Service
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190S7FS/00

Service Manual

Horizontal Frequency
30- 83KHz

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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 TRANSFOMER FOR THIS UNIT WHEN SERVICING

Revision List

Version	Release Date	Revision History	TPV model
A00	Mar.20, 2006	Initial release	T980KGNDBPPHNP

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

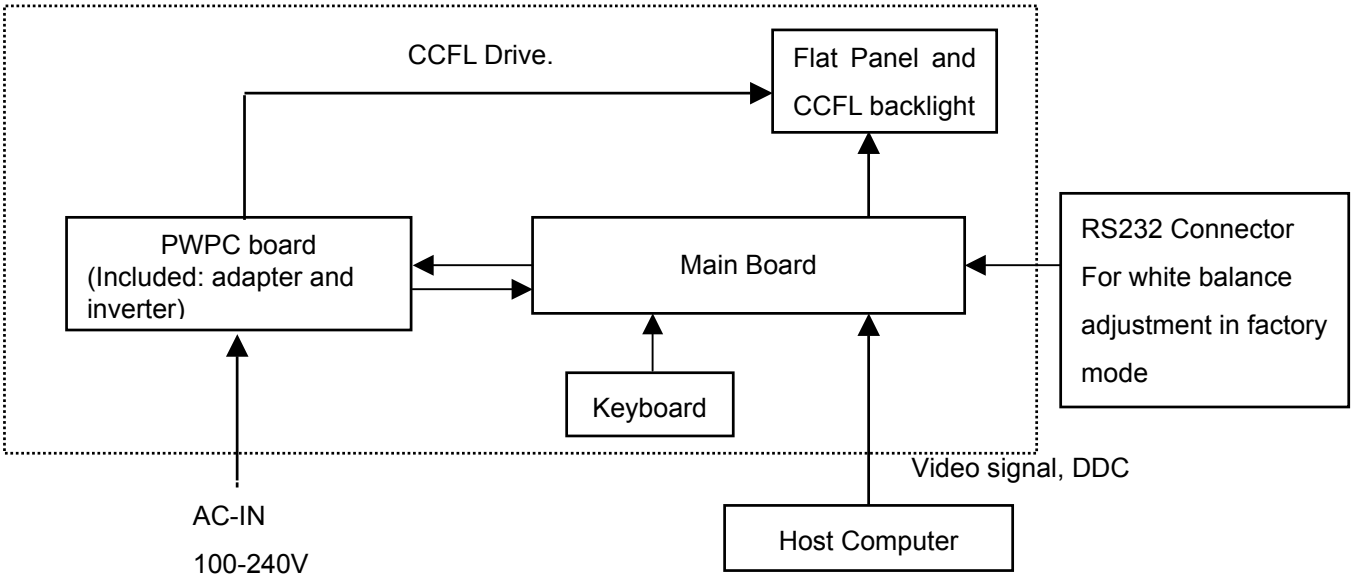
LCD Panel	Screen type	Active matrix - TFT LCD
	Panel Type	LM190E03 (LPL)
	Size	481mm (19.0")
	Pixel pitch	0.294mm(H) x 0.294mm(V)
	Viewable angle (CR>10)	Horizontal 140º, Vertical 130º (type)
	Response time	8ms (type)
Input	Video	0.7 Vp-p, input impedance, 75 ohm @DC
	Separate Sync	TTL level, input impedance 2.2k ohm terminate
	Horizontal Frequency	30kHz – 83kHz
	Vertical refresh rate	56 - 76Hz
Display Colors		16.2 M
Video dot rate		<140 MHz
Maximum Resolution		1280 x 1024 at 76Hz (analog input) 1280 x 1024 at 76Hz (digital input)
Plug & Play		VESA DDC2B
Power Consumption		Power on: < 34 W Power off: < 1 W
Input Connector		D-Sub 15pin D-DVI 24 pin
Input Video Signal		0.7 Vp-p, input impedance, 75 ohm @DC
Tilt		-5° ～ 25°
Maximum Screen Size		Horizontal: 376.32mm;Vertical: 301.056 mm
Power Source		100-240 VAC, 50/60 Hz
Environmental Considerations		Operating Temp: 5°C to 40°C Operating Humidity: 80%Max Storage Temp.: -20°C to 60°C Storage Humidity: 85%Max
Weight (Net)		5.7kg
Cabinet color		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.

Monitor Block Diagram



3. Operation instructions

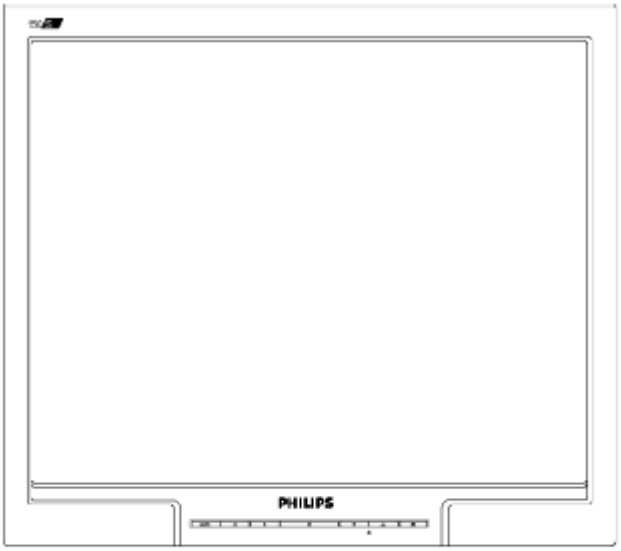
3.1 General Instructions

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.

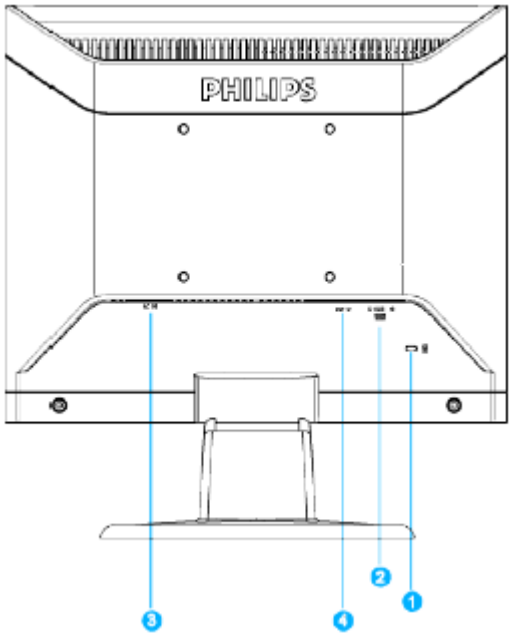
3.2 Control Buttons

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

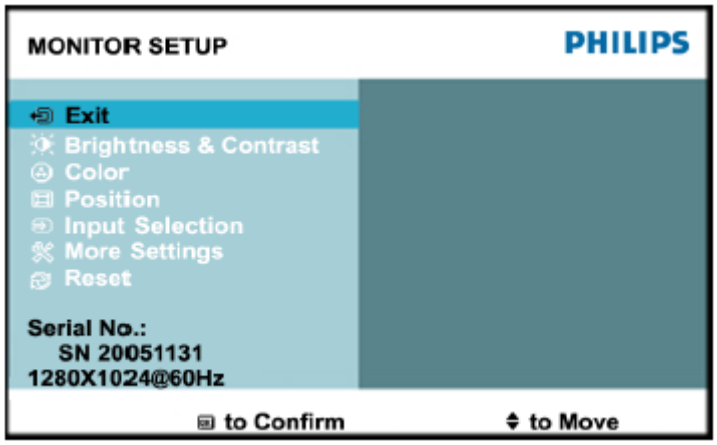


1	Kensington anti-thief lock
2	VGA input
3	AC power input
4	DVI-D input

3.3 Adjusting the Picture

This is a feather 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.

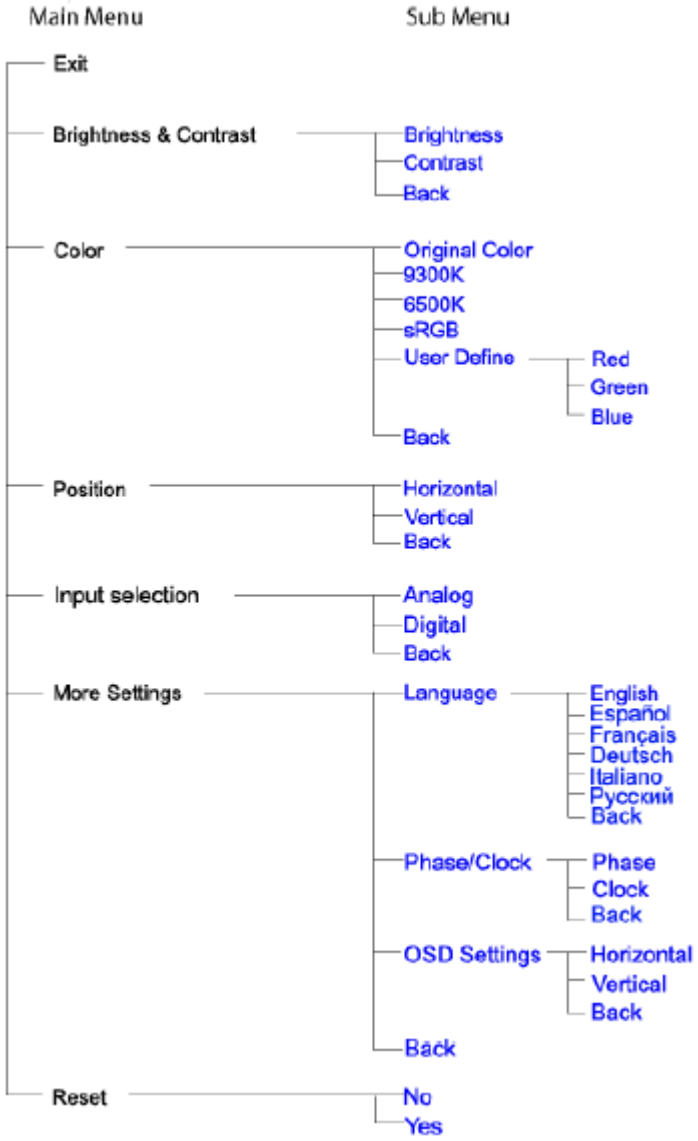
When you press the OK button on the front control of your monitor, the On-Screen Display (OSD) main controls window will pop up and you can then start making adjustments to your monitor’s various features. Use the ◀▶ or the ▲▼ keys to make your adjustments.



The OSD tree

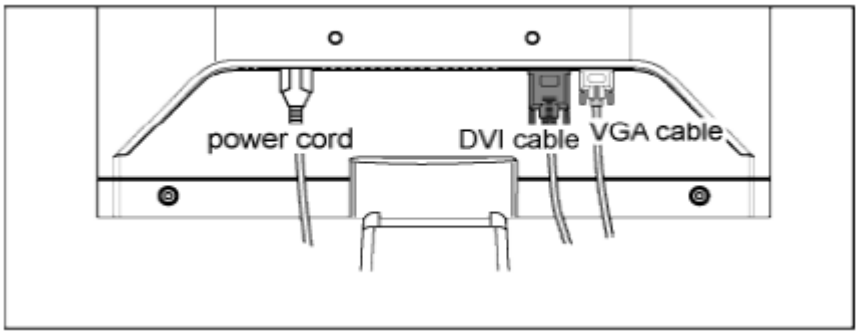
Below is an overall view of the structure of the On-Screen Display. You can use this as a reference when you want to work your way around the different adjustments later on.

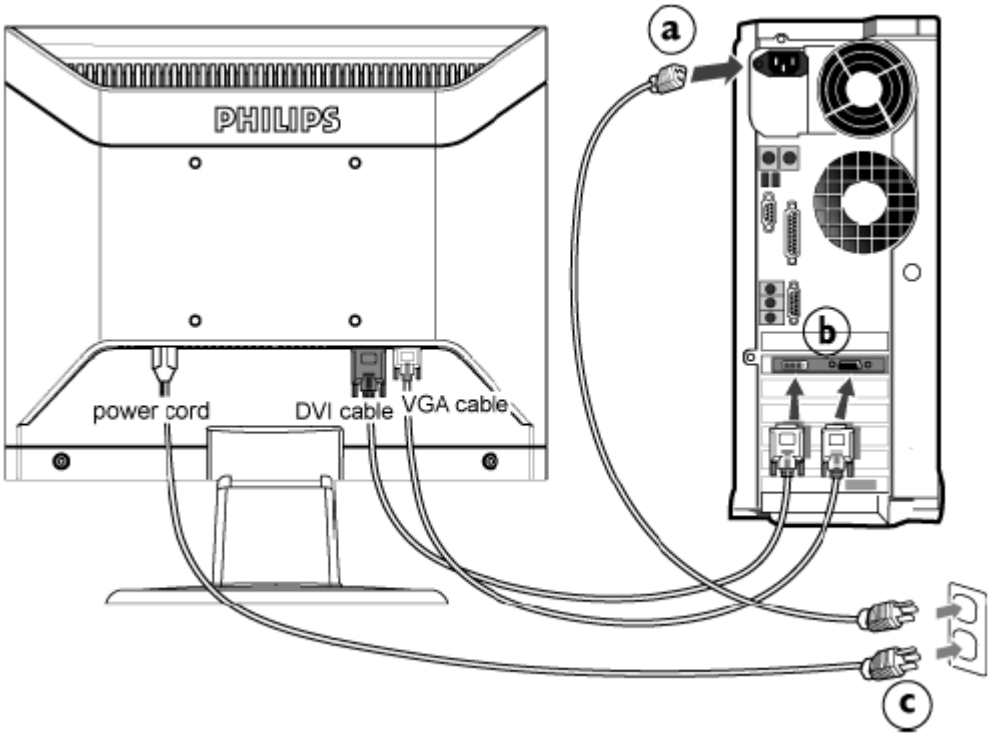
For Europe Model only:



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.

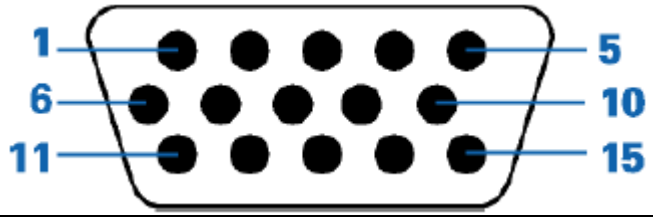
4. Input/Output Specification

4.1 Input Signal Connector

4.1.1 VGA Connector

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

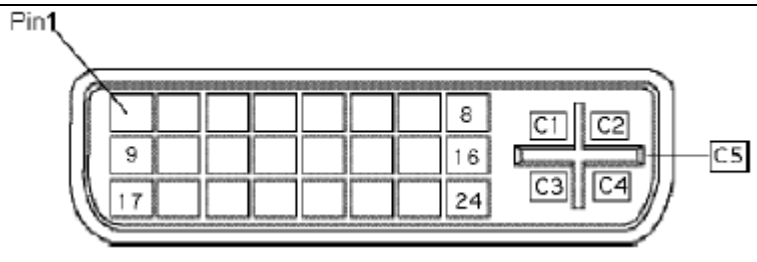
VGA Connector layout



4.1.2 DVI Connector

Pin NO.	Description	Pin NO.	Description
1.	T.M.D.S.Data2-	13.	No connect
2.	T.M.D.S.Data2+	14.	+ 5V Power
3.	T.M.D.S.Data2/4 Shield	15.	Ground (for +5V)
4.	No connect	16.	Hot Plug Detect
5.	No connect	17.	T.M.D.S.Data0-
6.	DDC Clock	18.	T.M.D.S.Data0+
7.	DDC Data	19.	T.M.D.S.Data0/5 Shield
8.	No connect	20.	No connect
9.	T.M.D.S.Data1-	21.	No connect
10.	T.M.D.S.Data1+	22.	T.M.D.S. Clock Shield
11.	T.M.D.S.Data1/3 Shield	23.	T.M.D.S. Clock +
12.	No connect	24.	T.M.D.S. Clock -

DVI 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
67.500	1152*870	75.000
60.000	1280*960	60.000
63.981	1280*1024	60.020
79.976	1280*1024	75.025
35.000	640*480	67.000
49.700	832*624	75.000

4.3 Panel Specification

4.3.1 Display Characteristics

LM190E03 Panel

Active screen size	19.0 inches (481.9mm) diagonal
Outline Dimension	396.0(H) x 324.0(V) x 16.5(D) mm(Typ.)
Pixel Pitch	0.098*RGB(H)mm x 0.294(V)mm
Pixel Format	1280 horizontal By 1024 vertical Pixels. RGB stripe arrangement
Interface	LVDS 2Port
Color depth	16.2M colors
Luminance, white	300 cd/m^2 (Center 1Point, typ)
Viewing Angle (CR>10)	Viewing Angle Free [R/L 160(Typ.), U/D 160(Typ.)]
Power Consumption	Total 22.67 Watt(Typ.), (3.03 W@V_{LCD} , 19.64 W@[Lamp=7.5mA])
Weight	2700g (Typ.)
Display operating mode	Transmissive mode, normally White
Surface treatments	Hard coating (3H), Anti-glare treatment of the front polarizer

4.3.2 Optical Characteristics

Parameter0		Symbol	Values			Units
			Min	Typ	Max	
Contrast Ratio		CR	450	700	-	
Surface Luminance, white		L_{WH}	250	300	-	cd/m^2
Luminance Variation		δ_{WHITE} 9P	75			%
Response Time	Rise Time	Tr_R	-	2	4	ms
	Decay Time	Tr_D	-	6	12	ms
Color Coordinates [CIE1931]	RED	Rx	Typ -0.03	0.639	Typ +0.03	
		Ry		0.342		
	GREEN	Gx		0.297		
		Gy		0.615		
	BLUE	Bx		0.146		
		By		0.068		
	WHITE	Wx		0.313		
		Wy		0.329		
Viewing Angle (CR>5)						
	x axis, right(ϕ=0°)	θr	75	88		Degree
	x axis, left (ϕ=180°)	θl	75	88		
	y axis, up (ϕ=90°)	θu	70	85		
	y axis, down (ϕ=270°)	θd	70	85		
Viewing Angle (CR>10)						
	x axis, right(ϕ=0°)	θr	70	80		Degree
	x axis, left (ϕ=180°)	θl	70	80		
	y axis, up (ϕ=90°)	θu	60	75		
	y axis, down (ϕ=270°)	θd	70	85		
Gray Scale				-		

4.3.3 Electrical Characteristics

It requires two power inputs. One is employed to power the LCD electronics and to drive the TFT array and liquid crystal. The second input power for the CCFL/Backlight is typically generated by an inverter. The inverter is an external unit to the LCDs.

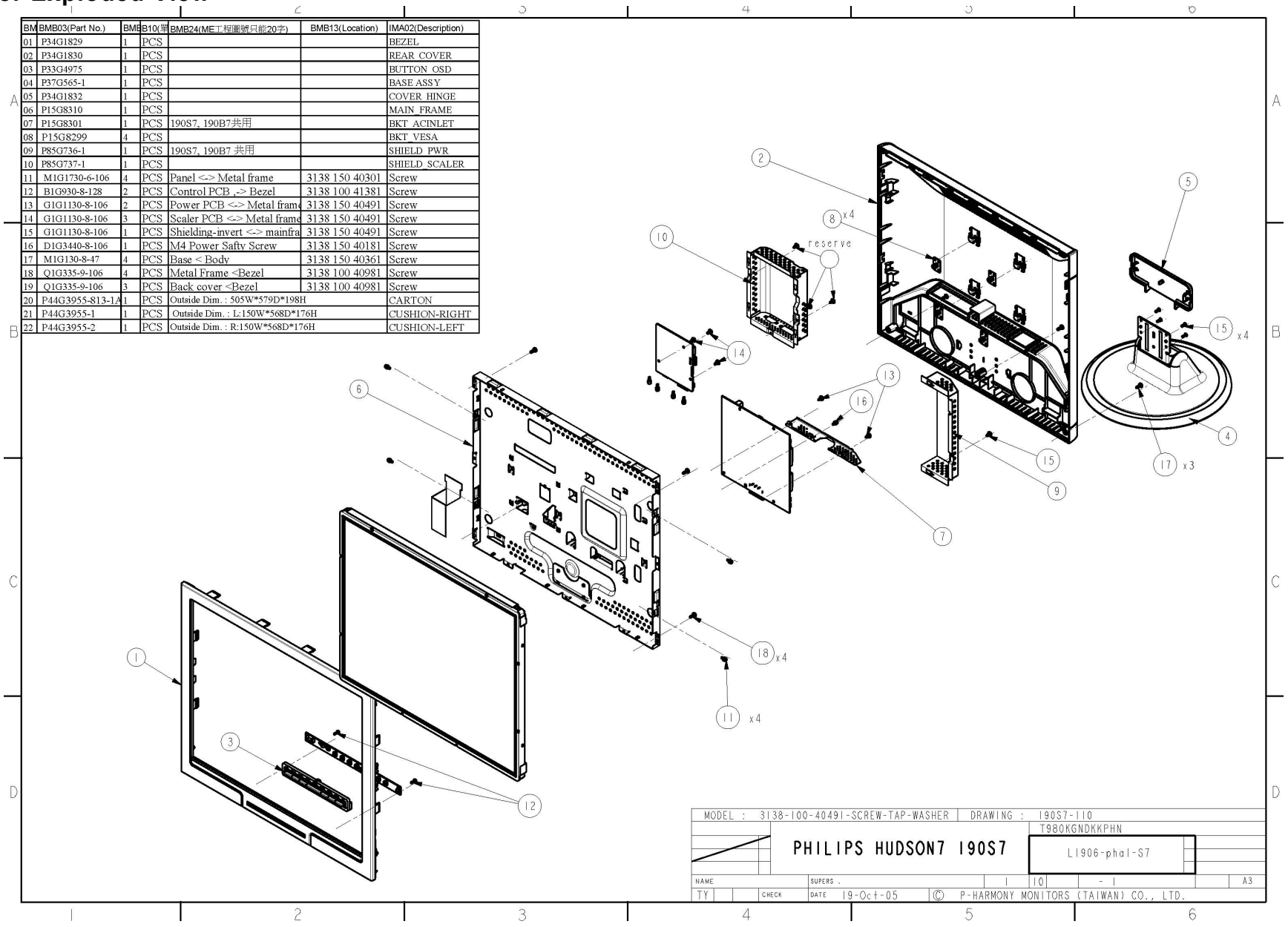
Parameter	Symbol	Values			Unit
		Min	Typ	Max	
MODULE :					
Power Supply Input Voltage	V_{LCD}	4.5	5.0	5.5	Vdc
Power Supply Input Current	I_{LCD}	-	605	696	mA
		-	700	805	mA
Power Consumption	P_{LCD}	-	3.03	3.48	Watt
Inrush current	I_{RUSH}	-	-	3	A

Parameter		Symbol	Values			Unit
			Min	Typ	Max	
LAMP :						
Operating Voltage		V_{BL}	640(8.0mA)	655(7.5mA)	790(3.0mA)	V_{RMS}
Operating Current		I_{BL}	3.0	7.5	8.0	mA_{RMS}
Established Starting Voltage		Vs				
	at 25 °C				1100	V_{RMS}
	at 0 °C				1400	V_{RMS}
Operating Frequency		f_{BL}	40	-	70	kHz
Discharge Stabilization Time		T_S	-	-	3	Min
Power Consumption		P_{BL}		19.64	21.60	Watt
Life Time			50,000	-		Hrs

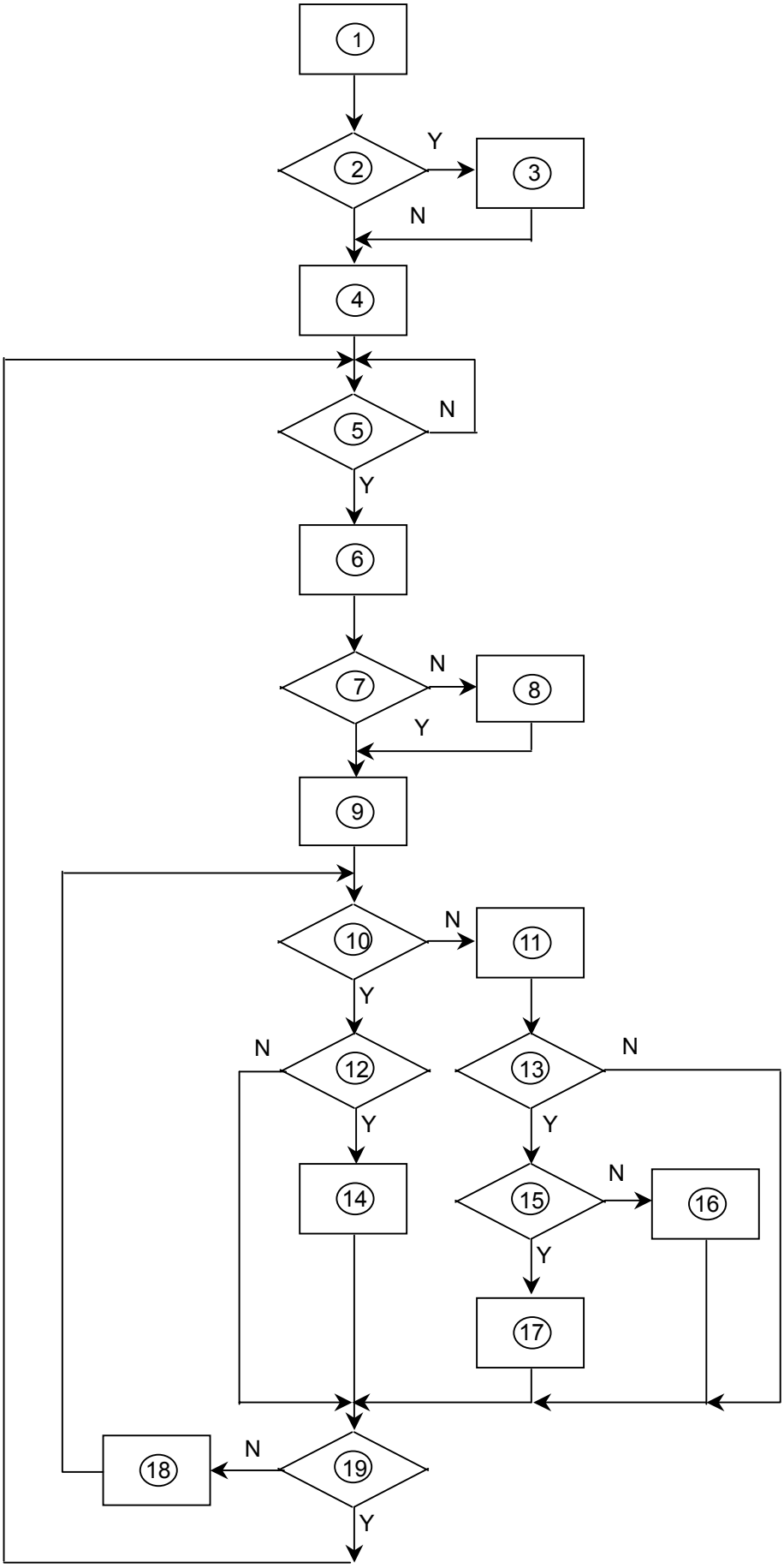
5. Block Diagram

5.1 Monitor Exploded View

BM	BMB03(Part No.)	BMB	B10(單	BMB24(ME工程圖號只能20字)	BMB13(Location)	IMA02(Description)
01	P34G1829	1	PCS			BEZEL
02	P34G1830	1	PCS			REAR_COVER
03	P33G4975	1	PCS			BUTTON_OSD
04	P37G565-1	1	PCS			BASE ASSY
05	P34G1832	1	PCS			COVER_HINGE
06	P15G8310	1	PCS			MAIN_FRAME
07	P15G8301	1	PCS	190S7, 190B7共用		BKT_ACINLET
08	P15G8299	4	PCS			BKT_VESA
09	P85G736-1	1	PCS	190S7, 190B7 共用		SHIELD_PWR
10	P85G737-1	1	PCS			SHIELD_SCALER
11	M1G1730-6-106	4	PCS	Panel <-> Metal frame	3138 150 40301	Screw
12	B1G930-8-128	2	PCS	Control PCB ,-> Bezel	3138 100 41381	Screw
13	G1G1130-8-106	2	PCS	Power PCB <-> Metal fram	3138 150 40491	Screw
14	G1G1130-8-106	3	PCS	Scaler PCB <-> Metal frame	3138 150 40491	Screw
15	G1G1130-8-106	1	PCS	Shielding-invert <-> mainfra	3138 150 40491	Screw
16	D1G3440-8-106	1	PCS	M4 Power Safty Screw	3138 150 40181	Screw
17	M1G130-8-47	4	PCS	Base < Body	3138 150 40361	Screw
18	Q1G335-9-106	4	PCS	Metal Frame <Bezel	3138 100 40981	Screw
19	Q1G335-9-106	3	PCS	Back cover <Bezel	3138 100 40981	Screw
20	P44G3955-813-1A	1	PCS	Outside Dim. : 505W*579D*198H		CARTON
21	P44G3955-1	1	PCS	Outside Dim. : L:150W*568D*176H		CUSHION-RIGHT
22	P44G3955-2	1	PCS	Outside Dim. : R:150W*568D*176H		CUSHION-LEFT



5.2 Software Flow Chart



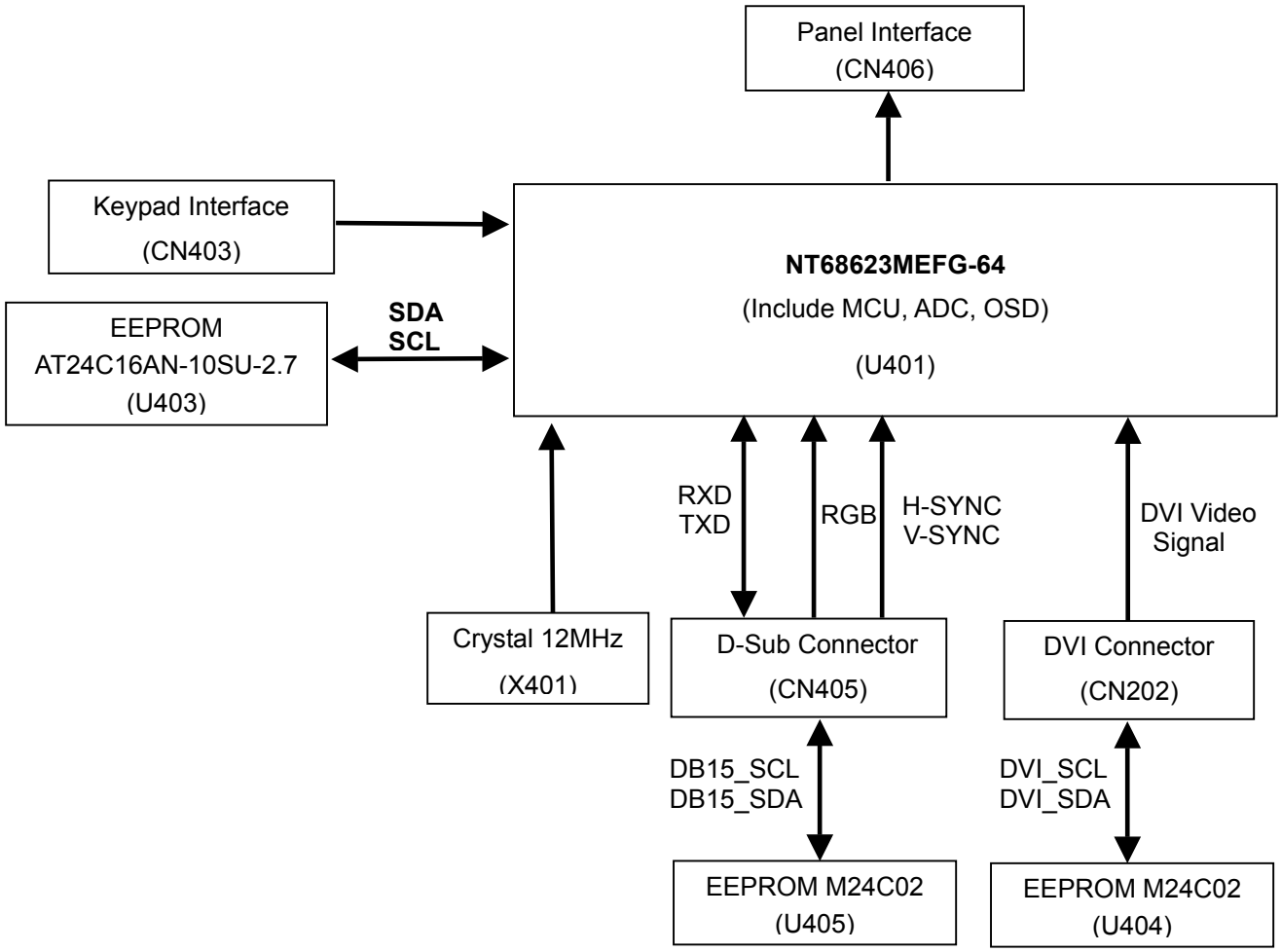
1) MCU Initializes.
2) Is the EEprom blank?
3) Program the EEprom by default values.
4) Get the PWM value of brightness from EEprom.
5) Is the power key pressed?
6) Clear all global flags.
7) Are the AUTO and SELECT keys pressed?
8) Enter factory mode.
9) Save the power key status into EEprom.

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

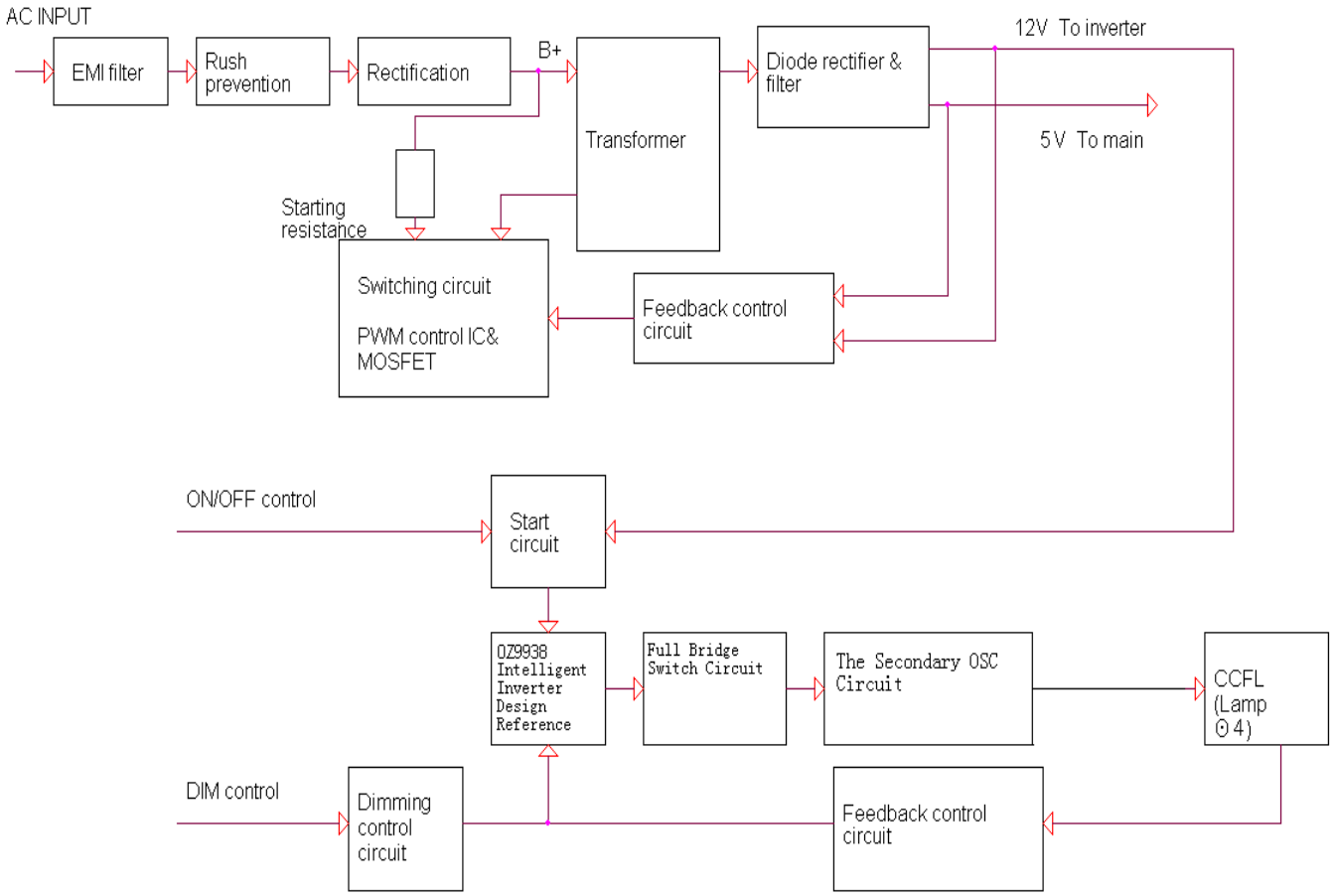
10) In standby mode?
11) Update the lifetime of back light.
12) Check the analog port, are there any signals coming?
13) Does the scalar send out an interrupt request?
14) Wake up the scalar.
15) Are there any signals coming from analog port?
16) Display "No connection Check Signal Cable" message. And 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

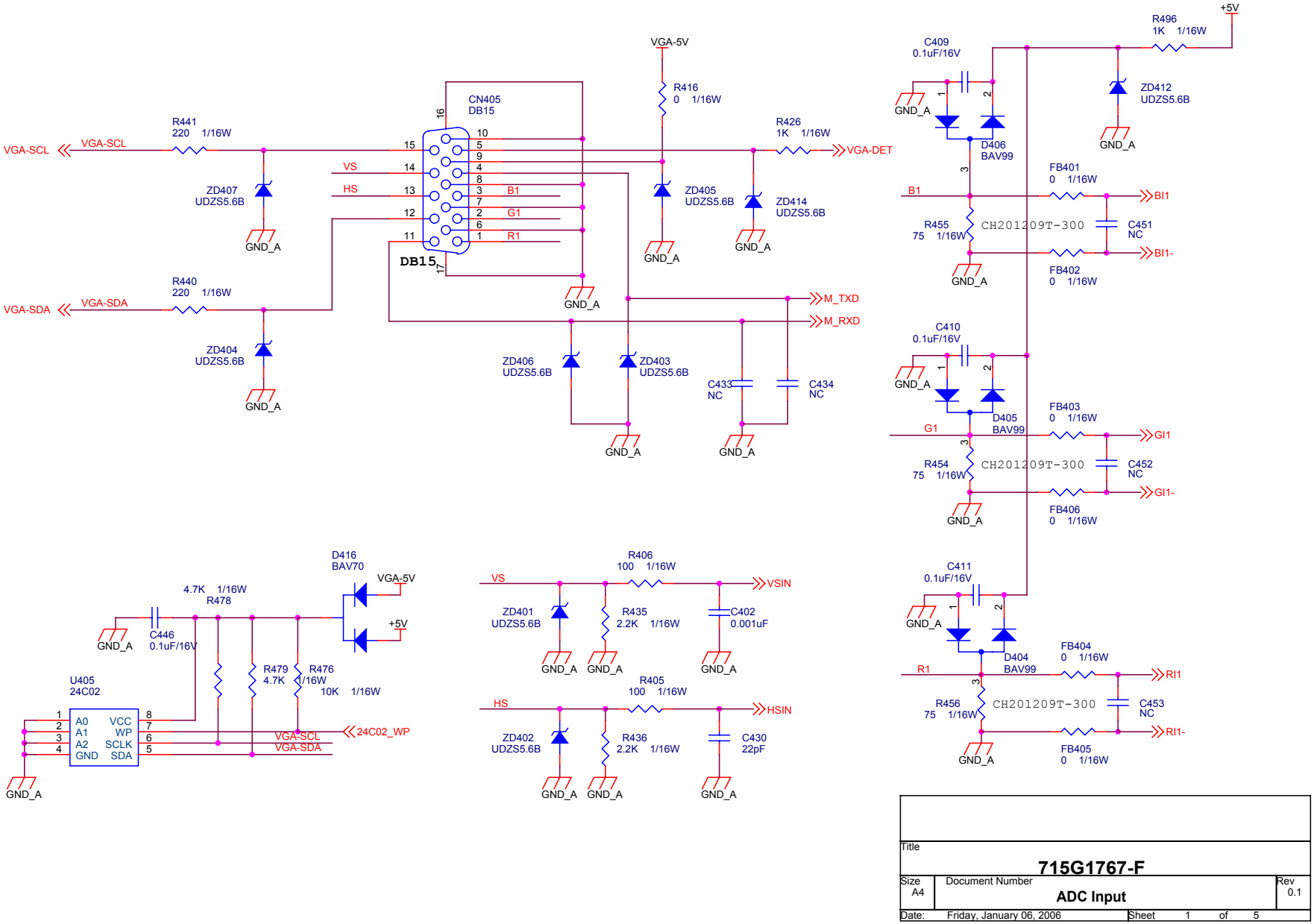
5.3.1 Main Board



5.3.2 Inverter/Power Board



6. Schematic Diagram
6.1 Main Board



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Size A4	Document Number ADC Input	Rev 0.1
Date: Friday, January 06, 2006	Sheet 1 of 5	

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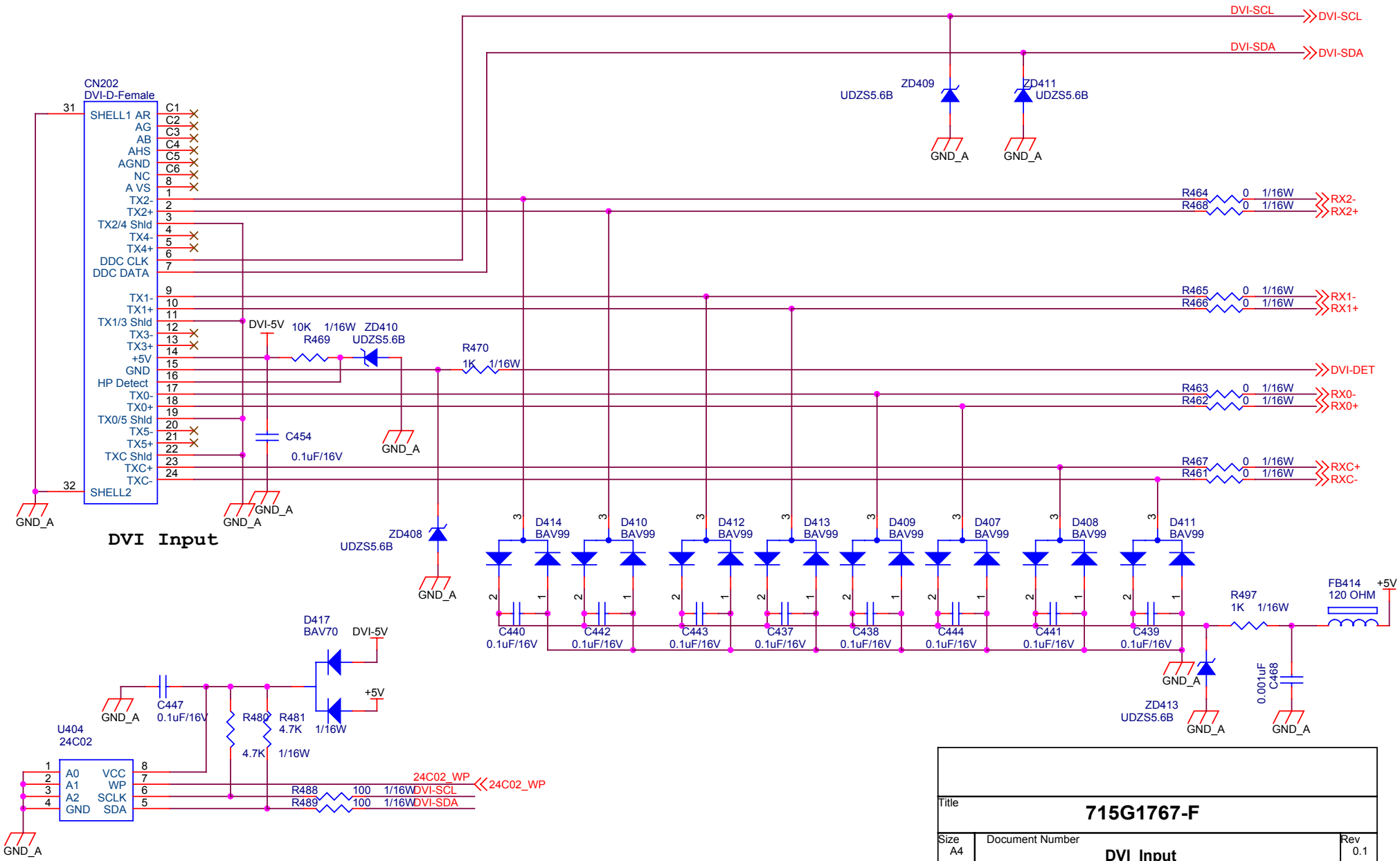

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Size A4	Document Number DVI Input		Rev 0.1
Date: Friday, January 06, 2006	Sheet 5	of 5	

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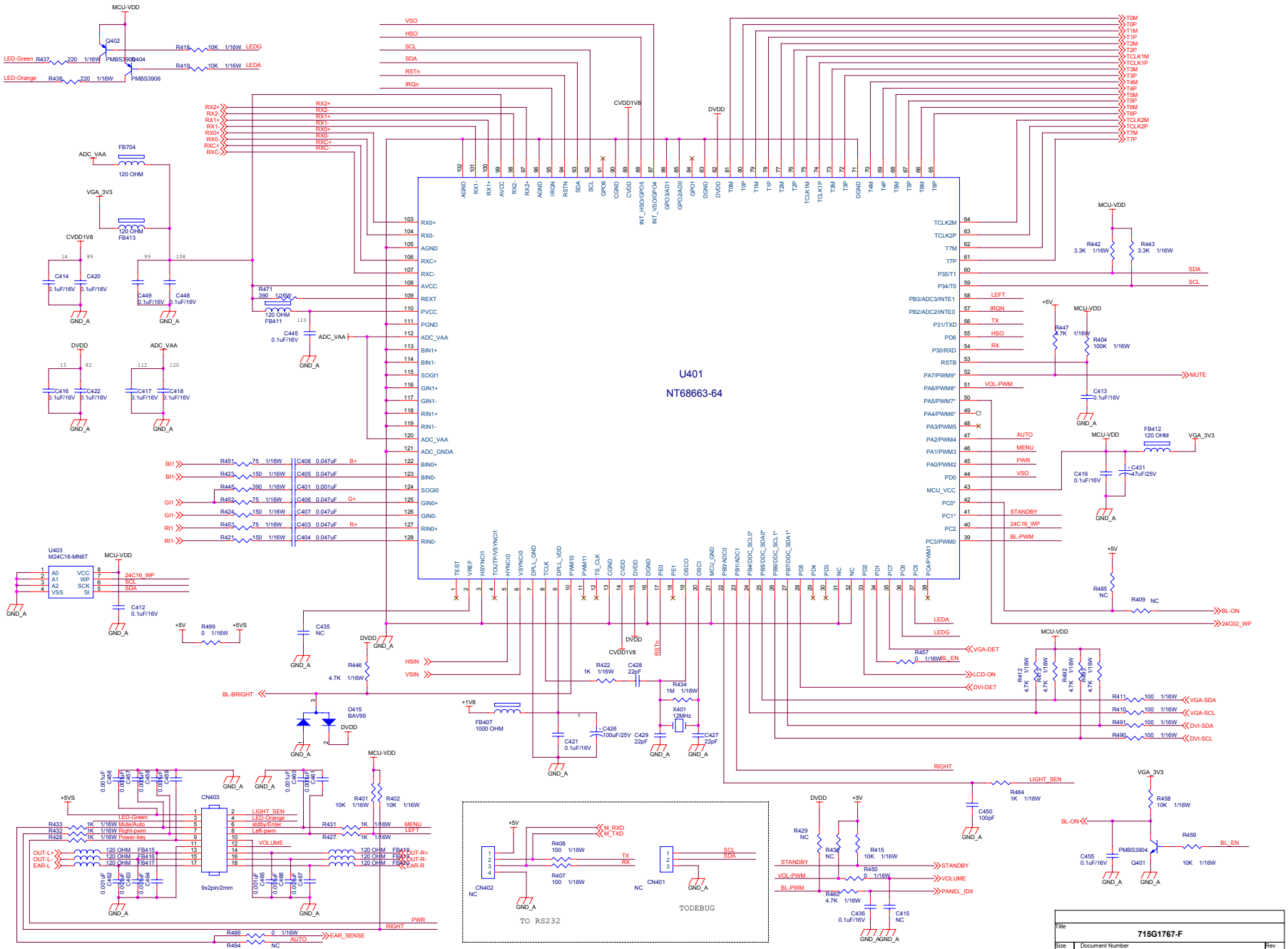

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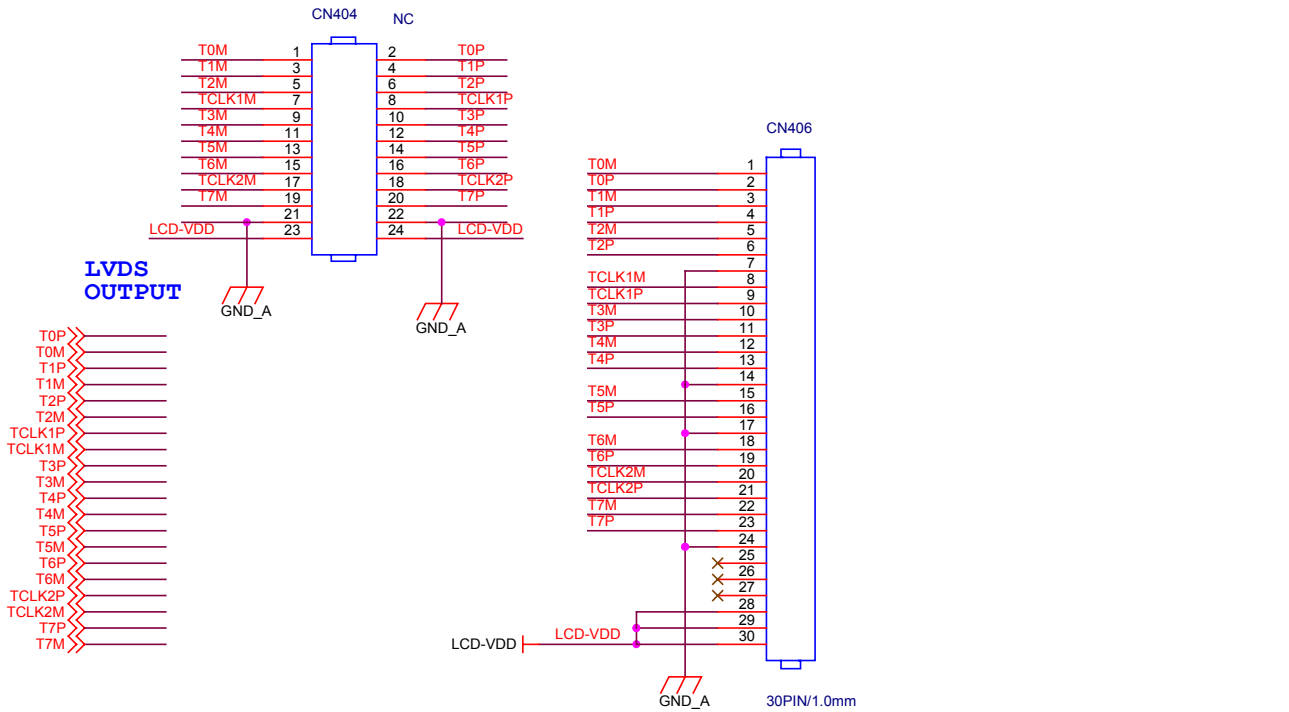

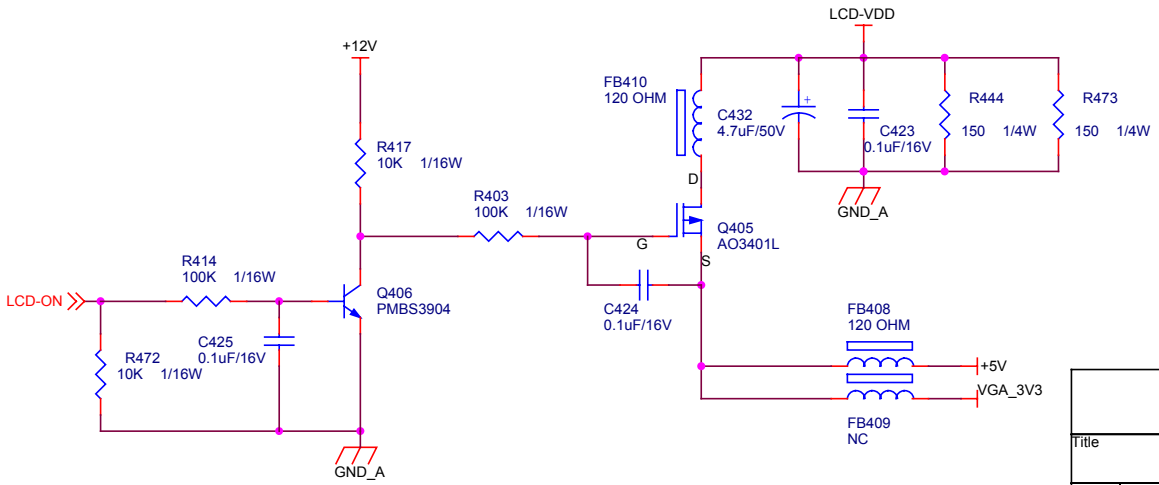

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Date: Friday, January 06, 2006	Sheet 3 of 5	

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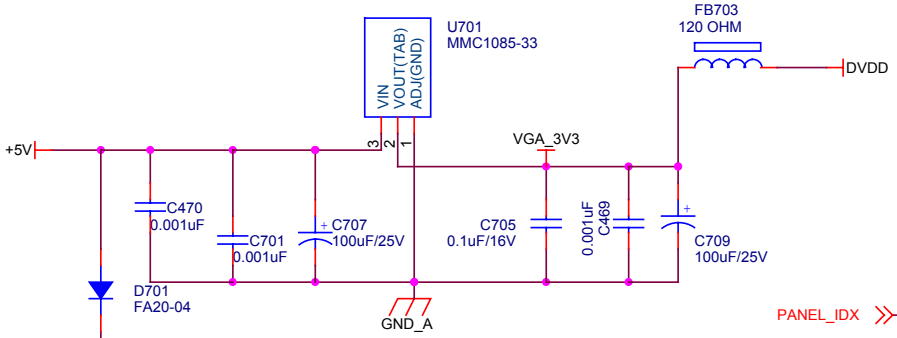
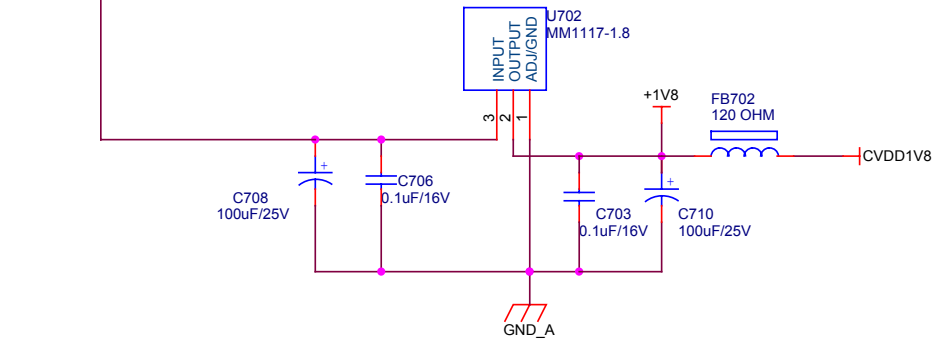
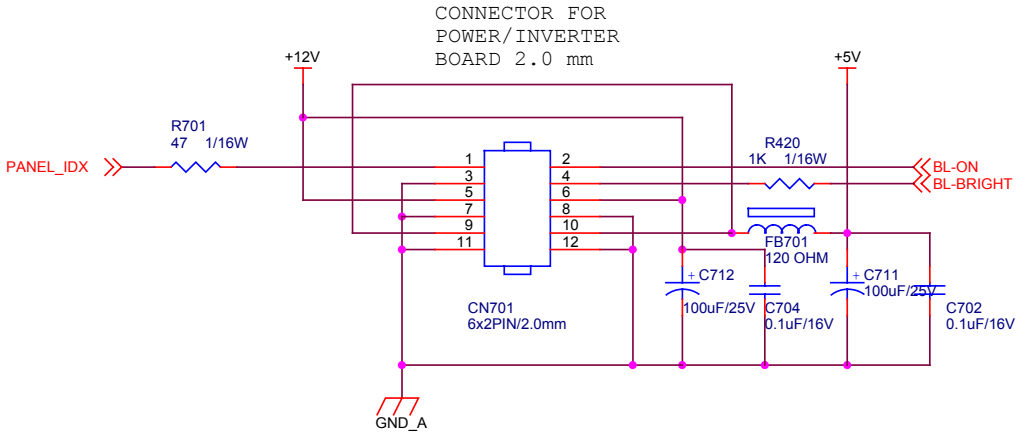
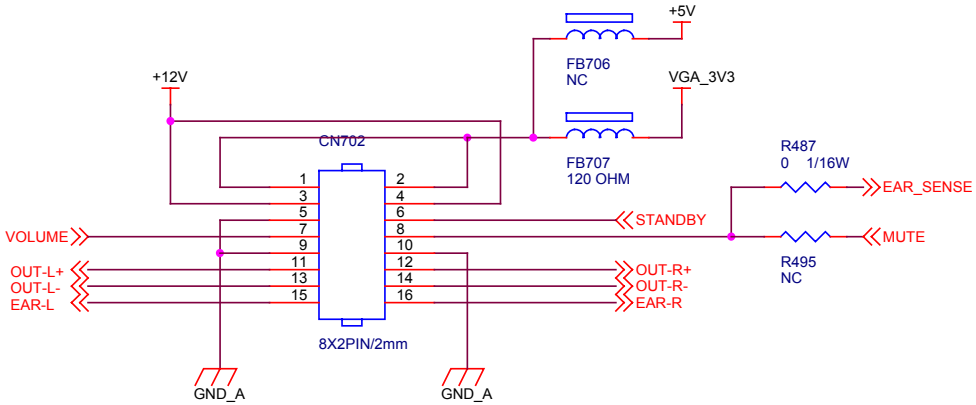


FOR 3.3V POWER USE



FOR 1.8V POWER USE





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Date: Friday, January 06, 2006	Sheet 4 of 5	

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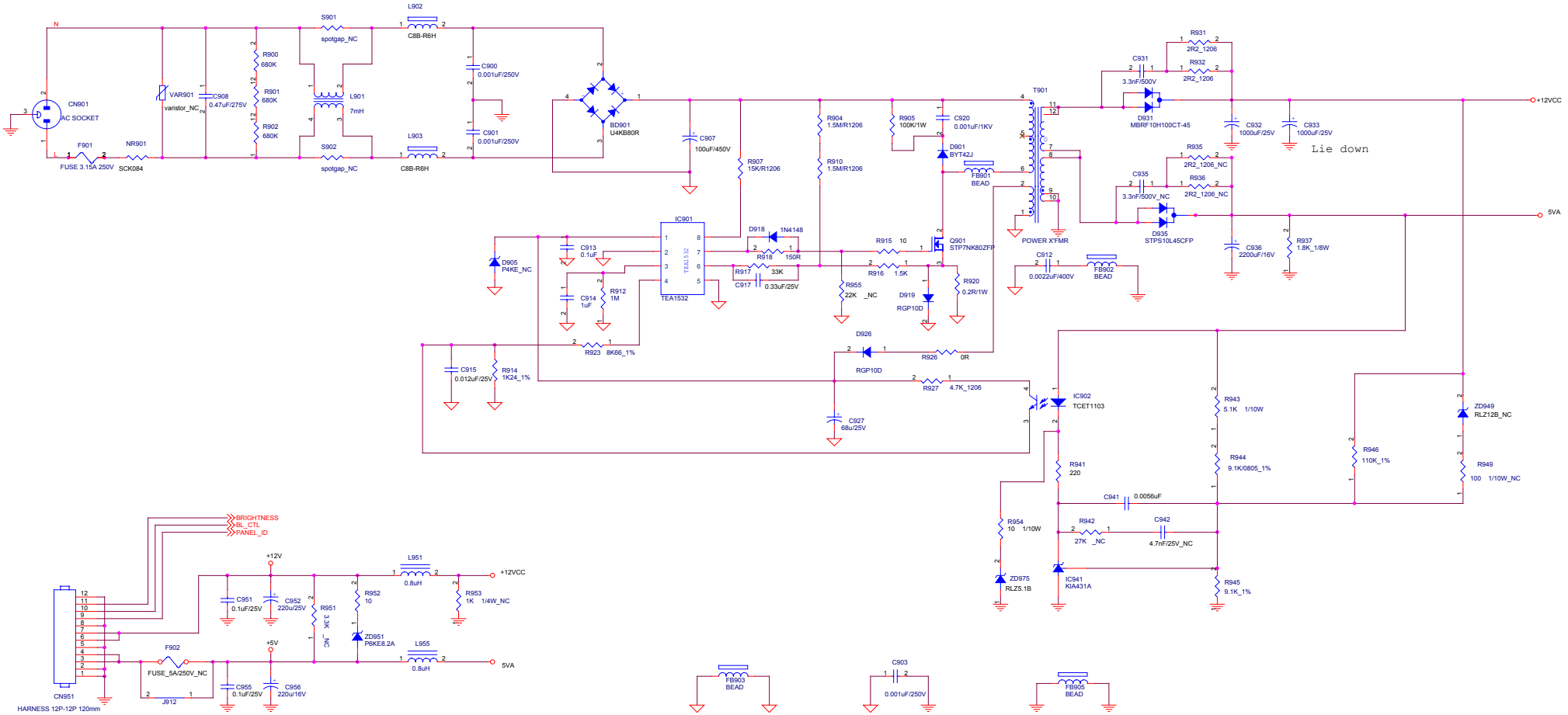
6.2 Pwpc Board



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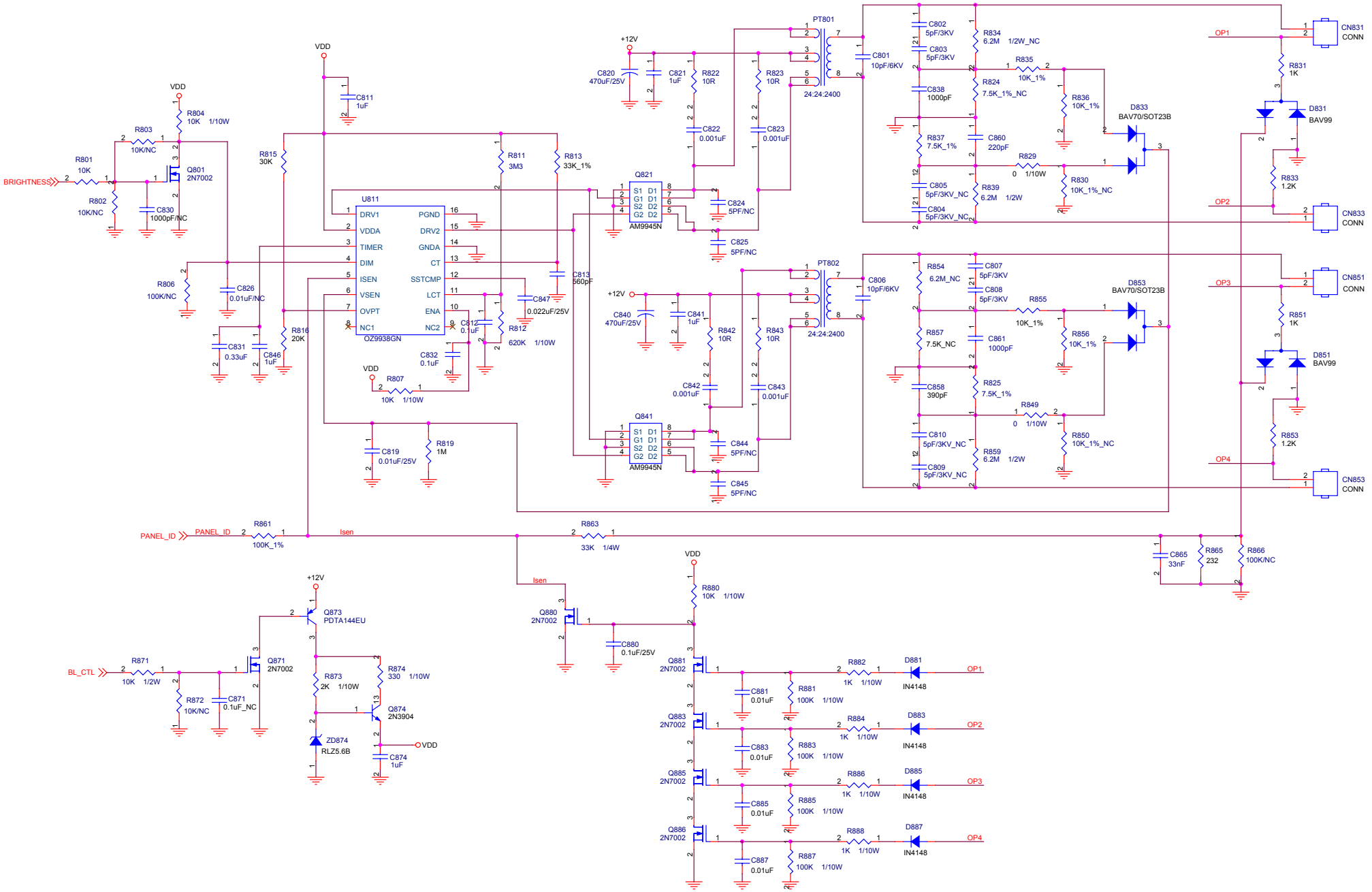
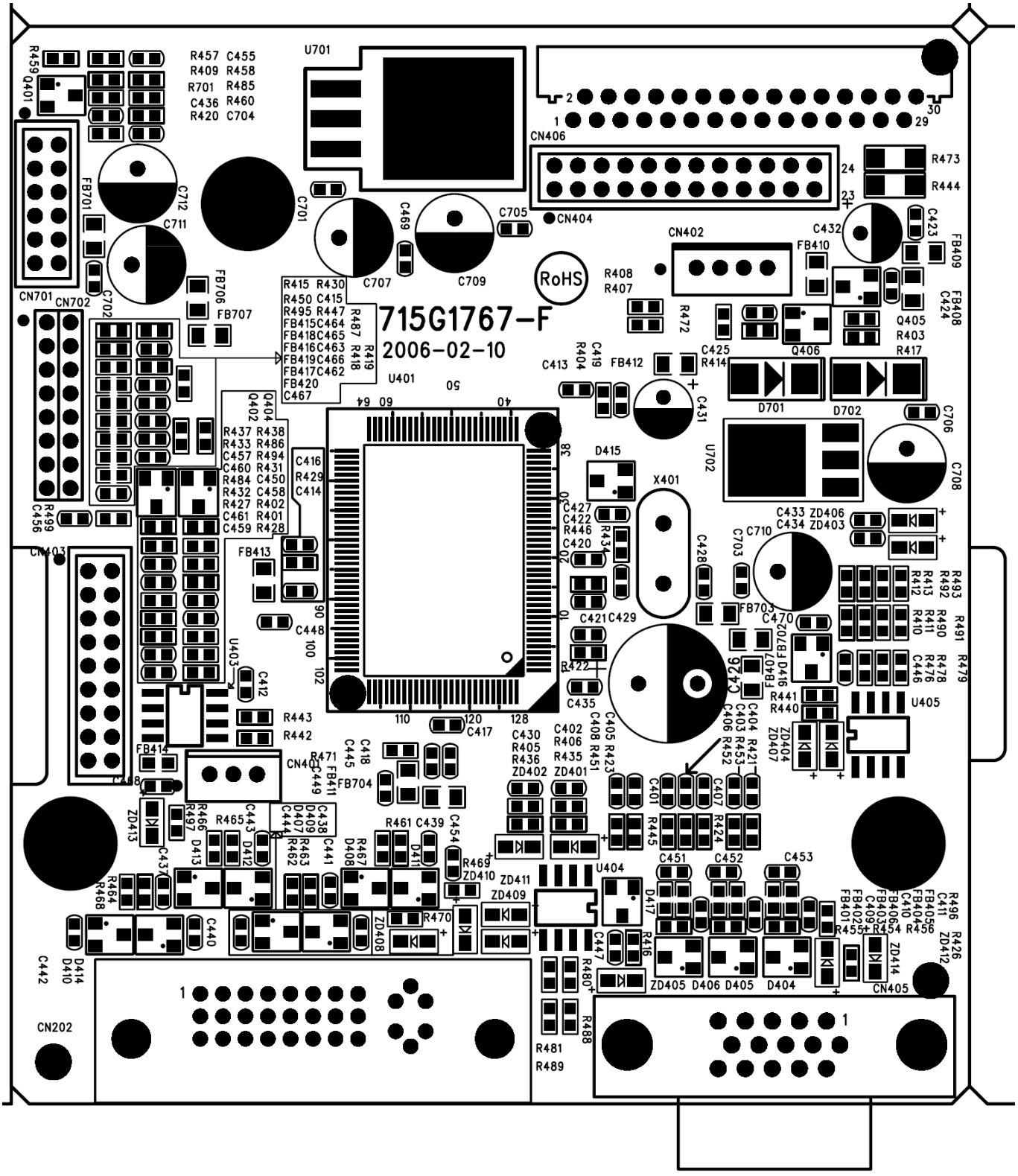


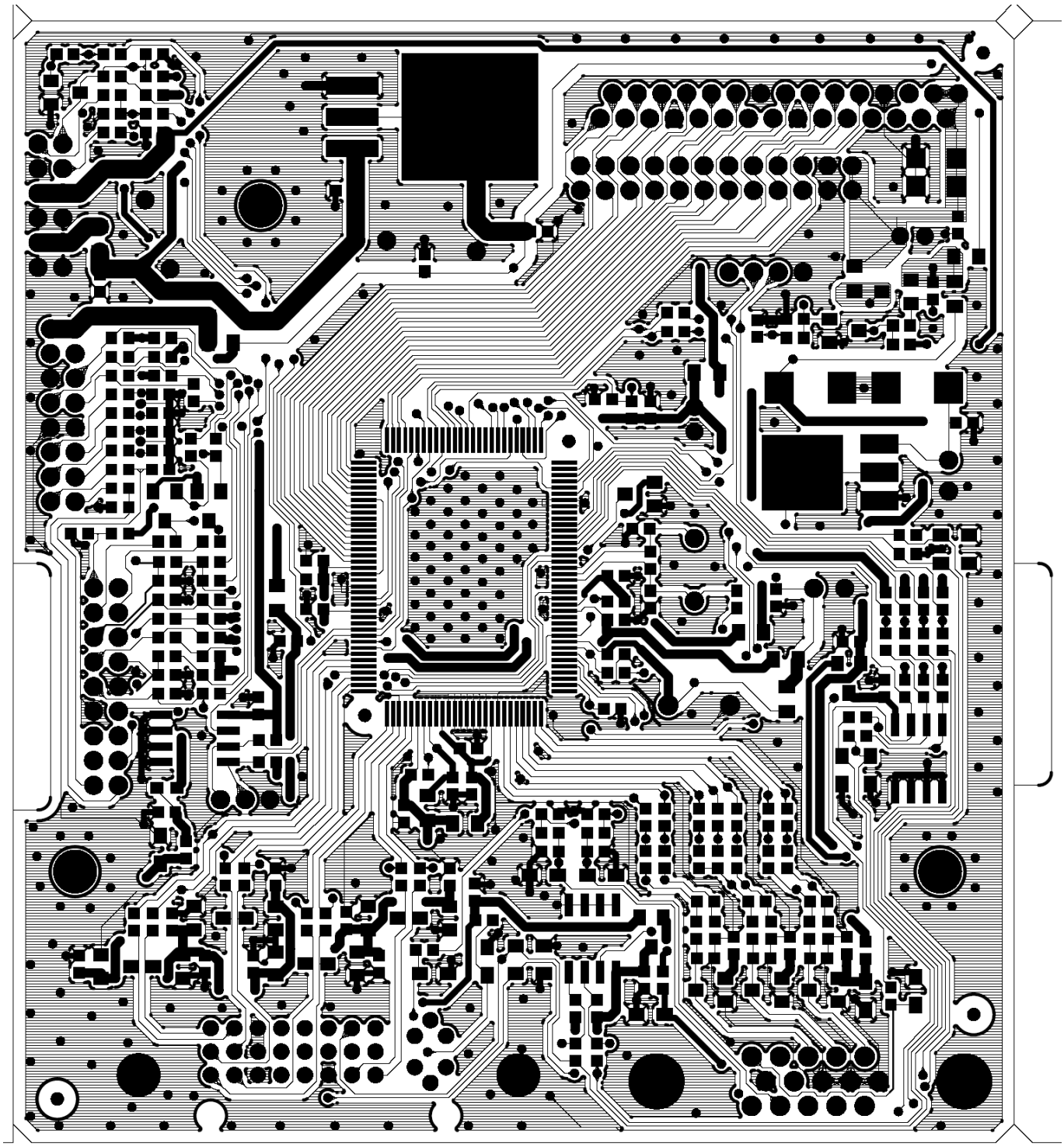
飛利浦 PHILIPS PHILIPS

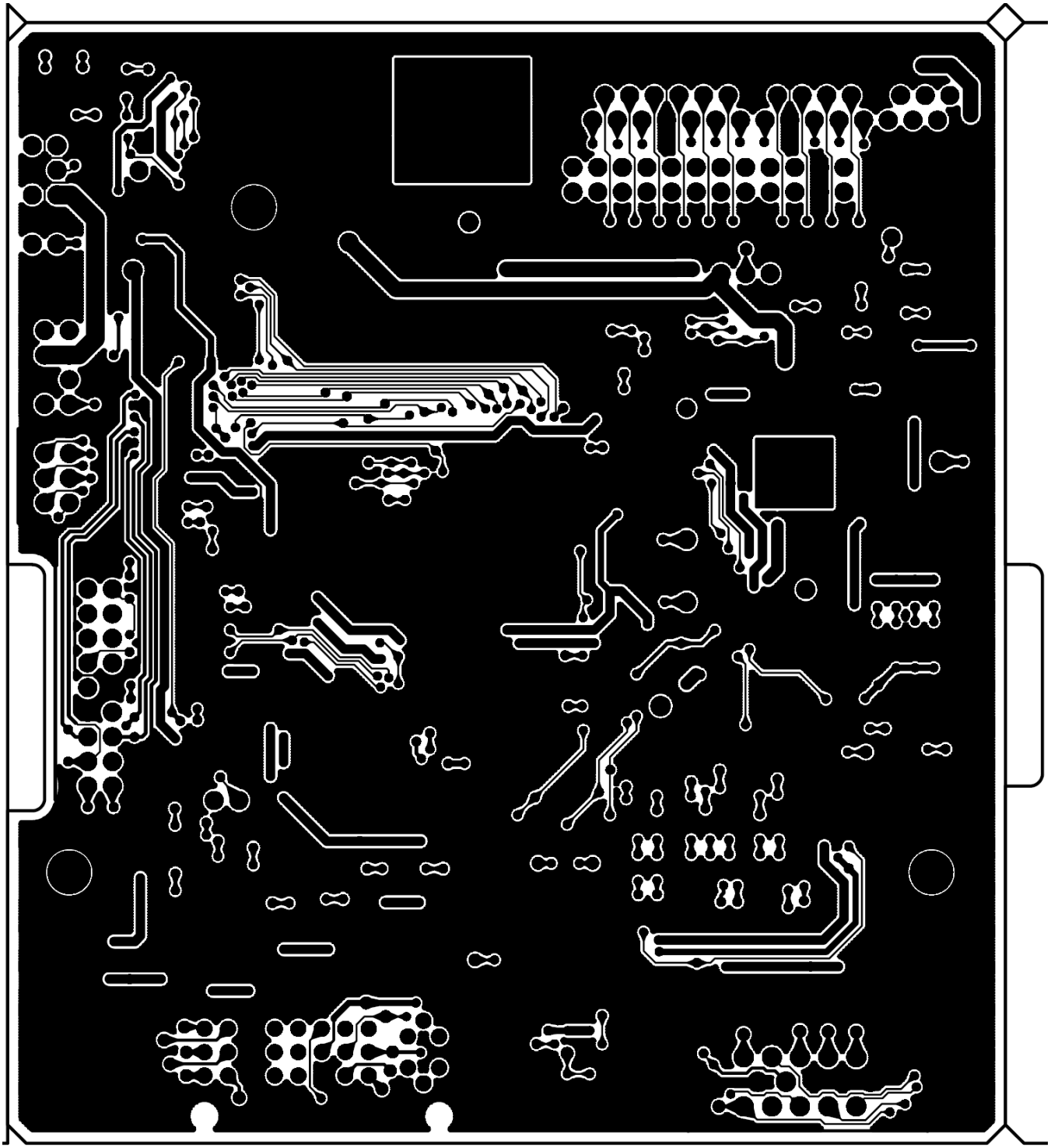
7. PCB Layout

7.1 Main Board

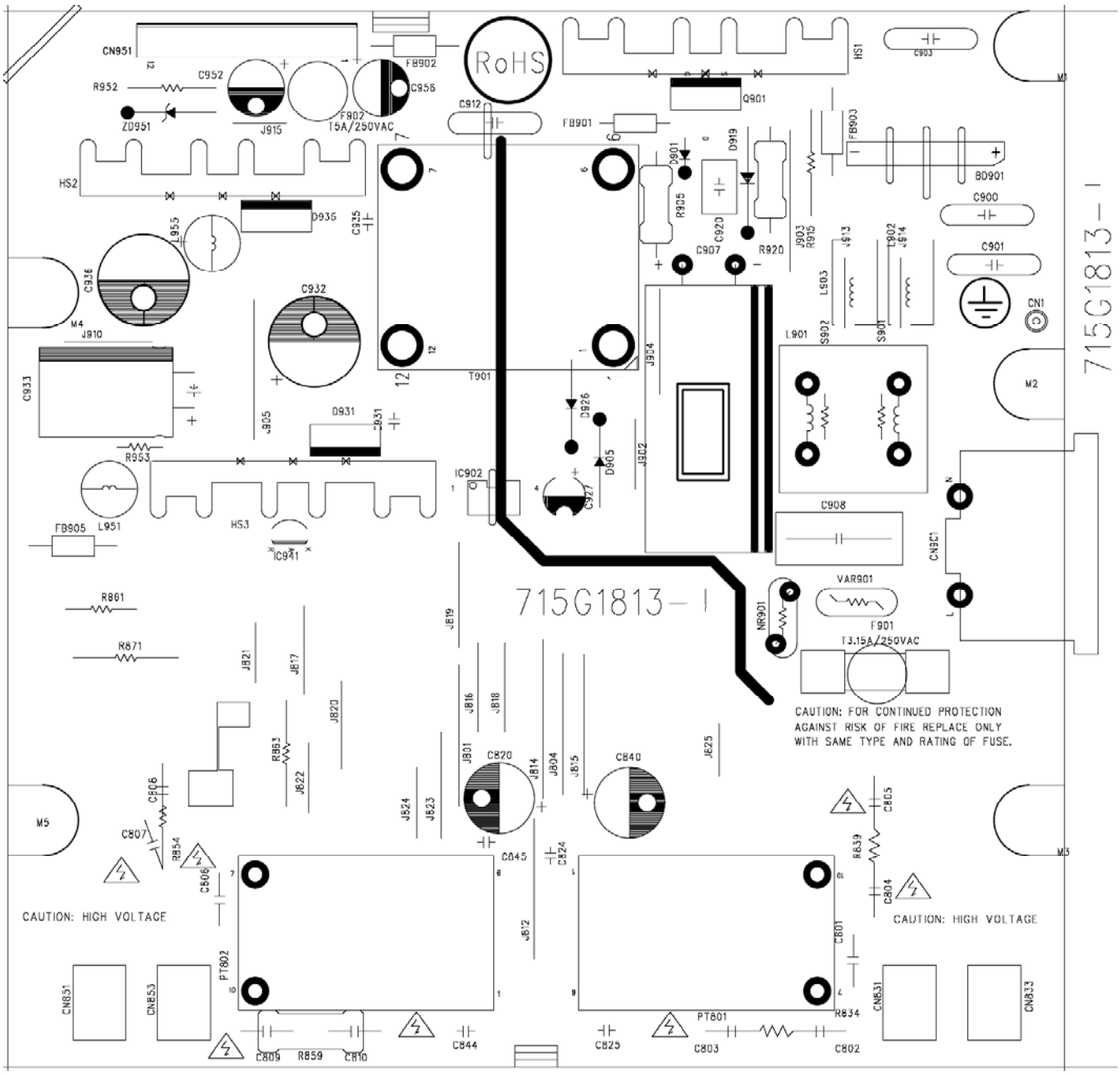
715G1767- F

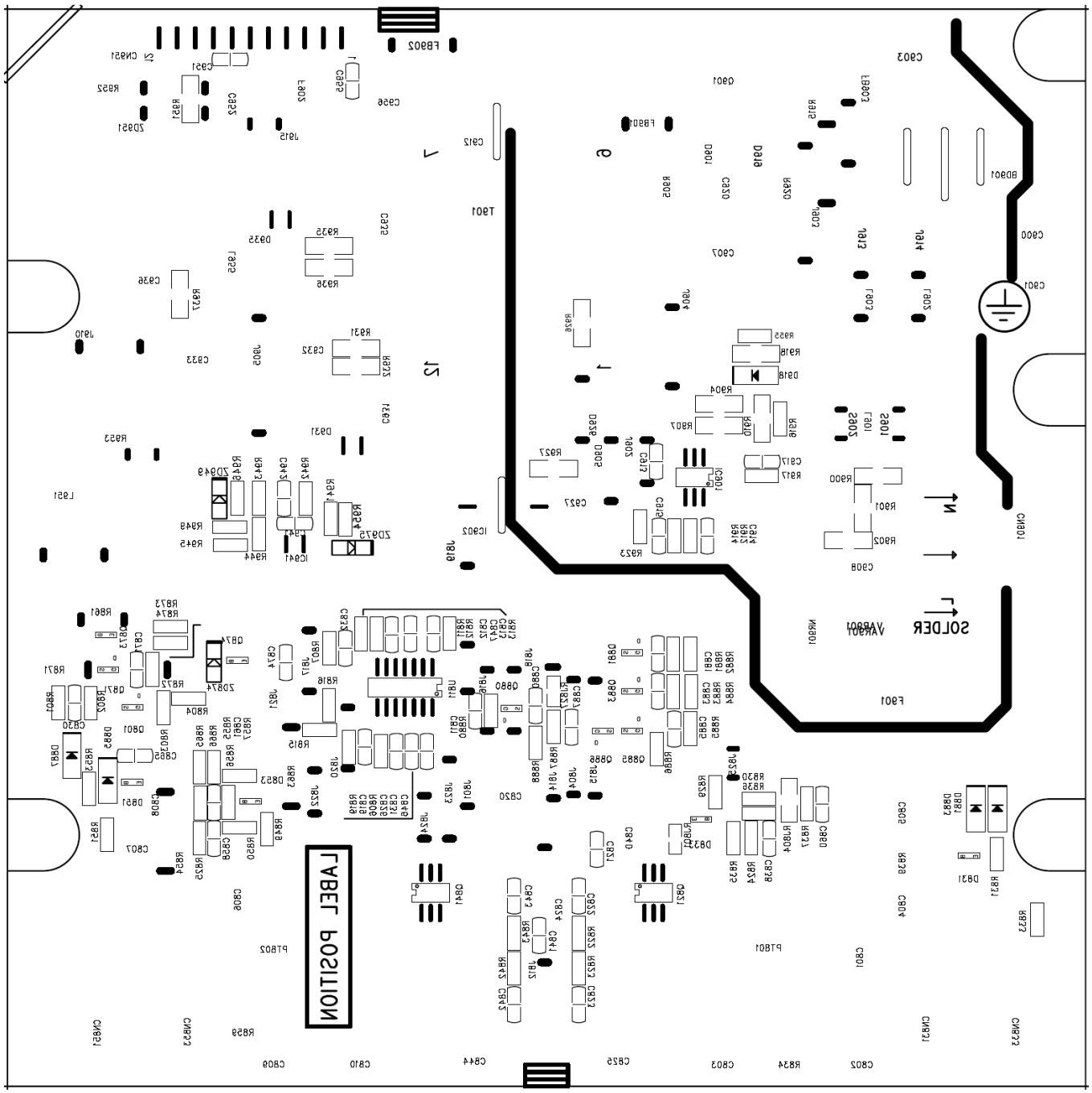


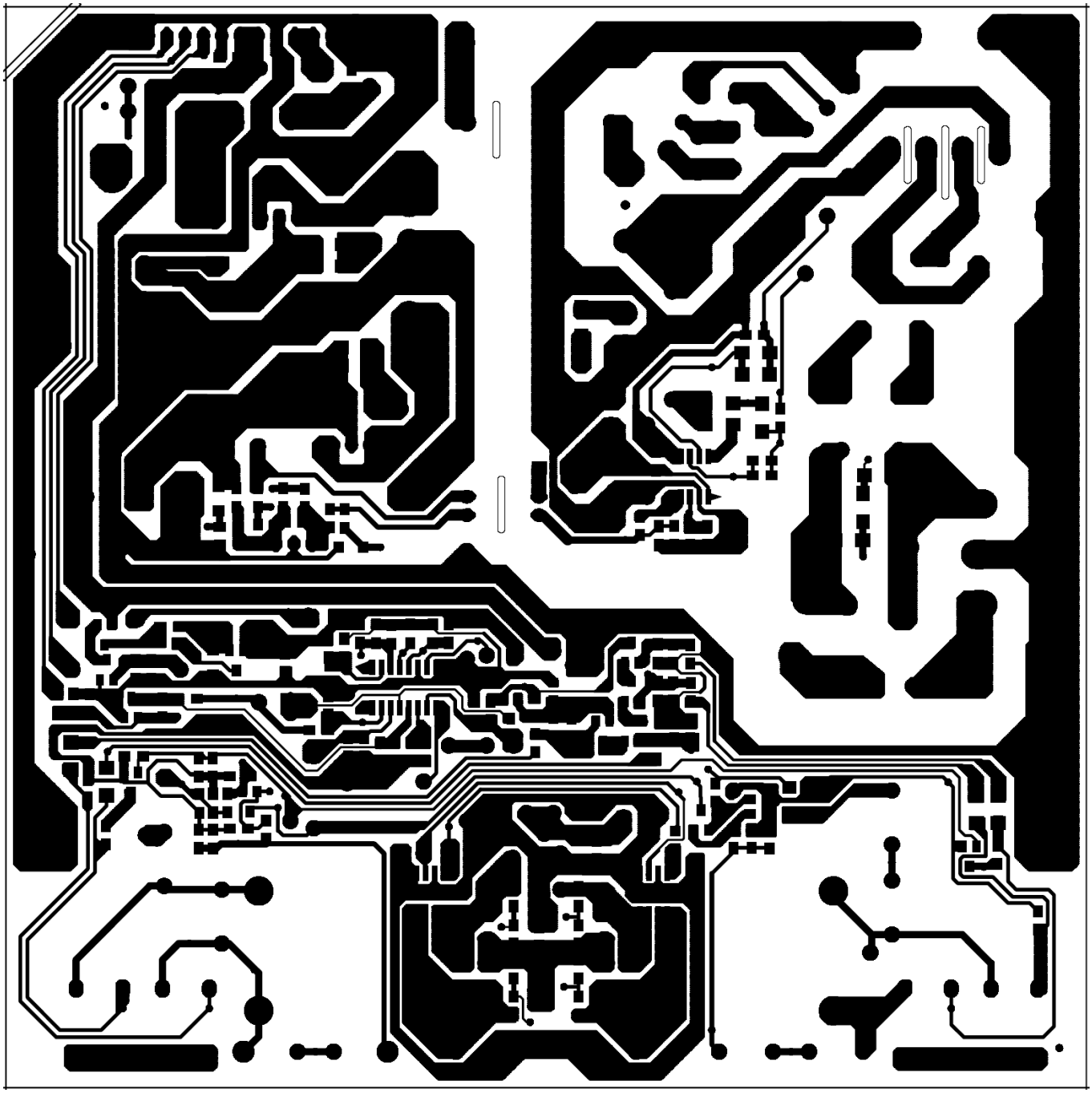




7.2 Pwpc Board
715G1813-1

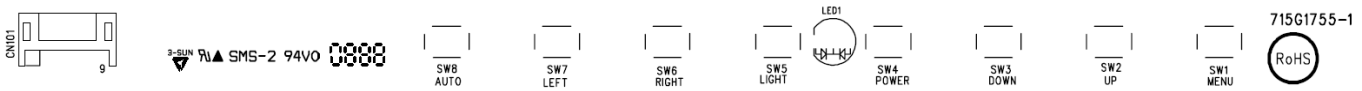



LABEL POSITION
SOLDER



7.3 Key Board

715G1755-1



8. 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

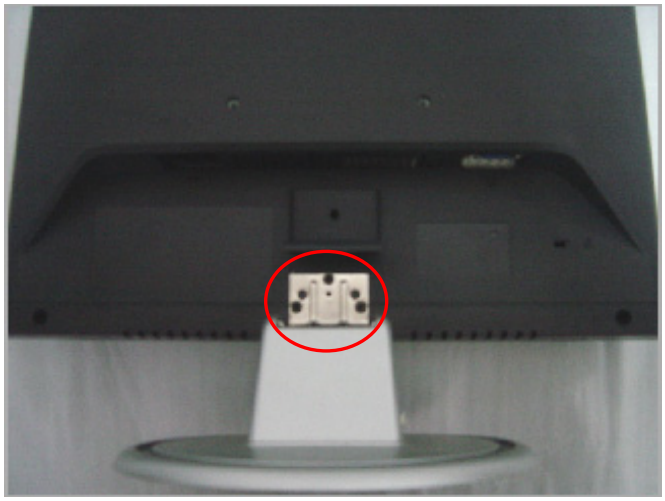


Fig.3

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

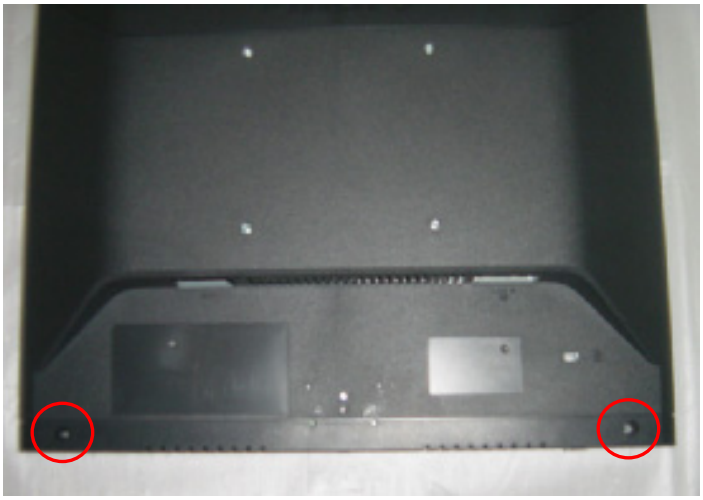


Fig.4

Fig.5

Fig.6

4. Remove shield as Fig.7

Remove 6 screws as Fig.7

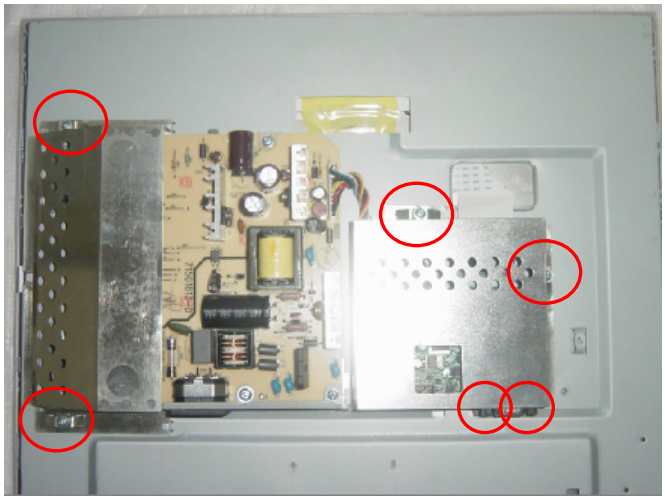


Fig.7

5. Remove main and pwpc board as Fig.8

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

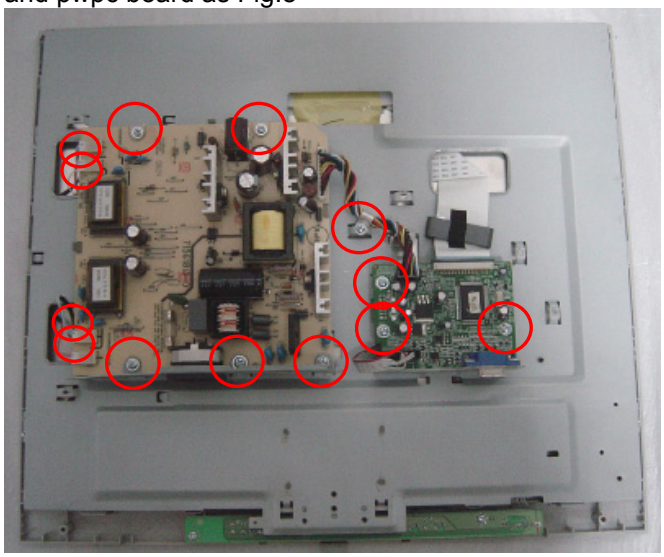


Fig.8

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

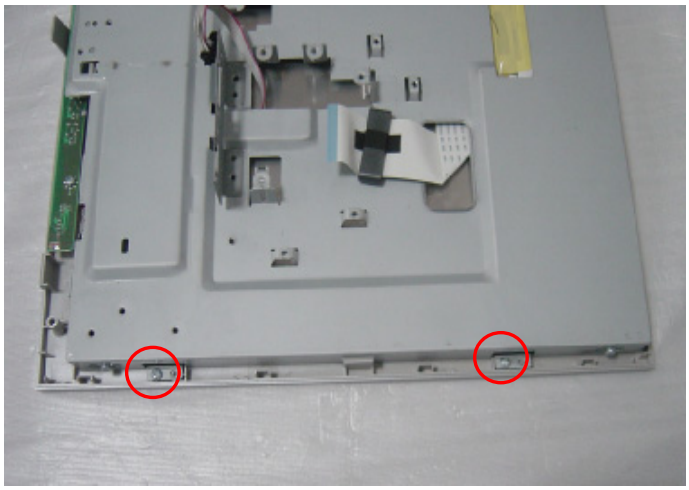


Fig.9

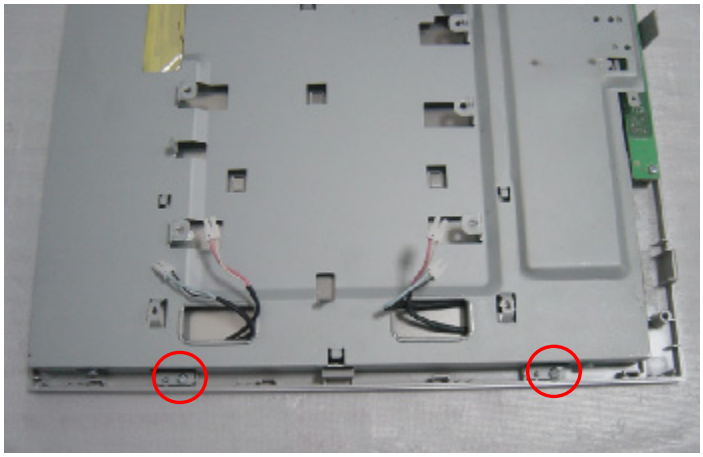


Fig.10

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

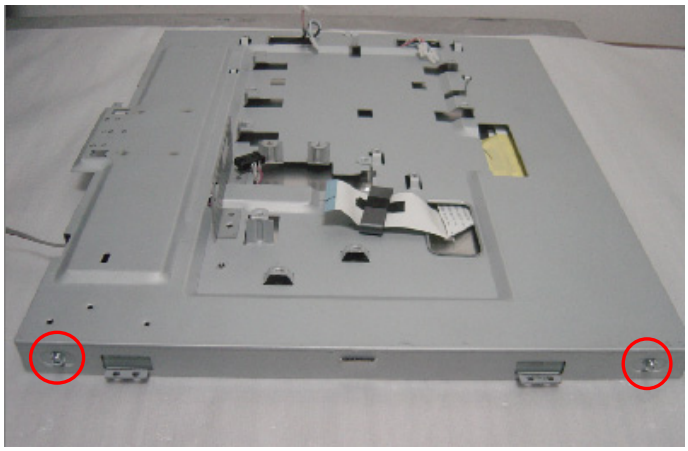


Fig.12

Fig.13

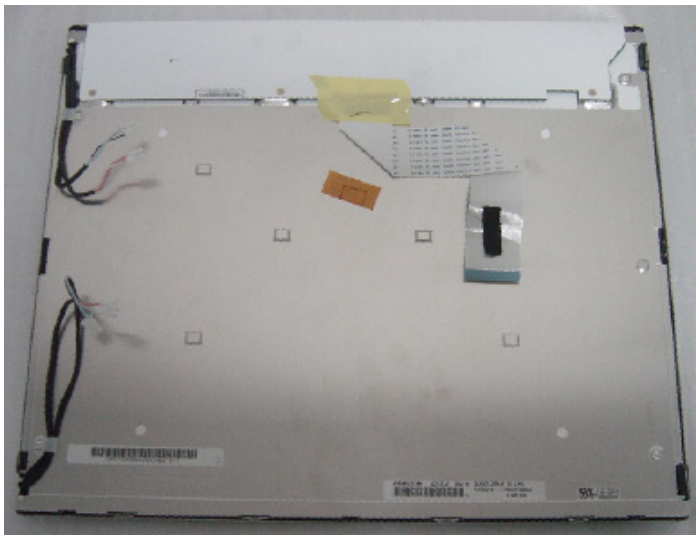


Fig.14

9. Trouble Shooting

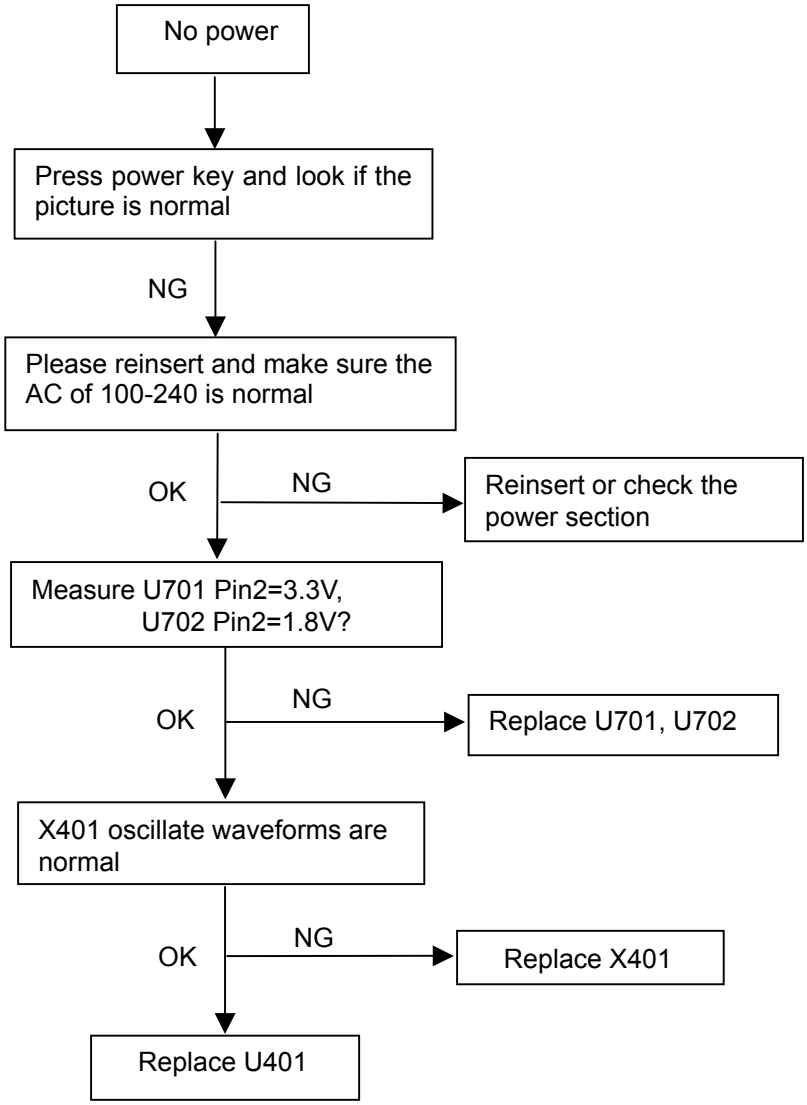
This page deals with problems that can be corrected by a user. If the problem still persists after you have tried these solutions, contact Philips customer service representative.

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 VGA 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 VGA cable is properly connected to the graphics board or PC.

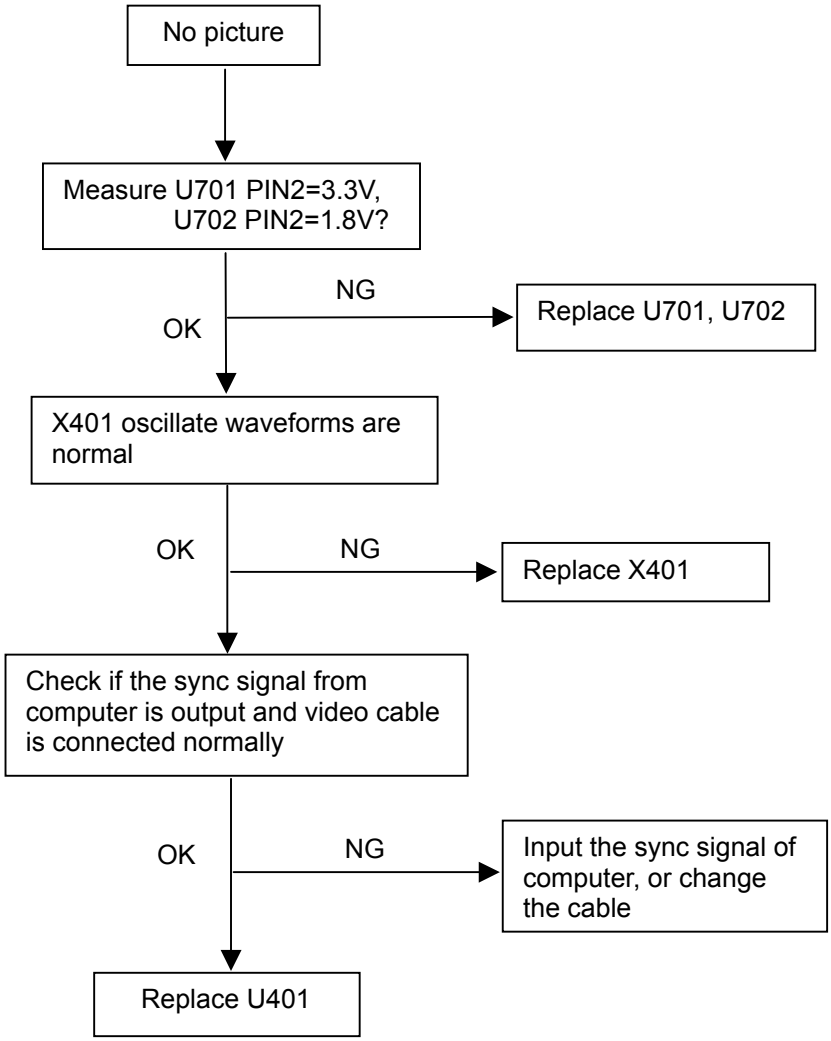
Vertical flicker appears 	• Press the Auto button. • Eliminate the vertical bars using the Phase/Clock of More Settings in OSD Main Controls.
Horizontal flicker appears 	• Press the Auto button. • Eliminate the vertical bars using the Phase/Clock of More Settings in OSD Main Controls.
The screen is too 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 peroid 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.

10. Repair Flow Chart

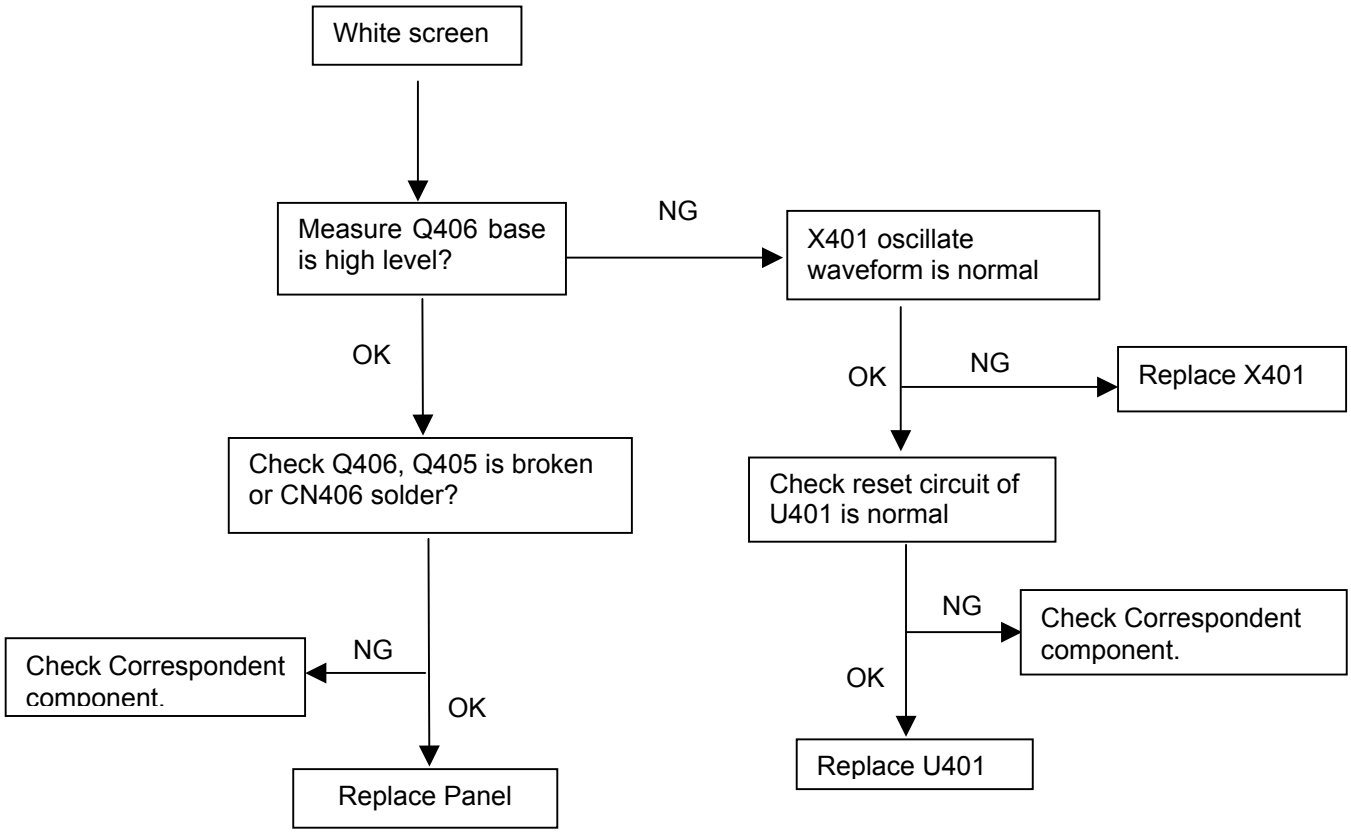
(1). No Power



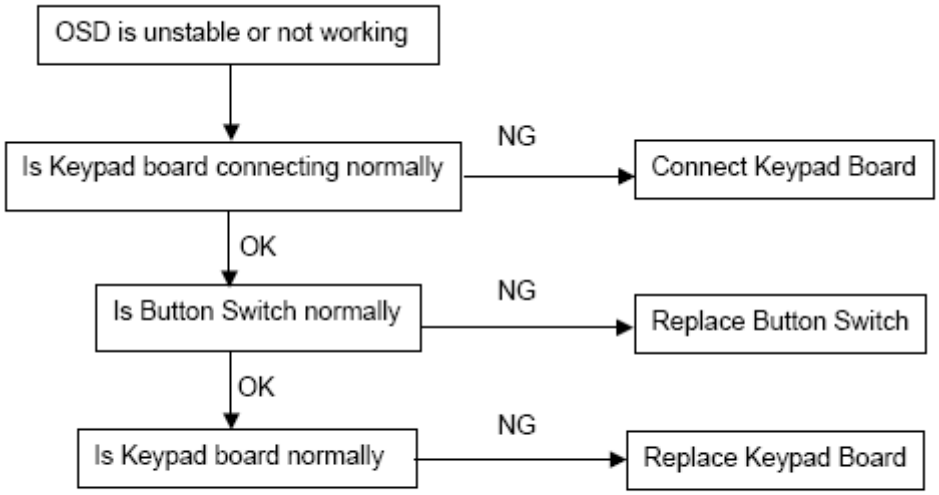
(2). No Picture


No picture
Measure U701 PIN2=3.3V,
U702 PIN2=1.8V?
NG
OK
Replace U701, U702
X401 oscillate waveforms are normal
OK
NG
Replace X401
Check if the sync signal from computer is output and video cable is connected normally
OK
NG
Input the sync signal of computer, or change the cable
Replace U401

(3). White screen



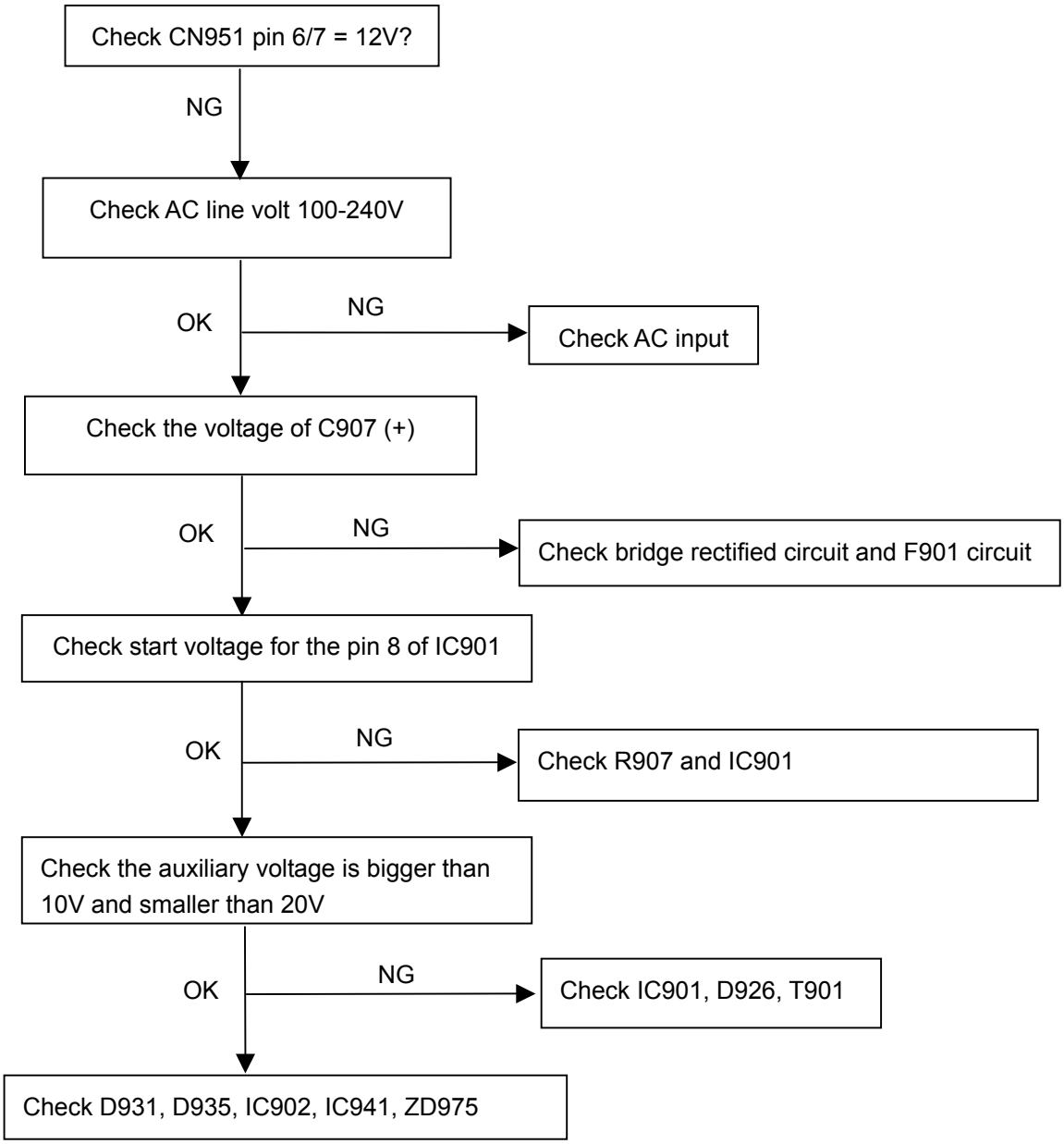
(4). Keypad Board



9.2.2 Power/Inverter Board

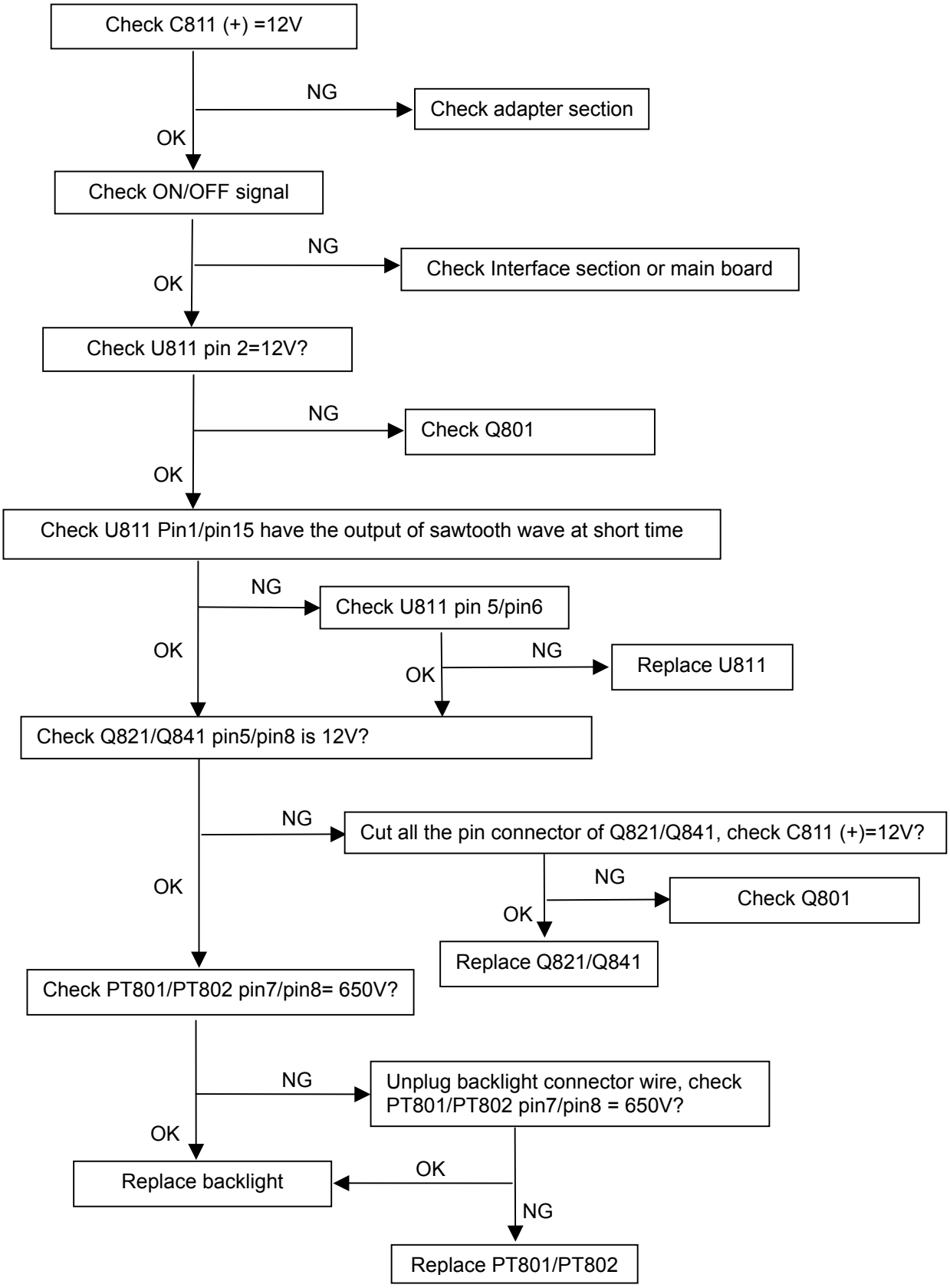
No power

Adapter Board

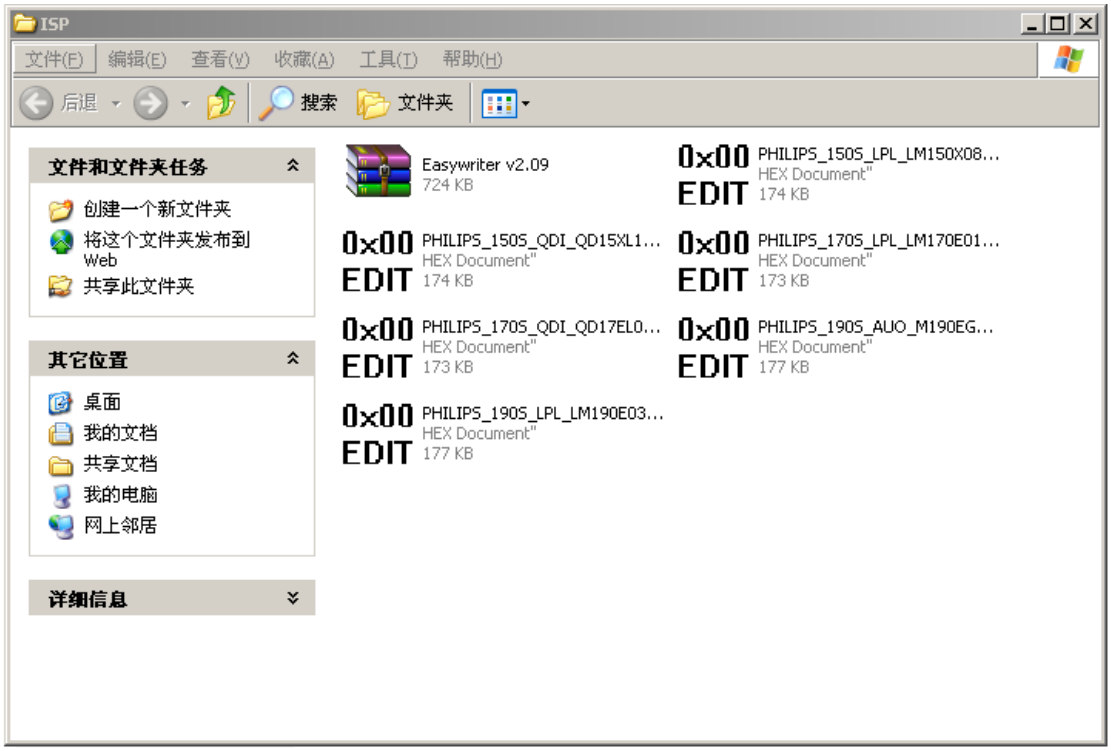


Inverter Board

No power

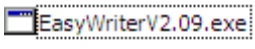


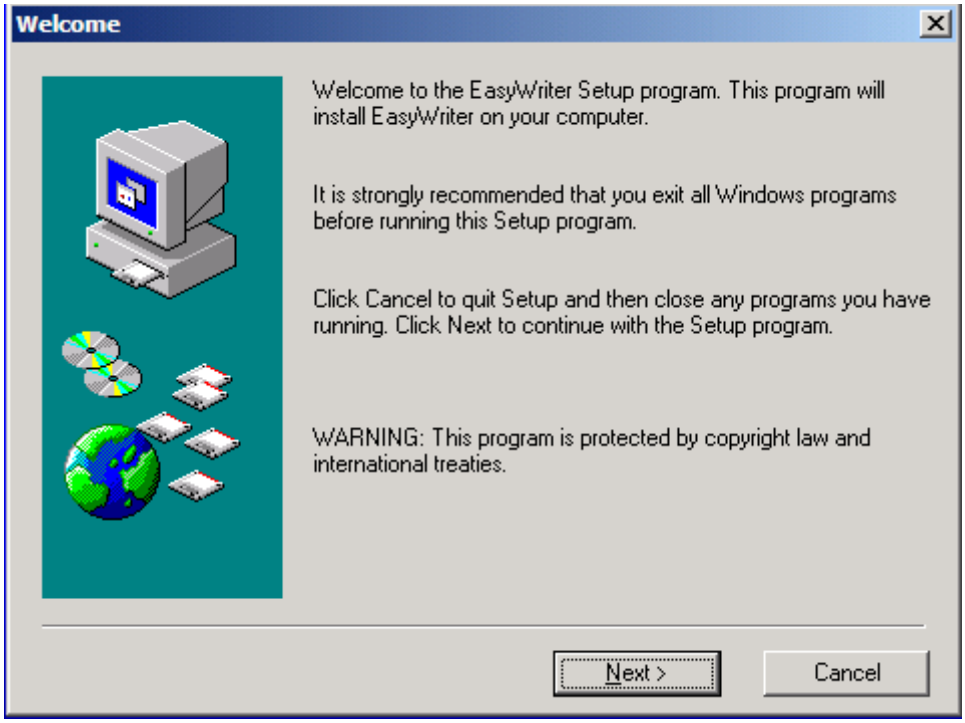
11. ISP Instruction (Take 170S for example)

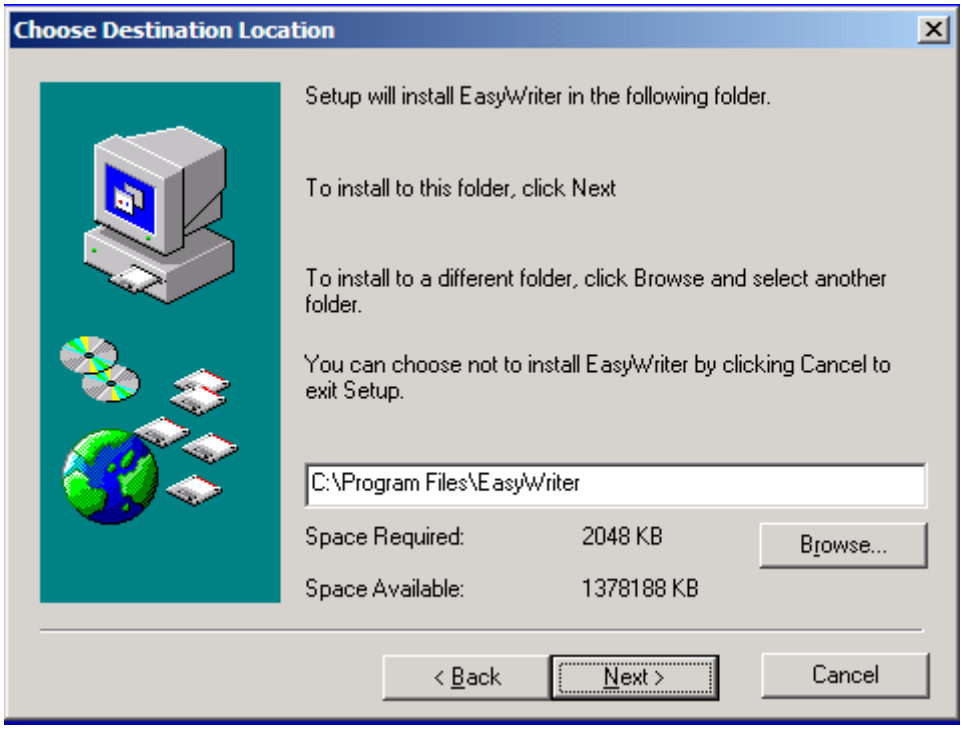


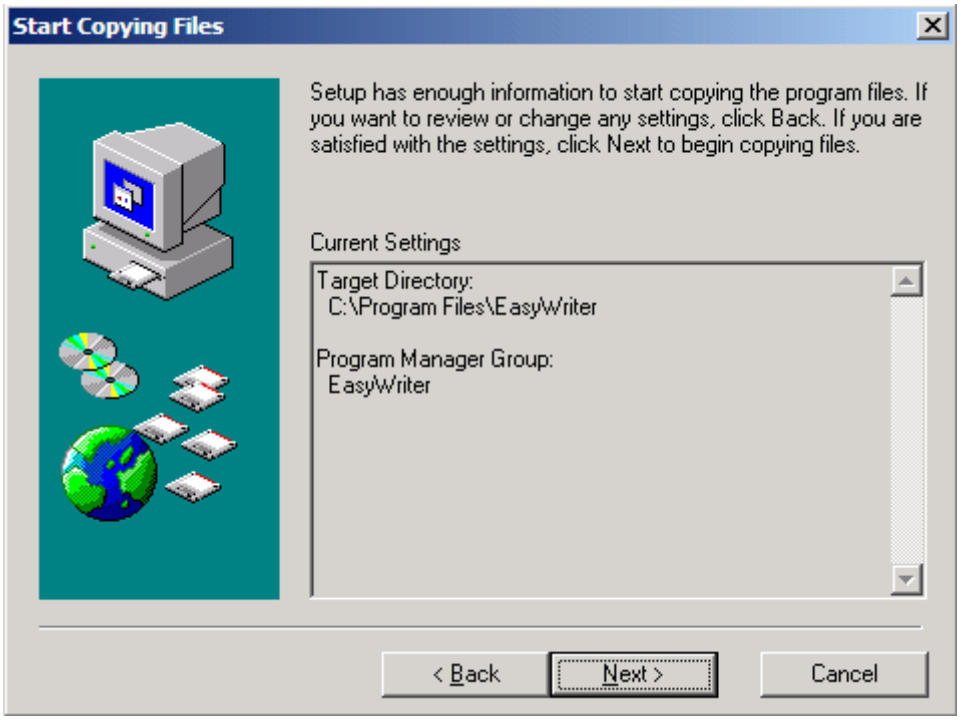
(1). Install the program software

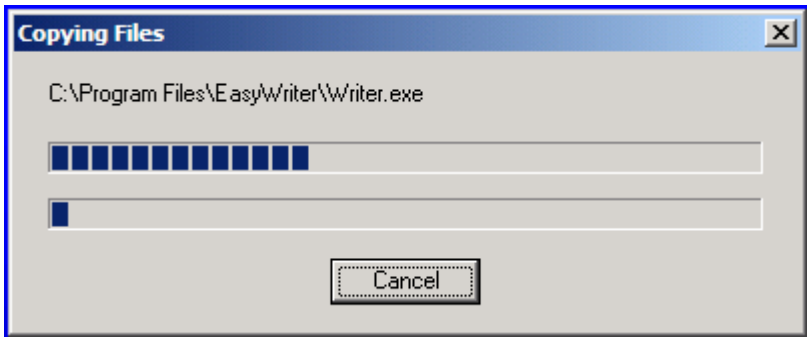
a. First decompressing files  EasyWriterV2.09.rar
WinRAR 档案文件
518 KB, as follow:

b. Double – click  EasyWriterV2.09.exe, start to install as follows:


Welcome
Welcome to the EasyWriter Setup program. This program will install EasyWriter on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup program.
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Next >
Cancel


Choose Destination Location
Setup will install EasyWriter in the following folder.
To install to this folder, click Next
To install to a different folder, click Browse and select another folder.
You can choose not to install EasyWriter by clicking Cancel to exit Setup.
C:\Program Files\EasyWriter
Space Required: 2048 KB
Space Available: 1378188 KB
Browse...
< Back
Next >
Cancel

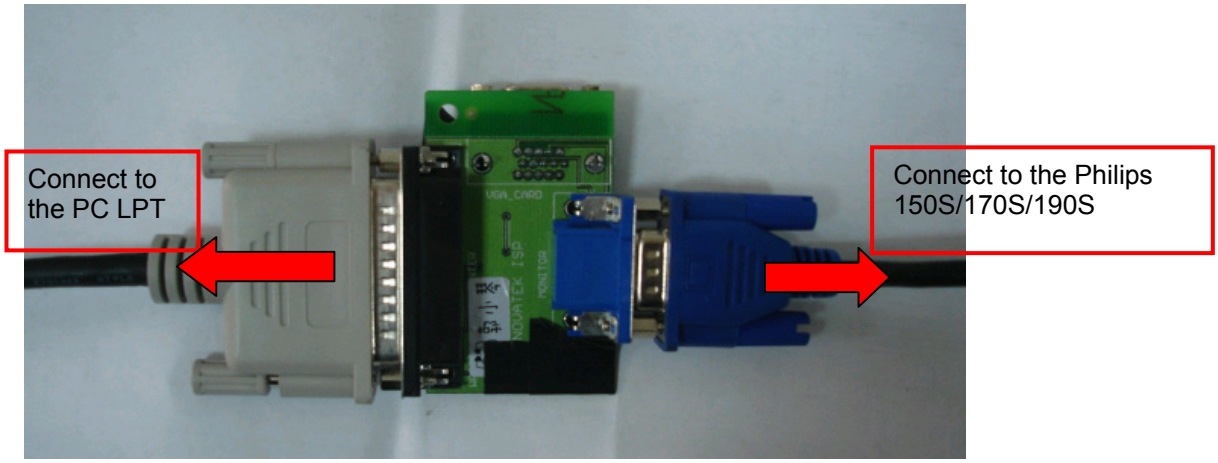




c. There will be a shortcut key 

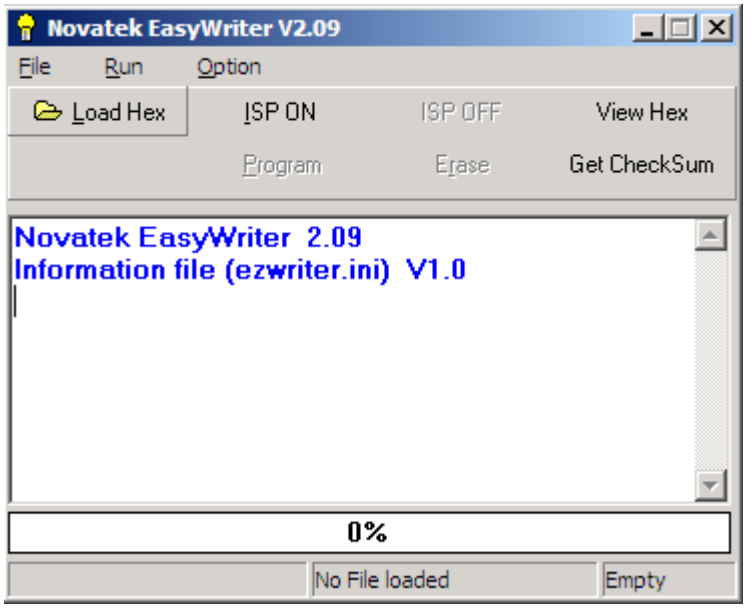
appears on the desktop.

(2). Connect the ISP board as follow:



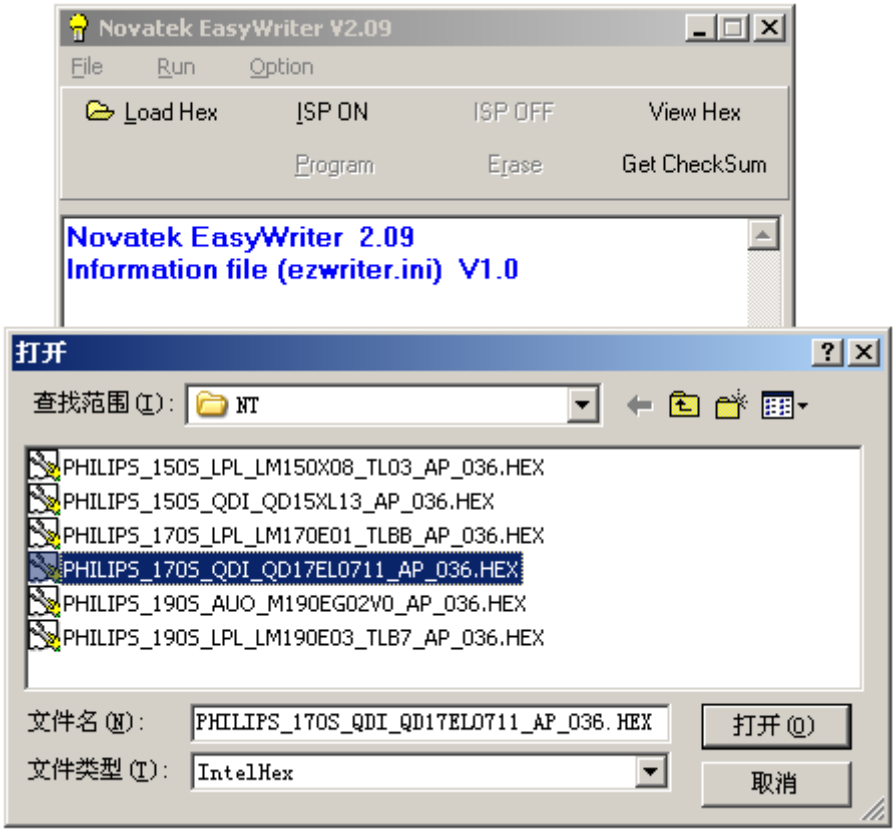
a. Double-click 

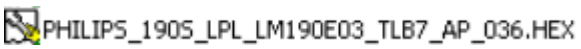
, running the program as follows:



b. Click 

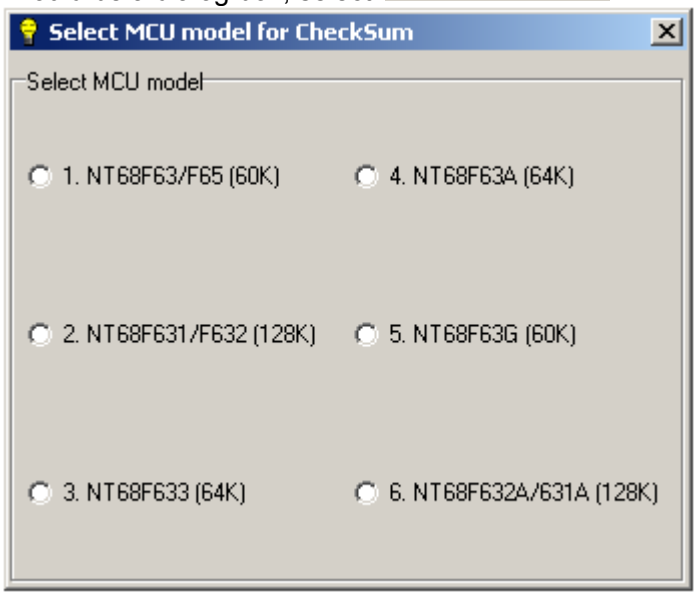
icon, search the program” PHILIPS_170S_QDI_QD17EL0711_AP_036.HEX”, and click **open:**

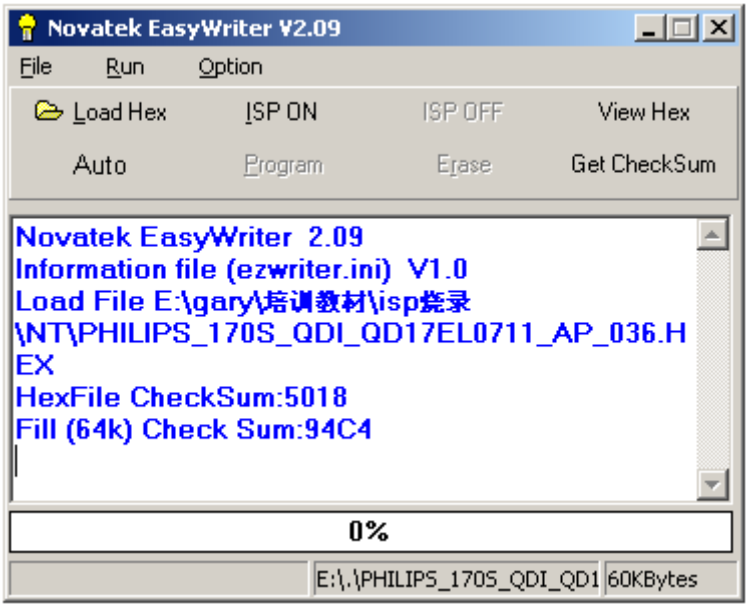


Note: When it is 190s model, you can select 

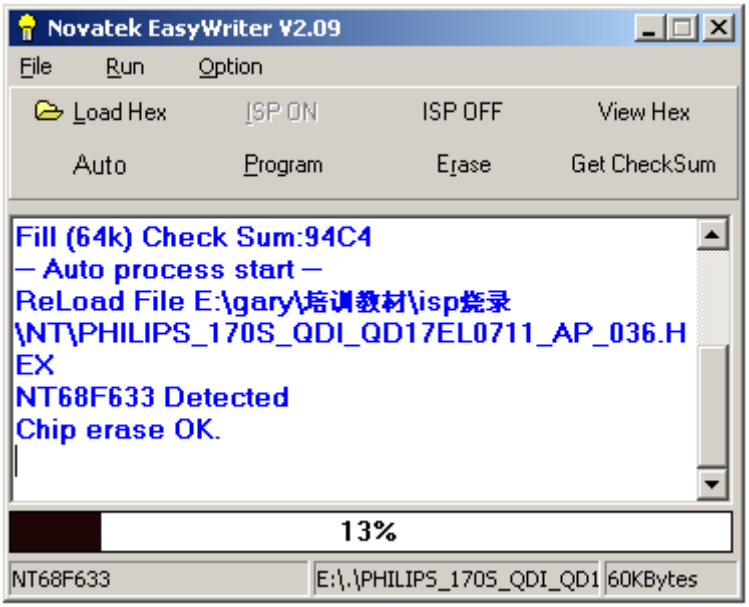
(for LPL panel)

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

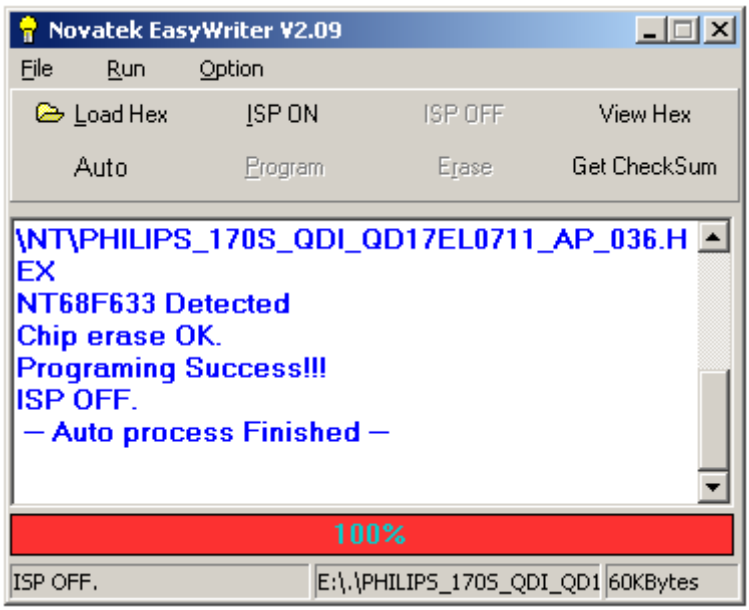




d. Click Auto icon, the writer is in processing…



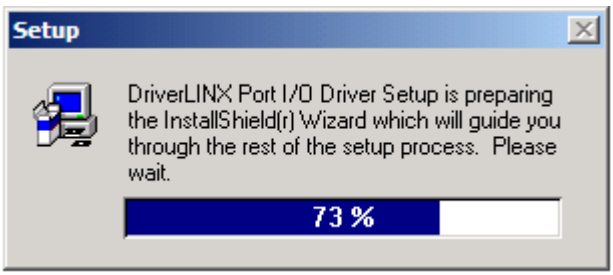
e. Until appears the follow Fig, writer completed.

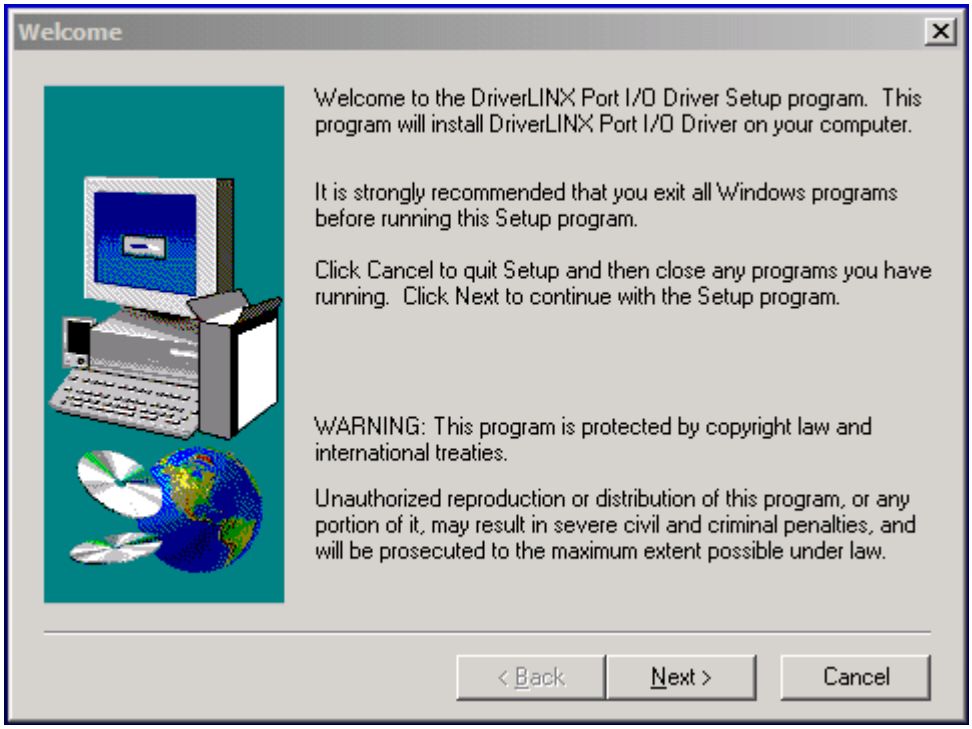


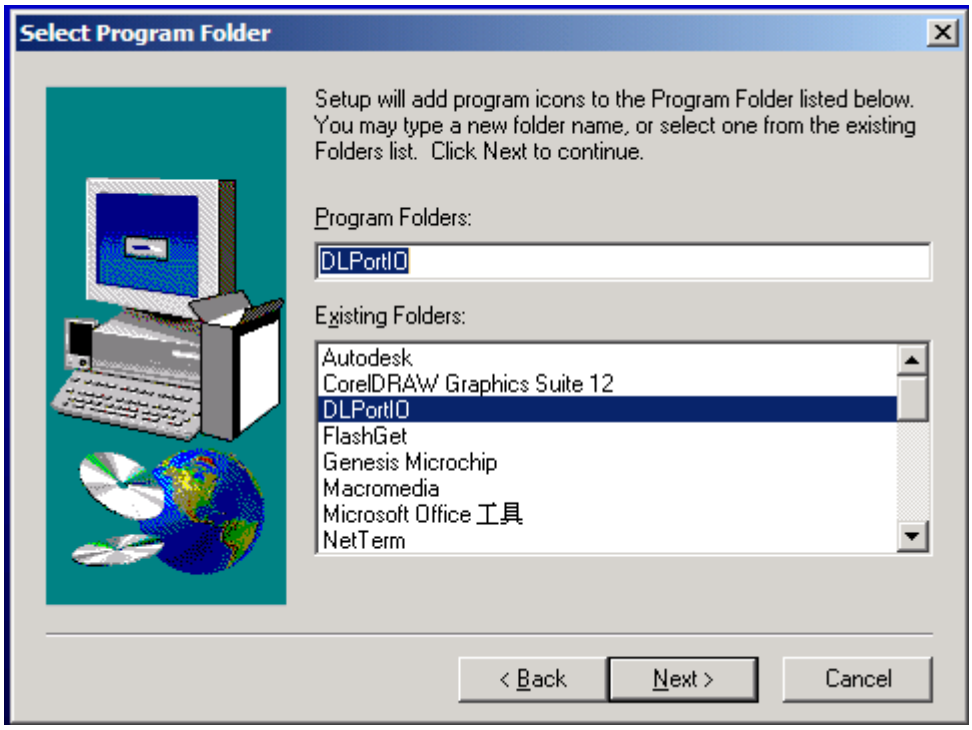
12. DDC Instruction (Take 170S for example)

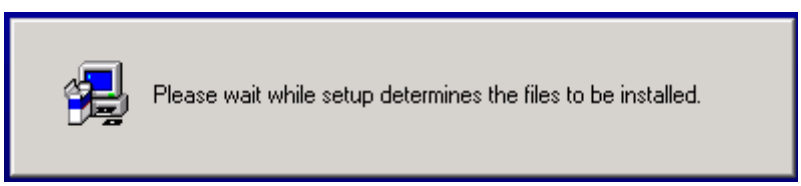
(1). Install software

You must install the  PORT95NT.EXE
PackageForTheWeb Stub
InstallShield Software Corpora... at the first. The processing as follows:

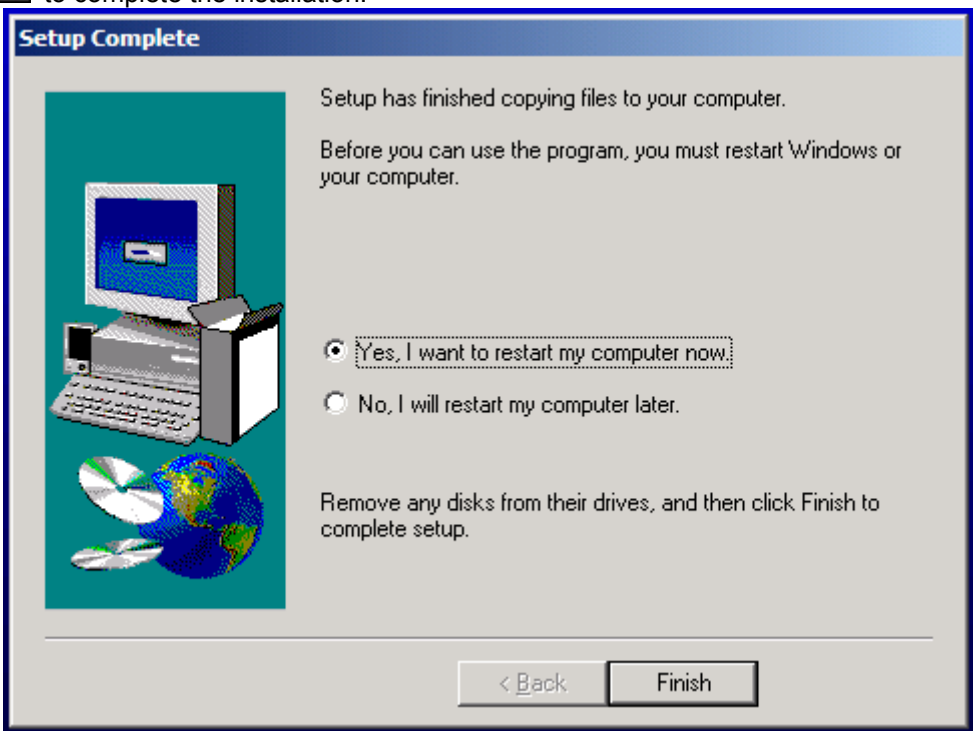



Welcome
Welcome to the DriverLINX Port I/O Driver Setup program. This program will install DriverLINX Port I/O Driver on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup program.
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
< Back
Next >
Cancel


Select Program Folder
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing Folders list. Click Next to continue.
Program Folders:
DLPortIO
Existing Folders:
Autodesk
CorelDRAW Graphics Suite 12
DLPortIO
FlashGet
Genesis Microchip
Macromedia
Microsoft Office 工具
NetTerm
< Back
Next >
Cancel

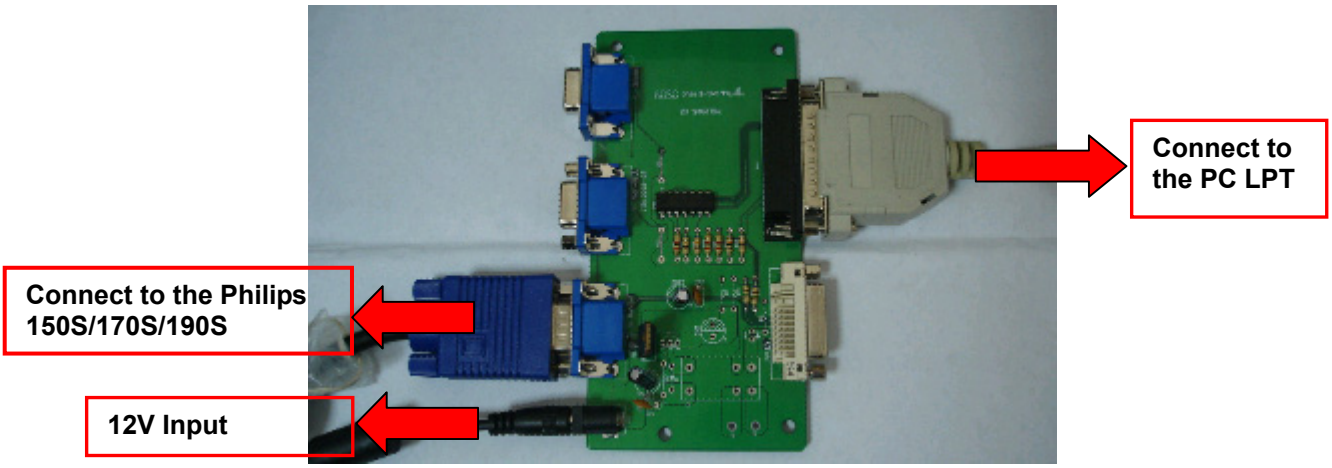

Please wait while setup determines the files to be installed.

Click Finish to complete the installation.

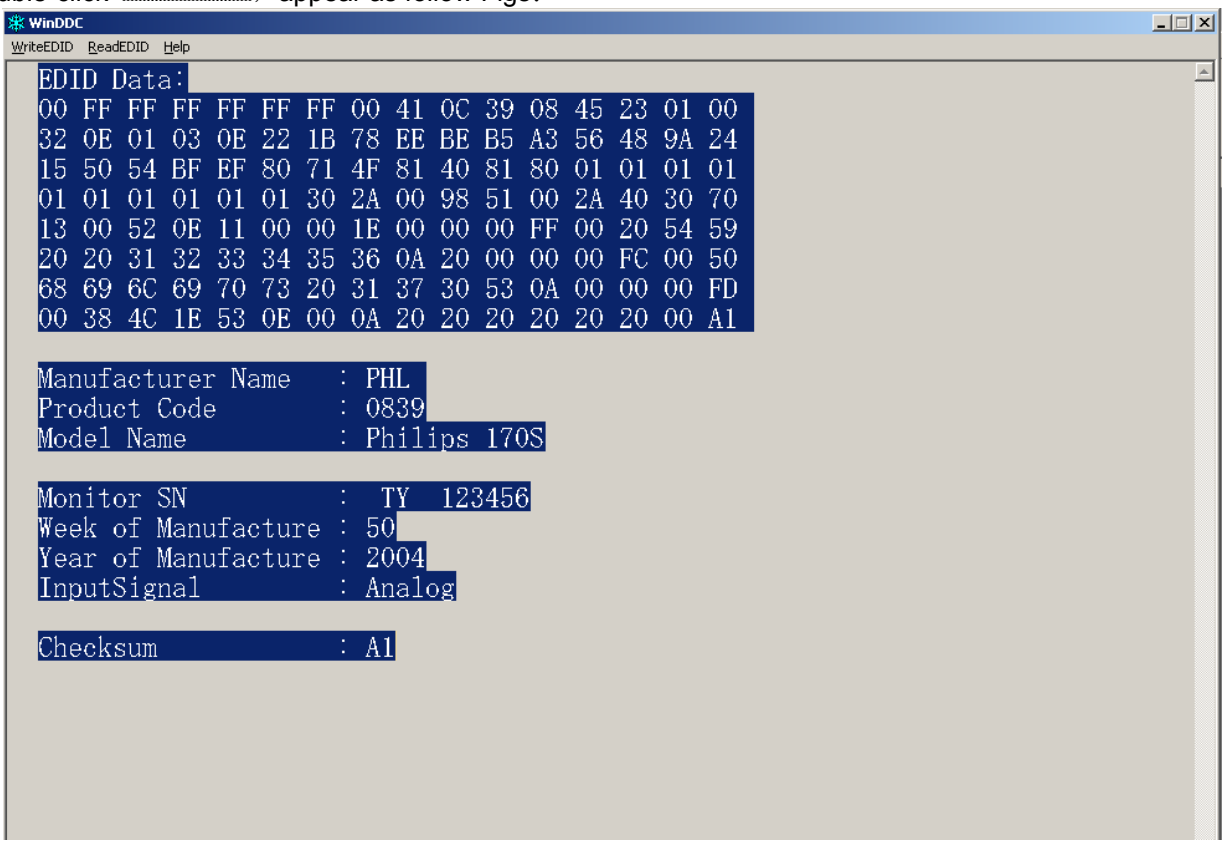


Note: After installation, you must restart the PC to take the setup effect.

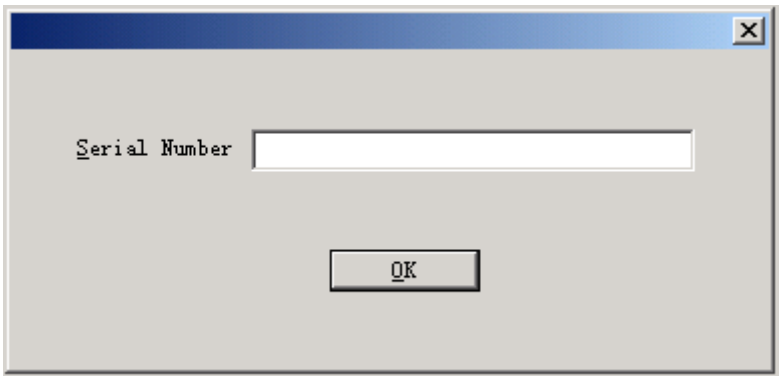
(2). Connect the DDC board as follow:



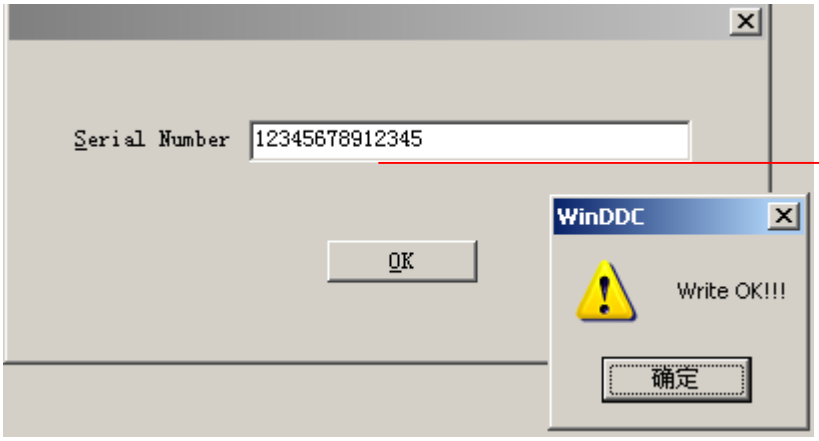
a. Double-click WinDDC.exe, appear as follow Figs：



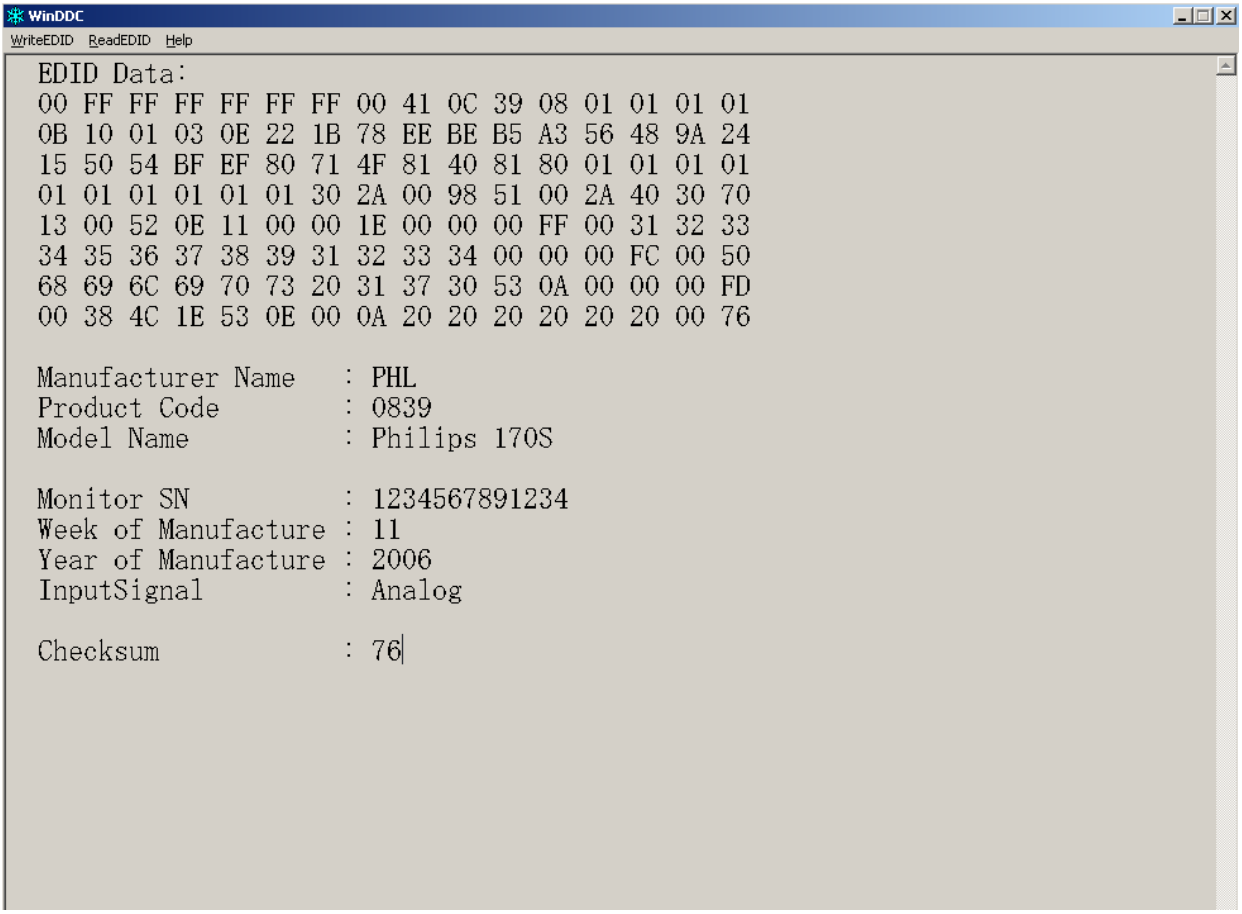
b. Click WriteEDID.



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


Serial Number
12345678912345
OK
WinDDC
Write OK!!!
确定
14 codes,
for example.

d. Unit appears the following Fig, writer completed.



190S EDID Program：

Analog EDID

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 3F 08 01 01 01 01
16:   09 10 01 03 0E 26 1E 78 EE 6D 65 A2 5A 4C 9D 23
32:   13 4F 54 BF EF 80 71 4F 81 40 81 80 01 01 01 01
48:   01 01 01 01 01 01 30 2A 00 98 51 00 2A 40 30 70
64:   13 00 78 2D 11 00 00 1E 00 00 00 FF 00 20 41 55
80:   20 20 30 30 30 30 30 31 0A 20 00 00 00 FC 00 50
96:   68 69 6C 69 70 73 20 31 39 30 53 0A 00 00 00 FD
112:  00 38 4C 1E 53 0E 00 0A 20 20 20 20 20 20 00 25
```

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:            083F
      ID Serial Number:           01010101
      Week of Manufacture:        9
      Year of Manufacture:        2006
<-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 :        38cm.
      Max. V. Image Size :        30cm.
      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:              0.6337890625
      Red y:              0.3535156250
      Green x:            0.3007812500
      Green y:            0.6142578125
      Blue x:             0.1376953125
      Blue y:             0.0761718750
      White x:            0.3085937500
```

```
      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:   EF
       -800x600   @72Hz VESA
       -800x600   @75Hz VESA
       -832x624   @75Hz Apple,Mac II
      -1024x768   @60Hz VESA
      -1024x768   @70Hz VESA
      -1024x768   @75Hz VESA
      -1280x1024 @75Hz VESA
Established Timings 3:   80
      -1152x870   @75Hz Apple,Mac II
<-x-Established Timings-x->

<---Standard Timing Identification--->
      -1152x864     @75
      -1280x960     @60
      -1280x1024    @60
<-x-Standard Timing Identification-x->

<---Detailed Timing Descriptions--->
Detailed Timing:             1280x1024 @   60Hz.
<-x-Detailed Timing Descriptions-x->

<---Detailed Timing Descriptions--->
Detailed Timing:    FF (Monitor SN) ' AU    000001'
Detailed Timing:    FC (Monitor Name) 'Philips 190S'
Detailed Timing:    FD (Monitor limits)
      Min. V. rate:   56Hz
      Max. V. rate:  76Hz
      Min. H. rate:   30KHz
      Max. H. rate:  83KHz
      Max. Pixel Clock:            140MHz
<-x-Detailed Timing Descriptions-x->

Extension Flag:              00
Checksum:                       25
```

Digital EDID
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 3F 08 01 01 01 01
16:   0A 10 01 03 80 26 1E 78 EE 6D 65 A2 5A 4C 9D 23
32:   13 4F 54 BF EF 80 71 4F 81 40 81 80 01 01 01 01
48:   01 01 01 01 01 01 30 2A 00 98 51 00 2A 40 30 70
64:   13 00 78 2D 11 00 00 1E 00 00 00 FF 00 41 55 30
80:   30 30 36 30 39 30 30 30 30 30 00 00 00 FC 00 50
96:   68 69 6C 69 70 73 20 31 39 30 53 0A 00 00 00 FD
112:  00 38 4C 1E 53 0E 00 0A 20 20 20 20 20 20 00 3E
```

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:            083F
            ID Serial Number:           01010101
            Week of Manufacture:        10
            Year of Manufacture:        2006
      <-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:       Digital
            Max. H. Image Size :        38cm.
            Max. V. Image Size :        30cm.
            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:              0.6337890625
            Red y:              0.3535156250
            Green x:            0.3007812500
            Green y:            0.6142578125
            Blue x:             0.1376953125
            Blue y:             0.0761718750
            White x:            0.3085937500
            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: EF
-800x600 @72Hz VESA
-800x600 @75Hz VESA
-832x624 @75Hz Apple,Mac II
-1024x768 @60Hz VESA
-1024x768 @70Hz VESA
-1024x768 @75Hz VESA
-1280x1024 @75Hz VESA
Established Timings 3: 80
-1152x870 @75Hz Apple,Mac II
<-x-Established Timings-x->

<---Standard Timing Identification--->
-1152x864 @75
-1280x960 @60
-1280x1024 @60
<-x-Standard Timing Identification-x->

<---Detailed Timing Descriptions--->
Detailed Timing: 1280x1024 @ 60Hz.
<-x-Detailed Timing Descriptions-x->

<---Detailed Timing Descriptions--->
Detailed Timing: FF (Monitor SN) 'AU0006090000'
Detailed Timing: FC (Monitor Name) 'Philips 190S'
Detailed Timing: FD (Monitor limits)
Min. V. rate: 56Hz
Max. V. rate: 76Hz
Min. H. rate: 30KHz
Max. H. rate: 83KHz
Max. Pixel Clock: 140MHz
<-x-Detailed Timing Descriptions-x->

Extension Flag: 00
Checksum: 3E

13. 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 T144（1280*1024/60HZ）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 190S7**********, 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±20, y=297±20,Y>230.

   Set Chroma-7120 CH4 as 6500 color temperature by ID key, press SC and Next key set 6500: x=313±20, y=329±20,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±5
   4). Adjust the **G** of Cool item on factory window until chroma 7120 indicator reached the value G=100±5
   5). Adjust the **B** of Cool item on factory window until chroma 7120 indicator reached the value B=100±5
   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±20, y=297±20,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±5
   4). Adjust the **G** of Warm item on factory window until chroma 7120 indicator reached the value G=100±5
   5). Adjust the **B** of Warm item on factory window until chroma 7120 indicator reached the value B=100±5
   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±20, y=329±20,Y>200. If not in the SPEC, repeat step 3,4,5.

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

14. Spare Parts List

PCB

Vendor P/N	Description
CBPC980KGNPHP	CONVERSION BOARD
PWPC1942LGR1P	POWER BOARD
KEPC780KE7P	KEY BOARD

Panel

Vendor P/N	Description
750GLG90E3B21N	LPL 19 TLBD PANEL

Mechanical and Accessory

Vendor P/N	Description
007G 5 7 2	COMPOUND PALLET
007G 5 7 6	COMPOUND PALLET
040G 152509	RECYCLE LABEL
040G 152512	RECYCLE LABEL
040G 58162435A	LABEL
044G6002608 1A	PAPER BOARD
044G6002757 2A	PAPER BOARD
044G9003 96	CORNER PAPER
044G9003115	CORNER PAPER
044G9003210	CORNER PAPER
050G 600 2	HANDLE1
050G 600 3	HANDLE2
052G 1185	MIDDLE TAPE FOR CARTON
052G 1186	SMALL TAPE
052G 1211 A	165MINIUM TAPE
089G 728GAA550	SIGNAL CABLE D-SUB GREATIAND
089G179E30C 6	FFC CABLE P-TWO
095G8014 18506 X	WIRE HARNESS
0B1G 930 8120	SCREW
0D1G3440 8120	SCREW
0G1G1130 6106	SCREW
0M1G 130 8 47	SCREW FLAT M3-0.5X10
0M1G1730 6106	SCREW TAPPING M3X0.5X6+SW
0Q1G 335 9 47	SCREW
0Q1G 335 9106	SCREW
P15G8299 1	BKT-VESA
P15G8301 1	POWER BRACKET
P15G8310 1	MAIN FRAME
P33G4975 VPA1C	BUTTON_OSD
P34G1829 VOA1T	BEZEL
P34G1830 VB 1T	REAR COVER
P34G1832 VB 1B	COVER_HINGE
P37G 565 1 VO	HINGE ASS'Y
P44G3955 1	CUSHION-RIGHT
P44G3955 2	CUSHION-LEFT
P44G3955813 1A	CARTON
P45G 88609 37	EPE
P85G 736 1	SHIELD-PWR
P85G 737 1	SHIELD-SCALER

Q40G 19N813 1A	RATING LABEL
Q40G 581813 8A	EPA LABEL
Q40G 582813 2A	FAMILY SHEET
Q41G780081313A	QSG FOR 190S
Q44GSLIP00130A	PAPER SLIP SHEET
Q44GSLIP00131A	PAPER SLIP SHEET
Q45G 76 28A04	PHILIPS PE BAG
Q70G1900813 1A	CD MANUAL
040G 457624 1B	LABEL-CPU
051G 6 4500	RTV
705G 078057001	Q920 ASS'Y
705G 078093010	D931 ASS'Y
705G 078093011	D935 ASS'Y
0M1G1730 8128	SCREW M3x8
090G6064 1	HEAT SINK

Main Board

Location	Vendor P/N	Description
CN406	033G801930F H	FPC CONN. 1.0MM 30P
CN701	033G8027 12	WAFER 2*6P 2.0MM R/A
CN403	033G8027 18	PIN HEADER 18P
C712	067G215L101 4N	KY25VB100M-L 6.3*11
C711	067G215L101 4N	KY25VB100M-L 6.3*11
C710	067G215L101 4N	KY25VB100M-L 6.3*11
C709	067G215L101 4N	KY25VB100M-L 6.3*11
C708	067G215L101 4N	KY25VB100M-L 6.3*11
C707	067G215L101 4N	KY25VB100M-L 6.3*11
C426	067G215L471 3N	KY16VB470M-L 10*12.5
C431	067G215V470 4N	KY25VB47-M-CC3.0 5*11MM
C432	067G215Y479 7N	LOW ESR EC 4.7 UF 50V NCC
CN405	088G 35315F H	D-SUB 15PIN
CN202	088G 35424F H	DV1 CONNECTOR 24PIN
X401	093G 22 51	CRYSTAL 12MHz HC-49US ARG6-120
	AIC980KGNPHP	MAIN BOARD
U401	056G 562913	NT68663MEFG
U702	056G 563 31	AI1117D-1.8-EI
U701	056G 563 63	MM1117DT33 TO-252 MMC
U403	056G1133 24	AT24C16AN-10SU-2.7
U404	056G1133 34	M24C02-WMN6TP
U405	056G1133 34	M24C02-WMN6TP
Q401	057G 417 4	PMBS3904/PHILIPS-SMT(04)
Q406	057G 417 4	PMBS3904/PHILIPS-SMT(04)
Q404	057G 417 13 T	KEC 2N3906S-RTK/PS
Q402	057G 417 13 T	KEC 2N3906S-RTK/PS
Q405	057G 763 1	A03401 SOT23 BY AOS(A1)
R499	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R487	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R486	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R468	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R467	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R466	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R465	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R464	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R463	061L0603000	RST SM 0603 JUMP MAX 0R05 R
FB402	061L0603000	RST SM 0603 JUMP MAX 0R05 R
FB405	061L0603000	RST SM 0603 JUMP MAX 0R05 R
FB406	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R416	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R450	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R457	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R461	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R462	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R453	061L0603101	CHIPR 100 OHM +-5% 1/16W
R491	061L0603101	CHIPR 100 OHM +-5% 1/16W
R490	061L0603101	CHIPR 100 OHM +-5% 1/16W
R489	061L0603101	CHIPR 100 OHM +-5% 1/16W
R488	061L0603101	CHIPR 100 OHM +-5% 1/16W
R452	061L0603101	CHIPR 100 OHM +-5% 1/16W
R451	061L0603101	CHIPR 100 OHM +-5% 1/16W

R405	061L0603101	CHIPR 100 OHM +-5% 1/16W
R406	061L0603101	CHIPR 100 OHM +-5% 1/16W
R407	061L0603101	CHIPR 100 OHM +-5% 1/16W
R408	061L0603101	CHIPR 100 OHM +-5% 1/16W
R410	061L0603101	CHIPR 100 OHM +-5% 1/16W
R411	061L0603101	CHIPR 100 OHM +-5% 1/16W
R497	061L0603102	CHIPR 1K OHM +-5% 1/16W
R496	061L0603102	CHIPR 1K OHM +-5% 1/16W
R484	061L0603102	CHIPR 1K OHM +-5% 1/16W
R470	061L0603102	CHIPR 1K OHM +-5% 1/16W
R433	061L0603102	CHIPR 1K OHM +-5% 1/16W
R432	061L0603102	CHIPR 1K OHM +-5% 1/16W
R420	061L0603102	CHIPR 1K OHM +-5% 1/16W
R422	061L0603102	CHIPR 1K OHM +-5% 1/16W
R426	061L0603102	CHIPR 1K OHM +-5% 1/16W
R427	061L0603102	CHIPR 1K OHM +-5% 1/16W
R428	061L0603102	CHIPR 1K OHM +-5% 1/16W
R431	061L0603102	CHIPR 1K OHM +-5% 1/16W
R469	061L0603103	CHIPR 10K OHM +-5% 1/16W
R446	061L0603103	CHIPR 10K OHM +-5% 1/16W
R476	061L0603103	CHIPR 10K OHM +-5% 1/16W
R472	061L0603103	CHIPR 10K OHM +-5% 1/16W
R459	061L0603103	CHIPR 10K OHM +-5% 1/16W
R458	061L0603103	CHIPR 10K OHM +-5% 1/16W
R419	061L0603103	CHIPR 10K OHM +-5% 1/16W
R418	061L0603103	CHIPR 10K OHM +-5% 1/16W
R417	061L0603103	CHIPR 10K OHM +-5% 1/16W
R415	061L0603103	CHIPR 10K OHM +-5% 1/16W
R402	061L0603103	CHIPR 10K OHM +-5% 1/16W
R401	061L0603103	CHIPR 10K OHM +-5% 1/16W
R414	061L0603104	RST SM 0603 RC0603 100K PM5 R
R404	061L0603104	RST SM 0603 RC0603 100K PM5 R
R403	061L0603104	RST SM 0603 RC0603 100K PM5 R
R434	061L0603105	RST SM 0603 RC0603 1M PM5 R
R421	061L0603151	CHIPR 150 OHM +-5% 1/16W
R423	061L0603151	CHIPR 150 OHM +-5% 1/16W
R424	061L0603151	CHIPR 150 OHM +-5% 1/16W
R437	061L0603221	CHIPR 220 OHM+-5% 1/16W
R438	061L0603221	CHIPR 220 OHM+-5% 1/16W
R440	061L0603221	CHIPR 220 OHM+-5% 1/16W
R441	061L0603221	CHIPR 220 OHM+-5% 1/16W
R436	061L0603222	CHIPR 2.2K OHM+-5% 1/16W
R435	061L0603222	CHIPR 2.2K OHM+-5% 1/16W
R442	061L0603332	CHIP 3.3K OHM 1/10W
R443	061L0603332	CHIP 3.3K OHM 1/10W
R445	061L0603390 0F	CHIP 390 OHM 1/10W 1%
R471	061L0603390 0F	CHIP 390 OHM 1/10W 1%
R701	061L0603470	CHIPR 47 OHM +-5% 1/16W
R493	061L0603472	CHIPR 4.7K OHM +-5% 1/16W
R492	061L0603472	CHIPR 4.7K OHM +-5% 1/16W
R481	061L0603472	CHIPR 4.7K OHM +-5% 1/16W
R480	061L0603472	CHIPR 4.7K OHM +-5% 1/16W
R479	061L0603472	CHIPR 4.7K OHM +-5% 1/16W

R478	061L0603472	CHIPR 4.7K OHM +-5% 1/16W
R460	061L0603472	CHIPR 4.7K OHM +-5% 1/16W
R447	061L0603472	CHIPR 4.7K OHM +-5% 1/16W
R413	061L0603472	CHIPR 4.7K OHM +-5% 1/16W
R412	061L0603472	CHIPR 4.7K OHM +-5% 1/16W
R454	061L0603750	CHIPR 75 OHM+-5% 1/16W
R455	061L0603750	CHIPR 75 OHM+-5% 1/16W
R456	061L0603750	CHIPR 75 OHM+-5% 1/16W
R473	061L1206151	CHIP 150OHM 1/4W
R444	061L1206151	CHIP 150OHM 1/4W
C429	065G0603100 31	CHIP 10PF+-0.5PF 50V NPO
C470	065G0603102 31	CHIP 1000PF 50V NPO
C469	065G0603102 31	CHIP 1000PF 50V NPO
C468	065G0603102 31	CHIP 1000PF 50V NPO
C467	065G0603102 31	CHIP 1000PF 50V NPO
C466	065G0603102 31	CHIP 1000PF 50V NPO
C465	065G0603102 31	CHIP 1000PF 50V NPO
C464	065G0603102 31	CHIP 1000PF 50V NPO
C463	065G0603102 31	CHIP 1000PF 50V NPO
C462	065G0603102 31	CHIP 1000PF 50V NPO
C401	065G0603102 31	CHIP 1000PF 50V NPO
C402	065G0603102 31	CHIP 1000PF 50V NPO
C456	065G0603102 31	CHIP 1000PF 50V NPO
C457	065G0603102 31	CHIP 1000PF 50V NPO
C458	065G0603102 31	CHIP 1000PF 50V NPO
C459	065G0603102 31	CHIP 1000PF 50V NPO
C460	065G0603102 31	CHIP 1000PF 50V NPO
C461	065G0603102 31	CHIP 1000PF 50V NPO
C448	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C447	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C446	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C445	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C444	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C443	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C442	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C441	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C440	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C449	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C450	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C454	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C455	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C701	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C702	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C703	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C704	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C705	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C706	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C409	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C410	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C411	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C413	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C414	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C416	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R

C417	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C418	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C419	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C420	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C439	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C438	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C437	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C436	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C425	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C424	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C423	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C422	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C421	065G0603104 12	CER2 0603 X7R 16V 100N PM10 R
C427	065G0603220 31	CER1 0603 NP0 50V 22P PM5 R
C428	065G0603220 31	CER1 0603 NP0 50V 22P PM5 R
C430	065G0603220 31	CER1 0603 NP0 50V 22P PM5 R
C412	065G0603224 15	CHIP 0.22UF 16VX5R
C408	065G0603473 32	CHIP 0.047UF 50V X7R
C407	065G0603473 32	CHIP 0.047UF 50V X7R
C406	065G0603473 32	CHIP 0.047UF 50V X7R
C405	065G0603473 32	CHIP 0.047UF 50V X7R
C404	065G0603473 32	CHIP 0.047UF 50V X7R
C403	065G0603473 32	CHIP 0.047UF 50V X7R
FB407	071G 56D102	B201209D102TT
FB707	071G 56K121	CHIP BEAD
FB704	071G 56K121	CHIP BEAD
FB703	071G 56K121	CHIP BEAD
FB702	071G 56K121	CHIP BEAD
FB701	071G 56K121	CHIP BEAD
FB412	071G 56K121 M	CHIP BEAD
FB411	071G 56K121 M	CHIP BEAD
FB410	071G 56K121 M	CHIP BEAD
FB408	071G 56K121 M	CHIP BEAD
FB414	071G 59B121 K	CHIP BEAD 120 OHM 0603FBM-11-1
FB413	071G 59B121 K	CHIP BEAD 120 OHM 0603FBM-11-1
FB420	071G 59B121 K	CHIP BEAD 120 OHM 0603FBM-11-1
FB419	071G 59B121 K	CHIP BEAD 120 OHM 0603FBM-11-1
FB418	071G 59B121 K	CHIP BEAD 120 OHM 0603FBM-11-1
FB417	071G 59B121 K	CHIP BEAD 120 OHM 0603FBM-11-1
FB416	071G 59B121 K	CHIP BEAD 120 OHM 0603FBM-11-1
FB415	071G 59B121 K	CHIP BEAD 120 OHM 0603FBM-11-1
FB404	071G 59B300 K	BEAD 30
FB403	071G 59B300 K	BEAD 30
FB401	071G 59B300 K	BEAD 30
D415	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D414	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D413	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D412	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D411	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D410	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D409	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D408	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D407	093G 64 33	DIO SIG SM BAV99 (PHSE)R

D406	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D405	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D404	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D417	093G 64 42 PP	BAV70 SOT-23
D416	093G 64 42 PP	BAV70 SOT-23
ZD414	093G 39S 34 T	UDZS5.6B
ZD413	093G 39S 34 T	UDZS5.6B
ZD412	093G 39S 34 T	UDZS5.6B
ZD411	093G 39S 34 T	UDZS5.6B
ZD410	093G 39S 34 T	UDZS5.6B
ZD409	093G 39S 34 T	UDZS5.6B
ZD408	093G 39S 34 T	UDZS5.6B
ZD407	093G 39S 34 T	UDZS5.6B
ZD406	093G 39S 34 T	UDZS5.6B
ZD405	093G 39S 34 T	UDZS5.6B
ZD404	093G 39S 34 T	UDZS5.6B
ZD403	093G 39S 34 T	UDZS5.6B
ZD402	093G 39S 34 T	UDZS5.6B
ZD401	093G 39S 34 T	UDZS5.6B
D701	093G2040 3F	FA20-04
D702	093G2040 3F	FA20-04
	715G1767 F	MAIN BOARD

Pwpc Board

Location	Vendor P/N	Description
CN831	033G8021 2D U	3.5mm WAFER
CN833	033G8021 2D U	3.5mm WAFER
CN851	033G8021 2D U	3.5mm WAFER
CN853	033G8021 2D U	3.5mm WAFER
IC902	056G 139 3A	PC123Y22FZOF
NR901	061G 5810T	8 OHM 4A NTCR BY THINKING
R905	061G152M104 64	100KOHM 5% 2W
R920	061G152M208 64	0.20 OHM 2W
C808	065G 3J5096ET	5PF 5% SL 3KV
C807	065G 3J5096ET	5PF 5% SL 3KV
C803	065G 3J5096ET	5PF 5% SL 3KV
C802	065G 3J5096ET	5PF 5% SL 3KV
C801	065G 6J1006ET	10PF 5% SL 6KV
C806	065G 6J1006ET	10PF 5% SL 6KV
C900	065G305M1022BP	Y2 1000PF M 250VAC Y5P
C901	065G305M1022BP	Y2 1000PF M 250VAC Y5P
C912	065G305M2222BP	2200PF +-20%
C936	067G215D2222KV	105℃ 2200UF M 10V
C820	067G215D471 4K	ED 470UF 25V
C840	067G215D471 4K	ED 470UF 25V
C907	067G215S10115K	100UF 450V
C933	067G215S102 4K	ED1000UF 25V
C932	067G215S102 4K	ED1000UF 25V
L902	071G 55 24	FERRITE BEAD
L903	071G 55 24	FERRITE BEAD
L901	073G 174 65 LS	LINE FILTER BY LISHIN
L951	073G 253902 T	CKOLE COIL 0.8uH
L955	073G 253902 T	CKOLE COIL 0.8uH
T901	080GL17T900 T	X'FMR SRW28LEC-T93H016
PT801	080GL19T 8DN1	X'FMR DARFONTK.2006M.101
PT802	080GL19T 8DN1	X'FMR DARFONTK.2006M.101
CN901	087G 501 32 S	AC SOCKET
BD901	093G 50460 16	U4KB80R
D901	093G 6026T52T	RECTIFIER DIODE FR107
CN951	095G8013 12 15	HARNESS
	PW1742R1SMTP	POWER BOARD FOR SMT
Q901	057G 600 35	STP8NK80ZFP
D931	093G 60267	SP10100
D935	093G1506 2	FMW-2156
IC901	056G 564911	IC TEA1532AT S08
U811	056G 608 10	0Z9938
Q874	057G 417 12 T	KEC 2N3904S-RTK/PS
Q886	057G 759 2	RK7002
Q885	057G 759 2	RK7002
Q883	057G 759 2	RK7002
Q881	057G 759 2	RK7002
Q880	057G 759 2	RK7002
Q801	057G 759 2	RK7002
Q871	057G 759 2	RK7002
Q873	057G 760 4B	PDTA144WK SOT346
Q821	057G 763 14	AM9945N

Q841	057G 763 14	AM9945N
RJ827	061L0805000	CHIPR 0OHM +-5% 1/10W
RJ801	061L0805000	CHIPR 0OHM +-5% 1/10W
R849	061L0805000	CHIPR 0OHM +-5% 1/10W
R829	061L0805000	CHIPR 0OHM +-5% 1/10W
R822	061L0805100	CHIPR 10 OHM+-5% 1/10W
R823	061L0805100	CHIPR 10 OHM+-5% 1/10W
R842	061L0805100	CHIPR 10 OHM+-5% 1/10W
R843	061L0805100	CHIPR 10 OHM+-5% 1/10W
R954	061L0805100	CHIPR 10 OHM+-5% 1/10W
R856	061L0805100 2F	CHIP 10K OHM 1/8W 1%
R855	061L0805100 2F	CHIP 10K OHM 1/8W 1%
R836	061L0805100 2F	CHIP 10K OHM 1/8W 1%
R835	061L0805100 2F	CHIP 10K OHM 1/8W 1%
R941	061L0805102	CHIPR 1K OHM +-5% 1/10W
R851	061L0805102	CHIPR 1K OHM +-5% 1/10W
R888	061L0805102	CHIPR 1K OHM +-5% 1/10W
R886	061L0805102	CHIPR 1K OHM +-5% 1/10W
R884	061L0805102	CHIPR 1K OHM +-5% 1/10W
R882	061L0805102	CHIPR 1K OHM +-5% 1/10W
R831	061L0805102	CHIPR 1K OHM +-5% 1/10W
R801	061L0805103	CHIPR 10K OHM +-5% 1/10W
R804	061L0805103	CHIPR 10K OHM +-5% 1/10W
R807	061L0805103	CHIPR 10K OHM +-5% 1/10W
R880	061L0805103	CHIPR 10K OHM +-5% 1/10W
R872	061L0805104	CHIPR 100K OHM+-5% 1/10W
R802	061L0805104	CHIPR 100K OHM+-5% 1/10W
R887	061L0805104	CHIPR 100K OHM+-5% 1/10W
R885	061L0805104	CHIPR 100K OHM+-5% 1/10W
R883	061L0805104	CHIPR 100K OHM+-5% 1/10W
R881	061L0805104	CHIPR 100K OHM+-5% 1/10W
R819	061L0805105	CHIP 1M OHM 5% 1/8W
R912	061L0805105	CHIP 1M OHM 5% 1/8W
R946	061L0805110 3F	110KOHM 1% 1/10W
R833	061L0805122	1.2KOHM +-5%,1/8W,0805
R853	061L0805122	1.2KOHM +-5%,1/8W,0805
R923	061L0805123	CHIP 12KOHM 1/8W
R914	061L0805124 1F	CHIP 1.24K OHM 1/10W 1%
R916	061L0805152	CHIPR 1.5K OHM +-5% 1/10W
R873	061L0805202	CHIP 2KOHM 1/8W
R816	061L0805203	CHIPR 20KOHM +-5% 1/8W
R865	061L0805232 0F	CHIP 232OHM
R815	061L0805303	CHIP 30K OHM 1/8W
R813	061L0805330 2F	CHIP 33KOHM 1/8W 1%
R874	061L0805331	CHIP 330 OHM 5% 1/10W
R917	061L0805333	CHIP 33KOHM 1% 1/8W
R811	061L0805335	3.3M 0805
R943	061L0805510 1F	CHIP 5.1K OHM 1/10W 1%
R812	061L0805624	CHIP 620KOHM 5% 0805 1/8W
R825	061L0805752	CHIP 7.5K OHM 1/10W
R837	061L0805752	CHIP 7.5K OHM 1/10W
R945	061L0805910 1F	CHIP 9.1K OHM 1/10W 1%
R944	061L0805910 1F	CHIP 9.1K OHM 1/10W 1%

RJ804	061L1206000	CHIPR 0 OHM +-5% 1/8W
R926	061L1206000	CHIPR 0 OHM +-5% 1/8W
R918	061L1206000	CHIPR 0 OHM +-5% 1/8W
R907	061L1206103	CHIP 10KOHM 5% 1/4W
R904	061L1206155	1.5M/0805
R910	061L1206155	1.5M/0805
R937	061L1206182	CHIP 1.8KOHM
R931	061L1206229	CHIP 2.2OHM 5% 1/8W
R932	061L1206229	CHIP 2.2OHM 5% 1/8W
R927	061L1206472	CHIP 4.7KOHM 5% 1/4W
R900	061L1206684	CHIPR 680K OHM+-5% 1/8W
R901	061L1206684	CHIPR 680K OHM+-5% 1/8W
R902	061L1206684	CHIPR 680K OHM+-5% 1/8W
C861	065G0805102 31	1000PF 50V NPO
C838	065G0805102 31	1000PF 50V NPO
C822	065G0805102 32	CHIP 1000P 50VX7R 0805
C823	065G0805102 32	CHIP 1000P 50VX7R 0805
C842	065G0805102 32	CHIP 1000P 50VX7R 0805
C843	065G0805102 32	CHIP 1000P 50VX7R 0805
C887	065G0805103 22	CHIP 0.01uF 25V X7R 0805
C885	065G0805103 22	CHIP 0.01uF 25V X7R 0805
C883	065G0805103 22	CHIP 0.01uF 25V X7R 0805
C881	065G0805103 22	CHIP 0.01uF 25V X7R 0805
C819	065G0805103 22	CHIP 0.01uF 25V X7R 0805
C913	065G0805104 22	0.1UF +-10% 25V X7R 080
C955	065G0805104 22	0.1UF +-10% 25V X7R 080
C951	065G0805104 22	0.1UF +-10% 25V X7R 080
C880	065G0805104 22	0.1UF +-10% 25V X7R 080
C832	065G0805104 22	0.1UF +-10% 25V X7R 080
C812	065G0805104 22	0.1UF +-10% 25V X7R 080
C811	065G0805105 22	CHIP 1UF 25V X7R 0805
C821	065G0805105 22	CHIP 1UF 25V X7R 0805
C841	065G0805105 22	CHIP 1UF 25V X7R 0805
C846	065G0805105 22	CHIP 1UF 25V X7R 0805
C874	065G0805105 22	CHIP 1UF 25V X7R 0805
C914	065G0805105 22	CHIP 1UF 25V X7R 0805
C915	065G0805123 22	CHIP 12nF 25V X7R 0805
C860	065G0805221 22	CHIP 220PF 25V X7R 0805
C847	065G0805223 22	CHIP 0.022UF 25V X7R 0805
C831	065G0805331 32	CHIP 330P 50V X7R 0805
C865	065G0805333 32	CHIP 0.033UF 50V
C917	065G0805334 22	0.33UF+-10% 25V X7R 0805
C858	065G0805391 31	CHIP 390PF 50V
C813	065G0805561 31	CHIP 560PF 50V NPO 0805
C941	065G0805562 21	5600PF/25V/NPO/J
D851	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D831	093G 64 33	DIO SIG SM BAV99 (PHSE)R
D833	093G 64 42 PP	BAV70 SOT-23
D853	093G 64 42 PP	BAV70 SOT-23
D885	093G 64 44 S	LL4148WP
D887	093G 64 44 S	LL4148WP
D881	093G 64 44 S	LL4148WP
D883	093G 64 44 S	LL4148WP

ZD874	093G 39S 24 T	RLZ 5.6B LLDS
ZD975	093G 39S 25 T	RLZ5.1B LLDS
	PW1742QDR1AIP	POWER BOARD FOR AI
CN901	006G 31500	EYELET
C905	006G 31502	1.5MM RIVET
NR901	006G 31502	1.5MM RIVET
PT802	006G 31502	1.5MM RIVET
PT801	006G 31502	1.5MM RIVET
L902	006G 31502	1.5MM RIVET
T901	006G 31502	1.5MM RIVET
IC941	056G 158 10 T	AZ431AZ-AE1
R915	061G 17210052T	100HM 5% 1/4W
R952	061G 17210052T	100HM 5% 1/4W
R871	061G 17210352T	CFR 10KOHM +-5% 1/4W
R861	061G 20010452T	100K OHM 1/4W 1%
R863	061G 20033352T	33KOHM 1% 1/4W
R839	061G212Y625 KT	MGFR 6.2MOHM +-5% 1/2W
R859	061G212Y625 KT	MGFR 6.2MOHM +-5% 1/2W
C920	065G 1K102 5T	1000PF/1KV
C931	065G517K332 2T	3.3NF 500V
C927	067G 3056804KT	ELCAP 68UF M 25V 105℃ KINGNICHI
C952	067G215B2214KT	LOW E,S,R 220UF +-20% 25V
C956	067G215B2214KT	LOW E,S,R 220UF +-20% 25V
FB902	071G 55 23 S	BEAD
FB903	071G 55 23 S	BEAD
FB905	071G 55 23 S	BEAD
FB901	071G 55 29	FERRITE BEAD
F902	084G 55 4	FOSE 382-5A 250V SICKMANN
F901	084G 55 7 GP	FUSE 3.15A 250V
ZD951	093G 39A3552T	ZENER DIODE P6KE8.2A ZOWIE
D919	093G 6038T52T	FR103
D926	093G 6038T52T	FR103
	715G1813 I	POWER BOARD

Key Board

Location	Vendor P/N	Description
	KEPC780KE7P	KEY BOARD
CN101	033G3802 6H	WAFER 6P RIGHT ANGLE PITCH 2.0
SW1	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
SW2	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
SW3	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
SW4	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
SW5	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
SW6	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
SW7	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
SW8	077G 600 1GCJ	TACT SWITCH TSPB-2 -NP
LED1	081G 12 1 GP	GP32032ME
	AIK780KE7SMTP	KEY BOARD
R109	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R100	061L0603000	RST SM 0603 JUMP MAX 0R05 R
R101	061L0603101	CHIPR 100 OHM +-5% 1/16W
R104	061L0603102	CHIPR 1K OHM +-5% 1/16W
R108	061L0603102	CHIPR 1K OHM +-5% 1/16W
R103	061L0603103	CHIPR 10K OHM +-5% 1/16W
R107	061L0603103	CHIPR 10K OHM +-5% 1/16W
R106	061L0603473	RST SM 0603 RC0603 47K PM5 R
R102	061L0603473	RST SM 0603 RC0603 47K PM5 R
C101	065G0603103 32	0.01UF +-10% 50V X7R
C102	065G0603103 32	0.01UF +-10% 50V X7R
C103	065G0603103 32	0.01UF +-10% 50V X7R
C104	065G0603103 32	0.01UF +-10% 50V X7R
C105	065G0603103 32	0.01UF +-10% 50V X7R
	715G1755 1	KEY BOARD