

EUT: LCD COLOR MONITOR

FCC ID: NPU15TP

Ariestec, INC.

USER'S MANUAL



## Important Safety Instruction

Please read the following instructions carefully. This manual should be retained for future use.

1. Unplug the monitor from its power source before cleaning it. Do not spray liquid cleaners directly onto the unit. Stand away from the monitor and spray the cleaning solution onto a rag. Then clean the monitor with the slightly dampened rag.
2. Do not place your monitor near a window. Exposing the monitor to rain, water, moisture or sunlight can severely damage it.
3. The openings located on the monitor case are the needed ventilation slots. To protect the monitor from overheating, do not block these openings. For the same reason, this unit should not be placed near or over sources of heat. The unit should never be placed in a built-in installation unless adequate ventilation is provided.
4. This product is equipped with a three-prong grounding-style plug. It should only be inserted into a grounding-style power outlet. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug by bending the rounded grounding pin back and jamming it into a two-prong socket.
5. If you are using an extension cord with the monitor, make sure that the combined ampere ratings of all the products plugged into the extension cord do not exceed the extension cord maximum ampere rating. Also make sure that the total of all the products plugged into the wall outlet do not exceed 15 amperes.
6. Do not lay anything on top of the power cord. Furthermore, make sure the power cord is placed in an area where it will not be stepped on.
7. Do not push any object into the monitor's cabinet openings. They may come in contact with the monitor voltage points and short out parts which may cause a fire or give off electric shocks.

8. Do not remove the cover or attempt to service this unit by yourself. You may void your warranty. Servicing of any nature should be performed only by an authorized technician.
9. If any of the following occur, immediately unplug your monitor and call an authorized technician.
  - The power cord or plug is frayed or damaged.
  - Liquid has been spilled into the monitor, or it has been exposed to rain.
  - The monitor has been dropped or the case has been damaged.
10. Power source:
  - For 120V operation, use only a power cord which has a parallel blade plug, rated 125V/6A min.
  - For 240V operation, use only a power cord which has a tandem blade, rated 250V/6A min.

## Federal Communications Commission (FCC Statement)

This equipment has been tested and found to comply with the limits for a Class E digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection. 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 the dealer or an experienced radio/TV technician for help.

Shielded interface cables and output power cord must be used in order to comply with emission limits.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### WARNING

### CAUTION:

- Use only shielded cables to connect I/O devices to this equipment
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- Use only RF shielded cable to connect this monitor to a computer device.

## Wichtige Sicherheitshinweise

1. Bitte lesen Sie diese Hinweise sorgfältig durch.
2. Heben Sie diese Anleitung für den späteren Gebrauch auf.
3. Vor jedem Reinigen ist das Gerät vom Stromnetz zu trennen. Verwenden Sie keine Flüssig- oder Aerosolreiniger. Am besten ein angefeuchtetes Tuch zur Reinigung.
4. Um eine Beschädigung des Gerätes zu vermeiden sollten Sie nur Zubehörteile verwenden, die vom Hersteller zugelassen sind.
5. Das Gerät ist vor Feuchtigkeit zu schützen.
6. Bei der Aufstellung des Gerätes ist auf sicheren Stand zu achten, Ein Kippen oder Fallen könnte Verletzungen hervorrufen. Verwenden Sie nur sichere Standorte und beachten Sie die Aufstellhinweise des Herstellers.
7. Die Belüftungsöffnungen dienen zur Luftzirkulation, die das Gerät vor Überhitzung schützt. Sorgen Sie dafür, daß diese Öffnungen nicht abgedeckt werden.
8. Beachten Sie beim Anschluß an das Stromnetz die Anschlußwerte.
9. Die Netzanschlußsteckdose muß aus Gründen der elektrischen Sicherheit einen Schutzleiterkontakt haben.
10. Verlegen Sie die Netzanschlußleitung so, daß niemand darüber fallen kann, Es sollte auch nichts auf der Leitung abgestellt werden.
  1. Alle Hinweise und Warnungen die sich am Gerät befinden sind zu beachten.
  2. Wird das Gerät über einen längeren Zeitraum nicht benutzt, sollten Sie es vom Stromnetz trennen. Somit wird im Falle einer Überspannung eine Beschädigung des Geräts vermieden.
  3. Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeiten in das Gerät gelangen. Dies könnte einen Brand bzw. elektrische Schläge zur Folge haben.
4. Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.

15. Wenn folgende Situationen auftreten, ist das Gerät vom Stromnetz zu trennen und von einer qualifizierten Servicestelle zu überprüfen:
  - a - Netzkabel oder Netzstecker sind beschädigt.
  - b - Feuchtigkeit ist in das Gerät eingedrungen.
  - c - Das Gerät war Feuchtigkeit ausgesetzt.
  - d - Wenn das Gerät nicht der Bedienungsanleitung entsprechend funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen.
  - e - Das Gerät ist gefallen und/oder das Gehäuse ist beschädigt.
  - f - Wenn das Gerät deutliche Anzeichen eines Defektes aufweist.
16. Bei Reparaturen dürfen nur Originalersatzteile bzw. den Originalteilen entsprechende Teile verwendet werden. Der Einsatz von ungeeigneten Ersatzteilen kann eine weitere Beschädigung hervorrufen.
17. Wenden Sie sich mit allen Fragen, die Service und Reparatur betreffen, an Ihren Servicepartner. Somit stellen Sie die Betriebssicherheit des Gerätes sicher.
18. Der Arbeitsplatz bezogene Schalldruckpegel nach DIN 45 635 beträgt 70dB (A) oder weniger.
19. Die Steckdose muß nahe dem Gerät angebracht und leicht zugänglich sein.
20. Es wird aus ergonomischen Gründen empfohlen, die Grundfarbe blau nicht auf dunklem Untergrund zu verwenden (schlechte Lesbarkeit und erhöhte Augenbelastung bei zu geringem Zeichenkontrast sind die Folge).
21. ZH1/618/10, 80 für Ergonomie
22. Zum Netzanschluß dieses Geräts ist eine geprüfte Leitung zu verwenden. Für einen Nennstrom bis 6A und einem Gerätegewicht von über 3 kg ist eine Leitung nicht leichter als H05VV-F mit einem Leitungsquerschnitt von 0,75mm<sup>2</sup> einzusetzen.

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## 1 INTRODUCTION

Congratulations on the purchase of your new 15.1" LCD Monitor. You Monitor features the latest advances in personal computing technology. Its of the art design combines ergonomics with high performance circuitry to provide a monitor with unequalled viewing quality and that is easy-to-use.

The LCD Monitor is Plug & Play compliant and when attached to a Plug & Play supported video adapter, the LCD monitor is automatically detected by your system. The monitor supports 10 factory preset viewing modes and a user defined modes giving greater flexibility and control over viewing conditions. The unit allows you to adjust the brightness to your viewing conditions. Other ergonomic features include a wide viewing angle and tilt & swivel adjustment.

Features are also available to maximize productivity and expandability. The USB (Universal Serial Bus) Hub provides four USB connectors that can be attached to a vast array of USB supported peripherals such as keyboards, scanners, and printers. The 1-watt speakers are mounted on the bottom of the monitor to conserve workspace.

The LCD Monitor complies with MPRII radiation emission, EPA power factor, and VESA Display Power Management Signaling (DPMS) specifications. The built-in power management features, the monitor can automatically reduce power consumption to less than 8 watts.

## Unpacking

Please make sure the following items are in the shipping package and found in good condition :

- 15.1" LCD Monitor
- Power Cord
- Signal Cable
- This Manual
- Adapter

- FDD

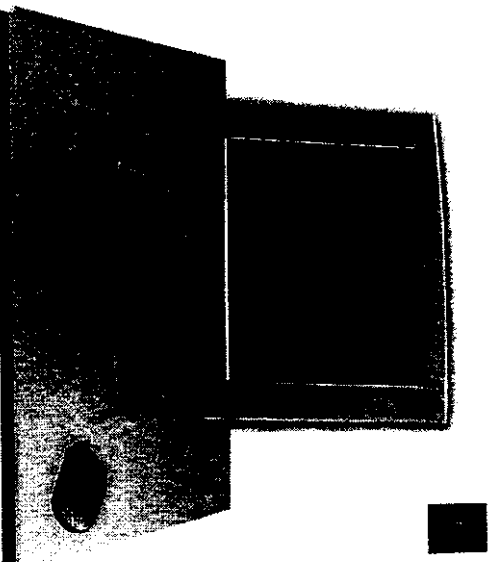
If any of the above is missing or appears damaged, please contact your dealer immediately.

## 2 INSTALLATION

### Choosing A Workstation

When choosing an appropriate workspace, keep these few things in mind:

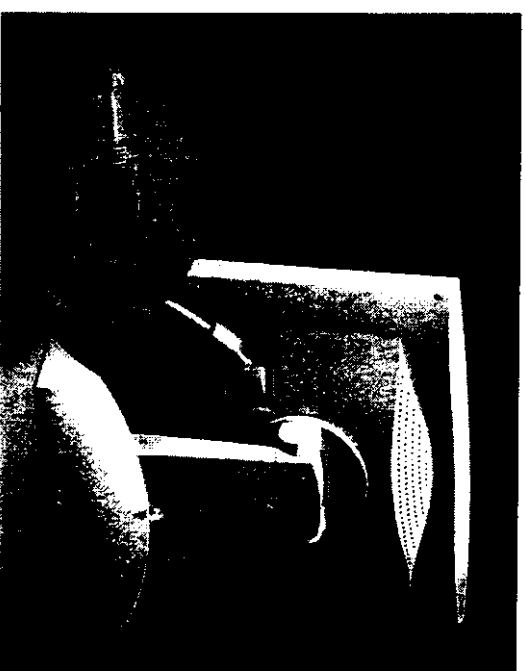
- A sturdy, level surface.
- An electrical wall outlet and a telephone wall jack near the computer.
- At least 3-inch clearance at the back of the computer to allow for the required airflow.
- Do not place near a window. Exposing the Monitor to direct sunlight for extended periods may damage the unit.
- You may want to use a desk lamp to adjust the ambient lighting for your viewing comfort.



*Figure 2 : The Workstation*

### The Signal Cable Connection

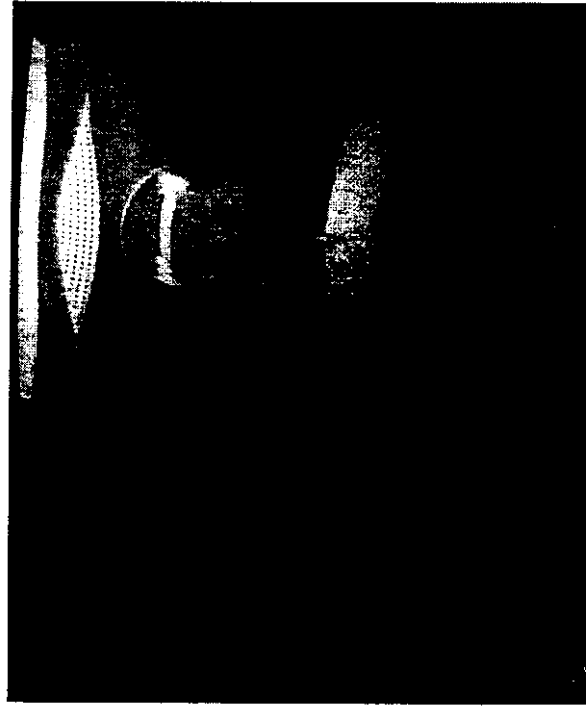
- Locate the VGA port on the rear of the PC. The signal cable has standard 20-pin mini D-sub (VGA) connector. If you are having trouble locating the VGA port, please refer to the documentation which came with your PC.
- Connect the signal cable to the PC's VGA port.
- Connect the other end of the signal cable to your LCD Monitor as shown in Figure 3.



*Figure 3 : Connecting the Signal Cable*

## The AC Connection

- Locate the DC port on the rear of the monitor.
- Plug the adapter into the DC port.
- Plug the male end into the outlet of wall.



*Figure 4 : Connecting the Power Cord*

### 3 OPERATION

#### Tilt & Swivel Adjustments

The monitor is capable of both tilt and swivel adjustments.

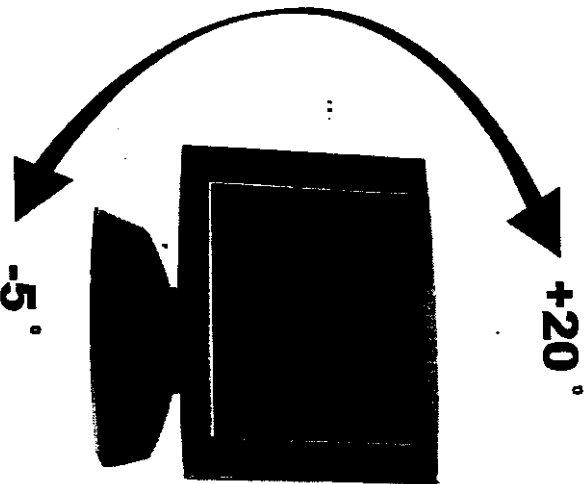


Figure 6: Tilt Adjustment

- With the tilt feature, the monitor is capable of vertical adjustments of +20° to -5°.
- The swivel feature allows for upright position.

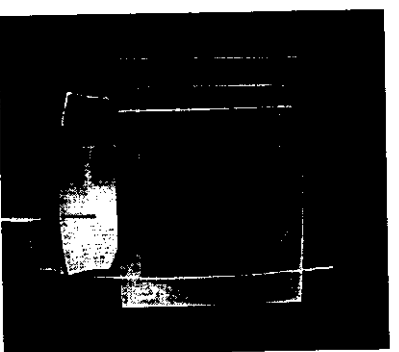
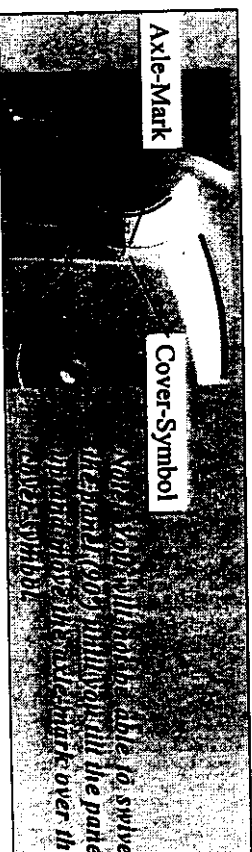


Figure 7 Swivel Adjustment



#### Power Controls

The power controls are located on the top side of the monitor's front panel.

##### Power Switch



When the power switch is pressed, the monitor will be turned on. When the power switch is pressed once more, the monitor will be turned off.

##### Power LED

The power LED is located just to the left of the power switch. Two different colors are used to indicate the monitor's power saving status.

- Yellow indicates the Monitor is in the ON mode.
- Amber indicates the Monitor is in the power saving mode.

## Adjustment

The Adjustment controls allow you to change the value of the brightness.



## 4 TECHNICAL SPECIFICATIONS

### Specifications

| Model              |  | 15TP                          |
|--------------------|--|-------------------------------|
| Screen             |  | 15LCD                         |
| Dot Pitch (mm)     |  |                               |
| Horizontal         |  | 0.30                          |
| Vertical           |  | 0.30                          |
| Display Size       |  | 15.1"                         |
| Viewing Angle      |  |                               |
| Right              |  | 60°                           |
| Left               |  | 60°                           |
| Top                |  | 45°                           |
| Bottom             |  | 45°                           |
| Scanning Frequency |  |                               |
| Horizontal (KHz)   |  | 30 - 48                       |
| Vertical (Hz)      |  | 50 - 60                       |
| Resolution         |  | 1024 x 768                    |
| Band Width         |  | 65MHz                         |
| Plug & Play        |  | DDCI & DDC2B                  |
| Display Colors     |  | 16.7M                         |
| Signal Cable       |  | 20 pin MDR connector          |
| Power              |  |                               |
| Consumption        |  | 50W                           |
| Supply             |  | 100-250V AC 50/60Hz Adapter   |
| Power Management   |  | Complied with EPA & VESA DPMS |

| Model                                      |  | 15TP                                |
|--------------------------------------------|--|-------------------------------------|
| Low Radiation                              |  | MPR II<br>TCO95 (Option)            |
| Operating Temperature<br>Relative Humidity |  | 0 ~ 40°C<br>10 ~ 90% non-condensing |
| Dimension                                  |  | 402mm(W) x 397mm(H) x 172mm(D)      |
| Net Weight                                 |  | 6.2KGS (13.7LBS)                    |

## 5 TROUBLE SHOOTING

This section will try to anticipate potential problems that you may encounter the day-to-day use of your monitor. Included in this section is information which should help solve these problems for you. If after trying the suggested solution your monitor still does not function properly, please contact your authorized service center.

### Power

#### Symptom :

The monitor is switched On, but the power LED is not lit.

#### Solution :

Switch the monitor Off. Then if the power cord and signal cable are properly connected. If the monitor is plugged into a powered extension cord or a surge protector, make sure that extension cord or the surge protector is turned on.

### Display

#### Symptom :

The display image is either dangling or unstable.

#### Solution :

Make sure that the signal cable's D-shaped connector is properly connected to the video adapter port on the back of the PC.

#### Symptom :

The picture is bouncing or a wave pattern is present in the display.

#### Solution :

Move any electrical devices away from the monitor, which may cause display interference. Please refer to the FCC statement at the beginning of the manual for more details on display interference.

## 6 PANEL CRITERIA

### Conditions

| Item              |                                                                                     | Conditions                                                           |
|-------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Lighting          | Fluorescent light (Day-Light Type) Display Surface illumination to be 500-1000 Lux. |                                                                      |
| Temperature       | 25°C ± 5°C                                                                          |                                                                      |
| Driving Condition | Equipment                                                                           | Customer CPU or PC AT Compatible CPU with Chips VGA Controller 655xx |
|                   | Supply voltage                                                                      | DC 5.0V                                                              |
|                   | Display pattern                                                                     | Black, White, Gray #31 R, G, B                                       |
|                   | Backlight                                                                           | If = 5mA                                                             |
|                   | Supply current                                                                      |                                                                      |
|                   | CCFL Driving Frequency                                                              | 35KHz                                                                |
|                   |                                                                                     |                                                                      |

**Remarks:** Inspect at 20 inches from display.

Defects not appear within 1 minute shall be ignored.

Standard viewing angle of the inspection shall be 0° to the display surface.

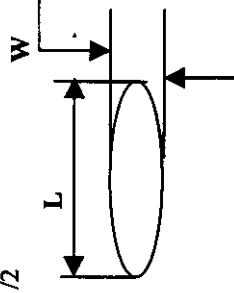
Variation of viewing angle to the display shall not exceed the range of specified viewing angle.

## Cosmetic Anomalies Inspection Specifications

### Cosmetic defect

Note: 1) All criteria shall be  $L \geq W$

$$2) D = (L + W) / 2$$



Unit: mm

| Defect type                                                         | Count                                             | Reject                        |
|---------------------------------------------------------------------|---------------------------------------------------|-------------------------------|
| Black Spot / White Spot ( $W > 1/4L$ )<br>(Foreign Circular Matter) | $0.15 < D \leq 0.4$                               | $D > 0.4$                     |
| Scratch on polarizer                                                | $0.01 < W \leq 0.1$<br>and<br>$1.0 < L \leq 10.0$ | $W > 0.1$<br>or<br>$L > 10.0$ |
| Polarizer bubbles                                                   | $0.1 < W \leq 0.5$<br>and<br>$L \leq 1.0$         | $W > 0.5$<br>or<br>$L > 1.0$  |
| Dent on polarizer                                                   | $0.1 < W \leq 0.5$<br>and<br>$L \leq 1.0$         | $W > 0.5$<br>or<br>$L > 1.0$  |
| Black line / White line<br>(Streak, Lint, Hair)                     | $0.05 < W \leq 0.10$<br>and<br>$0.3 < L \leq 2.1$ | $W > 0.10$<br>or<br>$L > 2.1$ |

Dirt: Product passes if dirt can be wiped off easily

Following defect to be judged by Limit Samples when it is necessary

- a) Rainbow color (Newton ring)
- b) Rubbing mark
- c) Mottling (Uniformity)
- d) Dim line (Vth shift line)

Total number of cosmetic defect with the countable range

| Accept      |          |
|-------------|----------|
| $N \leq 10$ | $N > 10$ |

Functional Anomalies Inspection Specification

There should be no displays that are unable to show any image.

Functional defect of pixels`

Definition

- 1) Each RGB element of a pixel is called subpixel.
- 2) Subpixel that contains larger than 1/2 defective area is called defective subpixel.
- 3) Brightness of a subpixel > 16 levels out of 64 gray levels shall be counted as a Bright subpixel or a Dark subpixel.
- 4) One block of adjacent defective subpixel whose contents are one or two defective subpixels shall be counted as a block of defects.

Distribution of defective subpixel

- 1)  $\geq 2$  defective subpixels for all types of combinations shall be all as adjacent defective subpixel.
- 2) Distance between two blocks of defects shall be  $\geq 4mm$
- 3) Distance between two blocks of defects both of which include bright green subpixel shall be  $\geq 8mm$
- 4) Blocks of defects within a  $\phi 20mm$  circle shall be  $\leq 4$
- 5) Blocks of defects both of which include a bright subpixel within a  $\phi 20mm$  circle shall be  $\leq 3$

Number of defective subpixels

| Defect type                         | Accept      | Reject   |
|-------------------------------------|-------------|----------|
| Bright subpixels                    | $N \leq 10$ | $N > 10$ |
| Bright Green subpixels              | $N \leq 4$  | $N > 4$  |
| Dark subpixels                      | $N \leq 10$ | $N > 10$ |
| Total number of defective subpixels | $N \leq 10$ | $N > 10$ |

**ARISTEC, INC.**

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FEDERAL COMMUNICATIONS COMMISSION

FCC ID:NPU15TP

Authorization and Evaluation Division

7435 Oakland Mills Road

Columbia, MD 21046

U.S.A.

Re: About the modification of LCD COLOR MONITOR

Gentlemen:

I, hereby, declare that all modification on the E.U.T.,  
FCC ID: NPU15TP, will be added or layout on the mass production  
products. Modifications are shown as below:

1. Added 102p capacitors on C9,C19,C22,C14,C26,C15 in parallel.  
(As the photo No.13)
2. Changed resistors from 22 $\Omega$  to 82 $\Omega$  On RP1,RP2,RP3,RP4,RP5,RP6,RP7,RP8,RP9.  
(As the photo No.11)
3. Changed RP10 resistor from 22 $\Omega$  to 47 $\Omega$ .  
(As the photo No.11)
4. Added 19 $\Omega$  beads on Hs, Vs and OCD in parallel.  
(As the photo No.13)
5. Changed C90 Capacitor from 10P to 100P.  
(As the photo No.13)
6. Changed C92 capacitor from 10P to 100P.  
(As the photo No.13)
7. Changed C89 capacitor from 10P to 100P.  
(As the photo No.13)
8. Added one ground wire on I/O board.  
(As the photo No.11)
9. Added a core on DC power cord.  
(As the photo No.2)
10. Added two cores on panel cable.  
(As the photo No.2,11)
11. Added a metal sheet to cover inverter board.  
(As the photo No.8)
12. Added a metal sheet to cover I/O board.  
(As the photo No.8)
13. Added a core on main board cable.  
(As the photo No.8)
14. Added a core on inverter cable.  
(As the photo No.11)
15. Added two cores on main board cable.  
(As the photo No.11)
16. Added two cooper tapes on the I/O board matel cover near panel cable.  
(As the photo No.8)

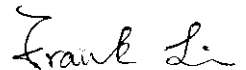


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17. Added gasket on I/O board cover.  
(As the photo No.8)
18. Added cooper tapes near inverter board.  
(As the photo No.8)
19. Added cooper tapes on two edges of panel.  
(As the photo No.19)
20. Added a aluminum tape on gap of base matel sheet.  
(As the photo No.10)
21. Added a aluminum tape beside I/O board.  
(As the photo No.10)
22. Added two cooper tapes on ground wires of I/O board.  
(As the photo No.12)

Sincerely yours



Frank Lin  
Superrisor

