ12B LLDS	9965 000 36078
ZD801	093G39S24T	RLZ 5.6B LLDS	9965 000 36079
ZD903	093G39S38T	PTZ 9.1B	9965 000 36080
ZD902	093G39S71T	BZT52C2V7-7-F SOD-123	9965 000 36096
ZD801	093G39S73T	BZT52C5V6-7-F SOD-123	9965 000 36097
ZD904	093G39S78T	BZT52C12-7-F SOD-123	9965 000 36098
ZD902	093G39S505	TZMC24	9965 000 36081
CN901	006G31500	EYELET	9965 000 36082
C905	006G31502	1.5MM RIVET	9965 000 36046
NR901	006G31502	1.5MM RIVET	9965 000 36046
T901	006G31502	1.5MM RIVET	9965 000 36046
PT801	006G31502	1.5MM RIVET	9965 000 36046
L902	006G31502	1.5MM RIVET	9965 000 36046
IC903	056G15810T	AZ431AZ-AE1	9965 000 36101
IC904	056G15810T	AZ431AZ-AE1	9965 000 36101
R823	061G212Y625KT	MGFR 6.2MOHM -5% 1/2W	9965 000 36083
C811	067G215B2214KT	LOW E,S,R 220UF -20% 25V	9965 000 36076
D903	093G6038T52T	FR103	9965 000 36095
	715G16761	POWER BOARD	9965 000 36102
F902	084G552GP	FUSE	9965 000 36084
FB901	071G5529	FERRITE BEAD	9965 000 36053
F901	084G552GP	FUSE	9965 000 36084

IC904	056G15812	KIA431A-AT/P TO-92	9965 000 36054
IC903	056G15812	KIA431A-AT/P TO-92	9965 000 36054
C904	065G1K1521T	1.5NF/1KV Z5F -10%	9965 000 36047
C914	065G517K1025T	1000PF 10% Y5P 500V	9965 000 36077
C915	065G517K1025T	1000PF 10% Y5P 500V	9965 000 36077
C910	067G215Y2207KT	ED 105 ⁻⁻⁻⁻ 22UF M 50V KINGNICH	9965 000 36048

Key Board

Location	Part No for TPV	Description	Philips 12NC
	KEPC780KE7P	KEY BOARD	9965 000 35900
CN101	033G38026H	WAFER 6P RIGHT ANGLE PITCH 2.0	9965 000 35999
SW1	077G6001GCJ	TACT SWITCH TSPB-2 -NP	9965 000 36000
SW2	077G6001GCJ	TACT SWITCH TSPB-2 -NP	9965 000 36000
SW3	077G6001GCJ	TACT SWITCH TSPB-2 -NP	9965 000 36000
SW4	077G6001GCJ	TACT SWITCH TSPB-2 -NP	9965 000 36000
SW5	077G6001GCJ	TACT SWITCH TSPB-2 -NP	9965 000 36000
SW6	077G6001GCJ	TACT SWITCH TSPB-2 -NP	9965 000 36000
SW7	077G6001GCJ	TACT SWITCH TSPB-2 -NP	9965 000 36000
SW8	077G6001GCJ	TACT SWITCH TSPB-2 -NP	9965 000 36000
LED1	081G121GP	GP32032ME	9965 000 36001
R109	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
R100	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
R101	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R104	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R108	061L0603102	CHIPR 1K OHM -5% 1/16W	9965 000 35970
R103	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R107	061L0603103	CHIPR 10K OHM -5% 1/16W	9965 000 35971
R106	061L0603473	RST SM 0603 RC0603 47K PM5 R	9965 000 36003
R102	061L0603473	RST SM 0603 RC0603 47K PM5 R	9965 000 36003
C101	065G060310332	0.01UF -10% 50V X7R	9965 000 36004
C102	065G060310332	0.01UF -10% 50V X7R	9965 000 36004
C103	065G060310332	0.01UF -10% 50V X7R	9965 000 36004
C104	065G060310332	0.01UF -10% 50V X7R	9965 000 36004
C105	065G060310332	0.01UF -10% 50V X7R	9965 000 36004

16. Different Parts List

Diversity of 150S7FB/00 compared with 150S7FS/00		
Part No. for TPV	Description	Philips 12NC
045G88607	PE BAG FOR MONITOR	9965 000 36555
095G801416658Q	WIRE HARNESS	9965 000 35911
750GLG50X0871M	PANEL LCD 15" X08 TL03 PHILIPS L	9965 000 36581
P33G4971VQA1C	BUTTON OSD	9965 000 36889
P34G1827VBA1T	BEZEL	9965 000 36888
P37G60561VB	HINGE ASS'Y	9965 000 36887
P85G7341	SHIELD-PWR	9965 000 35933
P85G7351	SHIELD-INV	9965 000 35934
P85G00011	SHIELD MAIN	9965 000 35935
Q40G15N8132B	RATING LABEL	9965 000 36886

Diversity of 150S7FB/27 compared with 150S7FS/00			
Location	Part No. for TPV	Description	Philips 12NC
	089G402A18NIS	POWER CORD	9965 000 37563
	750GLG50X0871M	PANEL LCD 15" X08 TL03 PHILIPS L	9965 000 36581
	750GLQ50L1311M	PANEL LCD 15" XL13 R01 PHILIPS Q	9965 000 36558
	CBPC560KGMP2P	CONVERSION BOARD	9965 000 36580
	CBPC560KQMP2P	CONVERSION BOARD(QDI)	9965 000 38140
	P33G4971VQA1C	BUTTON OSD	9965 000 36889
	P34G1827VBA1T	BEZEL	9965 000 36888
	P37G60561VB	HINGE ASS'Y	9965 000 36887
C431	067G305V1003	105 Σ 10UF -20% 16V	9965 000 37413
C707	067G305V1003	105 Σ 10UF -20% 16V	9965 000 37413
C708	067G305V1003	105 Σ 10UF -20% 16V	9965 000 37413
C426	067G305V2213P	105 Σ 220UF M 16V	9965 000 37414
R411	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
R410	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB406	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB405	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB404	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB403	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB402	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB401	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
R441	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R440	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
C429	065G040210031T	MLCC 0402 10UF J 50V NPO TAIYO Y	9965 000 36566
FB408	071G56K121M	CHIP BEAD	9965 000 36567
FB704	071G56K121M	CHIP BEAD	9965 000 36567
FB703	071G56K121M	CHIP BEAD	9965 000 36567
FB702	071G56K121M	CHIP BEAD	9965 000 36567
FB701	071G56K121M	CHIP BEAD	9965 000 36567
FB412	071G56K121M	CHIP BEAD	9965 000 36567
FB409	071G56K121M	CHIP BEAD	9965 000 36567
C903	063G10747410S	FILM CAPACITOR	9965 000 37794
J914	061G60210052T	10 OHM 5% 1/6W	9965 000 38141

J921	061G60210052T	10 OHM 5% 1/6W	9965 000 38141
PT801	S80GL19T8V1	TRANSFORMER ASS'Y	9965 000 38142
C814	065G080510231	1000PF 50V NPO	9965 000 36991

Diversity of 150S7FB/75 compared with 150S7FS/00

Location	Part No. for TPV	Description	Philips 12NC
	750GLQ50L1311M	PANEL LCD 15" XL13 R01 PHILIPS Q	9965 000 36558
	CBPC560KQMP1P	CONVERSION BOARD	9965 000 37546
	089G412A18NIS3	POWER CORD WALL-OUT FOR AUSTRALIA	9965 000 37345
	750GLG50X0871M	PANEL LCD 15" X08 TL03 PHILIPS L	9965 000 36581
	CBPC560KGMP1P	CONVERSION BOARD	9965 000 37545
	P33G4971VQA1C	BUTTON_OSD	9965 000 36889
	P34G1827VBA1T	BEZEL	9965 000 36888
	P37G60561VB	HINGE ASS'Y	9965 000 36887
	P85G7341	SHIELD-PWR	9965 000 35933
	P85G7351	SHIELD-INV	9965 000 35934
	P85G00011	SHIELD MAIN	9965 000 35935
C429	065G040210031T	MLCC 0402 10UF J 50V NPO TAIYO Y	9965 000 36566

Diversity of 150S7FB/93 compared with 150S7FS/00

Location	Part No. for TPV	Description	Philips 12NC
	089G414A18NYH	POWER CABLE	9965 000 37557
	750GLG50X0871M	PANEL LCD 15" X08 TL03 PHILIPS L	9965 000 36581
	CBPC560KGMP1P	CONVERSION BOARD	9965 000 37545
	P33G4971VQA1C	BUTTON_OSD	9965 000 36889
	P34G1827VBB1T	BEZEL	9965 000 37558
	P37G60561VB	HINGE ASS'Y	9965 000 36887
	P85G7341	SHIELD-PWR	9965 000 35933
	P85G7351	SHIELD-INV	9965 000 35934
	P85G00011	SHIELD MAIN	9965 000 35935
	089G414A18NLS	POWER CORD	9965 000 37089
	750GLQ50L1311M	PANEL LCD 15" XL13 R01 PHILIPS Q	9965 000 36558
	CBPC560KQMP1P	CONVERSION BOARD	9965 000 37546
C429	065G040210031T	MLCC 0402 10UF J 50V NPO TAIYO Y	9965 000 36566

Diversity of 150S7FG/00 compared with 150S7FS/00

Location	Part No. for TPV	Description	Philips 12NC
	040G152509	RECYCLE LABEL	9965 000 36553
	040G152512	RECYCLE LABEL	9965 000 36554
	040G58162435A	LABEL	9965 000 35901
	044G9003109	CORNER PAPER	9965 000 35902
	044G9003210	CORNER PAPER	9965 000 35903
	045G88607	PE BAG FOR MONITOR	9965 000 36555
	052G1211A	165MINIUM TAPE	9965 000 35908
	089G728GAC550	SIGNAL CABLE D-SUB GREATLAND	9965 000 36556

	089G404E18NLS	POWER CORD LONGWELL	9965 000 36557
	095G801416658Q	WIRE HARNESS	9965 000 35911
	750GLQ50L1311M	PANEL LCD 15" XL13 R01 PHILIPS Q	9965 000 36558
	P33G4971VVA1C	BUTTON_OSD	9965 000 36561
	P33G4972VC1L	COVER_HINGE	9965 000 36562
	P34G1827VCA1T	BEZEL	9965 000 36563
	P34G1828VC1T	REAR COVER	9965 000 36564
	P37G60561VC	HINGE ASS'Y	9965 000 36565
	P85G7341	SHIELD-PWR	9965 000 35933
	P85G7351	SHIELD-INV	9965 000 35934
	P85G00011	SHIELD_MAIN	9965 000 35935
	Q40G15N8133A	RATING LABEL	9965 000 36559
	Q40G15N8134A	RATING LABEL	9965 000 36560
	Q40G5828132A	FAMILY SHEET	9965 000 35936
	AIC560KQMPHP	MAIN BOARD (QDI)	9965 000 35893
FB401	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB402	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB403	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB404	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB405	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB406	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
C429	065G040210031T	MLCC 0402 10UF J 50V NPO TAIYO Y	9965 000 36566
FB704	071G56K121M	CHIP BEAD	9965 000 36567
FB703	071G56K121M	CHIP BEAD	9965 000 36567
FB702	071G56K121M	CHIP BEAD	9965 000 36567
FB701	071G56K121M	CHIP BEAD	9965 000 36567
FB412	071G56K121M	CHIP BEAD	9965 000 36567
FB409	071G56K121M	CHIP BEAD	9965 000 36567

Diversity of 150S7FG/27 compared with 150S7FS/00

Location	Part No. for TPV	Description	Philips 12NC
	040G152509	RECYCLE LABEL	9965 000 36553
	040G152512	RECYCLE LABEL	9965 000 36554
	045G88607	PE BAG FOR MONITOR	9965 000 36555
	089G728GAC550	SIGNAL CABLE D-SUB GREATLAND	9965 000 36556
	089G402E18NIS	POWER CORD	9965 000 36576
	750GLG50X0871M	PANEL LCD 15" X08 TL03 PHILIPS L	9965 000 36581
	CBPC560KGMP2P	CONVERSION BOARD	9965 000 36580
	P33G4971VVA1C	BUTTON_OSD	9965 000 36561
	P33G4972VC1L	COVER_HINGE	9965 000 36562
	P34G1827VCA1T	BEZEL	9965 000 36563
	P34G1828VC1T	REAR COVER	9965 000 36564
	P37G60561VC	HINGE ASS'Y	9965 000 36565
	P85G7341	SHIELD-PWR	9965 000 35933
	P85G7351	SHIELD-INV	9965 000 35934
	P85G00011	SHIELD_MAIN	9965 000 35935
	Q40G15N8137A	RATING LABEL	9965 000 36577
	Q40G15N8138A	RATING LABEL	9965 000 36578
	Q40G5828132A	FAMILY SHEET	9965 000 35936
	Q41G780081320A	USA SERVICE CARD	9965 000 36579
	040G45762412B	CBPC LABEL	9965 000 35942
	AIC560KGMP2P	MAIN BOARD	9965 000 36582
	040G4576241B	LABEL-CPU	9965 000 35944
FB401	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB402	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002

FB403	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB404	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB405	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB406	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
C429	065G040210031T	MLCC 0402 10UF J 50V NPO TAIYO Y	9965 000 36566
FB408	071G56K121M	CHIP BEAD	9965 000 36567
FB704	071G56K121M	CHIP BEAD	9965 000 36567
FB703	071G56K121M	CHIP BEAD	9965 000 36567
FB702	071G56K121M	CHIP BEAD	9965 000 36567
FB701	071G56K121M	CHIP BEAD	9965 000 36567
FB412	071G56K121M	CHIP BEAD	9965 000 36567
FB409	071G56K121M	CHIP BEAD	9965 000 36567

Diversity of 150S7FG/93 compared with 150S7FS/00

Location	Part No. for TPV	Description	Philips 12NC
	089G728GAC550	SIGNAL CABLE D-SUB GREATLAND	9965 000 36556
	089G414E18NIS	POWER CORD I-SHENG	9965 000 37440
	750GLG50X0871M	PANEL LCD 15" X08 TL03 PHILIPS L	9965 000 36581
	CBPC560KGMP1P	CONVERSION BOARD	9965 000 37545
	P33G4971VVA1C	BUTTON OSD	9965 000 36561
	P33G4972VC1L	COVER_HINGE	9965 000 36562
	P34G1827VCB1T	BEZEL	9965 000 37605
	P34G1828VC1T	REAR COVER	9965 000 36564
	P37G60561VC	HINGE ASS'Y	9965 000 36565
	P85G7341	SHIELD-PWR	9965 000 35933
	P85G7351	SHIELD-INV	9965 000 35934
	P85G00011	SHIELD_MAIN	9965 000 35935
	089G414E18NYH	POWER CORD YUNHUAN	9965 000 37606
	750GLQ50L1311M	PANEL LCD 15" XL13 R01 PHILIPS Q	9965 000 36558
	CBPC560KQMP1P	CONVERSION BOARD	9965 000 37546
C429	065G040210031T	MLCC 0402 10UF J 50V NPO TAIYO Y	9965 000 36566

Diversity of 150S7FS/78 compared with 150S7FS/00			
Location	Part No. for TPV	Description	Philips 12NC
	089G402A18NIS1	MAINSCORD(220V)-1.5M-CM3000	9965 000 39223
	CBPC560KQMP29P	CONVERSION BOARD	9965 000 39224
	KEPC780KE79P	KEY BOARD	9965 000 39225
	PWPC1521QDR3P	POWER BOARD	9965 000 39226
C431	067G305V1003	105Σ 10UF -20% 16V	9965 000 37413
C707	067G305V1003	105Σ 10UF -20% 16V	9965 000 37413
C708	067G305V1003	105Σ 10UF -20% 16V	9965 000 37413
C426	067G305V2213P	105Σ 220UF M 16V	9965 000 37414
R411	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
R410	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB406	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB405	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB404	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB403	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB402	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
FB401	061L0603000	RST SM 0603 JUMP MAX 0R05 R	9965 000 36002
R441	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
R440	061L0603101	CHIPR 100 OHM -5% 1/16W	9965 000 35969
C429	065G040210031T	MLCC 0402 10UF J 50V NPO TAIYO Y	9965 000 36566
FB408	071G56K121M	CHIP BEAD	9965 000 36567
FB704	071G56K121M	CHIP BEAD	9965 000 36567
FB703	071G56K121M	CHIP BEAD	9965 000 36567
FB702	071G56K121M	CHIP BEAD	9965 000 36567
FB701	071G56K121M	CHIP BEAD	9965 000 36567
FB412	071G56K121M	CHIP BEAD	9965 000 36567
FB409	071G56K121M	CHIP BEAD	9965 000 36567
	S73G17465VW	TRANSFORMERS	9965 000 39227
C903	063G10747410S	FILM CAPACITOR	9965 000 37794
C814	065G080510231	1000PF 50V NPO	9965 000 36991

17. General Production Specification

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1. FOREWORD

This specification describes a 15" wide SXGA multi-scan color TFT LCD monitor with max. resolution up to 1024*768/ 75 Hz non-interlaced. All optical characteristics (including WHITE-D, Brightness, and so on) are determined according to panel specification after warming up approximate 30 minutes that brightness stability is optimal, and follow strictly after panel specification.

2. PRODUCT PROFILE

This display monitor unit is a color display monitor enclosed in PHILIPS global styling cabinet, which has an integrated tilt base.

2.1 LCD

Type NR.	: LM150X8-TL03 (LPL),
Outside dimensions	: 326.5(w)*253.5(h)*11.2(d) (Typ) mm
Pitch (mm)	: 0.297 x 0.297mm
Color pixel arrangement:	RGB vertical stripes
Display surface	: low reflection, antiglare with hard coating
Color depth	: 16M colors (8 bits)
Backlight	: 2 CCFL's
Active area(WxH)	: 15" diagonal
View angle	: Horizontal $\pm 65^\circ$ Vertical $+45^\circ, -55^\circ$ (CR>10)
Contrast ratio	: 550:1(Typ.) 350:1(Min.)
White luminance	: Original color 250 nits (Typ.)
Gate IC	: OKI
Source IC	: OKI
Response time	: 8ms

Type NR.	: QD15XL13-Rev.01 (QDI)
Outside dimensions	: 326.5(w)*253.5(h)*11.0(d) (Typ) mm
Pitch (mm)	: 0.297 x 0.297 mm
Color pixel arrangement:	RGB vertical stripes
Display surface	: low reflection, antiglare with hard coating
Color depth	: 16M colors (8 bits)
Backlight	: 2 CCFL's
Active area(WxH)	: 15" diagonal
View angle	: Horizontal $\pm 60^\circ$ Vertical $+45^\circ, -55^\circ$ (CR>10)
Contrast ratio	: 500:1(Typ.) 300:1(Min.)
White luminance	: Original color 250 nits (Typ.)
Gate IC	: Novatek NT39320
Source IC	: Novatek NT3994
Response time	: 16ms

2.2 Scanning frequencies

Hor.	: 30 – 63 KHz
Ver.	: 56 - 76Hz
Video dot rate	: 80MHz
Power input	: 90-264 V AC, 50/60 $\pm$ 2 Hz
Power consumption	: < 23W maximum
Functions:	
(1) D-SUB:	analog R/G/B separate inputs, H/V sync separated, Composite (H+V) TTL level, SOG sync
(2) DVI_A:	NA
(3) DVI_D:	NA

2.3 Ambient temperature: 0 °C - 35 °C

3. Electrical characteristics

3.1 Interface signals

The input signals can be applied in three different modes :

1). D-Sub Analog

Input signal: Video, Hsync., Vsync

Video: 0.7 Vp-p, input impedance, 75 ohm @DC

Sync. : Separate sync TTL level, input impedance 2.2k ohm terminate

Hsync Positive/Negative

Vsync Positive/Negative

Composite sync TTL level, input impedance 5k ohm terminate (Positive/Negative)

Sync on green video 0.3 Vp-p Negative (Video 0.7 Vp-p Positive)

2). Intel DVI Digital

NA

3.2 Interface

3.2.1 D-Sub Cable

Length: 1.8 M + 50 / - 50mm

Connector type: D-Sub male with DDC2B pin assignments.

Blue connector thumb-operated jack screws

Pin assignment:

PIN No.	SIGNAL
1	Red
2	Green/ SOG
3	Blue
4	Sense (GND)
5	Cable Detect
6	Red GND
7	Green GND
8	Blue GND
9	DDC +5V
10	GND
11	Sense (GND)
12	Bi-directional data
13	H/H+V sync
14	V-sync
15	Data clock

3.2.2 DVI Cable NA

3.2.3 Software control functions via OSD/control adjustable functions:

(1) PC Analog only Signal Input Mode

Adjustable functions:

1 st LEVEL	2 nd LEVEL	3rd LEVEL
MONITOR SETUP		
Exit		
Brightness & Contrast	Brightness Contrast	
Color	Original Color, 9300K,6500K, sRGB, User Define	
Position & Size	Horizontal Vertical Size	<u>Full Screen</u>
		<u>Native Mode</u> <u>Fill with Aspect</u>
<u>Input Selection</u>	<u>Analog (D-Sub)</u>	
More Settings	Language	/00 : English, Espanol, Frencais, Deutsch, Italiano, , Russian
		/27 : English, Espanol, Frencais, Portuguess, S-Chinese
		/69,/75,/93,/96 : English, Espanol, Frencais, Deutsch, Italiano, , S-Chinese
	Phase/ Clock	Phase
		Clock
	OSD Settings	Horizontal Vertical
Reset	No Yes	
Serial No.:		
(Serial No.)		
Timing Mode		
Up/Down to Move, ok to Confirm		

Remark: " To move " at OSD window right-bottom.

" To adjust " at OSD window left-bottom.

Remark: Color Temperature factory default setting = 6500K for all regions.

(2) Digital interface OSD: NA

3.3 Timing requirement

3.3.1 Mode storing capacity

Factory preset modes: 13

Preset modes: 20

3.3.2 Factory preset timings

Item	H.Freq. (KHz)	Mode	Resolution	V.Freq. (Hz)	Item	H.Freq. (KHz)	Mode	Resolution	V.Freq. (Hz)
1	31.469	IBM VGA 3H	720x400	70.087	11	60.023	VESA	1024x768	75.029
2	31.469	VESA	640x480	59.940	12	35.000	MACINTOSH	640x480	67.000
3	37.861	VESA	640x480	72.809	13	49.700	MACINTOSH	832x624	75.000
4	37.500	VESA	640x480	75.000	14				
5	35.156	VESA	800x600	56.250	15				
6	37.879	VESA	800x600	60.317	16				
7	48.077	VESA	800x600	72.188	17				
8	46.875	VESA	800x600	75.000	18				
9	48.363	VESA	1024x768	60.004	19				
10	56.476	VESA	1024x768	70.069	20				

3.3.3 Preset Modes

MODE NO.	1	2	3	4
RESOLUTION	640 x 350	720 x 400	640 x 480	640 x 480
Dot clock(MHz)	25.175	28.321	25.175	30.24
f _h A (us) B (us) C (us) D (us) E (us)	31.469kHz 31.778(800 dots) 3.813(96 dots) 1.907(48 dots) 25.422(640 dots) 0.636(16 dots)	31.468kHz 31.78(900dots) 3.813(108dots) 1.907(54dots) 25.42(720dots) 0.636(18dots)	31.5kHz 31.778(800 dots) 3.813(96 dots) 1.907(48 dots) 25.422(640 dots) 0.636(16 dots)	35 kHz 28.571(864 dots) 2.116 (64 dots) 3.175(96 dots) 21.164(640 dots) 2.116(64 dots)
f _v O (ms) P (ms) Q (ms) R (ms) S (ms)	70Hz(70.09) 14.27(449 lines) 0.064(2 lines) 1.907(60 lines) 11.12(350 lines) 1.175(37 lines)	70Hz(70.085) 14.27(449 lines) 0.064(2 lines) 1.080(34 lines) 12.71(400 lines) 0.381(13 lines)	60Hz 16.683 (525 lines) 0.064 (2 lines) 1.049 (33 lines) 15.253 (480 lines) 0.317 (10 line)	67Hz 15 (525 lines) 0.086(3 lines) 1.114(39 lines) 13.714(480 lines) 0.086(3 line)
SYNC. H/V POLARITY	+/-	-/+	- / -	- / -
SEP. SYNC	Y	Y	Y	Y

MODE NO.	5	6	7	8
RESOLUTION	640 x 480	640 x 480	640x480	800 x 600
Dot clock(MHz)	31.500	31.501	36	36
f h	37.861kHz	37.5kHz	36kHz	35.2kHz
A (us)	26.413(832 dots)	26.667 (840 dots)	23.111 (832 dots)	28.444(1024 dots)
B (us)	1.270(40 dots)	2.032 (54 dots)	1.556 (56 dots)	2.000 (72 dots)
C (us)	3.810(120 dots)	3.81 (120 dots)	2.222 (80 dots)	3.556 (128 dots)
D (us)	20.317(640 dots)	20.317 (640 dots)	17.778 (640 dots)	22.222(800 dots)
E (us)	1.016(32 dots)	0.508 (26 dots)	1.555 (56 dots)	0.666 (24 dots)
f v	72.809Hz	75Hz	85Hz	56Hz
O (ms)	13.735(520 lines)	13.333 (500 lines)	11.763 (509 lines)	17.778 (625 lines)
P (ms)	0.079(3 lines)	0.08 (3 lines)	0.069 (3 lines)	0.057 (2 lines)
Q (ms)	0.528(20 lines)	0.427 (16 lines)	0.578 (25 lines)	0.626 (22 lines)
R (ms)	12.678(480 lines)	12.8 (480 lines)	11.093 (480 lines)	17.066 (600 lines)
S (ms)	0.45(17 lines)	0.026 (1 lines)	0.023 (1 lines)	0.029 (1 line)
SYNC. H/V POLARITY	-/-	- / -	-/-	+ / +
SEP. SYNC	Y	Y	Y	Y

MODE NO.	9	10	11	12
RESOLUTION	800 x 600	800 x 600	800 x 600	800 x 600
Dot clock (MHz)	40	50	49.498	56.251
f h	37.9kHz	48.077kHz	46.9kHz	53.7kHz
A (us)	26.4 (1056 dots)	20.80 (1040dots)	21.333(1056 dots)	18.631(1048 dots)
B (us)	3.2 (128 dots)	2.400 (120 dots)	1.616 (80 dots)	1.138 (64 dots)
C (us)	2.2 (88 dots)	1.280 (64 dots)	3.232 (160 dots)	2.702 (152 dots)
D (us)	20 (800 dots)	16.00 (800 dots)	16.162 (800 dots)	14.222 (800 dots)
E (us)	1 (40 dots)	1.120 (56 dots)	0.323 (16 dots)	0.569 (32 dots)
f v	60Hz	72Hz (72.188)	75Hz	85Hz
O (ms)	16.579 (628 lines)	13.85 (666 lines)	13.333 (625 lines)	11.756(631 lines)
P (ms)	0.106 (4 lines)	0.125 (6 lines)	0.064 (3 lines)	0.056 (3 lines)
Q (ms)	0.607 (23 lines)	0.478 (23 lines)	0.448 (21 lines)	0.503 (27 lines)
R (ms)	15.84 (600lines)	12.48 (600 lines)	12.8 (600 lines)	11.179 (600 lines)
S (ms)	0.026 (1 line)	0.770 (37 line)	0.021 (1 line)	0.018 (1 lines)
SYNC. H/V POLARITY	+ / +	+ / +	+ / +	+ / +
SEP. SYNC	Y	Y	Y	Y

MODE NO.	13	14	15	16
RESOLUTION	832 x 624	1024 x 768	1024 x 768	1024 x 768
Dot clock(MHz)	57.28	65	75	78.75
f h	49.7kHz	48.363kHz	56.5kHz	60kHz
A (us)	20.11(1152 dots)	20.677(1344 dots)	17.707(1328 dots)	16.66 (1312dots)
B (us)	1.117(64 dots)	2.092(136 dots)	1.813(136 dots)	1.219 (96 dots)
C (us)	3.91(224 dots)	2.462(160 dots)	1.920(144 dots)	2.235 (176 dots)
D (us)	14.52(832 dots)	15.754(1024 dots)	13.653(1024 dots)	13.003(1024 dots)
E (us)	0.563(32 dots)	0.369(24 dots)	0.321 (24 dots)	0.203 (16 dots)
f v	75Hz	60.004Hz	70.004Hz	75Hz (75.000)
O (ms)	13.41(667 lines)	16.666(806 lines)	14.272(806 lines)	13.328 (800 lines)
P (ms)	0.06(3 lines)	0.124(6 lines)	0.106(6 lines)	0.05(3 lines)
Q (ms)	0.784(39 lines)	0.600(29 lines)	0.514(29 lines)	0.446 (28 lines)
R (ms)	12.55(624 lines)	15.880(768 lines)	13.599(768 lines)	12.80 (768 lines)
S (ms)	0.016(1 lines)	0.062(3 lines)	0.053(3 lines)	0.017 (1 line)
SYNC. H/V	+/+	- / -	-/-	+ / +
POLARITY				
SEP . SYNC	Y	Y	Y	Y

MODE NO.	17	18	19	20
RESOLUTION	1024 x 768	1024 x 768	1152 x 864	1152 x 864
Dot clock(MHz)	83.096	94.5	79.9	94.5
f h	61.1kHz	68.7kHz	54.0kHz	63.9kHz
A (us)	16.367 (1360dots)	14.561(1376 dots)	18.523(1480 dots)	15.661(1480 dots)
B (us)	1.348 (112 dots)	1.016 (96 dots)	1.952(156 dots)	1.016(96 dots)
C (us)	2.022 (168 dots)	2.201 (208 dots)	1.352(108 dots)	1.116(105 dots)
D (us)	12.323(1024 dots)	10.836(1024 dots)	14.418(1152 dots)	12.19(1152 dots)
E (us)	0.674 (56 dots)	0.508 (48 dots)	0.801(64 dots)	1.339(127 dots)
f v	76Hz	85Hz	60Hz	70Hz
O (ms)	13.142 (803 lines)	11.765 (808 lines)	16.671(900lines)	14.283(912lines)
P (ms)	0.049 (3 lines)	0.044 (3 lines)	0.148(8 lines)	0.047(3lines)
Q (ms)	0.507 (31 lines)	0.524 (36 lines)	0.445(24 lines)	0.689(44 lines)
R (ms)	12.57 (768 lines)	11.183 (768lines)	16.004(864 lines)	13.531(864 lines)
S (ms)	0.016 (1 line)	0.014 (1 line)	0.074(4 lines)	0.016(1 lines)
SYNC. H/V	+ / +	+ / +	+/+	+/+
POLARITY				
SEP . SYNC	Y	Y	Y	Y

MODE NO.	21	22	23	24
RESOLUTION	1152 x 864	1152 x 870	1152 x 900	1152 x 900
Dot clock(MHz)	108	100	94.5	108
f h	67.5kHz	68.7kHz	61.8kHz	71.8kHz
A (us)	14.815(1600 dots)	14.56 (1456 dots)	16.169 (1528 dots)	13.926 (1054dots)
B (us)	1.185 (128 dots)	1.28 (128 dots)	1.354 (128 dots)	1.185 (128 dots)
C (us)	2.37 (256 dots)	1.44(144 dots)	2.201 (208 dots)	1.778 (192 dots)
D (us)	10.667 (1152 dots)	11.52 (1152 dots)	12.19 (1152 dots)	10.667 (1152 dots)
E (us)	0.593 (64 dots)	0.32 (32 dots)	0.424 (40 dots)	0.296 (32 dots)
f v	75Hz	75Hz	66Hz	76Hz
O (ms)	13.333 (900 lines)	13.333 (916 lines)	15.151 (937lines)	13.132 (943 lines)
P (ms)	0.044 (3 lines)	0.044 (3 lines)	0.065 (4 lines)	0.111 (8 lines)
Q (ms)	0.474 (32 lines)	0.568(39 lines)	0.501 (31 lines)	0.46 (33 lines)
R (ms)	12.8 (864 lines)	12.678 (870 lines)	14.552 (900lines)	12.533 (900 lines)
S (ms)	0.015 (1 lines)	0.043 (4 line)	0.033 (2 line)	0.028 (2 lines)
SYNC. H/V	- / -	- / -	Serr-	+ / +
POLARITY				
SEP . SYNC	Y	Y	Y	Y

MODE NO.	25	26	27	28
RESOLUTION Dot clock(MHz)	1280 x 960 108	1280 x 960 129.895	1280 x 1024 108	1280 x 1024 117
f h A (us) B (us) C (us) D (us) E (us)	60kHz 16.667(1800 dots) 1.037(112 dots) 2.889(312 dots) 11.852(1280 dots) 0.889(96 dots)	75kHz 13.307(1728 dots) 1.047 (136 dots) 1.725 (224 dots) 9.857 (1280 dots) 0.678 (88 dots)	64kHz 15.63 (1688 dots) 1.037 (112 dots) 2.296 (248 dots) 11.852 (1280 dots) 0.445 (48 dots)	71.7kHz 13.949(1632 dots) 0.957 (112 dots) 1.915 (224 dots) 10.94 (1280 dots) 0.137 (16 dots)
f v O (ms) P (ms) Q (ms) R (ms) S (ms)	60Hz 16.667(1000 lines) 0.05(3 lines) 0.600(36 lines) 16(960 lines) 0.017(1 lines)	75Hz 13.333(1002 lines) 0.039 (3 lines) 0.48 (36 lines) 12.774 (960 lines) 0.04 (3 lines)	60Hz 16.661(1066 lines) 0.047 (3 lines) 0.594 (38 lines) 16.005(1024 lines) 0.015 (1 line)	67Hz 14.883 (1067 lines) 0.112 (8 lines) 0.46 (33 lines) 14.283(1024 lines) 0.028 (2 lines)
SYNC. H/V POLARITY	+ / +	+ / +	+ / +	+ / +
SEP . SYNC	Y	Y	Y	Y

MODE NO.	29	30	31	32
RESOLUTION Dot clock(MHz)	1280 x 1024 130.223	1280 x 1024 135	1280 x 1024 138.008	688 x 556 27
F h A (us) B (us) C (us) D (us) E (us)	76kHz 13.158(1712 dots) 1.024 (133 dots) 1.905 (248 dots) 9.83 (1280 dots) 0.399(51 dots)	80kHz 12.504(1688 dots) 1.067(144 dots) 1.837(248 dots) 9.481(1280 dots) 0.119(16 dots)	81.1kHz 12.326(1664 dots) 0.474 (64 dots) 2.133 (288 dots) 9.481 (1280 dots) 0.238 (32 dots)	31.25kHz 32 (864 dots) 3.852 (104 dots) 1.778 (48 dots) 25.481 (688 dots) 0.889 (24 dots)
F v O (ms) P (ms) Q (ms) R (ms) S (ms)	72Hz 14 (1064 lines) 0.02 (2 lines) 0.5 (38 lines) 13.468(1024 lines) 0.012 (0 line)	75Hz 13.329(1066 lines) 0.038(3 lines) 0.475(38 lines) 12.804(1024 lines) 0.012 (1 line)	76Hz 13.139(1066 lines) 0.099 (8 lines) 0.394 (32 lines) 12.622(1024 lines) 0.024(2 lines)	50Hz 20 (625 lines) 0.128 (4 lines) 1.408 (44 lines) 17.972 (556 lines) 0.672 (21 lines)
SYNC. H/V POLARITY	+ / +	+ / +	- / -	- / +
SEP . SYNC	Y	Y	Y	Y

MODE NO.	33	34
RESOLUTION	960X720	960X720
Dot clock (MHz)	57.58	72.42
F h A (us) B (us) C (us) D (us) E (us)	44.76kHz 22.34(1286 dots) 1.72(99 dots) 2.58(148 dots) 16.67(960 dots) 0.856(49 dots)	56.4kHz 17.73(1284 dots) 1.44(104 dots) 2.21(160 dots) 13.256(960 dots) 0.780(56 dots)
F v O (ms) P (ms) Q (ms) R (ms) S (ms)	60Hz 16.667(746 lines) 0.067(2.9 lines) 0.495(22 lines) 16.081(720 lines) 0.0228(1 lines)	75Hz 13.333(752 lines) 0.053(3 lines) 0.5(28 lines) 12.766(720 lines) 0.0184(1 lines)
SYNC. H/V POLARITY	- / +	- / +
SEP . SYNC	Y	Y

3.4 Horizontal scanning

Sync polarity : Positive or Negative
 Scanning frequency : 30 – 63 KHz

3.5 Vertical scanning

Sync polarity : Positive or Negative
 Scanning frequency : 56 - 75 76Hz

3.6 Power input connection

Power cord length : 1.8 M
 Power cord type : 3 leads power cord with protective earth plug.

3.7 Power management

The monitor must comply with the Microsoft On Now specification, with two power management states, as defined by the VESA DPMS document. The monitor must appropriately display the DPMS state.

Mode	HSYNC	VSING	Video	Pwr-cons.	Indication	Rec. time
Power-On	On	On	active	< 23W	Green LED	--
Off	Off	Off	blanked	< 1 W	Amber LED	< 3 s
DC Power Off			N/A	< 1 W	LED Off	

3.8 Display identification

In accordance with VESA Display Channel Standard Ver.1.0 and having DDC 2B capability

3.9 USB Hub

NA

4. Visual characteristics**4.1 Test conditions**

Unless otherwise specified, this specification is defined under the following conditions.

- (1) Input signal: As defined in 3.3, 1024 x 768 non-interlaced mode (48K/60Hz), signal sources must have 75 ohm output impedance.
- (2) Luminance setting: controls to be set to 200 nits with full screen 100 % duty cycle white signal
- (3) Warm up: more than 30 minutes after power on with signal supplied.
- (4) Ambient light: 400 -- 600 lux.
- (5) Ambient temperature: 25 ± 5 °C

4.2 Brightness

>=250 nits (at panel color temperature, at center of the screen, set contrast and brightness at maximum.)

4.3 Image size

Actual display size 304.128 x 228.096 mm

4.4 Brightness uniformity

Set contrast at 100% and turn the brightness to get average above 200 nits at center of the screen.
 Apply the Fig 1; it should comply with the following formula:

$$\frac{B_{\min}}{B_{\max}} \times 100\% > 75\%$$

Where B_max =Maximum brightness B_min = Minimum brightness

4.5 Check Cross talk (S)

Apply Pattern 2. Set contrast and brightness at 100 %.
Measure YA. Then output Pattern 3 and measure YB.
the cross talk value :

$$\frac{ABS(YA - YB)}{YA} \times 100\% < 2.0 \%$$

4.6 White color adjustment

There are three factory preset white color 9300K, 6500K, sRGB.

Apply full gray64 pattern, with brightness in 100 % position and the contrast control at 50 % position.
The 1931 CIE Chromaticity (color triangle) diagram (x,y) coordinate for the screen center should be:

9300K CIE coordinates x = 0.283 ± 0.020 y = 0.297 ± 0.020

6500K/ sRGB CIE coordinates x= 0.313 ± 0.020 y = 0.329 ± 0.020

5. Mechanical characteristics

5.1 Cosmetic -

Philips ID

5.2 Mechanical data files -

ProE files required

5.3 Location of Philips logo -

Per Philips make-up sheet

5.4 The gap between Panel and front bezel < 1.2 mm (Static measurement w/o outer force anywhere, And depend on LPL & QDI panel spec.)

5.5 Location of Control icons -

Per Philips graphic sheet

5.6 Color for resin/paint -

Per Philips make-up sheet

5.7 Resins

- RoHS required
- WEEE required.

5.8 If paint is used

- Rohs required
- WEEE require

5.9 Plastic mold tooling

- Tooling to be designed to minimize cosmetic defects induced by molding process (sink, blush, weld lines, gate marks, ejector marks, etc.).
- Painting to cover up cosmetic defects due to molding is strongly discouraged.

5.10 Plastics flammability

- All Plastics to be Flame Retardant UL 94-V0 or better (if monitor weighs less than 18kg; UL94-V0 is OK).
- All major plastic parts (bezel, back cover) need to be molded from same resin.

5.11 Texture/Glossing of housing

- The texture area and texture no should follow Philips make-up sheet.
- The exterior surfaces shall have a uniform texture.
- Philips must approve the mold texturing.
- Detail document for texture refer to UAN-D249.
- < = 20 gloss units

5.12 Tilt and swivel base

Tilt angle: -5 ° to +25 °

5.13 Label

- Regulatory label / Carton label should follow Philips requirement.
- Detail document refer to Philips Engineering Reference Book.

5.14 Product dimension / Weight

- Unit dimension (incl. pedestal) : W: 342.1 mm, H: 348.6 mm, D: 180 mm
- Packed unit dimension (carton) : W: mm, H: mm, D: mm for other regions
- Packed unit dimension (carton) : W: mm, H: mm, D: mm for China, India
- Net weight : 3.2 Kg (Including I/F cable)
- Gross weight : Kg

5.15 Transportation

Transportation standards refer to TYE-M0002.

5.15.1 Transportation packages

Packaging and wrapping shall be sufficient to protect the product against damage or loss during shipment from the supplier to the destination specified in the purchase order. All packaging materials are subject to test and evaluation per TYE-M0002. The cushion material shall be constructed using EPS material.

5.15.2 Transportation Test

The overall test refer to TYE-M0002.

Vibration, drop test should be performed at ambient temperature(20°C to 23°C) and relative humidity (40% to 65%).

A. Transportation test specification for all regions except China/India

- Package test
 1. Random Vibration test
 2. Drop test
 3. Cold Drop test (for design reference)
- Un-package test
 1. Sine vibration (operating)
 2. Half sine shock test (non operation)

B. Transportation test specification for China/India

- Package test
 1. Random Vibration test
 2. Drop test
 3. Cold Drop test (for design reference)
- Un-package test
 1. Sine vibration (operating)
 2. Half sine shock test (non operation)

5.16 Pallet / Container loading

Transportation standards refer to TYE-M0002.

- Air shipment -
- Sea container 20'(pallet/slip sheet) -
- Sea container 40'(pallet/slip sheet) -

tbc
tbc
tbc

- Sea container 40' High Cube (pallet/slip sheet) - tbc
- Truck shipment- tbc
- A. **Air shipment**
- B. **Container loading for other regions**
- C. **Truck loading for other regions**

6. Environmental characteristics

The following sections define the interference and susceptibility condition limits that might occur between external environment and the display device.

6.1 Susceptibility of display to external environment

Operating

- Temperature : 0 to 35 degree C
- Humidity : 80% max
- Altitude : 0-3658m
- Air pressure : 600-1100 mBAR

Storage

- Temperature : -20 to 60 degree C
 - Humidity : 85% max (< 40°C)
 - Altitude : 0-12192m
 - Air pressure : 300-1100 mBAR
- Note: recommend at 5 to 35°C, Humidity less than 60 %

6.2 Display disturbances from external environment

According to IEC 801-2 for ESD disturbances

6.3 Display disturbances to external environment

Refer to Safety Requirement

7. Reliability

7.1 Mean Time Between Failures

System MTBF (Excluding the LCD panel and CCFL) : 50,000 hrs

8. Quality assurance requirements

8.1 Acceptance test

According to MIL-STD-105D Control II level
 AQL: 0.4 (major)
 1.5 (minor)
 (Please also refer to annual quality agreement)
 Customer acceptance criteria: UAW0377/00

9. Serviceability

The serviceability of this monitor should fulfill the requirements, which are prescribed in UAW-0346 and must be checked with the checklist UAT-0361.

10. Philips' Flat Panel Monitors Pixel Defect Policy

BRIGHT DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	150S7
1 lit subpixels	2
2 adjacent lit subpixels	1
3 adjacent lit subpixels	0
Distance between two bright dot defects	< 15 mm
Total bright dot defects of all types	2

BLACK DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	150S7
1 dark subpixels	5
2 adjacent dark subpixels	2
3 adjacent dark subpixels	0
Distance between two dark dot defects	< 15 mm
Total dark dot defects of all types	5

Total DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	150S7
Total bright or dark dot defect of all type	5

Fig 1: Brightness Uniformity

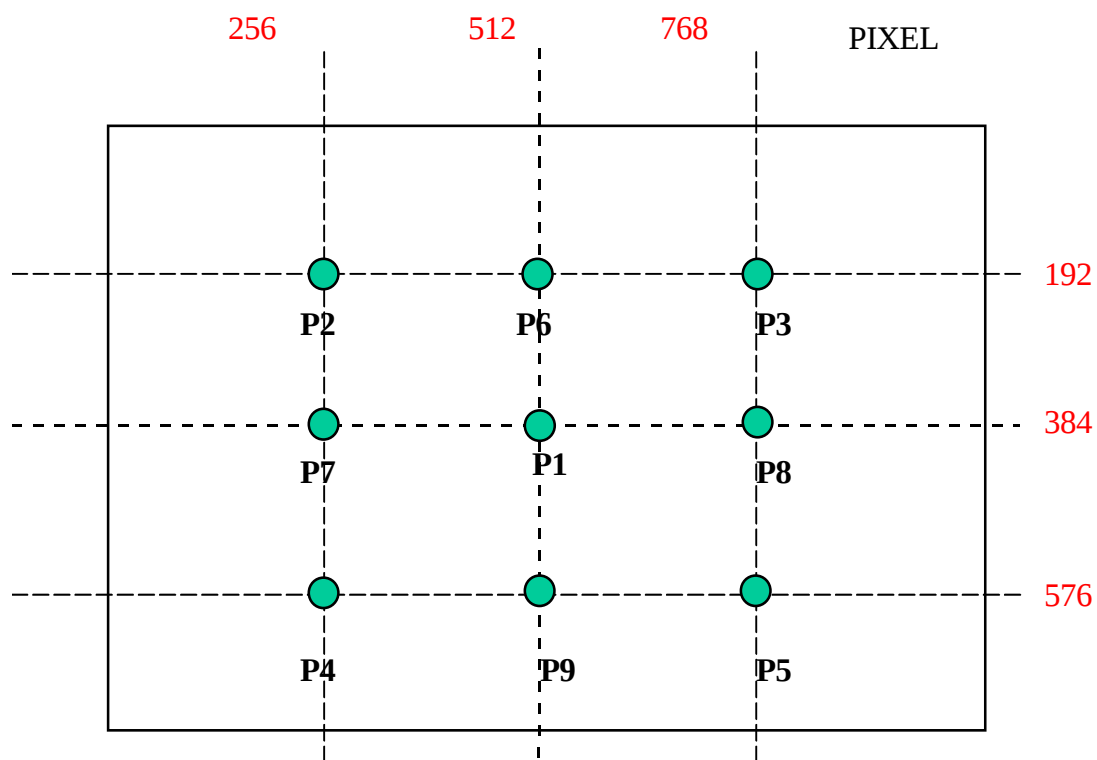
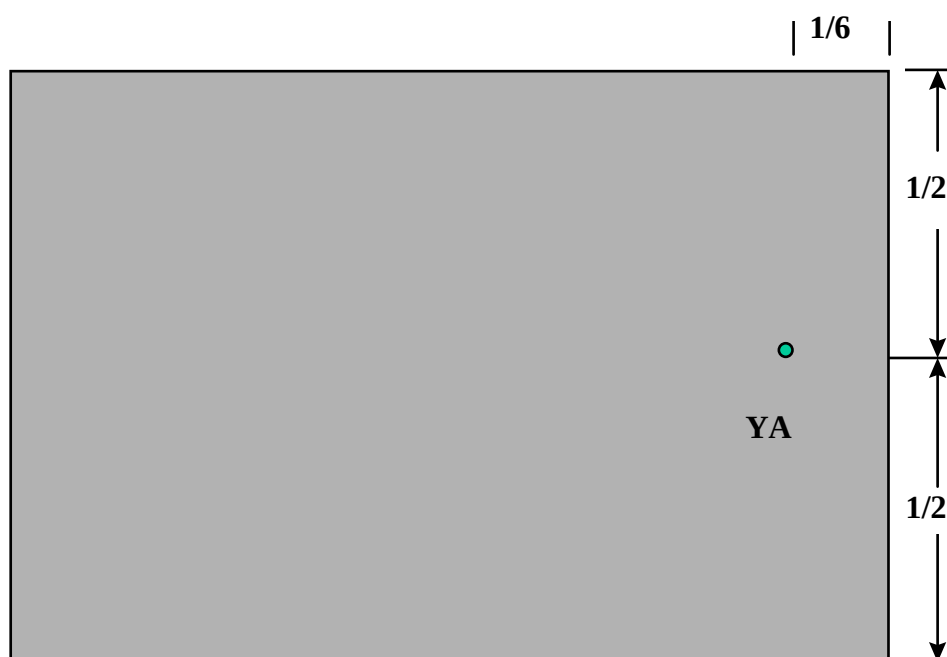
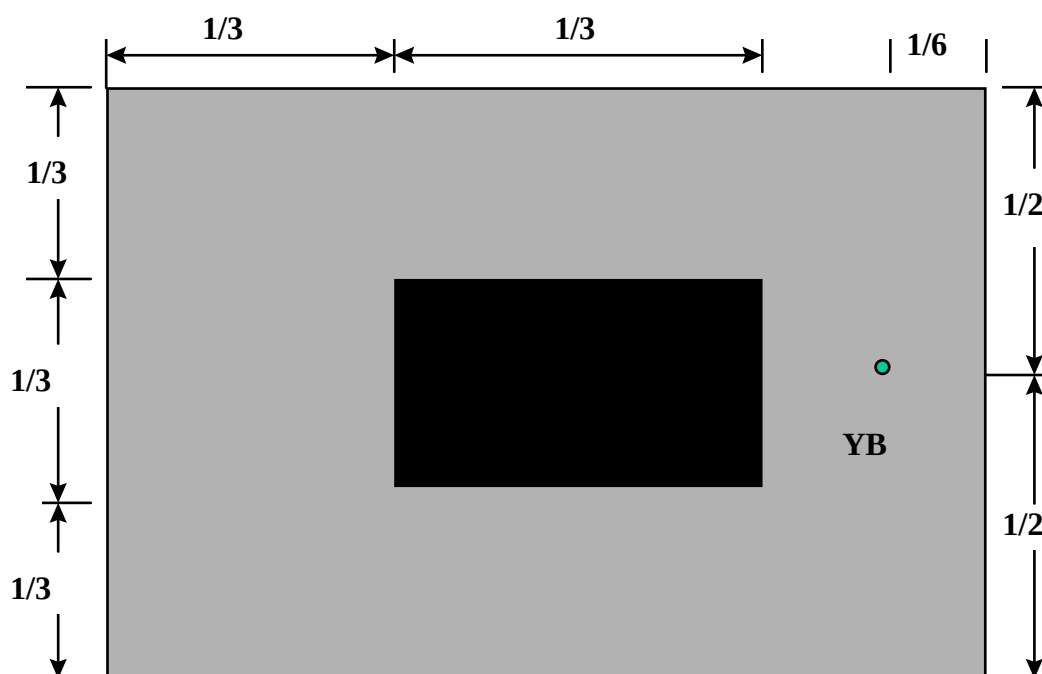
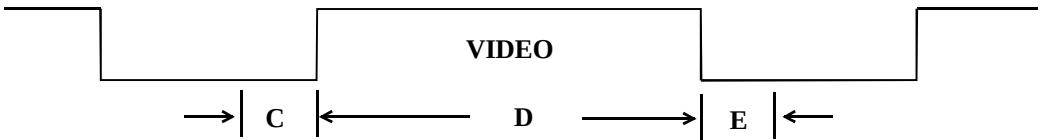


Fig 2: Cross talk pattern

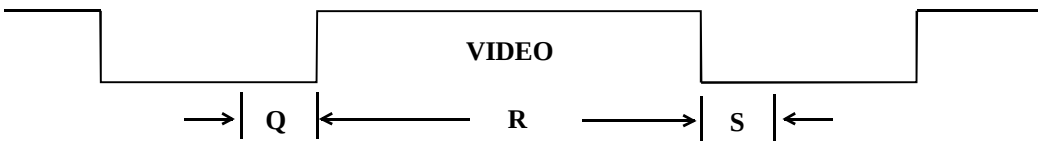
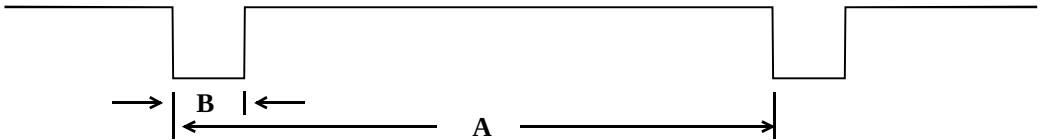
Gray level 46 (64 Gray level)

Fig 3: Cross-talk Pattern
Center at Gray level 0 (Black)

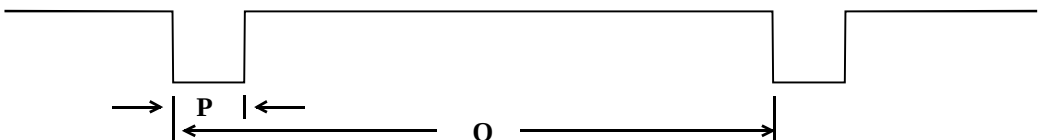
SEPARATE SYNC.



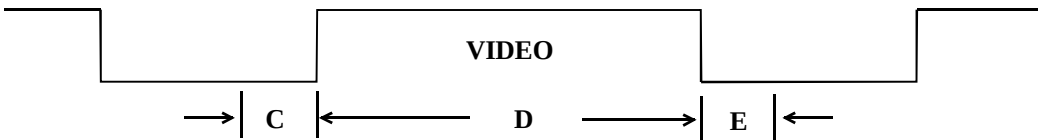
HORIZONTAL



VERTICAL



COMPOSITE SYNC.



HORIZONTAL

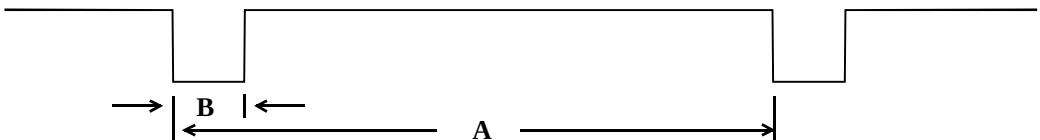


FIG-4 TIMING CHART -1