AMB-232A/223A/255A/280A Series

Analog Display Panel

Version 1.5

Industrial Display Panel

Analog Display Panel for Industrial Automation

User's Manual

History

➢ **Version 1.5**

Emphasis AUTO ADJUST feature in OSD control on page 27.

AMB-232A/232AT CE Report

AMB-232A/232AT FCC Report

SPORTON INTERNATIONAL INC.

FCC TEST REPORT

Report No. : F062001

Certificate No. : F062001

CERTIFICATE OF COMPLIANCE

for

CISPR PUB. 22 Class A

Equipment : Industrial Display Panel

Model No. : AMB-232A, AMB-232AT

FCC ID : N/A

Applicant : **Astech Technology Co., Ltd.**
6F-4, No. 351, Chung-Shan Rd., Sec. 2,
Chung-Ho City, Taipei, Taiwan, R.O.C.

HEREBY CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 - 1992** and the energy emitted by this equipment was *passed* **CISPR PUB. 22** both radiated and conducted emission class A limits. Testing was carried out on Jun. 23, 2000 at **SPORTON International Inc.** LAB. in Lin Kou.

Lenore Chang
President

July 10, 2000

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

SPORTON International Inc.	FCC ID : N/A
TEL : 886-2-2696-2468	Page No. : 3 of 24
FAX : 886-2-2696-2255	Issued Date : Jul. 7, 2000

AMB-223A/223AT CE Report

SPORTON INTERNATIONAL INC.

CE *CE TEST REPORT*

SPORTON LAB.

NVLAP
Accredited by United States
Department of Commerce
National Institute of
Standards and Technology

Report No. : C050414

Certificate No. : C050414

CERTIFICATE OF COMPLIANCE

according to

**European Standard EN 55022:1994/A1:1995/A2:1997 Class A
EN61000-3-2:1995, EN 61000-3-3:1995
and EN 55024:1998
(EN 61 000-4-2:1995, EN 61 000-4-3:1996,
EN 61 000-4-4:1995,EN 61 000-4-5:1995, EN 61 000-4-6:1996,
EN 61 000-4-8:1993, EN 61 000-4-11:1994)**

Equipment   : Analog Display Panel

Model No.   : AMB-223AT, AMB-223A

Applicant   : **Astech Technology Co., Ltd.**
6F-4, No. 351, Chung-Shan Rd., Sec. 2,
Chung-Ho City, Taipei, Taiwan, R.O.C.

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **EUROPEAN COUNCIL DIRECTIVE 89/336/EEC**. The equipment was *passed* the test performed according to European Standard EN 55022:1994/A1:1995/A2:1997 Class A, EN61000-3-2:1995, EN 61000-3-3:1995 and EN 55024:1998 (EN 61 000-4-2:1995, EN 61 000-4-3:1996, EN 61 000-4-4:1995, EN 61 000-4-5:1995, EN 61 000-4-6:1996, EN 61 000-4-8:1993, EN 61 000-4-11:1994).The test was carried out on May. 10, 2000 at **SPORTON International Inc.** LAB. in Lin Kou.

May 29, 2000

Lenore Chang
President

SPORTON *International Inc.*

6F, No. 106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

SPORTON *International Inc.*
TEL : 886-2-2696-2468
FAX : 886-2-2696-2255

Page Number   : 4 of 60
Issued Date   : May. 22, 2000

AMB-223A/223AT FCC Test Report

SPORTON INTERNATIONAL INC.

FCC TEST REPORT

Report No. : F050414

Certificate No. : F050414

CERTIFICATE OF COMPLIANCE

for

CISPR PUB. 22 Class A

Equipment	: Analog Display Panel
Model No.	: AMB-223AT, AMB-223A
FCC ID	: N/A
Applicant	: **Astech Technology Co., Ltd.**
	6F-4, No. 351, Chung-Shan Rd., Sec. 2,
	Chung-Ho City, Taipei, Taiwan, R.O.C.

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 - 1992** and the energy emitted by this equipment was *passed* **CISPR PUB. 22** both radiated and conducted emission class A limits. Testing was carried out on May. 5, 2000 at **SPORTON International Inc.** LAB. in Lin Kou.

Lenore Chang
President

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

SPORTON International Inc.	FCC ID	: N/A
TEL : 886-2-2696-2468	Page No.	: 3 of 27
FAX : 886-2-2696-2255	Issued Date	: May. 27, 2000

AMB-255A/AMB-255AT CE Report

EMC LAB
HomeTek
HomeTek Technology Inc.

ADDRESS: No.85-5, Shir Men Road, Tu Cheng City,
Taipei Hsien, TAIWAN, R. O. C.
PHONE : 886-2-22608375 FAX : 886-2-22748013
E - mail : hometek@ms15.hinet.net

CERTIFICATE OF COMPLIANCE

EUT	: Display Panel
MODEL NO.	: AMB-2215AT, AMB-255AT
Final Test Date	: 12/10/99 REPORT #: EA8K049
APPLICANT	: ASTECH TECHNOLOGY CO., LTD.
ADDRESS	: 6F-4, No. 351, Chung-Shan Rd.,
	Sec. 2, Chung-Ho City, Taipei,
	Taiwan, R. O. C.

MEASUREMENT PROCEDURE USED :

☑ EN50081-1 (1992) ☑ EN50082-1 (1997)
☐ EN50081-2 (1992) ☐ EN50082-2 (1992)

☐ EN55011 (1994)   ☑ EN 61000-4-2   ☑ EN 61000-4-5
☑ EN55022 (1994)   ☑ EN 61000-4-3   ☑ EN 61000-4-6
☐ EN61000-3-2   ☑ EN 61000-4-4   ☑ EN 61000-4-8
☐ EN61000-3-3   ☑ EN 61000-4-11

WE HEREBY SHOW THAT :
   THE MEASUREMENT SHOWN IN THE ATTACHMENT WERE MADE IN ACCORDANCE WITH
THE PROCEDURES INDICATED, AND THE ENERGY EMITTED BY THE EQUIPMENT WAS FOUND
TO BE WITHIN THE LIMITS APPLICABLE.
   THIS TEST RESULTS OF THIS REPORT APPLIES TO ABOVE TESTED SAMPLE ONLY.
   THIS TEST REPORT SHALL NOT BE REPRODUCE IN PART WITHOUT WRITTEN APPROVAL
OF HOMETEK TECHNOLOGY INC.

PREPARED BY   :   JOAN YANG   DATE : 12/14/'99

CHECK BY   :   SUSAN HUANG   DATE : 12/14/'99

APPROVED BY   :   GRANT HUANG/Manager   DATE : 12/15/99

AMB-255A/AMB-255AT FCC Report

FCC SPORTON LAB. NVLAP® | Certificate No: D052606

CERTIFICATE OF COMPLIANCE

Authorized under Declaration of Conformity
according to

47 CFR,Part 2 and Part 15 of the FCC Rules

- Equipment Under Test : Industrial Display Panel
  Model No. :AMB-255A, AMB-255AT
  Applicant : Astech Technology Co., Ltd.
  6F-4, No. 351, Chung-Shan Rd., Sec. 2,
  Chung-Ho City, Taipei, Taiwan, R.O.C.

SPORTON LAB.

I HEREBY CERTIFY THAT:

THE MEASUREMENTS SHOWN IN THIS TEST REPORT WERE MADE IN ACCORDANCE WITH THE PROCEDURES GIVEN IN **ANSI C63.4 - 1992** AND THE ENERGY EMITTED BY THIS EQUIPMENT WAS **PASSED** CISPR PUB. 22 and FCC Part 15 in BOTH RADIATED AND CONDUCTED EMISSIONS CLASS B LIMITS. THE TESTING WAS COMPLETED ON **Jun. 12, 2000** AT **SPORTON INTERNATIONAL INC.** LAB. IN **Nei Hwu.**

Lenore Chang

President

Safety & Warranty

1. Read these safety instructions carefully.

2. Keep this user's manual for later reference.

3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.

4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.

5. Keep this equipment away from humidity.

6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.

7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.

8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.

9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.

10. All cautions and warnings on the equipment should be noted.

11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.

12. Never pour any liquid into an opening. This could cause fire or electrical shock.

13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.

14. If any of the following situations arises, get the equipment checked by service personnel:

a. The power cord or plug is damaged.

b. Liquid has penetrated into the equipment.

c. The equipment has been exposed to moisture.

d. The equipment does not work well, or you cannot get it to work according to the users manual.

e. The equipment has been dropped and damaged.

f. The equipment has obvious signs of breakage.

15. DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). IT MAY DAMAGE THE EQUIPMENT.

Contents

1

Chapter1   General Information

General Information

1.1. Introduction

Congratulations on your purchase of the Industry Display Panel TFT LCD monitor - a marvelous contribution of cutting edge technology.

The LCD monitor has been designed with serious thoughts to present the best performance for most applications. Symbol of elegance, its compact and slim profile is well suited in working locations where space is at a premium.

The TFT LCD monitor displays sharper, more brilliant, crisper and flicker-free images. Complying with the power management regulations of VESA DPMS, the LCD monitor is extremely energy efficient and a power saver. Plus, the LCD monitor has extremely low radiation emissions and near zero electromagnetic fields which are supreme benefits.

Fully compatible with PC and Mac, the LCD monitor provides full interface for all sorts of related standards. Supported by "Plug & Play" complying with DDC1/DDC2B, installing the LCD monitor is absolutely troubled free.

The On Screen Display menu provides the user a convenient interface to make the right adjustment for optimum display performance.

1.2. Packing List

The LCD monitor comes with the following standard parts shown as below. Check and make sure they are included and in good condition. If anything is missing or damaged, contact the dealer immediately.

1. Industrial Display Panel x 1 pc
2. Industrial Display Panel User's Manual Disk x 1 pc
3. AC to DC power adaptor x 1 pc
4. VGA Cable 1.2 M x 1 pc
5. Panel Mounting Kits
6. Screws beg

With Touch Screen Optional
1. Touch Manual x 1 pc
2. Touch Pen x 1 pc
3. Drive Disk for Windows 95/98 v3.1
4. Drive Disk for Windows NT 4.0 v3.1
5. Drive Disk for DOS v7.06B & WIN 3.1 v3.01

To comply with the FCC & CE regulations, video cables included with the LCD monitor are ferrite-loaded.

It is better for you to keep the carton and the packing materials in case you might need them for packing or moving in the future.

1.3. Features of Display Panels

This menu provides full ranging analog interface LCD panels, which are 10.4"(VGA), 12.1"(SVGA), 15"(XGA) and 18.1"(SXGA) hi-brightness, long lifetime TFT LCD monitors.

1.3.1. AMB-232A

- Heavy-duty stain-less steel chassis & NEMA 4/12 & IP 65 aluminum alloy front panel
- 10.4" VGA (640x480 resolution) color TFT LCD display
- Analog RGB signals directly input with A/D board interface offering multi-scan function
- RS-232, Adapter, RGB terminals and AV input
- OSD controller on the front panel
- Touchscreen (Optional)
- Using standard VGA card
- DC/12V external power adapter
- Hi-brightness 200 cd / m2, Long-life time (20,000 hrs)
- Panel mount
- Wall mount: VESA 75 Standard (Optional)
- Desk top: VESA 75 Standard (Optional)
- Cable saddle
- Cable length: up to 20 meters
- Auto detect NTSC, PAL and Secam
- Adapter holder

1.3.2. AMB-223A

- Heavy-duty stain-less steel chassis & NEMA 4/12 & IP 65 aluminum alloy front panel
- 12.1" SVGA (800x600 resolution) color TFT LCD display
- Analog RGB signals directly input with A/D board interface offering multi-scan function
- RS-232, Adapter, RGB terminals and AV input
- OSD controller on the front panel
- Touchscreen (Optional)

- Using standard VGA card
- DC/12V external power adapter
- Hi-brightness 250 cd / m^2, Long-life time (25,000 hrs)
- Panel mount
- Wall mount: VESA 75 Standard (Optional)
- Desk top: VESA 75 Standard (Optional)
- Cable saddle
- Cable length: up to 20 meters
- Auto detect NTSC, PAL and Secam
- Adapter holder
- 19" Rack mount panel (Optional)

1.3.3. AMB-255A

- Heavy-duty stain-less steel chassis & NEMA 4/12 & IP 65 aluminum alloy front panel
- 15" XGA (1024x768 resolution) color TFT LCD display
- Analog RGB signals directly input with A/D board interface offering multi-scan function
- RS-232, Adapter, RGB terminals and AV input
- OSD controller on the front panel
- Touchscreen (Optional)
- Using standard VGA card
- DC/12V external power adapter
- Hi-brightness 250 cd / m^2, Long-life time (25,000 hrs)
- Panel mount
- Wall mount: VESA 75 Standard (Optional)
- Desk top: VESA 75 Standard (Optional)
- Cable saddle
- Cable length: up to 20 meters
- Auto detect NTSC, PAL and Secam
- Adapter holder
- 19" Rack mount panel (Optional)

1.3.4. AMB-280A

- Heavy-duty stain-less steel chassis & NEMA 4/12 & IP 65 aluminum alloy front panel
- 18.1" SXGA (1280x1024 resolution) color TFT LCD display
- Analog RGB signals directly input with A/D board interface offering multi-scan function
- RS-232, Adapter, RGB terminals, AV input and S Video
- OSD controller on the front panel
- Touchscreen (Optional)
- Using standard VGA card
- DC/12V external power adapter
- Hi-brightness 235 cd / m^2, Long-life time (25,000 hrs)
- Panel mount
- Wall mount: VESA 75 Standard (Optional)
- Desk top: VESA 75 Standard (Optional)
- Cable saddle
- Cable length: up to 20 meters
- Auto detect NTSC, PAL and Secam
- Adapter holder
- 19" Rack mount panel

1.4. General

1.4.1. AMB-232A

- **Construction**:   Heavy-duty stain-less steel chassis & aluminum alloy front panel
- **Dimension**:   288.2(W) x 195.2(H) x 49(D) mm
- **Gross Weight**:   6Kg

1.4.2. AMB-223A

- **Construction**:   Heavy-duty stain-less steel chassis & aluminum alloy front panel
- **Dimension**:   339(W) x 341(H) x 230(D) mm
- **Gross Weight**:   7.5Kg

1.4.3. AMB-255A

- **Construction**:   Heavy-duty stain-less steel chassis & aluminum alloy front panel
- **Dimension**:   420(W) x 300(H) x 55(D) mm
- **Gross Weight**:   10.3Kgs

1.4.4. AMB-280A

- **Construction**:   Heavy-duty stain-less steel chassis & aluminum alloy front panel
- **Dimension**:   450.5(W) x 383(H) x 55(D) mm
- **Gross Weight**:   13Kgs

1.5. Touchscreen (Optional)

- **Type**: 4/8-wire, analog resistive
- **Resolution**: Continuous
- **Light transmission**: 72% (surface meets 4H, ASTM-D-3363-92A standard.)
- **Operating pressure**: 30-45 grams for finger, 10 grams for stylus pen. Contact bounce< 10ms
- **Controller**: RS-232 interface
- **Power consumption**: +5V @200mA
- **OS support**: MS DOS, Windows 3.1, Windows 95, Windows 98, Windows NT.

1.6. Environment

- **Operating temperature**: 0°C to 50°C
- **Storage temperature**:   -20°C to 60°C
- **Relative humidity**:   5 to 95%, non-condensing
- **Altitude**:   10,000 ft. (3000 meters)
- **Vibration:** 5 to 17Hz, 0.1" double-amplitude displacement 17 to 500Hz, 1.5G peak to peak
- **Shock**:   10G peak acceleration (11 msec. Duration)
- **Safety**:   meets UL / CSA / TUV
- **EMI**:   FCC / VDE Class A

1.7. Order Information

- **AMB-232A**:
  With 10.4" VGA color LCD display
  Includes: External power adapter and 1.2m VGA extension cable
- **AMB-232A-T** (Optional touchscreen)

- **AMB-223A**:
  With 12.1" SVGA color LCD display
  Includes: External power adapter and 1.2m VGA extension cable
- **AMB-223A-T** (Optional touchscreen)

- **AMB-255A**:
  With 15" XGA color LCD display
  Includes: External power adapter and 1.2m VGA extension cable
- **AMB-255A-T** (Optional touchscreen)

- **AMB-280A**:
  With 18.1" SXGA color LCD display
  Includes: External power adapter and 1.2m VGA extension cable
- **AMB-280A-T** (Optional touchscreen)

1.8. Dimensions

Unit: mm

1.8.1. AMB-232A

288.2

49

195.2

65.8

21

291.2

198.2

MOUNTING HOLE SIZE

232A-3V

10.4″

(TOUCH OPTION)

VIDEO

RGB

ADAPTER

1.8.2. AMB-223A

339

58.6

226.4

65.8

25

341

230

MOUNTING HOLE SIZE

12.1″

(TOUCH OPTION)

VIDEO

RGB

ADAPTER

223A-3V-289
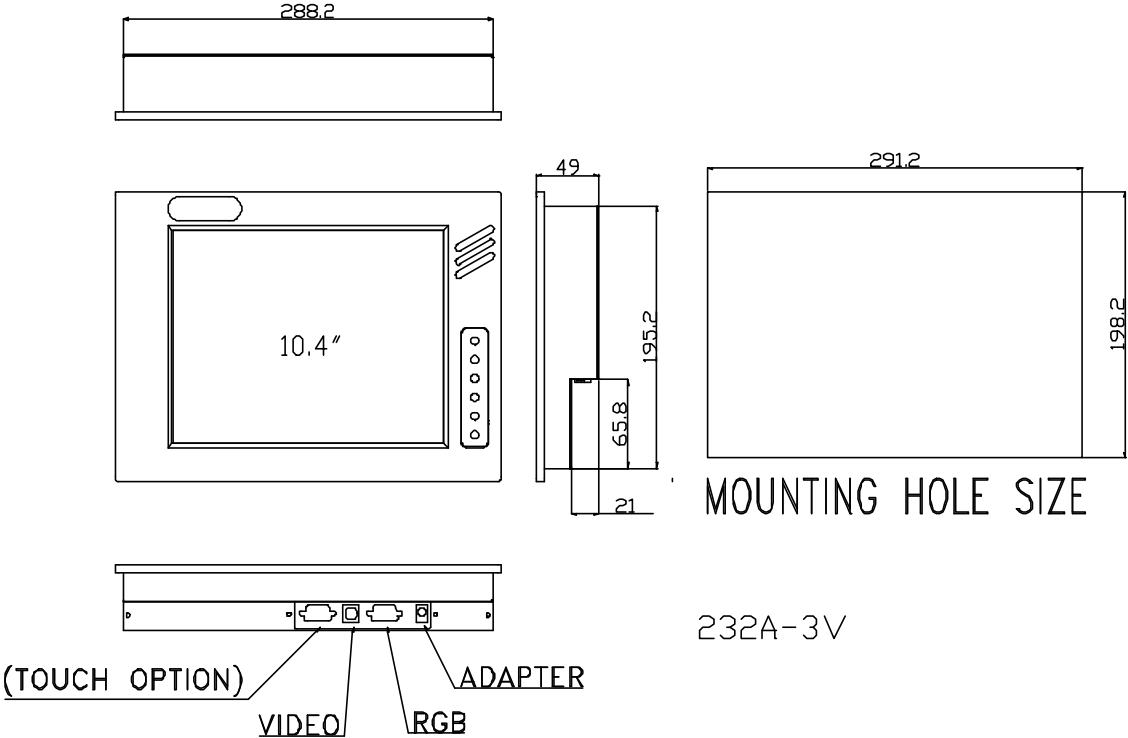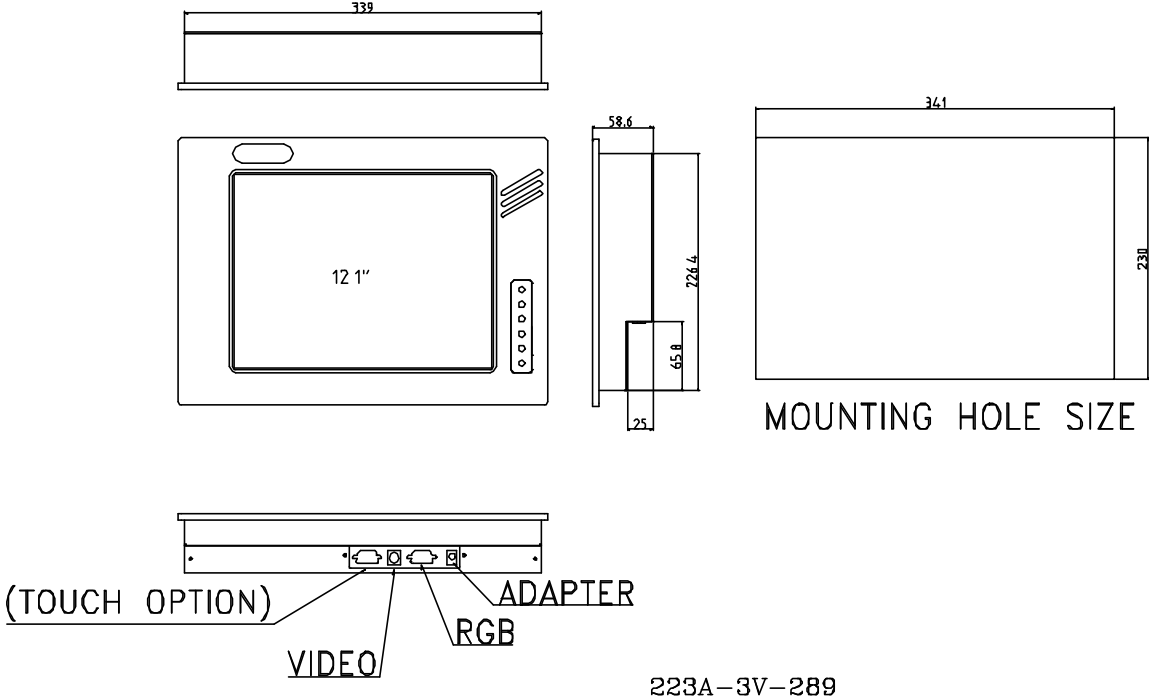
1.8.3. AMB-255A
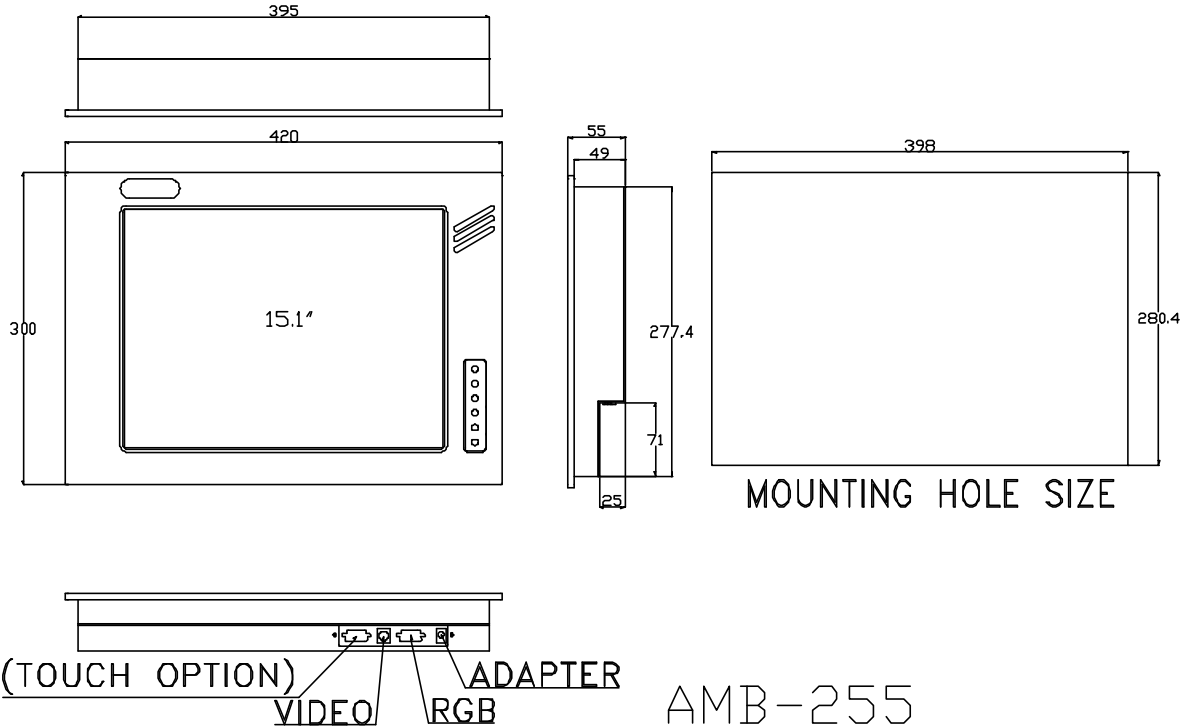
1.8.4. AMB-255AR
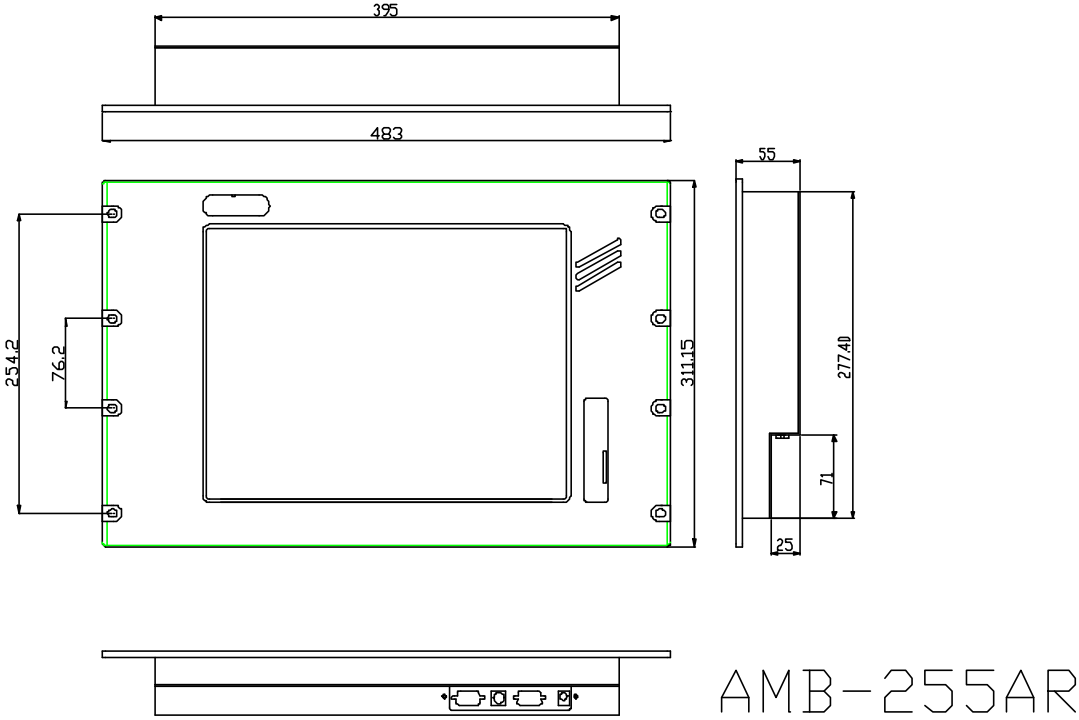
1.8.5. AMB-280A
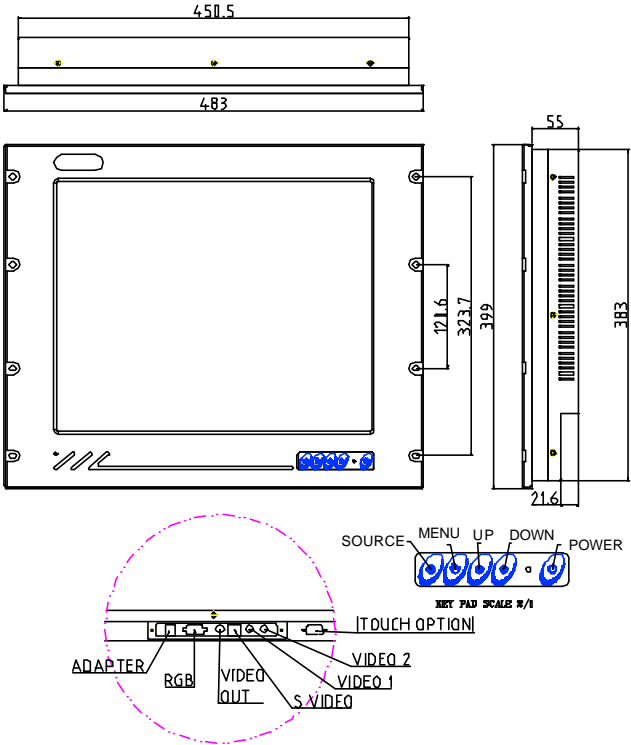
2

Chapter 2 Installation

Installation

2.1. Before Unpacking

It is very important to locate the LCD monitor in a suitable environment.

- The surface for placing the LCD monitor should be stable and level.

- Make sure the place has good ventilation, is out of direct unlighted, away form sources of excessive dust, dirt, heat, water, moisture and vibration.

- Convenience for connecting the LCD monitor to the related

- Facilities should be well considered too.
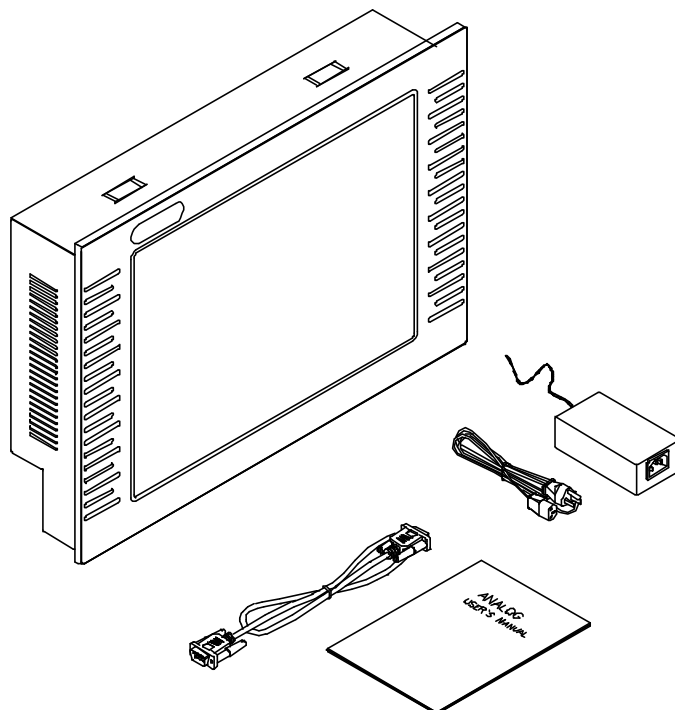
2.2.   Terminals on the Rear Panel

AMB-232A, AMB-223A, AMB-255A

(TOUCH OPTION)   ADAPTER

RGB

VIDEO

AMB-280A

SOURCE MENU UP DOWN POWER

KEY PAD SCALE 2/1

TOUCH OPTION

ADAPTER   VIDEO 2

RGB   VIDEO   VIDEO 1

OUT   S VIDEO
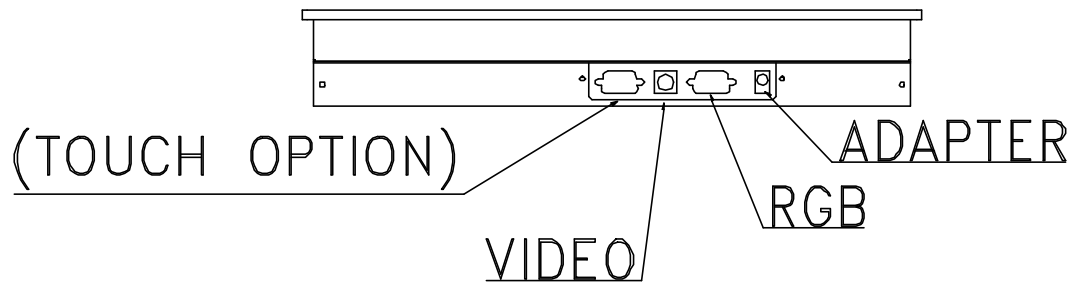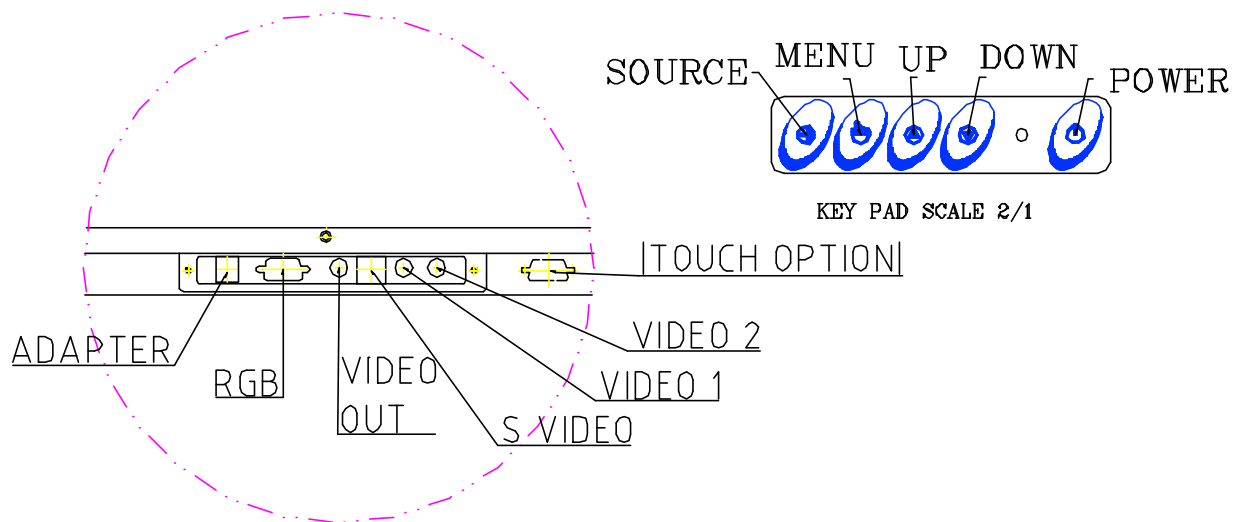
2.3.   Connecting Power

To supply the LCD monitor with power, use the provided AC-DC adapter and the power cord to connect to the power output socket of the computer. Fasten the connections securely.

Ps: If your computer is not equipped with such a power out put socket for the monitor, you may apply a power cord to connect to the provided AC-DC adapter and then plug it into the wall outlet. The plug should meet the electrical requirements in your country.
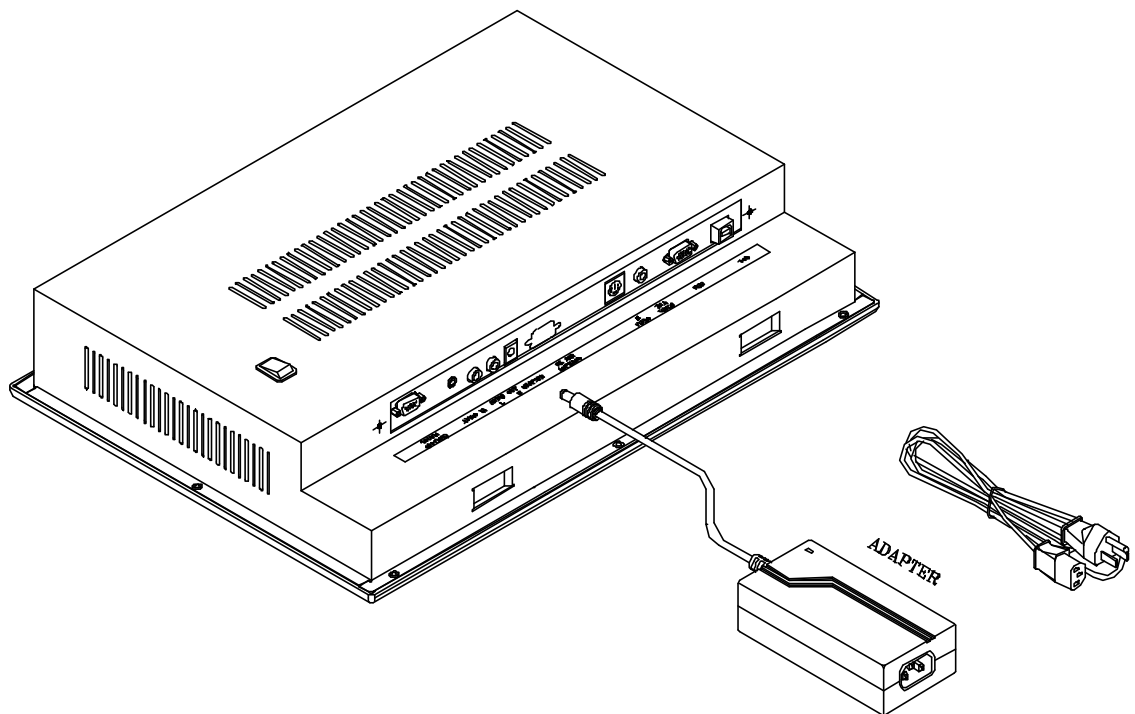
A "Surge Protection" device plugged between the AC-DC adapter and the wall outlet is recommended to prevent the effects of sudden current variations from reaching the LCD monitor. The sudden peaks of electricity may do harm to the LCD monitor.

2.4. Connecting the Computer

■ Turn off the computer and the LCD monitor before Connecting them.

■ Use the Monitor-to PC signal cable to connect the LCD monitor to the VGA port in your computer. The cable heads are the same on either side.

■ Fasten the connections securely.
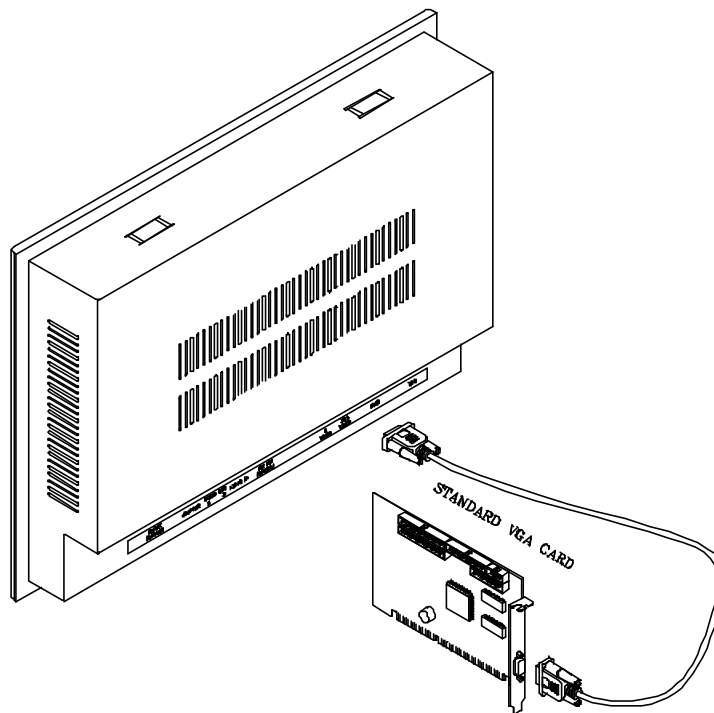
2.5.   Panel Mounting

These display panels can be placed on a shelf or table, or mounted onto a control panel. To mount them onto a control panel you need a kind of mounting kit, which you will find in the accessory box. Take the mounting steps described here below:

1. Set the display panel within the aperture in your control panel
2. Slide the mounting kits into the slots on the chassis cover
3. Tighten the bolt in the kits until the display panel is firmly secured to the control
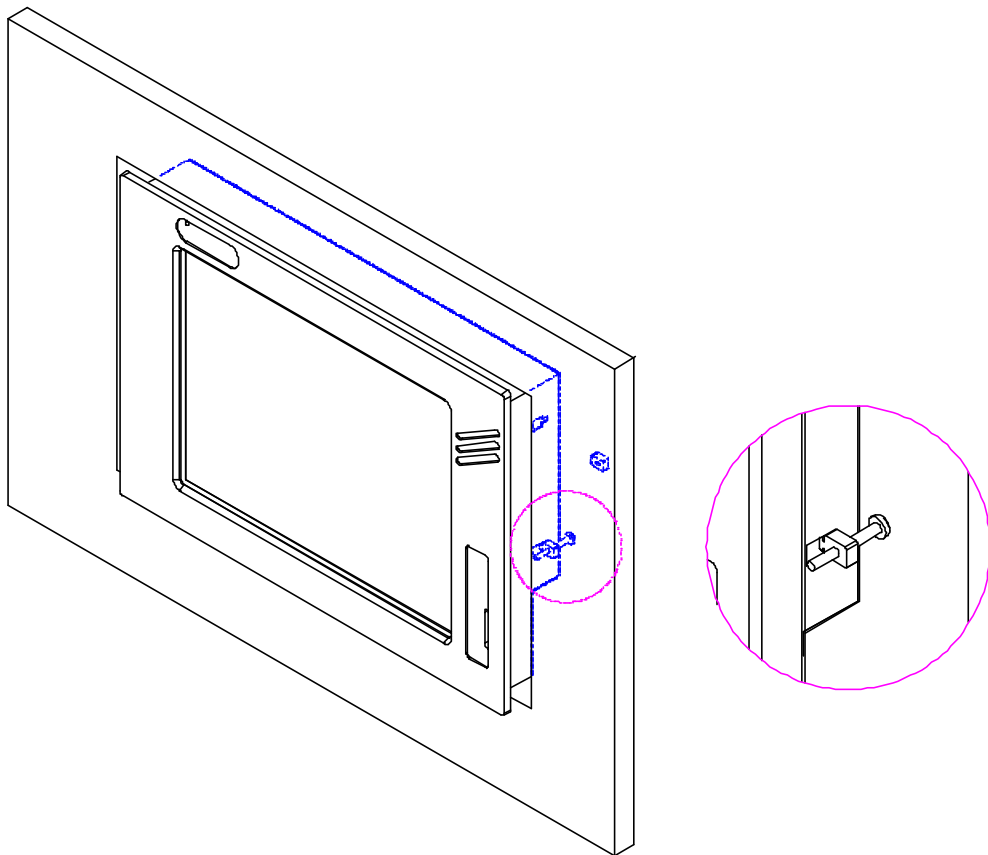
PANEL MOUNTING

2.6.   Desk Top (Optional)
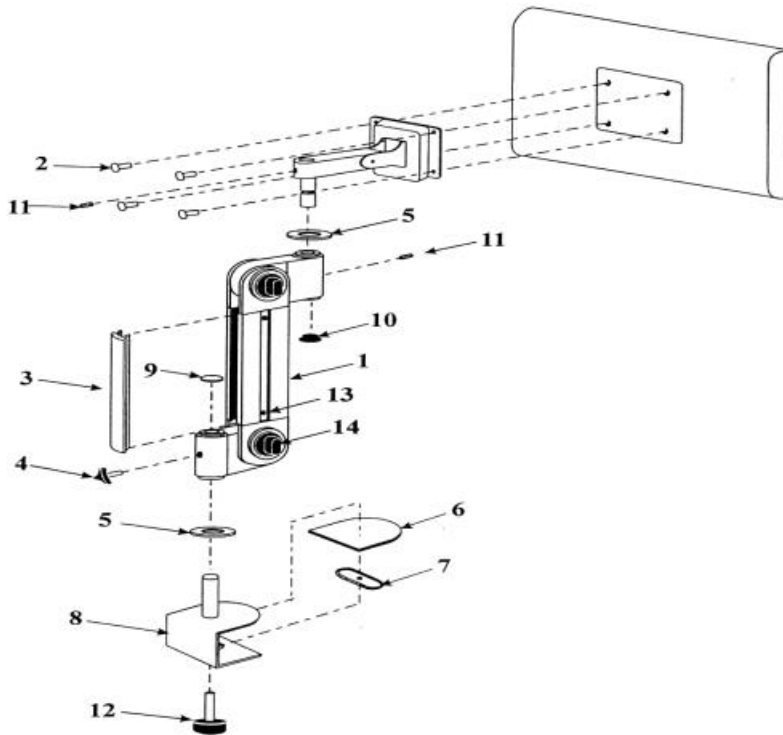
Important Information

1. You can adjust the tightness of arm rotation by turning #4 knobs clockwise.
2. You can adjust the tightness of display rotation by turning # 11 hex set screws clockwise or counter-clockwise by attached 3 mm hex key wrench.
3. Normally, you do not need adjust #14 knobs. If it is necessary to do so, you may turn the #14 knobs clockwise or counter-clockwise to adjust the friction for a most soft and smooth lifting operation of your LCD arm, but do not turn #14 knobs off.
4. You can counter-balanced adjust the tilt of your display for 45 degrees upward or 25 degrees downward. Hex key wrenches are attached for adjusting screw tightness when it is necessary.
5. Your LCD display is pivot adjustable
6. Cable can be organized inside the arm housing by removing and inserting #3 plastic cover.
7. Do not screw the #13 fasteners off.

2.7.   Wall Mounting (Optional)
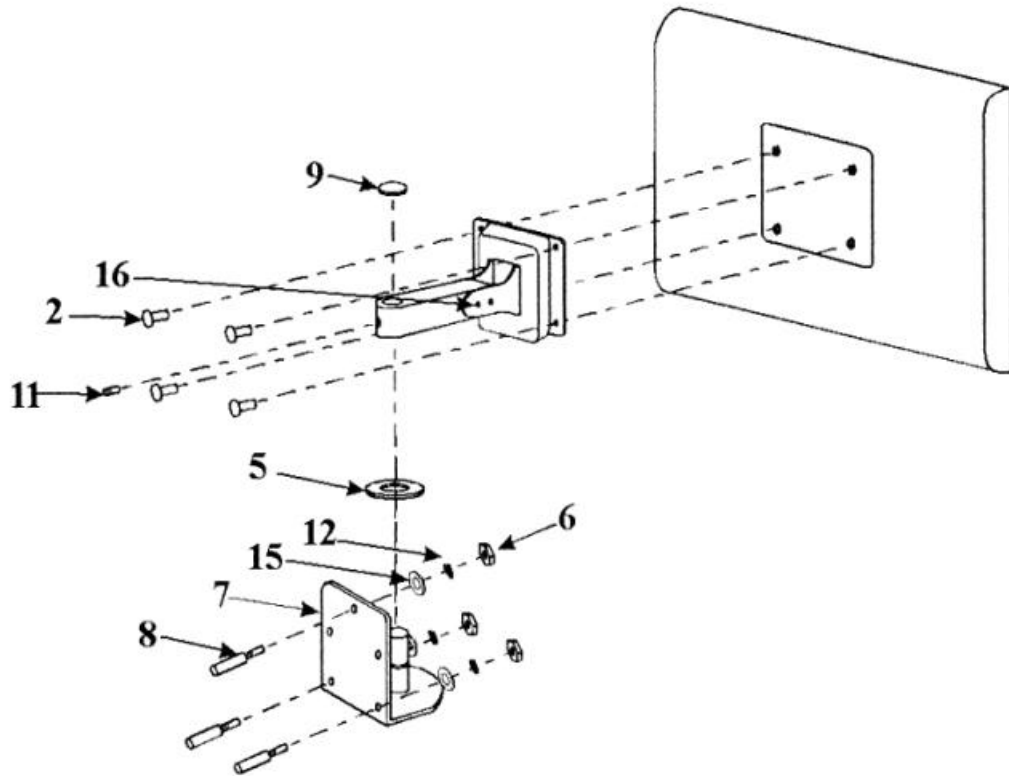
Important information

1. You can adjust the tightness of monitor rotation by turning #11 set screws Clockwise or counter-clockwise by the attached 3 mm hex key wrench.
2. Monitor tilt adjustment range is 45 degrees up or 25 degrees down. You are suggested to adjust #16 hex screw by the attached hex keys to a best tilt friction, when you first use of your LCD arm.
3. Your LCD monitor is portrait/landscape pivot adjustable 360 degrees.

2.8.   Rack Mounting (Optional)

Users can select different front panels for 19" rack mounting on 12.1"(AMB-223A) and 15" (AMB-255A) LCD panels.

ANALOG ROCK MOUNT
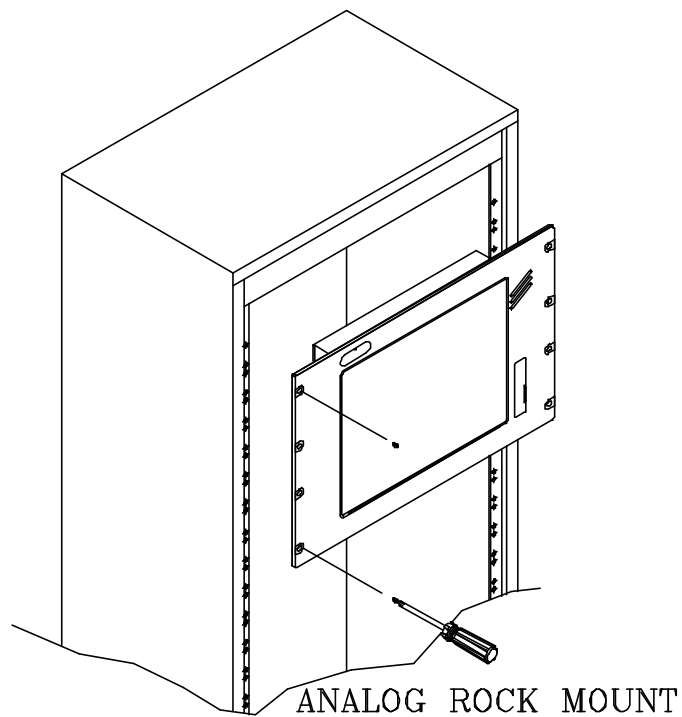
3

Chapter 3 User Controls

User Control

3.1.   OSD Controller

The LCD monitor is very easy and simple to operate. There are five controls below the front panel. You can see their respective indicators on the front.

```
       ⌐             ¬
      ┌─────────────┐
      │             │
      │   SOURCE    │
      │             │
      │   MENU      │
      │             │
      │   UP        │
      │             │
      │   DOWN      │
      │             │
      │             │
      │   POWER     │
      │             │
      └─────────────┘
       L             ⌐
```
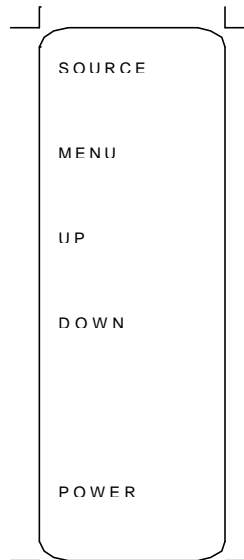
SOURCE	**PC & Composite Video Input Source change select** To scroll through items and locate them for adjustment in each page of the OSD menu, presses select button
MENU	**Menu** To activate the OSD menu, press the Button. When locating an item you like to adjust in the OSD menu, press to bring up the corresponding sub-menu for options.
UP	**Increase / Moving Down Button / Enter Button** To move the locating cursor forward in the OSD menu, press UP button. To increase the value while adjusting a parameter, press the UP button.
DOWN	**Decrease / Moving Up Button** To move the locating cursor backward in the OSD menu, press the DOWN button. To decrease the value while adjusting a parameter, press DOWN button.
POWER	**Power Switch** Push up the Power Switch to turn on the LCD monitor backlight and the power LED will light up green.

3.2.   On Screen Display [OSD]

There are eight options in the OSD menu. Press the Menu button to
Choose the items you would like to adjust.

<Menu>

```
BASIC SETTING
POSITION
SCREEN SETTING
AUTO ADJUST
MENU SETTING
RECALL
ALL RESET
EXIT
```

<BASIC SETTING>

```
BRIGHTNESS    128
CONTRAST      128
COLOR CONTROL
EXIT
```

BRIGHTNESS: To adjust the black color level of the image using **UP** and **DOWN** button.
CONTRAST: To adjust the white color level of the image using **UP** and **DOWN** button.
.

COLOR CONTROL:

```
┌─────────────────────────────────┐
│ COLOR 1                         │
│ COLOR 2                         │
│ COLDR 3                         │
│ USER                            │
│ EXIT                            │
│                                 │
├─────────────────────────────────┤
│                                 │
└─────────────────────────────────┘
```
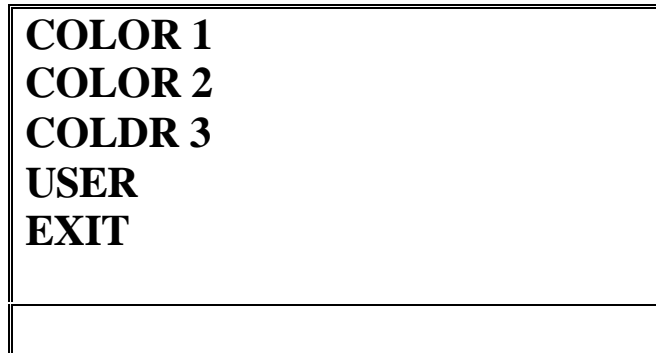
COLOR1: To setting the color temperature of the image
to 9300 K.

COLOR2: To setting the color temperature of the image
to 6500 K.

COLOR3: To setting the color temperature of the image
to 5000 K.

USER: To setting the RGB color of the image by user
define.

EXIT: Return previous menu.

EXIT (Under BASIC SETTING): Return previous menu.

<POSITION>

```
PHASE          10
H-SIZE         32
H-POSITION     32
V-POSITION     32
EXIT
```

PHASE: To adjust the noise of the image.
H-SIZE: To adjust the Horizontal size of the image.
H-POSITION: To adjust Horizontal position of the image.
V-POSITION: To adjust the Vertical position of the image.
EXIT: Return previous menu.

<SCREEN SETTING>

```
GRAPHIC/TEXT
EXPANSION
SMART SCALE
EXIT
```

GRAPHIC/TEXT: To exchange the 640X400(60Hz)/720X350(60Hz).
                 (Not for Windows OS)
EXPANSION: To expansion the image of full screen to shrink the
               image to normal (1piexl to 1piexl). (Not for 640 x 840)
SMART SCALE: To adjust the image to interpolation.
EXIT: Return previous menu.

<AUTO ADJUST>

AUTO ADJUST
AUTO TRANCKING
AUTO POSITION
EXIT
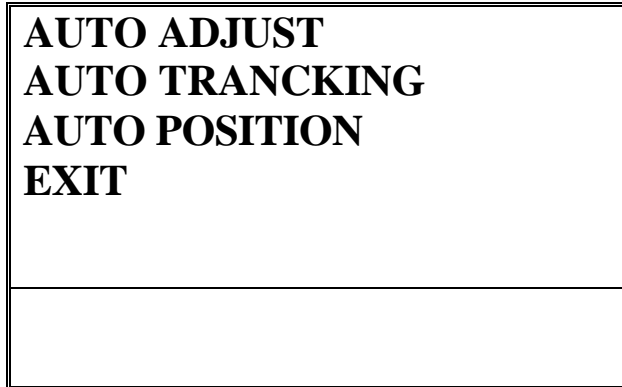
AUTO ADJUST: To auto tune the tracking & position. **Please make use of this feature whenever the VGA input has been changed.**
AUTO TRACKING: To auto tune the H-SIZE & PHASE of the image.
ATUO POSITION: To auto tune the Horizontal & Vertical position of
                the image.
EXIT: Return previous menu.

<MENU SETTING>

LANGUAGE
MENU POSITION
DISPLAY INFO
FW VERSION
EXIT

LANGUAGE: To select the English or Japanese of the OSD
MENU POSITION: To adjust the Horizontal & Vertical position
                of the OSD
DISPLAY INFO: To show the PC input Horizontal & Vertical
                Frequency & Resolution of the image.
FW VERSION: To show the version of the system BIOS.
EXIT: Return previous menu.

<RECALL>

When you run the function, the monitor will be setting to last status of the saving value.

<ALL RESET>

Recover the BIOS default setting.

<EXIT>

To close the OSD & saving all setting value.

A

APPENDIX A

Specifications

I. AMB-232A

Panel

Type	Color TFT
Size	Diagonal 10.4"
Brightness	200 cd/m2
Back light Life-time	20,000
Contrast Ratio	150: 1
Pixel Pitch	0.33x0.33mm
Viewing Angle (Horizontal)	90^0
Viewing Angle (Vertical)	50^0
Resolution	640x480
Display Modes	Full Screen in 640x480 mode
Color	262K
Input Signal	Analog RGB (0.7 V p-p, 75ohms)
Compatibility	VGA, SVGA, XGA, IBM PC, MacII
Power Management	VESA DPMS

Power Consumption

On- Working	48Watts (Max.)
On- Standby	4Watts
Input Voltage	AC 90~264V, 50~60Hz
Output	DC 12V / 3A
Safety & EMI	FCC-A, CE

II. AMB-223A

Panel

Type	Color TFT
Size	Diagonal 12.1"
Brightness	250 cd/m2
Back light Life-time	25,000 hrs
Contrast Ratio	250: 1
Pixel Pitch	0.3075(H) x 0.3075(V) mm
Viewing Angle (Horizontal)	120^0
Viewing Angle (Vertical)	100^0
Resolution	800x600
Display Modes	Full Screen in 640x480, 800x600mode
Color	262K
Input Signal	Analog RGB (0.7 V p-p, 75ohms)
Compatibility	VGA, SVGA, XGA, IBM PC, MacII
Power Management	VESA DPMS

Power Consumption

On- Working	48Watts (Max.)
On- Standby	4Watts
Input Voltage	AC 90~264V, 50~60Hz
Output	DC 12V / 3A

III.   AMB-255A

Panel

Type	Color TFT
Size	Diagonal 15"
Brightness	250 cd/m2
Back light Life-time	25,000 hrs
Contrast Ratio	300:1
Pixel Pitch	0.279(H) x 0.279(V) mm
Viewing Angle (Horizontal)	160^0
Viewing Angle (Vertical)	160^0
Resolution	1024x768
Display Modes	Full Screen in 640x480, 800x600, 1024x768 mode
Color	262K
Input Signal	Analog RGB (0.7 V p-p, 75ohms)
Compatibility	VGA, SVGA, XGA, IBM PC, MacII
Power Management	VESA DPMS

Power Consumption

On- Working	48Watts (Max.)
On- Standby	4Watts
Input Voltage	AC 90~264V, 50~60Hz
Output	DC 12V / 3A

IV.   AMB-280A

Panel

Type	Color TFT
Size	Diagonal 18.1"
Brightness	235 cd/m2
Back light Life-time	25,000 hrs
Contrast Ratio	300: 1
Pixel Pitch	0.2805(H) x 0.2805(V) mm
Viewing Angle (Horizontal)	160^0
Viewing Angle (Vertical)	160^0
Resolution	1280x1024
Display Modes	Full Screen in 640x480, 800x600, 1024x768, 1280x1024 mode
Color	16M
Input Signal	Analog RGB (0.7 V p-p, 75ohms)
Compatibility	VGA, SVGA, XGA, IBM PC, MacII
Power Management	VESA DPMS

Power Consumption

On- Working	60Watts (Max.)
On- Standby	4Watts
Input Voltage	AC 90~264V, 50~60Hz
Output	DC 12V / 3A

Standard Timing

RGB Input Format:

Supported Analog RGB Input Formats

MODE	Resolution	Horizontal (KHz)	Vertical (Hz)	Polarity (H/V)
TEXT	640X350	31.469	70.087	(+/-)
	720X350	31.469	70.087	(+/-)
	720X400	31.469	70.087	(-/+)
	640X400	31.469	70.087	(-/+)
	640X350	37.861	85.08	(+/-)
	720X350	37.861	85.08	(+/-)
	720X400	37.861	85.08	(+/-)
	640X400	37.927	85.039	(-/+)
	640X400	24.828	56.40	(-/-)
VGA	640X480	31.468	59.94	(-/-)
	640X480	37.861	72.809	(-/-)
	640X480	37.5	75	(-/-)
	640X480	43.269	85.008	(-/-)
	640X480	45	90	(+/+)
SVGA	800X600	35.156	56.26	(+/+)
	800X600	37.879	60.317	(+/+)
	800X600	48.077	72.188	(+/+)
	800X600	46.875	75	(+/+)
	800X600	53.674	85.061	(+/+)
XGA	1024X768	48.363	60.004	(-/-)
	1024X768	56.069	70.069	(-/-)
	1024X768	58.088	72.98	
	1024X768	60.023	75.029	(+/+)
	1024X768	68.677	84.997	(+/+)
	1024X768(I)	35.522	43.479	(+/+)
MAC	640X480	35	66.67	(+/-)
	832X624	49.729	74.5	(-/-)

Power Management System

The LCD monitor complies with the power management regulations of VESA DPMS(version 1.0p). It is provided with two phases of power saving modes by detecting the horizontal or vertical synchronous signal.

When the system is in the power saving mode or an incorrect timing is detected, the monitor screen will be blank and the power LED will flash orange.

Status	Power Consumption	Time to Resume	LED Color
On – Working	48 watts (max.)		Green
On – Standby	less than 4 watts	3 seconds	Orange

Troubleshooting

To solve the following problems, you may need to refer to **Appendix A Standard Timing** for compatible display specifications.

- Problem: Unclear or Unsteady Display

Actions:
1. Change to the Windows' s SHUT DOWN screen.
2. Activate the OSD menu.
3. Adjust the setting of frequency to stabilize the display.
4. Adjust the setting of phase to clarify the image.
5. You might need to repeat steps 3 and 4 to find balanced values for a best quality.

- Problem: No Display is shown on the LCD monitor.

Actions:
1. Make sure the LCD monitor is powered on by checking if the Power LED is lit. Check if all the connections are secure and the system is running correctly.
2. If the power LED lights up green, but there is still nothing displayed; connect your PC with another external monitor. If your PC works properly with that monitor, then it is possible that the VGA card timing of the system may be outside the LCD monitor' s synchronous range. You may need a qualified technician for help.

- Problem: "Not Supported Mode" is shown on the display.

    Action: This could be a mistake you made in the OSD menu while choosing the INPUT SOURCE: RGB or VEDIO. Or, it is possible that you have chosen a timing that is outside the LCD monitor' s synchronous range. Recall the factory default values may help to bring the screen back to normal.

- Problem: The LCD monitor does not work properly under Windows, but it functions all right in DOS mode.

    Action: Make sure the display mode you choose in Windows matches the LCD monitor.

B

APPENDIX B

Exploded diagram

I. AMB-232A
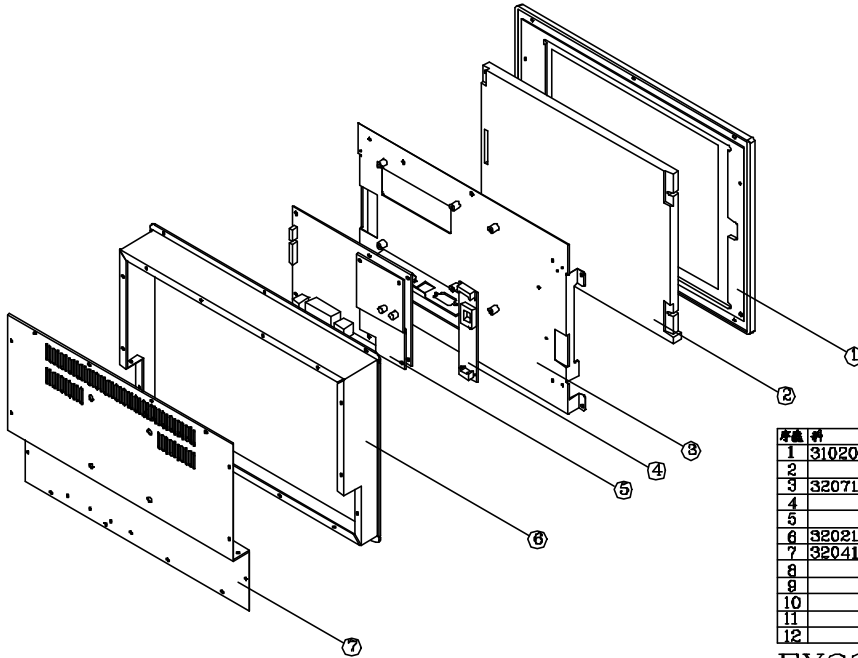
序 位	料	產 品 名 規 格	數 量	備	註
1	31020710000	後蓋	1		
2		33-18LCD	1		
3	32071500001	DISPLAY固定架	1		
4		INVERTER	1		
5		AD BOARD	1		
6	32021330001	前框	1		
7	32041402801	線置	1		
8			1		
9					
10					
11					
12					

EX232A000

II. AMB-223A
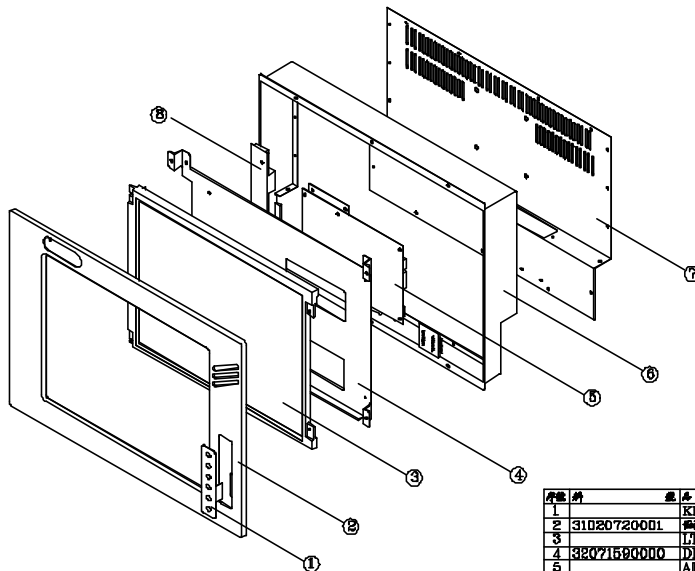
序 位	料	產 品 名 規 格	數 量	備	註
1		KEY PAD	1		
2	31020720001	後蓋	1		
3		LTM289 LCD	1		
4	32071590000	DISPLAY固定架	1		
5		AD BOARD	1		
6	32021380000	前框	1		
7	32041450000	線置	1		
8		INVERTER	1		
9					
10					
11					
12					

EX223A000 FOR LTM289

III. AMB-255

EX2551A00
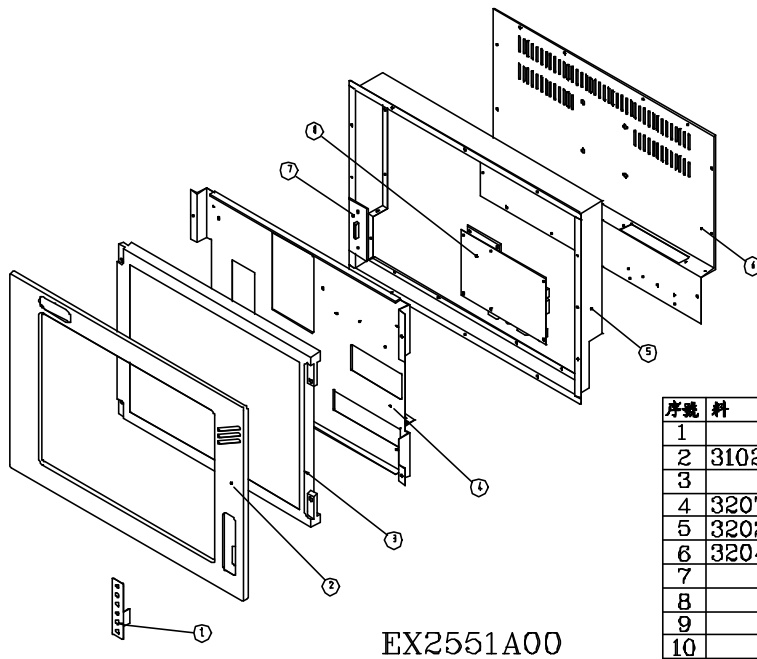
序號	料 號	品 名 規 格	數量	備 註
1		KEY PAD	1	
2	31020700000	面板	1	
3		LCD 15"	1	
4	32071490001	DISPLAY固定架	1	
5	32021320001	前框	1	
6	32041440000	後蓋	1	
7		轉接板	1	
8		AD BOARD	1	
9				
10				

IV. AMB-280A

EX280000
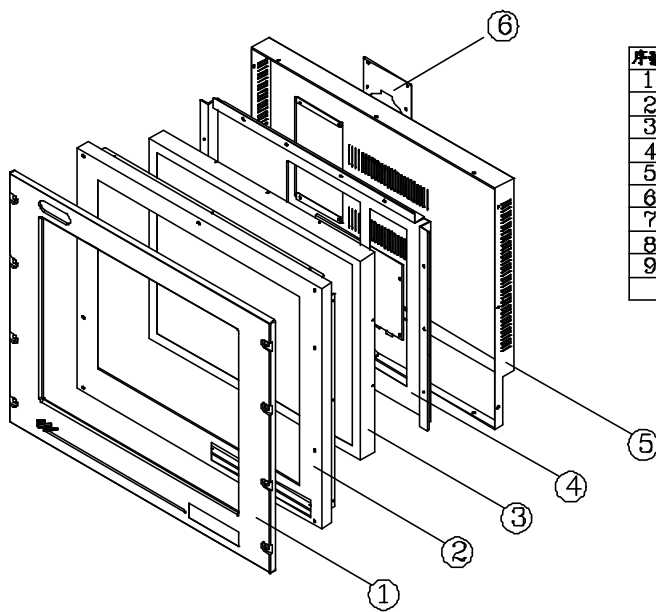
序號	料 號	品 名 規 格	數量	備 註
1	31180480002	面板	1	
2	32051040002	外殼固定架	1	
3		18.1LCD	1	
4	32071460001	DISPLAY固定架	1	
5	32041130002	後蓋	1	
6	32051290000	風扇固定架	1	
7				
8				
9				