



User Manual



Innovative LCD Display Solutions

AP-20 Series

DP-20 Series

OP-20 Series

NAP-20 Series



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2. Introduction

A. Overview

This LCD monitor incorporates 20" color active matrix thin-film-transistor (TFT) liquid crystal display to provide superior display performance. A maximum resolution of 1600 x 1200 is ideal for displaying complex graphics and high definition images. Other outstanding designs that enhance this LCD monitor's performance are Plug & Play compatibility and OSD (On Screen Display) controls.

B. Features

- High contrast color TFT LCD display support resolution up to 1600 x 1200.
- Advanced OSD control for picture quality adjustment.
- Detachable stand for wall-mounting application.
- Optional Composite and S-Video input
- Slim and compact size
- Wide Viewing Angle

Disclaimer

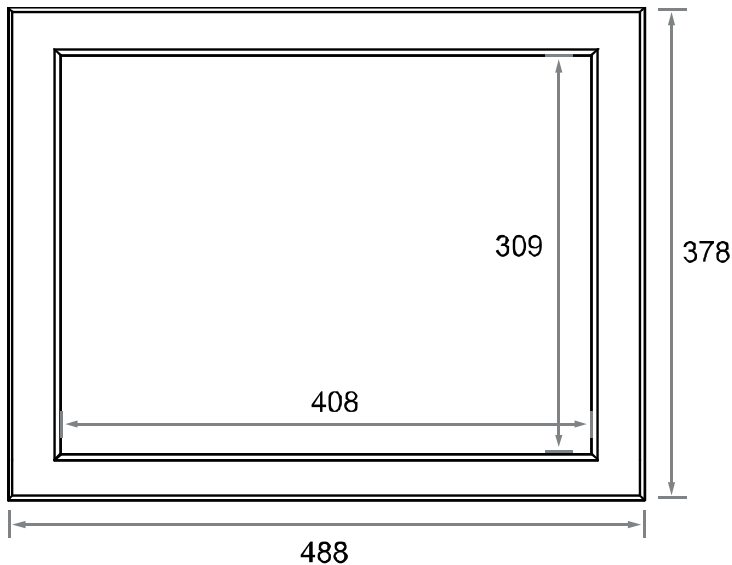
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2. Introduction

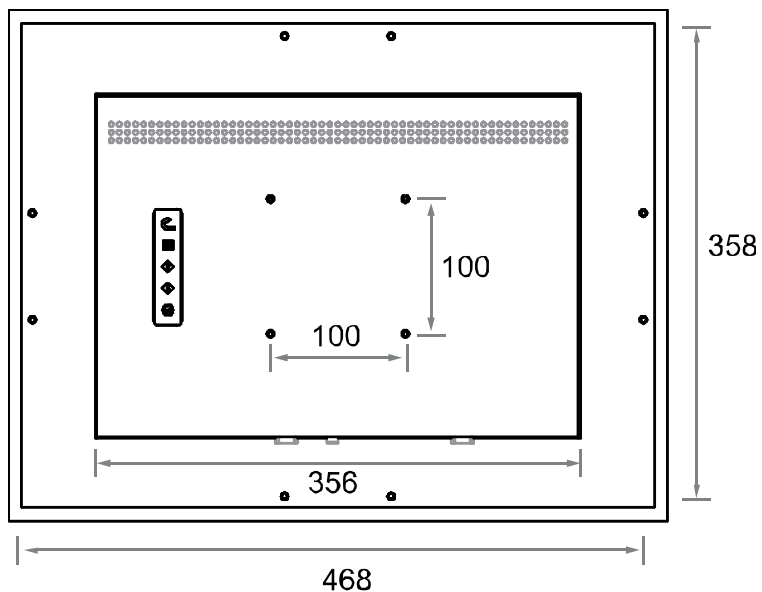
C. Dimension Diagrams

AP-20

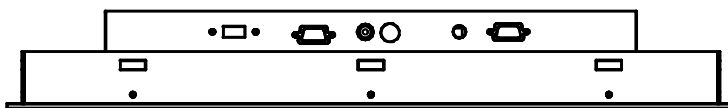
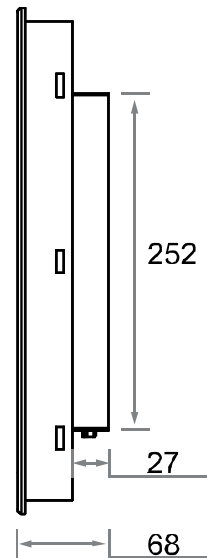
Front



Rear



Side

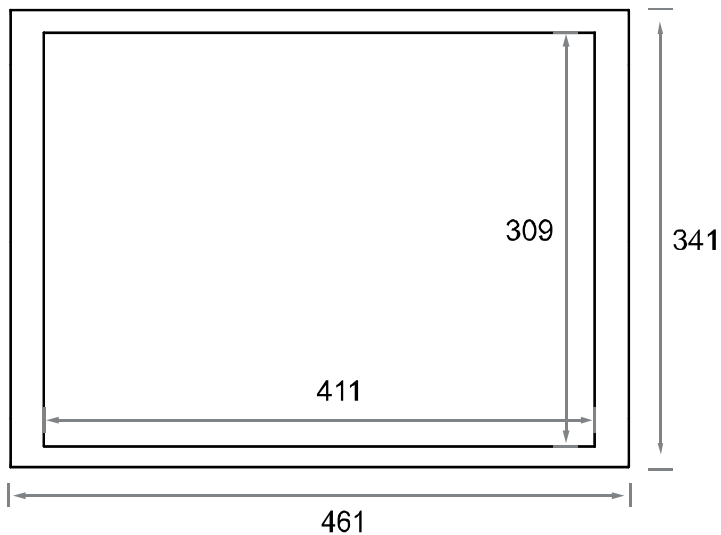


2. Introduction

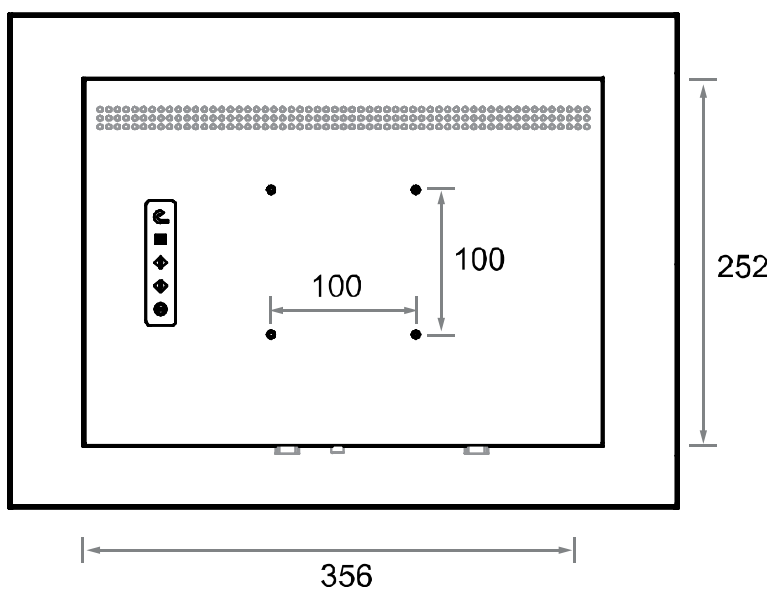
C. Dimension Diagrams

DP-20

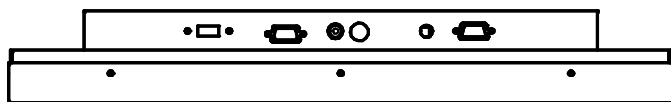
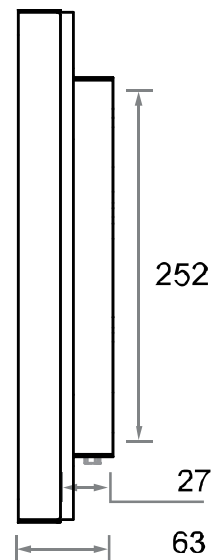
Front



Rear



Side

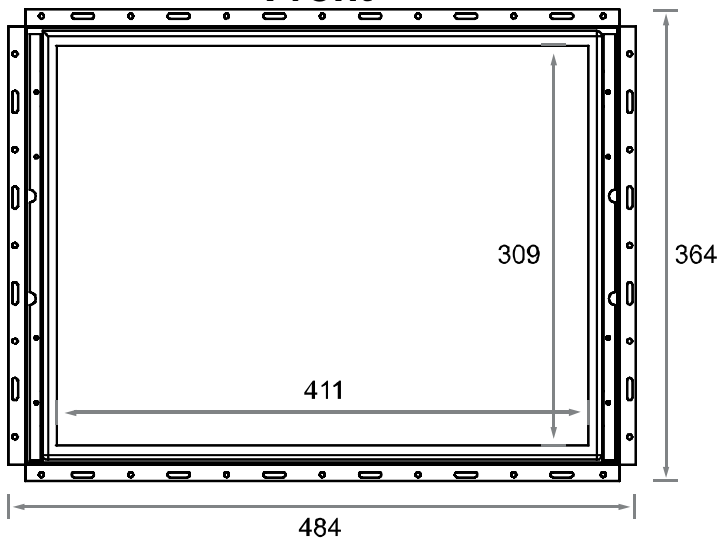


2. Introduction

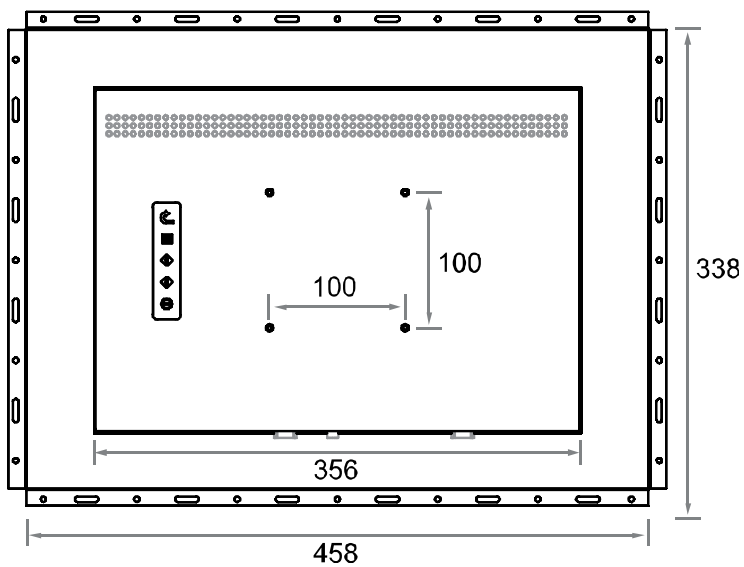
C. Dimension Diagrams

OP-20

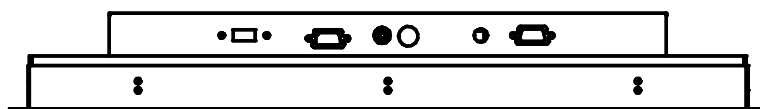
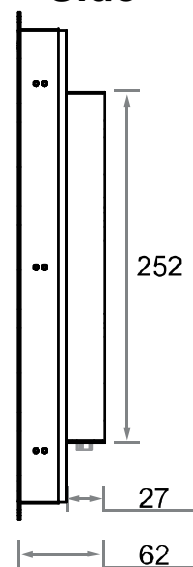
Front



Rear



Side

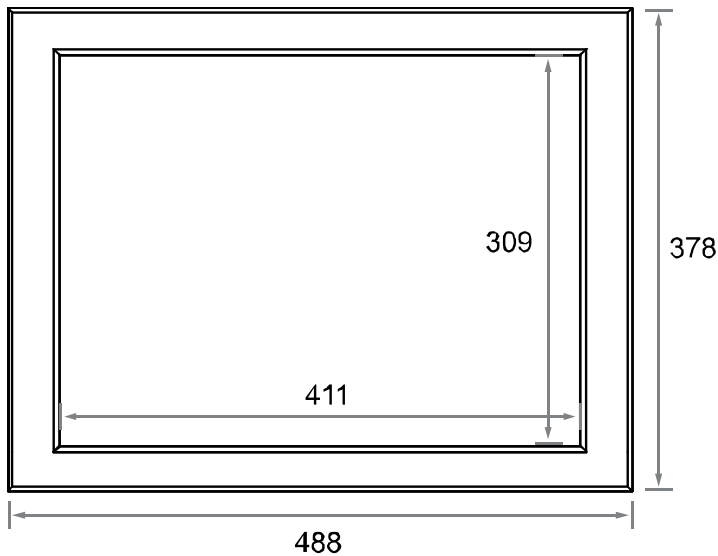


2. Introduction

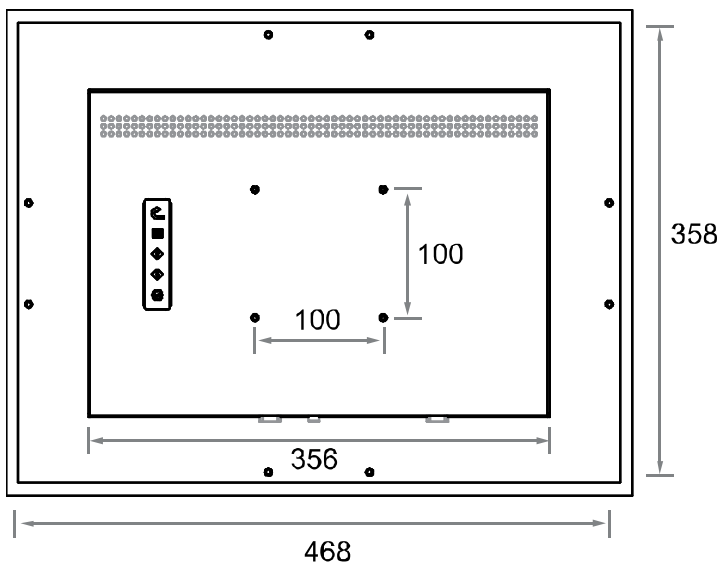
C. Dimension Diagrams

NAP-20

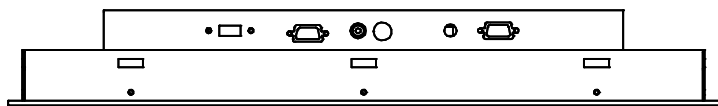
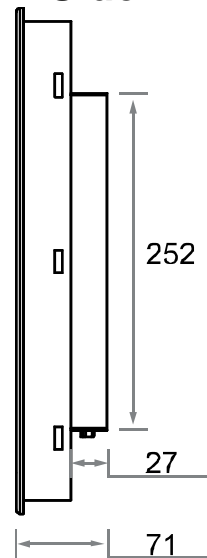
Front



Rear



Side



2. Introduction

Technical Specifications		
Monitor	LCD Panel (inch)	SAMSUNG 20"
	Display Type	TFT LCD active matrix colour
	Resolutions	1600 x 1200
	Response Time (ms)	Tr=1, Tf=4
	Contrast Ratio	800:1
	Brightness (cd/m ²)	300
	Pixel Pitch (HxV, mm)	0.255 x 0.255
	Display Colour	16.7M
	Viewing Angle (L / R / U / D)	80 / 80 / 80 / 80
	Storage Temp. (°C)	-10 to 60
	Operating Temp. (°C)	0 to 50
	LCD MTBF (hrs)	50,000
	Power Supply	Type
AC Input		100~240VAC
DC Output		12VDC
Adapter Size (WxDXH, mm)		108 x 64 x 30
Connectors	RCA	Composite video input (female) x 1
	S-Video	Mini DIN 4-pin (female) x 1
	VGA	HDDB 15-pin (female) x 1
Video	Standards	Supports NTSC, PAL or SECAM
Product Dimension	AP Series (WxHxD, mm)	488 x 378 x 68
	DP Series (WxHxD, mm)	461 x 341 x 63
	OP Series (WxHxD, mm)	484 x 364 x 62
	NAP Series (WxHxD, mm)	488 x 378 x 71
Packing Dimension	AP / DP / OP / NAP (WxHxD, mm)	653 x 558 x 112
Weight	Net (kg)	7
	Gross (kg)	9

3. Installation

A. Package Contents

After unpacking the carton, check and see if the following items are included in good condition. Contact your supplier as soon as possible for replacing the missing / damaged items.

- 20" TFT LCD monitor
- VGA Cable (Male to Male)
- DC 12V Adapter
- Power Cord
- Mounting Bracket (AP Series only)
- User Manual
- CD Disc
- RCA Cable (AV Version Only)
- S- Video Cable (AV Version Only)

B. Caution to The User

To assure continued FCC compliance, please use grounded power supply cord and the provided shielded video interface cable with bonded ferrite cores. If a BNC cable is going to be used, use only a shielded BNC (5) cable. Also, The Federal Communications Commission warns the user that any unauthorized changes or modifications to the unit if not expressly approved by the party responsible for compliance could void the user's authority of operating the equipment.

C. Cleaning

1. Gently wipe screen with a clean camel hair lens brush, or a soft, clean, lint-free cloth. This removes dust and other particles that can scratch the screen.
2. Do not apply excessive pressure to the screen surface when wiping it clean because this may damage the LCD.
3. Do not pour or spray any liquid directly onto the screen or case of the LCD monitor. Chemical cleaners have been reported to damage the screen or case of the LCD monitor.

3. Installation

D. Precautions

Read all of these instructions and save them for later use. Follow all warnings and instructions on the product.

Product

- Do not cover or block the vent holes in the case.
- Do not insert sharp objects or spill liquid into the LCD monitor through cabinet slots. They may cause accident fire, electric shock or failure.
- Disconnect the power plug from the AC outlet if you will not use it for an indefinite period of time.
- Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks.
- Do not touch the screen directly with your fingers. You may damage the screen, and oil from your skin is difficult to move.
- Do not apply pressure to screen. The LCD is very delicate.

Power

1. Use the type of power indicated on the marking label.

Plugs

1. Do not remove any of the prongs of the monitor's three-pronged power plug.
2. Disconnect the power plug from the AC outlet under following conditions :
 - If the product will not be used for an indefinite period time.
 - When the power cord or plug is damaged or frayed.
 - If the product does not operate normally when the operating instructions are followed.
 - Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
 - If the product has been dropped or the cabinet has been damaged.
 - If the product exhibits a distinct change in performance, indicating a need for service.

3. Installation

D. Precautions (Cont.)

Power and extension cords

1. Do not allow anything to rest on the power cord.
2. Do not locate this product where persons will walk on the cord.
3. Use the proper power cord with correct attachment plug type. If the power source is 120V AC, use a power cord that has UL and C-UL approvals. If the power source is a 240V AC supply, use the tandem (T blade) type attachment plug with ground conductor power cord that meets the respective European country's safety regulations, such as VDE for Germany.
4. Do not overload wall outlets or power cords. Ensure that the total of all units plugged into the wall outlet does not exceed 10 amperes.
5. Ensure that the total ampere ratings on all units plugged into the extension cord is not above the cord's rating.
6. If the power supply cord, which came with your monitor, is to be connected to the PC instead of the wall outlet, this equipment is to be used with UL/TÜV approved computers with receptacle rated 100~240V AC, 50/60Hz, 1.0A(minimum).

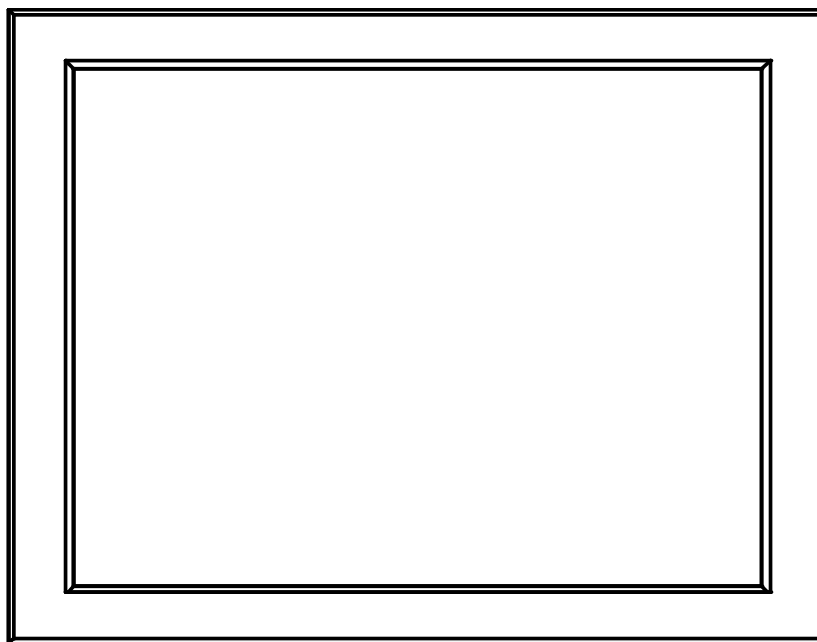
Environment

1. Place the monitor on a flat and leveled surface.
2. Place the monitor in a well-ventilated place.
3. Keep the monitor away from : Overly hot, cold or humid places, places directly under sunlight, dusty surroundings, equipment that generate strong magnetic fields.

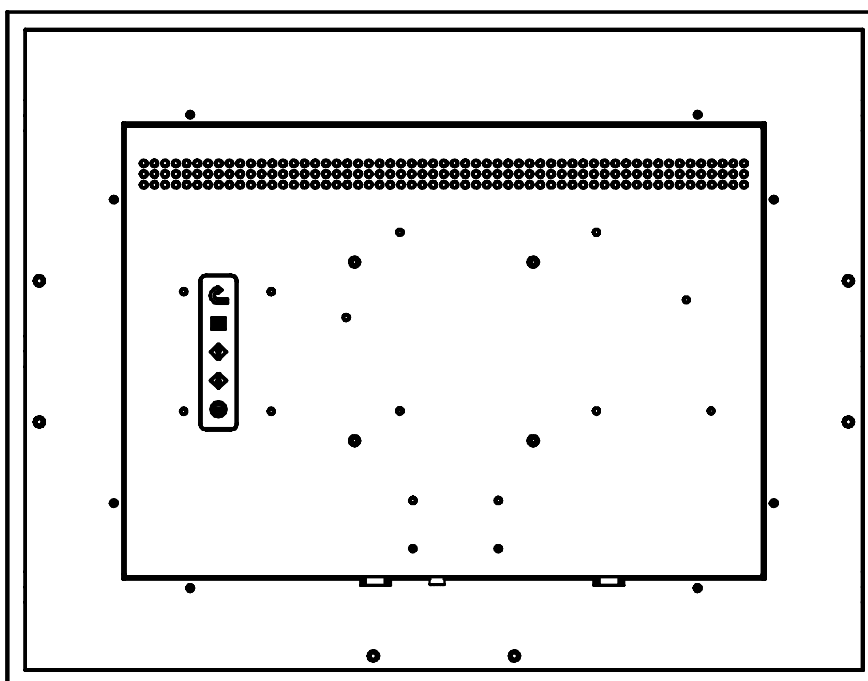
4. Using the System

A. Product Views

AP Series - Front View



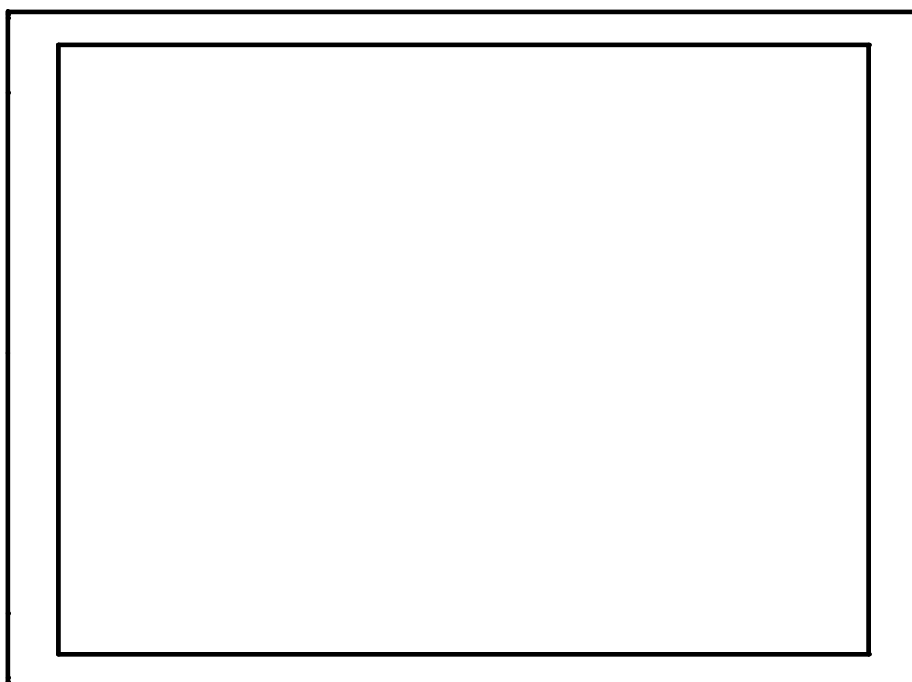
AP Series - Rear View



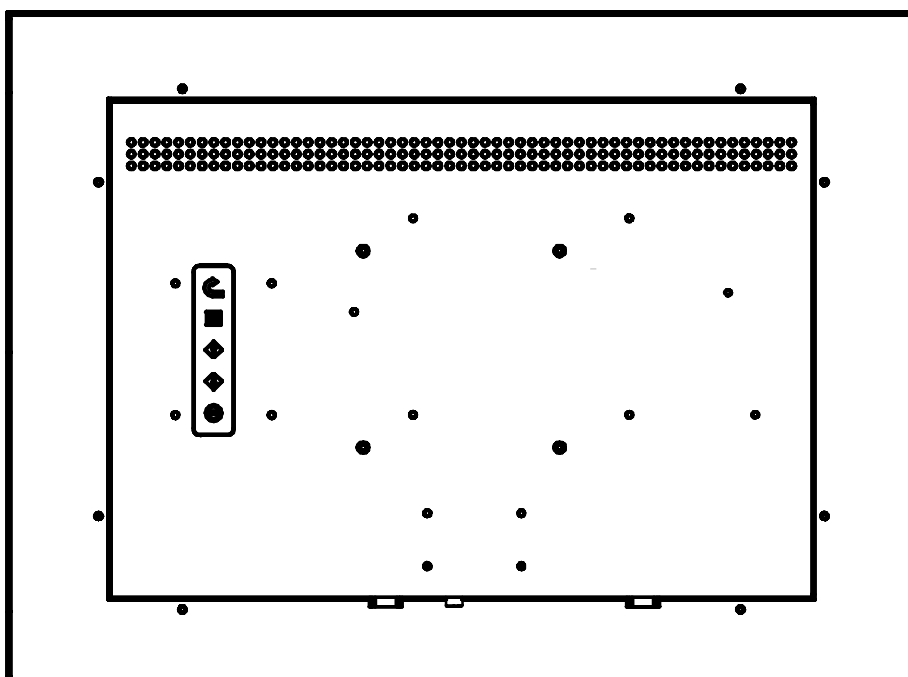
4. Using the System

A. Product Views (Cont.)

DP Series - Front View



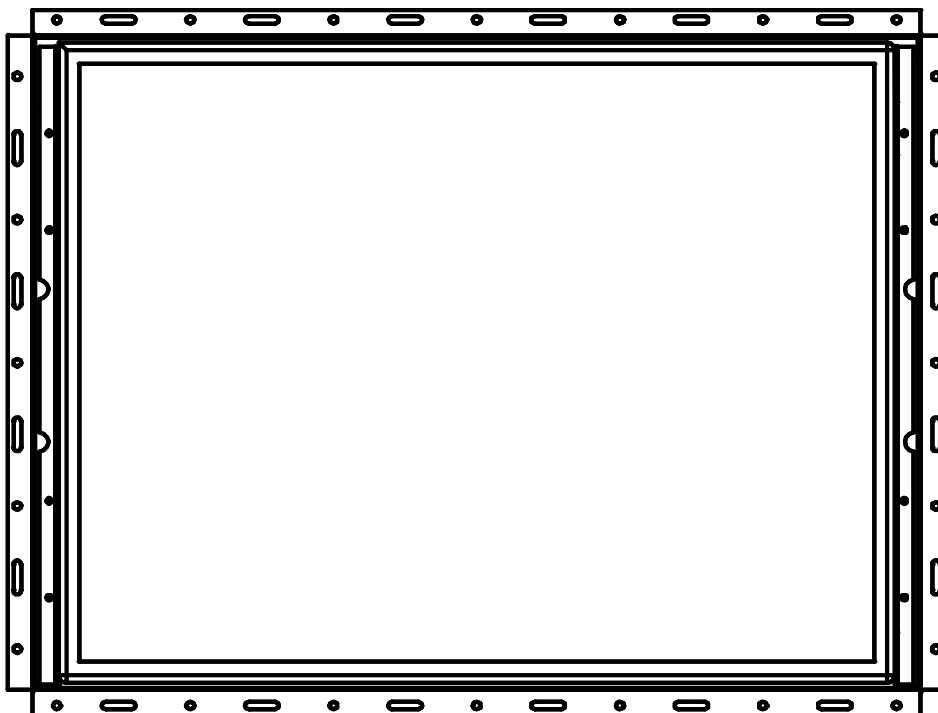
DP Series - Rear View



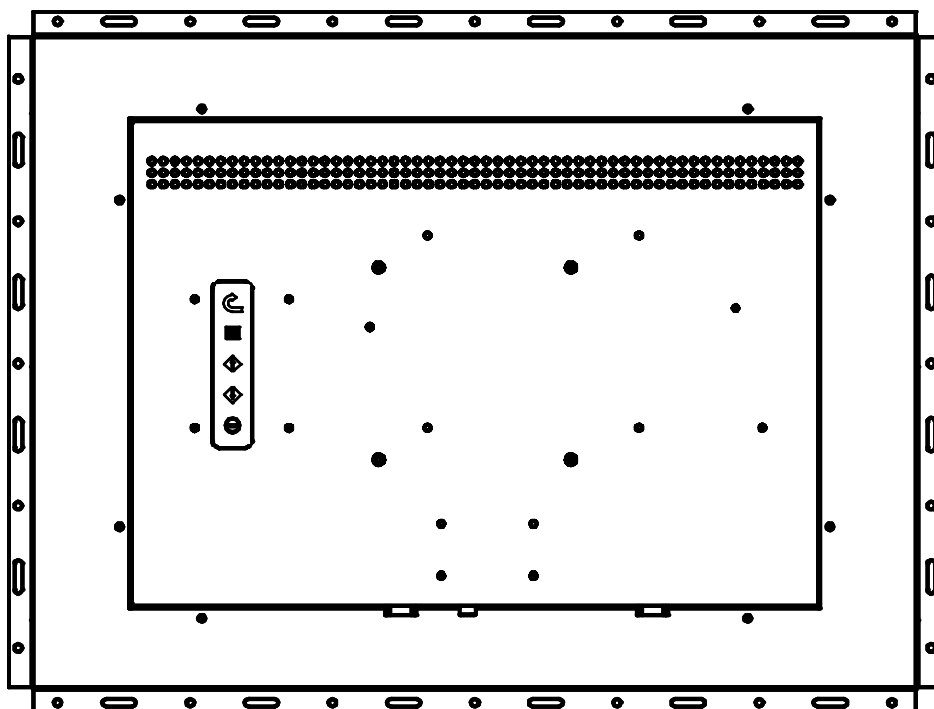
4. Using the System

A. Product Views (Cont.)

OP Series - Front View



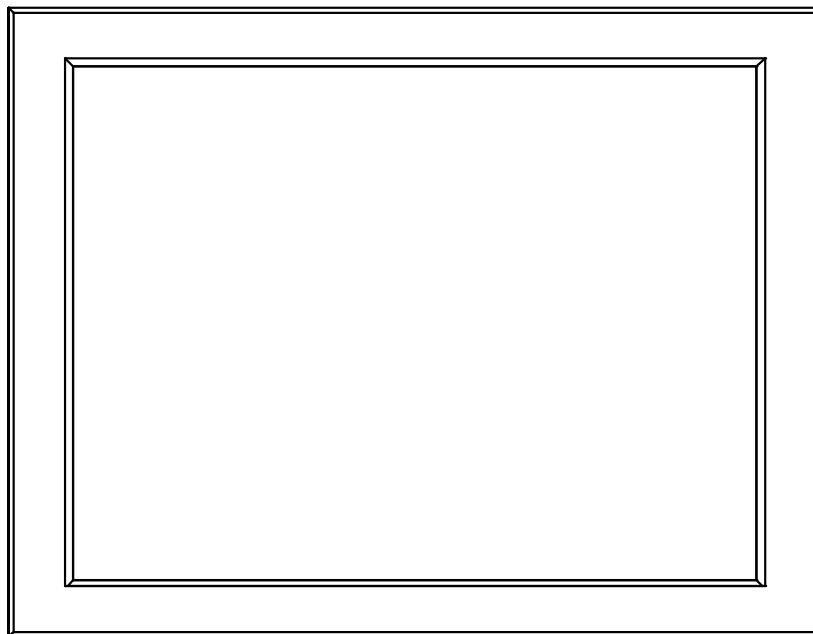
OP Series - Rear View



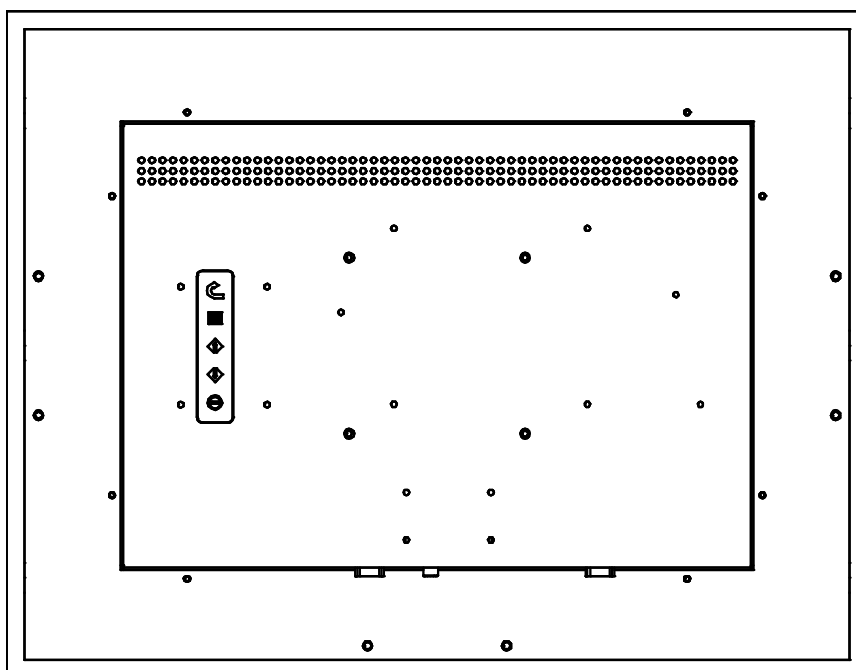
4. Using the System

A. Product Views

NAP Series - Front View

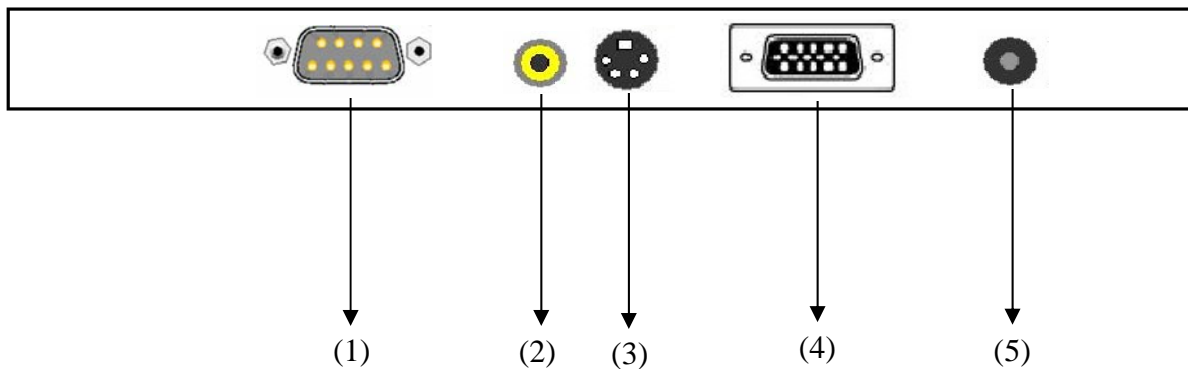
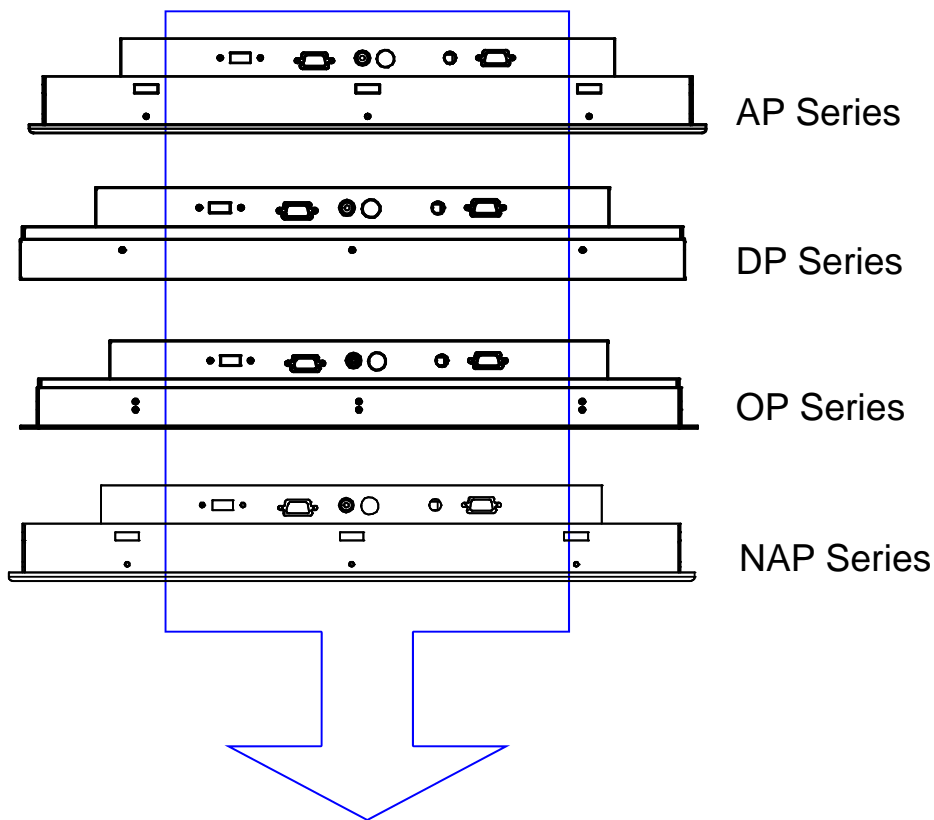


NAP Series - Rear View



4. Using the System

B. I/O Outlet



1. **SERIAL IN** : Connect to the Serial connector. (for Touchscreen series only)
2. **RCA IN** : Connect to the composite cable connector. (for AV series only)
3. **S-Video IN** : Connect to the S-Video cable connector. (for AV series only)
4. **PC IN** : Connect to D-Sub 15 pin signal connector.
5. **DC IN** : Connect to DC power cable.

4. Using the System

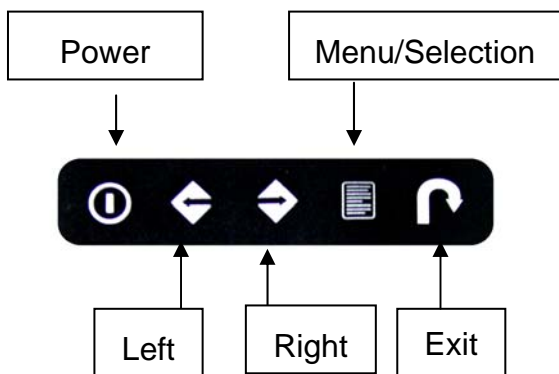
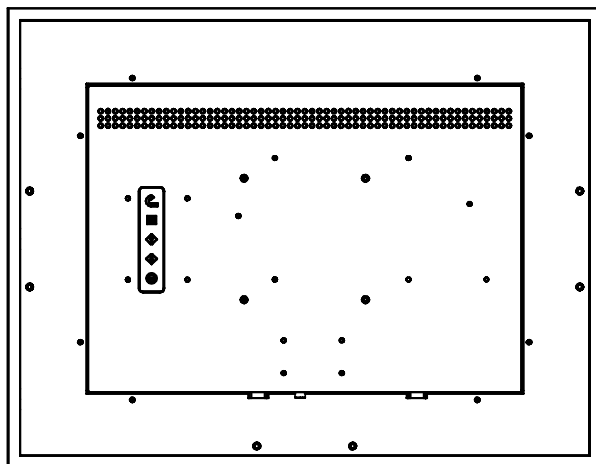
C. Installation Procedures

This monitor is equipped with an auto-sensing power supply for voltage ranges 100~240V, 50~60Hz. Please follow the following instruction to install LCD monitor.

1. Make sure that the system power is turned off.
2. Plug the signal cable to the signal connector at the rear of PC and the rear of the LCD monitor.
3. Plug adapter output cable to the jack at the rear of LCD monitor and the power cord to the adapter.
4. Connect the power cord to power source.
5. Turn on the computer and the monitor.
6. Then push the OSD menu button and use the Auto Adjust function to fine the best mode of your computer.

4. Using the System

D. OSD Switch



Input Select:

This button is used to select CVBS for composite video input, RGB for VGA input and S-Video for Super-Video input



OSD Menu:

This button is used to enter OSD main Menu



Increase(→):

This button is used to adjust the increasing or next value of selected OSD control option.



Decrease(←):

This button is used to adjust the decreasing or next value of selected OSD control option.

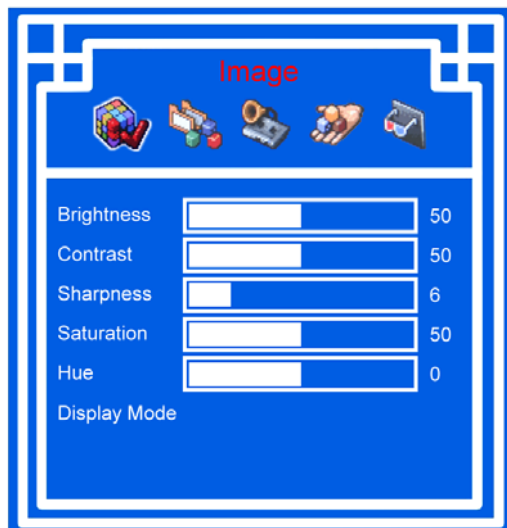


Power Switch:

This button is used to power ON/OFF the LCD

4. Using the System

E. OSD Control for VGA mode



Main Menu

Image

- To enter into the Brightness, Contrast, Sharpness, Saturation, Hue sub-menu

Geometry

- To enter into Auto Conflg., H. Position, V. Position, Clock, phase sub-menu

Function

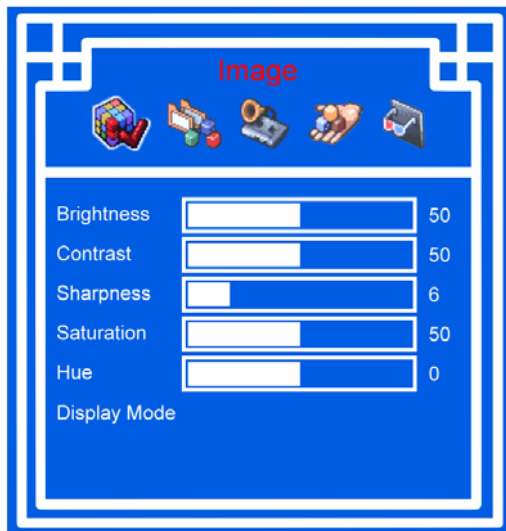
- To enter into the OSD Position, OSD Zoom and Color Temp. sub-menu

System

- To enter into the Language, Time, Power OFF and Reset sub-menu.

4. Using the System

E. OSD Control for VGA mode



Image

Brightness

To adjust brightness level of the input signal

Use the ▼ button to select the function, then use ◀/▶ button to adjust from 0-100

Contrast

To adjust the contrast level of the input signal

Use the ▼ button to select the function, then use ◀/▶ button to adjust from 0-100

Sharpness

To adjust the sharpness level of the input signal

Use the ▼ button to select the function, then use ◀/▶ 'button to adjust from 0-35

Saturation

To adjust the saturation level of the input signal

Use the ▼ button to select the function, then use ◀/▶ 'button to adjust from 0-100

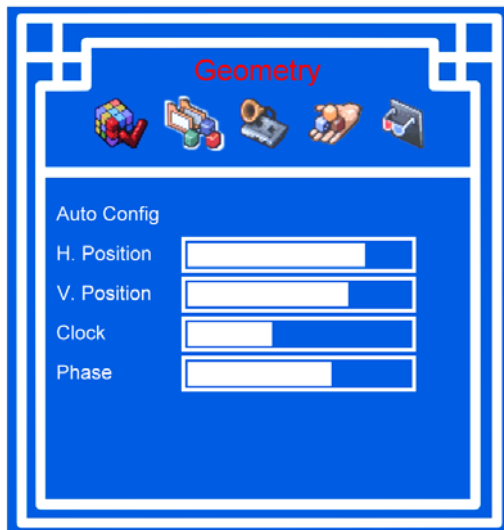
Hue

To adjust the Hue level of the input signal

Use the ▼ button to select the function, then use ◀/▶ button to adjust from (-19)-0-(+19)

4. Using the System

E. OSD Control for VGA mode



Geometry

Auto Config

To perform auto adjustment of the screen output.

Use the ▼ button to select the function, then use the ◀/▶ button to select “Auto Config”

H. Position

To adjust Horizontal Position of the screen output.

Use the ▼ button to select the function, then use the ◀/▶ button to adjust “H. Position”

V. Position

To adjust Vertical Position of the screen output.

Use the ▼ button to select the function, then use the ◀/▶ button to adjust “V. Position”

Clock

To adjust the width of the image

Use the ▼ button to select the function, then use the ◀/▶ button to adjust “Clock” .

Phase

To perform snow noise adjustment of the image.

Use the ▼ button to select the function, then use the ◀/▶ button to adjust “Phase”

4. Using the System

E OSD Control for VGA mode



Function

OSD Position

To perform OSD position selection of the screen

Use the ▼ button to select the function, then use the ◀/▶ button to select the digit for the OSD display region.

OSD Zoom

To perform OSD Zoom function of the OSD image

Use the ▼ button to select the function, then use the ◀/▶ button to on/off the OSD Zoom function

Color Temp.

To perform the Color Temperature selection of the image output

Use the ▼ button to select the function, then use the ◀/▶ ' button to select “Standard”, “Cool”, “Warm” and “User”

4. Using the System

E. OSD Control for VGA mode



System

Language

To perform Language selection of the function display

Use the ▼ button to select the function, then use the ◀/▶ button to select suitable display language “English”, “Chinese (中文)”, “Deutsch”, “Francais”, “Espanol”, “Italiano” and “Japanese (日本語)”.

Time

To perform time setting of the system.

Use the ▼ button to select the function, then input the time setting and restore

Power OFF

To perform preset power off setting

Use the ▼ button to select the function, then input time setting and use ◀/▶ button to on/off the function.

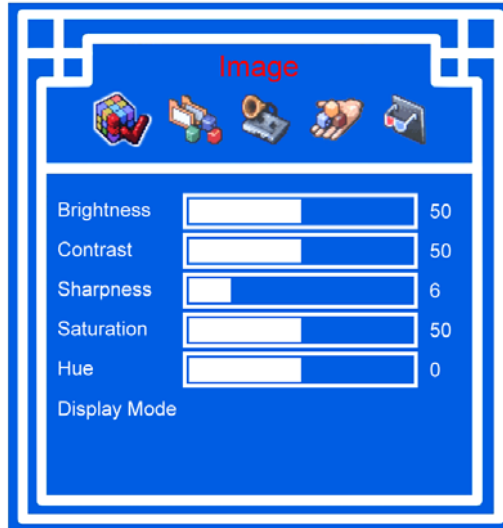
Reset

To perform reset all stored parameters to factory preset mode

Use the ▼ button to select the function, then use ◀/▶ button activate the function.

4. Using the System

F. OSD Control for Video mode



Image

Brightness

To adjust brightness level of the input signal

Use the ▼ button to select the function, then use ◀/▶ button to adjust from 0-100

Contrast

To adjust the contrast level of the input signal

Use the ▼ button to select the function, then use ◀/▶ button to adjust from 0-100

Sharpness

To adjust the sharpness level of the input signal

Use the ▼ button to select the function, then use ◀/▶ 'button to adjust from 0-35

Saturation

To adjust the saturation level of the input signal

Use the ▼ button to select the function, then use ◀/▶ 'button to adjust from 0-100

Hue

To adjust the Hue level of the input signal

Use the ▼ button to select the function, then use ◀/▶ button to adjust from (-19)-0-(+19)

4. Using the System

F. OSD Control for Video mode



Function

OSD Position

To perform OSD position selection of the screen

Use the ▼ button to select the function, then use the ◀/▶ button to select the digit for the OSD display region.

OSD Zoom

To perform OSD Zoom function of the OSD image

Use the ▼ button to select the function, then use the ◀/▶ button to on/off the OSD Zoom function

Color Temp.

To perform the Color Temperature selection of the image output

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4. Using the System

F. OSD Control for Video mode



System

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Time

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Power OFF

To perform preset power off setting

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Reset

To perform reset all stored parameters to factory preset mode

Use the ▼ button to select the function, then use ◀/▶ button activate the function.

End of User Manual