RLM-150

LCD Monitor Drawer

User Manual

Version 1.0

November 10, 2003

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1. Introduction

The RLM series consists of a 15" LCD screen. This all-in-one design is the best choice for easy set-up and user-friendly operation in the industrial environment.

1.1 Features

- Could be connected directly to a computer.
- Equipped with a 15" high brightness TFT LCD screen using a panel interface with 15 pins D-type connector, which conforms to the VGA standard.
- Slim body design with 1U height, saving rack space.

## 1.2 Checklist

Item	Description	Qty.
1	RLM-150 User Manual	1
2	Power Cable	1
3	RACK Mounting kit	2
4	Screw Accessories	1
5	RLM-150 rack mount drawer 15" LCD monitor	1

2. Specifications

- **LCD Display:** TTL LCD connector interface supports the screen reverse function.

  - ✓ **Display Model:** CHI MEI
  - ✓ **Display Type:** 15" TFT color
  - ✓ **LCD Model:** M150X2-T05
  - ✓ **Resolution:** 1024 x 768
  - ✓ **Display Colors:** 262,144 color
  - ✓ **Brightness:** 250 cd/m2
  - ✓ **Viewing Analog:** 160(H) x 160(V)
  - ✓ **LCD MTBF:** 50,000 hrs
  - ✓ **Backlight MTBF:** 30,000 hrs
  - ✓ **Supply Voltage:** 3.3V

- **Standard Power Adapter:** +12 VDC/3.75A

- **Standard D-sub 15Pin VGA Input connector**

- **Vibration:** 5~17Hz, 0.1"double amplitude displacement
  17~640Hz, 1.5G acceleration peak to peak

- **Shock:** 10G acceleration peak to peak (11ms)

- **Storage Temperature:** -20~60ºC

- **Operation Temperature:** 0~50ºC

- **Color:** Black (PANTONE BLACK C), White (PANTONE 433C)

- **Depth:** 510mm

- **Optional Touch Screen:**

  - ✓ **3M Resistive Touch Screen**
  - ✓ **Type:** Analog Resistive
  - ✓ **Resolution:** Continuous
  - ✓ **Light transmission:** Typical value 75%
  - ✓ **Surface Hardness:** 4H (Test condition: ASTM D3363-92A)
  - ✓ **8-wire touch screen**
  - ✓ **Touch screen interface:** RS-232
  - ✓ **Support driver:** Supports Linux, MS-DOS, Windows 3.1/95/ 98/CE, ME/2000/NT,OS/2,MAC,etc.

● **DIMENSION**

436

520

560

482

465

31.75

44
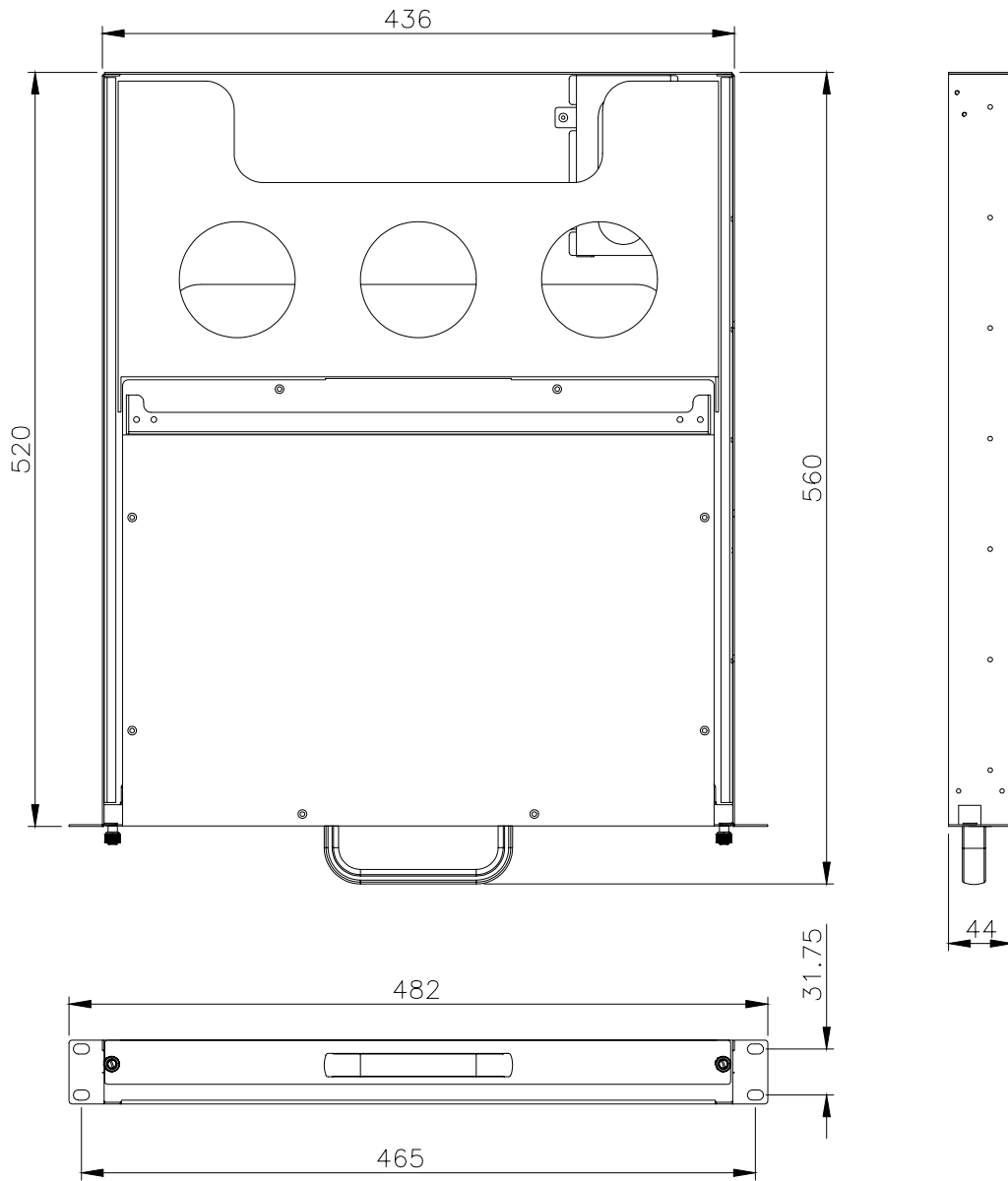
3. Using RLM-150

Step 1.   Unwrap the package and mount RLM-150 on the rack provided. RLM-150 supplies the rear bolster to make rack mounting easier.

For Rack mount
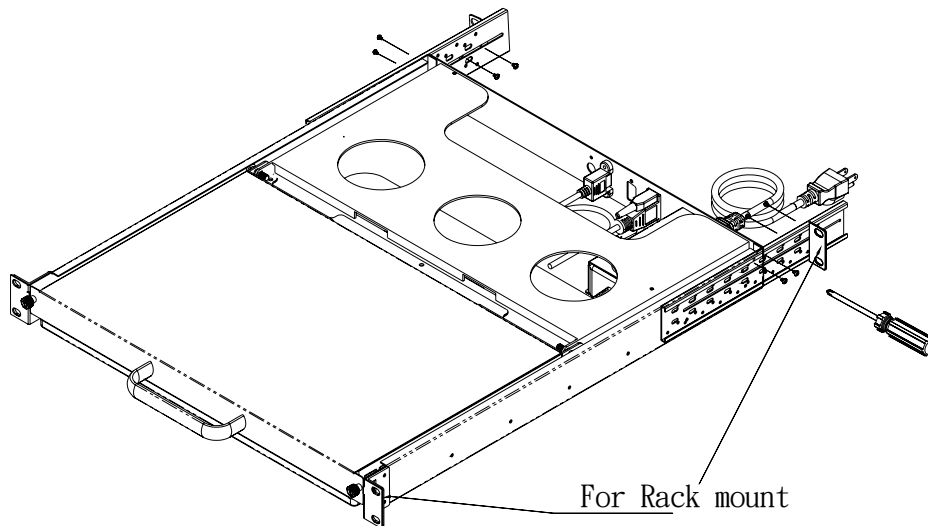
⚠ Please switch the power off and unplug adapter before connecting or disconnecting to RLM-150

Step 2.   Connect RLM-150 (using standard VGA), cable to the computer as the figure shown below.

PS/2 Port
USB Port
RS-232 Port
VGA Port
POWER INPUT
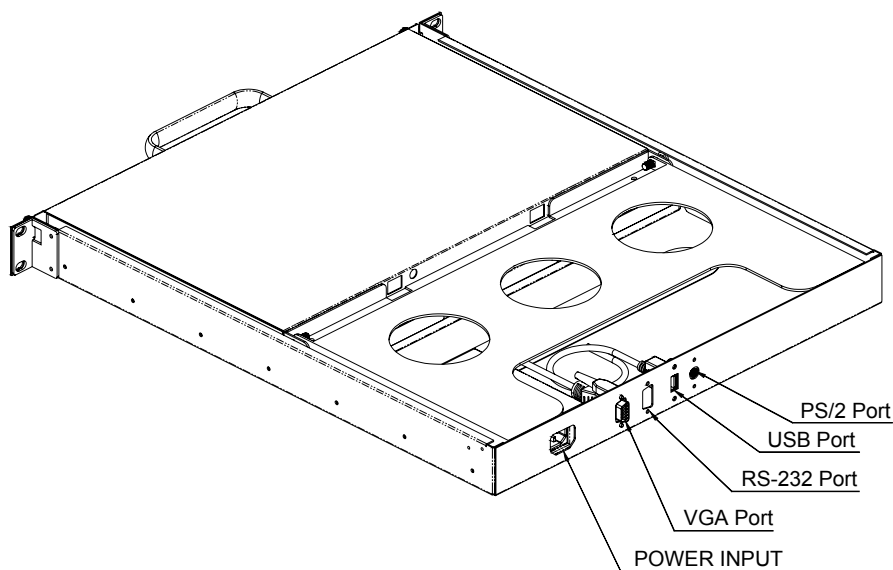
Step 3.   Plug the adapter into RLM-150 as shown in the following figure.
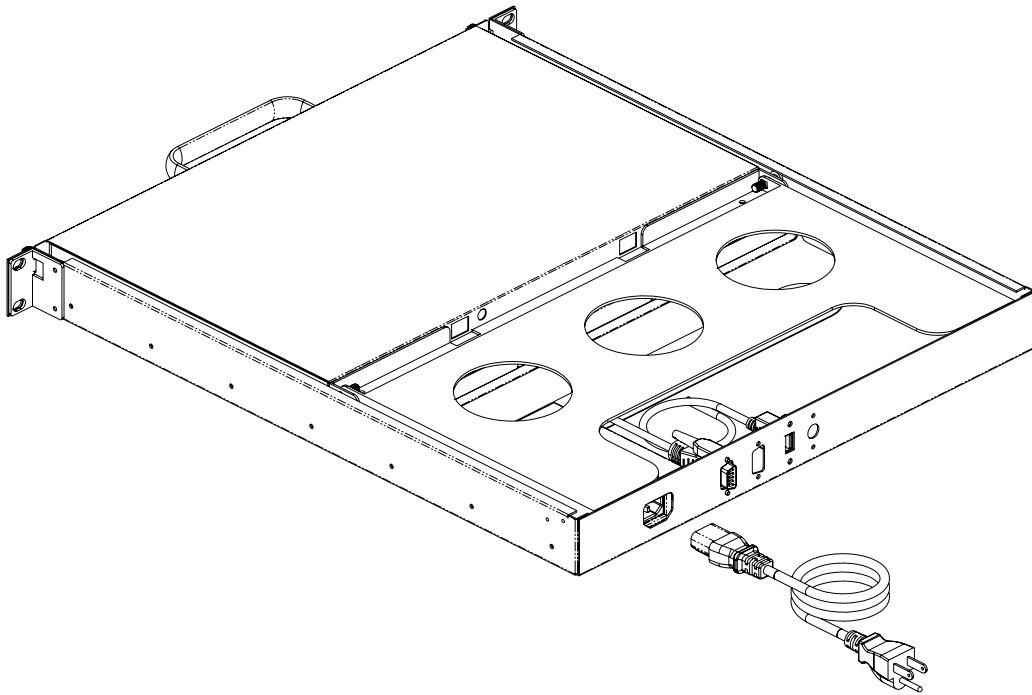
⚠ Please be aware of static electricity when you establish each connection.

Step 4.   OPEN Monitor Drawer.
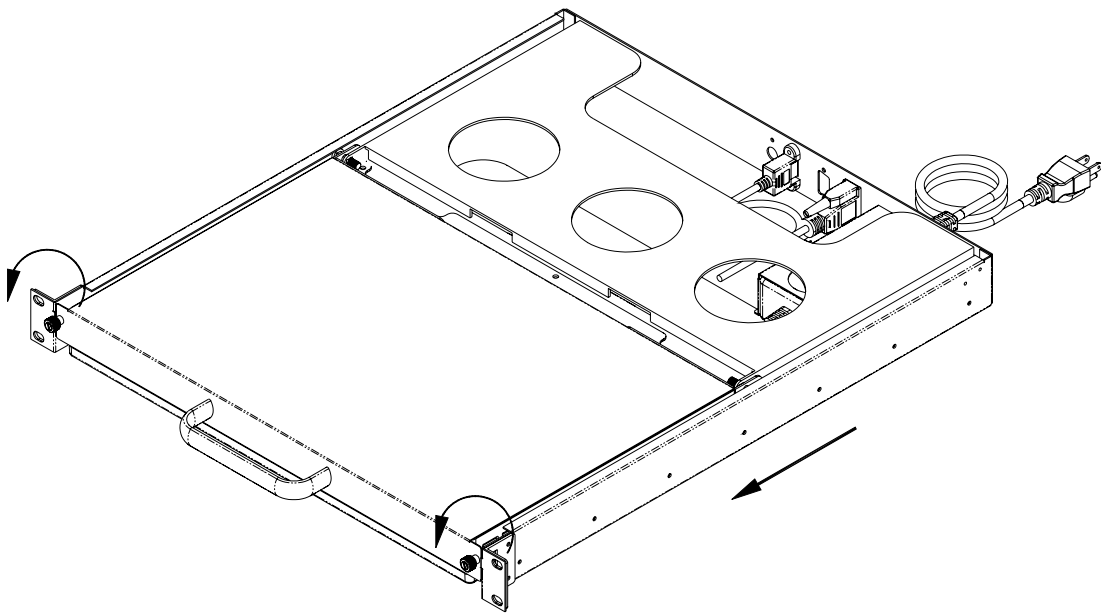
Step 5. Multiple sliding Monitor function.

UP

Step 2
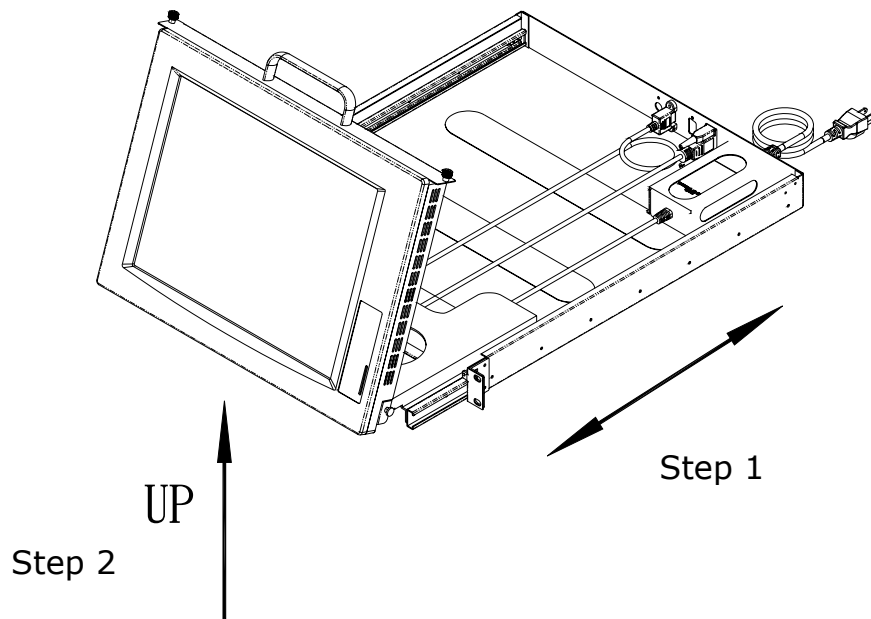
Step 1

Step 6. Turn on the computer.

LEFT Button
UP Button
RIGHT Button
DOWN Button
RETURN/MENU Button
LCD ON/OFF Button
POWER LED Indicate

RETURN/MENU

ON/OFF

POWER

4. Overall View of RLM-150

POWER INPUT

VGA PORT

RS-232 PORT

USB PORT

P/S2 PORT
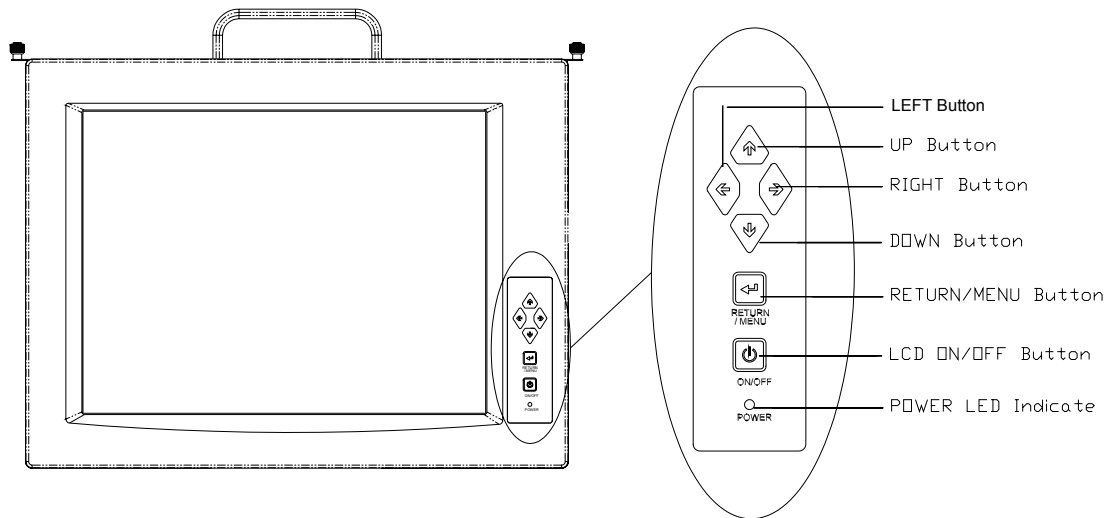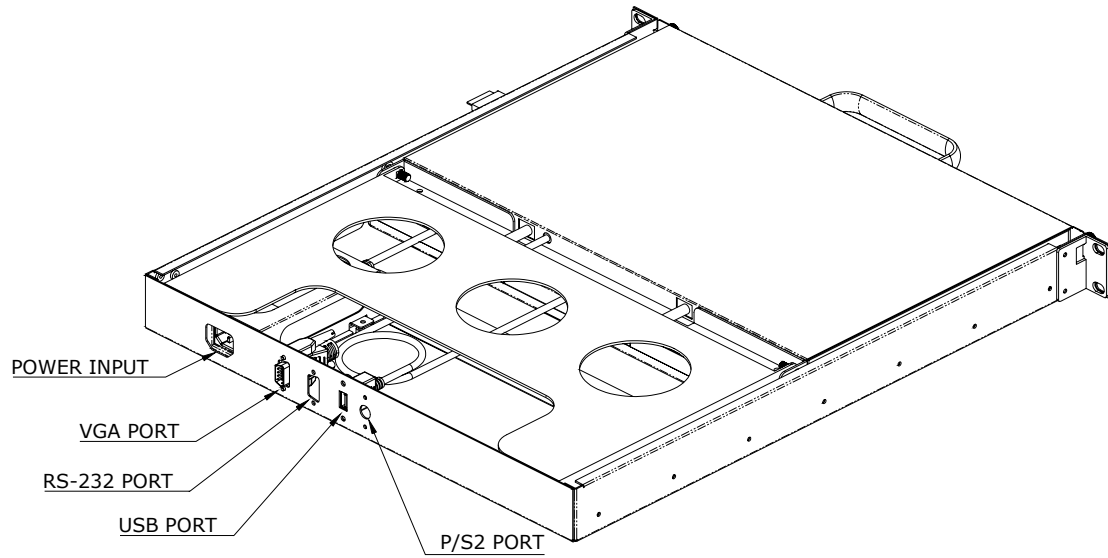
5.   OSD Control for LCD Display Settings

To change LCD display settings, use the OSD control buttons shown below and follow the instructions.
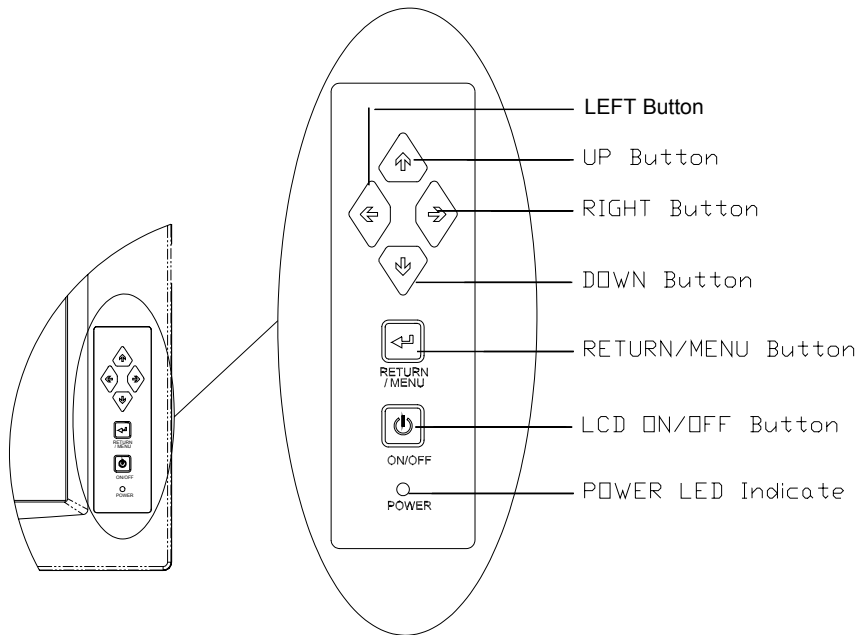
Step 1. Using "Up" & "Down" buttons to move the selecting bar then press the "Select" button to choose the OSD option.

⚠️ If the user wants to restore the default setting, please select the "Revert" option.

Step 2. Select "Save" to complete the adjustment.
Step 3. Press "Return" to leave the OSD page.

For more information concerning LCD display settings, please refer to Appendix 1.

Appendix A User Mode OSD Structure

LEVEL 0	LEVEL 1	VALUE
DISPLAY ADJUST	H-Position	0-255
	V-Position	0-30
	CLOCK	0-1788
	PHASE	0-31
	AUTO	YES , NO
	EXIT	Press Menu Button
INPUT SELECT	ANALOG	Press Menu Button
	DIGITAL	Press Menu Button
	VIDEO COMPOSITE	Press Menu Button
	VIDEO S-VIDEO	Press Menu Button
	EXIT	Press Menu Button
COLOR ADJUST	COLOR TEMPERATURE	6500K , 9300K
	RED GAIN	0-255
	GREEN GAIN	0-255
	BLUE GAIN	0-255
	EXIT	Press Menu Button
OSD ADJUST	H-Position	0-255
	V-Position	0-255
	OSD-OFF TIME	0-120
	LANGUAGE	English , Espanol , Deutsch , Frangais ,Italiao
	EXIT	Press Menu Button
ZURAC ADJUST	BRIGHTNESS-Z	0-255
	CONTRAST-Z	0-255
	DOS-MODE	TEXT , GRAPHICS
	CONTRAST-ADC	0-255
	EXIT	Press Menu Button
EXIT	EXIT OSD	Press Menu Button

Appendix B User Mode OSD Item Description

- **PHASE**

  This function is used to adjust the sampling Phase.

- **BRIGHTNESS-Z**

  This option is available for adjusting the brightness of screen. You can adjust the offset value of ZURAC through this option. Setting this value too high or too low will destroy the quality of image.

- **CONTRAST-Z**

- **CONTRAST-ADC**

  This option is available for adjusting contrast of screen. You can adjust the gain value of ZURAC or ADC through this option. Adjusting this value too high or too low will destroy the quality of image.

- **DOS-MODE**

  This option is available for selecting VGA input signal, to text mode or graphic mode. (It is only selectable on resolution of 720/640x400 or 720/640x350.) 400 and 350 standard IBM modes have the same H-sync. and V-sync. value so AV-0911 MPU cannot differentiate them automatically. You will need to adjust them manually so as to match the proper VGA mode.

- **H-POSITION**

  This option is available for adjusting the horizontal display position of image.

- **V-POSITION**

  This option is available for adjusting the vertical display position of image.

- **LANGUAGE**

  This option is available for selecting language used on OSD display. AV-0911 now can support the following 5 different languages. English is the default language.
    English
    Espanol
    Deutsch
   **Frangais**
    Italiao

- **Exit**

  Press 'EXIT' key to exit OSD menu when the OSD menu is at the first level.

Appendix C Power Adapter Specification

- **Model no:** UP0451E-12P67L

    ✓ **Input requirements:**
    Input Voltage range: 90 to 264 VAC.
    Line frequency: 47 to 63 HZ.
    In-Rush current: 40A max

    ✓ **Output:**
    Output Voltage range at +12V ±0.5V 3.75A 45 Watt
    Ripple and Noise: Voltage 120 mV

    ✓ **Operating environmental conditions:**
    Ambient Temperature: 0°C~40°C.
    Relative Humidity: 5%~95%.
    Altitude: Sea level to 10,000 feet.
    Vibration: 10-55Hz, 15 minutes X,Y,Z Axis cycle:20.

    ✓ **Efficiency: 80%**

    ✓ **EMI emissions:**
    The power supply meets the radiated and conducted emission
    requirements for a (CISPR22 CLASS B) and a (FCC CLASS B).

    ✓ **MTBF:**
    When the power supply is operated within the limits of the above-
    mentioned specifications, the MTBF shall be at least (150,000) hours
    at 25°C.

Appendix D Explode Drawing
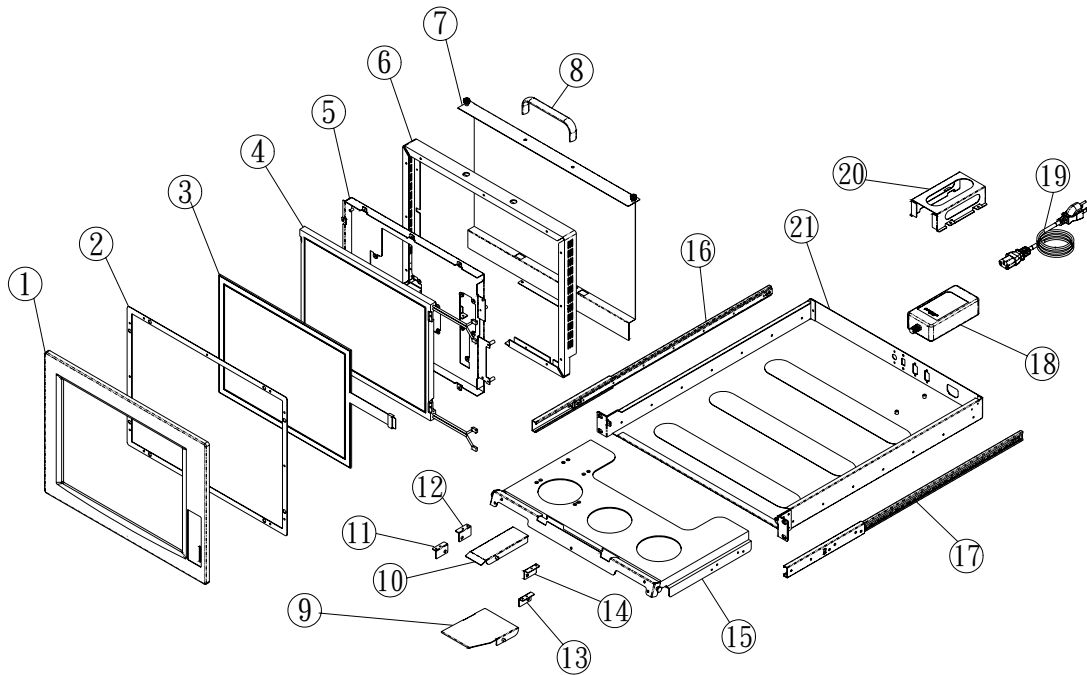
Part No.	Component
1	External Panel
2	Front Frame
3	Tempered Glass
4	LCD
5	LCD Steady
6	Rear Rack
7	Rear Cover
8	Handle
9	Bearing Slide Lock (front)
10	Bearing Slide Lock (rear)
11~15	Corner Braces
16~17	Slide
18	Power Supply
19	Power Cable
20	Stationary Barrier for Power Supply
21	Stand