

# NEC

PART NO. 599910536

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# SERVICE MANUAL

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COLOR MONITOR **MultiSync® LCD1530V**

**MODELS LCD1530V (A) / (B) / -BK(A)**

NEC-MITSUBISHI ELECTRIC VISUAL SYSTEMS CORPORATION

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08109453  
08109454  
08109455



## WARNING

The SERVICE PERSONNEL should have the appropriate technical training, knowledge and experience necessary to:

- Be familiar with specialized test equipment, and
- Be careful to follow all safety procedures to minimize danger to themselves and their coworkers.

To avoid electrical shocks, this equipment should be used with an appropriate power code.

This equipment utilized a micro-gap power switch. Turn off the set by first pushing power switch. Next, remove the power cord from the AC outlet.

To prevent fire or shock hazards, do not expose this unit to rain or moisture.



This symbol warns the personnel that un-insulated voltage within the unit may have sufficient magnitude to cause electric shock.



This symbol alerts the personnel that important literature concerning the operation and maintenance of this unit has been included.

Therefore, it should be read carefully in order to avoid any problems.



## PRODUCT SAFETY CAUTION

1. When parts replacement is required for servicing, always use the manufacturer's specified replacement.
2. When replacing the component, always be certain that all the components are put back in the place.
3. As for a connector, pick and extract housing with fingers properly since a disconnection and improper contacts may occur, when wires of the connector are led.
4. Use a proper screwdriver. If you use screwdriver that does not fit, you may damage the screws.

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# User's Manual

Only the point is mentioned

## 1. A Version

**NEC**



USER'S MANUAL

# MultiSync® LCD1530V™





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|  |                |   |
|--|----------------|---|
|   | <b>WARNING</b> |  |
| <p>TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO, DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS UNLESS THE PRONGS CAN BE FULLY INSERTED.</p> <p>REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p> |                |   |

|   |  |   |
|---|--|---|
|    | <b>CAUTION</b>   |  |
| <p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, MAKE SURE POWER CORD IS UNPLUGGED FROM WALL SOCKET. TO FULLY DISENGAGE THE POWER TO THE UNIT, PLEASE DISCONNECT THE POWER CORD FROM THE AC OUTLET. DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p> |  |   |
|    | <p>This symbol warns user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.</p> |   |
|    | <p>This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.</p>         |   |

**Canadian Department of Communications Compliance Statement**

- DOC: This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.
- C-UL: Bears the C-UL Mark and is in compliance with Canadian Safety Regulations according to C.S.A. 22.2 No. 950.

**FCC Information**

1. Use the attached specified cables with the LCD1 530V color monitor so as not to interfere with radio and television reception.
  - (1) Please use the supplied power cord or equivalent to ensure FCC compliance.
  - (2) Please use the supplied shielded video signal cable.
2. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult your dealer or an experienced radio/TV technician for help.

If necessary, the user should contact the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet, prepared by the Federal Communications Commission, helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

## Contents

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Your new NEC-Mitsubishi MultiSync® LCD monitor box\* should contain the following:

- MultiSync LCD1530V™ monitor with tilt base
- Power Cord
- Video Signal Cable
- User's Manual



\* Remember to save your original box and packing material to transport or ship the monitor.

## Quick Start

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To attach the MultiSync® LCD monitor to your system, follow these instructions:

1. Turn off the power to your computer.
2. For the PC: Connect the 15-pin mini D-SUB of the appropriate signal cable to the connector of the display card in your system (**Figure A.1**). Tighten all screws.  
For the Mac: Connect the MultiSync LCD1530V™ Macintosh cable adapter to the computer (**Figure B.1**). Attach the 15-pin mini D-SUB end of the appropriate signal cable to the MultiSync LCD1530V Macintosh cable adapter (**Figure B.1**). Tighten all screws.

**NOTE:** To obtain the MultiSync LCD1530V Macintosh cable adapter, call NEC-Mitsubishi Electronics Display at (800) 820-1230.

Remove connector cover and cable cover on back of monitor.

3. Connect the 15-pin mini D-SUB of the video signal cable to the appropriate connector on the back of the monitor (**Figure C.1**).

**NOTE:** Incorrect cable connections may result in irregular operation, damage display quality/components of LCD module and/or shorten the module's life.

4. Connect one end of the power cord to the MultiSync LCD Series monitor and the other end to the power outlet. Place the Video Signal Cable and AC power cord under Clips (**Figure C.1**). Replace connector cover and cable cover. (**Figure E.1**)

**NOTE:** Adjust position of cable that place under clips, to avoid damage for cable or monitor.

5. Turn on the monitor (**Figure D.1**) and the computer.
6. To complete the setup of your MultiSync LCD monitor, use the following OSM™ controls:
  - Auto Adjust Contrast
  - Auto Adjust

Refer to the **Controls** section of this User's Manual for a full description of these OSM controls.

**NOTE:** For download information on the Windows 95/98 INF file for your MultiSync LCD1530V monitor, refer to the **References** section of this User's Manual.

**NOTE:** If you have any problems, please refer to the **Troubleshooting** section of this User's Manual.

**NOTE:** For easy removal of the cable cover or signal cable, place the monitor face down. (**Figure R.2**)



## Quick Start *-continued*

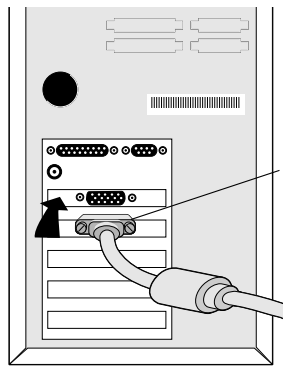


Figure A.1

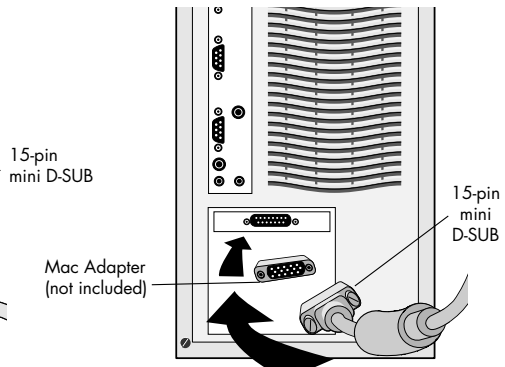


Figure B.1

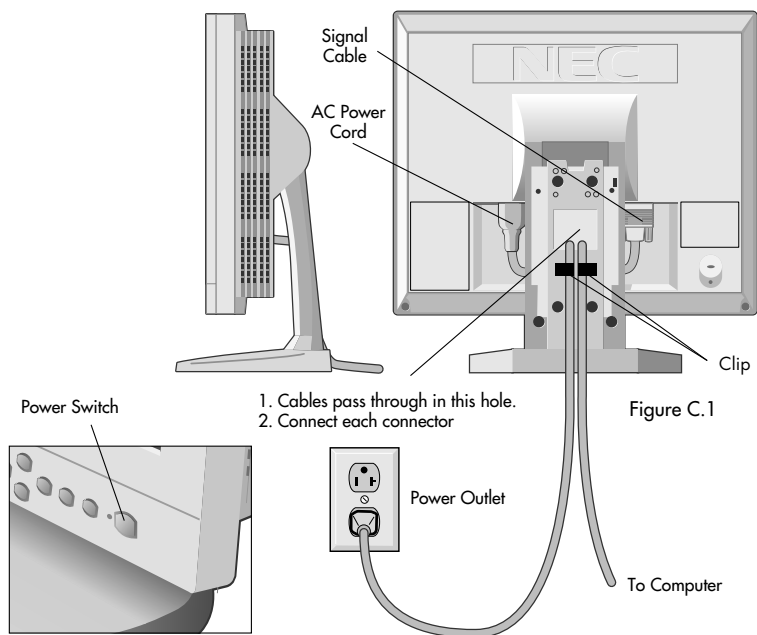


Figure C.1

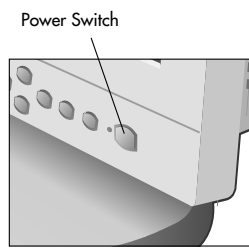
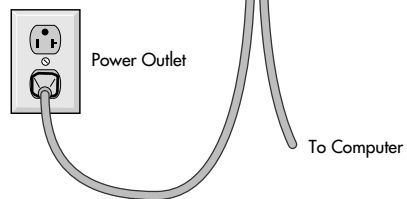


Figure D.1



4

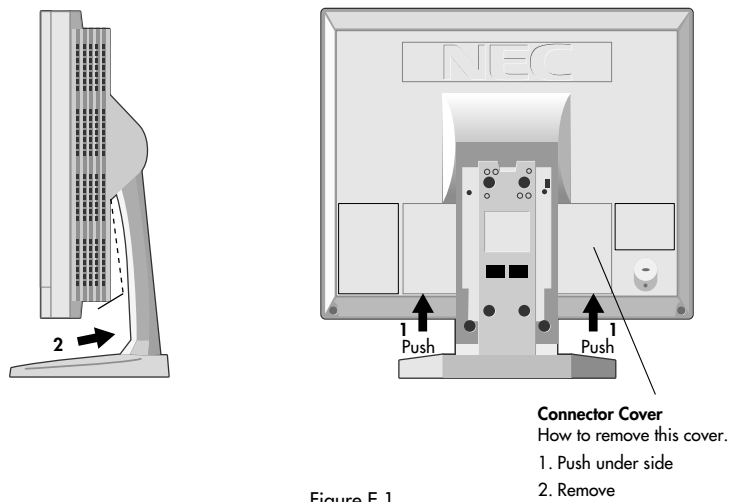
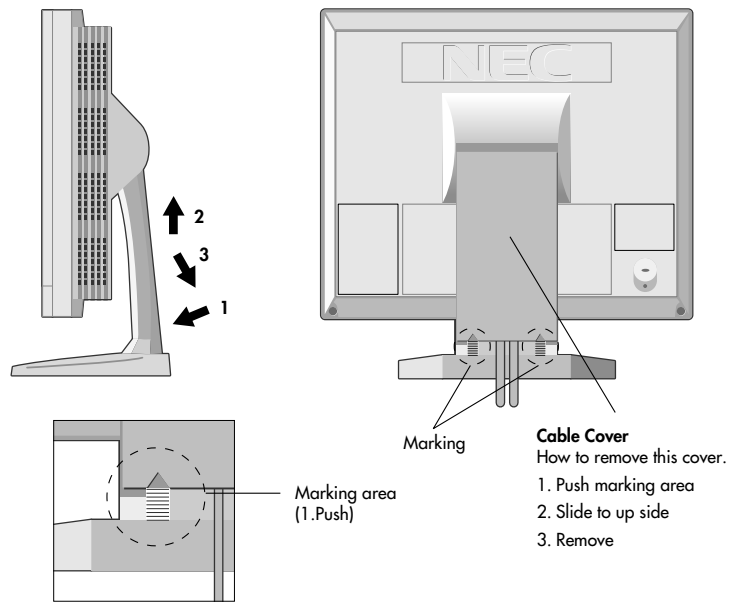


Figure E.1

## Quick Start –continued

### Tilt

Grasp both sides of the monitor screen with your hands and adjust the tilt as desired (**Figure TS.1**).

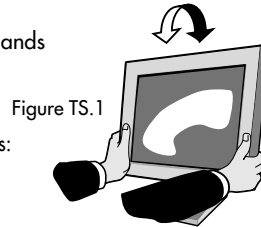


Figure TS.1

### Remove Monitor Stand for Mounting

To prepare the monitor for alternate mounting purposes:

1. Remove the connector cover, hinge cover and cable cover (**Figure R.1**).
2. Disconnect all cables.
3. Place monitor face down on a non-abrasive surface (place the screen on a 32 mm platform so that hole of stand match to screw location). (**Figure R.2**).
4. Remove the 4 screws connecting the monitor to the stand and lift off the stand assembly (**Figure R.2**) the monitor is now ready for mounting in an alternate manner.
5. Connect the AC cord and signal cable to the back of the monitor.
6. Reverse this process to reattach stand.

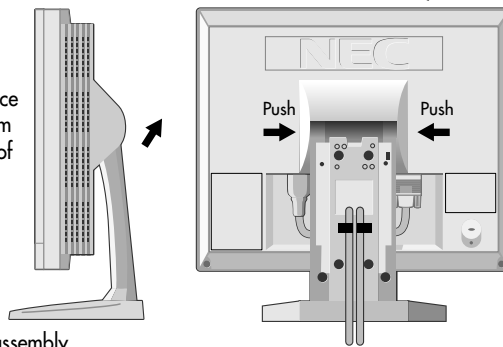


Figure R.1

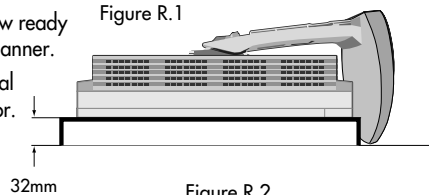
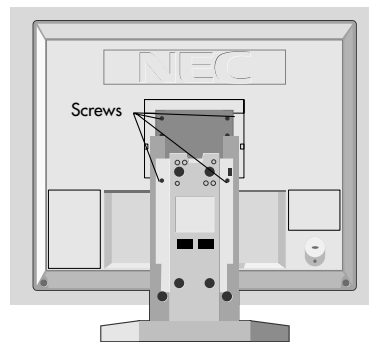


Figure R.2



6

# Controls

## OSM™ (On-Screen-Manager) Controls

The OSM controls on the front of the monitor function as follows:

To access OSM menu, press any of the control buttons ( ◀, ▶, ▲, ▼ ) or the PROCEED button.

| Control  | Main Menu   | Sub-Menu  |
|--|---|---|
| EXIT   | Exits the OSM controls.   | Exits to the OSM controls main menu.                              |
| CONTROL ▲/▼  | Moves the highlighted area up/down to select one of the controls. | Moves the highlighted area up/down to select one of the controls. |
| CONTROL ◀/▶  | Moves the highlighted area left/right to select control menus.    | Moves the bar left/right to increase or decrease the adjustment.  |
| PROCEED  | Has no function.  | Activates Auto Adjust and ALL RESET functions.                    |
| RESET: The currently highlighted control to the factory setting. | Resets all the controls within the highlighted menu.              | Resets the highlighted control.                                   |

**NOTE:** When RESET is pressed, a warning window will appear allowing you to cancel the reset function.

## ☀️ **Brightness/Contrast Controls**

### ☀️ **BRIGHTNESS**

Adjusts the overall image and background screen brightness.

### 🔊 **CONTRAST**

Adjusts the image brightness in relation to the background.

### AUTO **AUTO ADJUST CONTRAST**

Adjusts the image displayed for non-standard video inputs.

### **OSM LOCK OUT**

The OSM LOCK OUT control completely locks out access to all OSM control functions. When attempting to activate OSM controls while in the LOCK OUT mode, a screen will appear indicating that OSM controls are locked out.

- To enter the LOCK OUT mode, simultaneously press the PROCEED and ▼ button. The LOCK OUT window will appear.
- To activate the LOCK OUT function, simultaneously press and hold down the PROCEED and ▲ button. The OSM window will disappear within seconds and the LOCK OUT function will be activated.
- To deactivate the LOCK OUT mode, simultaneously press the PROCEED and ▲ button.

### AUTO **Auto Adjust**

Automatically adjusts the Image Position, the H. Size and Fine setting.

## Controls –continued

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### **Position Controls**

#### **H. POSITION**

Controls Horizontal Image Position within the display area of the LCD.

#### **V. POSITION**

Controls Vertical Image Position within the display area of the LCD.

#### **AUTO**

Automatically sets the Horizontal and Vertical Image Position within the display area of the LCD.


### **Image Adjust Controls**

#### **H. SIZE**

Adjusts the horizontal size by increasing or decreasing this setting.

#### **FINE**

Improves focus, clarity and image stability by increasing or decreasing this setting.

 Automatically adjusts the H. Size and Fine setting.

### **AccuColor® Control System**

Five color presets select the desired color setting. Each color setting is adjusted at the factory.

**R,G,B:** Increases or decreases Red, Green or Blue color depending upon which is selected. The change in color will appear on screen and the direction (increase or decrease) will be shown by the bars.

### **Tools**

#### **OSM H POS.**

#### **OSM V POS.**

You can choose where you would like the OSM™ control window to appear on your screen. Selecting OSM Location allows you to manually adjust the position of the OSM control menu left, right, up or down.

#### **ALL RESET**

Selecting ALL RESET allows you to reset all OSM control settings back to the factory settings. Individual settings can be reset by highlighting the control to be used and pressing the RESET button.

### **Information 1**

Indicates the current display resolution and frequency setting of the monitor.

### **Information 2**

Indicates the Model Name, Serial Number and URL.

**Resolution Notifier:** While the display is capable of other resolutions (as with all flat panel displays), it is a fixed matrix of pixels and best used at its native resolution — 1024 x 768. For further information, please refer to your display card or system manual.

## Recommended Use

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### Safety Precautions and Maintenance



FOR OPTIMUM PERFORMANCE, PLEASE NOTE THE FOLLOWING WHEN SETTING UP AND USING THE MULTISYNC® LCD COLOR MONITOR:



- **DO NOT OPEN THE MONITOR.** There are no user serviceable parts inside and opening or removing covers may expose you to dangerous shock hazards or other risks. Refer all servicing to qualified service personnel.
- Do not spill any liquids into the cabinet or use your monitor near water.
- Do not insert objects of any kind into the cabinet slots, as they may touch dangerous voltage points, which can be harmful or fatal or may cause electric shock, fire or equipment failure.
- Do not place any heavy objects on the power cord. Damage to the cord may cause shock or fire.
- Do not place this product on a sloping or unstable cart, stand or table, as the monitor may fall, causing serious damage to the monitor.
- When operating the MultiSync LCD monitor with its AC 220-240V power supply, use a power supply cord that matches the power supply voltage of the AC power outlet being used. The power supply cord you use must have been approved by and comply with the safety standards of your country. (Type HOSVV-F should be used in UK)
- Do not place any objects onto the monitor and do not use the monitor outdoors.
- The inside of the fluorescent tube located within the LCD monitor contains mercury. Please follow the bylaws or rules of your municipality to dispose of the tube properly.
- In UK, use a BS-approved power cord with molded plug having a black (5A) fuse installed for use with this monitor. If a power cord is not supplied with this monitor, please contact your supplier.

Immediately unplug your monitor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the monitor.
- If the monitor has been exposed to rain or water.
- If the monitor has been dropped or the cabinet damaged.
- If the monitor does not operate normally by following operating instructions.
- Do not bend power cord.
- Do not use monitor in high temperature, humid, dusty, or oily areas.
- Do not cover vent on monitor.
- If monitor or glass is broken, do not come in contact with the liquid crystal and handle with care.



**CAUTION**

- Allow adequate ventilation around the monitor so that heat can properly dissipate. Do not block ventilated openings or place the monitor near a radiator or other heat sources. Do not put anything on top of monitor.
- The power cable connector is the primary means of detaching the system from the power supply. The monitor should be installed close to a power outlet which is easily accessible.
- Handle with care when transporting. Save packaging for transporting.

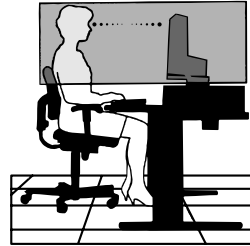
## Recommended Use *–continued*



CORRECT PLACEMENT AND ADJUSTMENT OF THE MONITOR CAN REDUCE EYE, SHOULDER AND NECK FATIGUE. CHECK THE FOLLOWING WHEN YOU POSITION THE MONITOR:



- For optimum performance, allow 20 minutes for warm-up.
- Adjust the monitor height so that the top of the screen is at or slightly below eye level. Your eyes should look slightly downward when viewing the middle of the screen.
- Position your monitor no closer than 16 inches and no further away than 28 inches from your eyes. The optimal distance is 21 inches.
- Rest your eyes periodically by focusing on an object at least 20 feet away. Blink often.
- Position the monitor at a 90° angle to windows and other light sources to minimize glare and reflections. Adjust the monitor tilt so that ceiling lights do not reflect on your screen.
- If reflected light makes it hard for you to see your screen, use an anti-glare filter.
- Clean the LCD monitor surface with a lint-free, non-abrasive cloth. Avoid using any cleaning solution or glass cleaner!
- Adjust the monitor's brightness and contrast controls to enhance readability.
- Use a document holder placed close to the screen.
- Position whatever you are looking at most of the time (the screen or reference material) directly in front of you to minimize turning your head while you are typing.
- Avoid displaying fixed patterns on the monitor for long periods of time to avoid image persistence (after-image effects).
- Get regular eye checkups.



### **Ergonomics**

To realize the maximum ergonomics benefits, we recommend the following:

- Do not position the Contrast control to its maximum setting
- Use the preset Size and Position controls with standard signals
- Use the preset Color Setting
- Use non-interlaced signals with a vertical refresh rate between 60-75Hz
- Do not use primary color blue on a dark background, as it is difficult to see and may produce eye fatigue to insufficient contrast

*For more detailed information on setting up a healthy work environment, call NEC at (800) 820-1230, NEC FastFacts™ information at (800) 366-0476 and request document #900108 or write the American National Standard for Human Factors Engineering of Visual Display Terminal Workstations – ANSI-HFS Standard No. 100-1988 – The Human Factors Society, Inc. P.O. Box 1369, Santa Monica, California 90406.*

# Specifications

| Monitor Specifications  |  | MultiSync® LCD1530V™ Monitor  | Notes  |
|---|--|---|--|
| LCD Module  | Diagonal:<br>Viewable Image Size:<br>Native Resolution (Pixel Count):                      | 15.1 inch<br>15.1 inch<br>1024 x 768  | Active matrix; thin film transistor (TFT) liquid crystal display (LCD); 0.30 mm dot pitch; 200cd/m <sup>2</sup> white luminance; 200:1 contrast ratio, typical |
| Input Signal  | Video:<br>Sync:  | ANALOG 0.7 Vp-p/75 Ohms<br>Separate sync. TTL Level<br>Horizontal sync. Positive/Negative<br>Vertical sync. Positive/Negative                   |  |
| Display Colors  | Analog input:  | 16,194,277 colors with dithering  | Depends on display card used.  |
| Viewing Angle   | Left/Right:<br>Up/Down:  | ± 60°<br>± 45°  |  |
| Synchronization Range   | Horizontal:<br>Vertical:   | 31.0 kHz to 60.0 kHz<br>56.2 Hz to 75.0 Hz  | Automatically<br>Automatically   |
| Resolutions Supported<br>Resolution based on horizontal and vertical frequencies only |  | 720 x 400* VGA text<br>640 x 480* at 60 Hz to 75 Hz<br>800 x 600* at 56 Hz to 75 Hz<br>832 x 624 at 75 Hz<br>1024 x 768 at 60 Hz to 75 Hz ..... | Some systems may not support all modes listed.<br>NEC-Mitsubishi Electronics Display cites recommended resolution at 75 Hz for optimal display performance.    |
| Active Display Area   | Horizontal:<br>Vertical:   | 307 mm/12.1 inches<br>230 mm/9.1 inches   | Dependent upon signal timing used, and does not include border area.   |
| Power Supply  |  | AC 100 – 240 V @ 50/60 Hz   |  |
| Current Rating  |  | 0.46 A @ 100 – 120 V, 0.27 A @ 220 – 240 V  |  |
| Dimensions  |  | 370 mm (W) x 370 mm (H) x 160 mm (D)<br>14.6 inches (W) x 14.6 inches (H) x 6.3 inches (D)  |  |
| Weight  |  | 4.7 kg<br>10.4 lbs  |  |
| Environmental Considerations  | Operating Temperature:<br>Humidity:<br>Feet:<br>Storage Temperature:<br>Humidity:<br>Feet: | 5°C to 35°C/41°F to 95°F<br>30% to 80%<br>3,000 m/10,000 Feet<br>-10°C to +60°C/14°F to 140°F<br>10% to 85%<br>12,000 m/40,000 Feet             |  |

\* Interpolated Resolutions: When resolutions are shown that are lower than the pixel count of the LCD module, text may appear different. This is normal and necessary for all current flat panel technologies when displaying non-native resolutions full screen. In flat panel technologies, each dot on the screen is actually one pixel, so to expand resolutions to full screen, an interpolation of the resolution must be done.

NOTE: Technical specifications are subject to change without notice.



## Features

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**Wider Compatibility:** Because the MultiSync LCD monitor is analog through and through, it does not require special analog to digital display or interface cards but can accept RGB input directly.

**Reduced Footprint:** Provides the ideal solution for environments requiring superior image quality but with size and weight limitations. The monitor's small footprint and low weight allow it to be moved or transported easily from one location to another.

**AccuColor® Control System:** Allows you to adjust the colors on your screen and customize the color accuracy of your monitor to a variety of standards.

**OSM™ (On-Screen Manager) Controls:** Allow you to quickly and easily adjust all elements of your screen image via simple to use on-screen menus.

**ErgoDesign® Features:** Enhance human ergonomics to improve the working environment, protect the health of the user and save money. Examples include OSM controls for quick and easy image adjustments, tilt base for preferred angle of vision, small footprint and compliance with MPRII guidelines for lower emissions.

**Plug and Play:** The Microsoft® solution with the Windows®95/98 operating system facilitates setup and installation by allowing the monitor to send its capabilities (such as screen size and resolutions supported) directly to your computer, automatically optimizing display performance.

**IPM™ (Intelligent Power Manager) System:** Provides innovative power-saving methods that allow the monitor to shift to a lower power consumption level when on but not in use, saving two-thirds of your monitor energy costs, reducing emissions and lowering the air conditioning costs of the workplace.

**Multiple Frequency Technology:** Automatically adjusts monitor to the display card's scanning frequency, thus displaying the resolution required.

**FullScan™ Capability:** Allows you to use the entire screen area in most resolutions, significantly expanding image size.

OSM Display Screen Copyright 2000 by  
NEC-Mitsubishi Electronics Display of America, Inc.

# Troubleshooting

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## **No picture**

- The signal cable should be completely connected to the display card/computer.
- The display card should be completely seated in its slot.
- Power Switch and computer power switch should be in the ON position.
- Check to make sure that a supported mode has been selected on the display card or system being used. (Please consult display card or system manual to change graphics mode.)
- Check the monitor and your display card with respect to compatibility and recommended settings.
- Check the signal cable connector for bent or pushed-in pins.

## **Image persistence**

- Image persistence is when a "ghost" of an image remains on the screen even after the monitor has been turned off. Unlike CRT monitors, LCD monitors' image persistence is not permanent. To alleviate image persistence, turn the monitor off for as long as an image was displayed. If an image was on the monitor for one hour and a "ghost" of that image remains, the monitor should be turned off for one hour to erase the image.

**NOTE: As with all personal display devices, NEC-Mitsubishi Electronics Display of America recommends using a screen saver at regular intervals whenever the screen is idle.**

## **Image is unstable, unfocused or swimming is apparent**

- Signal cable should be completely attached to the computer.
- Use the OSM Image Adjust controls to focus and adjust display by increasing or decreasing the fine total. When the display mode is changed, the OSM Image Adjust settings may need to be re-adjusted.
- Check the monitor and your display card with respect to compatibility and recommended signal timings.

## **LED on monitor is not lit** (*no green or amber color can be seen*)

- Power Switch should be in the ON position and power cord should be connected.
- Make certain the computer is not in a power-saving mode (touch the keyboard or mouse).

## **Display image is not sized properly**

- Use the OSM Image Adjust controls to increase or decrease the Coarse total.
- Check to make sure that a supported mode has been selected on the display card or system being used. (Please consult display card or system manual to change graphics mode.)

## **Selected resolution is not displayed properly**

- Use OSM Display Mode to enter Information menu and confirm that the appropriate resolution has been selected. If not, select corresponding option.

## References

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- **BBS** **(978) 742-8706**  
 NEC-Mitsubishi Electronics Display of America Remote Bulletin Board System is an electronic service accessible with your system and a modem. Communication parameters are: 300/1200/2400/9600/14.4k/28.8k/33.6k bps, no parity, 8-data bits, 1 stop bit
  - **Customer Service/ Technical Support** **(800) 632-4662**  
**Fax** **(978) 742-7049**
  - **Electronic Channels:**  
 NEC-Mitsubishi Electronics Display of America Remote Bulletin Board System  
 Internet e-mail: [tech-support@necmitsubishi.com](mailto:tech-support@necmitsubishi.com)  
 Internet ftp site: <ftp.necmitsubishi.com>  
 World Wide Web: <http://www.necmitsubishi.com>  
 Product Registration: <http://www.necmitsubishi.com/productregistration>  
 European Operations: <http://www.nec-monitors.com>  
 Windows® 95/98/2000 INF File: <http://support.necmitsubishi.com/software.htm>  
 then download the file NECMSINF.ZIP
  - **FastFacts™ Information** **(630) 467-4363**
- | INFORMATION              | DESCRIPTION   | DOCUMENT # |
|--------------------------|---|------------|
| Glossary                 | Definition of terms related to functions, features and installation of the MultiSync® monitor   | 900203     |
| More Information         | Names and addresses of other groups involved in standards and features of the MultiSync monitor | 900204     |
| Macintosh Connection     | Detailed information on connecting the MultiSync monitor to a Macintosh                         | 153006     |
| Healthy Work Environment | Detailed information on setting up a healthy work environment                                   | 900108     |
- **Literature & Sales Info** **(800) NEC-INFO [(800) 632-4636]**
  - **MultiSync Fulfillment** **(800) 820-1230**  
 [For software & accessories]
  - **TeleSales** **(800) 284-4484**

## Limited Warranty

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NEC-Mitsubishi Electronics Display of America, Inc. (hereinafter "NMD-A") warrants this Product to be free from defects in material and workmanship and, subject to the conditions set forth below, agrees to repair or replace (at NMD-A's sole option) any part of the enclosed unit which proves defective for a period of three (3) years from the date of first consumer purchase. Spare parts are warranted for ninety (90) days. Replacement parts or unit may be new or refurbished and will meet specifications of the original parts or unit.

This warranty gives you specific legal rights and you may also have other rights, which vary from state to state. This warranty is limited to the original purchaser of the Product and is not transferable. This warranty covers only NMD-A-supplied components. Service required as a result of third party components is not covered under this warranty. In order to be covered under this warranty, the Product must have been purchased in the U.S.A. or Canada by the original purchaser. This warranty only covers Product distribution in the U.S.A. or Canada by NMD-A. No warranty service is provided outside of the U.S.A. or Canada. Proof of Purchase will be required by NMD-A to substantiate date of purchase. Such proof of purchase must be an original bill of sale or receipt containing name and address of seller, purchaser, and the serial number of the product.

It shall be your obligation and expense to have the Product shipped, freight prepaid, or delivered to the authorized reseller from whom it was purchased or other facility authorized by NMD-A to render the services provided hereunder in either the original package or a similar package affording an equal degree of protection. All Products returned to NMD-A for service MUST have prior approval, which may be obtained by calling 1-800-632-4662. The Product shall not have been previously altered, repaired, or serviced by anyone other than a service facility authorized by NMD-A to render such service, the serial number of the product shall not have been altered or removed. In order to be covered by this warranty the Product shall not have been subjected to displaying of fixed images for long periods of time resulting in image persistence (afterimage effects), accident, misuse or abuse or operated contrary to the instructions contained in the User's Manual. Any such conditions will void this warranty.

NMD-A SHALL NOT BE LIABLE FOR DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR OTHER TYPES OF DAMAGES RESULTING FROM THE USE OF ANY NMD-A PRODUCT OTHER THAN THE LIABILITY STATED ABOVE. THESE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES OR THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE ABOVE EXCLUSIONS OR LIMITATIONS MAY NOT APPLY TO YOU.

This Product is warranted in accordance with the terms of this limited warranty. Consumers are cautioned that Product performance is affected by system configuration, software, the application, customer data, and operator control of the system, among other factors. While NMD-A Products are considered to be compatible with many systems, specific functional implementation by the customers of the Product may vary. Therefore, suitability of a Product for a specific purpose or application must be determined by consumer and is not warranted by NMD-A.

For the name of your nearest authorized NEC-Mitsubishi Electronics Display service facility, contact NEC-Mitsubishi Electronics Display at 1-800-632-4662.

## TCO'99

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Congratulations! You have just purchased a TCO'99 approved and labeled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also to the further development of environmentally adapted electronics products.



### **Why do we have environmentally labelled computers?**

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during the manufacturing. Since it has not been possible for the majority of electronics equipment to be recycled in a satisfactory way, most of these potentially damaging substances sooner or later enter Nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (Internal) and natural (external) environments. Since all methods of conventional electricity generation have a negative effect on the environment (acidic and climate-influencing emissions, radioactive waste, etc.), it is vital to conserve energy. Electronics equipment in offices consume an enormous amount of energy since they are often left running continuously.

### **What does labelling involve?**

This product meets the requirements for the TCO'99 scheme which provides for international and environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation) and Statens Energimyndighet (The Swedish National Energy Administration).

The requirements cover a wide range of issues: environment, ergonomics, usability, emission of electrical and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands concern restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons) and chlorinated solvents, among other things. The product must be prepared for recycling and the manufacturer is obliged to have an environmental plan which must be adhered to in each country where the company implements its operational policy. The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example, in respect of the reduction of electric and magnetic fields, physical and visual ergonomics and good usability.

### **Environmental Requirements**

#### **Flame retardants**

Flame retardants are present in printed circuit boards, cables, wires, casings and housings. In turn, they delay the spread of fire. Up to thirty percent of the plastic in a computer casing can consist of flame retardant substances. Most flame retardants contain bromine or chloride and these are related to another group of environmental toxins, PCBs, which are suspected to give rise to severe health effects, including reproductive damage in fish-eating birds and mammals, due to the bio-

## **TCO'99 –continued**

---

accumulative\* processes. Flame retardants have been found in human blood and researchers fear that disturbances in foetus development may occur.

TCO'99 demand requires that plastic components weighing more than 25 grams must not contain flame retardants with organically bound chlorine and bromine. Flame retardants are allowed in the printed circuit boards since no substitutes are available.

### **Lead\*\***

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning.

TCO'99 requirement permits the inclusion of lead since no replacement has yet been developed.

### **Cadmium\*\***

Cadmium is present in rechargeable batteries and in the colourgenerating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses.

TCO'99 requirement states that batteries, the colourgenerating layers of display screens and the electrical or electronics components must not contain any cadmium.

### **Mercury\*\***

Mercury is sometimes found in batteries, relays and switches, Mercury damages the nervous system and is toxic in high doses.

TCO'99 requirement states that batteries may not contain any Mercury. It also demands that no mercury is present in any of the electrical or electronics components associated with the display unit.

### **CFCs (freons)**

CFCs (freons) are sometimes used for washing printed circuit boards. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on Earth of ultraviolet light with consequent increased risks of skin cancer (malignant melanoma).

The relevant TCO'99 requirement; Neither CFCs nor HCFCs may be used during the manufacturing and assembly of the product or its packaging.

\*Bio-accumulative is defined as substances which accumulate within living organisms.

\*\*Lead, Cadmium and Mercury are heavy metals which are Bio-accumulative.

To obtain complete information on the environmental criteria document, order from:

TCO Development Unit  
SE-114 94 Stockholm  
SWEDEN  
FAX Number: +46 8 782 92 07  
E-mail (Internet): [development@tco.se](mailto:development@tco.se)

You may also obtain current information on TCO'99 approved and labelled products by visiting their website at: <http://www.tco-info.com/>

## NEC LCD Series

### PROPRIETARY NOTICE AND LIABILITY DISCLAIMER

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The NEC-Mitsubishi product(s) discussed in this document are warranted in accordance with the terms of the Limited Warranty Statement accompanying each product. However, actual performance of each such product is dependent upon factors such as system configuration, customer data and operator control. Since implementation by customers of each product may vary, the suitability of specific product configurations and applications must be determined by the customer and is not warranted by NEC-Mitsubishi.

To allow for design and specification improvements, the information in this document is subject to change at any time without notice. Reproduction of this document or portions thereof without prior approval of NEC-Mitsubishi is prohibited.

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### DECLARATION OF CONFORMITY

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This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

|                                |  |
|--------------------------------|--|
| <b>U.S. Responsible Party:</b> | <b>NEC-Mitsubishi Electronics Display of America, Inc.</b> |
| <b>Address:</b>                | <b>1250 North Arlington Heights Road</b>                   |
|                                | <b>Itasca, Illinois 60143-1248</b>                         |
| <b>Tel. No.:</b>               | <b>(630) 467-3000</b>                                      |

|                           |                    |
|---------------------------|--------------------|
| Type of Product:          | Computer Monitor   |
| Equipment Classification: | Class B Peripheral |
| Model:                    | MultiSync LCD1530V |



*We hereby declare that the equipment specified above conforms to the technical standards as specified in the FCC Rules.*

---

Windows is a registered trademark of Microsoft Corporation. NEC is a registered trademark of NEC Corporation. ENERGY STAR is a U.S. registered trademark. All other brands and product names are trademarks or registered trademarks of their respective owners.

As an ENERGY STAR® Partner, NEC-Mitsubishi Electronics Display of America has determined that this product meets the ENERGY STAR guidelines for energy efficiency. The ENERGY STAR emblem does not represent EPA endorsement of any product or service.

# NEC

Part No. HDJ67NJ3500  
Printed in Taiwan

2. B Version

---



# ***MultiSync LCD1530V***





User's Manual

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# **NEC**



|  |                |   |
|--|----------------|---|
|   | <b>WARNING</b> |  |
| <p>TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO, DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS UNLESS THE PRONGS CAN BE FULLY INSERTED.</p> <p>REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p> |                |   |

|  |  |   |
|--|--|---|
| <b>CAUTION</b>   |  |  |
| <b>RISK OF ELECTRIC SHOCK • DO NOT OPEN</b>  |  |   |
| <br>CAUTION | <p>TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>  |   |
|             | <p>This symbol warns user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.</p> |   |
|             | <p>This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.</p>         |   |

**Caution:**

When operating the MultiSync LCD1530V with a 220-240V AC power source in Europe except UK, use the power cord provided with the monitor.

In the UK, a BS approved power cord with a moulded plug has a Black (five Amps) fuse installed for use with this equipment. If a power cord is not supplied with this equipment please contact your supplier.

When operating the MultiSync LCD1530V with a 220-240V AC power source in Australia, use the power cord provided with the monitor.

For all other cases, use a power cord that matches the AC voltage of the power outlet and has been approved by and complies with the safety standard of your particular country.

ENERGYSTAR is a U.S. trademark.

As an ENERGYSTAR® Partner, NEC-Mitsubishi Electronics Display of America, Inc. has determined that this product meets the ENERGYSTAR guidelines for energy efficiency. The ENERGYSTAR emblem does not represent EPA endorsement of any product or service.

IBM PC/XT/AT, PS/2, MCGA, VGA, 8514/A and XGA are registered trademarks of International Business Machines Corporation.

Apple and Macintosh are registered trademarks of Apple Computer Inc.

Microsoft and Windows are registered trademarks of the Microsoft Corporation.

NEC is a registered trademark of NEC Corporation.

All other trademarks or registered trademarks are property of their respective owners.

**English-1**

# Declaration

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## Declaration of the Manufacturer

We hereby certify that the colour monitor  
MultiSync LCD1530V (LA-15R01)

are in compliance with

Council Directive 73/23/EEC:

- EN 60950

Council Directive 89/336/EEC:

- EN 55022

- EN 61000-3-2

- EN 61000-3-3

- EN 55024

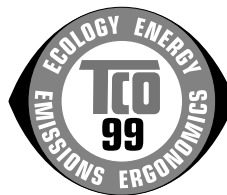
and marked with



NEC-Mitsubishi Electric Visual Systems, Corp.  
686-1, NISHIOI OI-MACHI  
ASHIGARAKAMI-GUN  
KANAGAWA 258-8533, JAPAN



Power consumption of  
the monitor is less than  
3 W when in power-  
saving mode.



English-2

# For the Customer to use in U.S.A. or Canada

English

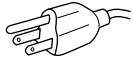
## Canadian Department of Communications Compliance Statement

**DOC:** This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.  
Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouiller du Canada.

**C-UL:** Bears the C-UL Mark and is in compliance with Canadian Safety Regulations according to C.S.A. C22.2 #950.  
Ce produit porte la marque 'C-UL' et se conforme aux règlements de sûreté Canadiens selon CAN/CSA C22.2 No. 950.

## FCC Information

1. Use the attached specified cables with the MultiSync LCD1530V colour monitor so as not to interfere with radio and television reception.
  - (1) The power supply cord you use must have been approved by and comply with the safety standards of U.S.A., and meet the following condition.

|                   |   |
|-------------------|---|
| Power supply cord | Non shield type, 3-conductor  |
| Length            | 1.8 m   |
| Plug shape        |  |

- (2) Shielded video signal cable.  
Use of other cables and adapters may cause interference with radio and television reception.

English-3

2. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult your dealer or an experienced radio/TV technician for help.
- If necessary, the user should contact the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet, prepared by the Federal Communications Commission, helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

## Declaration of Conformity

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

|                                |   |
|--------------------------------|---|
| <b>U.S. Responsible party:</b> | <b>NEC-Mitsubishi Electronics Display of America, Inc.</b>            |
| <b>Address:</b>                | <b>1250 N. Arlington Heights Road<br/>Itasca, Illinois 60143-1248</b> |
| <b>Tel. No.:</b>               | <b>(630)467-3000</b>  |

|                           |                    |
|---------------------------|--------------------|
| Type of Product:          | Computer Monitor   |
| Equipment Classification: | Class B Peripheral |
| Models:                   | MultiSync LCD1530V |



*We hereby declare that the equipment specified above conforms to the technical standards as specified in the FCC Rules.*

**English-4**

# Contents

Your new NEC-Mitsubishi MultiSync LCD monitor box\* should contain the following:

- MultiSync LCD1530V monitor with tilt base
- Power Cord
- Video Signal Cable
- User's Manual
- CD-ROM includes complete User's Manual in PDF format and Windows related files (Inf file and color profile). To see the complete User's Manual, Acrobat Reader 4.0 must be installed on your PC.



*\* Remember to save your original box and packing material to transport or ship the monitor.*

# Quick Start

---

To attach the MultiSync LCD monitor to your system, follow these instructions:

1. Turn off the power to your computer.
2. For the PC: Connect the 15-pin mini D-SUB of the appropriate signal cable to the connector of the display card in your system (**Figure A.1**). Tighten all screws.  
For the Mac: Connect the MultiSync LCD1530V Macintosh cable adapter to the computer (**Figure B.1**). Attach the 15-pin mini D-SUB end of the appropriate signal cable to the MultiSync LCD1530V Macintosh cable adapter (**Figure B.1**). Tighten all screws.  
Remove connector cover and cable cover on back of monitor (**Figure E.1**).
3. Connect the 15-pin mini D-SUB of the video signal cable to the appropriate connector on the back of the monitor (**Figure C.1**).  
**NOTE:** Incorrect cable connections may result in irregular operation, damage display quality/components of LCD module and/or shorten the module's life.
4. Connect one end of the power cord to the MultiSync LCD Series monitor and the other end to the power outlet. Place the video signal cable and AC power cord under the clips. (**Figure C.1**).  
Replace connector cover and cable cover. (**Figure E.1**)  
**NOTE:** Adjust the position of the cable under the clips to avoid damage for cable or monitor.
5. Turn on the monitor (**Figure D.1**) and the computer.
6. To complete the setup of your MultiSync LCD monitor, use the following OSM controls:
  - Auto Adjust Contrast
  - Auto Adjust

Refer to the **Controls** section of this User's Manual for a full description of these OSM controls.

**NOTE:** If you have any problems, please refer to the **Troubleshooting** section of this User's Manual.

**NOTE:** For easy removal of the cable cover or signal cable, place the monitor face down. (**Figure R.2**)

**English-6**

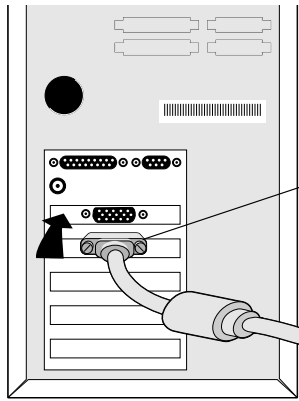


Figure A.1

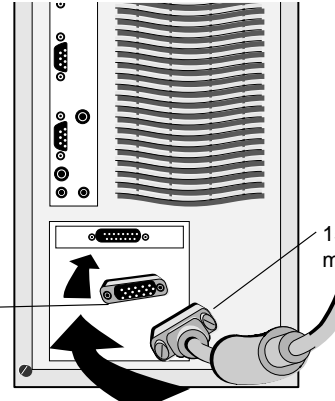


Figure B.1

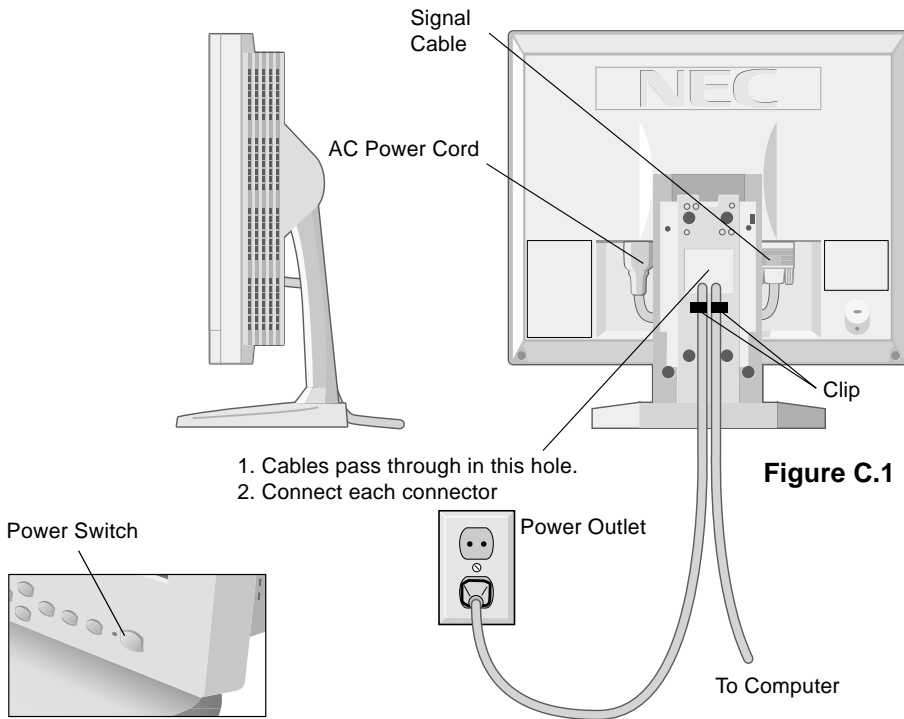
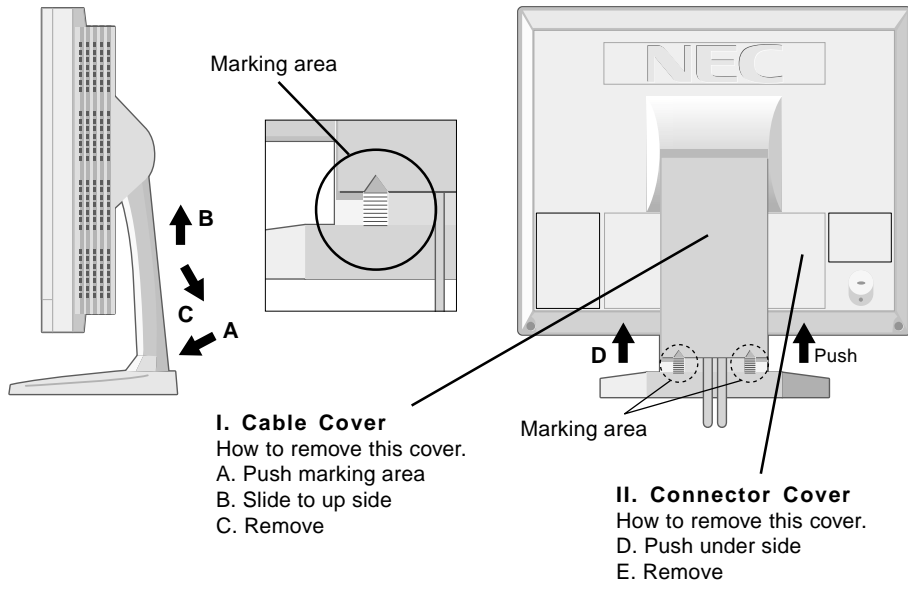


Figure C.1

Figure D.1



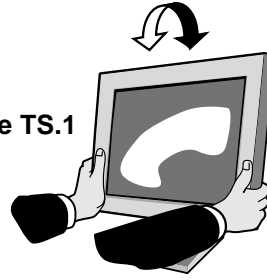
**Figure E.1**



### Tilt

Grasp both sides of the monitor screen with your hands and adjust the tilt as desired (**Figure TS.1**).

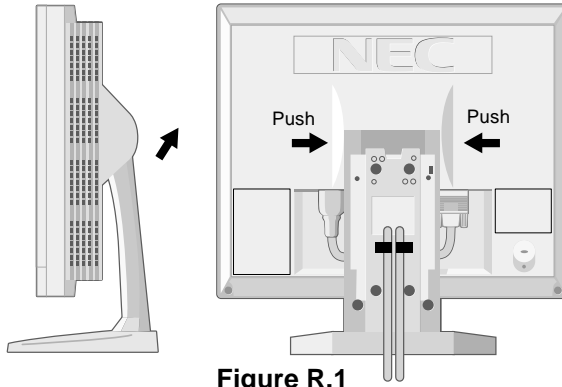
**Figure TS.1**



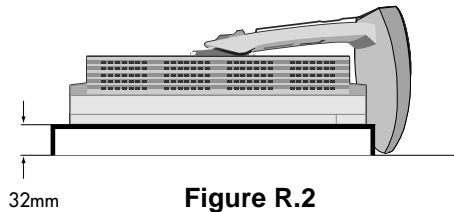
### Remove Monitor Stand for Mounting

To prepare the monitor for alternate mounting purposes:

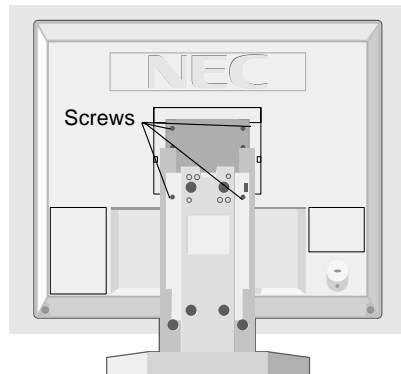
1. Remove the connector cover, hinge cover and cable cover. (**Figure R.1**)
2. Disconnect all cables.
3. Place monitor face down on a non-abrasive surface. (Place the screen on a 32 mm platform so that hole of stand match to screw location) (**Figure R.2**).
4. Remove the 4 screws connecting the monitor to the stand and lift off the stand assembly (**Figure R.2**) the monitor is now ready for mounting in an alternate manner.
5. Connect the AC cord and signal cable to the back of the monitor.
6. Reverse this process to reattach stand.



**Figure R.1**



**Figure R.2**



# Controls

---



## OSM (On-Screen-Manager) Controls

The OSM controls on the front of the monitor function as follows:  
To access OSM press any of the control buttons (◀, ▶, ▲, ▼) or the PROCEED button

| Control   | Main Menu   | Sub-Menu  |
|---|---|---|
| <b>EXIT</b>   | Exits the OSM controls.   | Exits to the OSM controls main menu.                              |
| <b>CONTROL ▲/▼</b>  | Moves the highlighted area up/down to select one of the controls. | Moves the highlighted area up/down to select one of the controls. |
| <b>CONTROL ◀/▶</b>  | Moves the highlighted area left/right to select control menus.    | Moves the bar left/right to increase or decrease the adjustment.  |
| <b>PROCEED</b>  | Has no function.  | Activates Auto Adjust and all RESET functions.                    |
| <b>RESET</b><br>The currently highlighted control to factory setting. | Resets all the controls within the highlighted menu.              | Resets the highlighted control.                                   |

**NOTE:** When RESET is pressed, a warning window will appear allowing you to cancel the reset function.

## **Brightness/Contrast Controls**

-  **BRIGHTNESS**  
Adjusts the overall image and background screen brightness.
-  **CONTRAST**  
Adjusts the image brightness in relation to the background.
- AUTO** **AUTO ADJUST CONTRAST**  
Adjusts the image displayed for non-standard video inputs.

English-10

## OSM LOCK OUT

The OSM LOCK OUT control completely locks out access to all OSM control functions. When attempting to activate OSM controls while in the LOCK OUT mode, a screen will appear indicating that OSM controls are locked out.

- To enter the LOCK OUT mode, simultaneously press the PROCEED and ▼ button. The LOCK OUT window will appear.
- To activate the LOCK OUT function, simultaneously press and hold down the PROCEED and ▲ button. The OSM window will disappear within seconds and the LOCK OUT function will be activated.
- To deactivate the LOCK OUT mode, simultaneously press the PROCEED and ▲ button.

### **AUTO** Auto Adjust

Automatically adjusts the Image Position, the H. Size and Fine setting.



### **Position Controls**



#### **H. POSITION**

Controls Horizontal Image Position within the display area of the LCD.



#### **V. POSITION**

Controls Vertical Image Position within the display area of the LCD.

**AUTO**

#### **AUTO**

Automatically sets the Horizontal and Vertical Image Position within the display area of the LCD.



### **Image Adjust Controls**



#### **H. SIZE**

Adjusts the horizontal size by increasing or decreasing this setting.



### **FINE**

Improves focus, clarity and image stability by increasing or decreasing this setting.

**AUTO**

Automatically adjusts the H. Size and Fine setting.



### **Color Control System**

Five color presets select the desired color setting. Each color setting is adjusted at the factory.

**R,G,B:** Increases or decreases Red, Green or Blue color depending upon which is selected. The change in color will appear on screen and the direction (increase or decrease) will be shown by the bars.



### **Tools**



#### **OSM H POS.**



#### **OSM V POS.**

You can choose where you would like the OSM control window to appear on your screen. Selecting OSM Location allows you to manually adjust the position of the OSM control menu left, right, up or down.

**ALL  
RESET**

#### **ALL RESET**

Selecting ALL RESET allows you to reset all OSM control settings back to the factory settings. Individual settings can be reset by highlighting the control to be used and pressing the RESET button.



### **Information 1**

Indicates the current display resolution and frequency setting of the monitor.



### **Information 2**

Indicates the Model Name, Serial Number and URL.

**Resolution Notifier:** While the display is capable of other resolutions (as with all flat panel displays), it is a fixed matrix of pixels and best used at its native resolution – 1024 x 768. For further information, please refer to your display card or system manual.

# Recommended Use

## Safety Precautions and Maintenance



FOR OPTIMUM PERFORMANCE, PLEASE NOTE THE FOLLOWING WHEN SETTING UP AND USING THE MULTISYNC LCD COLOR MONITOR:



- **DO NOT OPEN THE MONITOR.** There are no user serviceable parts inside and opening or removing covers may expose you to dangerous shock hazards or other risks. Refer all servicing to qualified service personnel.
- Do not spill any liquids into the cabinet or use your monitor near water.
- Do not insert objects of any kind into the cabinet slots, as they may touch dangerous voltage points, which can be harmful or fatal or may cause electric shock, fire or equipment failure.
- Do not place any heavy objects on the power cord. Damage to the cord may cause shock or fire.
- Do not place this product on a sloping or unstable cart, stand or table, as the monitor may fall, causing serious damage to the monitor.
- When operating the MultiSync LCD monitor with its AC 220-240V power supply, use a power supply cord that matches the power supply voltage of the AC power outlet being used. The power supply cord you use must have been approved by and comply with the safety standards of your country. (Type HOSVV-F should be used in UK.)
- Do not place any objects onto the monitor and do not use the monitor outdoors.
- The inside of the fluorescent tube located within the LCD monitor contains mercury. Please follow the bylaws or rules of your municipality to dispose of the tube properly.
- In UK, use a BS-approved power cord with molded plug having a black (5A) fuse installed for use with this monitor. If a power cord is not supplied with this monitor, please contact your supplier.

Immediately unplug your monitor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the monitor.
- If the monitor has been exposed to rain or water.
- If the monitor has been dropped or the cabinet damaged.

- If the monitor does not operate normally by following operating instructions.
- Do not bend power cord.
- Do not use monitor in high temperature, humid, dusty, or oily areas.
- Do not cover vent on monitor.
- If monitor is broken, do not come in contact with the liquid crystal.
- If glass is broken. Handle with care.



Caution

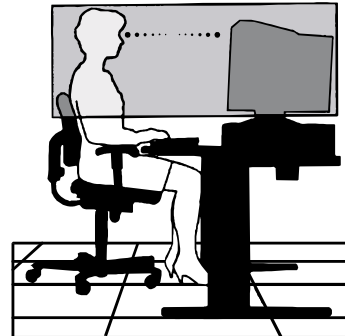
- Allow adequate ventilation around the monitor so that heat can properly dissipate. Do not block ventilated openings or place the monitor near a radiator or other heat sources. Do not put anything on top of monitor.
- The power cable connector is the primary means of detaching the system from the power supply. The monitor should be installed close to a power outlet which is easily accessible.
- Handle with care when transporting. Save packaging for transporting.



CORRECT PLACEMENT AND ADJUSTMENT OF THE MONITOR CAN REDUCE EYE, SHOULDER AND NECK FATIGUE. CHECK THE FOLLOWING WHEN YOU POSITION THE MONITOR:



- For optimum performance, allow 20 minutes for warm-up.
- Adjust the monitor height so that the top of the screen is at or slightly below eye level. Your eyes should look slightly downward when viewing the middle of the screen.
- Position your monitor no closer than 16 inches and no further away than 28 inches from your eyes. The optimal distance is 21 inches.
- Rest your eyes periodically by focusing on an object at least 20 feet away. Blink often.
- Position the monitor at a 90° angle to windows and other light sources to minimize glare and reflections. Adjust the monitor tilt so that ceiling lights do not reflect on your screen.
- If reflected light makes it hard for you to see your screen, use an anti-glare filter.



**English-14**

- Clean the LCD monitor surface with a lint-free, non-abrasive cloth. Avoid using any cleaning solution or glass cleaner!
- Adjust the monitor's brightness and contrast controls to enhance readability.
- Use a document holder placed close to the screen.
- Position whatever you are looking at most of the time (the screen or reference material) directly in front of you to minimize turning your head while you are typing.
- Avoid displaying fixed patterns on the monitor for long periods of time to avoid image persistence (after-image effects).
- Get regular eye checkups.

### **Ergonomics**

To realize the maximum ergonomics benefits, we recommend the following:

- Do not position the Contrast control to its maximum setting
- Use the preset Size and Position controls with standard signals
- Use the preset Color Setting
- Use non-interlaced signals with a vertical refresh rate between 60-75 Hz
- Do not use primary color blue on a dark background, as it is difficult to see and may produce eye fatigue to insufficient contrast

# Specifications

| Monitor Specifications  | MultiSync LCD1530V   | Notes  |
|---|--|--|
| LCD Module<br>Diagonal:<br>Viewable Image Size:<br>Native Resolution (Pixel Count):   | 15.1 inch<br>15.1 inch<br>1024 x 768   | Active matrix; thin film transistor (TFT) liquid crystal display (LCD); 0.30 mm dot pitch; 200cd/m <sup>2</sup> white luminance; 200:1 contrast ratio, typical |
| Input Signal  | Video:<br>Sync:<br>ANALOG 0.7 Vp-p/75 Ohms<br>Separate sync. TTL Level<br>Horizontal sync. Positive/Negative<br>Vertical sync. Positive/Negative   |  |
| Display Colours   | Analog input:<br>16,194,277 colors with dithering  | Depends on display card used.  |
| Synchronization Range   | Horizontal:<br>Vertical:<br>31.0 kHz to 60.0 kHz<br>56.2 Hz to 75.0 Hz   | Automatically<br>Automatically   |
| Resolutions Supported<br>Resolution based on horizontal and vertical frequencies only | 720 x 400*VGA text<br>640 x 480*at 60 Hz to 75 Hz<br>800 x 600*at 56 Hz to 75 Hz<br>832 x 624* at 75 Hz<br>1024 x 768 at 60 Hz to 75 Hz  | Some systems may not support all modes listed.<br>NEC-Mitsubishi Electronics Display cites recommended resolution at 75 Hz for optimal display performance.    |
| Active Display Area**   | Horizontal:<br>Vertical:<br>307 mm/12.1 inches<br>230 mm/9.1 inches  | Dependent upon signal timing used, and does not include border area.   |
| Power Supply  | AC 100-240 V @50/60 Hz   |  |
| Current Rating  | 0.46 A @ 100-120 V / 0.27 A @ 220-240 V  |  |
| Dimensions  | 370 (W) x 370 (H) x 160 (D) mm   |  |
| Weight  | 4.7 kg (10.4 lbs)  |  |
| Environmental Considerations  | Operating Temperature:<br>Humidity:<br>Altitude:<br>Storage Temperature:<br>Humidity:<br>Altitude:<br>5 °C to 35 °C<br>30% to 80%<br>3,000 m<br>-10 °C to +60 °C<br>10% to 85%<br>12,000 m |  |

\* Interpolated Resolutions: When resolutions are shown that are lower than the pixel count of the LCD module, text may appear different. This is normal and necessary for all current flat panel technologies when displaying non-native resolutions full screen. In flat panel technologies, each dot on the screen is actually one pixel, so to expand resolutions to full screen, an interpolation of the resolution must be done.

**NOTE:** Technical specifications are subject to change without notice.

**English-16**



# Features

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**Wider Compatibility:** Because the MultiSync LCD monitor is analog through and through, it does not require special analog to digital display or interface cards but can accept RGB input directly.

**Reduced Footprint:** Provides the ideal solution for environments requiring superior image quality but with size and weight limitations. The monitor's small footprint and low weight allow it to be moved or transported easily from one location to another.

**Color Control System:** Allows you to adjust the colors on your screen and customize the color accuracy of your monitor to a variety of standards. OSM (On-Screen Manager) Controls: Allow you to quickly and easily adjust all elements of your screen image via simple to use on-screen menus.

**ErgoDesign Features:** Enhance human ergonomics to improve the working environment, protect the health of the user and save money. Examples include OSM controls for quick and easy image adjustments, tilt base for preferred angle of vision, small footprint and compliance with MPRII guidelines for lower emissions.

**Plug and Play:** The Microsoft solution with the Windows 95/98/2000 operating system facilitates setup and installation by allowing the monitor to send its capabilities (such as screen size and resolutions supported) directly to your computer, automatically optimizing display performance.

**IPM (Intelligent Power Manager) System:** Provides innovative power-saving methods that allow the monitor to shift to a lower power consumption level when on but not in use, saving two-thirds of your monitor energy costs, reducing emissions and lowering the air conditioning costs of the workplace.

**Multiple Frequency Technology:** Automatically adjusts monitor to the display card's scanning frequency, thus displaying the resolution required.

**FullScan Capability:** Allows you to use the entire screen area in most resolutions, significantly expanding image size.

# Troubleshooting

---

## No picture

- The signal cable should be completely connected to the display card/ computer.
- The display card should be completely seated in its slot.
- Power Switch and computer power switch should be in the ON position.
- Check to make sure that a supported mode has been selected on the display card or system being used. (Please consult display card or system manual to change graphics mode.)
- Check the monitor and your display card with respect to compatibility and recommended settings.
- Check the signal cable connector for bent or pushed-in pins.

## Image persistence

- Image persistence is when a “ghost” of an image remains on the screen even after the monitor has been turned off. Unlike CRT monitors, LCD monitors’ image persistence is not permanent. To alleviate image persistence, turn the monitor off for as long as an image was displayed. If an image was on the monitor for one hour and a “ghost” of that image remains, the monitor should be turned off for one hour to erase the image.

**NOTE:** As with all personal display devices, NEC-Mitsubishi Electronic Displays recommends using a screen saver at regular intervals whenever the screen is idle.

## Image is unstable, unfocused or swimming is apparent

- Signal cable should be completely attached to the computer.
- Use the OSM Image Adjust controls to focus and adjust display by increasing or decreasing the fine total. When the display mode is changed, the OSM Image Adjust settings may need to be re-adjusted.
- Check the monitor and your display card with respect to compatibility and recommended signal timings.

English-18

**LED on monitor is not lit (no green or amber color can be seen)**

- Power Switch should be in the ON position and power cord should be connected.
- Make certain the computer is not in a power-saving mode (touch the keyboard or mouse).

**Display image is not sized properly**

- Use the OSM Image Adjust controls to increase or decrease the Coarse total.
- Check to make sure that a supported mode has been selected on the display card or system being used. (Please consult display card or system manual to change graphics mode.)

**Selected resolution is not displayed properly**

- Use OSM Display Mode to enter Information menu and confirm that the appropriate resolution has been selected. If not, select corresponding option.

# TCO'99

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Congratulations! You have just purchased a TCO'99 approved and labeled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also to the further development of environmentally adapted electronics products.



## **Why do we have environmentally labelled computers?**

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during the manufacturing. Since it has not been possible for the majority of electronics equipment to be recycled in a satisfactory way, most of these potentially damaging substances sooner or later enter Nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (Internal) and natural (external) environments. Since all methods of conventional electricity generation have a negative effect on the environment (acidic and climate-influencing emissions, radioactive waste, etc.), it is vital to conserve energy. Electronics equipment in offices consume an enormous amount of energy since they are often left running continuously.

## **What does labelling involve?**

This product meets the requirements for the TCO'99 scheme which provides for international and environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation) and Statens Energimyndighet (The Swedish National Energy Administration).

The requirements cover a wide range of issues: environment, ergonomics, usability, emission of electrical and magnetic fields, energy consumption and electrical and fire safety.

**English-20**

The environmental demands concern restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons) and chlorinated solvents, among other things. The product must be prepared for recycling and the manufacturer is obliged to have an environmental plan which must be adhered to in each country where the company implements its operational policy. The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example, in respect of the reduction of electric and magnetic fields, physical and visual ergonomics and good usability.

### **Environmental Requirements**

#### **Flame retardants**

Flame retardants are present in printed circuit boards, cables, wires, casings and housings. In turn, they delay the spread of fire. Up to thirty percent of the plastic in a computer casing can consist of flame retardant substances. Most flame retardants contain bromine or chloride and these are related to another group of environmental toxins, PCBs, which are suspected to give rise to severe health effects, including reproductive damage in fish-eating birds and mammals, due to the bioaccumulative\* processes. Flame retardants have been found in human blood and researchers fear that disturbances in foetus development may occur.

TCO' 99 demand requires that plastic components weighing more than 25 grams must not contain flame retardants with organically bound chlorine and bromine. Flame retardants are allowed in the printed circuit boards since no substitutes are available.

#### **Lead\*\***

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning.

TCO' 99 requirement permits the inclusion of lead since no replacement has yet been developed.

**Cadmium\*\***

Cadmium is present in rechargeable batteries and in the colourgenerating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses.

TCO' 99 requirement states that batteries, the colourgenerating layers of display screens and the electrical or electronics components must not contain any cadmium.

**Mercury\*\***

Mercury is sometimes found in batteries, relays and switches, Mercury damages the nervous system and is toxic in high doses.

TCO' 99 requirement states that batteries may not contain any Mercury. It also demands that no mercury is present in any of the electrical or electronics components associated with the display unit.

**CFCs (freons)**

CFCs (freons) are sometimes used for washing printed circuit boards. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on Earth of ultraviolet light with consequent increased risks of skin cancer (malignant melanoma).

The relevant TCO' 99 requirement; Neither CFCs nor HCFCs may be used during the manufacturing and assembly of the product or its packaging.

\* Bio-accumulative is defined as substances which accumulate within living organisms.

\*\* Lead, Cadmium and Mercury are heavy metals which are Bio-accumulative.

To obtain complete information on the environmental criteria document, order from:

**TCO Development Unit**

SE-114 94 Stockholm

SWEDEN

FAX Number: +46 8 782 92 07

E-mail (Internet): [development@tco.se](mailto:development@tco.se)

You may also obtain current information on TCO' 99 approved and labelled products by visiting their website at:

<http://www.tco-info.com/>

# Serial Number Information

Refer to the serial number information shown below.

EX.) SERIAL NUMBER LABEL

Model Name : LCD1530V

SERIAL NO. :



Manufactured Year : \_\_\_\_\_  
( Last digit )

Manufactured Month : \_\_\_\_\_

|                      |      |   |
|----------------------|------|---|
| January to September | 1 to | 9 |
| October              |      | X |
| November             |      | Y |
| December             |      | Z |

Serial Number(5-digit)  
(sequential number  
at production month,  
00001-99999)

Factory Code: \_\_\_\_\_

Compal ..... "I"

Control Code: \_\_\_\_\_

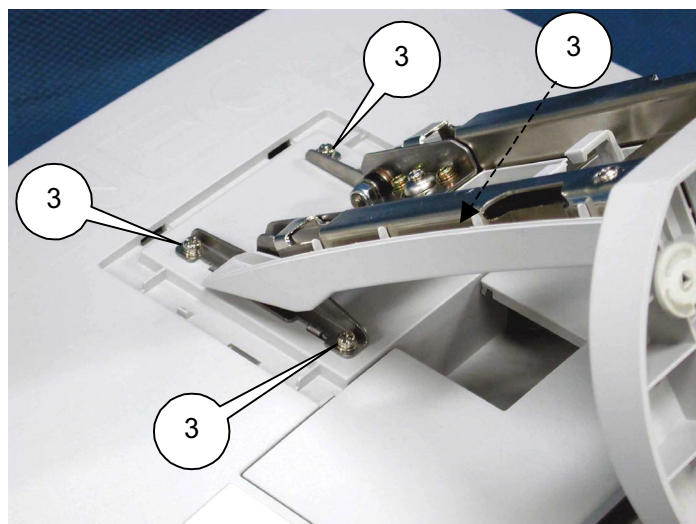
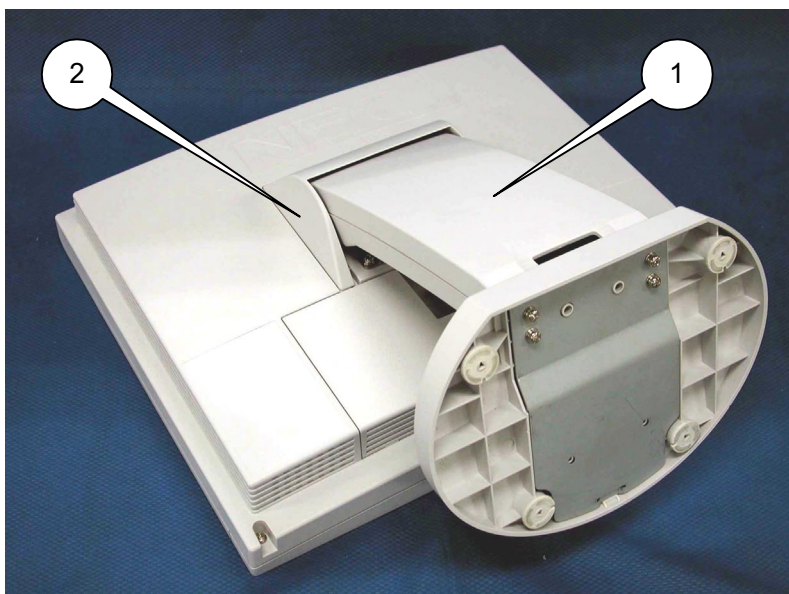
A : LG Panel of A ver. (for U.S.A.)

B : LG Panel of B ver. (for Europe and Asia and Pacific)

# DISASSEMBLY

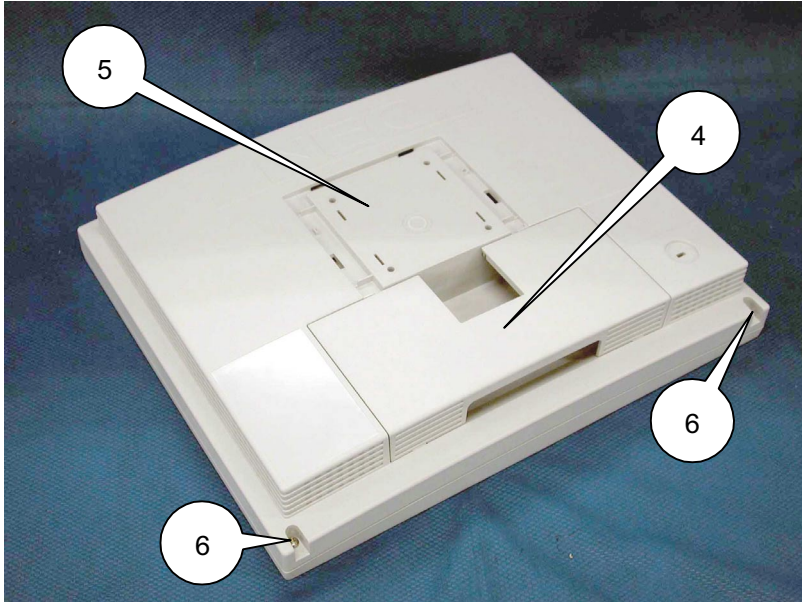
- Before you disassemble the set, turn off power and pull out the power plug.
- Use the proper screwdriver. If oversize or undersize screwdriver is used, screws may be damaged.
- Assembly is the opposite process of disassembly.

| SYMBOL | CODE     | DESCRIPTION      | CABINET COLOR |
|--------|----------|------------------|---------------|
| 1      | 79PP0301 | HINGE REAR COVER | White         |
| 1      | 79PP0464 | HINGE REAR COVER | Black         |
| 2      | 79PP0300 | HINGE UP COVER   | White         |
| 2      | 79PP0463 | HINGE UP COVER   | Black         |
| 3      | -        | SCREW(A)         |               |

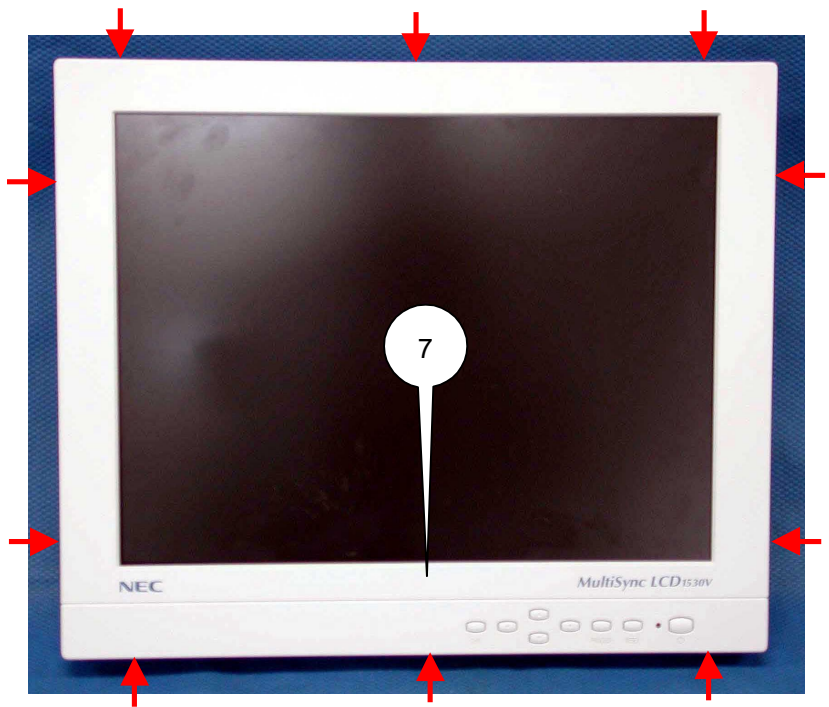




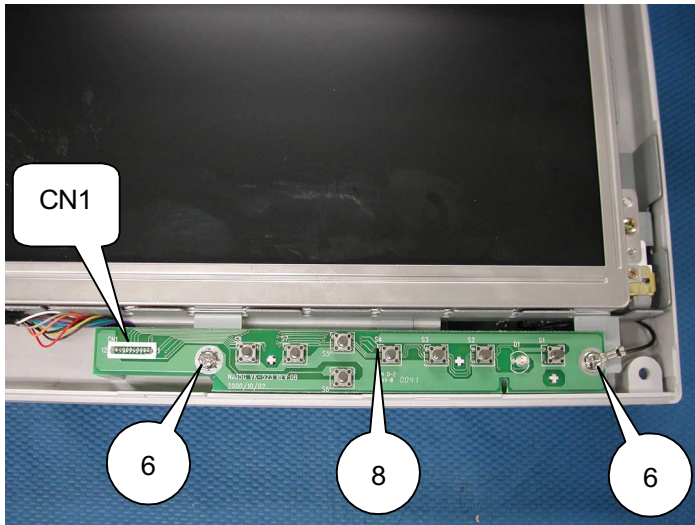
| SYMBOL | CODE     | DESCRIPTION     | CABINET COLOR |
|--------|----------|-----------------|---------------|
| 4      | 79PP0290 | CABLE COVER     | White         |
| 4      | 79PP0462 | CABLE COVER     | Black         |
| 5      | 79PP0292 | BACK COVER ASSY | White         |
| 5      | 79PP0461 | BACK COVER ASSY | Black         |
| 6      | -        | SCREW(B)        |               |



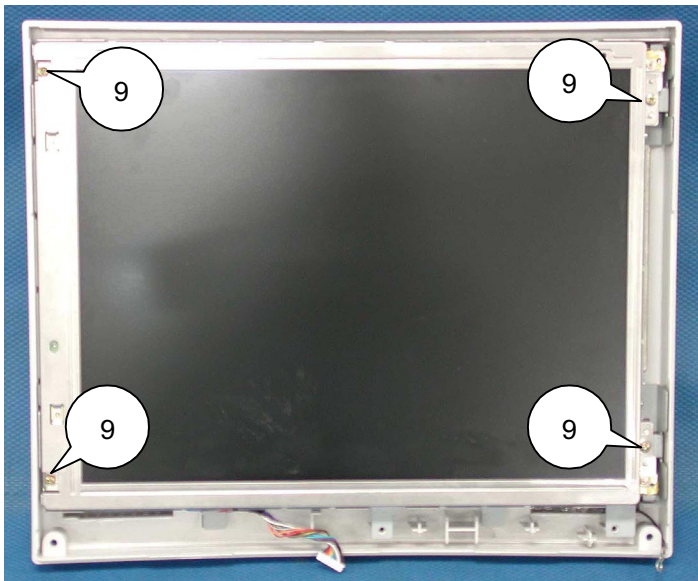
| SYMBOL | CODE     | DESCRIPTION | CABINET COLOR |
|--------|----------|-------------|---------------|
| 7      | 79PP0291 | BEZEL ASSY  | White         |
| 7      | 79PP0460 | BEZEL ASSY  | Black         |



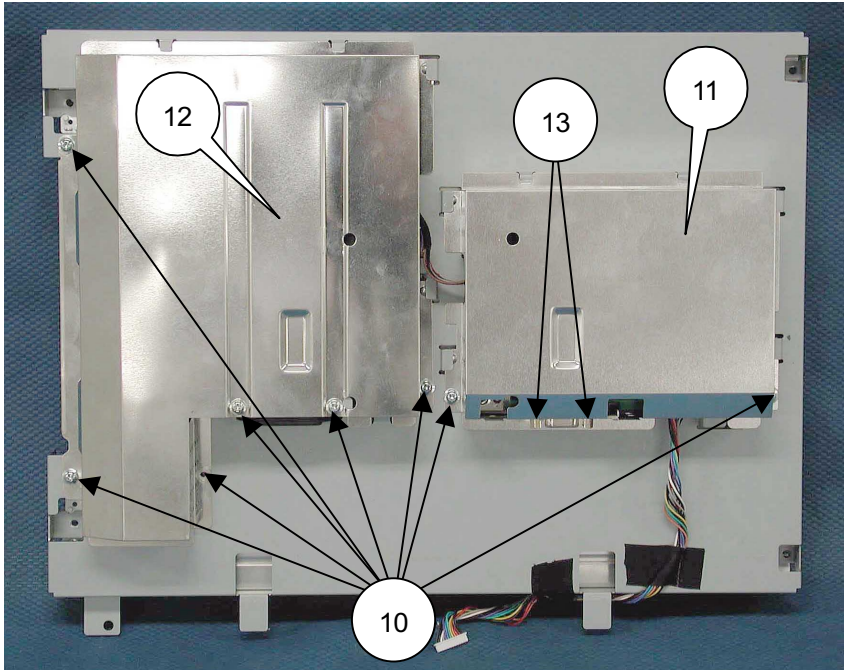
| SYMBOL | CODE     | DESCRIPTION |
|--------|----------|-------------|
| 6      | -        | SCREW(B)    |
| 8      | 79PP0287 | PCBA KEY/B  |



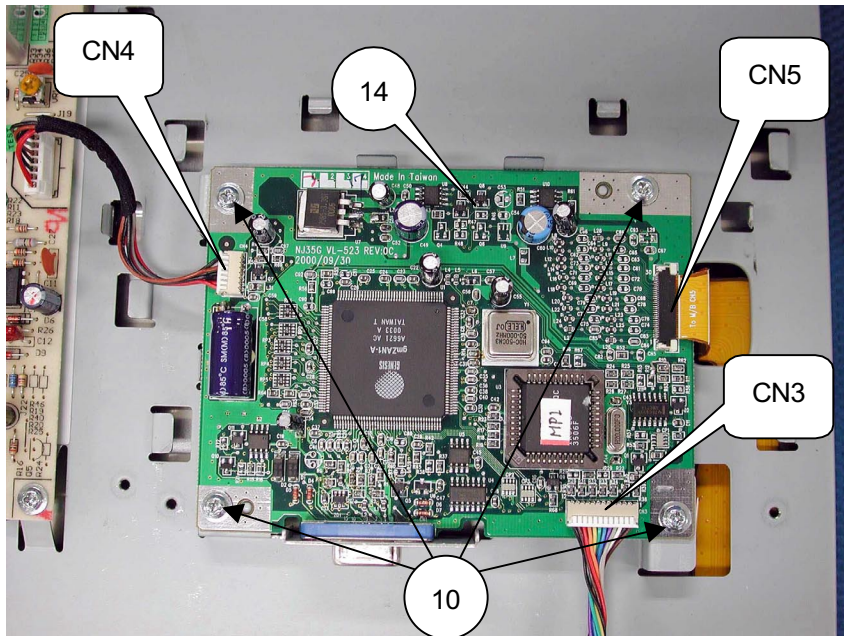
| SYMBOL | CODE | DESCRIPTION |
|--------|------|-------------|
| 9      | -    | SCREW(C)    |



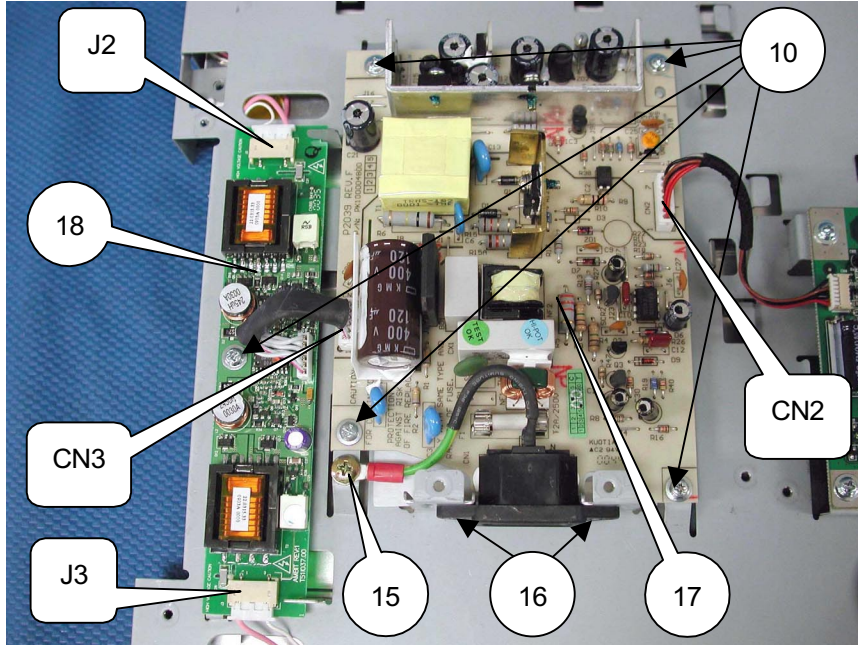
| SYMBOL | CODE | DESCRIPTION       |
|--------|------|-------------------|
| 10     | -    | SCREW(D)          |
| 11     | -    | MAIN BOARD SHIELD |
| 12     | -    | PB SHIELD ASSY    |
| 13     | -    | SCREW SPECIAL     |



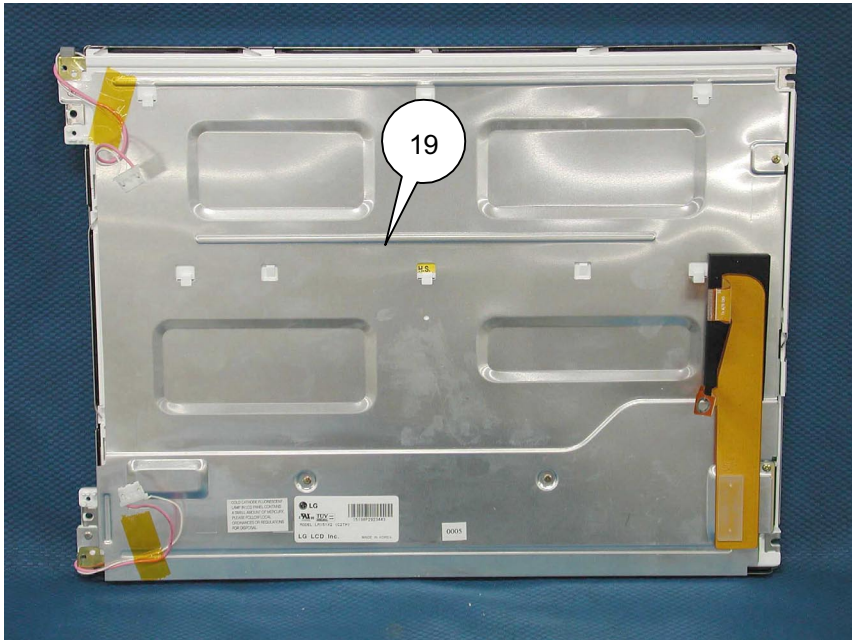
| SYMBOL | CODE     | DESCRIPTION     |
|--------|----------|-----------------|
| 14     | 79PP0288 | FIRMWARE CTRL/B |
| 10     | -        | SCREW(D)        |



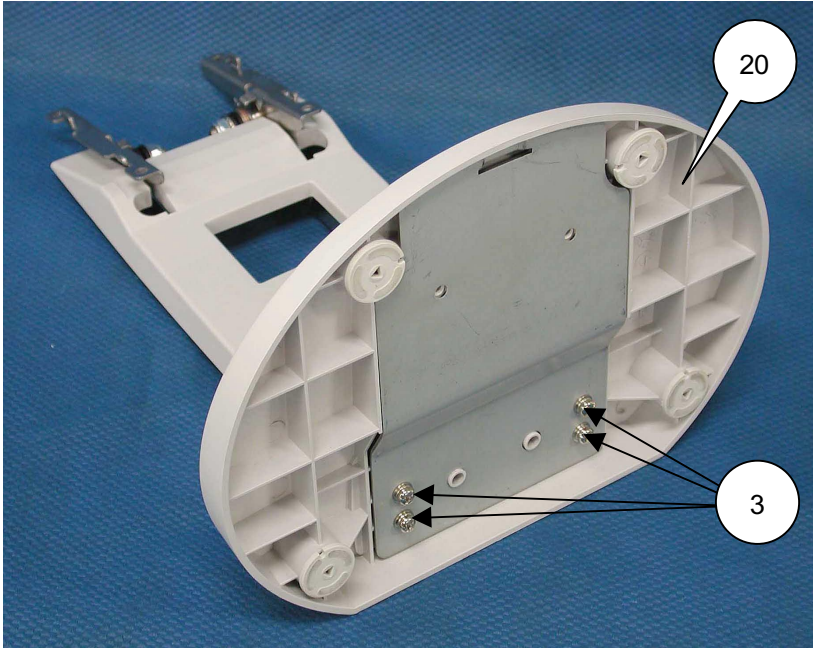
| SYMBOL | CODE     | DESCRIPTION                   |
|--------|----------|-------------------------------|
| 10     | -        | SCREW(D)                      |
| 15     | -        | SCREW(E)                      |
| 16     | -        | SCREW(F)                      |
| 17     | 79PP0299 | AC ADAPTER(ILAN P2039 5V/12V) |
| 18     | 79PP0289 | INVERTER(NJ35J 15" T51I037)   |



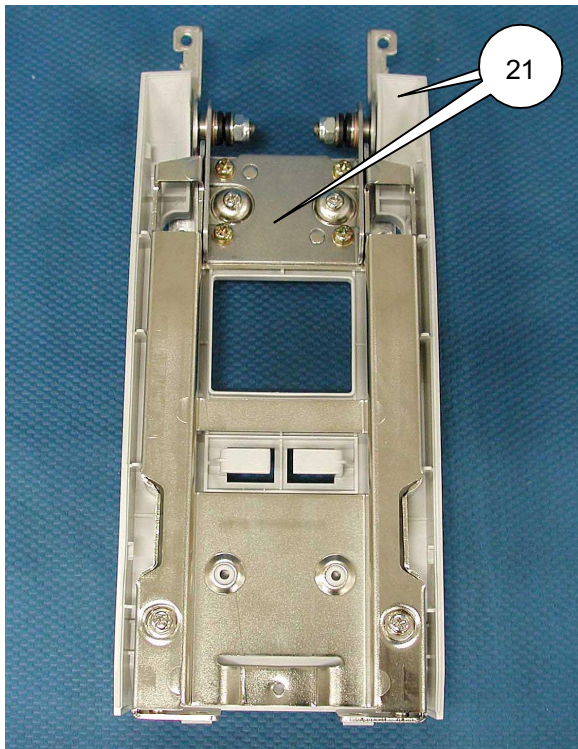
| SYMBOL | CODE     | DESCRIPTION           |
|--------|----------|-----------------------|
| 19     | 36804268 | LCD LM151X2 15.1"(LG) |



| SYMBOL | CODE     | DESCRIPTION | CABINET COLOR |
|--------|----------|-------------|---------------|
| 3      | -        | SCREW(A)    |               |
| 20     | 79PP0459 | BASE ASSY   | White         |
| 20     | 79PP0466 | BASE ASSY   | Black         |



| SYMBOL | CODE     | DESCRIPTION | CABINET COLOR |
|--------|----------|-------------|---------------|
| 21     | 79PP0458 | NECK ASSY   | White         |
| 21     | 79PP0465 | NECK ASSY   | Black         |



# ADJUSTMENT PROCEDURES

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## 1. Application

This adjustment specification shall be applied to the adjustment of the LCD1530V (A)/(B)-BK(A).

## 2. Adjustment conditions

### 2.1 Time for adjustment

Adjustment of a unit to be adjusted shall be carried out only at the time of the adjustment of the set as a whole.

### 2.2 Measuring instruments, jigs, and tools

The measuring instruments, jigs, and tools required at the time of the adjustment of the unit to be adjusted shall be as specified below.

- a. A signal generator that can generate an output of signal timing produced by the adjusted (\*) VG-829 or specified in [4. Setting method for the VG-829.] In this case, however, this signal generator shall be capable of displaying all white and all black as a screen display pattern.

\* The word "adjusted" shall mean that the amplitude of each signal R, G, B, which is output from the signal generator, is maintained at  $0.7V_{p-p} \pm 0.05V$  when a load of  $75\Omega$  is connected.

- b. D-SUB 15-pin signal cable
- c. Video signal cable

### 2.3 Power-supply voltage

INPUT : 100Vac ~ 240Vac  $\pm 10\%$ , 47 ~ 63Hz

### 2.4 Aging

Not required.

### 3. Set adjustments

#### 3.1 Power ON

1) Insert the AC power cable in a wall outlet, or press the POWER key ① thereafter. Confirm that the LED is lit in amber (or that an OSM of [NO SIGNAL] is displayed).

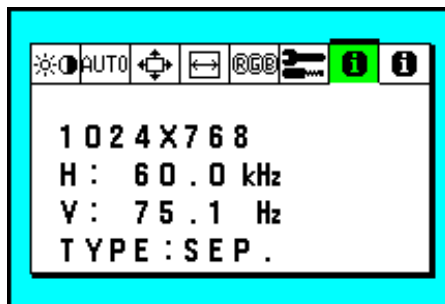
\* The product shall be regarded as an NG item unless the LED is lit in amber even when the AC power cable is inserted in a wall outlet or the POWER key ① is pressed.

2) Enter an input of Signal 20. Confirm that the LED is lit in green.

\* The product shall be regarded as an NG item unless the LED is lit in green at that time.

3) Press the PROCEED key, and confirm that an OSM is displayed in the LCD screen.

#### Information



Indicate the Input signal timing mode.

Resolution /Frequency

▶ (RIGHT) : Change tag to next right direction

◀ (LEFT) : Change tag to next left direction

▲ (UP) : No function

▼ (DOWN) : No function

PROCEED : No function

RESET : No function

EXIT : Close OSM menu

Press "RESET" key + ▲ (UP) key + ▼ (DOWN) key at the same time under the condition of the above OSM to enter Factory mode.



## 3.2 Adjustment

### 3.2.1 Enter Factory mode

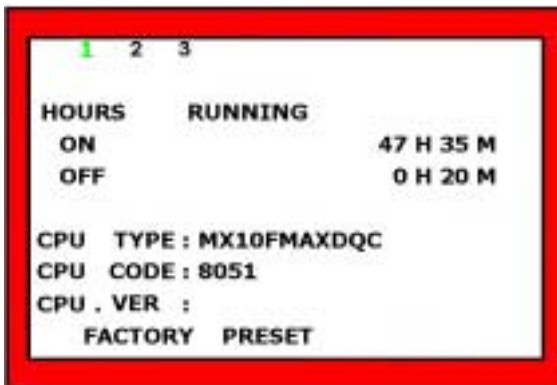
1. Input signal 1024x768(75) 16 Gray pattern
2. Open display information of OSM menu
3. Press "UP" key + "DOWN" key + "PROCEED" key at same time
4. Warning message is displayed



5. Press "PROCEED" key to enter factory mode      LED blinking  
(Press "EXIT" key to exit factory mode)

### 3.2.2 Factory preset

1. Select Item1.
2. Select FACTORY PRESET by "DOWN" key.
3. Press "PROCEED" key and execute clear HOURS RUNNING, AUTO INFORMATION and EEPROM.



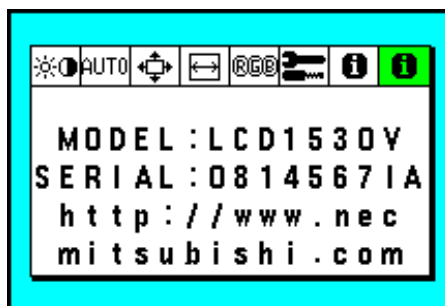
### 3.2.3 OFFSET/GAIN Adjustment

1. Select Item3 by "left" key.  
Video input pattern: 16 Gray scale.
2. Press "DOWN" key and select AUTO ADJUST.
3. Press "PROCEED" key and adjust RGB OFFSET and RGB GAIN.
4. Press "EXIT" key 2times and exit FACTORY mode.



### 3.3 Serial No. Information

1. Open User menu serial no. information (CPU read serial No. from EDID data and indicate in OSM menu)
2. Check serial no. is correct.
3. Close OSM menu



**Note: Factory mode**

Mention the contents of the service menu letter

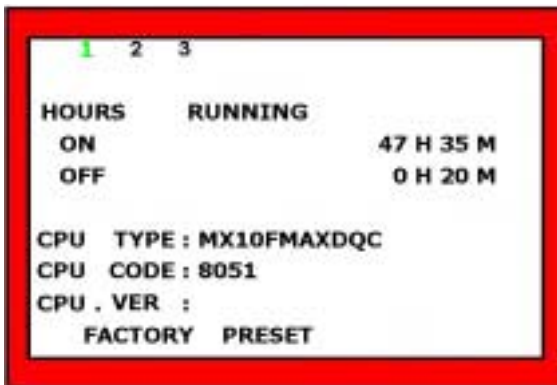
Warning message



**How to enter Factory mode**

1. Open Information menu (Signal information)
2. Press "UP" key + "DOWN" key + "RESET" key
3. Indicate warning message
4. Press Proceed key then enter Factory mode (LED Green and Amber blinking)  
Or Press exit to close OSM menu  
OSM Flame is RED

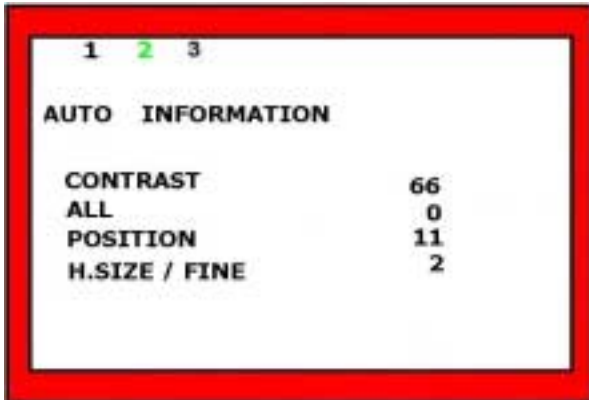
**How to use Factory mode**



Page1:

The page can check user's HOURS RUNNING and system total's HOURS RUNNING.

1. Press "DOWN" key to move cursor on HOURS RUNNING.
2. Press "DOWN" key + "PROCEED" key or "UP" key + "PROCEED" key at the same time can check HOURS RUNNING.
3. Press "DOWN" key to move cursor on FACTORY PRESET.
4. Press "PROCEED" key can reset all function to initial (include user's HOURS RUNNING and AUTO INFORMATION).



Page2:

The page can check user adjust times (Use factory preset can clear to zero.).



Page3:

The page can adjust RGB offset and gain.

1. Press "DOWN" key to move cursor on AUTO ADJUST.
2. Press "PROCEED" key can auto balance.

### How to exit Factory mode

1. Press "EXIT" key and then close OSM menu(Factory mode)
2. Press "EXIT" key and then warning message appears.
3. Press "EXIT" key and then OSM menu close(exit Factory mode)

When turn off monitor in Factory mode, it should exit from Factory mode.

If unplug a power cord in Factory mode, it should exit from Factory mode too.

**: Hours Running**

Indicate On time and Off mode (power save) time(hours, minutes).

There are two timer.

The one can be cleared and the other cannot be cleared.

Following Key operation changes the timer indication.

Select Hours Running item

UP key + PROCEED key : Indicate timer which can be cleared

DOWN key + PROCEED key : Indicate timer which cannot be cleared

LEFT key + RIGHT key + RESET key : Timer is cleared

The indicated number should be changed every 5minutes.

On mode time      xxxH xxM

Off Mode time      xxxH xxM

**: F/W ver** Indicate F/W version

**: Auto Count**

Indicate total time that Auto Adjustment (Contrast, Auto adjust, Position, H size/Fine) is executed

Value should be cleared by factory reset in Factory mode menu.

**: Factory Preset in Factory mode**

When proceed key is pushed at Factory preset, Hours running and auto count is cleared.

#### 4. VG-829 Setting Method

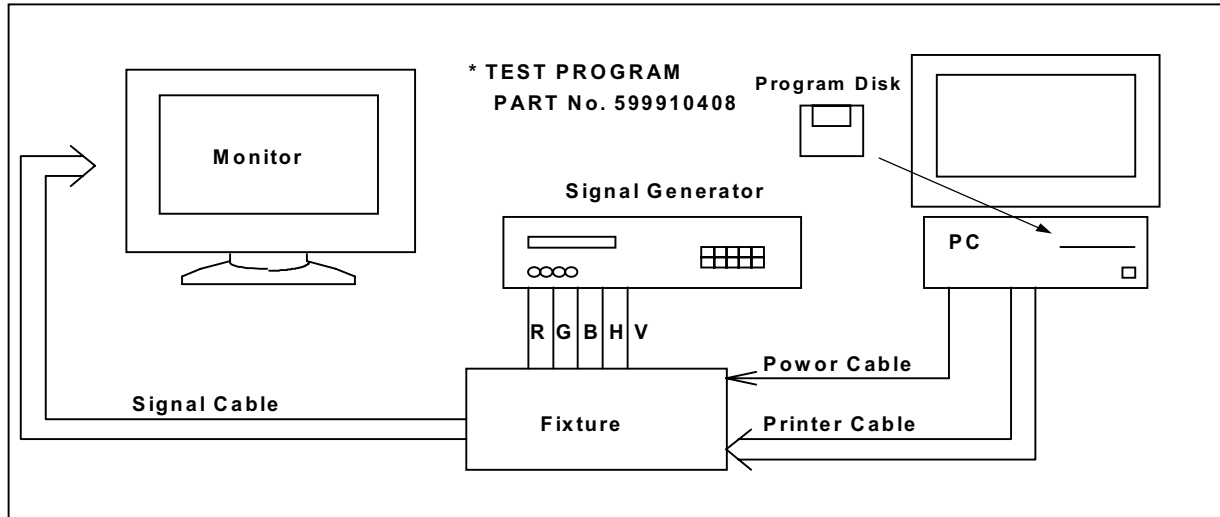
| Signal        |                  | VG-829   |  |  |  |  |
|---------------|------------------|--|--|--|--|--|
| Mode          |                  | 20   |  |  |  |  |
| H             | DOT CLOCK [MHz]  | 78.75  |  |  |  |  |
|               | TOTAL [DOT]      | 1312   |  |  |  |  |
|               | DISP [DOT]       | 1024   |  |  |  |  |
|               | SYNC PULSE [DOT] | 96   |  |  |  |  |
|               | BACK [DOT]       | 176  |  |  |  |  |
|               | HDstrat [DOT]    | 0  |  |  |  |  |
|               | HDwidth [DOT]    | 0  |  |  |  |  |
| V             | INTERLACE        | NON  |  |  |  |  |
|               | TOTAL [H]        | 800  |  |  |  |  |
|               | DISP [H]         | 768  |  |  |  |  |
|               | SYNC PULSE [H]   | 3  |  |  |  |  |
|               | BACK PORCH [H]   | 28   |  |  |  |  |
|               | EQPfp [H]        | 0  |  |  |  |  |
|               | EQPbp [H]        | 0  |  |  |  |  |
|               | SERRATION [H]    | OFF  |  |  |  |  |
|               | EDP [H]          | OFF  |  |  |  |  |
|               | VDs [H]          | 0  |  |  |  |  |
|               | VBf [H]          | 0  |  |  |  |  |
| OUTPUT        | OUTPUT MODE      | ANALOG   |  |  |  |  |
|               | NRZ/RZ           | NRZ  |  |  |  |  |
|               | CV               |  |  |  |  |  |
|               | HS               | POS  |  |  |  |  |
|               | VS               | POS  |  |  |  |  |
|               | CS               | NEG  |  |  |  |  |
|               | HD               | NEG  |  |  |  |  |
|               | VD               | NEG  |  |  |  |  |
|               | RGB              | POS  |  |  |  |  |
|               | HT               | POS  |  |  |  |  |
|               | C                | NEG  |  |  |  |  |
|               | VIDEO            | 0.70V  |  |  |  |  |
|               | Set-up           | 0.00V  |  |  |  |  |
|               | Sync             | 0.30V  |  |  |  |  |
| PAT SEL       |                  | GRAY   |  |  |  |  |
| CHARA PATTERN | Format           | 1  |  |  |  |  |
|               | Code             | 82   |  |  |  |  |
|               | Font             | 16*16  |  |  |  |  |
|               | Cell             | 16*16  |  |  |  |  |
| GRAY          | Direction:0      | L0:0 L1:17 L2:34 L3:51 L4:68 L5:85 L6:102 L7:127<br>L8:143 L9:159 LA:175 LB:191 LC:207 LD:223 LE:239<br>LF:255 |  |  |  |  |

# INSPECTION

## 1. Inspection of PLUG & PLAY communication

### 1.1 A construction of System

This system should be connected as shown below.



### 1.2 Starting method

#### 1) Input Signal

Input signal must be separate sync. Two kinds of signals must be prepared.

One is the signal which vertical synchronization frequency is 42Hz, and another is the signal that vertical synchronization frequency is between 55Hz and 25kHz.

Horizontal synchronization frequency should be set to reasonable value(example 31.5kHz).

#### 2) Power ON procedure

- First, put the floppy disk for PnP Inspection into PC and turn on PC.
- Turn on Fixture.
- Make sure that fixture's LED blinks on and off.
- Turn on signal generator and monitor.

#### 3) Starting PC Software

- Inspection of PnP communication

To check the PnP communication, EDID file name is LCD1530V.

Type "P LCD1530V" to DOS command line and press return key.

- Writing EDID to EEPROM and inspection of PnP communication

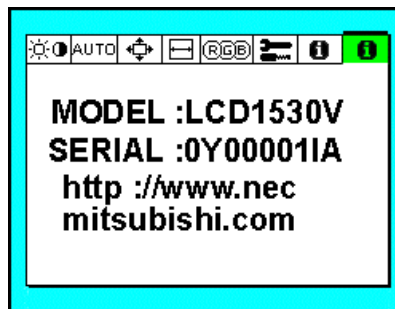
To write EDID to EEPROM and check the PnP communication of LCD1530V, type "WP LCD1530V" on DOS command line and press return key.

### 1.3 Operation

- The operation should be performed according to the screen message.
- When the message of “Please set V. sync to 42Hz.” is displayed, set the signal generator to the signal with vertical synchronization frequency of 42Hz. When the message of “Please set V. sync to over 55Hz.” is displayed, set the signal generator to the signal whose vertical synchronization frequency is between 55Hz and 25kHz.
- The message of “Normally Complete” means that writing of EDID data or PnP inspection completed normally. The message of “Error” means that writing of EDID data or PnP inspection finished incorrectly.
- When the PnP inspection is completed, read EDID data would be displayed. And if the read EDID data differed from the original EDID data, the different bytes would be displayed in red.
- For the details of error, see the messages displayed at the bottom right of the screen. The meaning of the messages is shown on section 1.5.
- After writing of EDID data or inspection of DDC2B, monitor can not be communicated by DDC1. In that case, turn off and on the monitor again, which will make the DDC1 communication test possible.
- Make sure that fixture’s LED flashes on and off before writing EDID data, inspecting DDC1 and DDC2B. If the fixture’s LED does not flash on and off, turn off and turn on the monitor and the fixture.

### 1.4 Installation of a serial number (Information of OSM)

1. Enter the factory mode.
2. The factory mode is closed.
3. Information 2 of the menu(user mode) is opened, and it confirms that a serial number were changed.





## 1.5 Error Messages

- Start Bit Error

This message is displayed when the start bit is not "H" while sending data from PC to MPU on the fixture. This error will be caused by noise etc. on the line.

- Command Error

This message is displayed when the different command is sent from PC to MPU on the fixture.

- Hardware Error

This message means that the PC does not recognize ACK command sent from the MPU on the fixture.

- File Open Error

This message means that the input EDID file name was wrong.

- Command line Switch Error

This message means that the input communication command is incorrect.

- Parity Error

This message is displayed when the MPU on the fixture recognized the parity bit is incorrect.

This error can be caused by noise etc. on the line.

- EDID Data Error

This message is displayed when the null bit is not detected in EDID data read by DDC1 communication.

- EDID Data Sort Error

This message is displayed when the header code is not detected in EDID data read by DDC1 communication.

- Time Out Error

This message is displayed when the PC does not recognize ACK commands sent from MPU within 10 msec after the PC had sent communication command or EDID data.

If this error occurs, check the connection on PC, fixture and monitor.

1.6 EDID data file

The EDID data file text is shown below. When you write or inspect EDID for this monitor, the following table can be used.

file name : LCD1530V

|    | 0         | 1         | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | A  | B  | C  | D  | E  | F         |
|----|-----------|-----------|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------|
| 00 | 00        | FF        | FF | FF | FF | FF | FF | 00 | 38 | A3 | A8 | 65 | 01 | 01 | 01 | 01        |
| 10 | 1F<br>*1) | 0A<br>*2) | 01 | 02 | 08 | 1F | 17 | 78 | EA | 4E | E0 | A1 | 57 | 4C | 99 | 23        |
| 20 | 19        | 52        | 57 | BF | EE | 00 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01        |
| 30 | 01        | 01        | 01 | 01 | 01 | 01 | C3 | 1E | 00 | 20 | 41 | 00 | 20 | 30 | 10 | 60        |
| 40 | 13        | 00        | 33 | E6 | 10 | 00 | 00 | 1E | 00 | 00 | 00 | FD | 00 | 38 | 4B | 1F        |
| 50 | 3C        | 08        | 00 | 0A | 20 | 20 | 20 | 20 | 20 | 20 | 00 | 00 | 00 | FC | 00 | 4E        |
| 60 | 45        | 43        | 20 | 4C | 43 | 44 | 31 | 35 | 33 | 30 | 56 | 0A | 00 | 00 | 00 | FF        |
| 70 | 00        | 31<br>*3) | 36 | 38 | 34 | 33 | 30 | 30 | 39 | 0A | 20 | 20 | 20 | 20 | 00 | 88<br>*4) |

Table 1.6 Data list

- Note 1: address 10h                      Week of manufacture = Month of manufacture × 4
- Note 2: address 11h                    Year of manufacture - 2000
- Notes 3: address 71h ~ 7Dh        Serial Number (ASCII coded)  
If less than 13 char, terminate with 0Ah and fill the rests with 20h.
- Note 4: address 7Fh                    Checksum  
The sum of entire 128 byte shall be equal to 00h.

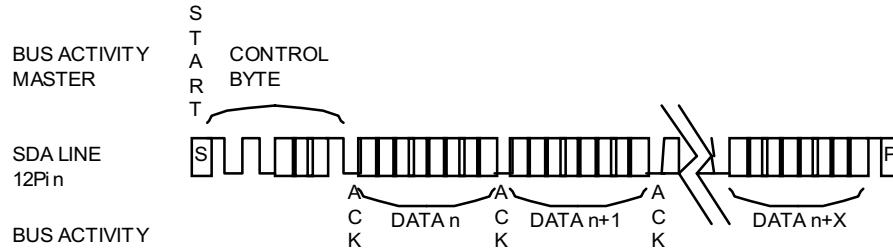


Diagram 1.6 Timing chart of DDC2B

## 2. Appearance of LCD and Display inspection standard

### 2.1 Dot defect

#### 2.1.1 Bright Dot

Bright dot is defined as dots(sub-pixels) which appeared brightly in the screen when the LCM displayed with dark pattern.

- R, G or B 1 dot ----- 6 Max.
- Adjacent 2 dots ----- 2 Max.
- Adjacent above 3 dots ----- Not allowed.
- Total amount of Bright dots ----- 8 Max.
- Minimum distance between dots ---- 15mm

#### 2.1.2 Dark Dot

Dark dot is defined as dots(sub-pixels) which appeared darkly in the screen when the LCM displayed with bright pattern.

- 1 dot ----- 6 Max.
- Adjacent 2 dots ----- 2 Max.
- Adjacent above 3 dots ----- Not allowed
- Total amount of Dark dot ----- 8 Max.
- minimum distance between dots ---- 15mm

#### 2.1.3 Total amount of Dot Defects ----- 10 Max.(including bright & dark dot defects)

NOTE: a. Every dot herein means Sub-pixel(each Red, Green or Blue Color).  
 b. Bright & Dark dots are larger than half sub-pixel. (Dots smaller than half sub-pixel are not counted as defect dots)

### 2.2 Polarizer Defects

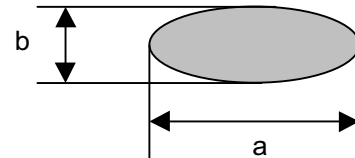
| Items   |          | Criteria   |
|---------|----------|--|
| Scratch | Linear   | $0.05 \leq W \leq 0.2, 5.0 \leq L \leq 10.0, N \leq 4$ |
| Dent    | Circular | $0.2 \leq D \leq 0.5, N \leq 6$                        |

NOTE: D: Average Diameter  $D=(a+b)/2$

W: Width, L: Length, N: Quantity

Linear:  $a > 2b$ , Circular:  $a < 2b$

Unit: mm



- a. Extraneous substances that can be wiped out like Finger Print, Particles are not considered as a defect.
- b. Defects which is on the Black Matrix(outside of Active Area) are not considered as a defect.

### 2.3 Foreign Material

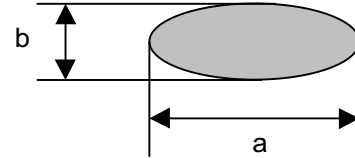
| Items            |          | Criteria  |
|------------------|----------|---|
| Foreign Material | Linear   | $0.05 \leq W \leq 0.1, 0.3 \leq L \leq 4, N \leq 4$ |
|                  | Circular | $0.2 \leq D \leq 0.5, N \leq 6$                     |

NOTE: D: Average Diameter  $D=(a+b)/2$

W: Width, L: Length, N: Quantity

Linear:  $a > 2b$ , Circular:  $a < 2b$

Unit: mm



### 2.4 Line defect

All kinds of line defects such as vertical, horizontal or cross are not allowed.

### 2.5 Bezel Appearance

Scratches, minor bents, stains, particles on the Bezel frame are not considered as a defect.

### 3. BACK LIGHT REPLACEMENT MANUAL

#### TFT Color Liquid-crystal Module

[LM151X2 (Part No. 36804268)]

#### CONTENTS

- 1. Back light Replacement Procedure
  - 1.1 Equipment and Tool Required for Replacement
  - 1.2 Preparation
  - 1.3 Replacement procedures

**Note:** The replacement of the backlight tube in LCD module will not be reflected to extend the warranty period of whole LCD module or that of whole LCD monitor. Please refer warranty terms and conditions of LCD module.

#### Warranty

##### a. Warranty Period

The In-warranty is Eighteen(18) Months from manufacturing month.  
Note) The manufacturing Month is on the LCDs as Supplier's serial No.

##### b. Repair Warranty

The repair warranty is Twelve(12) Months from repaired month for repaired LCDs.  
Note) The Label for repair will be added after repairing.

|                         |                        |  |  |  |
|-------------------------|------------------------|--|--|--|
| Rev. 1.0<br>18/Feb/1999 | Rev. 2.0<br>4/Mar/1999 |  |  |  |
|-------------------------|------------------------|--|--|--|

##### c. Serial Number Information

###### • Lot Mark

|   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|

A,B: DIVISION CODE  
C,D,E: MODEL CODE  
F: YEAR  
G: MONTH  
H,I,J,K,L: SERIAL NO.

Note: 1. YEAR

|      |    |    |    |    |    |    |    |    |    |      |
|------|----|----|----|----|----|----|----|----|----|------|
| YEAR | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 2000 |
| Mark | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 0    |

Note: 2. MONTH

|       |      |      |      |      |     |      |      |      |      |      |      |      |
|-------|------|------|------|------|-----|------|------|------|------|------|------|------|
| MONTH | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| Mark  | 1    | 2    | 3    | 4    | 5   | 6    | 7    | 8    | 9    | 0    | N    | D    |

###### • Location of Lot Mark

Serial NO. is printed on the label. The label is attached to the backside of the LCD module.  
This is subject to change without prior notice.

## **1. Back light Replacement Procedure**

### 1.1 Equipment and Tool Required for Replacement

- 1) Finger protectors
- 2) ESD wrist strap
- 3) Precision Screw driver (+)
- 4) Replacement lamp unit

#### **Back light unit (Part No. 79PG1000)**

Recommendations: If or dirt adheres to the fluorescent lamp during replacement, it could result in uneven lighting, so it is recommend that replacement be performed in a clean room or on a clean bench (class C). Also the LCD module could be damaged due to static electricity, so it is recommended that an ionizer (or other anti-static electricity equipment) be used.

### 1.2 Preparation

- 1) Put on the finger protectors and ESD wrist strap.
- 2) Turn on the ionizer (or turn on the other anti-static electricity equipment).

### 1.3 Replacement procedures

To be explained according to the sequence of replacement work.

(1) Put the TFT-LCD module on the working table, with its display plane facing upwards.

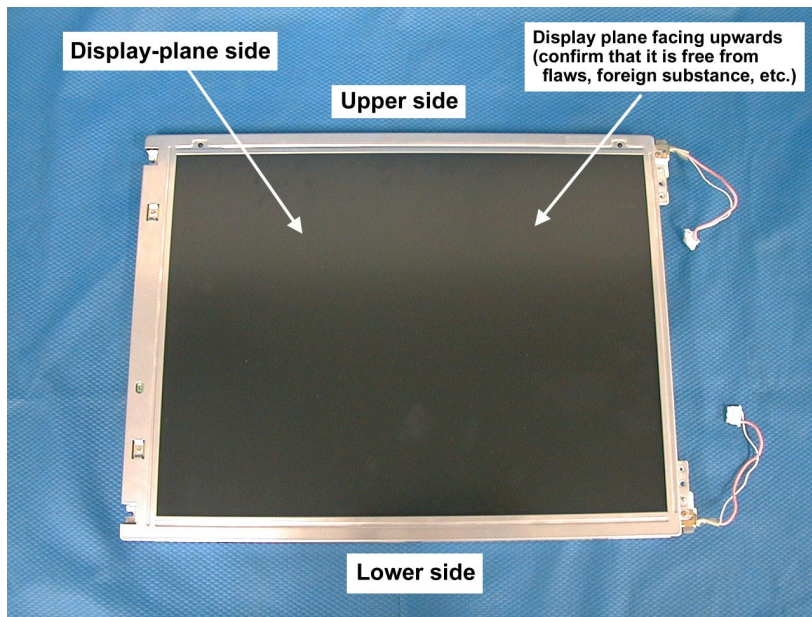


Photo 1

(2) A screw is removed.

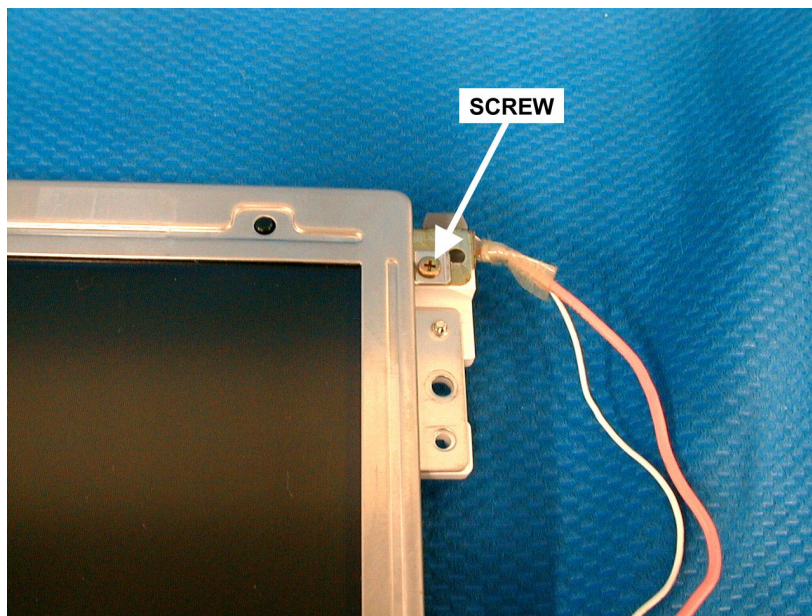


Photo 2

(3) Slowly pull the bracket, back light and take out the back light unit.

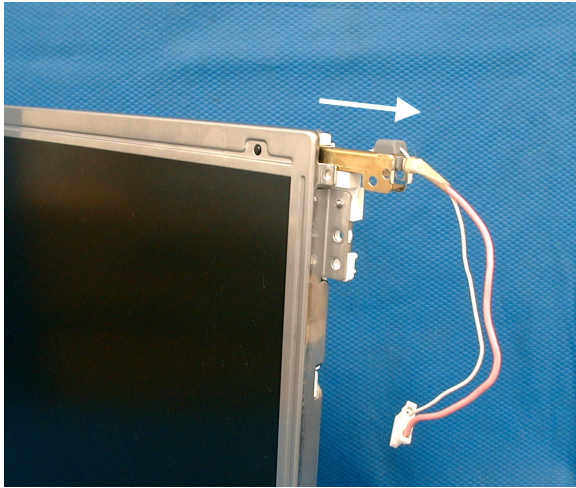


Photo 3

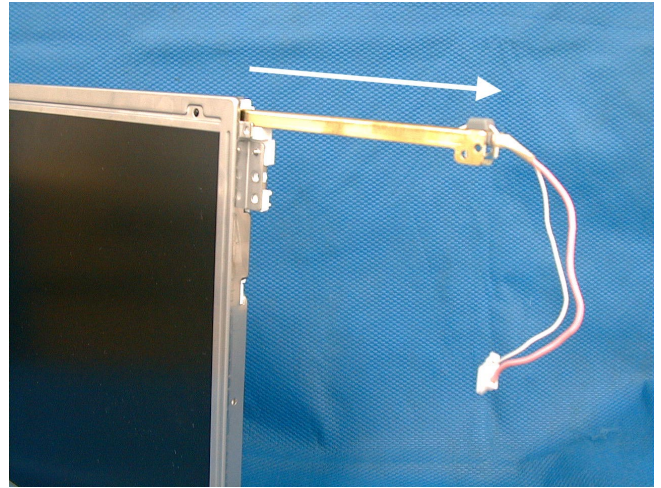


Photo 4

(4) Then, take out the lower-side back light unit.

Turn the LCD module upside down and follow the procedures (2) to (3).

(5) Photo 5 shows the condition that the two upper and lower lamp units have been dislodged.



Photo 5



(6) Stand the LCD module and insert the back light unit.

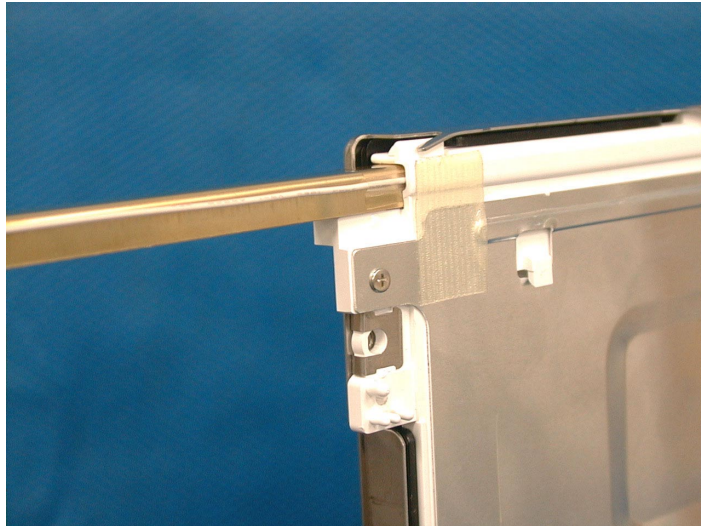


Photo 6

- Make sure not to confuse the direction of insertion.

(7) After the completion of insertion, the back light unit is fixed with the screw.

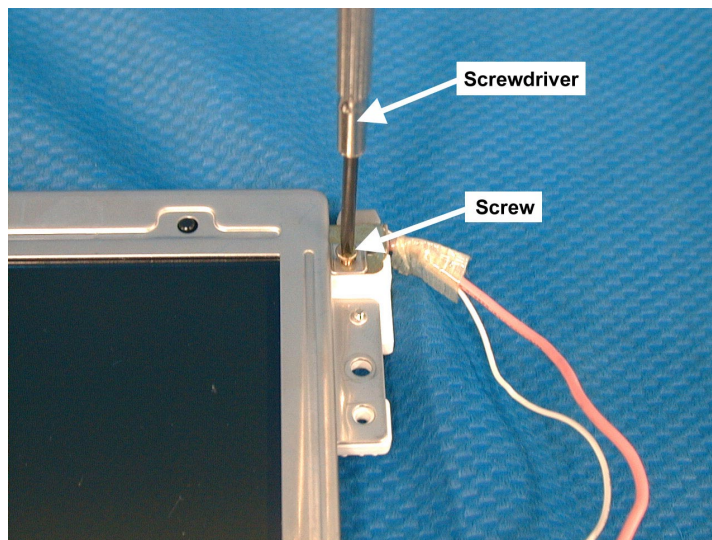


Photo 7

(8) Insert another back light unit according to the procedures of (6) and (7) above.

(9) Check items:

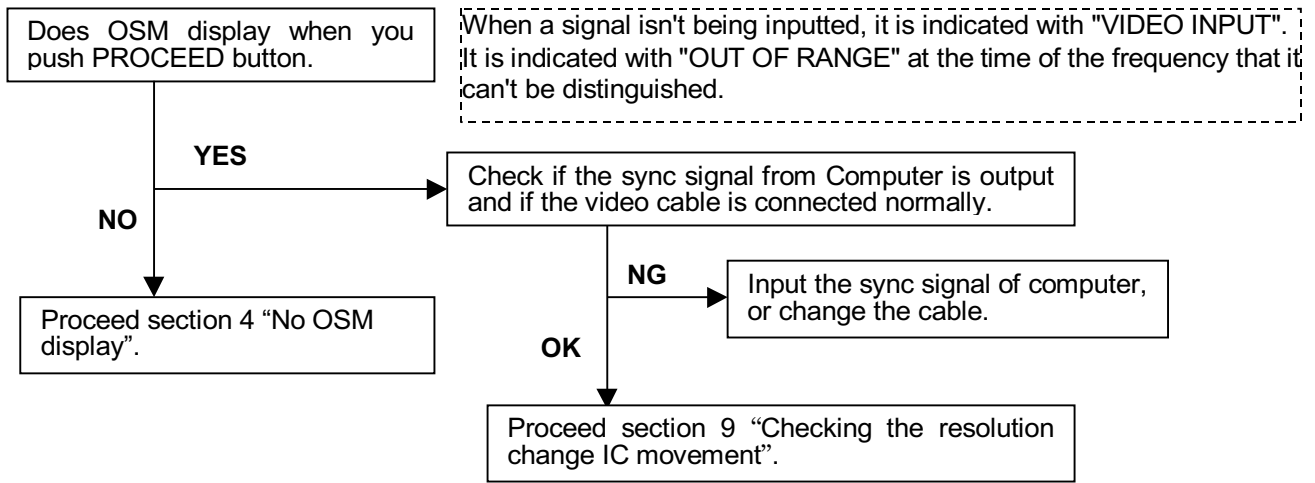
- Confirm that everything is in the same condition as original. (Photo 1)
- Confirm that the display plane of the LCD module is free from flaws, dust, and foreign substance.
- Incorporate the LCD module in the main unit, connect the connector, and turn on the power supply.
- Confirm the lighting of the fluorescent lamp.

# TROUBLE SHOOTING

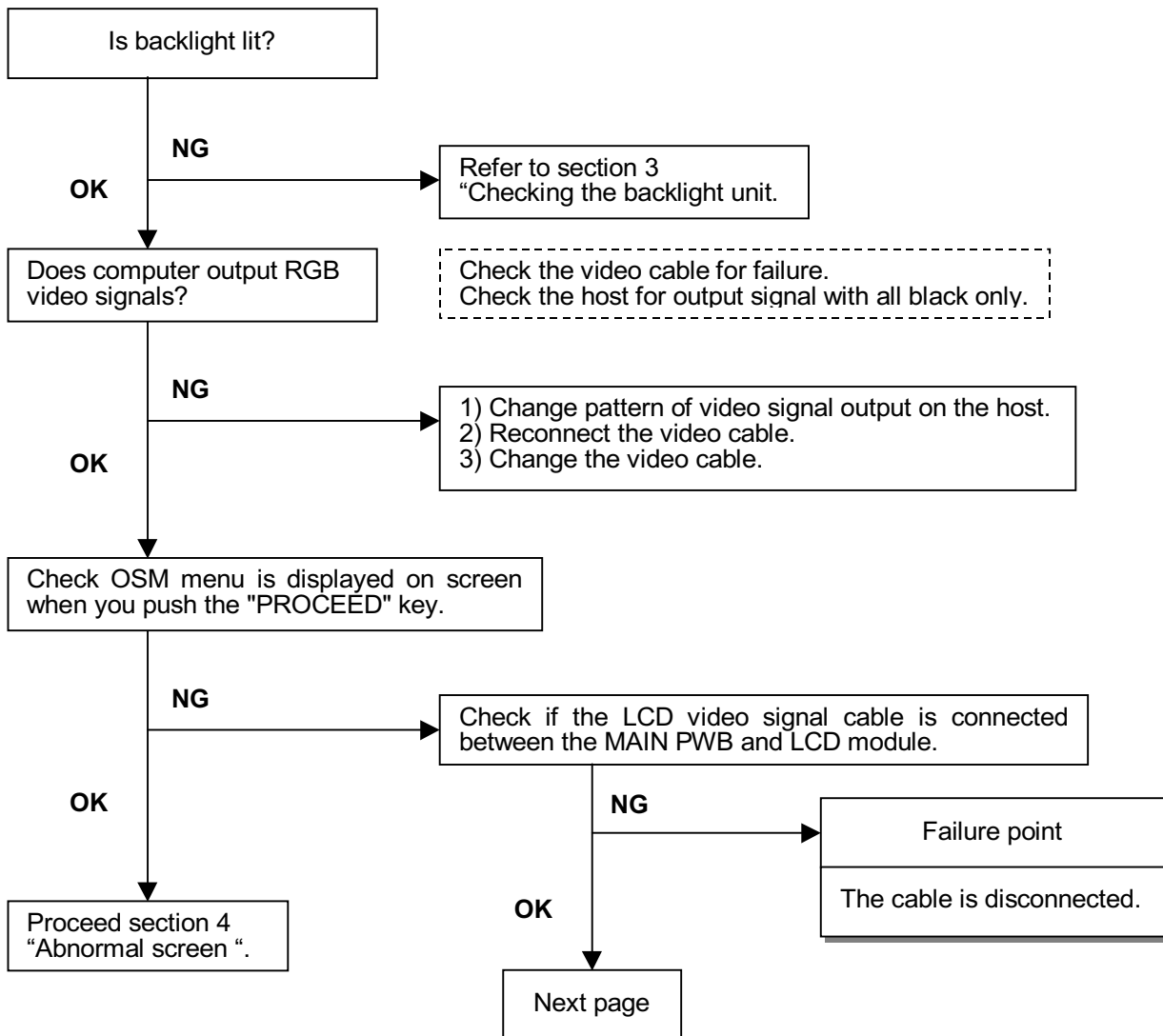
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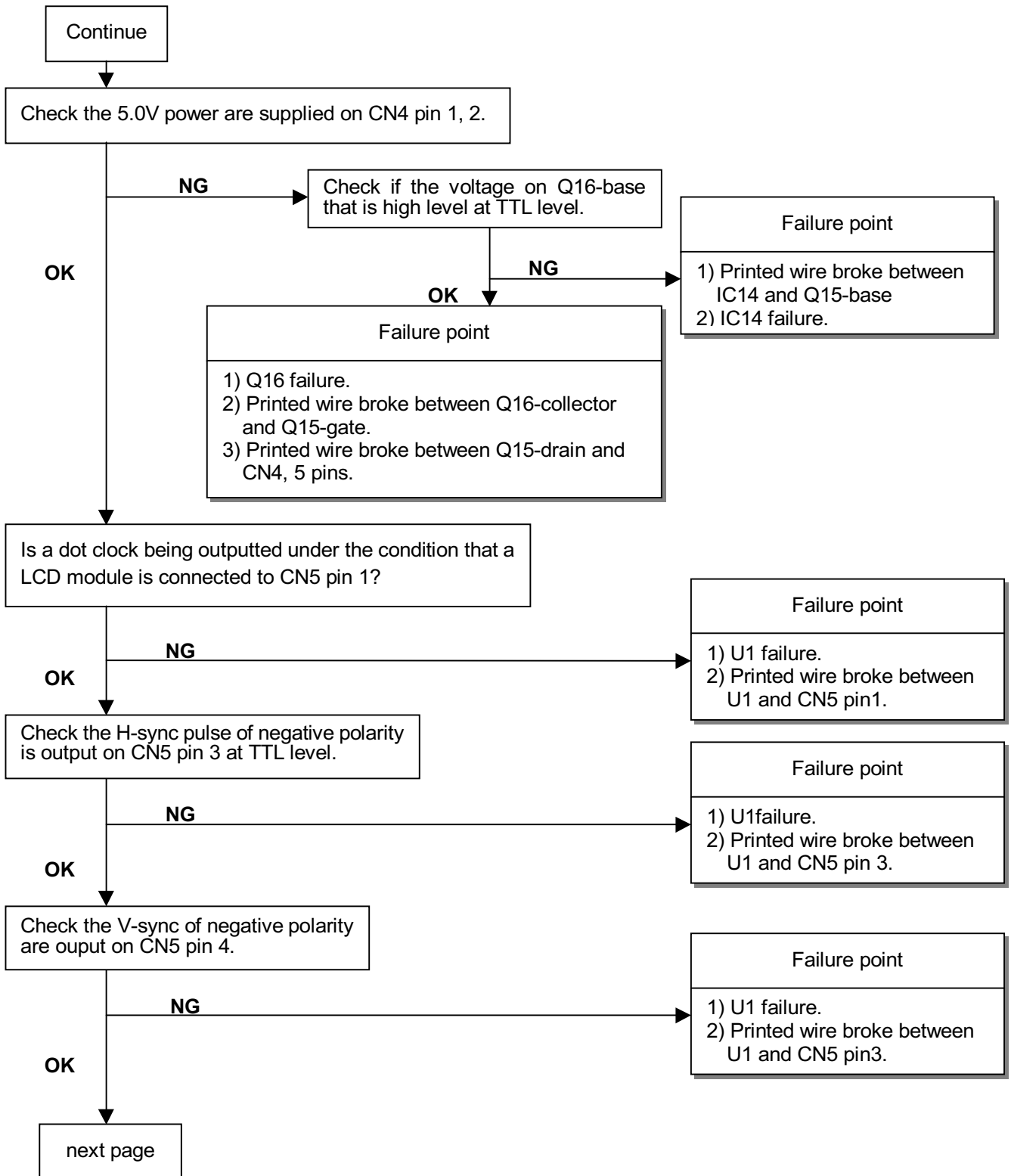
|  | Page |
|--|------|
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| 2. Nothing displays on screen (Screen is black, color of LED is green) ..... | 6-3  |
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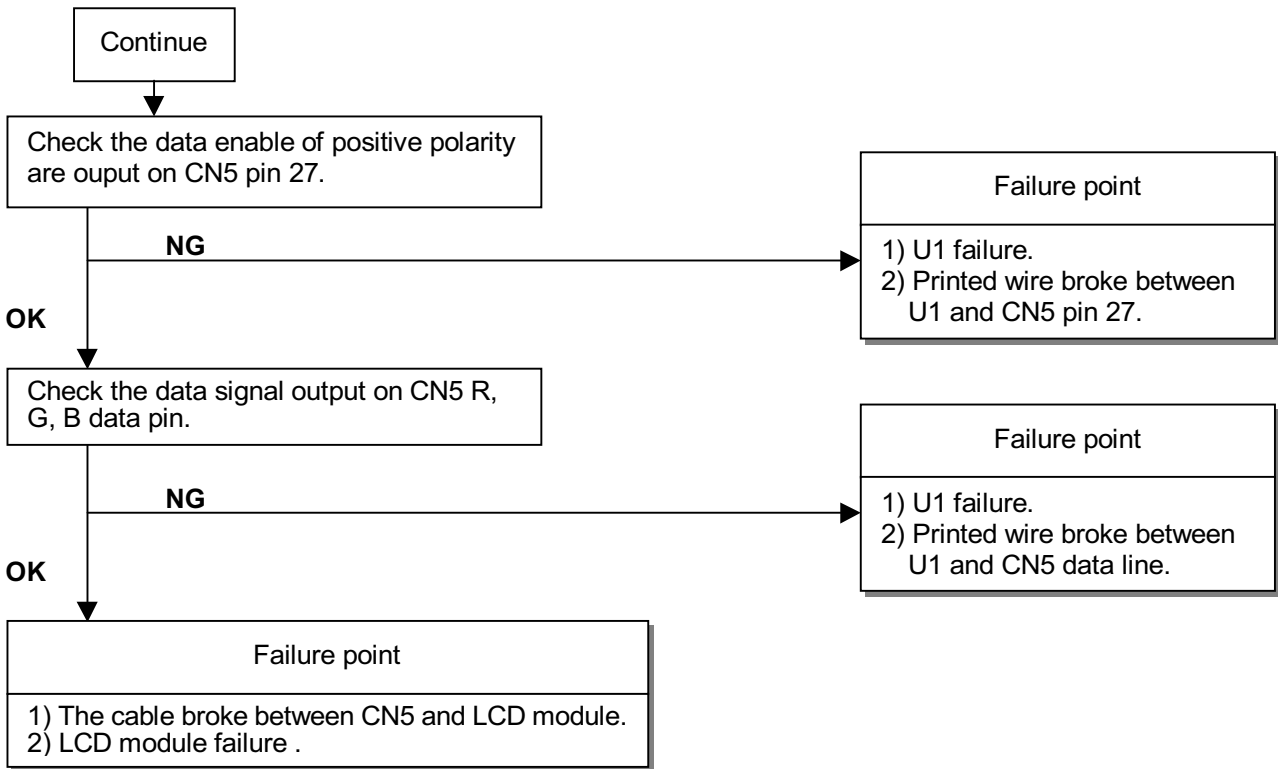
# 1. No display of screen (Screen is black, color of LED is amber)



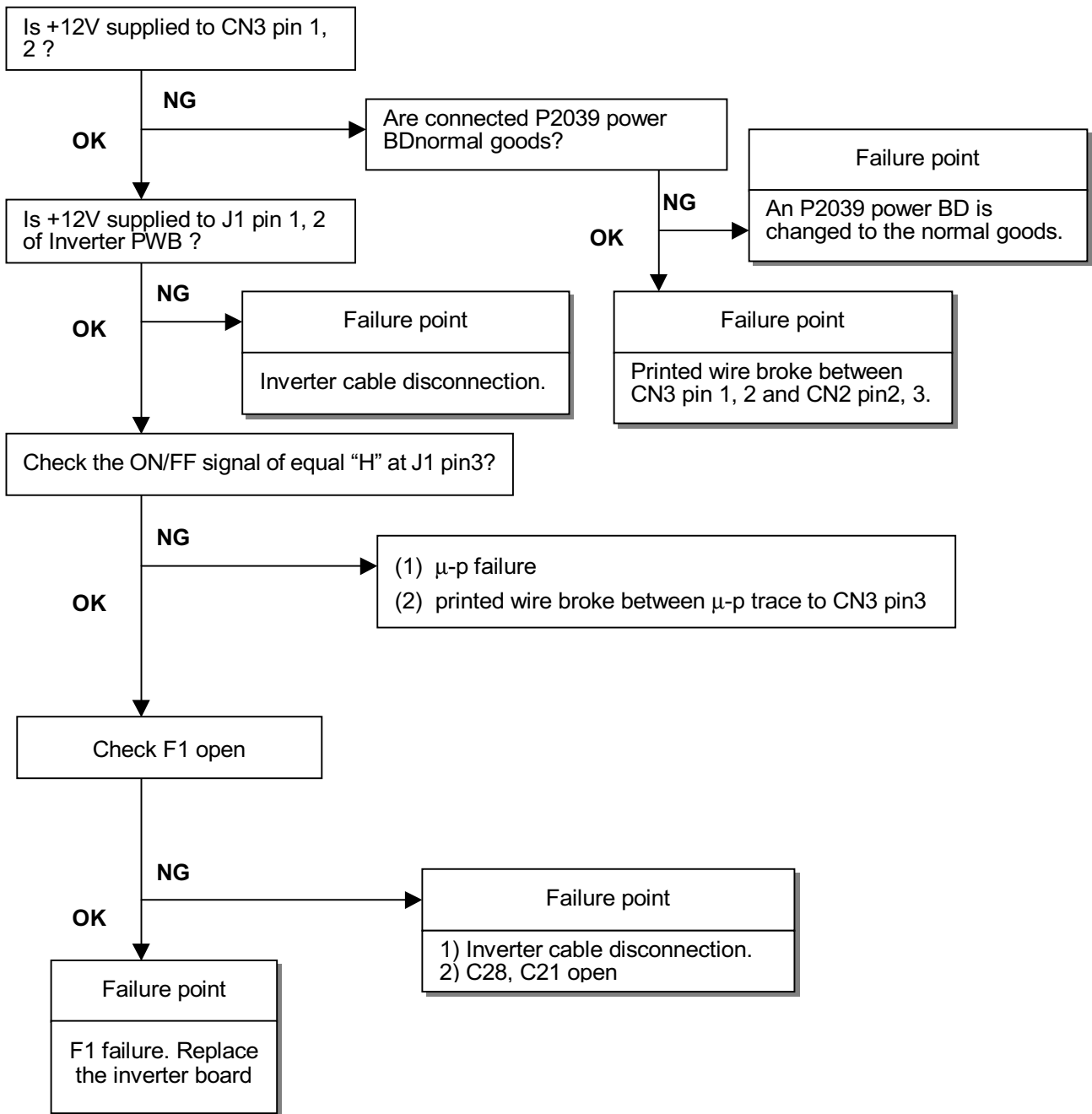
## 2. Nothing displays on screen (Screen is black, color of LED is green)



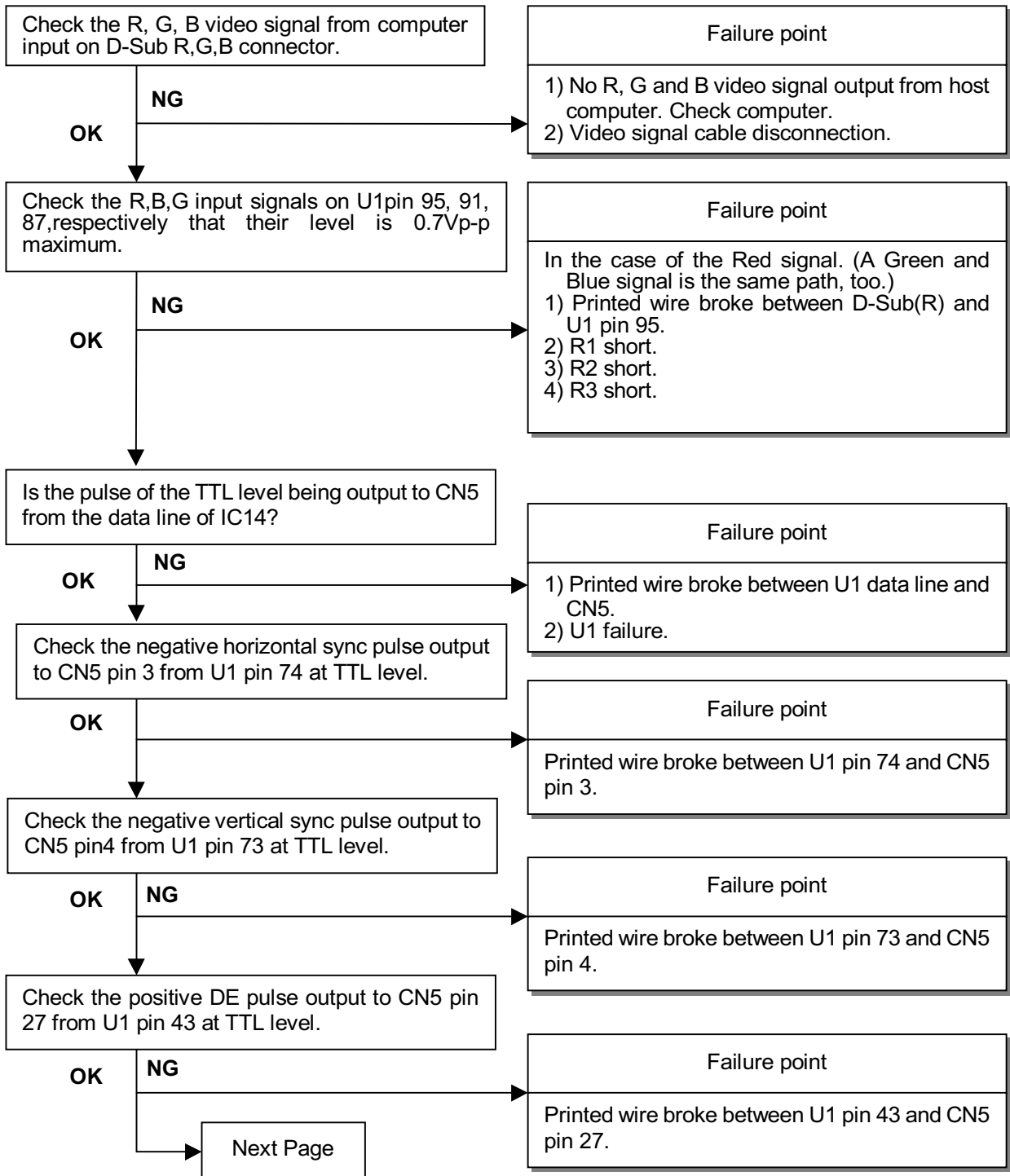




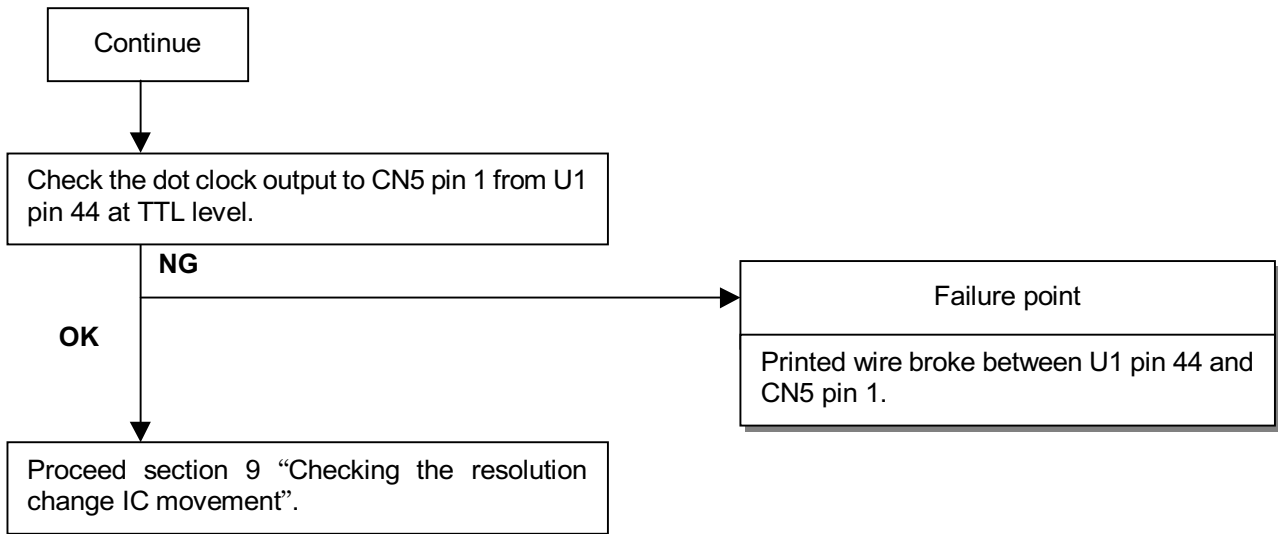
### 3. Checking the back light unit



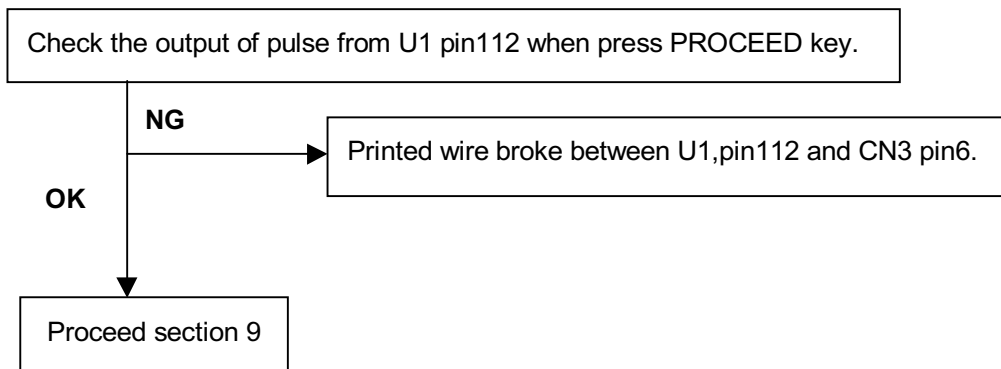
#### 4. Abnormal screen



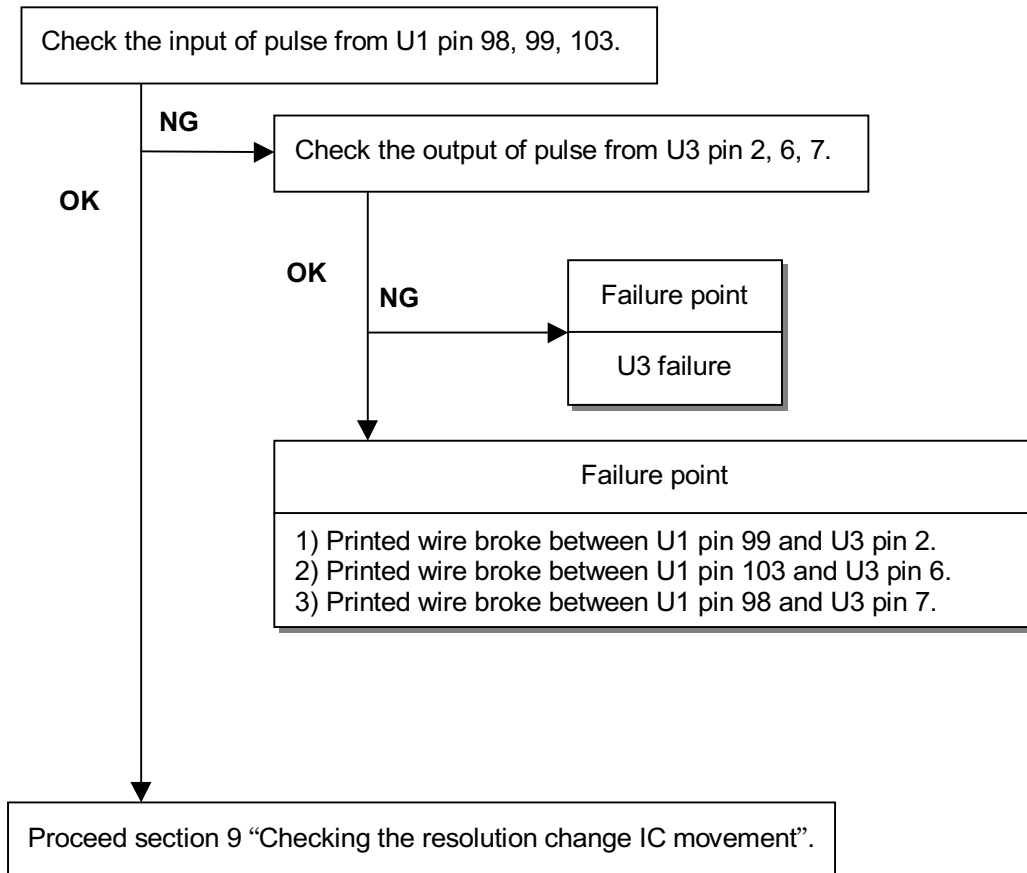




## 5. No OSM display

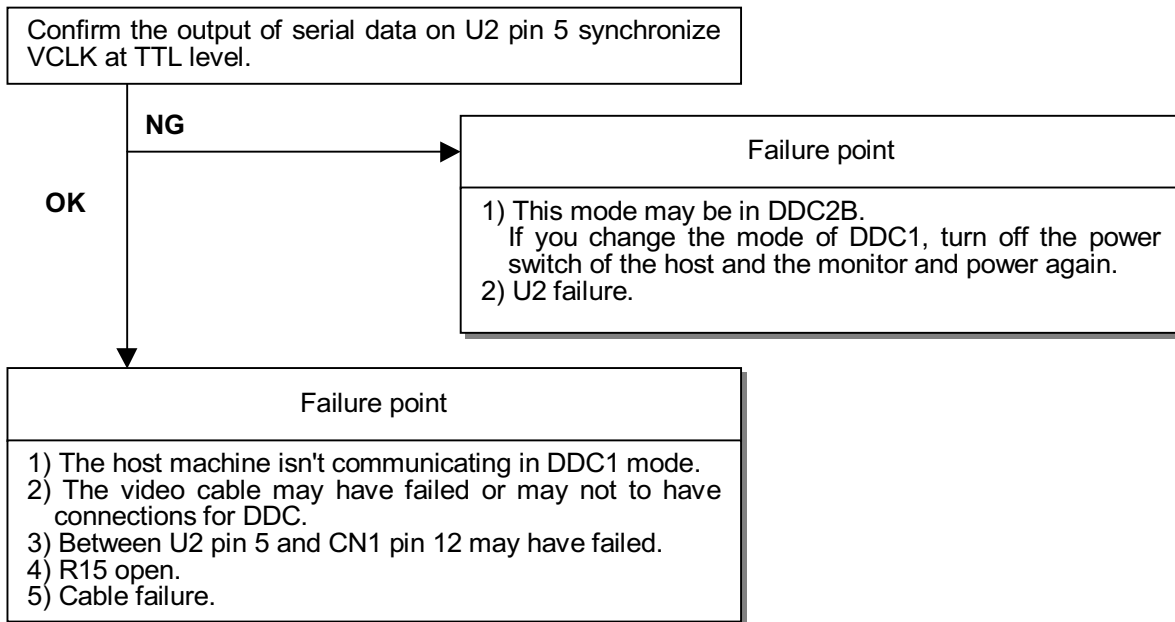


## 6. Abnormal Auto adjustment

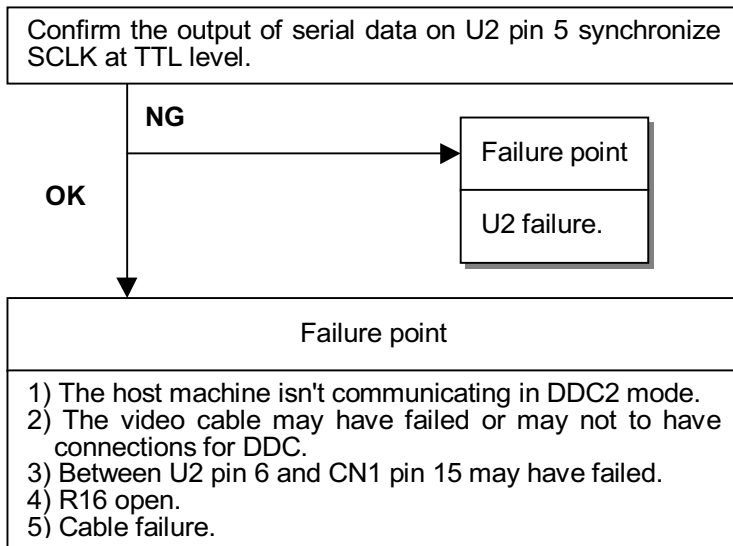


## 7. Abnormal plug and play operation

### 7.1 Abnormal DDC1

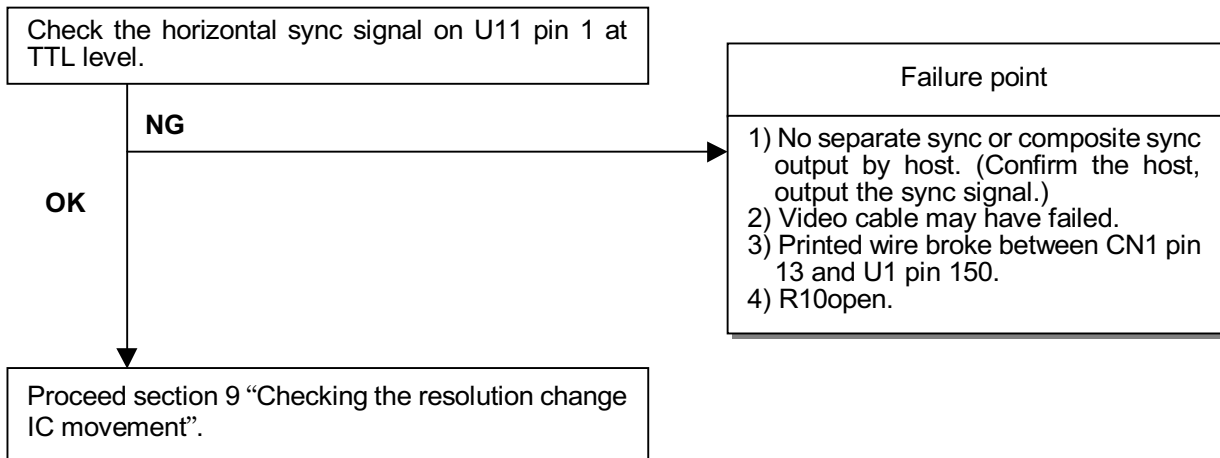


### 7.2 Abnormal DDC2

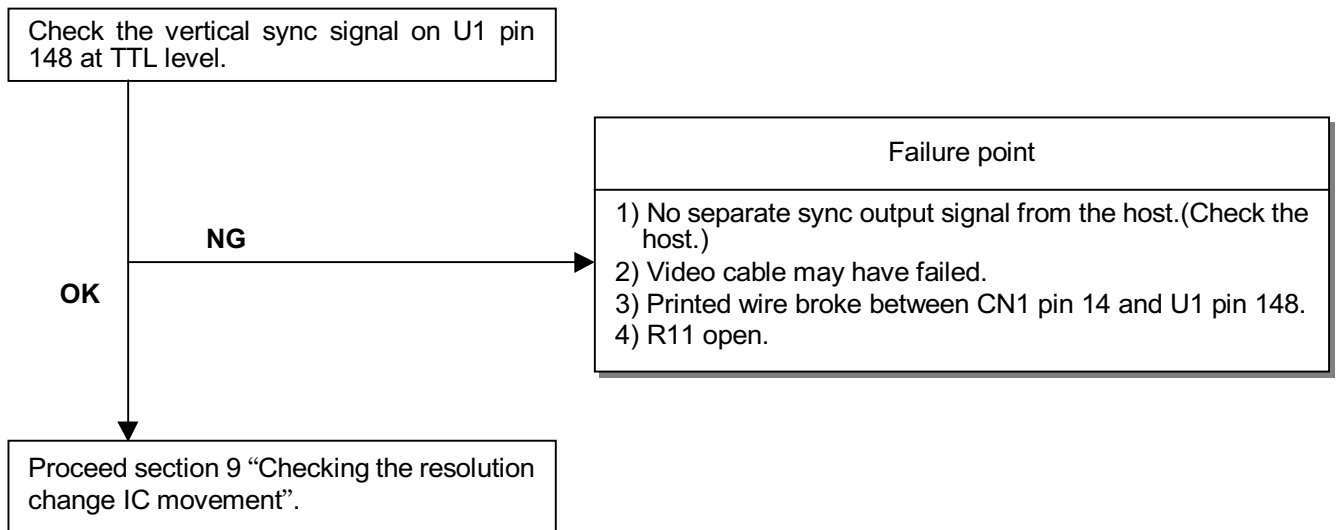


## 8. Checking the interface circuit of sync signal

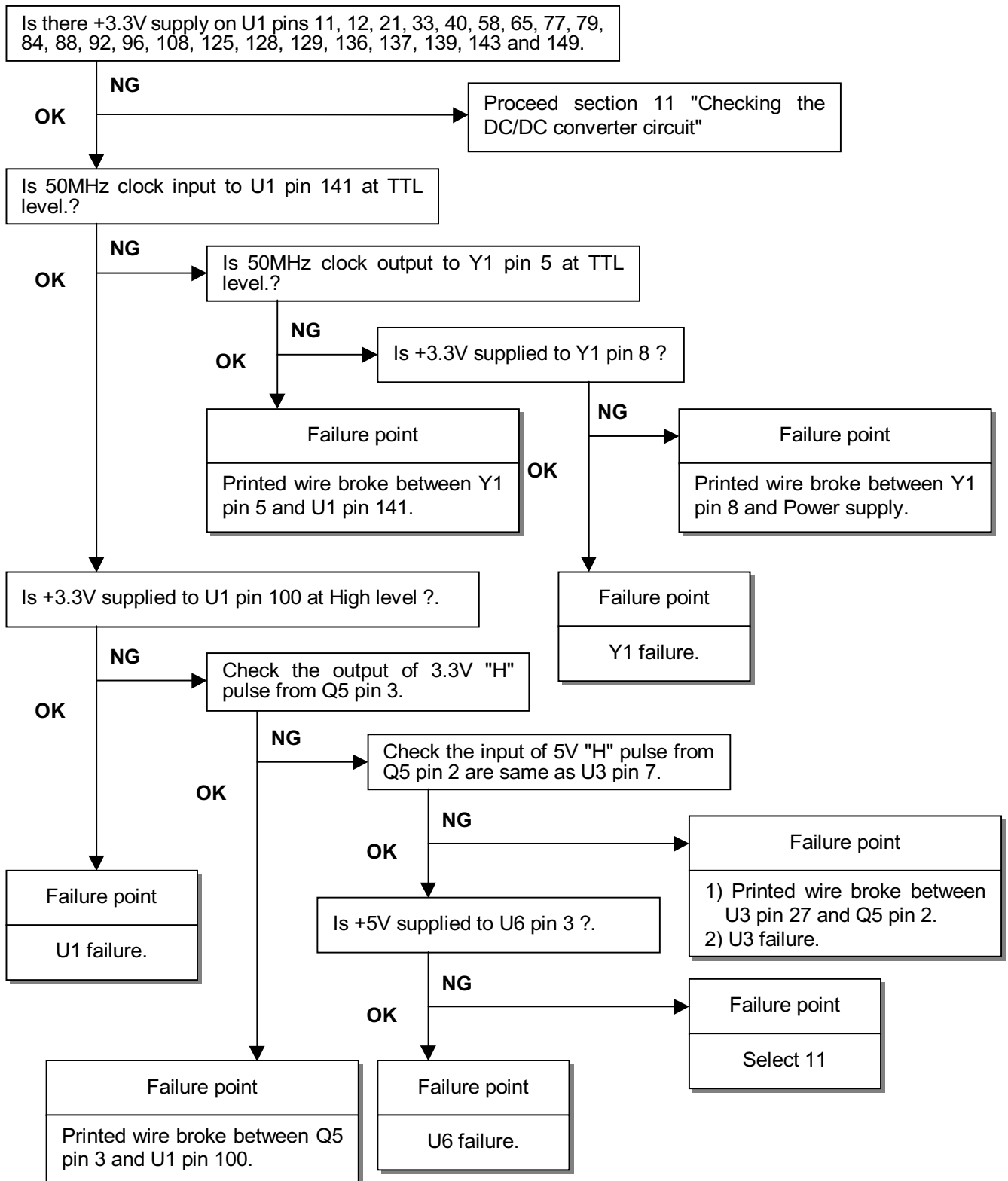
### 8.1 Checking the control circuit of horizontal sync pulse



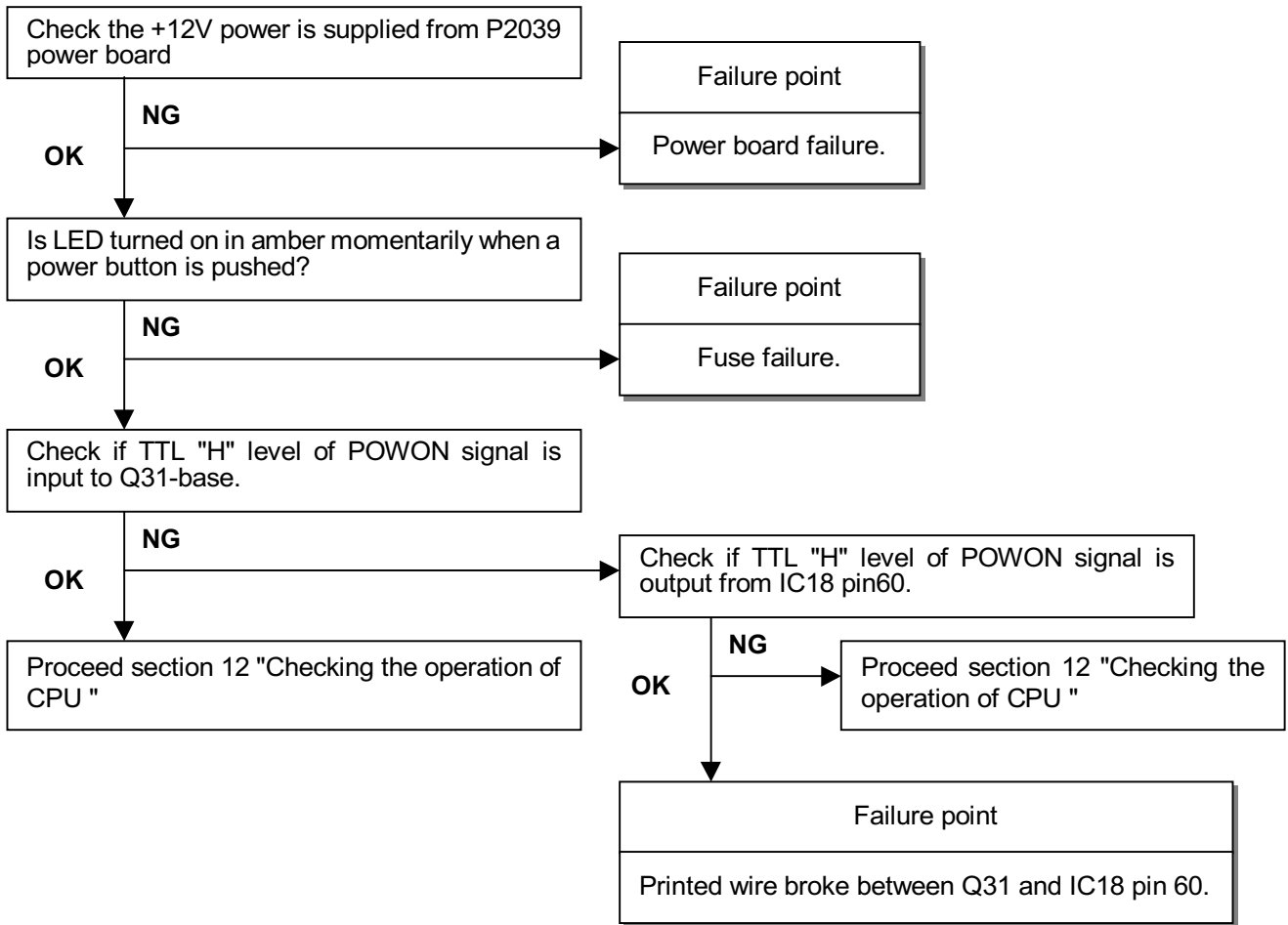
## 8.2 Checking the control circuit of vertical sync pulse



## 9. Checking the resolution change IC movement

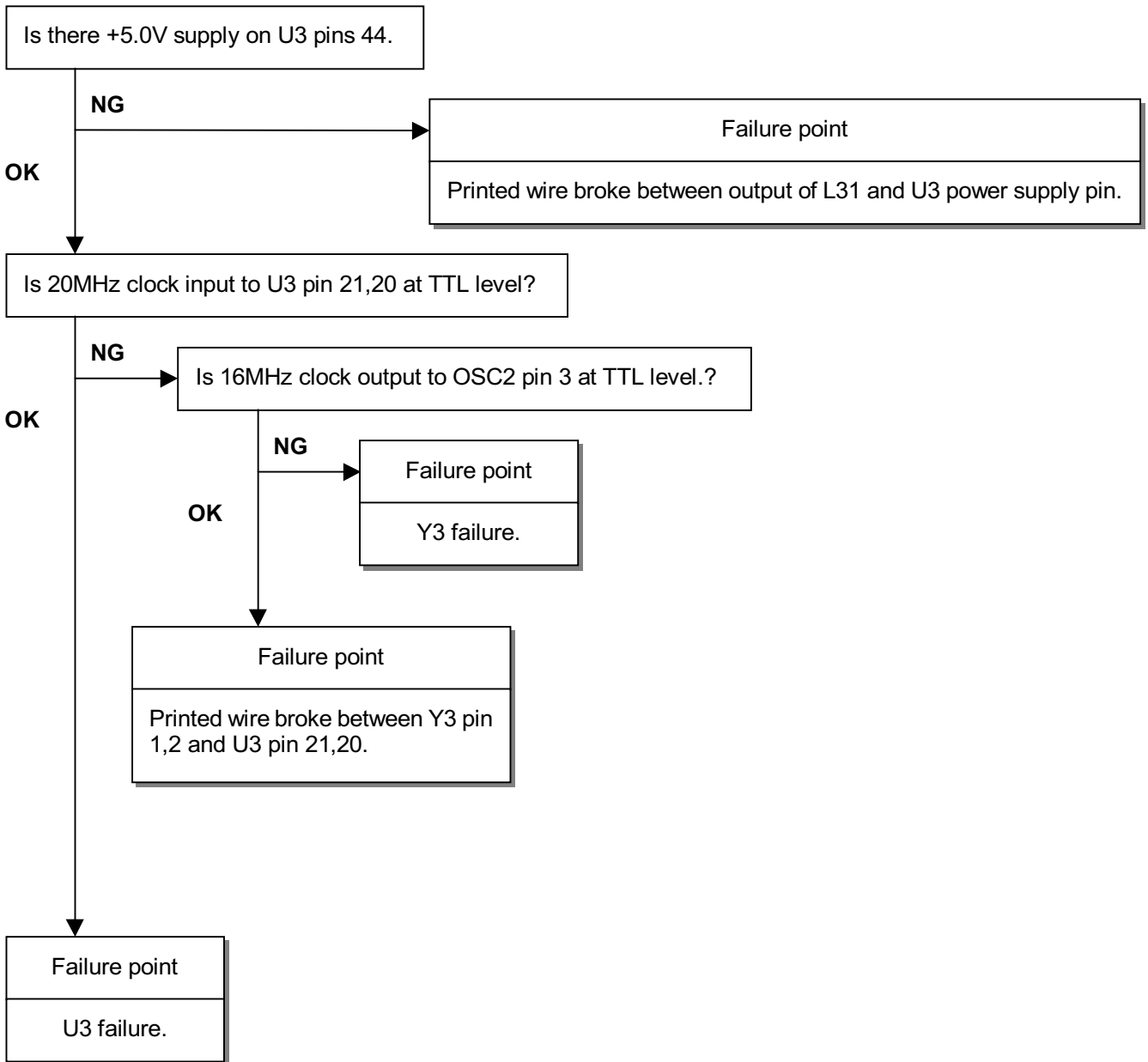


## 10. No power on





## 11. Checking the operation of CPU



# CIRCUIT DESCRIPTION

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## 1. Power Circuit

### 1.1 Power input block (Circuit diagram: Power board P2039)

AC input is 100-240V 50/60Hz.

A power supply for internal 12V and 5V are gained from the power connector through the voltage supervisory circuit.

### 1.2 Power control block

#### 1.2.1 Basic power control (Circuit diagram: Power board P2039)

P2039 is used to generate the system power. It has built-in PWM controllers to provide two voltage outputs, one is provided for microprocessor or other TTL level IC (+5V) etc., the other one is provided for the power of inverter (+12V). These two supply powers use the same oscillation frequency, the same start-up circuit, and the same protection circuit, so they can avoid interference with each other.

#### 1.2.2 3.3V power control (Circuit diagram: MAIN Board P.4/5)

The U7 is a DC converter for the 3.3V power system. It outputs fixed 3.3V.

This power is fed to GMZAN1, etc.

#### 1.2.3 LCD panel 3.3V power control (Circuit diagram: MAIN Board P.5/5)

Panel power control uses U10 and Q8 from GMZAN1 (pin\_76) Ppwr.

When the Ppwr stays at the high level, the Panel voltage is 3.3V.

When the Ppwr stays at the low level, the Panel voltage is 0V.

## 2. Microcomputer Control Circuit

U3 is a microcomputer to control U1 (gmZAN1) etc.

The source voltage is 5V from CN4 pin1.

### 2.1 Clock circuit (Circuit diagram: MAIN Board P.3/5)

The Y3 is a crystal of the microcomputer. It generates an output of 20MHz.

### 2.2 Microcomputer port circuit (Circuit diagram: MAIN Board P.3/5 and P.1/5)

The microcomputer (U3) is connected to the gmZAN1 (U1),

#### 2.2.1 I2C buses

U3 Port3.4 (PIN16) (I/O) SDDAT Serial data  
U3 Port3.5 (PIN17) (OUT) SDCLK Serial clock

This is an I2C serial communication bus and is used for Read or Write data communication of U2 and U5.

#### 2.2.2 gmZAN1 and uP communication buses

These data are communicated between U3 (microcomputer) and U1 (gmZAN1)

U3 Port1.0 (PIN2) HDATA0 : Data signal  
U3 Port1.1 (PIN3) HDATA1 : Data bus  
U3 Port1.2 (PIN4) HDATA2 : Data bus  
U3 Port1.3 (PIN5) HDATA3 : Data bus  
U3 Port1.4 (PIN6) HCLK : Clock signal  
U3 Port1.5 (PIN7) HFS : Host Frame Sync

## **2.3 PIO (General-purpose port) (Circuit diagram: MAIN Board P.3/5)**

### **2.3.1 Power switch status signal**

U3 port2.7 (PIN31) (IN) PW\_SW

This pin is connected to Keyboard connector (CN3) pin2(PW SW).

It is set at the high level when the power key switch is pressed.

### **2.3.2 D-sub cable status signal**

U3 port2.6 (PIN30) (IN) PCDETECT

This is an IN/OUT supervisory signal for the D-sub cable.

This pin is connected to CN1(D-sub) pin10.

It is set at the low level when the cable is connected.

### **2.3.3 LED control**

U3 port1.6 (PIN8) (OUT) uP\_LEDY

U3 port1.7 (PIN9) (OUT) uP\_LEDG

These signals are used for the LED lighting control.

When they are at the high level, these LEDs are lit.

### **2.3.4 Inverter Control**

U3 port2.0.(PIN24)(OUT) BRIGHT

This signal control Inverter brightness.

U3 portRXD(PIN13)(OUT)BLON

This is on/off control pin of Inverter.

5V OFF / 0V ON

### **2.3.5 Serial No. Information**

Serial No. is indicated in OSD menu.

U3 reads serial No. data from U2(24LC21 P.1/5).

## **3.Signal Input circuit**

### **3.1Analog Interface(Circuit diagram: MAIN Board P.1/5)**

CN1(D-sub connector):Analog signal input connector

Pin1(RED)/Pin2(GREEN)/Pin3(BLUE) :Video signal input

Pin9 : 5V from PC for DDC communication

Pin10 :PC detection pin

Pin12 : DDC data

Pin13 : Horizontal sync

Pin14 : Vertical sync

Pin15 : DDC clock

Video signal 0-0.7Vp-p 75Ohm

Sync signal separate sync TTL level Positive/ Negative

### 3.2 Signal Identification flow chart

Table 2-1. Signal Identification Flowchart1

| Preset No. | Hsync Frequency     | Vsync             | SYNC POL.    |       | Video Mode    | Description     | Note          |    |
|------------|---------------------|-------------------|--------------|-------|---------------|-----------------|---------------|----|
|            |                     |                   | HSYNC        | VSYNC |               |                 |               |    |
| MOD [3]    | 24.0kHz=<fH<30.8kHz |                   |              |       | 640X400(56)   | NEC PC98(24kHz) | *1            |    |
| MOD [6]    | 30.8kHz=<fH<33kHz   | fV<63Hz           |              |       | 640X480(60)   | IBM VGA         | -             |    |
| MOD [1]    |                     | 63Hz=<fV          | +            | -     | 720X350(70)   | IBM VGA         | -             |    |
| MOD [4]    |                     |                   | -            | +     | 720X400(70)   | IBM VGA         | -             |    |
| MOD [4]    |                     |                   | Other        | Other | 720X400(70)   | -               | -             |    |
| MOD [11]   |                     |                   | fV<58Hz      |       |               | 800X600(56)     | VESA STANDARD | -  |
| MOD [12]   | 33.0kHz=<fH<43.0kHz | 58Hz=<fV<63H      |              |       | 800X600(60)   | VESA STANDARD   | -             |    |
| MOD [7]    |                     | 63Hz=<fV<68H      |              |       | 640X480(66)   | VESA STANDARD   | -             |    |
| MOD [8]    |                     | 68Hz=<fV<74H      |              |       | 640X480(72)   | VESA STANDARD   | -             |    |
| MOD [9]    |                     | 74Hz=<fV          | -            | -     | 640X480(75)   | MAC             | -             |    |
| MOD [2]    |                     |                   | +            | -     | 720X350(85)   | -               | *1            |    |
| MOD [5]    |                     |                   | -            | +     | 720X400(85)   | VESA STANDARD   | *1            |    |
| MOD [5]    |                     |                   | Other        | Other | 720X400(85)   | -               | *1            |    |
|            |                     | 43kHz=<fH<47.2kHz | fV<50Hz      |       |               | -               | -             | *1 |
| MOD [13]   |                     |                   | 50Hz=<fV<80H |       |               | 800X600(75)     | VESA STANDARD | -  |
| MOD [10]   | 80Hz=<fV            |                   |              |       | 640X480(85)   | VESA STANDARD   | *1            |    |
| MOD [17]   | 47.2kHz=<fH<51kHz   | fV<63Hz           |              |       | 1024X768(60)  | VESA STANDARD   | -             |    |
| MOD [14]   |                     | 63Hz=<fV<73H      |              |       | 800X600(72)   | VESA STANDARD   | -             |    |
| MOD [16]   |                     | 73Hz=<fV<78H      |              |       | 832X624(75)   | MAC             | -             |    |
|            |                     | 78Hz=<fV          |              |       | -             | -               | *1            |    |
| MOD [18]   | 51kHz=<fH<55kHz     | fV<70Hz           |              |       | 1024X768(66)  | SUN             | -             |    |
| MOD [15]   |                     | 70Hz=<fV          |              |       | 800X600(85)   | VESA STANDARD   | -             |    |
| MOD [19]   | 55kHz=<fH<59kHz     |                   |              |       | 1024X768(70)  | VESA STANDARD   | -             |    |
| MOD [20]   | 59kHz=<fH<62kHz     |                   |              |       | 1024X768(75)  | VESA STANDARD   | -             |    |
| (MOD [21]) | 62kHz=<fH<75kHz     |                   |              |       | 1280X1024 etc | -               | *1            |    |
|            | 75kHz=<fH           |                   |              |       | -             | -               | *1            |    |

\*1: OUT OF RANGE

Table 2-2. Signal Identification Flowchart 2\*

| V. LINE | V. SYNC.    | Video Mode  | Description          |
|---------|-------------|-------------|----------------------|
| <400    |             |             | OUT of RANGE         |
| =<487   | FV<50Hz     |             | OUT of RANGE         |
|         | 50=<fV<63Hz | NEC PC98DOS | OUT of RANGE         |
|         | 63=<fV<78Hz | VGADOS      | MOD [1]720x350(70)   |
|         | 78<fV       |             | OUT of RANGE         |
| =<607   | FV<50Hz     | VGA         | OUT of RANGE         |
|         | 50=<fV<63Hz |             | MOD [6]640x480(60)   |
|         | 63=<fV<68Hz |             | MOD [7]640x480(66)   |
|         | 68=<fV<74Hz |             | MOD [8]640x480(72)   |
|         | 74=<fV<78Hz |             | MOD [9]640x480(75)   |
|         | 78=<fV      |             | OUT of RANGE         |
| =<768   | fV<50Hz     | SVGA        | OUT of RANGE         |
|         | 50=<fV<58Hz |             | MOD [11]800x600(56)  |
|         | 58=<fV<63Hz |             | MOD [12]800x600(60)  |
|         | 63=<fV<73Hz |             | MOD [14]800x600(72)  |
|         | 73=<fV<78Hz |             | MOD [13]800x600(75)  |
|         | 78=<fV      |             | OUT of RANGE         |
| =<870   | fV<50Hz     | XGA         | OUT of RANGE         |
|         | 50=<fV<63Hz |             | MOD [17]1024x768(60) |
|         | 63=<fV<68Hz |             | MOD [18]1024x768(66) |
|         | 68=<fV<73Hz |             | MOD [19]1024x768(70) |
|         | 73=<fV<78Hz |             | MOD [20]1024x768(75) |
|         | 78<fV       |             | OUT of RANGE         |
| >870    | -           | -           | OUT of RANGE         |

\*When monitor identifies the signal as mode[16] in Table.2-1, monitor should follow Table 2-3 as a substitute for Table2-2.

Table2-3. Signal Identification Flowchart 3

| V. LINE | V. SYNC. | Video Mode | Description         |
|---------|----------|------------|---------------------|
| =<640   | -        | SVGA       | MOD [13]800x600(75) |
| >640    | -        | MAC        | MOD [16]832x624(75) |

### 3.3 EEPROM for EDID(Circuit diagram: MAIN Board P.1/5)

EDID data is written in U2(24LC21A).

5V voltage is supplied from internal 5V and PC 5V(CN1 Pin9).

## 4.Input Image Enlargement Display Circuit

### 4.1 gmZAN1 (Circuit diagram: MAIN Board P.1/5)

gmZAN1(U1) has 135MHz ADC and scaling engine.

gmZAN1 (U1) is controlled through the external memory bus of the microcomputer (U3).

gmZAN1 is provided with the analog interface.

OSD is used gmZAN1 internal OSD font.(No external OSD chip)

### 4.2 Clock input of gmZAN1 (Circuit diagram: MAIN Board P.1/5)

Y1 is clock generator of U1(gmZAN1).

Supplied Voltage of Y1 is 3.3V and clock frequency is 50MHz.

### 4.3 Data output for LCD module (Circuit diagram: MAIN Board P.1/5 P.5/5)

PD0-PD17 is data (6bit)for LCD module

PD0-PD5 :Red data

PD6-PD11:Green data

PD12-PD17:Blue data

PVS(Pin73):Vsync for LCD module

PHS(Pin74):Hsync for LCD module

## 5. EEPROM Control Circuit

### 5.1 Data memory (Circuit diagram: MAIN Board P.3/5)

The display control data are held by the EEPROM (U5). These display control data are accessed through the IIC bus of the microcomputer.

## **6. Auto-adjuster circuit control**

### **6.1 Video level adjusting function**

Functions of VIDEO RAM are also used for the automatic contrast adjustment (video level adjustment).

For the microcomputer, a maximum value of the entered one screen or the level data in the specified area can be used.

This readout value is used for the black level setting and white level setting (contrast setting) for the VIDEO amplifier.

## **7. Inverter**

### **7.1 Inverter circuit (Circuit diagram Inverter)**

This Inverter is for LG LM151X2 LCD panel and High Voltage.

Power supply 12V(J1 Pin1and 2)

Inverter control (J1 Pin 4)

Inverter on/off control (J1 Pin3)

# REPLACEMENT PARTS LIST

The components specified for Model LCD1530V(A)

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

| *** ICS *** |          |                          |
|-------------|----------|--------------------------|
| U1          | 79PP0481 | S IC GMZAN1 PQFP-160 ZO) |
| U2          | 79PP0482 | SM IC EE 128X8 SO E DDC  |
| U3          | 79PP0330 | IC MX10FMAXDQC PLCC-4    |
| U4          | 79PP0484 | SM IC 74HC4066D SOP-14 A |
| U5          | 79PP0359 | IC EE 16K SO-8 C         |
| U6          | 79PP0186 | IC MAX810M SOT-23 RST    |
| U7          | 79PP0483 | SM IC AMC7585-3.35T TO-2 |

| *** TRANSISTORS *** |          |                          |
|---------------------|----------|--------------------------|
| Q1                  | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q10                 | 79PP0485 | SM TR SI2301DS 1P SOT-23 |
| Q11                 | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q2                  | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q3                  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q5                  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q7                  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q8                  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q9                  | 79PP0058 | TR DTC124EK (SOT-23)     |
| U10                 | 79PP0060 | TR SI9435 (SO-8)         |
| U8                  | 79PP0060 | TR SI9435 (SO-8)         |

| *** DIODES *** |          |                           |
|----------------|----------|---------------------------|
| D1             | 79PP0061 | DIODE EC10QS04            |
| D2             | 79PP0061 | DIODE EC10QS04            |
| D4             | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D5             | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D6             | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D7             | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| LED            | 79PP0331 | LED LYG2093 YEL/GRN 3D    |
| ZD1            | 79PP0376 | DIODE DALC208SC6 SOT23-6  |

| *** RELAYS & SWITCHES *** |          |                          |
|---------------------------|----------|--------------------------|
| S1                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S2                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S3                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S4                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S5                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S6                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S7                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S8                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

| *** PWB ASSYS *** |          |                           |
|-------------------|----------|---------------------------|
| INV               | 79PP0289 | INVERTER(NJ35G 15 T51103" |
| PCBC              | 79PP0288 | FIRMWARE CTRL/B(VL-523 LN |
| PCBK              | 79PP0287 | PCBA KEY/B(VK-523 LNJ35G) |

| *** COILS & FILTERS *** |          |                           |
|-------------------------|----------|---------------------------|
| L1                      | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L10                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L11                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L12                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L13                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L14                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L15                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L16                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L17                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L18                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L19                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L2                      | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L20                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L21                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L22                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L23                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L24                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L25                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L3                      | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L30                     | 79PP0447 | CHIP MURATA BLM21P300S    |
| L31                     | 79PP0447 | CHIP MURATA BLM21P300S    |
| L32                     | 79PP0447 | CHIP MURATA BLM21P300S    |
| L6                      | 79PP0447 | CHIP MURATA BLM21P300S    |
| L8                      | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L9                      | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R55                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R60                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R64                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R65                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |

| *** ELECTRICAL PARTS & MISCELLANEOUS PARTS *** |          |                           |
|--|----------|---------------------------|
| ACADP  | 79PP0299 | AC ADAPTER(ILAN P2039 5V/ |
| LCD  | 36804268 | LCD LM151X2               |
|  | 79PG1000 | BACK LIGHT UNIT           |
| SIG  | 79PP0476 | SIGNAL CABLE ASSY         |
| Y1   | 79PP0332 | OSCILLATOR 50MHZ HALF     |
| Y3   | 79PP0471 | CRYSTAL(20MHZ)            |
| POWC   | 79PP0296 | PWR CORD(SP305X2.0MXIS14) |

| *** APPEARANCE PARTS *** |          |                          |
|--------------------------|----------|--------------------------|
| BACKC                    | 79PP0292 | BACK COVER ASSY          |
| BASE                     | 79PP0459 | BASE ASSY(NJ353B PC+ABS) |

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

|       |          |                           |
|-------|----------|---------------------------|
| BEZEL | 79PP0291 | BEZEL ASSY                |
| CBLC  | 79PP0290 | CABLE COVER               |
| HRC   | 79PP0301 | HINGE REAR COVER          |
| HUC   | 79PP0300 | HINGE UP COVER            |
| STDF  | 79PP0458 | NECK ASSY(NJ353C PC+ABS)  |
| CHASS | 79PP0478 | CHASSIS ASSY(NJ353G CHASS |
| SPONG | 79PP0479 | SPONGE(FPC/NJ3544 C4305   |

| *** PRINTED & PACKING MATERIALS *** |          |                           |
|-------------------------------------|----------|---------------------------|
| CARTON                              | 79PP0293 | CARTON(C-NJ350-J67)       |
| CAUT                                | 79PP0469 | CAUTION LABEL(NJ350-L001) |
| CUSHL                               | 79PP0297 | CUSHION.L(NJ3513)         |
| CUSHR                               | 79PP0298 | CUSHION.R(NJ3513)         |
| MANU                                | 79PP0294 | USER'S MANUAL(U-NJ350-J67 |
| NP                                  | 79PP0304 | RATING NP(N-NJ350-J67 UOF |
| PBAG                                | 79PP0295 | PE BAG                    |
| POWC                                | 79PP0296 | PWR CORD(SP305X2.0MXIS14) |
| SUS                                 | 79PP0480 | SET UP SHEET(F-NJ350-J67  |

| *** RESISTORS *** |          |                         |
|-------------------|----------|-------------------------|
| L26               | 79PP0092 | R.CHIP 0H 1/16W +5%     |
| L27               | 79PP0092 | R.CHIP 0H 1/16W +5%     |
| L28               | 79PP0092 | R.CHIP 0H 1/16W +5%     |
| L4                | 79PP0092 | R.CHIP 0H 1/16W +5%     |
| L5                | 79PP0092 | R.CHIP 0H 1/16W +5%     |
| R1                | 79PP0094 | R.CHIP 100H 1/16W +-5%  |
| R10               | 79PP0092 | R.CHIP 0H 1/16W +5%     |
| R11               | 79PP0092 | R.CHIP 0H 1/16W +5%     |
| R14               | 79PP0488 | CHIP RES 1/16W 56 +-1%  |
| R15               | 79PP0394 | CHIP RES 1/16W 27K +-5% |
| R16               | 79PP0102 | R.CHIP 47K 1/16W +-5%   |
| R17               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R18               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R19               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R2                | 79PP0415 | CHIP RES 1/16W 75 +-1%  |
| R21               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R22               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R23               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R24               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R25               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R26               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R27               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R3                | 79PP0094 | R.CHIP 100H 1/16W +-5%  |
| R30               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R31               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R32               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R33               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |
| R34               | 79PP0096 | R.CHIP 10K 1/16W +-5%   |

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

|     |          |                          |
|-----|----------|--------------------------|
| R35 | 79PP0096 | R.CHIP 10K 1/16W +-5%    |
| R36 | 79PP0096 | R.CHIP 10K 1/16W +-5%    |
| R37 | 79PP0096 | R.CHIP 10K 1/16W +-5%    |
| R39 | 79PP0486 | CHIP RES 1/10W 150 +-5%  |
| R4  | 79PP0094 | R.CHIP 100H 1/16W +-5%   |
| R40 | 79PP0486 | CHIP RES 1/10W 150 +-5%  |
| R42 | 79PP0096 | R.CHIP 10K 1/16W +-5%    |
| R43 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R44 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R45 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R49 | 79PP0487 | CHIP RES 1/16W 20K +-5%  |
| R5  | 79PP0415 | CHIP RES 1/16W 75 +-1%   |
| R50 | 79PP0096 | R.CHIP 10K 1/16W +-5%    |
| R51 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R52 | 79PP0092 | R.CHIP 0H 1/16W +5%      |
| R53 | 79PP0096 | R.CHIP 10K 1/16W +-5%    |
| R54 | 79PP0096 | R.CHIP 10K 1/16W +-5%    |
| R56 | 79PP0101 | R.CHIP 22H 1/16W +-5%    |
| R59 | 79PP0101 | R.CHIP 22H 1/16W +-5%    |
| R6  | 79PP0094 | R.CHIP 100H 1/16W +-5%   |
| R61 | 79PP0095 | R.CHIP 1K 1/16W +5%      |
| R62 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R63 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R66 | 79PP0096 | R.CHIP 10K 1/16W +-5%    |
| R68 | 79PP0096 | R.CHIP 10K 1/16W +-5%    |
| R69 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R7  | 79PP0094 | R.CHIP 100H 1/16W +-5%   |
| R8  | 79PP0415 | CHIP RES 1/16W 75 +-1%   |
| R9  | 79PP0094 | R.CHIP 100H 1/16W +-5%   |
| RP1 | 79PP0105 | R.CHIP 22H 1/16W +-5%    |
| RP2 | 79PP0105 | R.CHIP 22H 1/16W +-5%    |
| RP3 | 79PP0105 | R.CHIP 22H 1/16W +-5%    |
| RP4 | 79PP0105 | R.CHIP 22H 1/16W +-5%    |
| RP5 | 79PP0105 | R.CHIP 22H 1/16W +-5%    |

| *** CAPACITORS *** |          |                           |
|--------------------|----------|---------------------------|
| C1                 | 79PP0203 | CHIP CER.CAP. 0.01U 50V + |
| C11                | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C13                | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C14                | 79PP0115 | C.CERAMIC 100P 50V +-5%   |
| C15                | 79PP0115 | C.CERAMIC 100P 50V +-5%   |
| C16                | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C18                | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C19                | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C2                 | 79PP0203 | CHIP CER.CAP. 0.01U 50V + |
| C20                | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C21                | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C22                | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |



| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| C23    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C24    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C25    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C26    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C27    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C28    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C29    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C3     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C30    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C31    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C32    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C33    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C34    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C35    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C36    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C37    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C38    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C39    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C4     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C40    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C41    | 79PP0472 | CAP 10U 16V M A P2.5T     |
| C42    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C43    | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C44    | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C45    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C46    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C47    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C48    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C49    | 79PP0477 | CAP 470U 10V M A P3.5     |
| C5     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C50    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C51    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C52    | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C55    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C56    | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C57    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C58    | 79PP0474 | CAP 1000U 16V M A P5 L    |
| C59    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C6     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C60    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C67    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C7     | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C8     | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C80    | 79PP0475 | CAP 220U 16V M A P3.5     |
| C81    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C84    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C85    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C86    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |

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| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| C9     | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C92    | 79PP0489 | CHIP CAP 15P 50V +-5% NPO |
| C94    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C95    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C96    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C97    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| CP1    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |
| CP2    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |
| CP3    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |

8-6

# REPLACEMENT PARTS LIST

The components specified for Model LCD1530V-BK(A)

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

| *** ICS *** |          |                          |
|-------------|----------|--------------------------|
| U1          | 79PP0481 | S IC GMZAN1 PQFP-160 ZO) |
| U2          | 79PP0482 | SM IC EE 128X8 SO E DDC  |
| U3          | 79PP0330 | IC MX10FMAXDQC PLCC-4    |
| U4          | 79PP0484 | SM IC 74HC4066D SOP-14 A |
| U5          | 79PP0359 | IC EE 16K SO-8 C         |
| U6          | 79PP0186 | IC MAX810M SOT-23 RST    |
| U7          | 79PP0483 | SM IC AMC7585-3.35T TO-2 |

| *** TRANSISTORS *** |          |                          |
|---------------------|----------|--------------------------|
| Q1                  | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q10                 | 79PP0485 | SM TR SI2301DS 1P SOT-23 |
| Q11                 | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q2                  | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q3                  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q5                  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q7                  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q8                  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q9                  | 79PP0058 | TR DTC124EK (SOT-23)     |
| U10                 | 79PP0060 | TR SI9435 (SO-8)         |
| U8                  | 79PP0060 | TR SI9435 (SO-8)         |

| *** DIODES *** |          |                           |
|----------------|----------|---------------------------|
| D1             | 79PP0061 | DIODE EC10QS04            |
| D2             | 79PP0061 | DIODE EC10QS04            |
| D4             | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D5             | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D6             | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D7             | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| LED            | 79PP0331 | LED LYG2093 YEL/GRN 3D    |
| ZD1            | 79PP0376 | DIODE DALC208SC6 SOT23-6  |

| *** RELAYS & SWITCHES *** |          |                          |
|---------------------------|----------|--------------------------|
| S1                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S2                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S3                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S4                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S5                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S6                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S7                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S8                        | 79PP0338 | TACT SWITCH NE35C SKHHAP |

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

| *** PWB ASSYS *** |          |                           |
|-------------------|----------|---------------------------|
| INV               | 79PP0289 | INVERTER(NJ35G 15 T51103" |
| PCBC              | 79PP0288 | FIRMWARE CTRL/B(VL-523 LN |
| PCBK              | 79PP0287 | PCBA KEY/B(VK-523 LNJ35G) |

| *** COILS & FILTERS *** |          |                           |
|-------------------------|----------|---------------------------|
| L1                      | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L10                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L11                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L12                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L13                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L14                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L15                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L16                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L17                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L18                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L19                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L2                      | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L20                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L21                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L22                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L23                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L24                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L25                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L3                      | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L30                     | 79PP0447 | CHIP MURATA BLM21P300S    |
| L31                     | 79PP0447 | CHIP MURATA BLM21P300S    |
| L32                     | 79PP0447 | CHIP MURATA BLM21P300S    |
| L6                      | 79PP0447 | CHIP MURATA BLM21P300S    |
| L8                      | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L9                      | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R55                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R60                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R64                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R65                     | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |

| *** ELECTRICAL PARTS & MISCELLANEOUS PARTS *** |          |                           |
|--|----------|---------------------------|
| ACADP  | 79PP0299 | AC ADAPTER(ILAN P2039 5V/ |
| LCD  | 36804268 | LCD LM151X2               |
|  | 79PG1000 | BACK LIGHT UNIT           |
| POWC   | 79PP0470 | PWR CORD(SP305X2.0MXIS14) |
| SIG  | 79PP0493 | CABLE ASSY                |
| Y1   | 79PP0332 | OSCILLATOR 50MHZ HALF     |
| Y3   | 79PP0471 | CRYSTAL(20MHZ)            |

| *** APPEARANCE PARTS *** |          |                           |
|--------------------------|----------|---------------------------|
| BACKC                    | 79PP0461 | BACK COVER ASSY(NJ353E PC |
| BASE                     | 79PP0466 | BASE ASSY(NJ353B PC+ABS)  |

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

|       |          |                           |
|-------|----------|---------------------------|
| BEZEL | 79PP0460 | BEZEL ASSY(NJ353D PC+ABS) |
| CBLC  | 79PP0462 | CABLE COVER(PC+ABS MCG03) |
| HRC   | 79PP0464 | HINGE REAR COVER(PC+ABS)  |
| HUC   | 79PP0463 | HINGE UP COVER(PC+ABS MCG |
| STDF  | 79PP0465 | NECK ASSY(NJ353C PC+ABS)  |
| CHASS | 79PP0478 | CHASSIS ASSY(NJ353G CHASS |
| SPONG | 79PP0479 | SPONGE(FPC/NJ3544 C4305   |

| *** PRINTED & PACKING MATERIALS *** |  |  |
|-------------------------------------|--|--|
|-------------------------------------|--|--|

|        |          |                           |
|--------|----------|---------------------------|
| CARTON | 79PP0467 | CARTON(C-NJ350-J67)       |
| CAUT   | 79PP0469 | CAUTION LABEL(NJ350-L001) |
| CUSHL  | 79PP0297 | CUSHION.L(NJ3513)         |
| CUSHR  | 79PP0298 | CUSHION.R(NJ3513)         |
| MANU   | 79PP0294 | USER'S MANUAL(U-NJ350-J67 |
| NP     | 79PP0468 | RATING NP(N-NJ350-J67 UOF |
| PBAG   | 79PP0295 | PE BAG                    |
| SUS    | 79PP0480 | SET UP SHEET(F-NJ350-J67  |

| *** RESISTORS *** |  |  |
|-------------------|--|--|
|-------------------|--|--|

|     |          |                         |
|-----|----------|-------------------------|
| L26 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L27 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L28 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L4  | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L5  | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R1  | 79PP0094 | R,CHIP 100H 1/16W +5%   |
| R10 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R11 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R14 | 79PP0488 | CHIP RES 1/16W 56 +-1%  |
| R15 | 79PP0394 | CHIP RES 1/16W 27K +-5% |
| R16 | 79PP0102 | R,CHIP 47K 1/16W +-5%   |
| R17 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R18 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R19 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R2  | 79PP0415 | CHIP RES 1/16W 75 +-1%  |
| R21 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R22 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R23 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R24 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R25 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R26 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R27 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R3  | 79PP0094 | R,CHIP 100H 1/16W +5%   |
| R30 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R31 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R32 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R33 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R34 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R35 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

|     |          |                          |
|-----|----------|--------------------------|
| R36 | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R37 | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R39 | 79PP0486 | CHIP RES 1/10W 150 +-5%  |
| R4  | 79PP0094 | R,CHIP 100H 1/16W +5%    |
| R40 | 79PP0486 | CHIP RES 1/10W 150 +-5%  |
| R42 | 79PP0096 | R,CHIP 10K 1/16W +5%     |
| R43 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R44 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R45 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R49 | 79PP0487 | CHIP RES 1/16W 20K +-5%  |
| R5  | 79PP0415 | CHIP RES 1/16W 75 +-1%   |
| R50 | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R51 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R52 | 79PP0092 | R,CHIP 0H 1/16W +5%      |
| R53 | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R54 | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R56 | 79PP0101 | R,CHIP 22H 1/16W +-5%    |
| R59 | 79PP0101 | R,CHIP 22H 1/16W +-5%    |
| R6  | 79PP0094 | R,CHIP 100H 1/16W +5%    |
| R61 | 79PP0095 | R,CHIP 1K 1/16W +5%      |
| R62 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R63 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R66 | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R68 | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R69 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R7  | 79PP0094 | R,CHIP 100H 1/16W +5%    |
| R8  | 79PP0415 | CHIP RES 1/16W 75 +-1%   |
| R9  | 79PP0094 | R,CHIP 100H 1/16W +5%    |
| RP1 | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP2 | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP3 | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP4 | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP5 | 79PP0105 | R,CHIP 22H 1/16W +-5%    |

| *** CAPACITORS *** |  |  |
|--------------------|--|--|
|--------------------|--|--|

|     |          |                           |
|-----|----------|---------------------------|
| C1  | 79PP0203 | CHIP CER.CAP. 0.01U 50V + |
| C11 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C13 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C14 | 79PP0115 | C.CERAMIC 100P 50V +-5%   |
| C15 | 79PP0115 | C.CERAMIC 100P 50V +-5%   |
| C16 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C18 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C19 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C2  | 79PP0203 | CHIP CER.CAP. 0.01U 50V + |
| C20 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C21 | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C22 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C23 | 79PP0427 | C.CERAMIC 1000P 50V J NPO |

| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| C24    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C25    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C26    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C27    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C28    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C29    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C3     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C30    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C31    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C32    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C33    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C34    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C35    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C36    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C37    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C38    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C39    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C4     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C40    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C41    | 79PP0472 | CAP 10U 16V M A P2.5T     |
| C42    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C43    | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C44    | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C45    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C46    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C47    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C48    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C49    | 79PP0477 | CAP 470U 10V M A P3.5     |
| C5     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C50    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C51    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C52    | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C55    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C56    | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C57    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C58    | 79PP0474 | CAP 1000U 16V M A P5 L    |
| C59    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C6     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C60    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C67    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C7     | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C8     | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C80    | 79PP0475 | CAP 220U 16V M A P3.5     |
| C81    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C84    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C85    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C86    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C9     | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |

| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| C92    | 79PP0489 | CHIP CAP 15P 50V +-5% NPO |
| C94    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C95    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C96    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C97    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| CP1    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |
| CP2    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |
| CP3    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |

# REPLACEMENT PARTS LIST

The components specified for Model LCD1530V(B)

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

\*\*\* ICS \*\*\*

|    |          |                          |
|----|----------|--------------------------|
| U1 | 79PP0481 | S IC GMZAN1 PQFP-160 ZO) |
| U2 | 79PP0482 | SM IC EE 128X8 SO E DDC  |
| U3 | 79PP0330 | IC MX10FMAXDQC PLCC-4    |
| U4 | 79PP0484 | SM IC 74HC4066D SOP-14 A |
| U5 | 79PP0359 | IC EE 16K SO-8 C         |
| U6 | 79PP0186 | IC MAX810M SOT-23 RST    |
| U7 | 79PP0483 | SM IC AMC7585-3.35T TO-2 |

\*\*\* TRANSISTORS \*\*\*

|     |          |                          |
|-----|----------|--------------------------|
| Q1  | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q10 | 79PP0485 | SM TR SI2301DS 1P SOT-23 |
| Q11 | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q2  | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q3  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q5  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q7  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q8  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q9  | 79PP0058 | TR DTC124EK (SOT-23)     |
| U10 | 79PP0060 | TR SI9435 (SO-8)         |
| U8  | 79PP0060 | TR SI9435 (SO-8)         |

\*\*\* DIODES \*\*\*

|     |          |                           |
|-----|----------|---------------------------|
| D1  | 79PP0061 | DIODE EC10QS04            |
| D2  | 79PP0061 | DIODE EC10QS04            |
| D4  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D5  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D6  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D7  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| LED | 79PP0331 | LED LYG2093 YEL/GRN 3D    |
| ZD1 | 79PP0376 | DIODE DALC208SC6 SOT23-6  |

\*\*\* RELAYS & SWITCHES \*\*\*

|    |          |                          |
|----|----------|--------------------------|
| S1 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S2 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S3 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S4 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S5 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S6 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S7 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S8 | 79PP0338 | TACT SWITCH NE35C SKHHAP |

8-13

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

\*\*\* PWB ASSYS \*\*\*

|      |          |                           |
|------|----------|---------------------------|
| INV  | 79PP0289 | INVERTER(NJ35G 15 T51103" |
| PCBC | 79PP0288 | FIRMWARE CTRL/B(VL-523 LN |
| PCBK | 79PP0287 | PCBA KEY/B(VK-523 LNJ35G) |

\*\*\* COILS & FILTERS \*\*\*

|     |          |                           |
|-----|----------|---------------------------|
| L1  | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L10 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L11 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L12 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L13 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L14 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L15 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L16 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L17 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L18 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L19 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L2  | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L20 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L21 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L22 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L23 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L24 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L25 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L3  | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L30 | 79PP0447 | CHIP MURATA BLM21P300S    |
| L31 | 79PP0447 | CHIP MURATA BLM21P300S    |
| L32 | 79PP0447 | CHIP MURATA BLM21P300S    |
| L6  | 79PP0447 | CHIP MURATA BLM21P300S    |
| L8  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L9  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R55 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R60 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R64 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R65 | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |

\*\*\* ELECTRICAL PARTS & MISCELLANEOUS PARTS \*\*\*

|       |          |                           |
|-------|----------|---------------------------|
| ACADP | 79PP0299 | AC ADAPTER(ILAN P2039 5V/ |
| POWC  | 79PP0305 | PWR CORD(SF022X2.0MXIS14  |
| LCD   | 36804268 | LCD LM151X2               |
|       | 79PG1000 | BACK LIGHT UNIT           |
| SIG   | 79PP0476 | SIGNAL CABLE ASSY         |
| Y1    | 79PP0332 | OSCILLATOR 50MHZ HALF     |
| Y3    | 79PP0471 | CRYSTAL(20MHZ)            |

\*\*\* APPEARANCE PARTS \*\*\*

|       |          |                          |
|-------|----------|--------------------------|
| BACKC | 79PP0292 | BACK COVER ASSY          |
| BASE  | 79PP0459 | BASE ASSY(NJ353B PC+ABS) |

8-14

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

|       |          |                           |
|-------|----------|---------------------------|
| BEZEL | 79PP0291 | BEZEL ASSY                |
| CBLC  | 79PP0290 | CABLE COVER               |
| HRC   | 79PP0301 | HINGE REAR COVER          |
| HUC   | 79PP0300 | HINGE UP COVER            |
| STDF  | 79PP0458 | NECK ASSY(NJ353C PC+ABS)  |
| CHASS | 79PP0478 | CHASSIS ASSY(NJ353G CHASS |
| SPONG | 79PP0479 | SPONGE(FPC/NJ3544 C4305   |

\*\*\* PRINTED & PACKING MATERIALS \*\*\*

|        |          |                           |
|--------|----------|---------------------------|
| CARTON | 79PP0302 | CARTON (C-NJ350-J67 F B)  |
| CAUT   | 79PP0469 | CAUTION LABEL(NJ350-L001) |
| CUSHL  | 79PP0297 | CUSHION.L(NJ3513)         |
| CUSHR  | 79PP0298 | CUSHION.R(NJ3513)         |
| MANU   | 79PP0303 | USER'S MANUAL(U-NJ350-J67 |
| NP     | 79PP0304 | RATING NP(N-NJ350-J67 UOF |
| PBAG   | 79PP0295 | PE BAG                    |
| SUS    | 79PP0480 | SET UP SHEET(F-NJ350-J67  |

\*\*\* RESISTORS \*\*\*

|     |          |                         |
|-----|----------|-------------------------|
| L26 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L27 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L28 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L4  | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L5  | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R1  | 79PP0094 | R,CHIP 100H 1/16W +5%   |
| R10 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R11 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R14 | 79PP0488 | CHIP RES 1/16W 56 +-1%  |
| R15 | 79PP0394 | CHIP RES 1/16W 27K +-5% |
| R16 | 79PP0102 | R,CHIP 47K 1/16W +-5%   |
| R17 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R18 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R19 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R2  | 79PP0415 | CHIP RES 1/16W 75 +-1%  |
| R21 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R22 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R23 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R24 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R25 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R26 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R27 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R3  | 79PP0094 | R,CHIP 100H 1/16W +5%   |
| R30 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R31 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R32 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R33 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R34 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R35 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |

8-15

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

|     |          |                          |
|-----|----------|--------------------------|
| R36 | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R37 | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R39 | 79PP0486 | CHIP RES 1/10W 150 +-5%  |
| R4  | 79PP0094 | R,CHIP 100H 1/16W +5%    |
| R40 | 79PP0486 | CHIP RES 1/10W 150 +-5%  |
| R42 | 79PP0096 | R,CHIP 10K 1/16W +5%     |
| R43 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R44 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R45 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R49 | 79PP0487 | CHIP RES 1/16W 20K +-5%  |
| R5  | 79PP0415 | CHIP RES 1/16W 75 +-1%   |
| R50 | 79PP0096 | R,CHIP 10K 1/16W +5%     |
| R51 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R52 | 79PP0092 | R,CHIP 0H 1/16W +5%      |
| R53 | 79PP0096 | R,CHIP 10K 1/16W +5%     |
| R54 | 79PP0096 | R,CHIP 10K 1/16W +5%     |
| R56 | 79PP0101 | R,CHIP 22H 1/16W +-5%    |
| R59 | 79PP0101 | R,CHIP 22H 1/16W +-5%    |
| R6  | 79PP0094 | R,CHIP 100H 1/16W +5%    |
| R61 | 79PP0095 | R,CHIP 1K 1/16W +5%      |
| R62 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R63 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R66 | 79PP0096 | R,CHIP 10K 1/16W +5%     |
| R68 | 79PP0096 | R,CHIP 10K 1/16W +5%     |
| R69 | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R7  | 79PP0094 | R,CHIP 100H 1/16W +5%    |
| R8  | 79PP0415 | CHIP RES 1/16W 75 +-1%   |
| R9  | 79PP0094 | R,CHIP 100H 1/16W +5%    |
| RP1 | 79PP0105 | R,CHIP 22H 1/16W +5%     |
| RP2 | 79PP0105 | R,CHIP 22H 1/16W +5%     |
| RP3 | 79PP0105 | R,CHIP 22H 1/16W +5%     |
| RP4 | 79PP0105 | R,CHIP 22H 1/16W +5%     |
| RP5 | 79PP0105 | R,CHIP 22H 1/16W +5%     |

\*\*\* CAPACITORS \*\*\*

|     |          |                           |
|-----|----------|---------------------------|
| C1  | 79PP0203 | CHIP CER.CAP. 0.01U 50V + |
| C11 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C13 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C14 | 79PP0115 | C.CERAMIC 100P 50V +-5%   |
| C15 | 79PP0115 | C.CERAMIC 100P 50V +-5%   |
| C16 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C18 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C19 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C2  | 79PP0203 | CHIP CER.CAP. 0.01U 50V + |
| C20 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C21 | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C22 | 79PP0119 | C.CERAMIC 0.1U 16V -20+80 |
| C23 | 79PP0427 | C.CERAMIC 1000P 50V J NPO |

8-16

| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| C24    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C25    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C26    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C27    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C28    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C29    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C3     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C30    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C31    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C32    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C33    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C34    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C35    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C36    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C37    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C38    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C39    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C4     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C40    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C41    | 79PP0472 | CAP 10U 16V M A P2.5T     |
| C42    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C43    | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C44    | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C45    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C46    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C47    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C48    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C49    | 79PP0477 | CAP 470U 10V M A P3.5     |
| C5     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C50    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C51    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C52    | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C55    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C56    | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C57    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C58    | 79PP0474 | CAP 1000U 16V M A P5 L    |
| C59    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C6     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C60    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C67    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C7     | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C8     | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C80    | 79PP0475 | CAP 220U 16V M A P3.5     |
| C81    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C84    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C85    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C86    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C9     | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |

8-17

| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| C92    | 79PP0489 | CHIP CAP 15P 50V +-5% NPO |
| C94    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C95    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C96    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C97    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| CP1    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |
| CP2    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |
| CP3    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |

8-18

# REPLACEMENT PARTS LIST

The components specified for Model LCD1530V(A)

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

\*\*\* ICS \*\*\*

|    |          |                          |
|----|----------|--------------------------|
| U1 | 79PP0481 | S IC GMZAN1 PQFP-160 ZO) |
| U2 | 79PP0482 | SM IC EE 128X8 SO E DDC  |
| U3 | 79PP0330 | IC MX10FMAXDQC PLCC-4    |
| U4 | 79PP0484 | SM IC 74HC4066D SOP-14 A |
| U5 | 79PP0359 | IC EE 16K SO-8 C         |
| U6 | 79PP0186 | IC MAX810M SOT-23 RST    |
| U7 | 79PP0483 | SM IC AMC7585-3.35T TO-2 |

\*\*\* TRANSISTORS \*\*\*

|     |          |                          |
|-----|----------|--------------------------|
| Q1  | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q10 | 79PP0485 | SM TR SI2301DS 1P SOT-23 |
| Q11 | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q2  | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q3  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q5  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q7  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q8  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q9  | 79PP0058 | TR DTC124EK (SOT-23)     |
| U10 | 79PP0060 | TR SI9435 (SO-8)         |
| U8  | 79PP0060 | TR SI9435 (SO-8)         |

\*\*\* DIODES \*\*\*

|     |          |                           |
|-----|----------|---------------------------|
| D1  | 79PP0061 | DIODE EC10QS04            |
| D2  | 79PP0061 | DIODE EC10QS04            |
| D4  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D5  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D6  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D7  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| LED | 79PP0331 | LED LYG2093 YEL/GRN 3D    |
| ZD1 | 79PP0376 | DIODE DALC208SC6 SOT23-6  |

\*\*\* RELAYS & SWITCHES \*\*\*

|    |          |                          |
|----|----------|--------------------------|
| S1 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S2 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S3 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S4 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S5 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S6 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S7 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S8 | 79PP0338 | TACT SWITCH NE35C SKHHAP |

| SYMBOL   | PART NO  | DESCRIPTION               |
|--|----------|---------------------------|
| *** PWB ASSYS ***                              |          |                           |
| INV  | 79PP0289 | INVERTER(NJ35G 15 T51I03" |
| PCBC   | 79PP0288 | FIRMWARE CTRL/B(VL-523 LN |
| PCBK   | 79PP0287 | PCBA KEY/B(VK-523 LNJ35G) |
| *** COILS & FILTERS ***                        |          |                           |
| L1   | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L10  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L11  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L12  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L13  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L14  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L15  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L16  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L17  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L18  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L19  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L2   | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L20  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L21  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L22  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L23  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L24  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L25  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L3   | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L30  | 79PP0447 | CHIP MURATA BLM21P300S    |
| L31  | 79PP0447 | CHIP MURATA BLM21P300S    |
| L32  | 79PP0447 | CHIP MURATA BLM21P300S    |
| L6   | 79PP0447 | CHIP MURATA BLM21P300S    |
| L8   | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L9   | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R55  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R60  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R64  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R65  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| *** ELECTRICAL PARTS & MISCELLANEOUS PARTS *** |          |                           |
| ACADP  | 79PP0299 | AC ADAPTER(ILAN P2039 5V/ |
| LCD  | 36804268 | LCD LM151X2               |
|  | 79PG1000 | BACK LIGHT UNIT           |
| SIG  | 79PP0476 | SIGNAL CABLE ASSY         |
| Y1   | 79PP0332 | OSCILLATOR 50MHZ HALF     |
| Y3   | 79PP0471 | CRYSTAL(20MHZ)            |
| POWC   | 79PP0296 | PWR CORD(SP305X2.0MXIS14) |
| *** APPEARANCE PARTS ***                       |          |                           |
| BACKC  | 79PP0292 | BACK COVER ASSY           |
| BASE   | 79PP0459 | BASE ASSY(NJ353B PC+ABS)  |

| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| BEZEL  | 79PP0291 | BEZEL ASSY                |
| CBLC   | 79PP0290 | CABLE COVER               |
| HRC    | 79PP0301 | HINGE REAR COVER          |
| HUC    | 79PP0300 | HINGE UP COVER            |
| STDF   | 79PP0458 | NECK ASSY(NJ353C PC+ABS)  |
| CHASS  | 79PP0478 | CHASSIS ASSY(NJ353G CHASS |
| SPONG  | 79PP0479 | SPONGE(FPC)(NJ3544 C4305  |

\*\*\* PRINTED & PACKING MATERIALS \*\*\*

|        |          |                           |
|--------|----------|---------------------------|
| CARTON | 79PP0293 | CARTON(C-NJ350-J67)       |
| CAUT   | 79PP0469 | CAUTION LABEL(NJ350-L001) |
| CUSHL  | 79PP0297 | CUSHION.L(NJ3513)         |
| CUSHR  | 79PP0298 | CUSHION.R(NJ3513)         |
| MANU   | 79PP0294 | USER'S MANUAL(U-NJ350-J67 |
| NP     | 79PP0304 | RATING NP(N-NJ350-J67 U0F |
| PBAG   | 79PP0295 | PE BAG                    |
| POWC   | 79PP0296 | PWR CORD(SP305X2.0MXIS14) |
| SUS    | 79PP0480 | SET UP SHEET(F-NJ350-J67  |

\*\*\* RESISTORS \*\*\*

|     |          |                         |
|-----|----------|-------------------------|
| L26 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L27 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L28 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L4  | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L5  | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R1  | 79PP0094 | R,CHIP 100H 1/16W +-5%  |
| R10 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R11 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R14 | 79PP0488 | CHIP RES 1/16W 56 +-1%  |
| R15 | 79PP0394 | CHIP RES 1/16W 27K +-5% |
| R16 | 79PP0102 | R,CHIP 47K 1/16W +-5%   |
| R17 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R18 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R19 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R2  | 79PP0415 | CHIP RES 1/16W 75 +-1%  |
| R21 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R22 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R23 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R24 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R25 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R26 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R27 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R3  | 79PP0094 | R,CHIP 100H 1/16W +-5%  |
| R30 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R31 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R32 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R33 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R34 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |



| SYMBOL | PART NO  | DESCRIPTION              |
|--------|----------|--------------------------|
| R35    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R36    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R37    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R39    | 79PP0486 | CHIP RES 1/10W 150 +-5%  |
| R4     | 79PP0094 | R,CHIP 100H 1/16W +-5%   |
| R40    | 79PP0486 | CHIP RES 1/10W 150 +-5%  |
| R42    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R43    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R44    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R45    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R49    | 79PP0487 | CHIP RES 1/16W 20K +-5%  |
| R5     | 79PP0415 | CHIP RES 1/16W 75 +-1%   |
| R50    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R51    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R52    | 79PP0092 | R,CHIP 0H 1/16W +5%      |
| R53    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R54    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R56    | 79PP0101 | R,CHIP 22H 1/16W +-5%    |
| R59    | 79PP0101 | R,CHIP 22H 1/16W +-5%    |
| R6     | 79PP0094 | R,CHIP 100H 1/16W +-5%   |
| R61    | 79PP0095 | R,CHIP 1K 1/16W +-5%     |
| R62    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R63    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R66    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R68    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R69    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R7     | 79PP0094 | R,CHIP 100H 1/16W +-5%   |
| R8     | 79PP0415 | CHIP RES 1/16W 75 +-1%   |
| R9     | 79PP0094 | R,CHIP 100H 1/16W +-5%   |
| RP1    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP2    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP3    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP4    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP5    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |

\*\*\* CAPACITORS \*\*\*

|     |          |                           |
|-----|----------|---------------------------|
| C1  | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C11 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C13 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C14 | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C15 | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C16 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C18 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C19 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C2  | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C20 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C21 | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C22 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |

| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| C23    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C24    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C25    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C26    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C27    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C28    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C29    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C3     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C30    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C31    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C32    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C33    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C34    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C35    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C36    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C37    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C38    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C39    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C4     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C40    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C41    | 79PP0472 | CAP 10U 16V M A P2.5T     |
| C42    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C43    | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C44    | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C45    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C46    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C47    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C48    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C49    | 79PP0477 | CAP 470U 10V M A P3.5     |
| C5     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C50    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C51    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C52    | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C55    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C56    | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C57    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C58    | 79PP0474 | CAP 1000U 16V M A P5 L    |
| C59    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C6     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C60    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C67    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C7     | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C8     | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C80    | 79PP0475 | CAP 220U 16V M A P3.5     |
| C81    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C84    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C85    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C86    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |

| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| C9     | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C92    | 79PP0489 | CHIP CAP 15P 50V +-5% NPO |
| C94    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C95    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C96    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C97    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| CP1    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |
| CP2    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |
| CP3    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |

# REPLACEMENT PARTS LIST

The components specified for Model LCD1530V-BK(A)

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

\*\*\* ICS \*\*\*

|    |          |                          |
|----|----------|--------------------------|
| U1 | 79PP0481 | S IC GMZAN1 PQFP-160 ZO) |
| U2 | 79PP0482 | SM IC EE 128X8 SO E DDC  |
| U3 | 79PP0330 | IC MX10FMAXDQC PLCC-4    |
| U4 | 79PP0484 | SM IC 74HC4066D SOP-14 A |
| U5 | 79PP0359 | IC EE 16K SO-8 C         |
| U6 | 79PP0186 | IC MAX810M SOT-23 RST    |
| U7 | 79PP0483 | SM IC AMC7585-3.35T TO-2 |

\*\*\* TRANSISTORS \*\*\*

|     |          |                          |
|-----|----------|--------------------------|
| Q1  | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q10 | 79PP0485 | SM TR SI2301DS 1P SOT-23 |
| Q11 | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q2  | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q3  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q5  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q7  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q8  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q9  | 79PP0058 | TR DTC124EK (SOT-23)     |
| U10 | 79PP0060 | TR SI9435 (SO-8)         |
| U8  | 79PP0060 | TR SI9435 (SO-8)         |

\*\*\* DIODES \*\*\*

|     |          |                           |
|-----|----------|---------------------------|
| D1  | 79PP0061 | DIODE EC10QS04            |
| D2  | 79PP0061 | DIODE EC10QS04            |
| D4  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D5  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D6  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D7  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| LED | 79PP0331 | LED LYG2093 YEL/GRN 3D    |
| ZD1 | 79PP0376 | DIODE DALC208SC6 SOT23-6  |

\*\*\* RELAYS & SWITCHES \*\*\*

|    |          |                          |
|----|----------|--------------------------|
| S1 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S2 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S3 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S4 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S5 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S6 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S7 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S8 | 79PP0338 | TACT SWITCH NE35C SKHHAP |

| SYMBOL   | PART NO  | DESCRIPTION               |
|--|----------|---------------------------|
| *** PWB ASSYS ***                              |          |                           |
| INV  | 79PP0289 | INVERTER(NJ35G 15 T51I03" |
| PCBC   | 79PP0288 | FIRMWARE CTRL/B(VL-523 LN |
| PCBK   | 79PP0287 | PCBA KEY/B(VK-523 LNJ35G) |
| *** COILS & FILTERS ***                        |          |                           |
| L1   | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L10  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L11  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L12  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L13  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L14  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L15  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L16  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L17  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L18  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L19  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L2   | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L20  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L21  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L22  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L23  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L24  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L25  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L3   | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L30  | 79PP0447 | CHIP MURATA BLM21P300S    |
| L31  | 79PP0447 | CHIP MURATA BLM21P300S    |
| L32  | 79PP0447 | CHIP MURATA BLM21P300S    |
| L6   | 79PP0447 | CHIP MURATA BLM21P300S    |
| L8   | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L9   | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R55  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R60  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R64  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R65  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| *** ELECTRICAL PARTS & MISCELLANEOUS PARTS *** |          |                           |
| ACADP  | 79PP0299 | AC ADAPTER(ILAN P2039 5V/ |
| LCD  | 36804268 | LCD LM151X2               |
|  | 79PG1000 | BACK LIGHT UNIT           |
| POWC   | 79PP0470 | PWR CORD(SP305X2.0MXIS14) |
| SIG  | 79PP0493 | CABLE ASSY                |
| Y1   | 79PP0332 | OSCILLATOR 50MHZ HALF     |
| Y3   | 79PP0471 | CRYSTAL(20MHZ)            |
| *** APPEARANCE PARTS ***                       |          |                           |
| BACKC  | 79PP0461 | BACK COVER ASSY(NJ353E PC |
| BASE   | 79PP0466 | BASE ASSY(NJ353B PC+ABS)  |

| SYMBOL | PART NO  | DESCRIPTION                |
|--------|----------|----------------------------|
| BEZEL  | 79PP0460 | BEZEL ASSY(NJ353D PC+ABS)  |
| CBLC   | 79PP0462 | CABLE COVER(PC+ABS MCG03)  |
| HRC    | 79PP0464 | HINGE REAR COVER(PC+ABS)   |
| HUC    | 79PP0463 | HINGE UP COVER(PC+ABS MCG) |
| STDF   | 79PP0465 | NECK ASSY(NJ353C PC+ABS)   |
| CHASS  | 79PP0478 | CHASSIS ASSY(NJ353G CHASS) |
| SPONG  | 79PP0479 | SPONGE(FPC)(NJ3544 C4305)  |

\*\*\* PRINTED & PACKING MATERIALS \*\*\*

|        |          |                            |
|--------|----------|----------------------------|
| CARTON | 79PP0467 | CARTON(C-NJ350-J67)        |
| CAUT   | 79PP0469 | CAUTION LABEL(NJ350-L001)  |
| CUSHL  | 79PP0297 | CUSHION.L(NJ3513)          |
| CUSHR  | 79PP0298 | CUSHION.R(NJ3513)          |
| MANU   | 79PP0294 | USER'S MANUAL(U-NJ350-J67) |
| NP     | 79PP0468 | RATING NP(N-NJ350-J67 U0F) |
| PBAG   | 79PP0295 | PE BAG                     |
| SUS    | 79PP0480 | SET UP SHEET(F-NJ350-J67)  |

\*\*\* RESISTORS \*\*\*

|     |          |                         |
|-----|----------|-------------------------|
| L26 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L27 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L28 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L4  | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L5  | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R1  | 79PP0094 | R,CHIP 100H 1/16W +-5%  |
| R10 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R11 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R14 | 79PP0488 | CHIP RES 1/16W 56 +-1%  |
| R15 | 79PP0394 | CHIP RES 1/16W 27K +-5% |
| R16 | 79PP0102 | R,CHIP 47K 1/16W +-5%   |
| R17 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R18 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R19 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R2  | 79PP0415 | CHIP RES 1/16W 75 +-1%  |
| R21 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R22 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R23 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R24 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R25 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R26 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R27 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R3  | 79PP0094 | R,CHIP 100H 1/16W +-5%  |
| R30 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R31 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R32 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R33 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R34 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R35 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |

| SYMBOL | PART NO  | DESCRIPTION              |
|--------|----------|--------------------------|
| R36    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R37    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R39    | 79PP0486 | CHIP RES 1/10W 150 +-5%  |
| R4     | 79PP0094 | R,CHIP 100H 1/16W +-5%   |
| R40    | 79PP0486 | CHIP RES 1/10W 150 +-5%  |
| R42    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R43    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R44    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R45    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R49    | 79PP0487 | CHIP RES 1/16W 20K +-5%  |
| R5     | 79PP0415 | CHIP RES 1/16W 75 +-1%   |
| R50    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R51    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R52    | 79PP0092 | R,CHIP 0H 1/16W +5%      |
| R53    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R54    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R56    | 79PP0101 | R,CHIP 22H 1/16W +-5%    |
| R59    | 79PP0101 | R,CHIP 22H 1/16W +-5%    |
| R6     | 79PP0094 | R,CHIP 100H 1/16W +-5%   |
| R61    | 79PP0095 | R,CHIP 1K 1/16W +-5%     |
| R62    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R63    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R66    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R68    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R69    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R7     | 79PP0094 | R,CHIP 100H 1/16W +-5%   |
| R8     | 79PP0415 | CHIP RES 1/16W 75 +-1%   |
| R9     | 79PP0094 | R,CHIP 100H 1/16W +-5%   |
| RP1    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP2    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP3    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP4    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP5    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |

\*\*\* CAPACITORS \*\*\*

|     |          |                           |
|-----|----------|---------------------------|
| C1  | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C11 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C13 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C14 | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C15 | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C16 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C18 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C19 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C2  | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C20 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C21 | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C22 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C23 | 79PP0427 | C,CERAMIC 1000P 50V J NPO |

| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| C24    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C25    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C26    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C27    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C28    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C29    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C3     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C30    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C31    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C32    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C33    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C34    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C35    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C36    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C37    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C38    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C39    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C4     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C40    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C41    | 79PP0472 | CAP 10U 16V M A P2.5T     |
| C42    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C43    | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C44    | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C45    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C46    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C47    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C48    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C49    | 79PP0477 | CAP 470U 10V M A P3.5     |
| C5     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C50    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C51    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C52    | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C55    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C56    | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C57    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C58    | 79PP0474 | CAP 1000U 16V M A P5 L    |
| C59    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C6     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C60    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C67    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C7     | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C8     | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C80    | 79PP0475 | CAP 220U 16V M A P3.5     |
| C81    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C84    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C85    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C86    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C9     | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |



| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| C92    | 79PP0489 | CHIP CAP 15P 50V +-5% NPO |
| C94    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C95    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C96    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C97    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| CP1    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |
| CP2    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |
| CP3    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |

# REPLACEMENT PARTS LIST

The components specified for Model LCD1530V(B)

| SYMBOL | PART NO | DESCRIPTION |
|--------|---------|-------------|
|--------|---------|-------------|

\*\*\* ICS \*\*\*

|    |          |                          |
|----|----------|--------------------------|
| U1 | 79PP0481 | S IC GMZAN1 PQFP-160 ZO) |
| U2 | 79PP0482 | SM IC EE 128X8 SO E DDC  |
| U3 | 79PP0330 | IC MX10FMAXDQC PLCC-4    |
| U4 | 79PP0484 | SM IC 74HC4066D SOP-14 A |
| U5 | 79PP0359 | IC EE 16K SO-8 C         |
| U6 | 79PP0186 | IC MAX810M SOT-23 RST    |
| U7 | 79PP0483 | SM IC AMC7585-3.35T TO-2 |

\*\*\* TRANSISTORS \*\*\*

|     |          |                          |
|-----|----------|--------------------------|
| Q1  | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q10 | 79PP0485 | SM TR SI2301DS 1P SOT-23 |
| Q11 | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q2  | 79PP0055 | TR 2SA1036K (SOT-23)     |
| Q3  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q5  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q7  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q8  | 79PP0058 | TR DTC124EK (SOT-23)     |
| Q9  | 79PP0058 | TR DTC124EK (SOT-23)     |
| U10 | 79PP0060 | TR SI9435 (SO-8)         |
| U8  | 79PP0060 | TR SI9435 (SO-8)         |

\*\*\* DIODES \*\*\*

|     |          |                           |
|-----|----------|---------------------------|
| D1  | 79PP0061 | DIODE EC10QS04            |
| D2  | 79PP0061 | DIODE EC10QS04            |
| D4  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D5  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D6  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| D7  | 79PP0380 | ZENER DIODE RLZ5.6B(LL-34 |
| LED | 79PP0331 | LED LYG2093 YEL/GRN 3D    |
| ZD1 | 79PP0376 | DIODE DALC208SC6 SOT23-6  |

\*\*\* RELAYS & SWITCHES \*\*\*

|    |          |                          |
|----|----------|--------------------------|
| S1 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S2 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S3 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S4 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S5 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S6 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S7 | 79PP0338 | TACT SWITCH NE35C SKHHAP |
| S8 | 79PP0338 | TACT SWITCH NE35C SKHHAP |

| SYMBOL   | PART NO  | DESCRIPTION               |
|--|----------|---------------------------|
| *** PWB ASSYS ***                              |          |                           |
| INV  | 79PP0289 | INVERTER(NJ35G 15 T51I03" |
| PCBC   | 79PP0288 | FIRMWARE CTRL/B(VL-523 LN |
| PCBK   | 79PP0287 | PCBA KEY/B(VK-523 LNJ35G) |
| *** COILS & FILTERS ***                        |          |                           |
| L1   | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L10  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L11  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L12  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L13  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L14  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L15  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L16  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L17  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L18  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L19  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L2   | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L20  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L21  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L22  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L23  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L24  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L25  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L3   | 79PP0491 | SSUPPRE KC FBM-L11-160808 |
| L30  | 79PP0447 | CHIP MURATA BLM21P300S    |
| L31  | 79PP0447 | CHIP MURATA BLM21P300S    |
| L32  | 79PP0447 | CHIP MURATA BLM21P300S    |
| L6   | 79PP0447 | CHIP MURATA BLM21P300S    |
| L8   | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| L9   | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R55  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R60  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R64  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| R65  | 79PP0492 | SSUPPRE TOKIN N1608Z301T0 |
| *** ELECTRICAL PARTS & MISCELLANEOUS PARTS *** |          |                           |
| ACADP  | 79PP0299 | AC ADAPTER(ILAN P2039 5V/ |
| POWC   | 79PP0305 | PWR CORD(SP022X2.0MXIS14  |
| LCD  | 36804268 | LCD LM151X2               |
|  | 79PG1000 | BACK LIGHT UNIT           |
| SIG  | 79PP0476 | SIGNAL CABLE ASSY         |
| Y1   | 79PP0332 | OSCILLATOR 50MHZ HALF     |
| Y3   | 79PP0471 | CRYSTAL(20MHZ)            |
| *** APPEARANCE PARTS ***                       |          |                           |
| BACKC  | 79PP0292 | BACK COVER ASSY           |
| BASE   | 79PP0459 | BASE ASSY(NJ353B PC+ABS)  |

| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| BEZEL  | 79PP0291 | BEZEL ASSY                |
| CBLC   | 79PP0290 | CABLE COVER               |
| HRC    | 79PP0301 | HINGE REAR COVER          |
| HUC    | 79PP0300 | HINGE UP COVER            |
| STDF   | 79PP0458 | NECK ASSY(NJ353C PC+ABS)  |
| CHASS  | 79PP0478 | CHASSIS ASSY(NJ353G CHASS |
| SPONG  | 79PP0479 | SPONGE(FPC)(NJ3544 C4305  |

\*\*\* PRINTED & PACKING MATERIALS \*\*\*

|        |          |                           |
|--------|----------|---------------------------|
| CARTON | 79PP0302 | CARTON (C-NJ350-J67 F B)  |
| CAUT   | 79PP0469 | CAUTION LABEL(NJ350-L001) |
| CUSHL  | 79PP0297 | CUSHION.L(NJ3513)         |
| CUSHR  | 79PP0298 | CUSHION.R(NJ3513)         |
| MANU   | 79PP0303 | USER'S MANUAL(U-NJ350-J67 |
| NP     | 79PP0304 | RATING NP(N-NJ350-J67 U0F |
| PBAG   | 79PP0295 | PE BAG                    |
| SUS    | 79PP0480 | SET UP SHEET(F-NJ350-J67  |

\*\*\* RESISTORS \*\*\*

|     |          |                         |
|-----|----------|-------------------------|
| L26 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L27 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L28 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L4  | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| L5  | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R1  | 79PP0094 | R,CHIP 100H 1/16W +-5%  |
| R10 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R11 | 79PP0092 | R,CHIP 0H 1/16W +5%     |
| R14 | 79PP0488 | CHIP RES 1/16W 56 +-1%  |
| R15 | 79PP0394 | CHIP RES 1/16W 27K +-5% |
| R16 | 79PP0102 | R,CHIP 47K 1/16W +-5%   |
| R17 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R18 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R19 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R2  | 79PP0415 | CHIP RES 1/16W 75 +-1%  |
| R21 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R22 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R23 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R24 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R25 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R26 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R27 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R3  | 79PP0094 | R,CHIP 100H 1/16W +-5%  |
| R30 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R31 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R32 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R33 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R34 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |
| R35 | 79PP0096 | R,CHIP 10K 1/16W +-5%   |

| SYMBOL | PART NO  | DESCRIPTION              |
|--------|----------|--------------------------|
| R36    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R37    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R39    | 79PP0486 | CHIP RES 1/10W 150 +-5%  |
| R4     | 79PP0094 | R,CHIP 100H 1/16W +-5%   |
| R40    | 79PP0486 | CHIP RES 1/10W 150 +-5%  |
| R42    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R43    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R44    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R45    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R49    | 79PP0487 | CHIP RES 1/16W 20K +-5%  |
| R5     | 79PP0415 | CHIP RES 1/16W 75 +-1%   |
| R50    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R51    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R52    | 79PP0092 | R,CHIP 0H 1/16W +5%      |
| R53    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R54    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R56    | 79PP0101 | R,CHIP 22H 1/16W +-5%    |
| R59    | 79PP0101 | R,CHIP 22H 1/16W +-5%    |
| R6     | 79PP0094 | R,CHIP 100H 1/16W +-5%   |
| R61    | 79PP0095 | R,CHIP 1K 1/16W +-5%     |
| R62    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R63    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R66    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R68    | 79PP0096 | R,CHIP 10K 1/16W +-5%    |
| R69    | 79PP0194 | CHIP RES 1/16W 4.7K +-5% |
| R7     | 79PP0094 | R,CHIP 100H 1/16W +-5%   |
| R8     | 79PP0415 | CHIP RES 1/16W 75 +-1%   |
| R9     | 79PP0094 | R,CHIP 100H 1/16W +-5%   |
| RP1    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP2    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP3    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP4    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |
| RP5    | 79PP0105 | R,CHIP 22H 1/16W +-5%    |

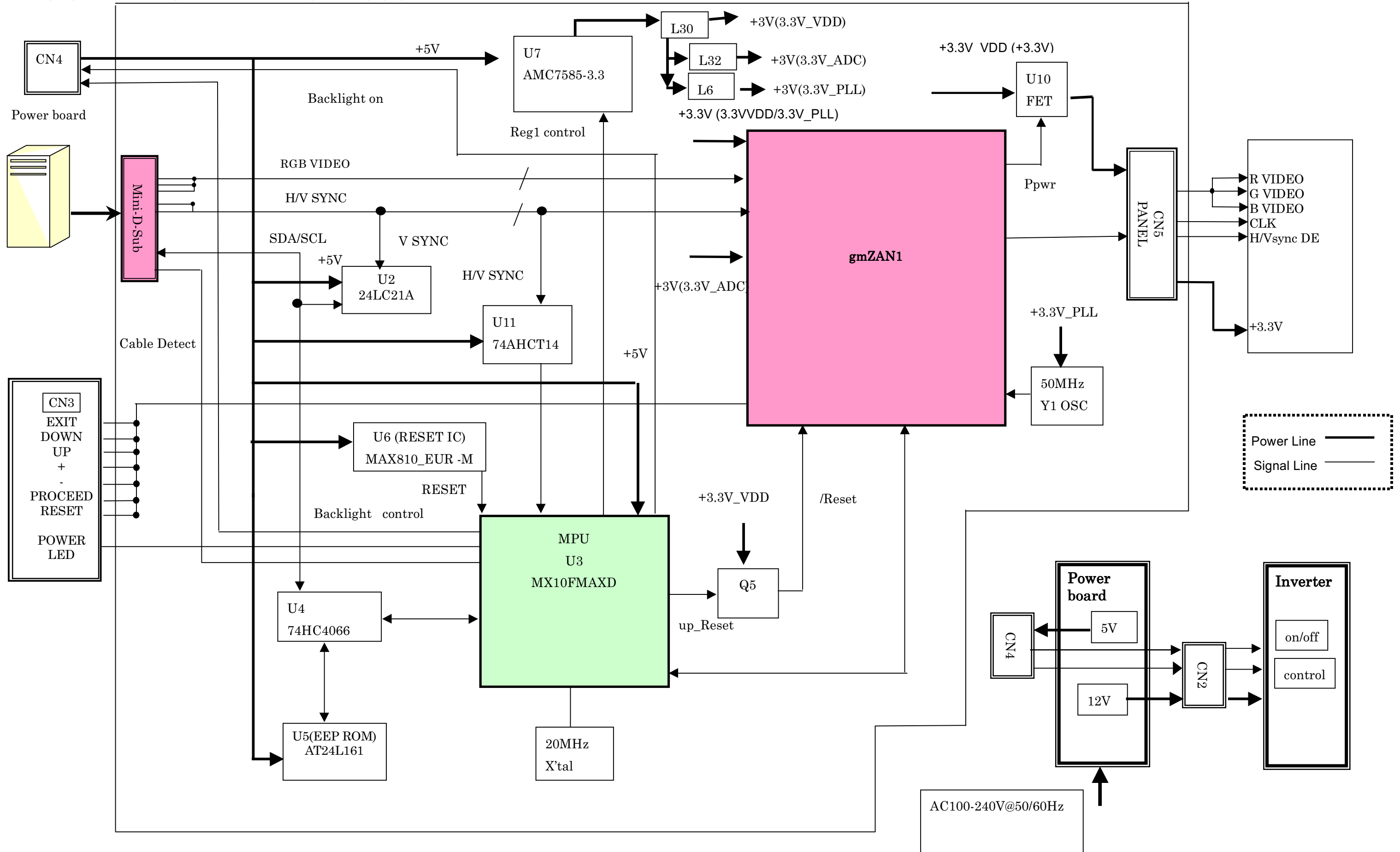
\*\*\* CAPACITORS \*\*\*

|     |          |                           |
|-----|----------|---------------------------|
| C1  | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C11 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C13 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C14 | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C15 | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C16 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C18 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C19 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C2  | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C20 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C21 | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C22 | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C23 | 79PP0427 | C,CERAMIC 1000P 50V J NPO |

| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| C24    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C25    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C26    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C27    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C28    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C29    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C3     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C30    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C31    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C32    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C33    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C34    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C35    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C36    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C37    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C38    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C39    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C4     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C40    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C41    | 79PP0472 | CAP 10U 16V M A P2.5T     |
| C42    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C43    | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C44    | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C45    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C46    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C47    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C48    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C49    | 79PP0477 | CAP 470U 10V M A P3.5     |
| C5     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C50    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C51    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C52    | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C55    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C56    | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C57    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C58    | 79PP0474 | CAP 1000U 16V M A P5 L    |
| C59    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C6     | 79PP0203 | CHIP CER,CAP. 0.01U 50V + |
| C60    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C67    | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |
| C7     | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C8     | 79PP0116 | C,CERAMIC 22P 50V +-5%    |
| C80    | 79PP0475 | CAP 220U 16V M A P3.5     |
| C81    | 79PP0473 | ELE CAP 22U 50V M B P2    |
| C84    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C85    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C86    | 79PP0114 | C,CERAMIC 10P 50V +-1PF   |
| C9     | 79PP0119 | C,CERAMIC 0.1U 16V -20+80 |

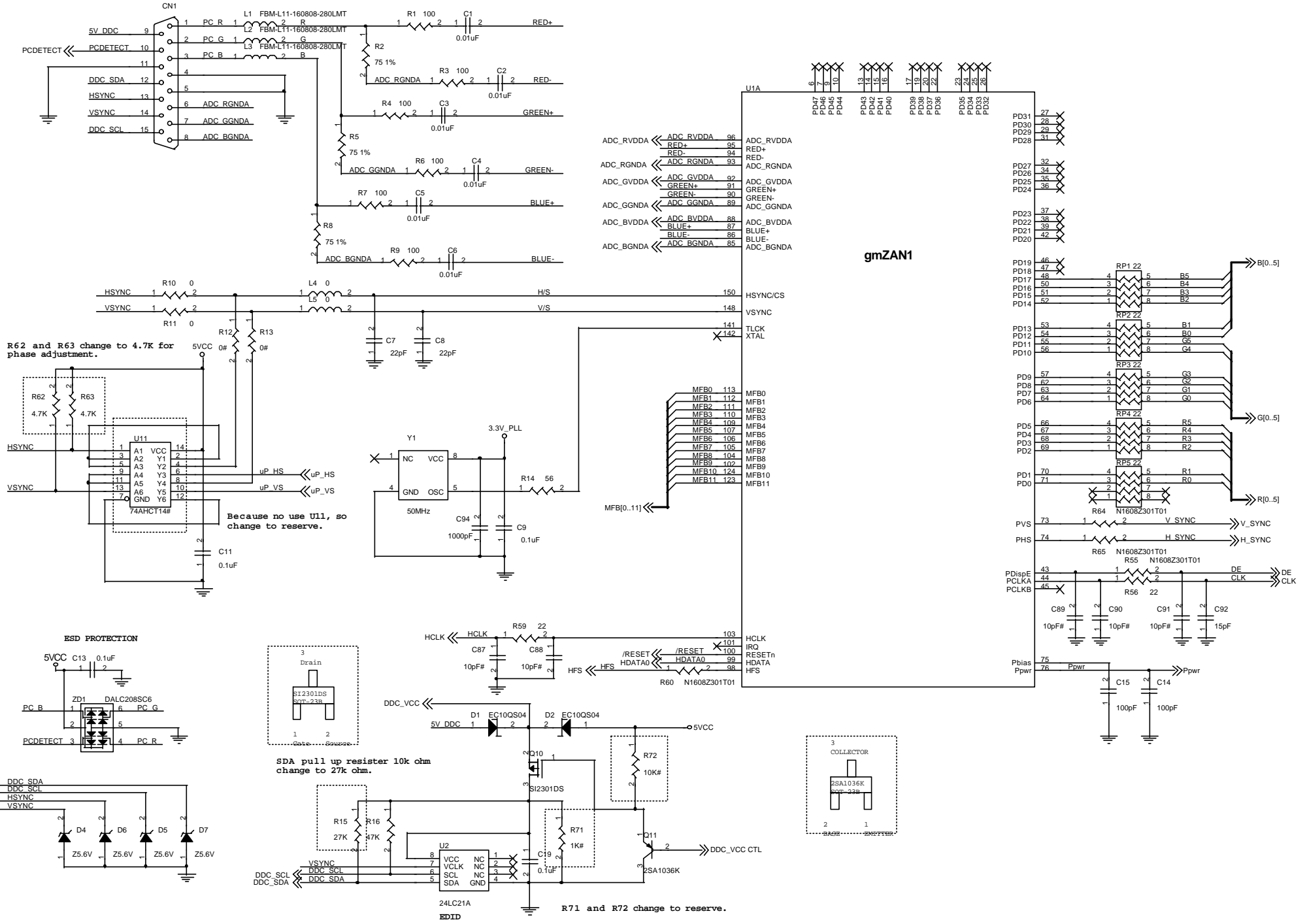
| SYMBOL | PART NO  | DESCRIPTION               |
|--------|----------|---------------------------|
| C92    | 79PP0489 | CHIP CAP 15P 50V +-5% NPO |
| C94    | 79PP0427 | C,CERAMIC 1000P 50V J NPO |
| C95    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C96    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| C97    | 79PP0115 | C,CARAMIC 100P 50V +-5%   |
| CP1    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |
| CP2    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |
| CP3    | 79PP0490 | CHIP CAP 100P 50V K NPO 1 |

# BLOCK DIAGRAM LCD1530V

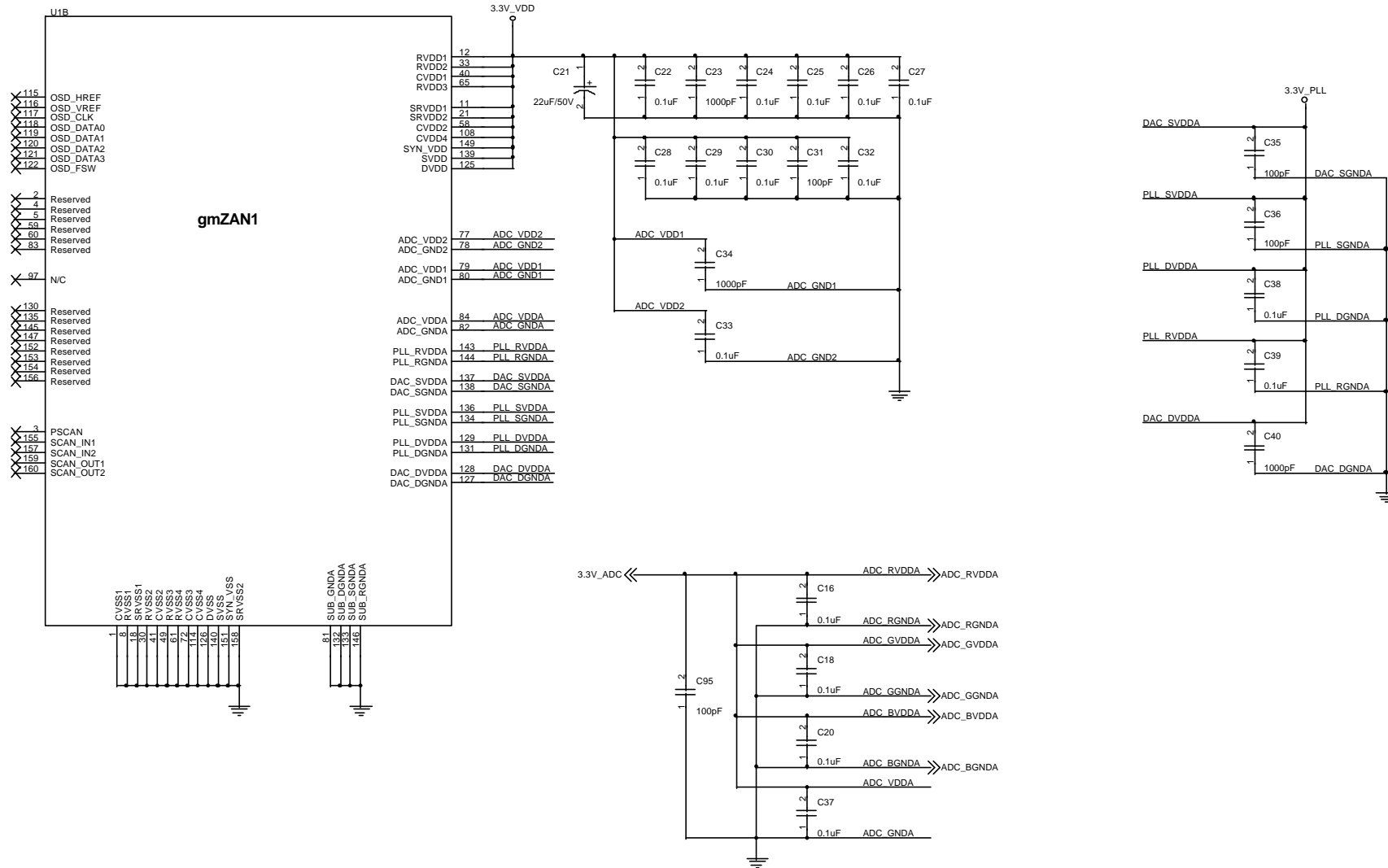




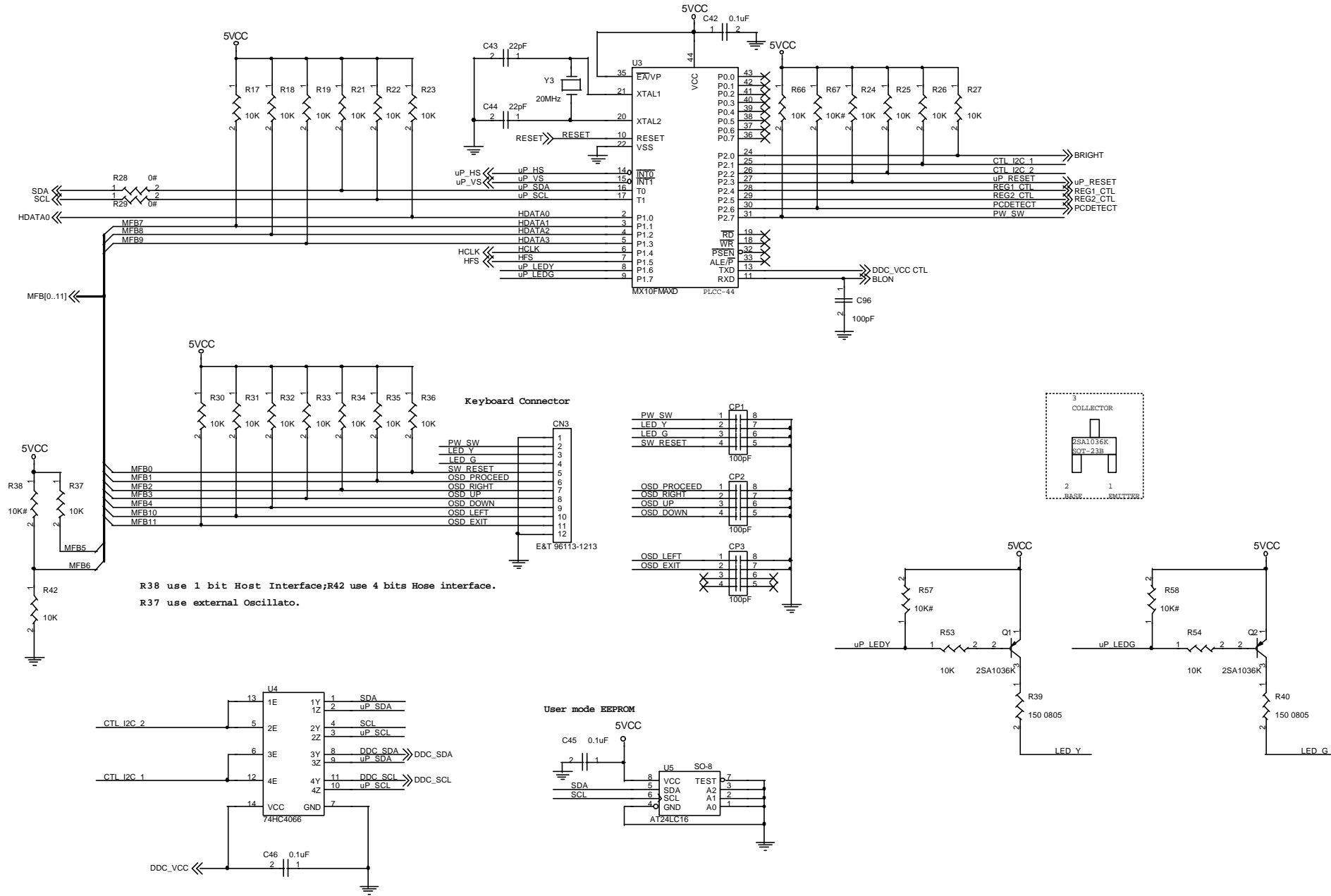
# MODEL LCD1530V MAIN BOARD SCHEMATIC DIAGRAM(1/5)



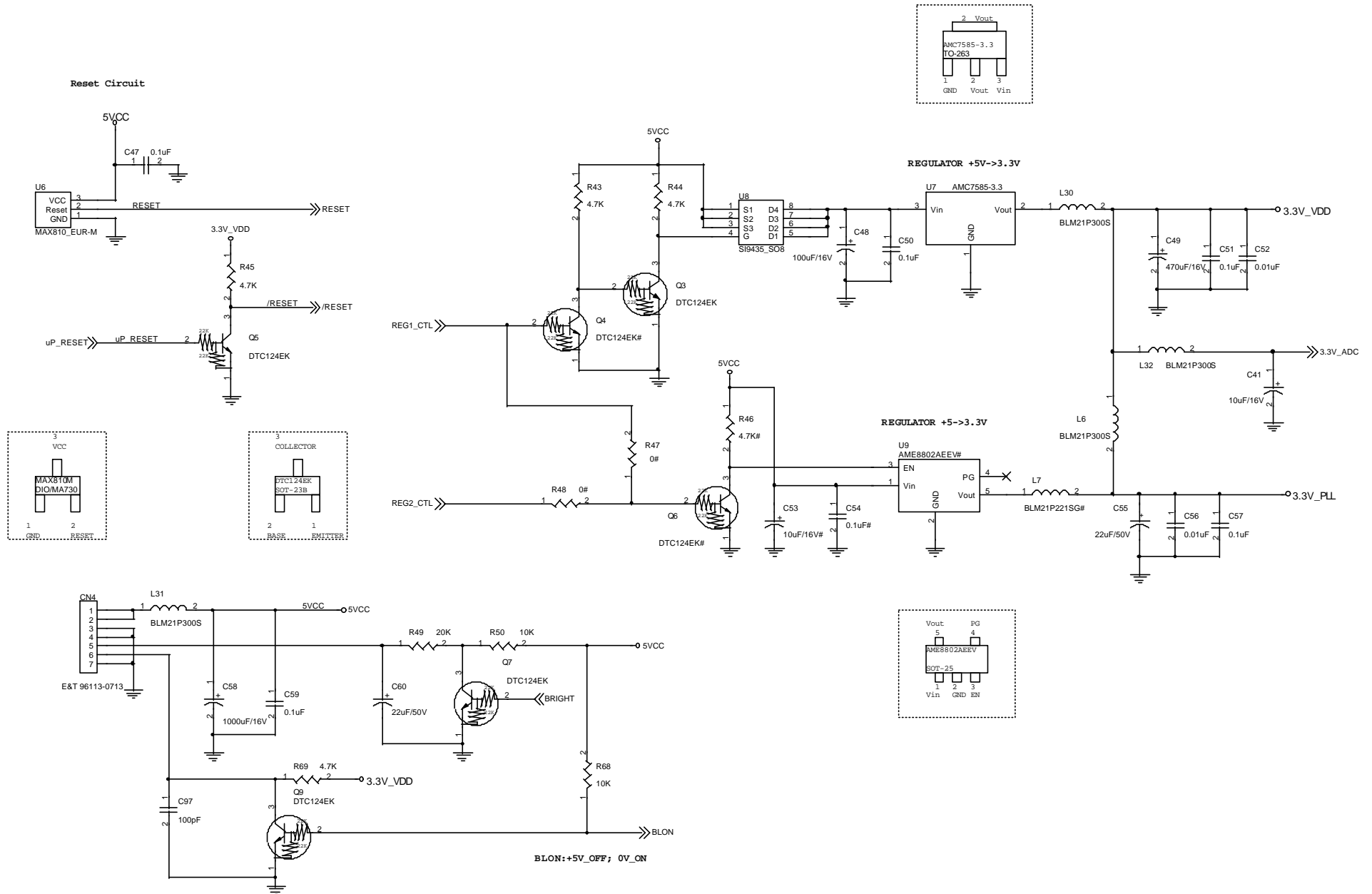
# MODEL LCD1530V MAIN BOARD SCHEMATIC DIAGRAM(2/5)



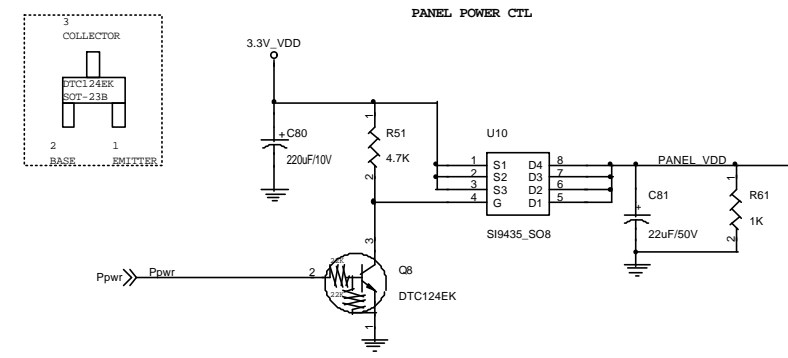
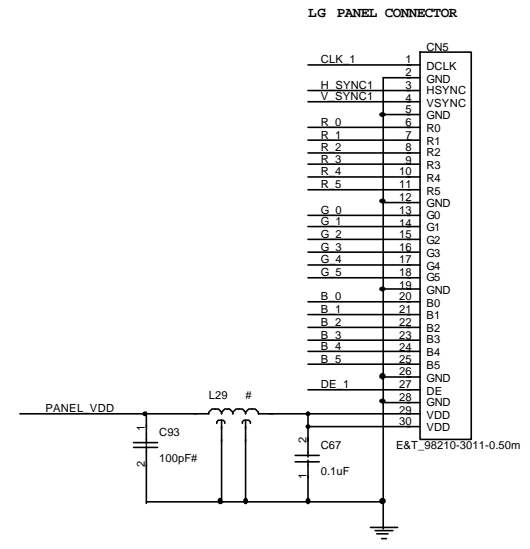
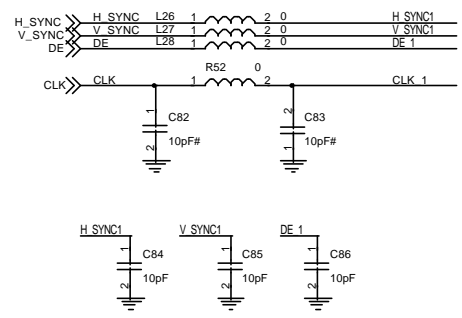
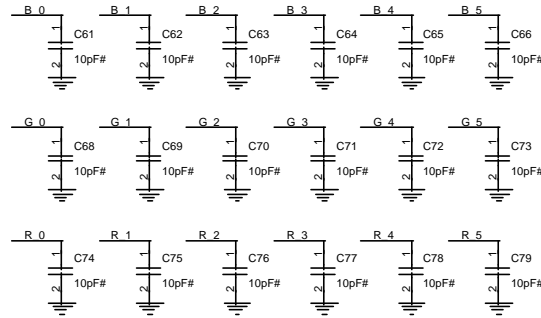
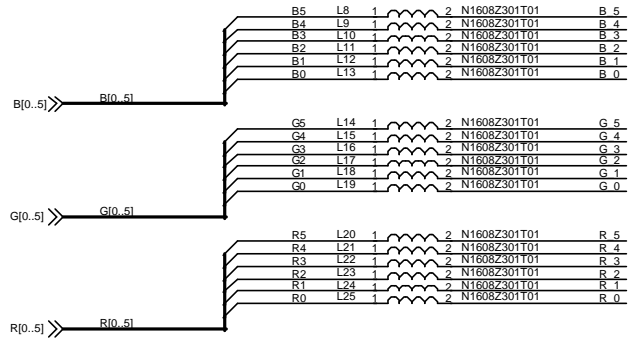
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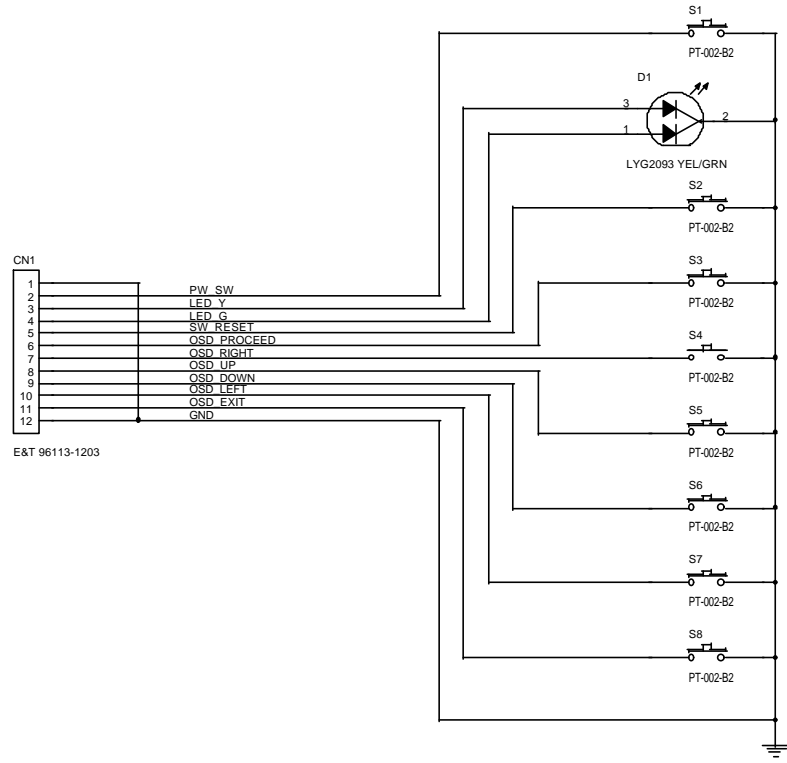
# MODEL LCD1530V MAIN BOARD SCHEMATIC DIAGRAM(4/5)



# MODEL LCD1530V MAIN BOARD SCHEMATIC DIAGRAM(5/5)

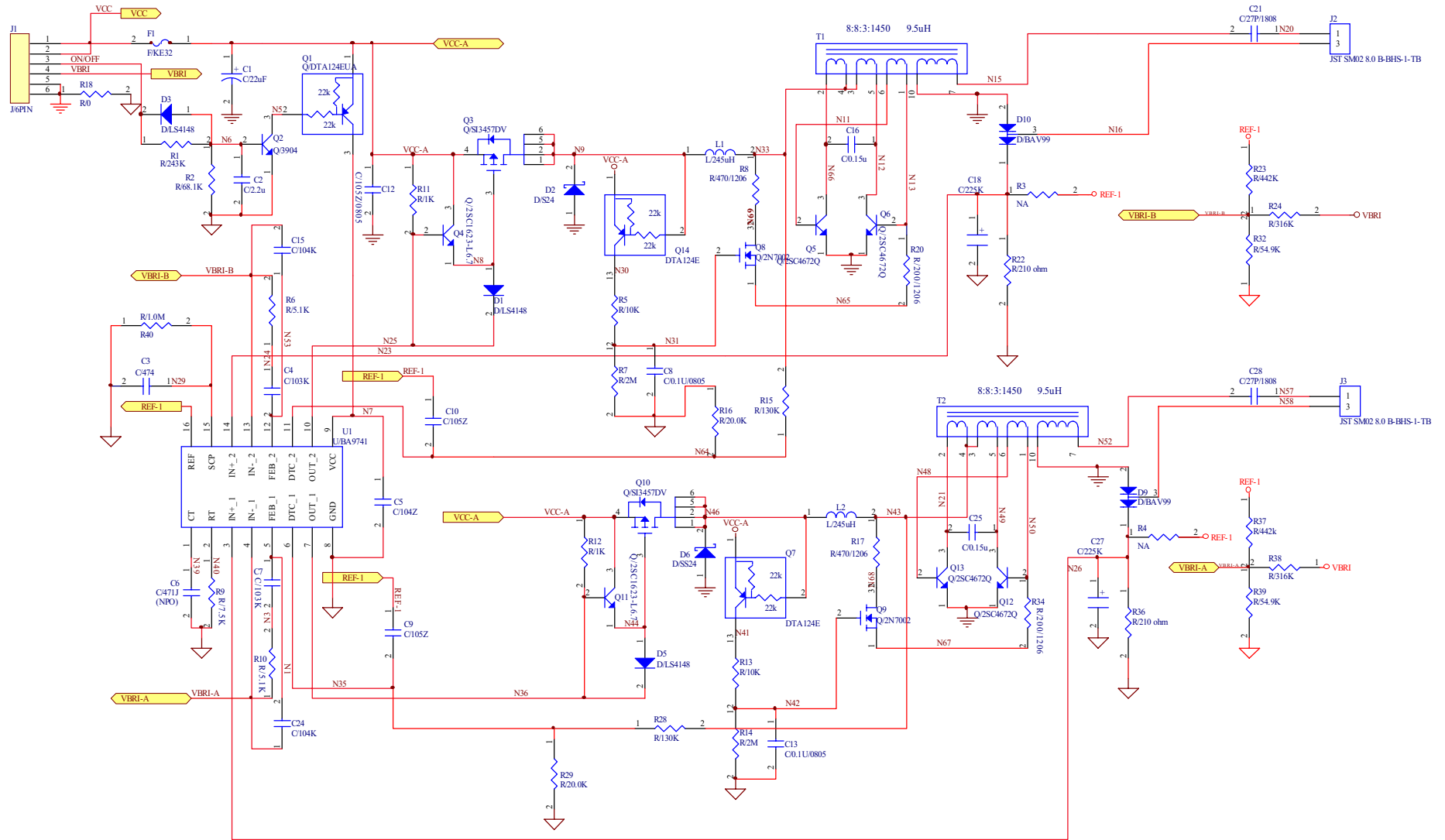


# MODEL LCD1530V PCBA KEY BOARD SCHEMATIC DIAGRAM(1/1)





# MODEL LCD1530V INVERTER SCHEMATIC DIAGRAM(1/1)



Ictc0  
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