

Service  
Service  
Service



170S7FS/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 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.)

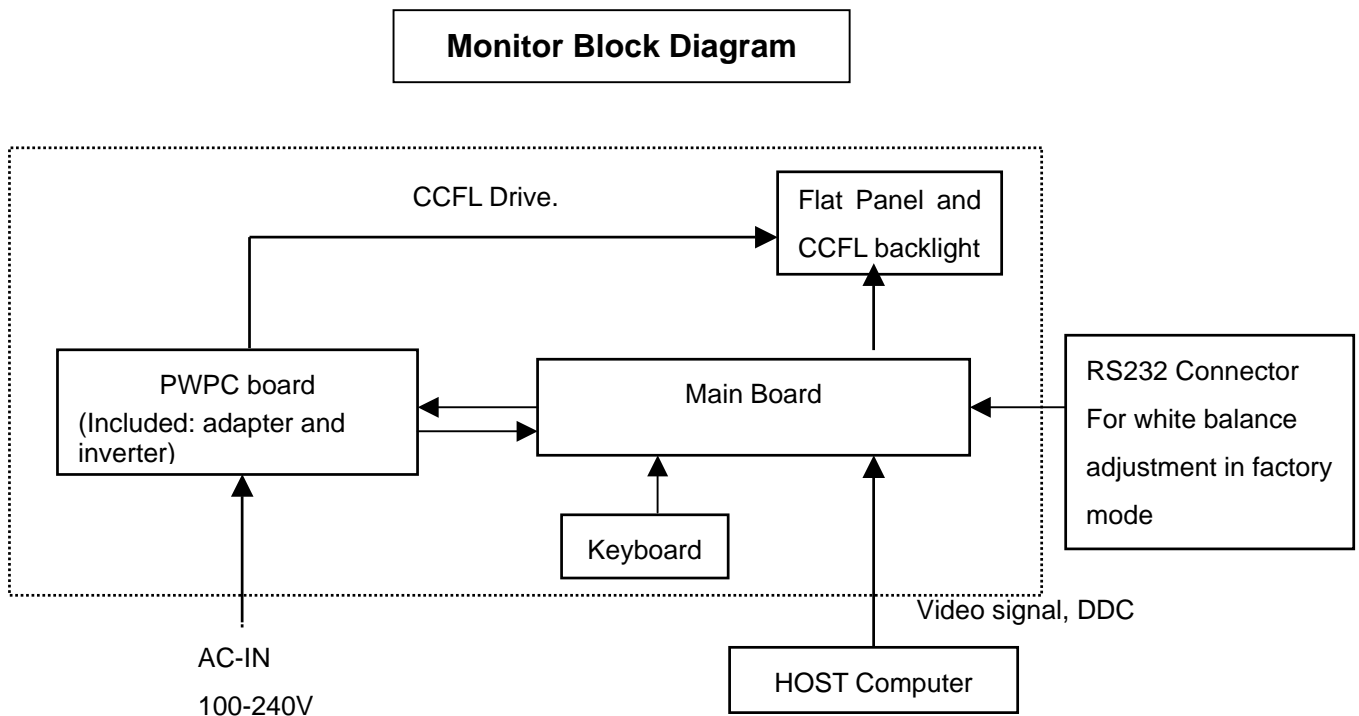
# 1. Monitor Specifications

|                              |                         |   |
|------------------------------|-------------------------|---|
| LCD Panel                    | Screen type             | Active matrix - TFT LCD   |
|                              | Panel Type              | LM170E01-TLBB (LPL)<br>QD17EL07 (QDI)   |
|                              | Size                    | 430mm (17.0")   |
|                              | Pixel pitch             | 0.264mm(H) x 0.264mm(V)   |
|                              | Viewable angle (CR>=10) | Horizontal 140°, Vertical 140° (type) (LPL)<br>Horizontal 140°, Vertical 125° (type) (QDI)    |
|                              | Response time           | 8 ms (type) (LPL)<br>8 ms (type) (QDI)  |
| Input                        | Video                   | R, G, B Analog Interface  |
|                              | 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)  |
| Recommended Resolution       |                         | 1280 x 1024 at 60Hz (analog input)  |
| Plug & Play                  |                         | VESA DDC2B  |
| Power Consumption            |                         | Power on: < 30 W<br>Power off: < 1 W  |
| Input Connector              |                         | D -Sub 15pin  |
| Input Video Signal           |                         | 0.7 Vp-p, input impedance, 75 ohm @DC   |
| Tilt                         |                         | -5° ~ 25°   |
| Maximum Screen Size          |                         | Horizontal: 337.9mm;Vertical: 270.3 mm  |
| Power Source                 |                         | 100-240 VAC, 50/60 Hz   |
| Environmental Considerations |                         | Operating Temp: 5°C to 40°C<br>Storage Temp.: -20°C to 60°C<br>Relative Humidity: 20%-80% Max |
| Weight (Net)                 |                         | 4.7kg   |
| 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.



### 3. Operation instructions

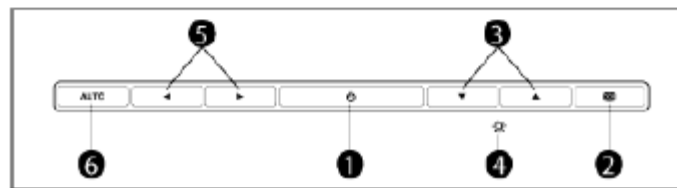
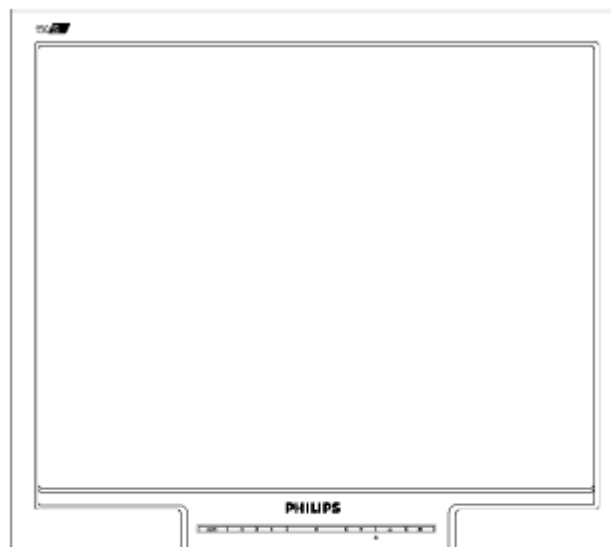
#### 3.1 General Instructions






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.

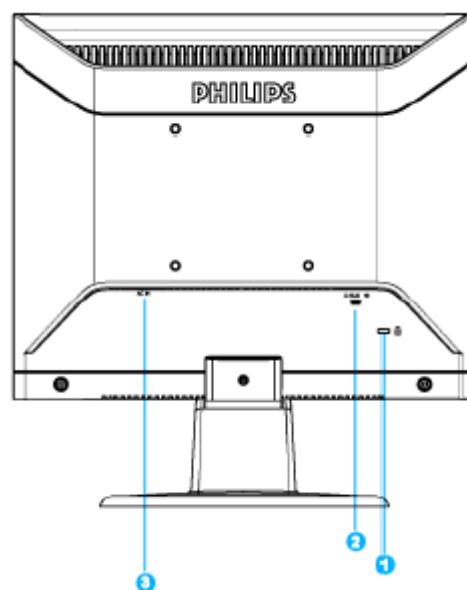
#### 3.2 Control Buttons

##### 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

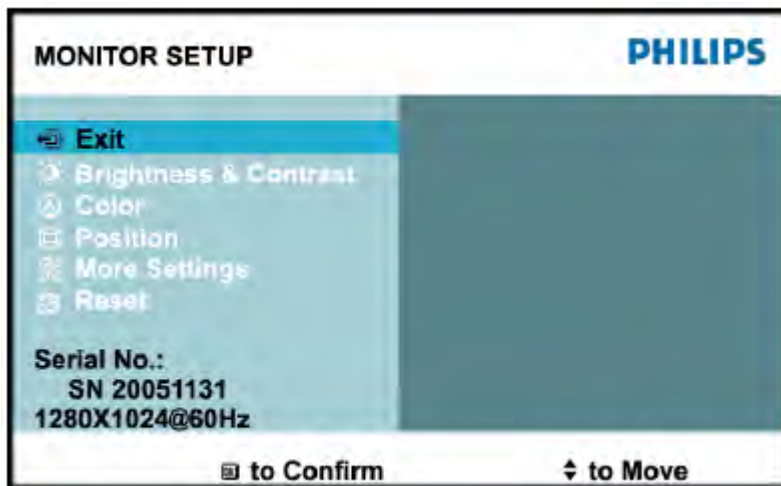


- 1 Kensington anti-thief lock
- 2 VGA input
- 3 AC power input

### 3.3 Adjusting the Picture

This is a 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.

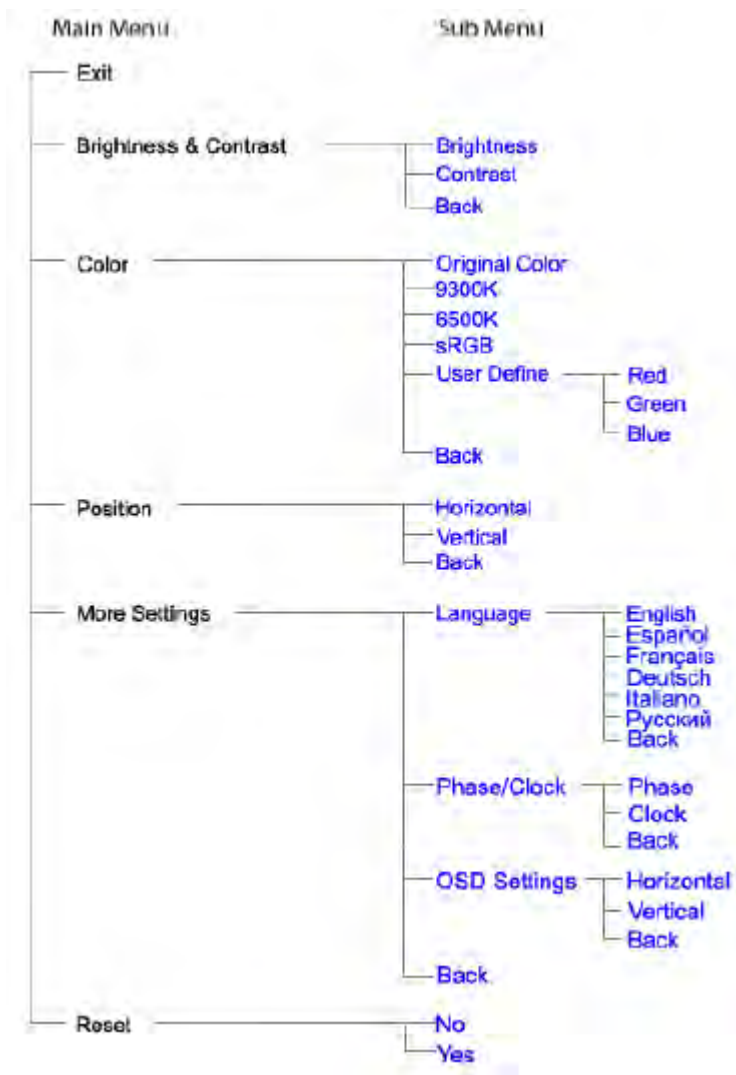
When you press the  button on the front control of your monitor, the On-Screen Display (OSD) main controls window will pop up and you can then start making adjustments to your monitor's various features. Use the  or the  keys to make your adjustments.



#### 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.

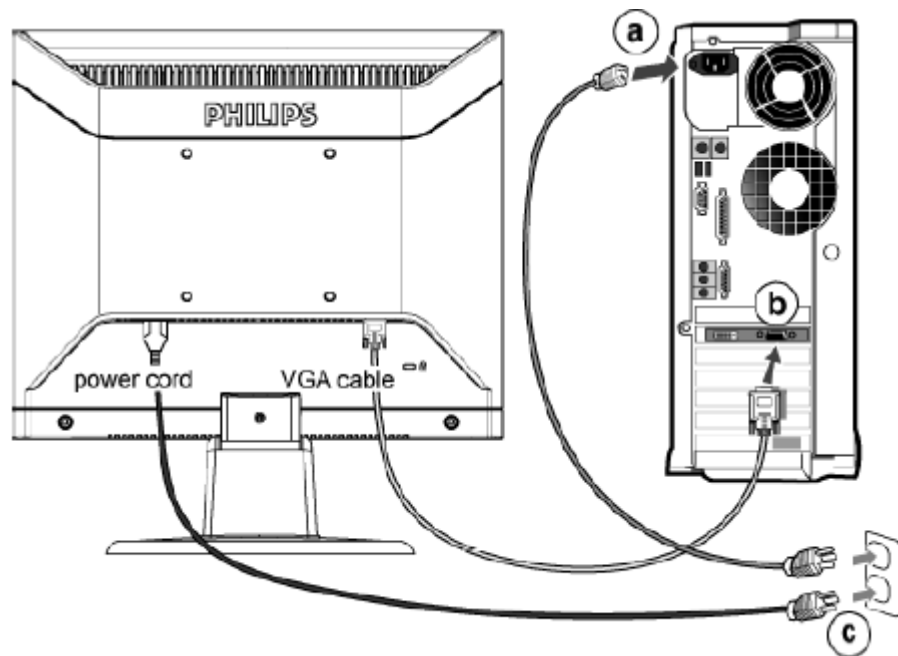
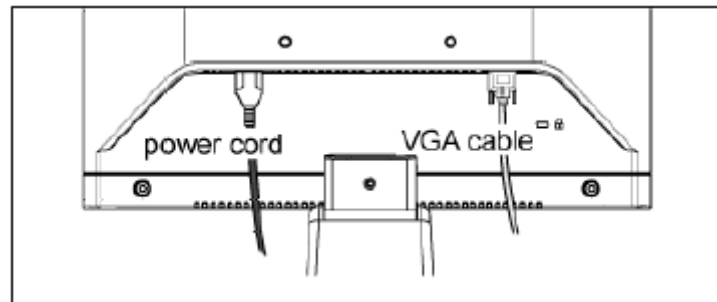
**For Europe Model only:**





### 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.)

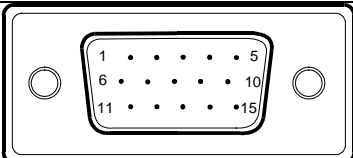


- 2) Connect to PC

- (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

| 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  |                         |         |                        |
|  |                         |         |                        |

### 4.2 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****LM170E01-TLBB Panel**

|                        |  |
|------------------------|--|
| Active screen size     | 17.0 inch (43.27cm) diagonal                                   |
| Outline Dimension      | 358.5(H) x 296.5(V) x 17.0(D) mm(Typ.)                         |
| Pixel Pitch            | 0.264 mm x 0.264 mm  |
| Pixel Format           | 1280 horiz. by 1024 vert. Pixels. RGB stripe arrangement       |
| Display Colors         | 16.2M colors   |
| Luminance, white       | 300 cd/m <sup>2</sup> (Typ. Center 1 point)                    |
| Power Consumption      | 19.6 Watts(Typ.)   |
| Weight                 | 2150g (Typ.)   |
| Display operating mode | Transmissive mode, normally white                              |
| Surface treatments     | Hard coating (3H), Anti-glare treatment of the front polarizer |

**QD17EL07 Panel**

| Parameter                        | Specifications                  | Unit  |
|----------------------------------|---------------------------------|-------|
| Display size                     | 43(17") Diagonal                | mm    |
| Active area                      | 337.9(H) × 270.3(V)             | mm    |
| Pixel format                     | 1280 (H) × 1024(V)              | Pixel |
|                                  | (1 pixel = R+G+B dots)          |       |
| Pixel pitch                      | 0.264(H) × 0.264 (V)            | mm    |
| Pixel configuration              | R, G, B vertical stripe         |       |
| Display mode                     | Normally white                  |       |
| Unit outline dimensions (typ.)*1 | 296.5(W) × 358.5(H) × 17(T)max. | mm    |
| Mass                             | 1700 max.                       | g     |
| Surface treatment                | Anti-glare and hard-coating 3H  |       |

### 4.3.2 Optical Characteristics

#### LM170E01-TLBB Panel

| Parameter                         | Symbol       | Values |       |       | Units             |
|-----------------------------------|--------------|--------|-------|-------|-------------------|
|                                   |              | Min.   | Typ.  | Max.  |                   |
| Contrast ratio                    | CR           | 500    | 700   | -     |                   |
| Surface luminance, white          | $L_{WH}$     | 250    | 300   | -     | cd/m <sup>2</sup> |
| Luminance uniformity              | $\Delta L_9$ | 75     | -     | -     | %                 |
| Response time                     | Tr           |        | 8     | 16    | ms                |
| Rise time                         | $Tr_R$       | -      | 2     | 4     |                   |
| Decay time                        | $Tr_D$       | -      | 6     | 12    |                   |
| CIE color coordinates             |              |        |       |       |                   |
| Red                               | XR           | 0.605  | 0.635 | 0.665 |                   |
|                                   | YR           | 0.312  | 0.342 | 0.372 |                   |
| Green                             | XG           | 0.262  | 0.292 | 0.322 |                   |
|                                   | YG           | 0.581  | 0.611 | 0.641 |                   |
| Blue                              | XB           | 0.117  | 0.147 | 0.177 |                   |
|                                   | YB           | 0.040  | 0.070 | 0.100 |                   |
| White                             | XW           | 0.283  | 0.313 | 0.343 |                   |
|                                   | YW           | 0.299  | 0.329 | 0.359 |                   |
| Viewing angle (by CR $\geq 10$ )  |              |        |       |       |                   |
| X axis, right ( $\phi=0^\circ$ )  | $\theta_r$   | 60     | 70    | -     | degree            |
| X axis, left ( $\phi=180^\circ$ ) | $\theta_l$   | 60     | 70    | -     |                   |
| Y axis, up ( $\phi=90^\circ$ )    | $\theta_u$   | 60     | 75    | -     |                   |
| Y axis, down ( $\phi=270^\circ$ ) | $\theta_d$   | 50     | 65    | -     |                   |
| Viewing angle (by CR $\geq 5$ )   |              |        |       |       |                   |
| X axis, right ( $\phi=0^\circ$ )  | $\theta_r$   | 70     | 80    | -     | degree            |
| X axis, left ( $\phi=180^\circ$ ) | $\theta_l$   | 70     | 80    | -     |                   |
| Y axis, up ( $\phi=90^\circ$ )    | $\theta_u$   | 70     | 85    | -     |                   |
| Y axis, down ( $\phi=270^\circ$ ) | $\theta_d$   | 60     | 75    | -     |                   |
| Relative brightness               |              |        |       |       |                   |
| Luminance uniformity (TCO99)      |              | -      | -     | 1.7   |                   |

| Parameter                        |            | Symbol                 | Condition           | Min.  | Typ.  | Max.  | Unit              |
|----------------------------------|------------|------------------------|---------------------|-------|-------|-------|-------------------|
| Viewing Angle Range              | Horizontal | $\theta 21, \theta 22$ | CR>10               | 60    | 70    |       | Deg.              |
|                                  | Vertical   | $\theta 11$            |                     | 55    | 65    |       | Deg.              |
|                                  |            | $\theta 12$            |                     | 50    | 60    |       | Deg.              |
|                                  | Horizontal | $\theta 21, \theta 22$ | CR>5                | 70    | 80    |       | Deg.              |
|                                  | Vertical   | $\theta 11$            |                     | 65    | 75    |       | Deg.              |
|                                  |            | $\theta 12$            |                     | 60    | 70    |       | Deg.              |
| Contrast ratio                   |            | C R n                  | $\theta =0^{\circ}$ | 400   | 600   | —     |                   |
| Response time                    |            | $\tau$                 | $\theta =0^{\circ}$ | —     | 8     | 16    | ms                |
| Rise time                        | $\tau r$   |                        |                     |       | 2     |       | ms                |
| Fall time                        | $\tau d$   |                        |                     |       | 6     |       | ms                |
| Chromaticity of White (CIE 1931) |            | Wx                     |                     | 0.283 | 0.313 | 0.343 |                   |
|                                  |            | Wy                     |                     | 0.299 | 0.329 | 0.359 |                   |
| Chromaticity of Red (CIE 1931)   |            | Rx                     |                     | 0.612 | 0.642 | 0.672 |                   |
|                                  |            | Ry                     |                     | 0.311 | 0.341 | 0.371 |                   |
| Chromaticity of Green (CIE 1931) |            | Gx                     |                     | 0.249 | 0.279 | 0.309 |                   |
|                                  |            | Gy                     |                     | 0.580 | 0.610 | 0.640 |                   |
| Chromaticity of Blue (CIE 1931)  |            | Bx                     |                     | 0.113 | 0.143 | 0.173 |                   |
|                                  |            | By                     |                     | 0.053 | 0.083 | 0.113 |                   |
| Luminance of white               |            | Y L                    |                     | 220   | 270   |       | Cd/m <sup>2</sup> |
| White Uniformity                 |            | $\delta W$             |                     | —     | 1.25  | 1.3   |                   |

## 4.3.3 Electrical Characteristics

## LM170E01-TLBB Panel

The LM170E01-TLBB requires two power inputs. One is employed to power the LCD electronics and to drive the TFT array and liquid crystal. Another which powers the CCFL, is typically generated by an inverter. The inverter is an external unit to the LCD.

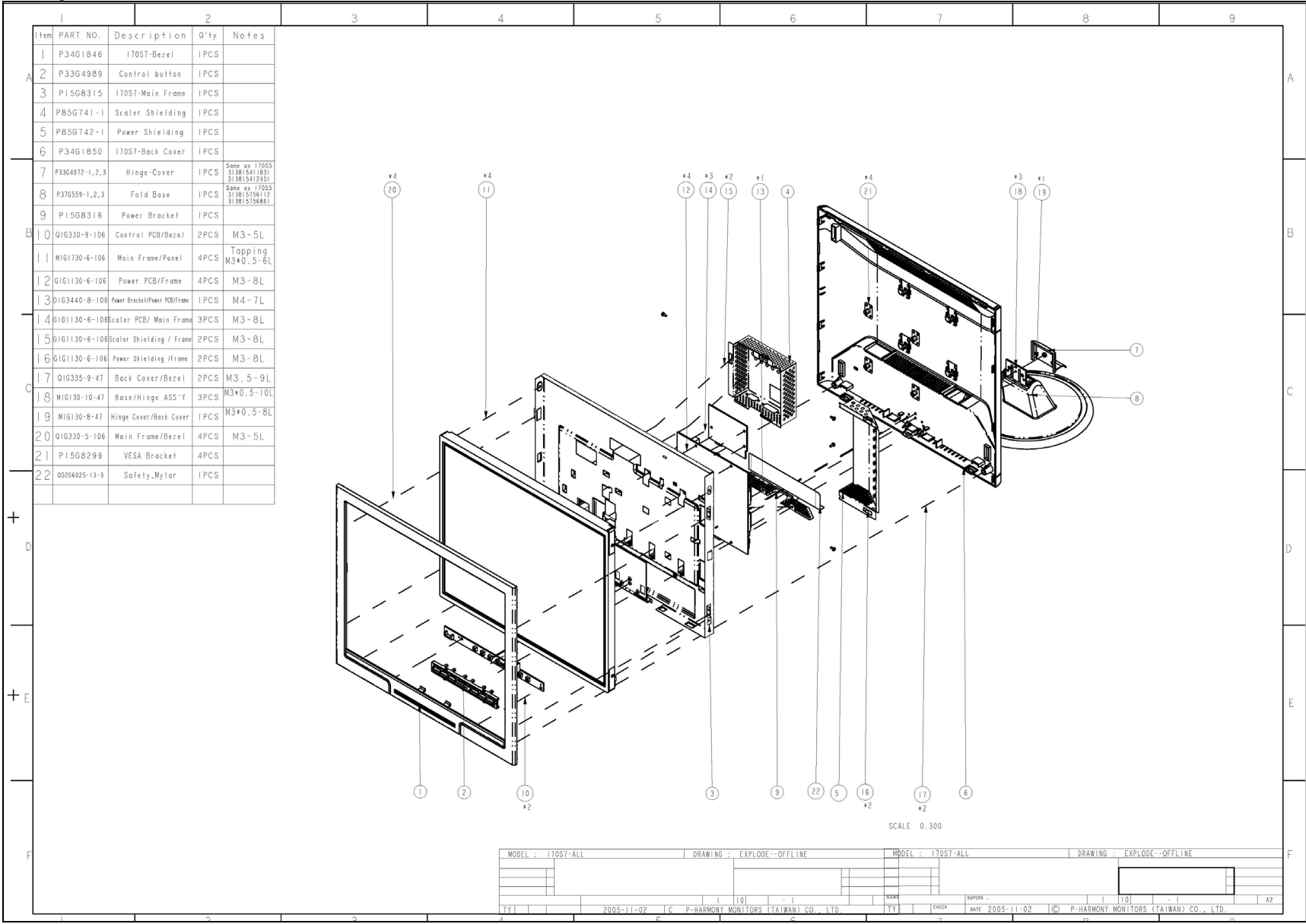
| Parameter                                | Symbol     | Values          |                 |                 | Units      |
|--|------------|-----------------|-----------------|-----------------|------------|
|  |            | Min.            | Typ.            | Max.            |            |
| MODULE :                                 |            |                 |                 |                 |            |
| Power Supply Input Voltage               | $V_{CC}$   | 4.5             | 5.0             | 5.5             | V          |
| Permissive Power Input Ripple            | $V_{RF}$   | -               | -               | 0.1             | V          |
| Power Supply Input Current               | $I_{CC}$   | -               | 0.54            | 0.63            | A          |
| Differential Impedance                   | $Z_m$      | 90              | 100             | 110             | ohm        |
| Power Consumption                        | $P_C$      | -               | 2.7             | 3.15            | Watts      |
| Rush Current                             | $I_{RUSH}$ | -               | 2.0             | 3.0             | A          |
| LAMP for each CCFL:                      |            |                 |                 |                 |            |
| Operating Voltage                        | $V_{BL}$   | 640<br>(@7.0mA) | 650<br>(@6.5mA) | 740<br>(@3.0mA) | $V_{RMS}$  |
| Operating Current                        | $I_{BL}$   | 2.5             | 6.5             | 7.0             | $mA_{RMS}$ |
| Established Starting Voltage<br>at 25 °C | $V_{BS}$   | -               | -               | 1000            | $V_{RMS}$  |
| at 0 °C                                  |            | -               | -               | 1250            | $V_{RMS}$  |
| Operating Frequency                      | $f_{BL}$   | 40              | 60              | 70              | kHz        |
| Discharge Stabilization Time             | $T_S$      | -               | -               | 3               | Minutes    |
| Power Consumption                        | $P_{BL}$   | -               | 16.90           | 18.60           | Watts      |
| Life Time                                |            | 50,000          | -               | -               | Hrs        |

## QD17EL07 Panel

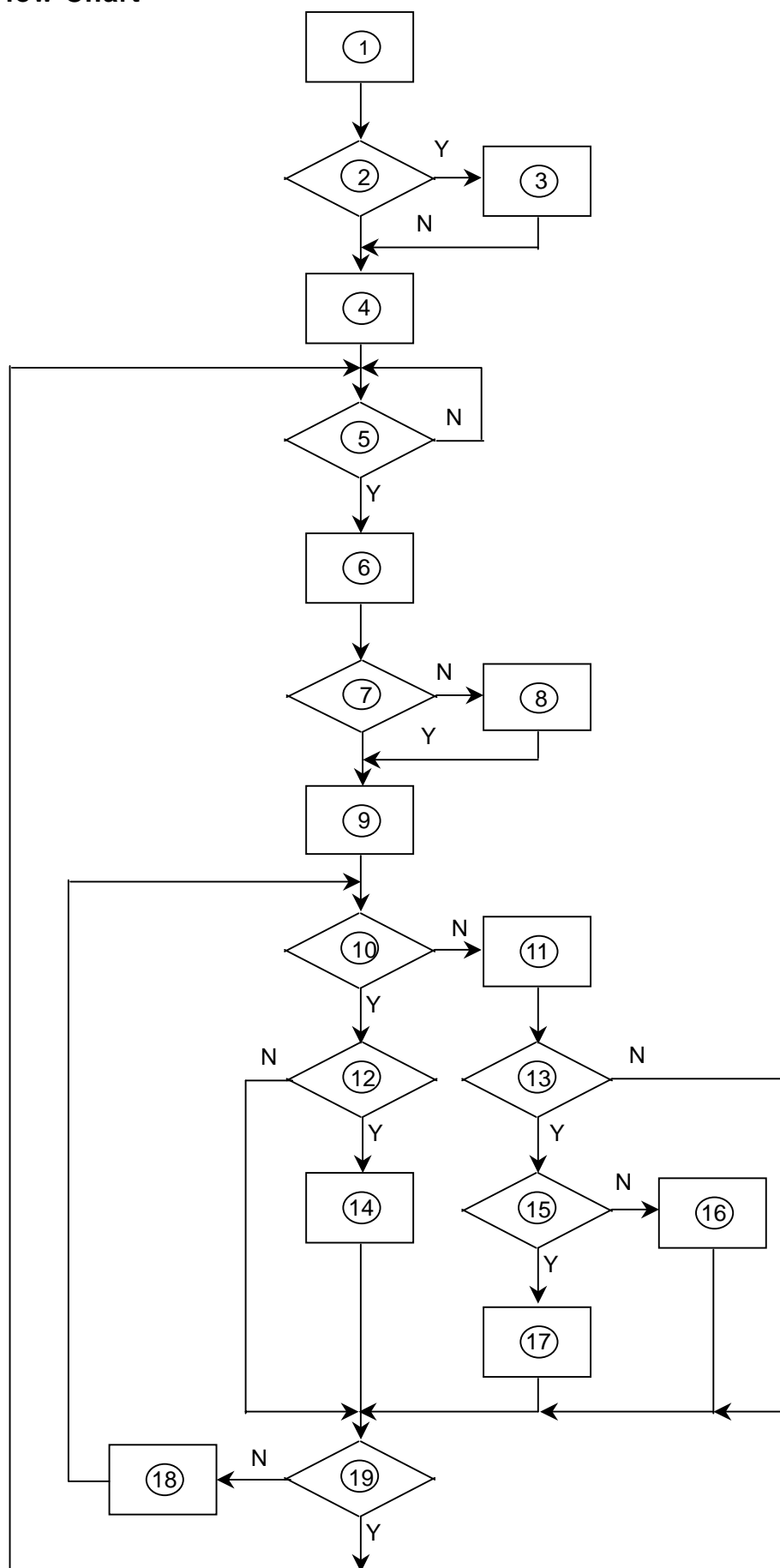
| Parameter                            |                         | Sym.       | Min. | Typ. | Max. | Unit     | Remark             |
|--------------------------------------|-------------------------|------------|------|------|------|----------|--------------------|
| VDD                                  | Supply voltage          | VDD        | +4.5 | +5.0 | +5.5 | V        | 【Note2】            |
| Current dissipation                  | @ Full Back pattern     | IDD        | —    | 760  | 1200 | mA       | 【Note3】            |
|                                      | @ Full White pattern    |            | —    | 480  | —    | mA       |                    |
|                                      | @ 1-line on/off pattern |            | —    | 700  | —    | mA       |                    |
|                                      | @ 1-dot on/off pattern  |            | —    | 860  | —    | mA       |                    |
|                                      | @ Mosaic pattern        |            | —    | 630  | —    | mA       |                    |
| Permissive input ripple voltage      |                         | $V_{RP}$   | —    | —    | 100  | mV p-p   | VDD=+5.5V          |
| Differential input Threshold voltage | High                    | $V_{TH}$   | —    | —    | +100 | mV       | $V_{CM}=+1.2V$     |
|                                      | Low                     | $V_{TL}$   | -100 | —    | —    | mV       | 【Note1】            |
| Terminal resistor                    |                         | $R_T$      | —    | 100  | —    | $\Omega$ | Differential input |
| Rush current                         |                         | $I_{RUSH}$ | —    | —    | 3    | A        | Rise time 470uS    |

| Parameter              | Symbol | Min.  | Typ.  | Max.  | Unit              | Remark  |
|------------------------|--------|-------|-------|-------|-------------------|---------|
| Lamp current range     | $I_L$  | 4.0   | 7.0   | 8.0   | mA <sub>RMS</sub> | 【Note1】 |
| Lamp voltage           | $V_L$  | 550.8 | 612   | 673.2 | V <sub>rms</sub>  |         |
| Lamp power consumption | $P_L$  | —     | 4.28  | —     | W                 | 【Note2】 |
| Lamp frequency         | $F_L$  | —     | 47    | —     | kHz               | 【Note3】 |
| Kick-off voltage       | $V_s$  | —     | —     | 1200  | V <sub>rms</sub>  | Ta=25°C |
|                        |        | —     | —     | 1500  | V <sub>rms</sub>  | Ta=0°C  |
| Lamp life time         | $L_L$  | 40000 | 50000 | —     | hour              | 【Note5】 |

5. Block Diagram  
5.1 Monitor Exploded View



## 5.2 Software Flow Chart



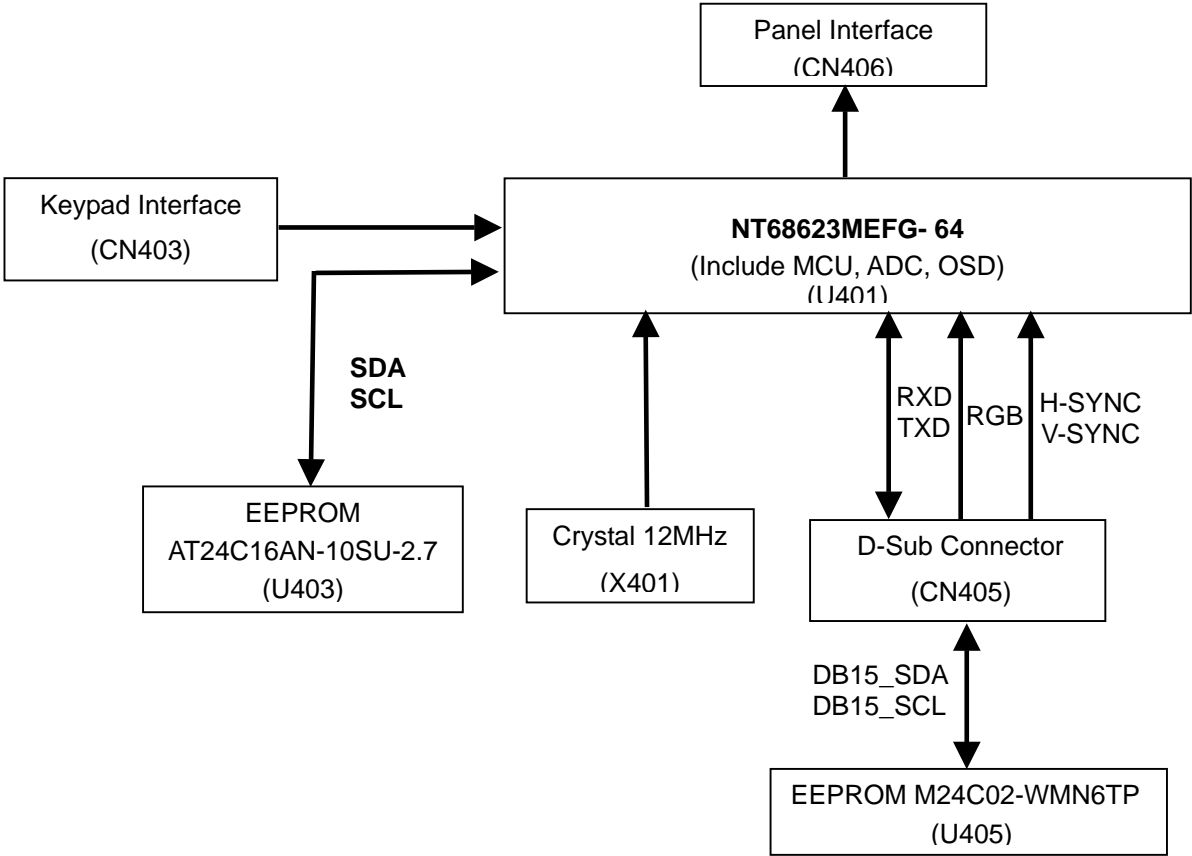


- 1) MCU Initializes.
- 2) Is the EEprom blank?
- 3) Program the EEprom by default values.
- 4) Get the PWM value of brightness from EEprom.
- 5) Is the power key pressed?
- 6) Clear all global flags.
- 7) Are the AUTO and SELECT keys pressed?
- 8) Enter factory mode.
- 9) Save the power key status into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

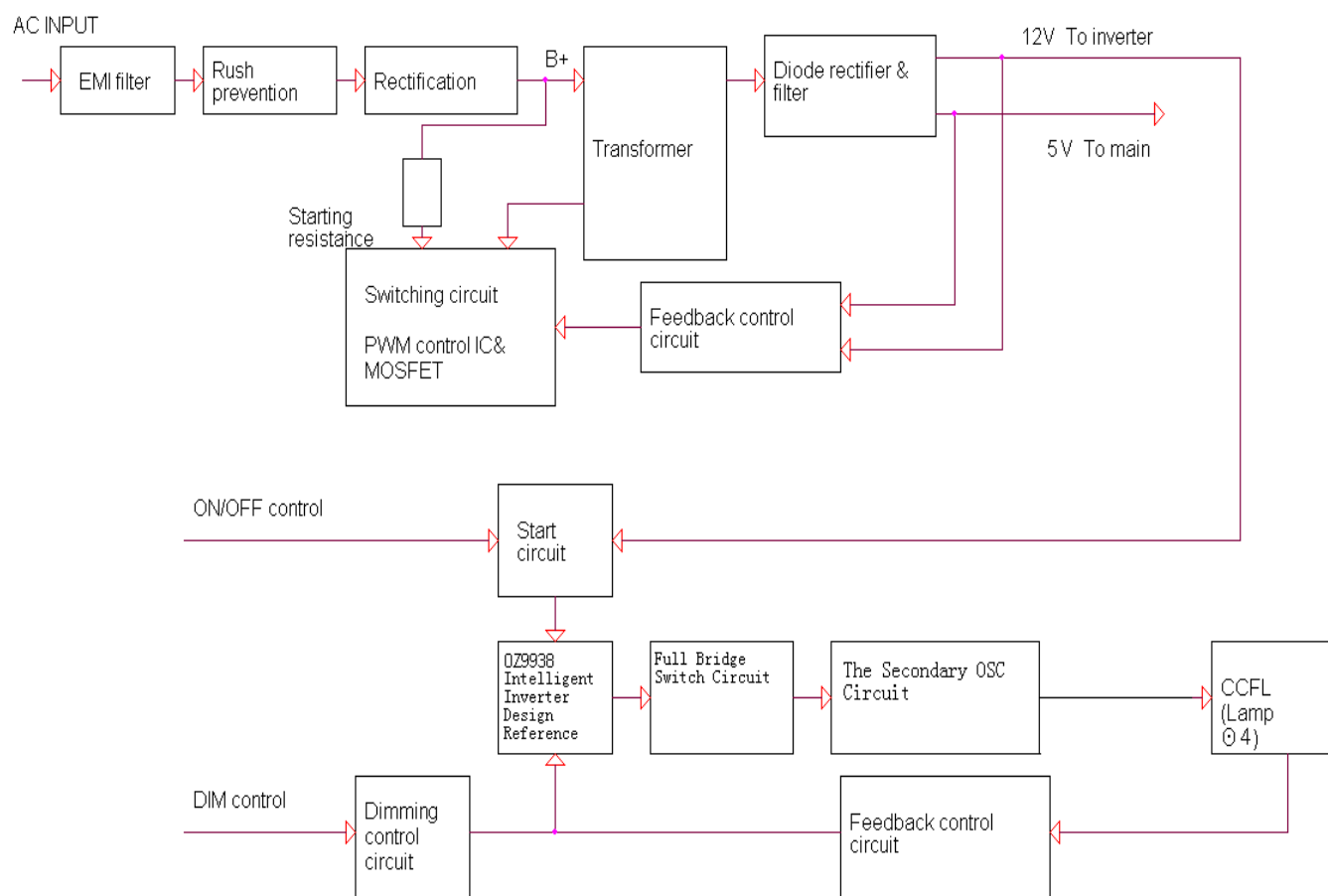
Turn on the LED and set it to green color. Scalar initializes.

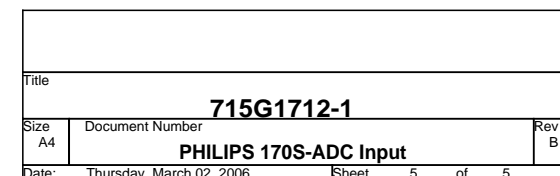
- 10) In standby mode?
- 11) Update the lifetime of back light.
- 12) Check the analog port, are there any signals coming?
- 13) Does the scalar send out an interrupt request?
- 14) Wake up the scalar.
- 15) Are there any signals coming from analog port?
- 16) Display "No connection Check Signal Cable"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

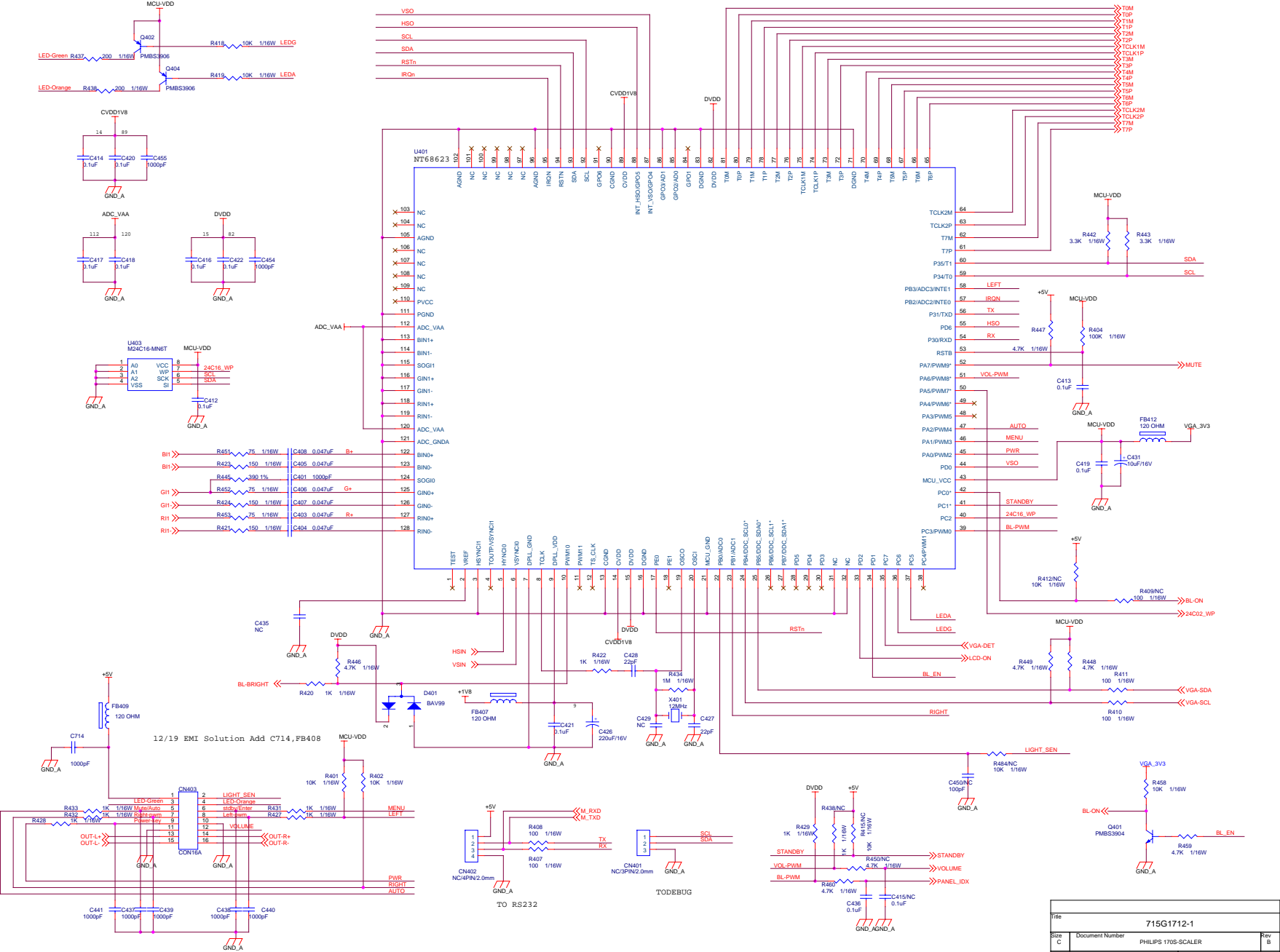
5.3 Electrical Block Diagram  
5.3.1 Main Board

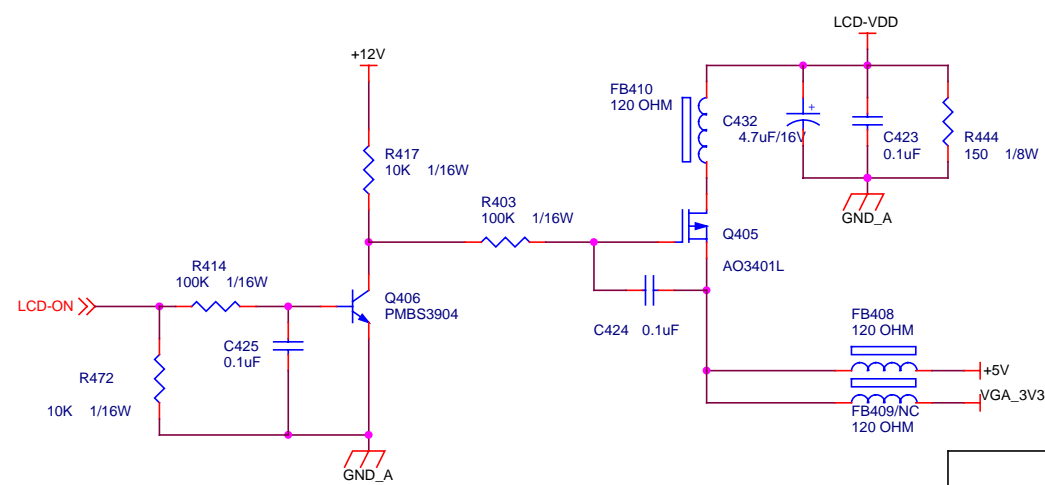
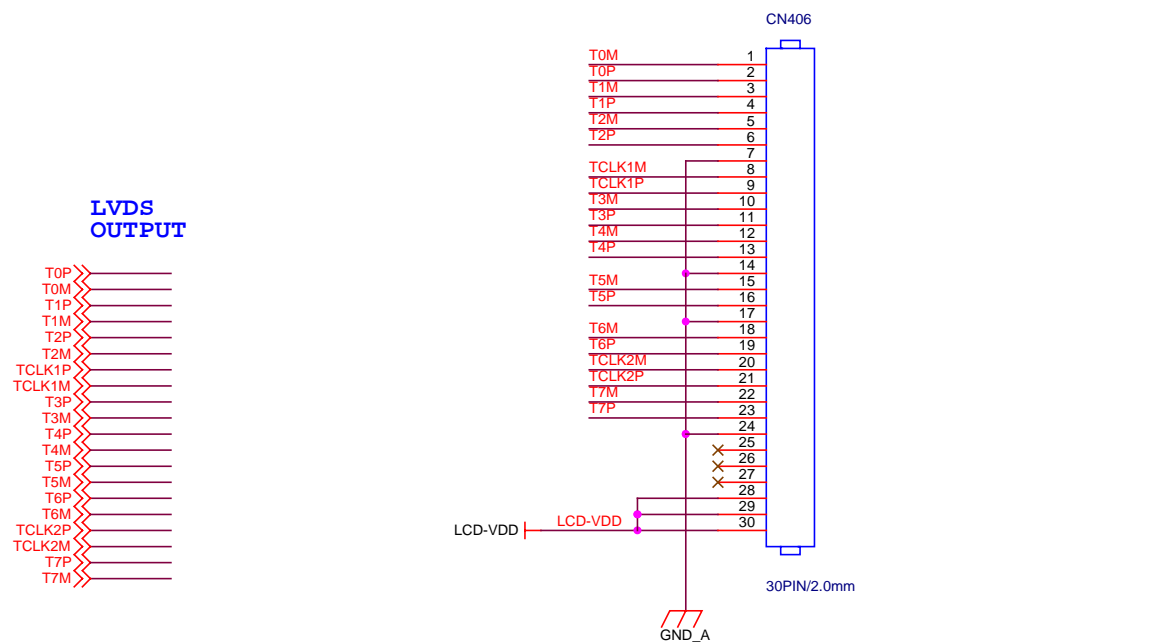


## 5.3.2 Inverter/Power Board

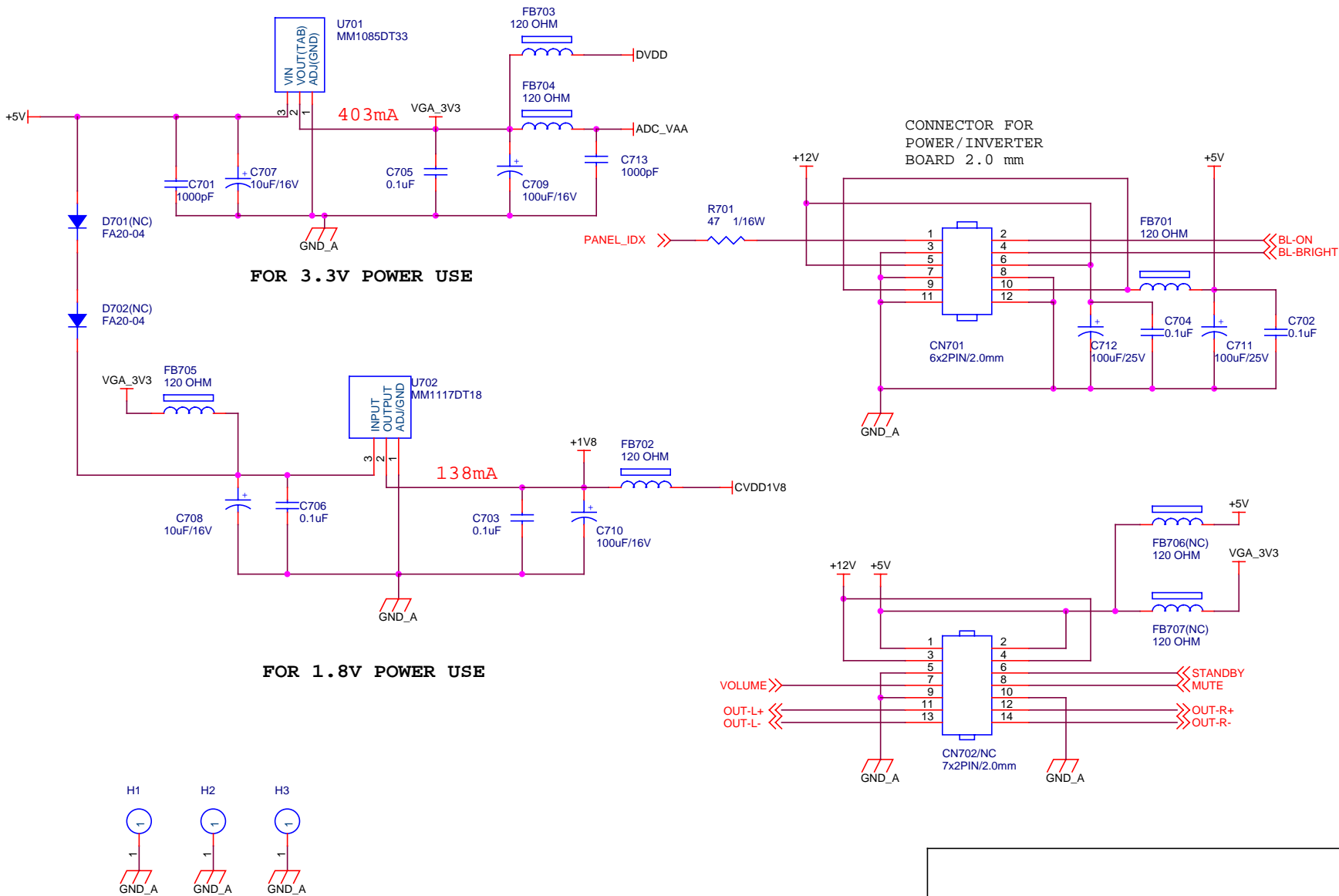








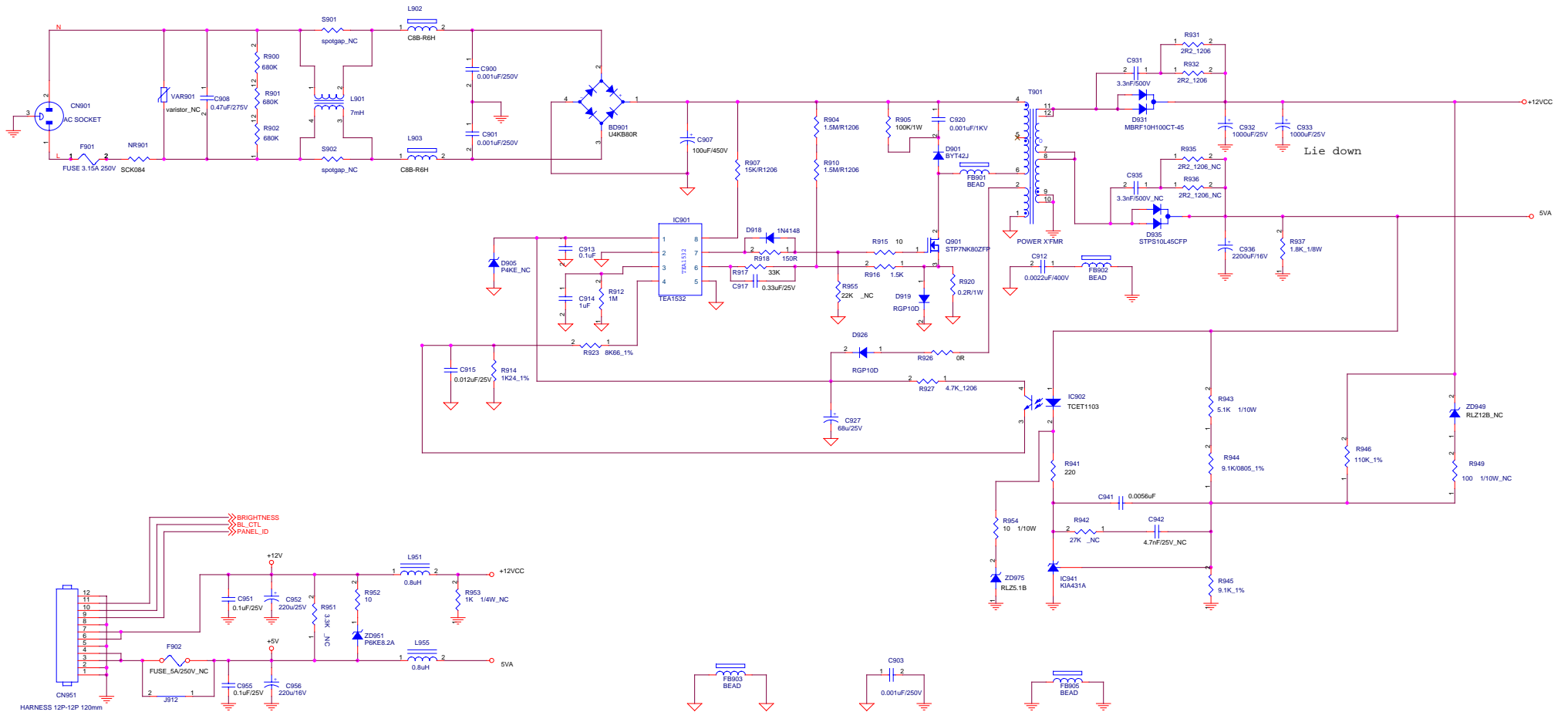
|            |                           |              |
|------------|---------------------------|--------------|
| Title      |                           |              |
| 715G1712-1 |                           |              |
| Size       | Document Number           | Rev          |
| A4         | PHILIPS 170S-PANEL OUTPUT | B            |
| Date:      | Thursday, March 02, 2006  | Sheet 3 of 5 |



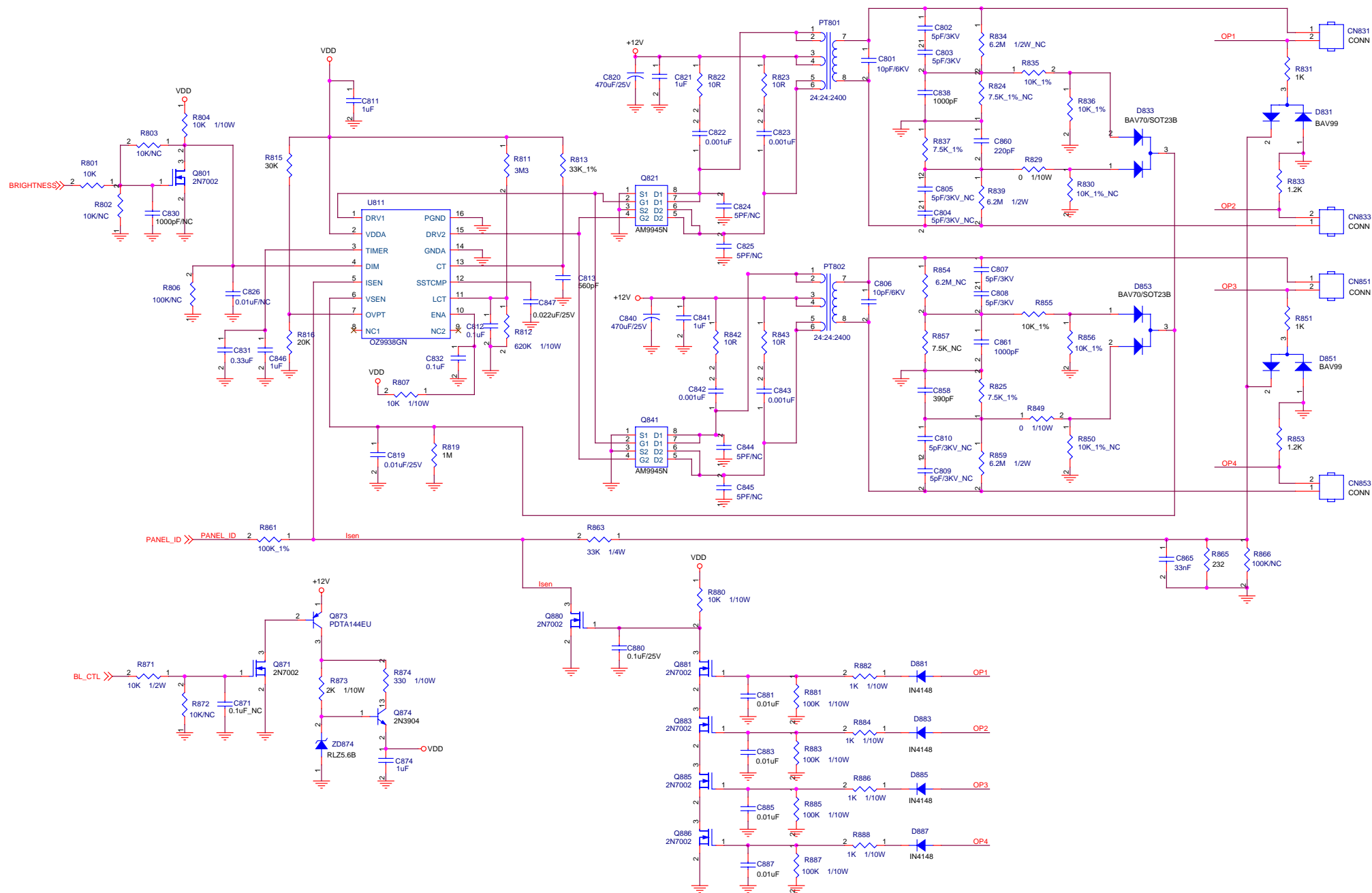
|            |                           |              |
|------------|---------------------------|--------------|
| Title      |                           |              |
| 715G1712-1 |                           |              |
| Size       | Document Number           | Rev          |
| A4         | PHILIPS 170S-Scaler Power | B            |
| Date:      | Thursday, March 02, 2006  | Sheet 2 of 5 |

## 6.2 Pwpc Board

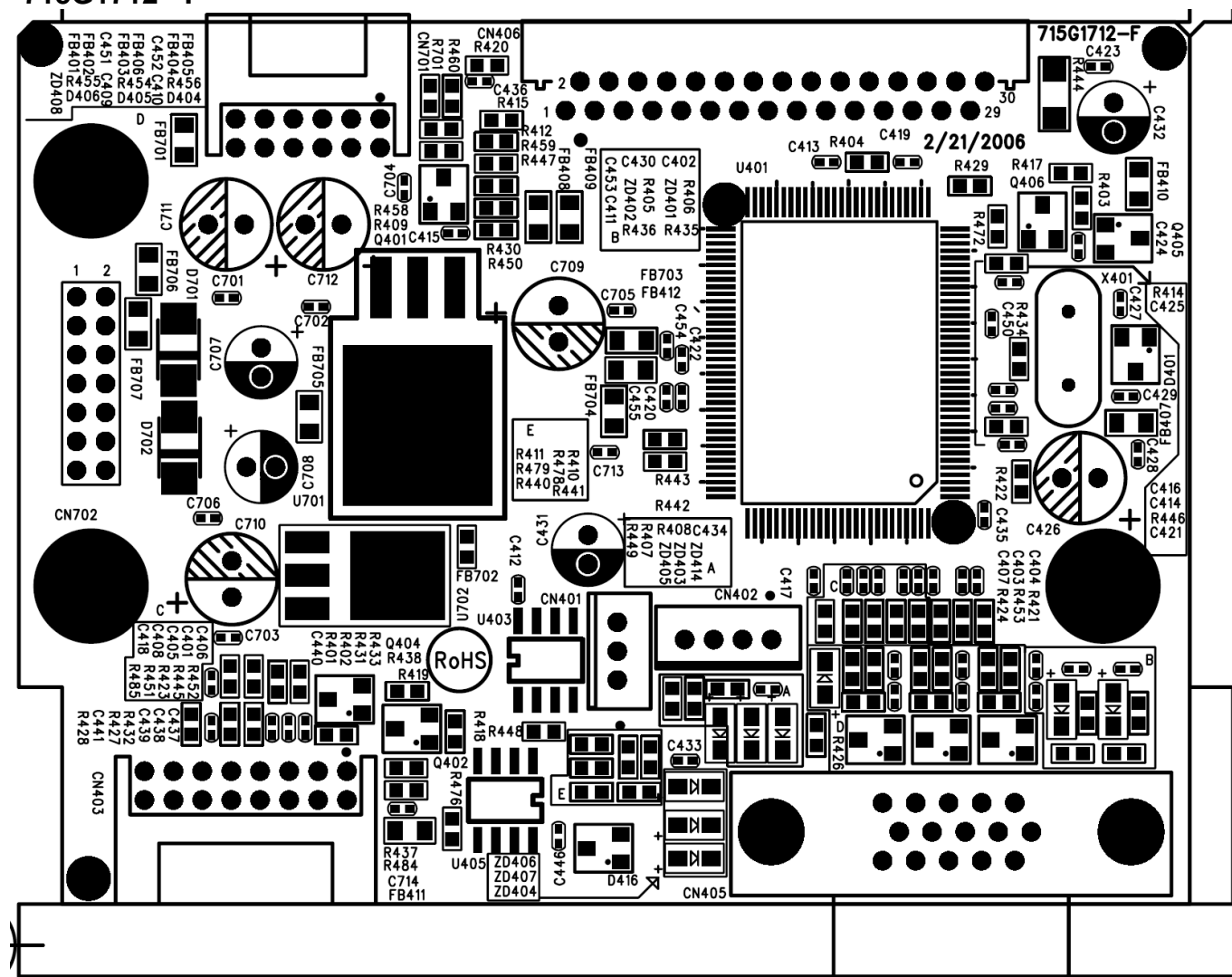
PN : PWPC1742LGR1

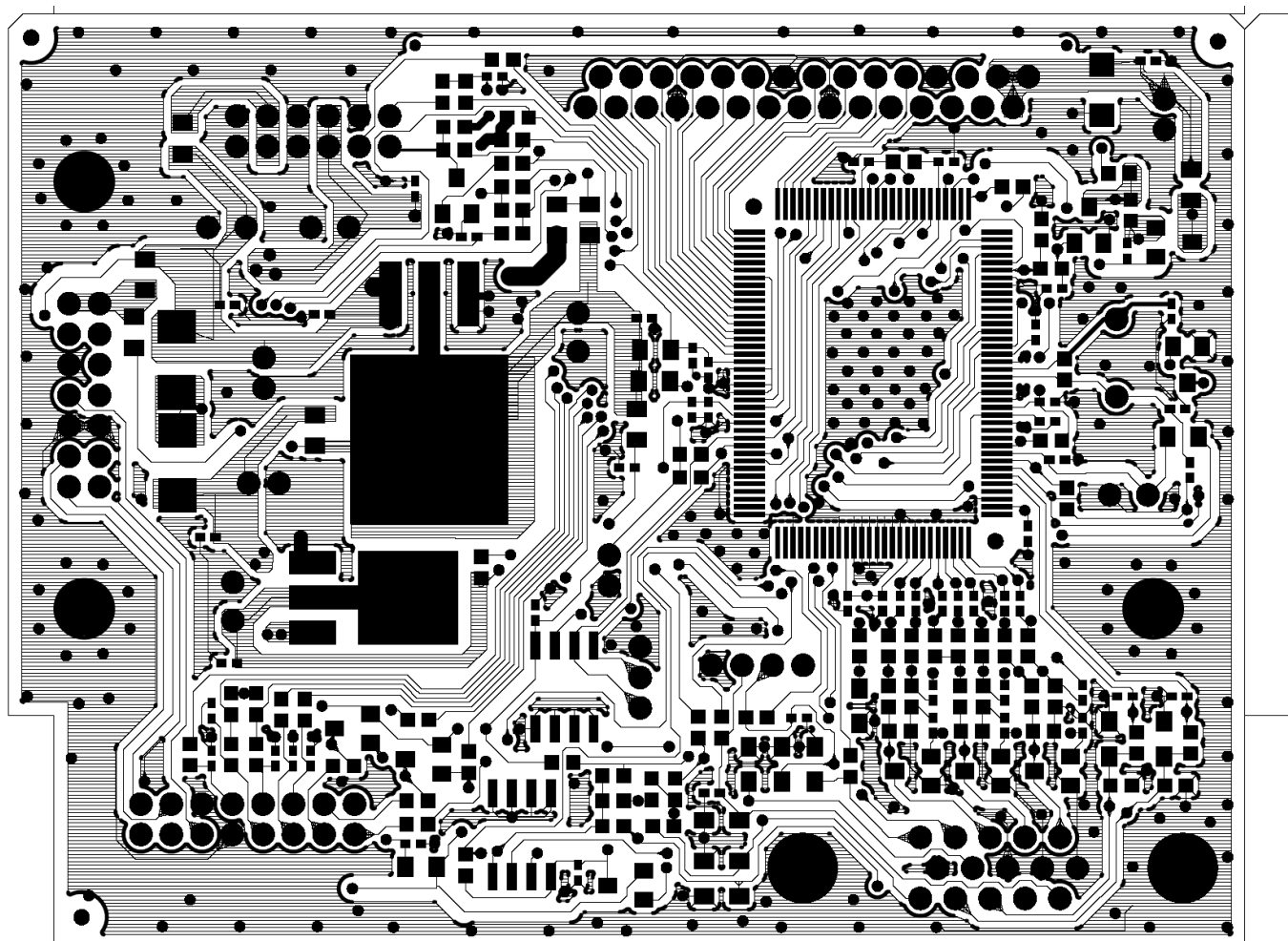


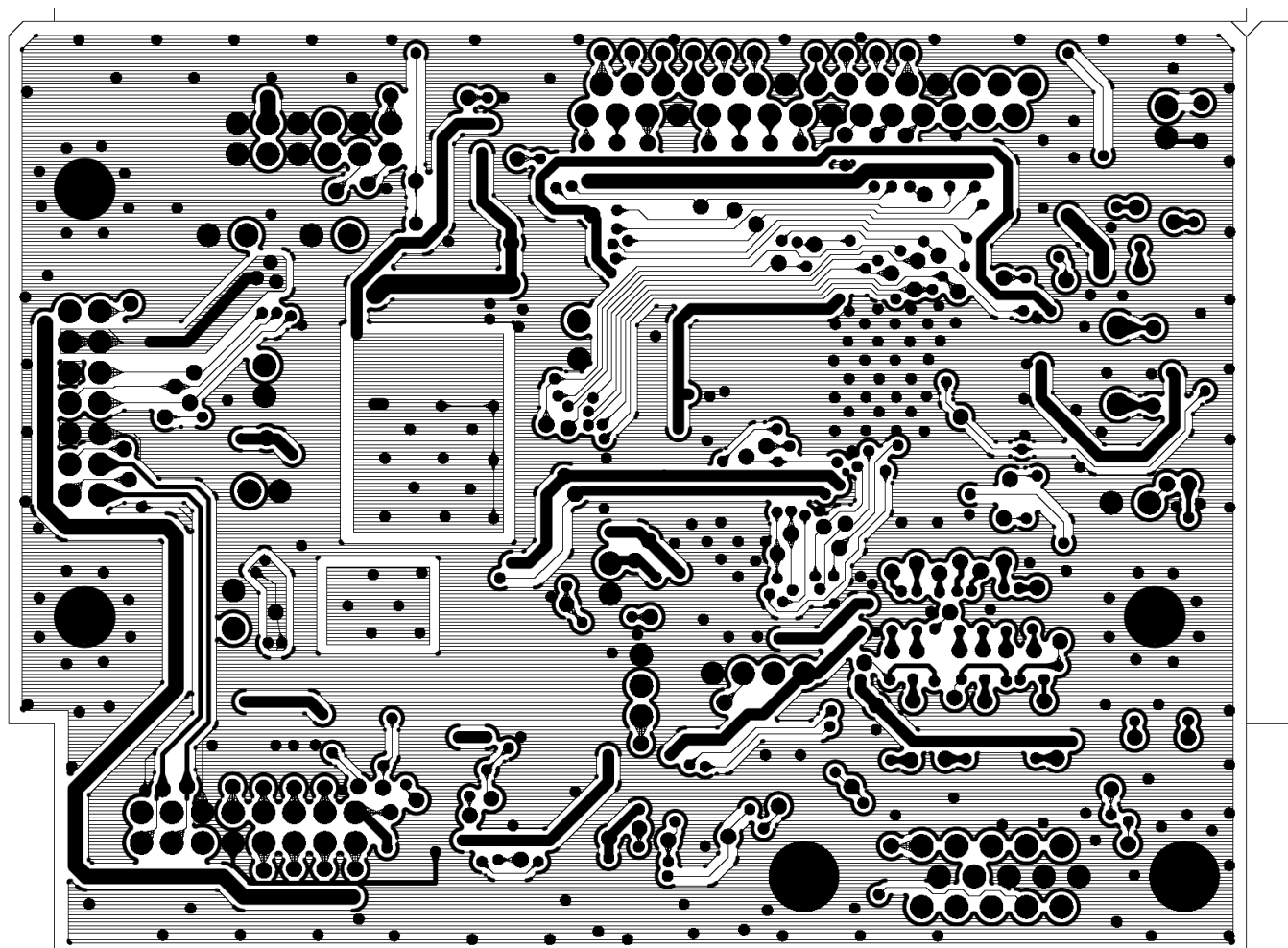




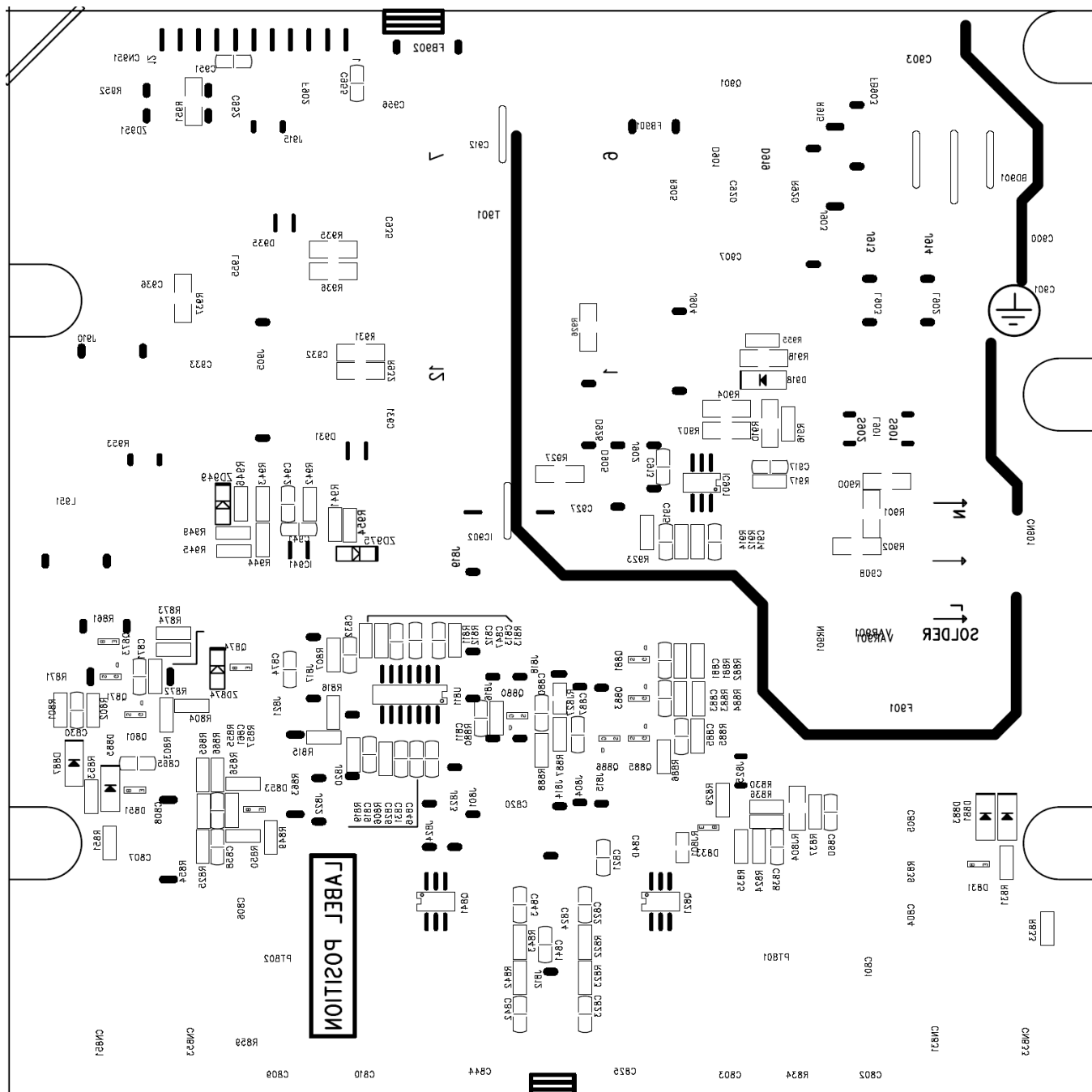
**715G1712 - F**

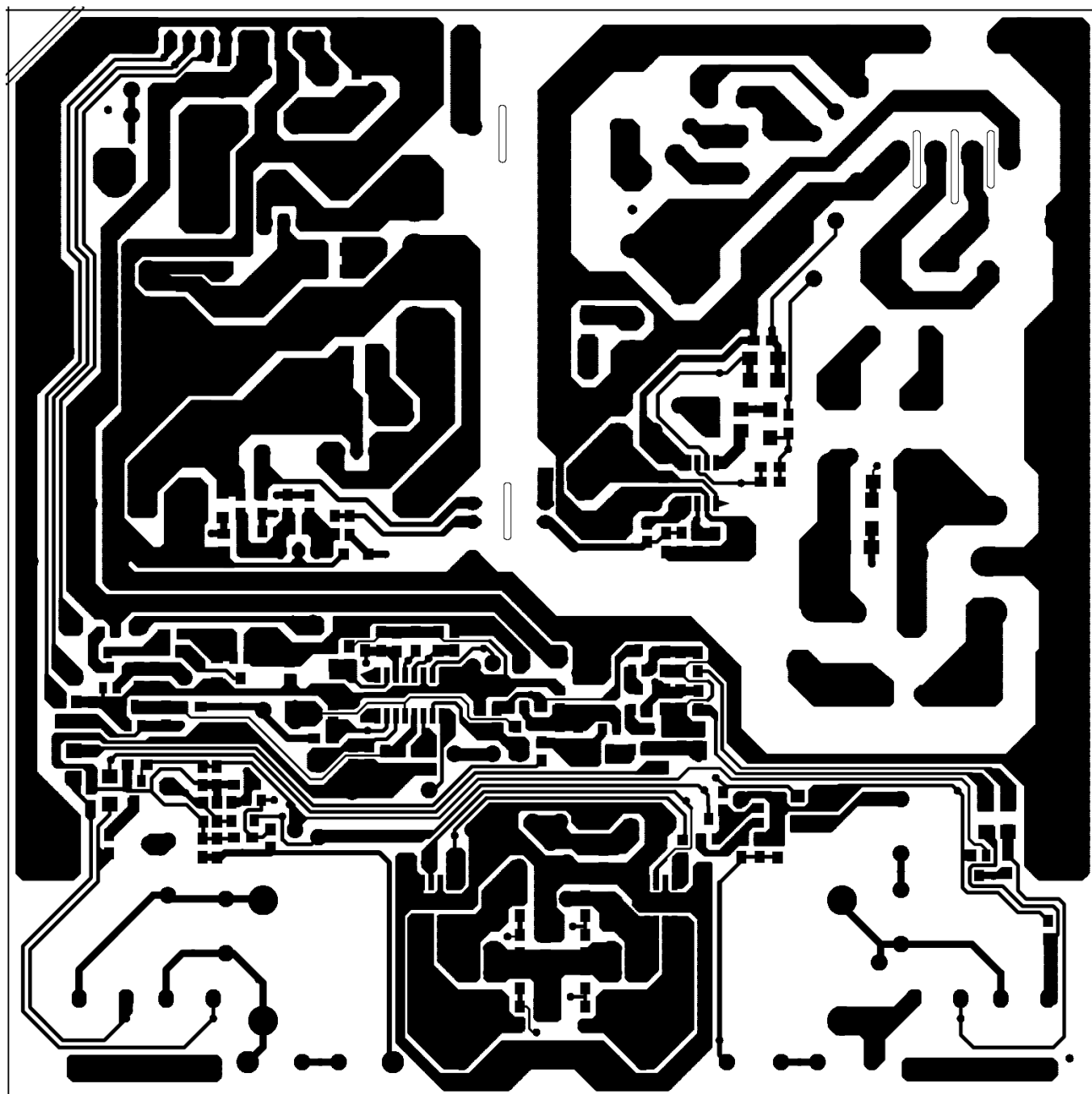




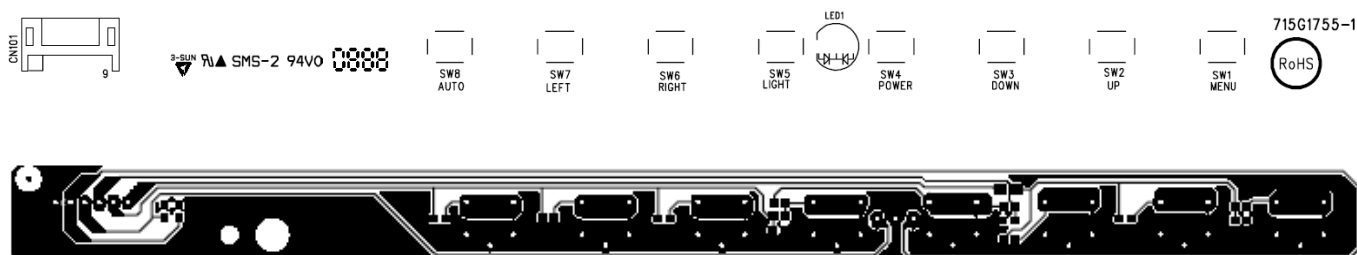








### 7.3 Key Board 715G1755-1





## 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

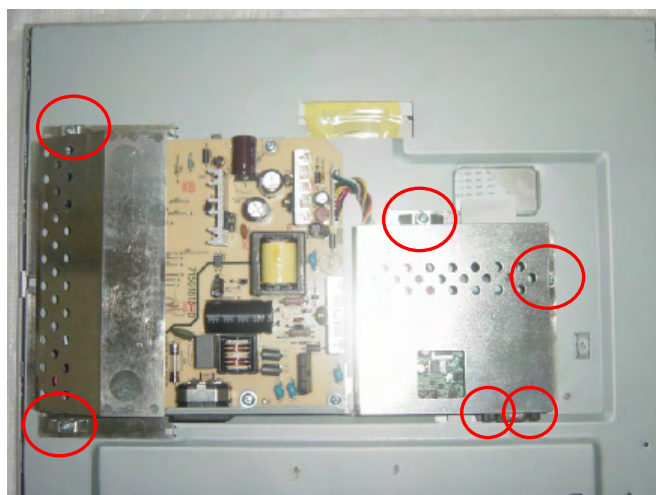


Fig.7

### 5. Remove main and pwpc board as Fig.8

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

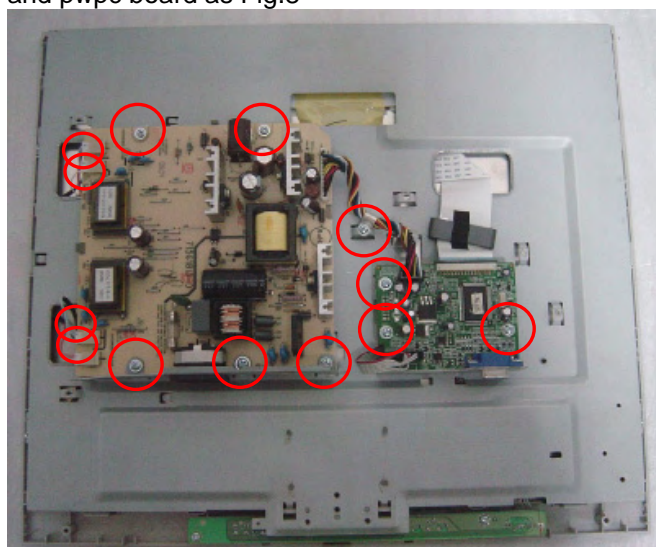


Fig.8

### 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

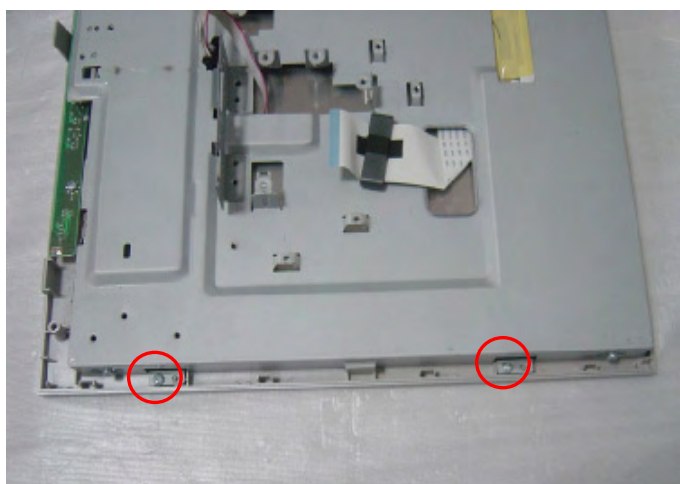


Fig.9

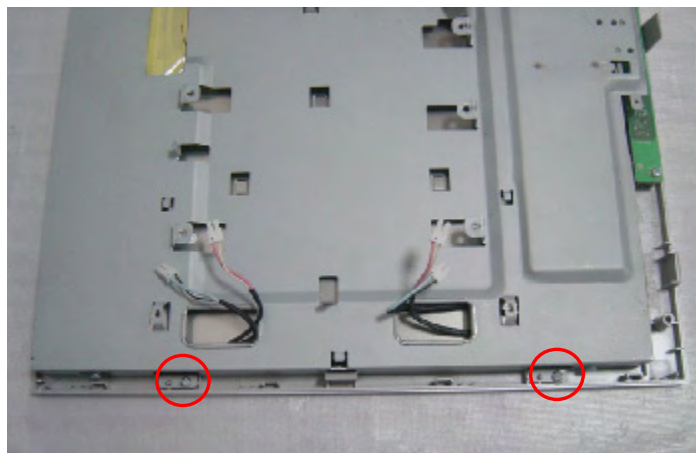


Fig.10



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

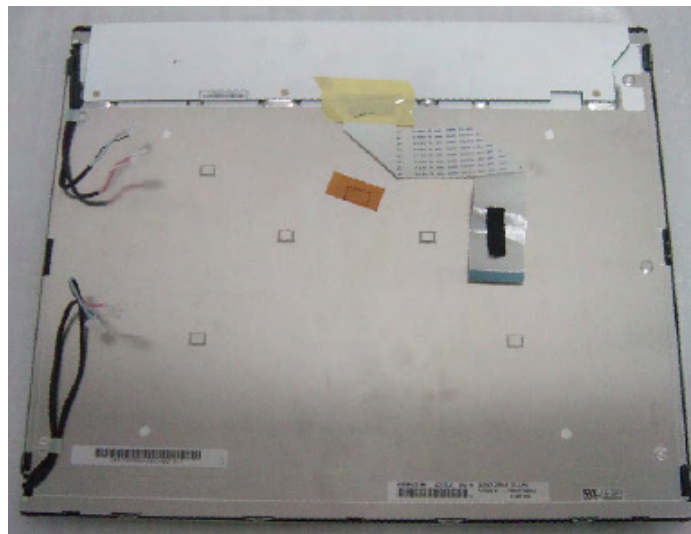



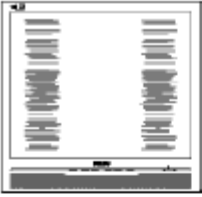

Fig.14

## 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.

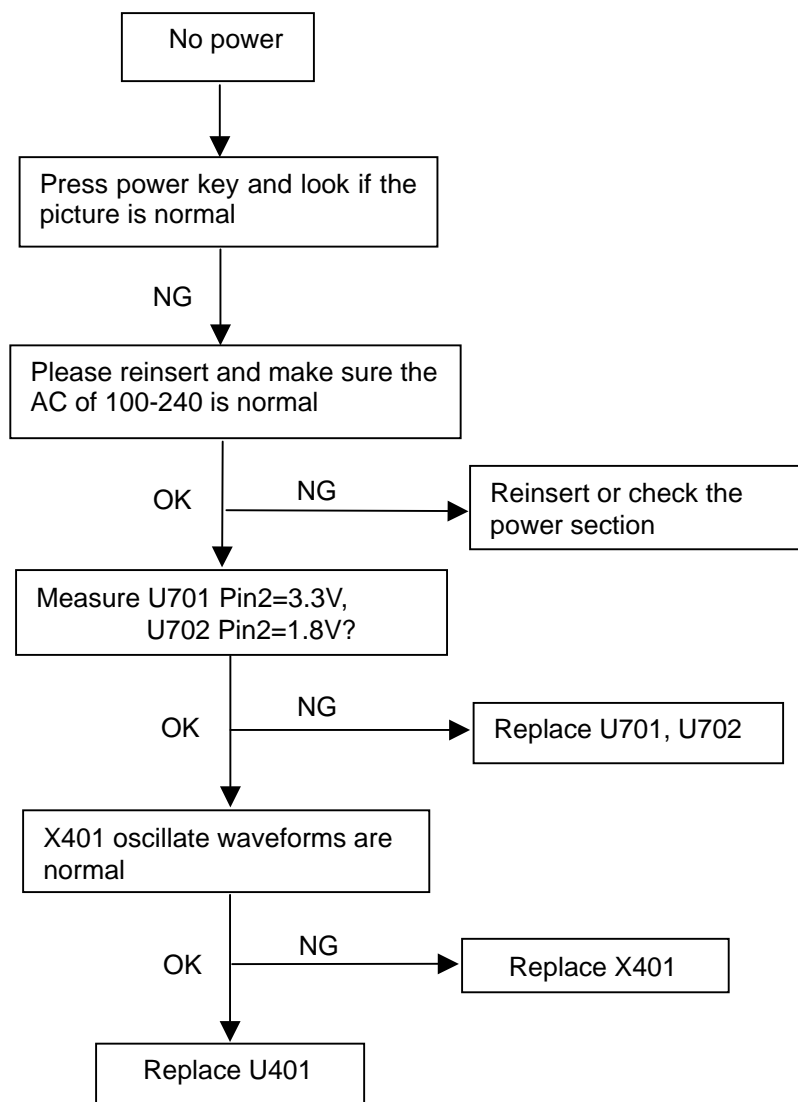
| Common Problems  |  |
|--|--|
| Having this problem  | Check these items  |
| No Picture<br>(Power LED not lit)  | <ul style="list-style-type: none"> <li>• Make sure the power cord is plugged into the power outlet and into the back of the monitor.</li> <li>• First, ensure that the power button on the front of the monitor is in the OFF position, then press it to the ON position.</li> </ul>     |
| No Picture<br>(Power LED is amber or yellow)   | <ul style="list-style-type: none"> <li>• Make sure the computer is turned on.</li> <li>• Make sure the signal cable is properly connected to your computer.</li> <li>• Check to see if the monitor cable has bent pins.</li> <li>• The Energy Saving feature may be activated</li> </ul> |
| Screen says<br> | <ul style="list-style-type: none"> <li>• Make sure the monitor cable is properly connected to your computer. (Also refer to the Quick Set-Up Guide).</li> <li>• Check to see if the monitor cable has bent pins.</li> <li>• Make sure the computer is turned on.</li> </ul>              |
| AUTO button not working properly   | <ul style="list-style-type: none"> <li>• The Auto Function is designed for use on standard Macintosh or IBM-compatible PCs running Microsoft Windows.</li> <li>• It may not work properly if using nonstandard PC or video card.</li> </ul>  |
| Imaging Problems   |  |
| Display position is incorrect  | <ul style="list-style-type: none"> <li>• Press the Auto button.</li> <li>• Adjust the image position using the Phase/Clock of More Settings in OSD Main Controls.</li> </ul>   |
| Image vibrates on the screen   | <ul style="list-style-type: none"> <li>• Check that the signal cable is properly connected to the graphics board or PC.</li> </ul>   |



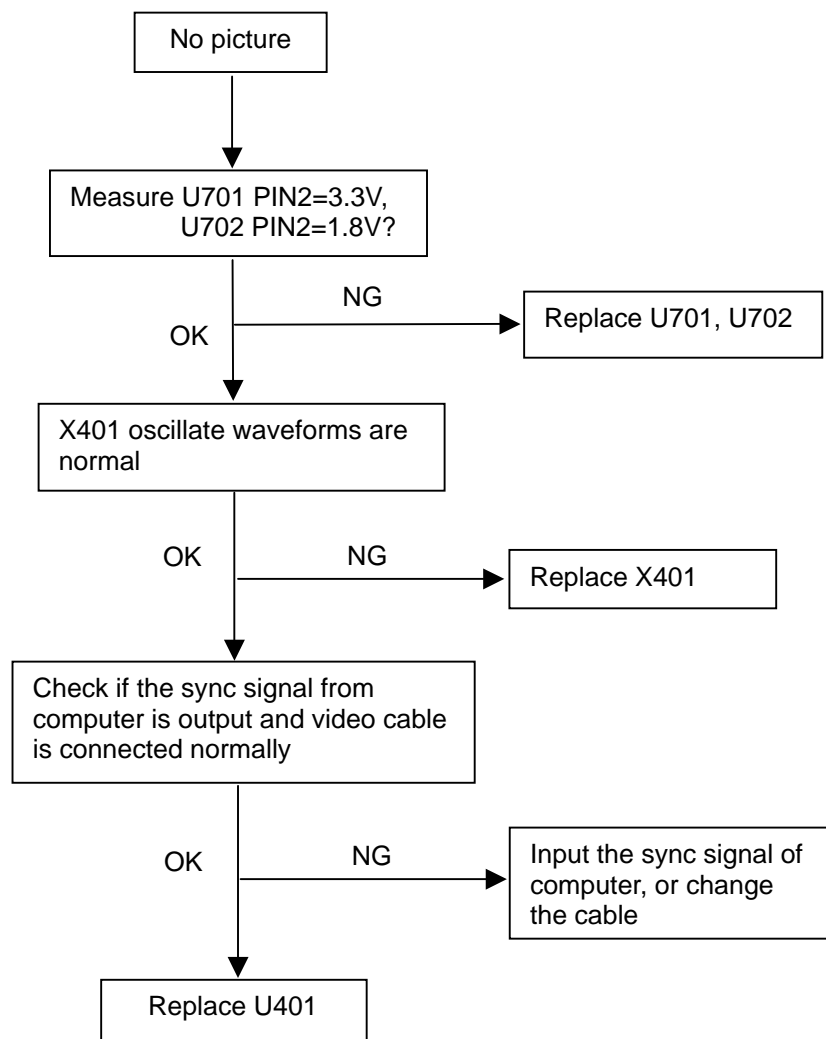
|   |   |
|---|---|
| <p>Vertical flicker appears</p>    | <ul style="list-style-type: none"> <li>• Press the Auto button.</li> <li>• Eliminate the vertical bars using the Phase/Clock of More Settings in OSD Main Controls.</li> </ul>  |
| <p>Horizontal flicker appears</p>  | <ul style="list-style-type: none"> <li>• Press the Auto button.</li> <li>• Eliminate the vertical bars using the Phase/Clock of More Settings in OSD Main Controls.</li> </ul>  |
| <p>The screen is too bright or too dark</p>   | <ul style="list-style-type: none"> <li>• 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).</li> </ul> |
| <p>An after-image appears</p>   | <ul style="list-style-type: none"> <li>• 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</li> </ul>   |
| <p>An after-image remains after the power has been turned off.</p>  | <ul style="list-style-type: none"> <li>• 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.</li> </ul>                                      |
| <p>Green, red, blue, dark, and white dots remains</p>   | <ul style="list-style-type: none"> <li>• The remaining dots are normal characteristic of the liquid crystal used in today's technology.</li> </ul>  |

## 10. Repair Flow Chart

### (1). No Power

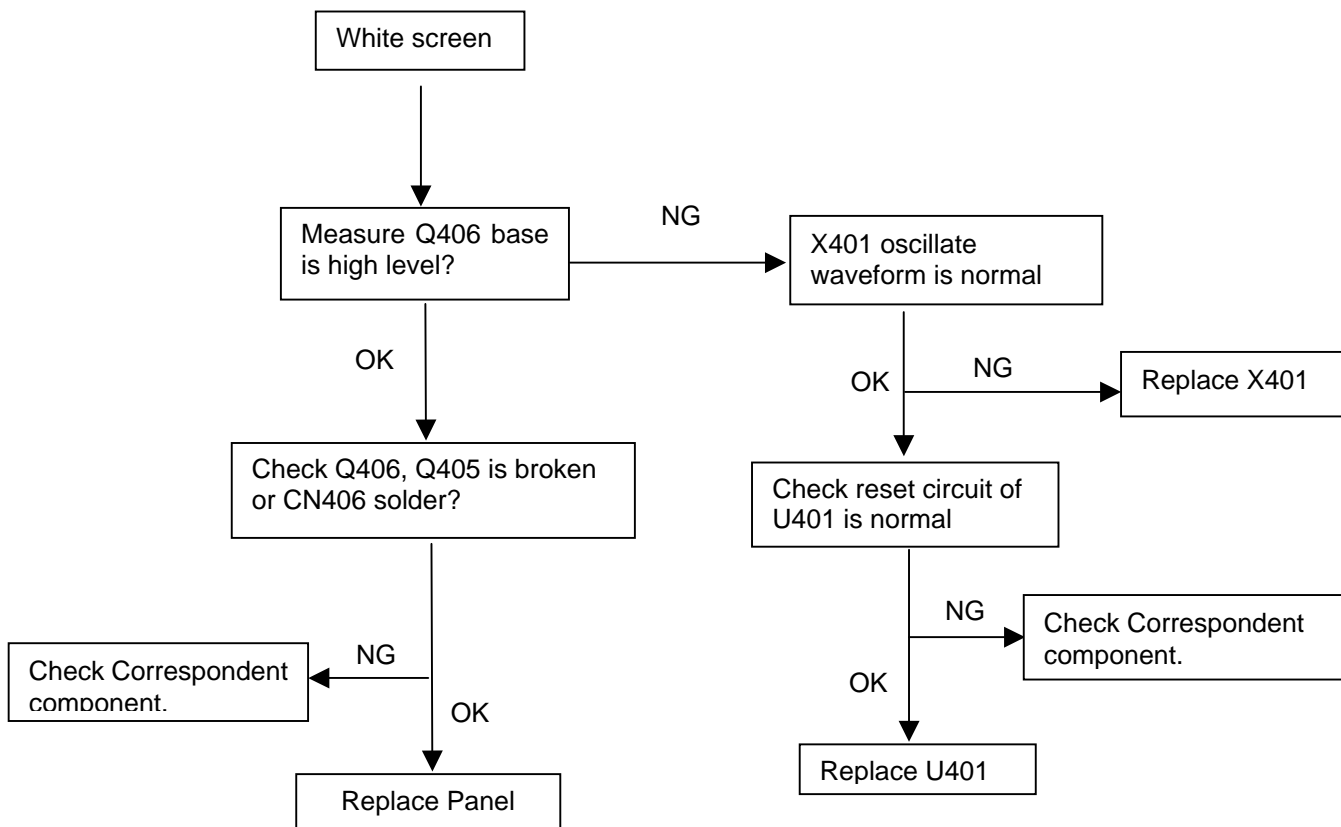


### (2). No Picture

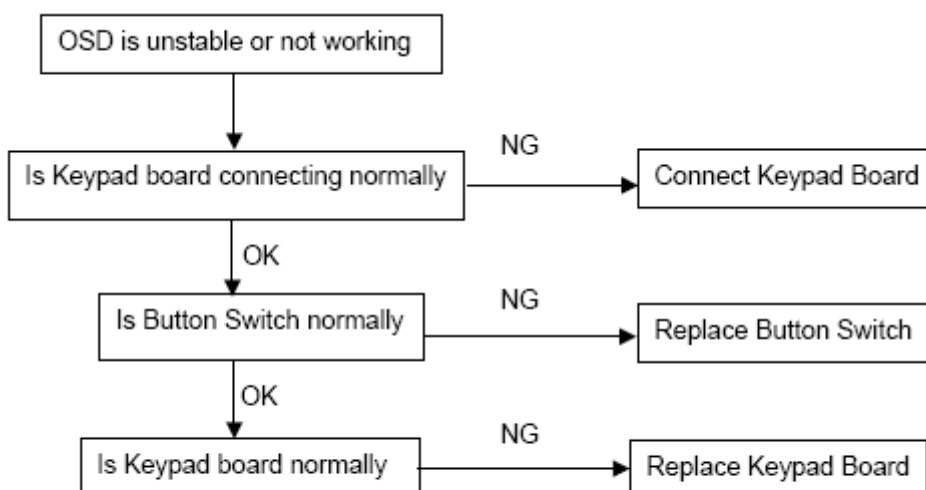




(3). White screen



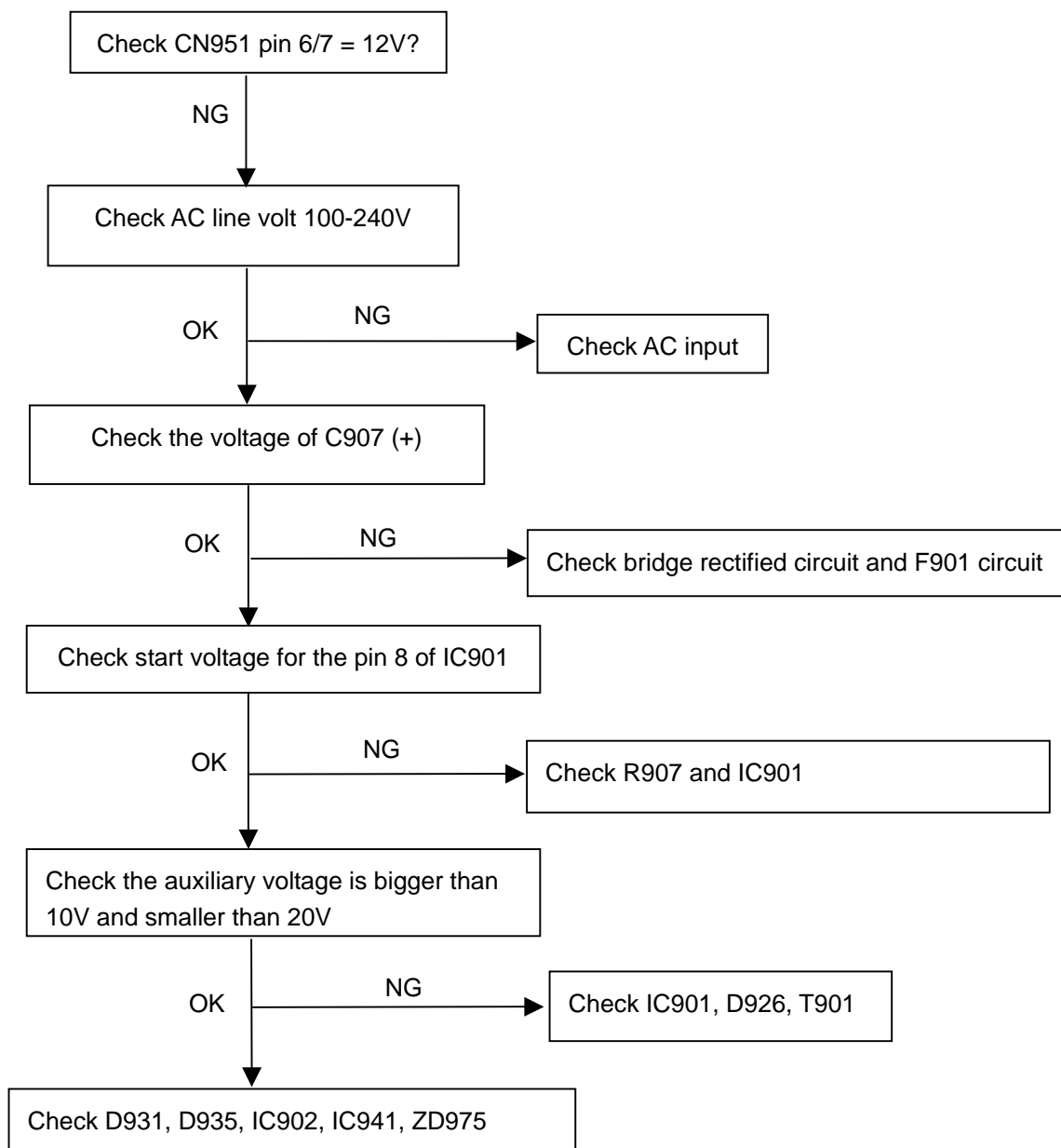
(4). Keypad Board



### 9.2.2 Power/Inverter Board

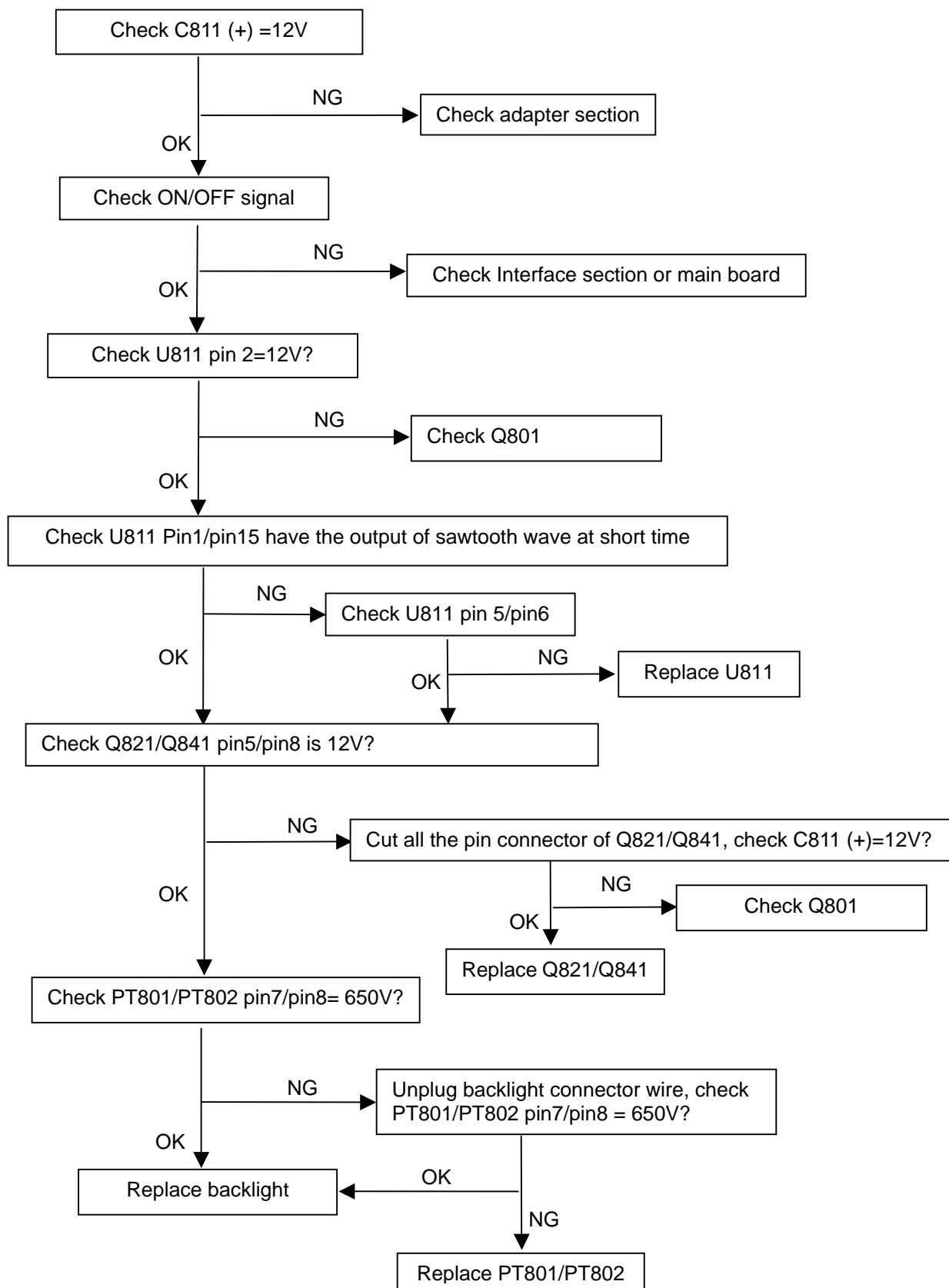
No power

Adapter Board

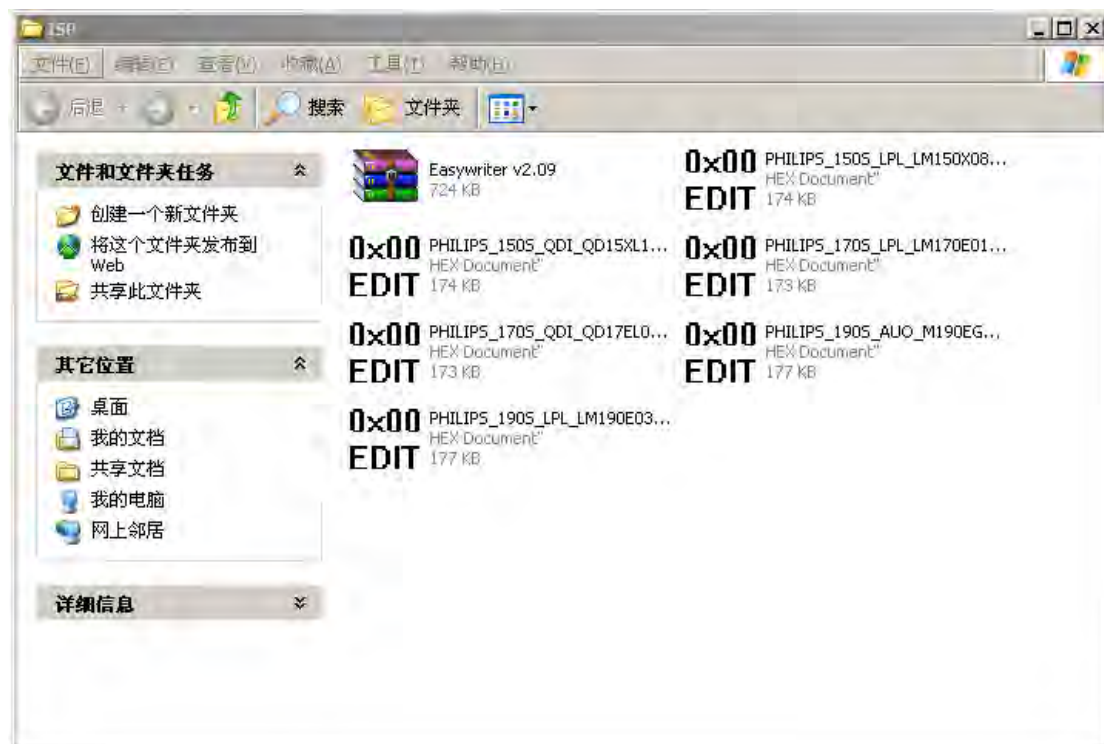


## Inverter board

No power




## 11. ISP Instruction

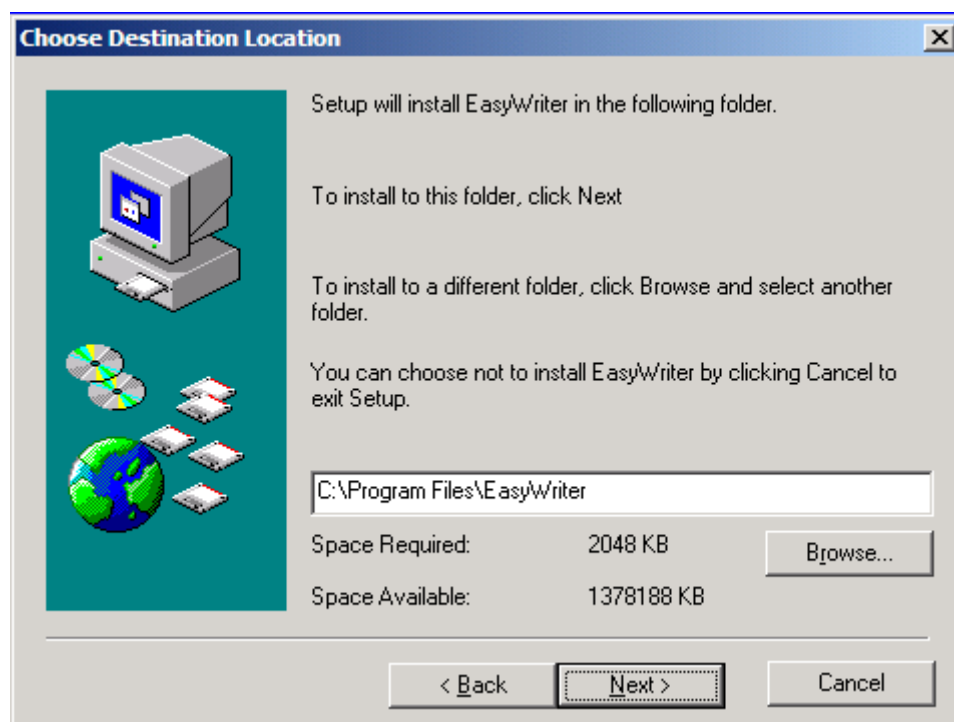
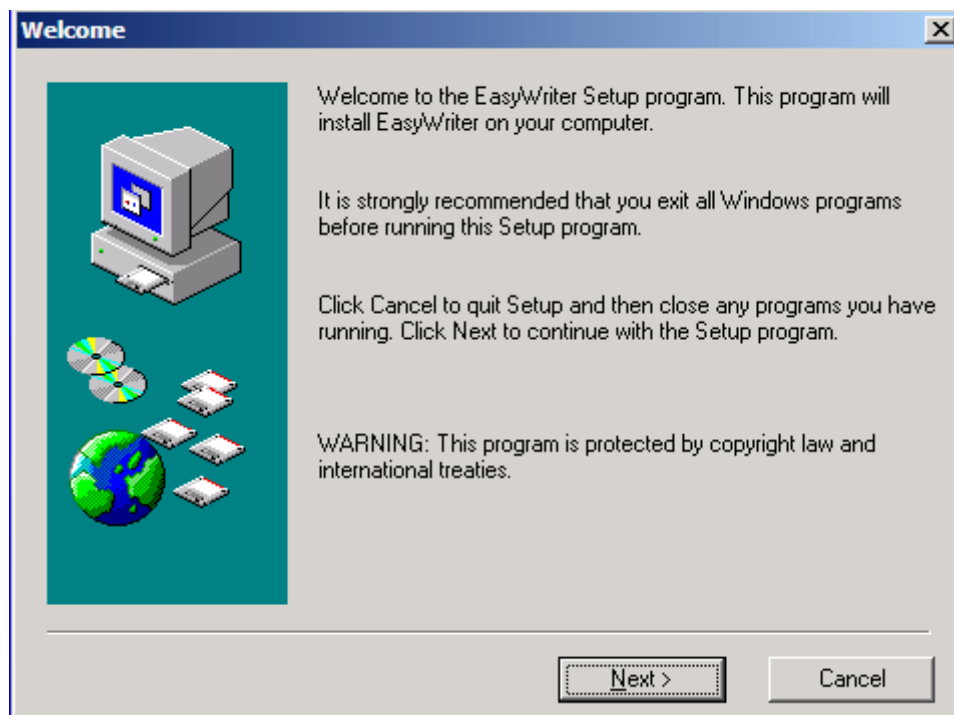


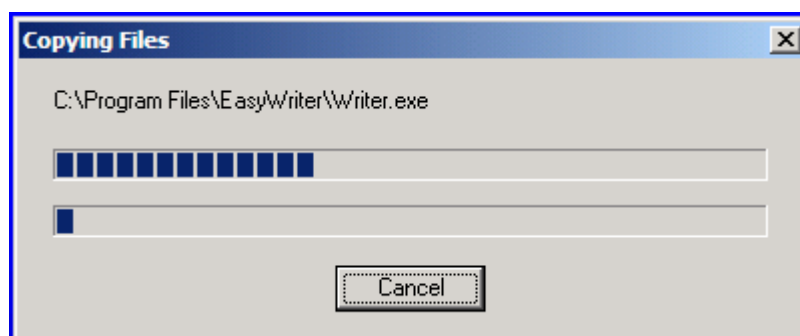
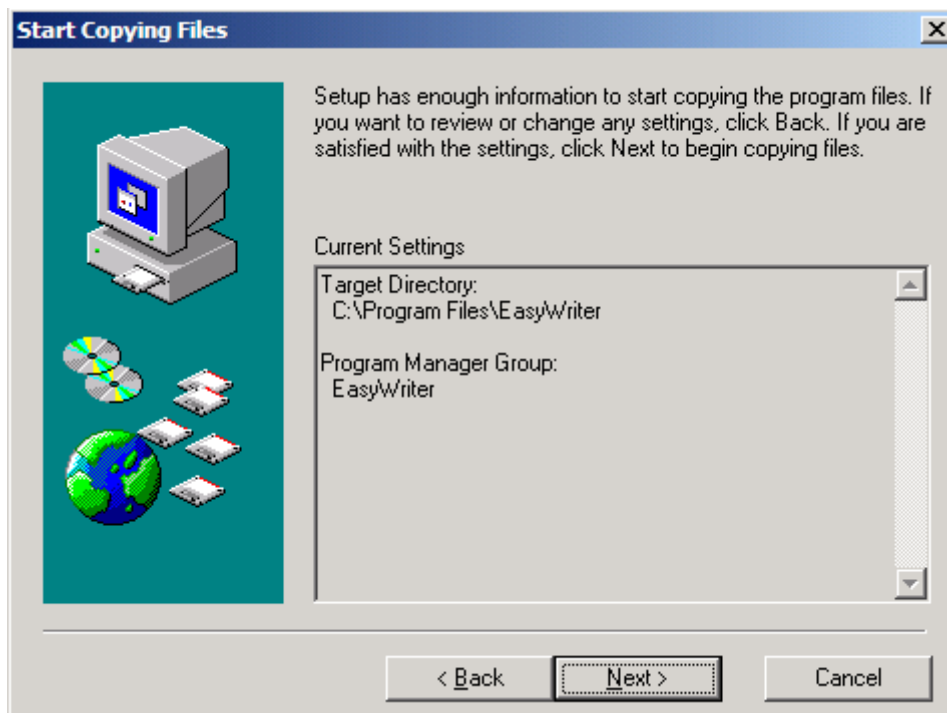
### (1). Install the program software

- a. First decompressing files   , as follow:



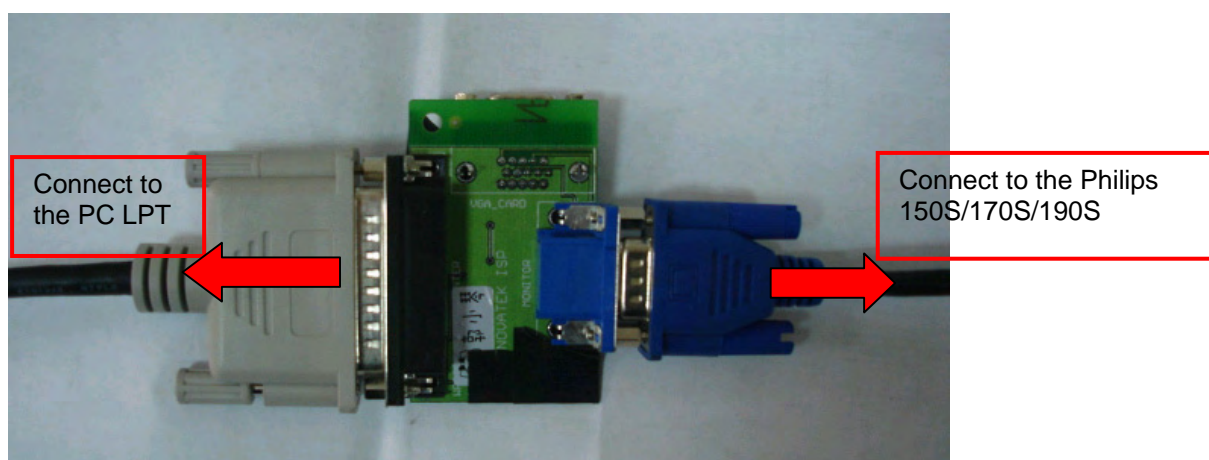
- b. Double – click  , start to install as follows:



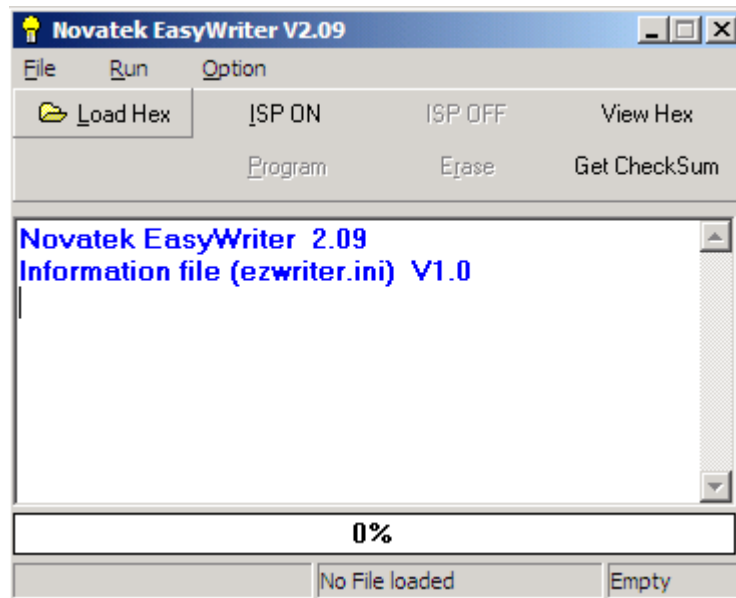



c. There will be a shortcut key  appears on the desktop.

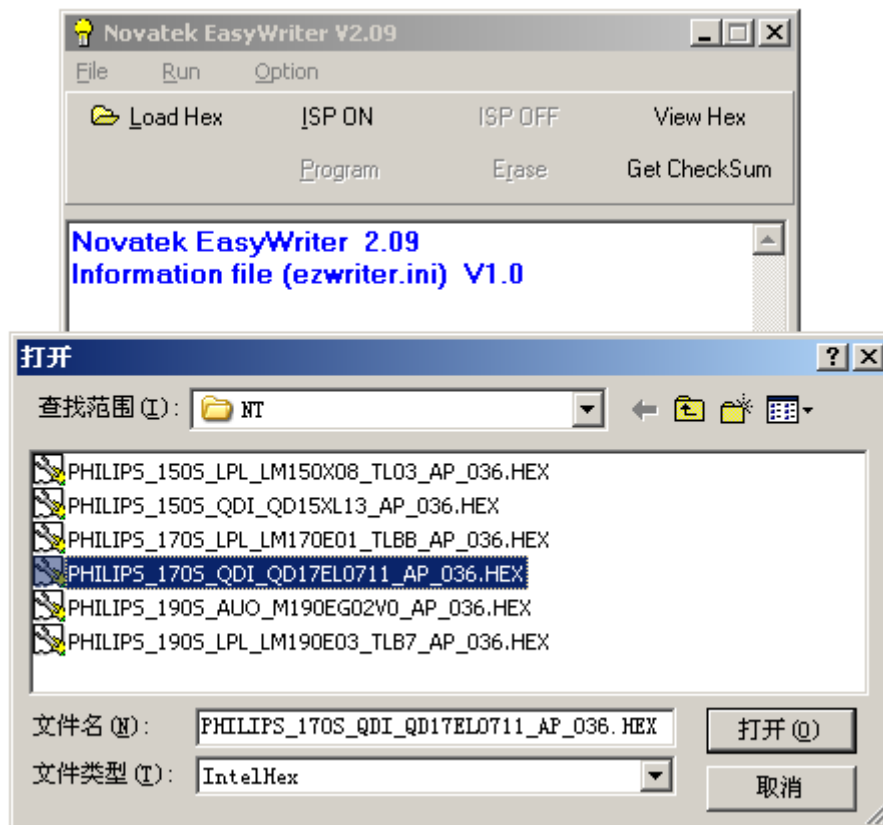
**(2). Connect the ISP board as follow:**



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

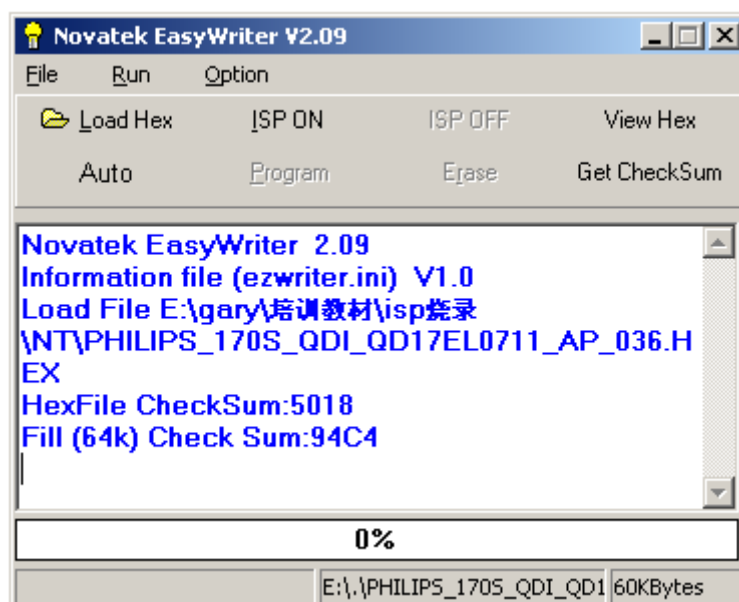
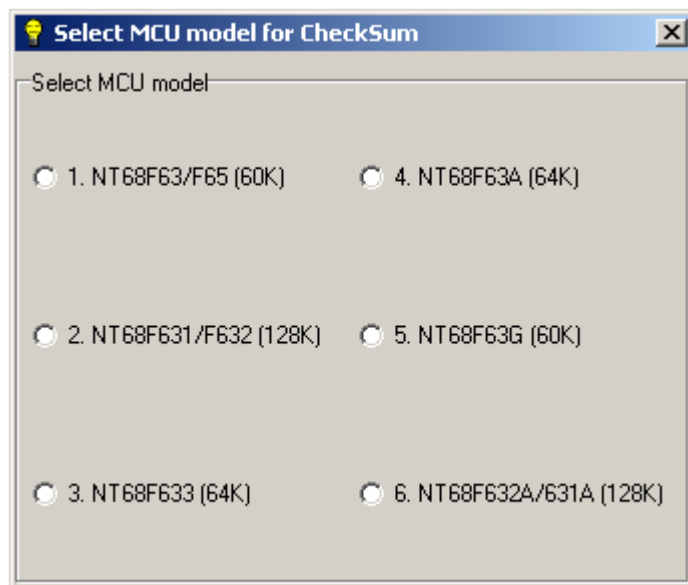


- b. Click  **Load Hex** icon, search the program" PHILIPS\_170S\_QDI\_QD17EL0711\_AP\_036.HEX", and click **open**:



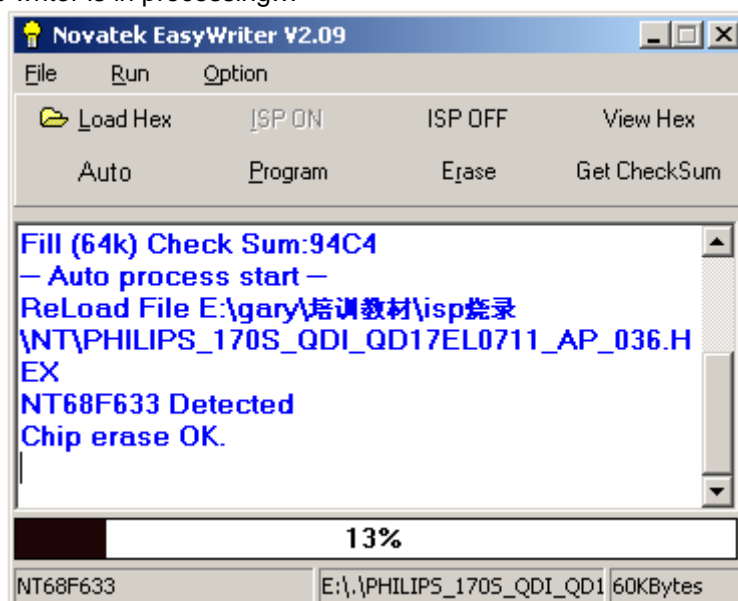
**Note:** If it is 170s model, you can select the  **PHILIPS\_170S\_QDI\_QD17EL0711\_AP\_036.HEX** (for QDI panel) or  **PHILIPS\_170S\_LPL\_LM170E01\_TL88\_AP\_036.HEX** (for LPL panel)

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

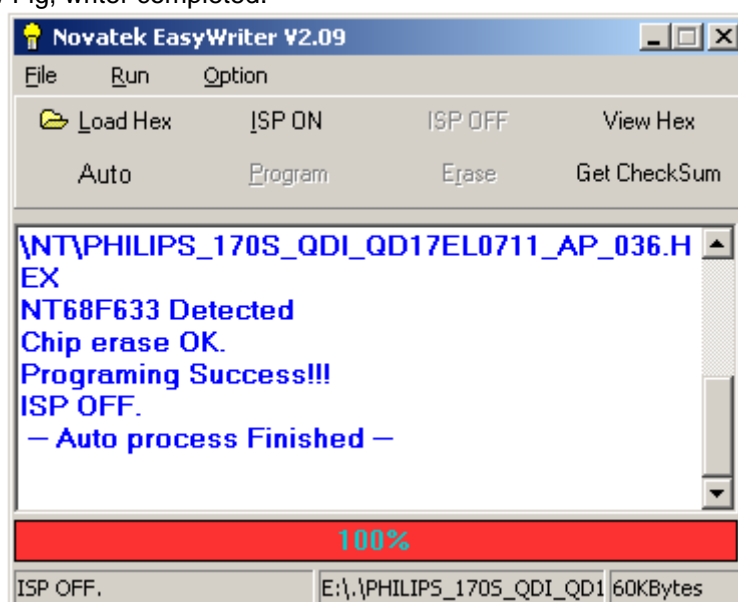




d. Click **Auto** icon, the writer is in processing...



e. Until appears the follow Fig, writer completed.



## 12. DDC Instruction



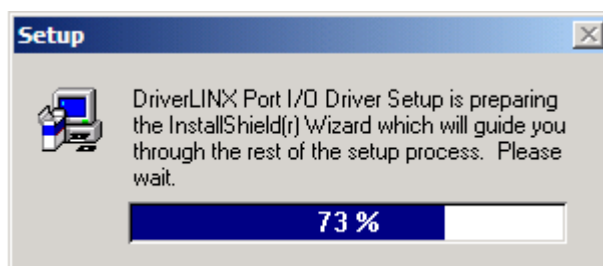
### (1). Install software

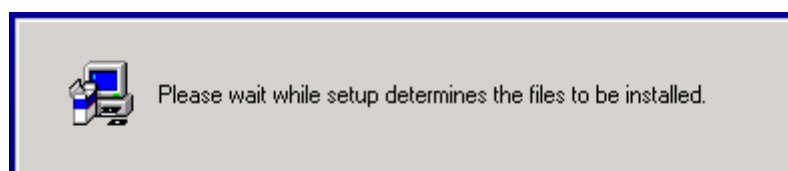
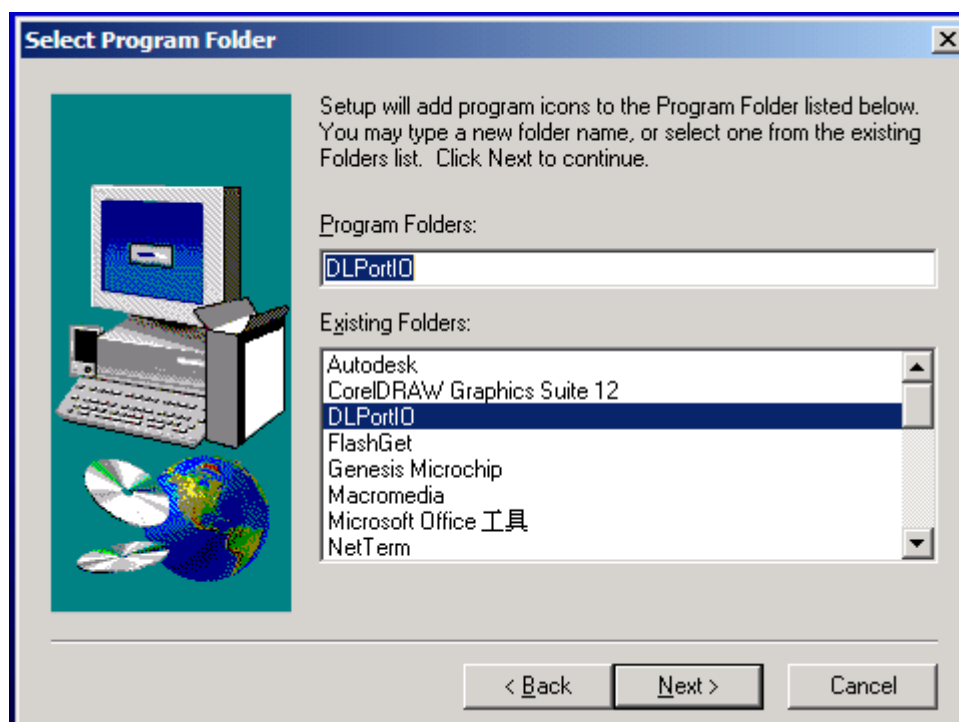
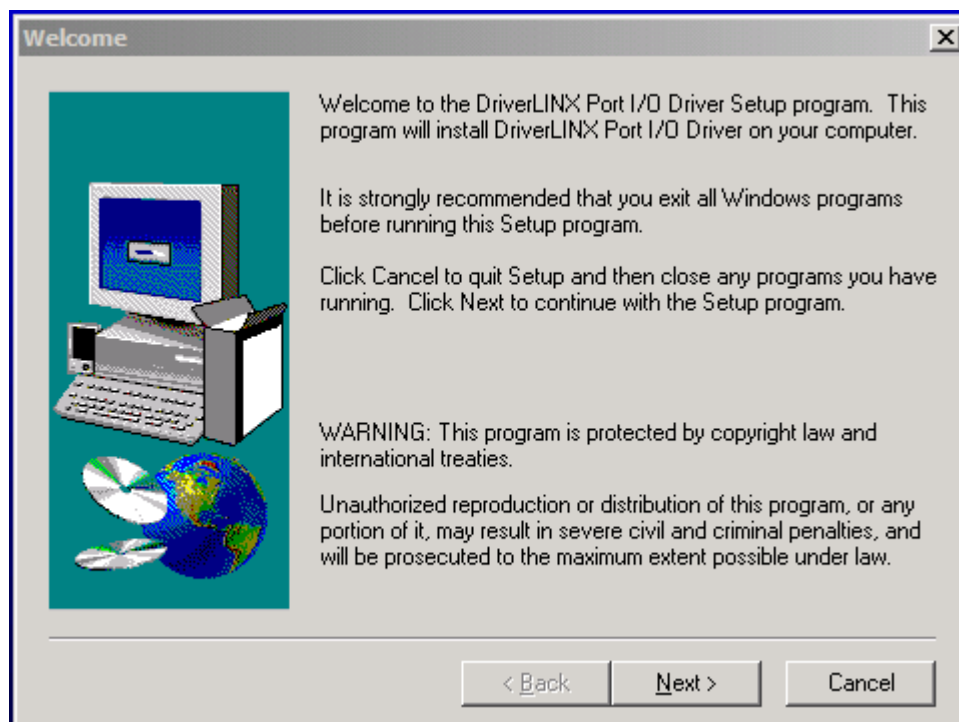
You must install the




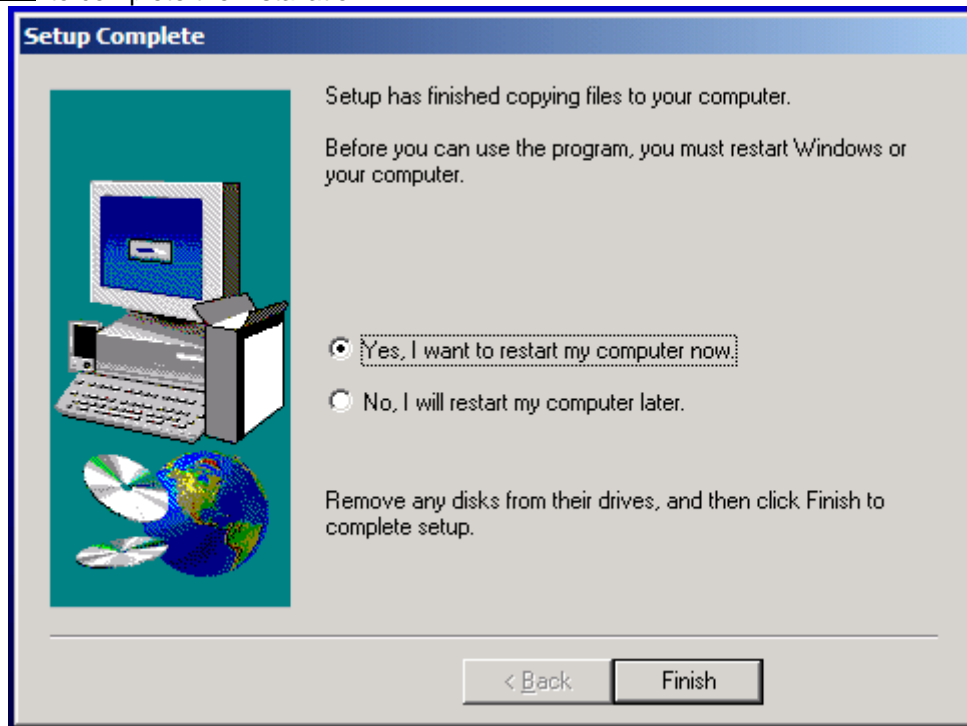
PORT95NT.EXE  
PackageForTheWeb Stub  
InstallShield Software Corpora...

at the first. The processing as follows:



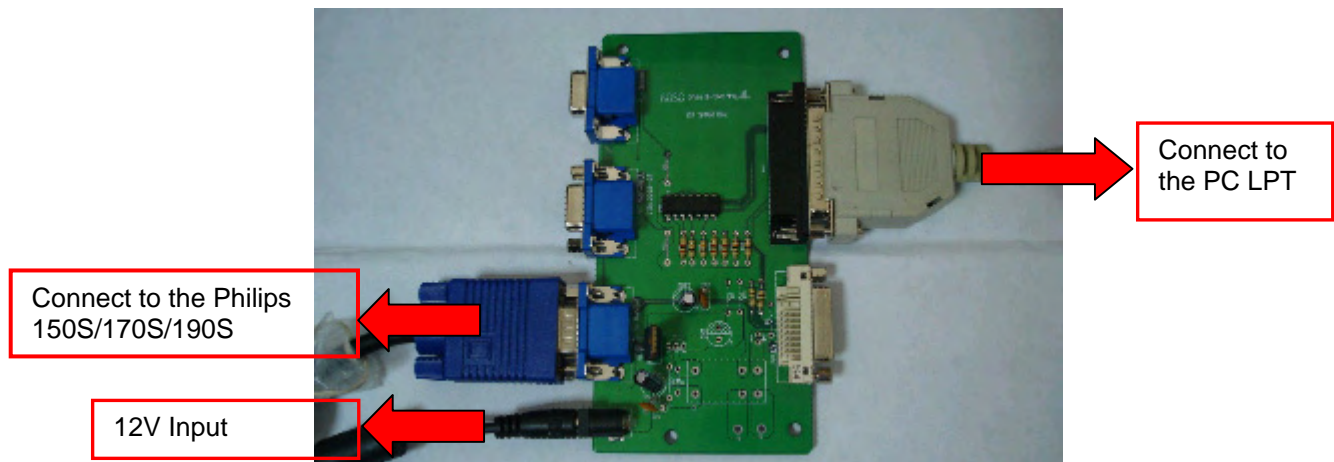


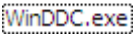
Click  to complete the installation.

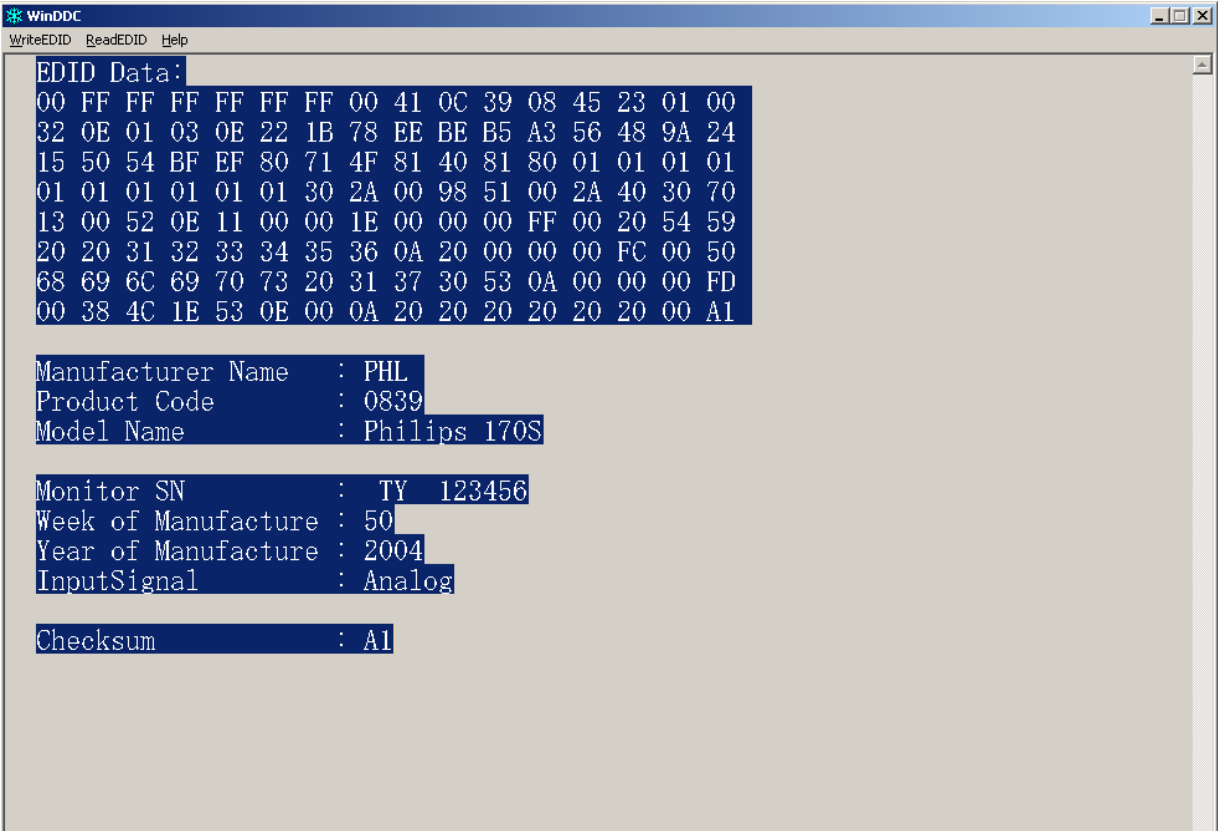


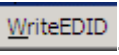
**Note:** After installation, you must restart the PC to take the setup effect.

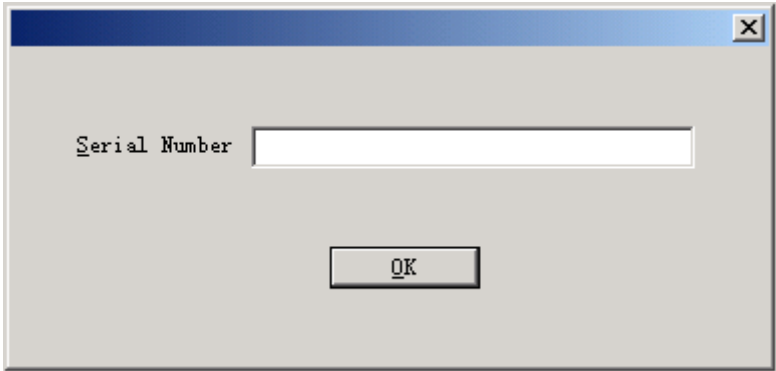
(2). Connect the DDC board as follow:



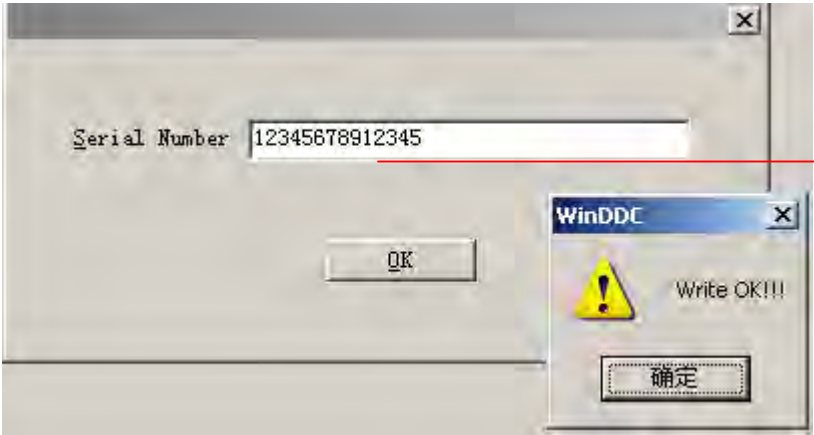
a. Double-click , appear as follow Figs:



b. Click 

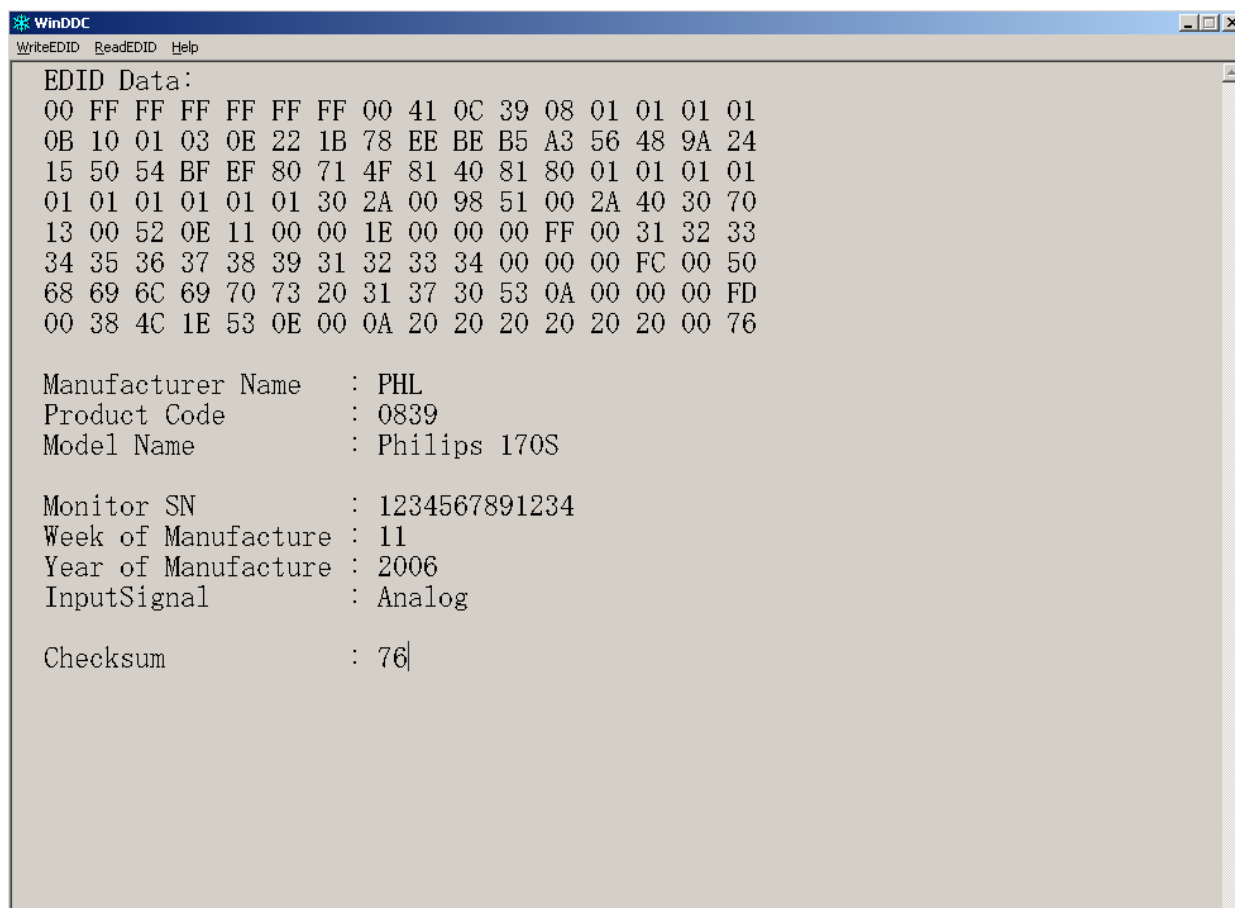


c. Key in the Serial Number printed on the barcode label, then click “OK”



14 codes,  
for example.

d. Unit appears the following Fig, writer completed.



### 170S 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 39 08 01 01 01 01  
16: 0A 10 01 03 0E 22 1B 78 EE BE B5 A3 56 48 9A 24  
32: 15 50 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 52 0E 11 00 00 1E 00 00 00 FF 00 20 41 55  
80: 20 20 30 30 30 30 31 0A 20 00 00 00 FC 00 50  
96: 68 69 6C 69 70 73 20 31 37 30 53 0A 00 00 00 FD  
112: 00 38 4C 1E 53 0E 00 0A 20 20 20 20 20 20 00 DD

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: 0839  
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: 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 : 34cm.  
Max. V. Image Size : 27cm.  
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: 0.6386718750  
Red y: 0.3388671875  
Green x: 0.2861328125  
Green y: 0.6035156250  
Blue x: 0.1425781250  
Blue y: 0.0849609375  
White x: 0.3125000000  
White y: 0.3300781250

<-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 170S'

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: DD



### 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 170S7\*\*\*\*\*, 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.

## 14. Spare Parts List

Different Spare Parts between LPL panel and QDI panel

| Location | Part No. for TPV     | Description           | Located in                                       |
|----------|----------------------|-----------------------|--|
|          | CBPC780KGMPHP (LPL)  | CONVERSION BOARD      |  |
|          | CBPC780KQMPHP (QDI)  | CONVERSION BOARD      |  |
|          | AIC780KGMPHP (LPL)   | MAIN BOARD            |  |
|          | AIC780KQMPHP (QDI)   | MAIN BOARD            |  |
|          | 750GLG70E1B 11 (LPL) | LPL 17" TLBB PANEL    |  |
|          | 750GLQ70L07 61 (QDI) | QDI 17" V11 PANEL     |  |
| C714     | 065G040210131T       | 0402 MLCC 100PF J 50V | Only for LPL panel model, Located in Main board) |
| C713     | 065G040210131T       | 0402 MLCC 100PF J 50V |  |
| C455     | 065G040210131T       | 0402 MLCC 100PF J 50V |  |
| C454     | 065G040210131T       | 0402 MLCC 100PF J 50V |  |
| C441     | 065G040210131T       | 0402 MLCC 100PF J 50V |  |
| C440     | 065G040210131T       | 0402 MLCC 100PF J 50V |  |
| C439     | 065G040210131T       | 0402 MLCC 100PF J 50V |  |
| C438     | 065G040210131T       | 0402 MLCC 100PF J 50V |  |
| C437     | 065G040210131T       | 0402 MLCC 100PF J 50V |  |
| C433     | 065G040210131T       | 0402 MLCC 100PF J 50V |  |
| C434     | 065G040210131T       | 0402 MLCC 100PF J 50V |  |
| FB411    | 071G 56K121          | CHIP BEAD (LPL)       |  |

### PCB

| Part No. for TPV            | Description      |
|-----------------------------|------------------|
| CBPC780KGMPHP (LPL)         | CONVERSION BOARD |
| CBPC780KQMPHP (QDI)         | CONVERSION BOARD |
| PWPC1742QDR1P (LPL and QDI) | POWER BOARD      |
| KEPC780KE7P (LPL and QDI)   | KEY BOARD        |

### Panel

| Part No. for TPV     | Description        |
|----------------------|--------------------|
| 750GLG70E1B 11 (LPL) | LPL 17" TLBB PANEL |
| 750GLQ70L07 61 (QDI) | QDI 17" V11 PANEL  |

### Mechanical and Accessory

|                   |                        |
|-------------------|------------------------|
| 007G 5 7100       | COMPOUND PALLET        |
| 007G 5 7101       | COMPOUND PALLET        |
| 040G 58162435A    | LABEL                  |
| 044G600278612A    | PAPER BOARD            |
| 044G6002834 6A GP | PAPER BOARD            |
| 044G9003109       | 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         |

|                  |                           |
|------------------|---------------------------|
| 089G179E30C 4    | FFC CABLE P-TWO           |
| 095G8014 16659 Q | WIRE HARNESS              |
| 095G8014 16659 X | WIRE HARNESS              |
| 0D1G3440 8120    | SCREW                     |
| 0G1G1130 6106    | SCREW                     |
| 0M1G 130 8 47    | SCREW FLAT M3-0.5X10      |
| 0M1G 130 10 47   | SCREW PHM4-0.7X8 TPS      |
| 0M1G1730 6106    | SCREW TAPPING M3X0.5X6+SW |
| 0Q1G 330 5106    | SCREW                     |
| 0Q1G 330 9106    | SCREW                     |
| 0Q1G 335 9 47    | SCREW                     |
| P15G8299 1       | BKT-VESA                  |
| P15G8315 1       | MAIN FRAME                |
| P15G8316 1       | POWER BRACKET             |
| P33G4972 VB 1L   | COVER_HINGE               |
| P33G4989 VPA1C   | CONTROL BUTTON            |
| P34G1846 VOA1T   | BEZEL                     |
| P34G1850 VB 1T   | REAR_COVER                |
| P37G 559 1 VO    | HINGE                     |
| P44G3790 1       | EPS                       |
| P44G3790 2       | EPS                       |
| P44G3790813 1A   | CARTON                    |
| P45G 88609 36    | PE BAG FOR MONITOR        |
| P85G 741 1       | SCALER SHIELDING          |
| P85G 742 1       | POWER SHIELDING           |
| Q40G 17N813 1A   | RATING LABEL              |
| Q40G 581813 8A   | EPA LABEL                 |
| Q40G 582813 2A   | FAMILY SHEET              |
| Q41G780081312A   | 170S7 QSG                 |
| Q44GSLIP00126A   | PAPER SLIPSHEET           |
| Q44GSLIP00127A   | PAPER SLIPSHEET           |
| Q45G 76 28A04    | PHILIPS PE BAG            |
| Q52G6025 13 3    | MYLAR                     |
| Q70G1700813 1A   | CD MANUAL                 |
| 040G 45762412B   | CBPC LABEL                |
| 051G 6 4500      | RTV                       |
| 705G 078057001   | Q920 ASS'Y                |
| 705G 078093010   | D931 ASS'Y                |
| 705G 078093011   | D935 ASS'Y                |
| 040G 457624 1B   | LABEL-CPU                 |
| 090G6064 1       | HEAT SINK                 |
| 0M1G1730 8128    | SCREW M3x8                |

## Main Board (LPL)

| Location | Part No. for TPV | Description                    |
|----------|------------------|--------------------------------|
|          | CBPC780KGMPHP    | CONVERSION BOARD               |
| CN406    | 033G801930F H    | FPC CONN. 1.0MM 30P            |
| CN701    | 033G8027 12      | WAFER 2*6P 2.0MM R/A           |
| CN403    | 033G8027 16      | WAFER 16PIN 2.0mm DIP          |
| 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            |
| C432     | 067G215Y479 7N   | LOW ESR EC 4.7 UF 50V NCC      |
| C426     | 067G305V221 3    | 220UF/16V                      |
| CN405    | 088G 35315F H    | D-SUB 15PIN                    |
| X401     | 093G 22 51       | CRYSTAL 12MHz HC-49US ARG6-120 |
|          | AIC780KGMPHP     | MAIN BOARD                     |
| U401     | 056G 562112      | NT68623MEFG-64                 |
| U701     | 056G 563 7       | AIC1084-33PM                   |
| U702     | 056G 563 31      | AI1117D-1.8-EI                 |
| U403     | 056G1133 24      | AT24C16AN-10SU-2.7             |
| U405     | 056G1133 34      | M24C02-WMN6TP                  |
| Q401     | 057G 417 4       | PMBS3904/PHILIPS-SMT(04)       |
| Q406     | 057G 417 4       | PMBS3904/PHILIPS-SMT(04)       |
| Q402     | 057G 417 13 T    | KEC 2N3906S-RTK/PS             |
| Q404     | 057G 417 13 T    | KEC 2N3906S-RTK/PS             |
| Q405     | 057G 763 1       | A03401 SOT23 BY AOS(A1)        |
| FB702    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| FB406    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| FB405    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| FB404    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| FB403    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| FB402    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| FB401    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| R411     | 061L0603101      | CHIPR 100 OHM +-5% 1/16W       |
| R410     | 061L0603101      | CHIPR 100 OHM +-5% 1/16W       |
| R408     | 061L0603101      | CHIPR 100 OHM +-5% 1/16W       |
| R407     | 061L0603101      | CHIPR 100 OHM +-5% 1/16W       |
| R406     | 061L0603101      | CHIPR 100 OHM +-5% 1/16W       |
| R405     | 061L0603101      | CHIPR 100 OHM +-5% 1/16W       |
| R422     | 061L0603102      | CHIPR 1K OHM +-5% 1/16W        |
| R485     | 061L0603102      | CHIPR 1K OHM +-5% 1/16W        |
| R433     | 061L0603102      | CHIPR 1K OHM +-5% 1/16W        |
| R432     | 061L0603102      | CHIPR 1K OHM +-5% 1/16W        |
| R431     | 061L0603102      | CHIPR 1K OHM +-5% 1/16W        |
| R428     | 061L0603102      | CHIPR 1K OHM +-5% 1/16W        |
| R427     | 061L0603102      | CHIPR 1K OHM +-5% 1/16W        |
| R426     | 061L0603102      | CHIPR 1K OHM +-5% 1/16W        |
| R420     | 061L0603102      | CHIPR 1K OHM +-5% 1/16W        |
| R472     | 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       |
| R414     | 061L0603103      | CHIPR 10K OHM +-5% 1/16W       |

|       |                |                               |
|-------|----------------|-------------------------------|
| R402  | 061L0603103    | CHIPR 10K OHM +-5% 1/16W      |
| R401  | 061L0603103    | CHIPR 10K OHM +-5% 1/16W      |
| R403  | 061L0603104    | RST SM 0603 RC0603 100K PM5 R |
| R404  | 061L0603104    | RST SM 0603 RC0603 100K PM5 R |
| R434  | 061L0603105    | RST SM 0603 RC0603 1M PM5 R   |
| R424  | 061L0603151    | CHIPR 150 OHM +-5% 1/16W      |
| R423  | 061L0603151    | CHIPR 150 OHM +-5% 1/16W      |
| R421  | 061L0603151    | CHIPR 150 OHM +-5% 1/16W      |
| R437  | 061L0603201    | CHIP 200 OHM 1/16W            |
| R438  | 061L0603201    | CHIP 200 OHM 1/16W            |
| R440  | 061L0603221    | CHIPR 220 OHM+-5% 1/16W       |
| R441  | 061L0603221    | CHIPR 220 OHM+-5% 1/16W       |
| R435  | 061L0603222    | CHIPR 2.2K OHM+-5% 1/16W      |
| R436  | 061L0603222    | CHIPR 2.2K OHM+-5% 1/16W      |
| R443  | 061L0603332    | CHIP 3.3K OHM 1/10W           |
| R442  | 061L0603332    | CHIP 3.3K OHM 1/10W           |
| R445  | 061L0603390 0F | CHIP 390 OHM 1/10W 1%         |
| R701  | 061L0603470    | CHIPR 47 OHM +-5% 1/16W       |
| R479  | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R478  | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R476  | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R460  | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R459  | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R449  | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R448  | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R447  | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R446  | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R451  | 061L0603750    | CHIPR 75 OHM+-5% 1/16W        |
| R452  | 061L0603750    | CHIPR 75 OHM+-5% 1/16W        |
| R453  | 061L0603750    | CHIPR 75 OHM+-5% 1/16W        |
| R454  | 061L0603750 9F | 75OHM 1% 1/10W                |
| R455  | 061L0603750 9F | 75OHM 1% 1/10W                |
| R456  | 061L0603750 9F | 75OHM 1% 1/10W                |
| FB410 | 061L0805000    | CHIPR 0OHM +-5% 1/10W         |
| R444  | 061L1206151    | CHIP 150OHM 1/4W              |
| C714  | 065G040210131T | 0402 MLCC 100PF J 50V         |
| C713  | 065G040210131T | 0402 MLCC 100PF J 50V         |
| C455  | 065G040210131T | 0402 MLCC 100PF J 50V         |
| C454  | 065G040210131T | 0402 MLCC 100PF J 50V         |
| C441  | 065G040210131T | 0402 MLCC 100PF J 50V         |
| C440  | 065G040210131T | 0402 MLCC 100PF J 50V         |
| C439  | 065G040210131T | 0402 MLCC 100PF J 50V         |
| C438  | 065G040210131T | 0402 MLCC 100PF J 50V         |
| C437  | 065G040210131T | 0402 MLCC 100PF J 50V         |
| C433  | 065G040210131T | 0402 MLCC 100PF J 50V         |
| C434  | 065G040210131T | 0402 MLCC 100PF J 50V         |
| C402  | 065G040210131T | 0402 MLCC 100PF J 50V         |
| C701  | 065G040210232T | 0402 MLCC 1000PF K 50V        |
| C401  | 065G040210232T | 0402 MLCC 1000PF K 50V        |
| C422  | 065G040210415T | 0402 MLCC 0.1UF K 16V         |
| C423  | 065G040210415T | 0402 MLCC 0.1UF K 16V         |
| C424  | 065G040210415T | 0402 MLCC 0.1UF K 16V         |
| C425  | 065G040210415T | 0402 MLCC 0.1UF K 16V         |

|       |                |                            |
|-------|----------------|----------------------------|
| C436  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C446  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C702  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C703  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C704  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C705  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C706  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C409  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C410  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C411  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C413  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C414  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C416  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C417  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C418  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C419  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C420  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C421  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C430  | 065G040222031T | 0402 MLCC 22PF J 50V       |
| C428  | 065G040222031T | 0402 MLCC 22PF J 50V       |
| C427  | 065G040222031T | 0402 MLCC 22PF J 50V       |
| C412  | 065G0402224A5T | MLCC 0402 0.22UF K 10V X5R |
| C403  | 065G040247312T | 0402 MLCC 47NF K 16V       |
| C404  | 065G040247312T | 0402 MLCC 47NF K 16V       |
| C405  | 065G040247312T | 0402 MLCC 47NF K 16V       |
| C406  | 065G040247312T | 0402 MLCC 47NF K 16V       |
| C407  | 065G040247312T | 0402 MLCC 47NF K 16V       |
| C408  | 065G040247312T | 0402 MLCC 47NF K 16V       |
| FB407 | 071G 56F102 K  | CHIP BEAD 1KOHM            |
| D401  | 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   |
| D416  | 093G 64 42 PP  | BAV70 SOT-23               |
| ZD414 | 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                   |
|       | 715G1712 F     | MAIN BOARD                 |
| FB408 | 071G 56K121 M  | CHIP BEAD                  |
| FB701 | 071G 56K121 M  | CHIP BEAD                  |
| FB412 | 071G 56K121 M  | CHIP BEAD                  |
| FB703 | 071G 56K121 M  | CHIP BEAD                  |
| FB704 | 071G 56K121 M  | CHIP BEAD                  |
| FB705 | 071G 56K121 M  | CHIP BEAD                  |
| FB411 | 071G 56K121 M  | CHIP BEAD                  |

## Main Board (QDI)

| Location | Part No. for TPV | Description                    |
|----------|------------------|--------------------------------|
|          | CBPC780KQMPHP    | CONVERSION BOARD               |
| CN406    | 033G801930F H    | FPC CONN. 1.0MM 30P            |
| CN701    | 033G8027 12      | WAFER 2*6P 2.0MM R/A           |
| CN403    | 033G8027 16      | WAFER 16PIN 2.0mm DIP          |
| 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            |
| C432     | 067G215Y479 7N   | LOW ESR EC 4.7 UF 50V NCC      |
| C426     | 067G305V221 3    | 220UF/16V                      |
| CN405    | 088G 35315F H    | D-SUB 15PIN                    |
| X401     | 093G 22 51       | CRYSTAL 12MHz HC-49US ARG6-120 |
|          | AIC780KQMPHP     | MAIN BOARD                     |
| U401     | 056G 562112      | NT68623MEFG-64                 |
| U701     | 056G 563 7       | AIC1084-33PM                   |
| U702     | 056G 563 31      | AI1117D-1.8-EI                 |
| U403     | 056G1133 24      | AT24C16AN-10SU-2.7             |
| U405     | 056G1133 34      | M24C02-WMN6TP                  |
| Q401     | 057G 417 4       | PMBS3904/PHILIPS-SMT(04)       |
| Q406     | 057G 417 4       | PMBS3904/PHILIPS-SMT(04)       |
| Q402     | 057G 417 13 T    | KEC 2N3906S-RTK/PS             |
| Q404     | 057G 417 13 T    | KEC 2N3906S-RTK/PS             |
| Q405     | 057G 763 1       | A03401 SOT23 BY AOS(A1)        |
| FB702    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| FB406    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| FB405    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| FB404    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| FB403    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| FB402    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| FB401    | 061L0603000      | RST SM 0603 JUMP MAX 0R05 R    |
| R411     | 061L0603101      | CHIPR 100 OHM +-5% 1/16W       |
| R410     | 061L0603101      | CHIPR 100 OHM +-5% 1/16W       |
| R408     | 061L0603101      | CHIPR 100 OHM +-5% 1/16W       |
| R407     | 061L0603101      | CHIPR 100 OHM +-5% 1/16W       |
| R406     | 061L0603101      | CHIPR 100 OHM +-5% 1/16W       |
| R405     | 061L0603101      | CHIPR 100 OHM +-5% 1/16W       |
| R422     | 061L0603102      | CHIPR 1K OHM +-5% 1/16W        |
| R485     | 061L0603102      | CHIPR 1K OHM +-5% 1/16W        |
| R433     | 061L0603102      | CHIPR 1K OHM +-5% 1/16W        |



|      |                |                               |
|------|----------------|-------------------------------|
| R432 | 061L0603102    | CHIPR 1K OHM +-5% 1/16W       |
| R431 | 061L0603102    | CHIPR 1K OHM +-5% 1/16W       |
| R428 | 061L0603102    | CHIPR 1K OHM +-5% 1/16W       |
| R427 | 061L0603102    | CHIPR 1K OHM +-5% 1/16W       |
| R426 | 061L0603102    | CHIPR 1K OHM +-5% 1/16W       |
| R420 | 061L0603102    | CHIPR 1K OHM +-5% 1/16W       |
| R472 | 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      |
| R414 | 061L0603103    | CHIPR 10K OHM +-5% 1/16W      |
| R402 | 061L0603103    | CHIPR 10K OHM +-5% 1/16W      |
| R401 | 061L0603103    | CHIPR 10K OHM +-5% 1/16W      |
| R403 | 061L0603104    | RST SM 0603 RC0603 100K PM5 R |
| R404 | 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      |
| R438 | 061L0603201    | CHIP 200 OHM 1/16W            |
| R437 | 061L0603201    | CHIP 200 OHM 1/16W            |
| R440 | 061L0603221    | CHIPR 220 OHM+-5% 1/16W       |
| R441 | 061L0603221    | CHIPR 220 OHM+-5% 1/16W       |
| R435 | 061L0603222    | CHIPR 2.2K OHM+-5% 1/16W      |
| R436 | 061L0603222    | CHIPR 2.2K OHM+-5% 1/16W      |
| R443 | 061L0603332    | CHIP 3.3K OHM 1/10W           |
| R442 | 061L0603332    | CHIP 3.3K OHM 1/10W           |
| R445 | 061L0603390 0F | CHIP 390 OHM 1/10W 1%         |
| R701 | 061L0603470    | CHIPR 47 OHM +-5% 1/16W       |
| R479 | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R478 | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R476 | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R460 | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R459 | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R449 | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R448 | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R447 | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R446 | 061L0603472    | CHIPR 4.7K OHM +-5% 1/16W     |
| R453 | 061L0603750    | CHIPR 75 OHM+-5% 1/16W        |



|       |                |                            |
|-------|----------------|----------------------------|
| R452  | 061L0603750    | CHIPR 75 OHM+-5% 1/16W     |
| R451  | 061L0603750    | CHIPR 75 OHM+-5% 1/16W     |
| R454  | 061L0603750 9F | 75OHM 1% 1/10W             |
| R455  | 061L0603750 9F | 75OHM 1% 1/10W             |
| R456  | 061L0603750 9F | 75OHM 1% 1/10W             |
| FB410 | 061L0805000    | CHIPR 0OHM +-5% 1/10W      |
| R444  | 061L1206151    | CHIP 150OHM 1/4W           |
| C402  | 065G040210131T | 0402 MLCC 100PF J 50V      |
| C401  | 065G040210232T | 0402 MLCC 1000PF K 50V     |
| C701  | 065G040210232T | 0402 MLCC 1000PF K 50V     |
| C422  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C423  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C424  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C425  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C436  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C446  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C702  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C703  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C704  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C705  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C706  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C409  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C410  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C411  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C413  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C414  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C416  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C417  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C418  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C419  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C420  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C421  | 065G040210415T | 0402 MLCC 0.1UF K 16V      |
| C427  | 065G040222031T | 0402 MLCC 22PF J 50V       |
| C428  | 065G040222031T | 0402 MLCC 22PF J 50V       |
| C430  | 065G040222031T | 0402 MLCC 22PF J 50V       |
| C412  | 065G0402224A5T | MLCC 0402 0.22UF K 10V X5R |
| C403  | 065G040247312T | 0402 MLCC 47NF K 16V       |
| C404  | 065G040247312T | 0402 MLCC 47NF K 16V       |
| C405  | 065G040247312T | 0402 MLCC 47NF K 16V       |
| C406  | 065G040247312T | 0402 MLCC 47NF K 16V       |

|       |                |                          |
|-------|----------------|--------------------------|
| C407  | 065G040247312T | 0402 MLCC 47NF K 16V     |
| C408  | 065G040247312T | 0402 MLCC 47NF K 16V     |
| FB407 | 071G 56F102 K  | CHIP BEAD 1KOHM          |
| D401  | 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 |
| D416  | 093G 64 42 PP  | BAV70 SOT-23             |
| ZD414 | 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                 |
|       | 715G1712 F     | MAIN BOARD               |
| FB408 | 071G 56K121 M  | CHIP BEAD                |
| FB701 | 071G 56K121 M  | CHIP BEAD                |
| FB412 | 071G 56K121 M  | CHIP BEAD                |
| FB703 | 071G 56K121 M  | CHIP BEAD                |
| FB704 | 071G 56K121 M  | CHIP BEAD                |
| FB705 | 071G 56K121 M  | CHIP BEAD                |

## Power Board(LPL and QDI)

| Location | Part No. for TPV | Description               |
|----------|------------------|---------------------------|
|          | PWPC1742QDR1P    | POWER BOARD               |
| 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         |
| C840     | 067G215D471 4K   | ED 470UF 25V              |
| C820     | 067G215D471 4K   | ED 470UF 25V              |
| C907     | 067G215S10115K   | 100UF 450V                |
| C932     | 067G215S102 4K   | ED1000UF 25V              |
| C933     | 067G215S102 4K   | ED1000UF 25V              |
| L903     | 071G 55 24       | FERRITE BEAD              |
| L902     | 071G 55 24       | FERRITE BEAD              |
| L901     | 073G 174 65 LS   | LINE FILTER BY LISHIN     |
| L955     | 073G 253902 T    | CKOLE COIL 0.8uH          |
| L951     | 073G 253902 T    | CKOLE COIL 0.8uH          |
| T901     | 080GL17T900 T    | X'FMR SRW28LEC-T93H016    |
| PT802    | 080GL19T 8DN1    | X'FMR DARFONTK.2006M.101  |
| PT801    | 080GL19T 8DN1    | X'FMR DARFONTK.2006M.101  |
| F901     | 084G 55 7 GP     | FUSE 3.15A 250V           |
| 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          |
| Q841  | 057G 763 14    | AM9945N                   |
| Q821  | 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    |
| R836  | 061L0805100 2F | CHIP 10K OHM 1/8W 1%      |
| R855  | 061L0805100 2F | CHIP 10K OHM 1/8W 1%      |
| R856  | 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  |
| R887  | 061L0805104    | CHIPR 100K OHM+-5% 1/10W  |
| R802  | 061L0805104    | CHIPR 100K OHM+-5% 1/10W  |
| R872  | 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          |
| R853  | 061L0805122    | 1.2KOHM +-5%,1/8W,0805    |
| R833  | 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       |

|       |                |                           |
|-------|----------------|---------------------------|
| R944  | 061L0805910 1F | CHIP 9.1K OHM 1/10W 1%    |
| R945  | 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      |
| R902  | 061L1206684    | CHIPR 680K OHM+-5% 1/8W   |
| R901  | 061L1206684    | CHIPR 680K OHM+-5% 1/8W   |
| R900  | 061L1206684    | CHIPR 680K OHM+-5% 1/8W   |
| C838  | 065G0805102 31 | 1000PF 50V NPO            |
| C861  | 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   |
| C914  | 065G0805105 22 | CHIP 1UF 25V X7R 0805     |
| 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     |
| 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              |
| D883  | 093G 64 44 S   | LL4148WP                  |
| D881  | 093G 64 44 S   | LL4148WP                  |

|       |                |                                 |
|-------|----------------|---------------------------------|
| D887  | 093G 64 44 S   | LL4148WP                        |
| D885  | 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                          |
| T901  | 006G 31502     | 1.5MM RIVET                     |
| L902  | 006G 31502     | 1.5MM RIVET                     |
| PT801 | 006G 31502     | 1.5MM RIVET                     |
| PT802 | 006G 31502     | 1.5MM RIVET                     |
| NR901 | 006G 31502     | 1.5MM RIVET                     |
| C905  | 006G 31502     | 1.5MM RIVET                     |
| IC941 | 056G 158 10 T  | AZ431AZ-AE1                     |
| R952  | 061G 17210052T | 100HM 5% 1/4W                   |
| R915  | 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                  |
| R859  | 061G212Y625 KT | MGFR 6.2MOHM +-5% 1/2W          |
| R839  | 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°C KINGNICH |
| C952  | 067G215B2214KT | LOW E,S,R 220UF +-20% 25V       |
| C956  | 067G215B2214KT | LOW E,S,R 220UF +-20% 25V       |
| FB905 | 071G 55 23 S   | BEAD                            |
| FB902 | 071G 55 23 S   | BEAD                            |
| FB903 | 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      |
| D926  | 093G 6038T52T  | FR103                           |
| D919  | 093G 6038T52T  | FR103                           |
|       | 715G1813 I     | POWER BOARD                     |

## KEPC Board (LPL and QDI)

|       | 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                      |