User's Guide

L226WA

Make sure to read the Important Precautions before using the product. Keep the User's Guide(CD) in an accessible place for furture reference.

See the label attached on the product and give the information to your dealer when you ask for service.



Important Precautions

This unit has been engineered and manufactured to ensure your personal safety, however improper use may result in potential eletrical shock or fire hazards. In order to allow the proper operation of all safeguards incorporated in this display, observe the following basic rules for its installation, use, and servicing.

On Safety

Use only the power cord supplied with the unit. In case you use another power cord, make sure that it is certified by the applicable national standards if not being provided by the supplier. If the power cable is faulty in any way, please contact the manufacturer or the nearest authorized repair service provider for a replacement.

The power supply cord is used as the main disconnection device. Ensure that the socket-outlet is easily accessible after installation.

Operate the display only from a power source indicated in the specifications of this manual or listed on the display. If you are not sure what type of power supply you have in your home, consult with your dealer.

Overloaded AC outlets and extension cords are dangerous. So are frayed power cords and broken plugs. They may result in a shock or fire hazard. Call your service technician for replacement.

Do not Open the Display.

- There are no user serviceable components inside.
- There are Dangerous High Voltages inside, even when the power is OFF.
- Contact your dealer if the display is not operating properly.

To Avoid Personal Injury:

- Do not place the display on a sloping shelf unless properly secured.
- Use only a stand recommended by the manufacturer.

To Prevent Fire or Hazards:

- Always turn the display OFF if you leave the room for more than a short period of time. Never leave the display ON when leaving the house.
- Keep children from dropping or pushing objects into the display's cabinet openings. Some internal parts carry hazardous voltages.
- Do not add accessories that have not been designed for this display.
- During a lightning storm or when the display is to be left unattended for an extended period of time, unplug it from the wall outlet.

On Installation

Do not allow anything to rest upon or roll over the power cord, and do not place the display where the power cord is subject to damage.

Do not use this display near water such as near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool. Displays are provided with ventilation openings in the cabinet to allow the release of heat generated during operation. If these openings are blocked, built-up heat can cause failures which may result in a fire hazard. Therefore, NEVER:

- Block the bottom ventilation slots by placing the display on a bed, sofa, rug, etc.
- Place the display in a built-in enclosure unless proper ventilation is provided.
- Cover the openings with cloth or other material.
- Place the display near or over a radiator or heat source.

Do not rub or strike the Active Matrix LCD with anything hard as this may scratch, mar, or damage the Active Matrix LCD permanently.

Do not press the LCD screen with your finger for a long time as this may cause some afterimages.

Some dot defects may appear as Red, Green or Blue spots on the screen. However, this will have no impact or effect on the display performance.

If possible, use the recommended resolution to obtain the best image quality for your LCD display. If used under any mode except the recommended resolution, some scaled or processed images may appear on the screen. However, this is characteristic of the fixed-resolution LCD panel.

On Cleaning

- Unplug the display before cleaning the face of the display screen.
- Use a slightly damp (not wet) cloth. Do not use an aerosol directly on the display screen because over-spraying may cause electrical shock.

On Repacking

 Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it in its original material.

On Disposal

- The fluorescent lamp used in this product contains a small amount of mercury.
- Do not dispose of this product with general household waste.
 Disposal of this product must be carried out in accordance to the regulations of your local authority.

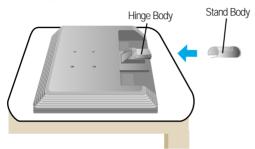
Connecting the Display

Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices is turned off.

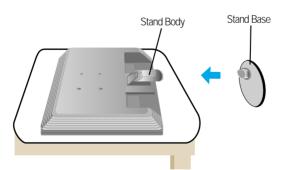
Connecting the stand

- 1. Place the monitor with its front facing downward on a soft cloth.
- **2.** Assemble the Stand Body into the product in the correct direction as shown in the picture. Make sure you push it until you hear it "click".

Important: Once the stand body and the hinge body are assembled, you cannot disassemble them.



- 3. Assemble the Stand Base(Front, Rear) into the Stand Body in the correct direction.
- **4.** Once assembled take the monitor up carefully and face the front side



Important

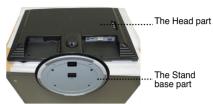
- This illustration depicts the general model of connection. Your monitor may differ from the items shown in the picture.
- Do not carry the product upside down holding only the stand base. The product may fall and get damaged or injure your foot.

To remove the Stand:

1. Put a cushion or soft cloth on a flat surface.



2. Place the monitor face down on the cushion or soft cloth.



3. Pushing Latch inside, Take the stand base from stand body.



4. Separate the stand using a screwdriver as shown in the picture. **Note:** Please keep the 4 screw in an accessible place for future use.



5. Pack up the product as shown in the picture.



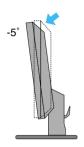
Connecting the Display

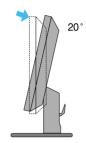
■ Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices is turned off.

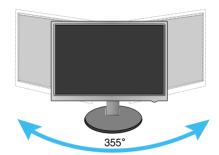
Positioning your display

- 1. Adjust the position of the panel in various ways for maximum comfort.
 - Tilt Range: -5°~20°







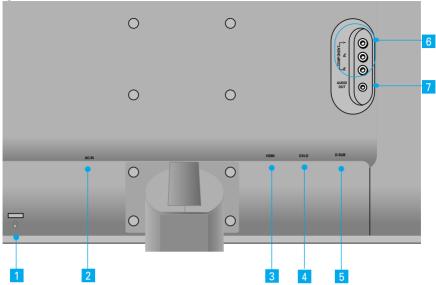


Ergonomic

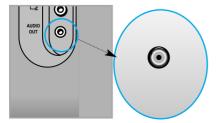
 It is recommended that in order to maintain an ergonomic and comfortable viewing position, the forward tilt angle of the monitor should not exceed 5 degrees.

Name and function of the Parts

Rear View

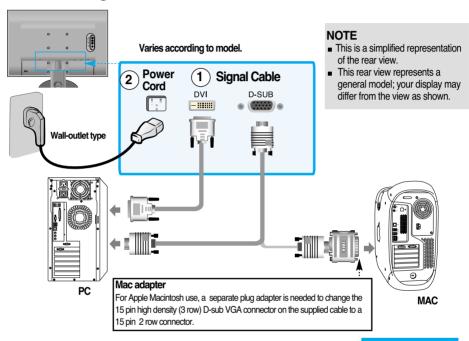


- 1 Kensington Security Slot
- 2 AC-IN Connector: Connect the Power Cord
- 3 HDMI Signal Connector
- 4 DVI-D input terminal (digital signal connector)
- 5 D-SUB Analogue Signal Connector
- 6 COMPONENT Input Terminal
- 7 Audio out Jack(Headset/Earphone/connecting terminal of the Speaker)
 - :You can use the AUDIO-OUT Jack by connecting earphones or a headset when using the HDMI configuration.
 - *AUDIO-OUT is only available with the HDMI input. (You cannot use it with D-SUB, DVI or any other component.)
 - The Left Rear of the Monitor



When Connecting to your PC

- 1. Place the monitor in a convenient, well-ventilated location near your computer. To adjust height of your monitor, unlock the stand lock on top of the stand.
- 2. Connect the signal cable. When attached, tighten the thumbscrews to secure the connection. (1)
- 3. Connect the power cord into a proper power outlet that is easily accessible and close to the display. (2)



- **4.** Press **(**) button on the front switch panel to turn the power on.
- **5.** Press the **SOURCE** button at the front side of the monitor.



- Mhen connecting with a DVI signal input cable.
 - Select DVI: DVI digital signal.
- **B**) When connecting with a D-Sub signal cable.
 - Select **RGB**: D-Sub analogue signal.



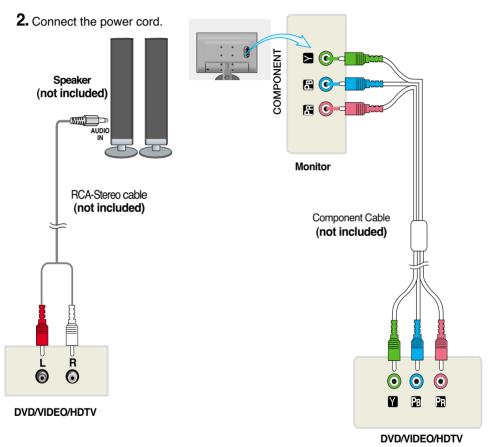
- *RGB: To connect 15-pin D-SUB signal input cable
- *DVI: To connect DVI signal input cable



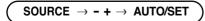
- How to connect to two computers.
 Connect the signal cables (DVI and D-Sub) to each computer.
 Press the SOURCE button at the front side of the monitor.
- Directly connect to a grounded power outlet on the wall or a power bar with a ground wire.

■■■ When Watching DVD/Video/HDTV

- When connecting with a Component cable
- 1. Connect the Component cables and RCA to Stereo cables properly. Connect the terminals to the sockets of the same color.



3. Press the **SOURCE** button at the front side of the monitor.

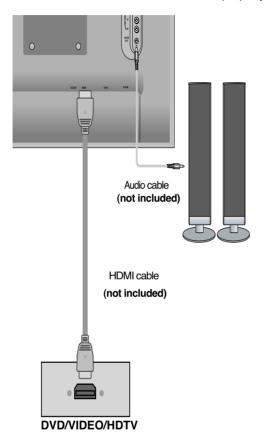


- (A) When connecting with a Component cable.
 - Select Component

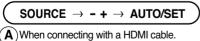


■■■ When Watching DVD/Video/HDTV

- When connecting with a HDMI cable
- 1. Connect the HDMI cables and Audio cables properly.



2. Press the **SOURCE** button at the front side of the monitor.



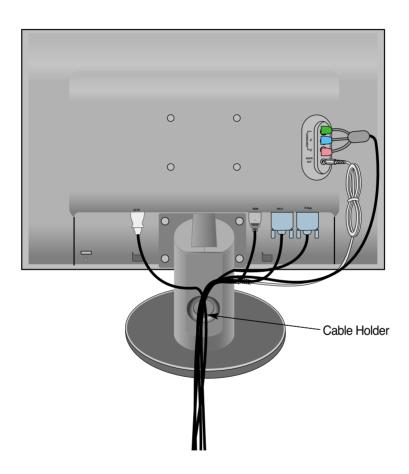
· Select HDMI



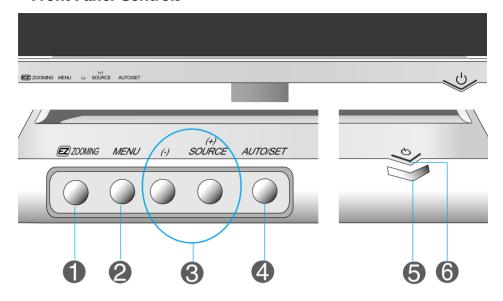
Connecting to External Devices

■■■ To arrange the cables

1. After connecting the cables neatly, arrange the cables to the **Cable Holder** as shown in the following figure.



Front Panel Controls





Z ZOOMING Button

At the current display, Use 'ez Zooming' Key, then the display resolution is transferred to the one step low resolution.

Use 'ez Zooming' Key one more, the display is back to the original display.

*Only One touch of ez-zoom, you can fine the best resolution you want and it is possible to magnify the size of characters and pictures for the old not having good eye sight, housewives not dealing with computer well and children.

- Recommend resolution are 1680 x 1050, 1280 x 1024, 1024 x 768, 800 x 600.
- The setting method can differ by O/S or video card. In this case, Please ask to the computer or the video card manufacturer.



Forte Manager does not work in HDMI Video mode.



Use this button to enter or exit the On Screen Display.

Controls locked/Controls unlocked

Controls locked

Controls unlocked

This function allows you to lock the current control settings, so that they cannot b inadvertently changed.

Use this function to lock or unlock OSD display settings. To lock the setting, go to the special function in the OSD menu and select "On" for **Child lock**. The message, "**Controls locked**" will be displayed. To unlock the setting, Press and hold **MENU** and (+) buttons for a while until you see the message, "**Controls unlocked**"



+ Button

Use this button to select an icon or adjust the setting in the OSD screen.

(+)SOURCE Button

· Select the input signal.

SOURCE \rightarrow - + \rightarrow AUTO/SET

RGB: 15-pin D-SUB analogue signal

DVI : DVI digital signal

Component : DTV SET-TOP BOX, Video, DVD HDMI : HDMI

DTV SET-TOP BOX.Video.DVD





AUTO/ SET Button

Use this button to enter a selection in the On Screen Display.

AUTO IMAGE ADJUSTMENT

When adjusting your display settings, always press the **AUTO/SET** button before entering the On Screen Display(OSD). This will automatically adjust your display image to the ideal settings for the current screen resolution size (display mode).

For optimal display change resolution to 1680x1050

The best display mode is

- 22 inch monitor : 1680 x 1050@60Hz



Power Button

Use this button to turn the display on or off.



Power Indicator

This Indicator lights up blue when the display operates normally(On Mode). If the display is in Sleep Mode (Energy Saving), this indicator color changes to amber.



On Screen Display (OSD) Control Adjustment

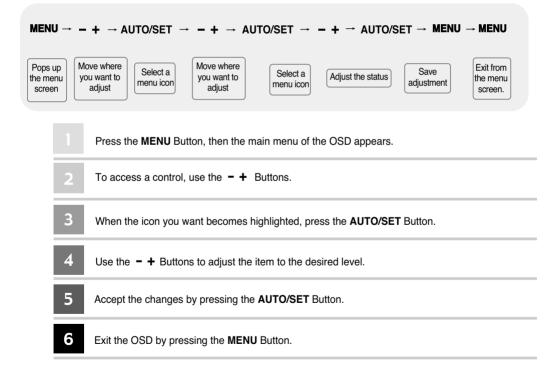
Screen Adjustment

Making adjustments to the image size, position and operating parameters of the display is quick and easy with the On Screen Display Control system. A short example is given below to familiarize you with the use of the controls. The following section is an outline of the available adjustments and selections you can make using the OSD.

NOTE

Allow the display to stabilize for at least 30 minutes before making image adjustments.

To make adjustments in the On Screen Display, follow these steps:



OSD (On Screen Display) menu

| Icon | Function Description |
|---------|---|
| PICTURE | Adjusting Screen Colour. |
| SPECIAL | Selecting the options. |
| SCREEN | Screen Adjustment. |
| PIP | Adjusting PIP Mode (Multiple Screen) Functions. |



OSD(On Screen Display)

The OSD function enables you to adjust the screen status conveniently since it provides graphical presentation.



Adjusting Screen Colour

EZ Video



HDMI, Component input

The **EZ Video** function automatically adjusts the screen image quality depending on the AV usage environment.

- Dynamic : Select this option to display with a sharp image.
- Standard: The most general and natural screen display status.
- · Mild: Select this option to display with a mild image.
- Game: Select this option to enjoy dynamic image when playing a game.
- $\hbox{\bf \cdot User}: Select this option to use the user-defined settings.$



Brightness

To adjust the brightness of the screen.

Contrast

To adjust the contrast of the screen. **Color**

To adjust the color to desired level. **Sharpness**

To adjust the clearness of the screen.

ACC



HDMI, Component input

Selecting a factory setting colour set.

Warm: Slightly reddish white.
Normal: Slightly bluish white.
Cool: Slightly purplish white.



If the EZ video setting in the Picture menu is set to Dynamic, Standard, Mild or Game the subsequent menus will be automatically set.



Adjusting Screen Colour

CSM



PC only

· 6500K/9300K/sRGB

Selecting a factory setting colour set.

6500K: Slightly reddish white. 9300K: Slightly bluish white.

sRGB : Set the screen color to fit the SRGB standard color

• **User** : Select this option to use the user-defined settings.



Brightness

To adjust the brightness of the screen. **Contrast**

To adjust the contrast of the screen.

Red / Green / Blue

Set your own colour levels.



- * When HDMI is connected to a set-top box or video player like a DVD player, please select HDMI PC in the screen adjustment of the OSD to start CSM for 720P @ 60 Hz, 480P @ 60 Hz.
- * 720P @ 60 Hz, 480P @ 60 Hz is equivalent to PC Timing 1280x720 @ 60 Hz, 640x480 @ 60 Hz.



Selecting the options



Input



If you press the button once, the following Input Signal Window will appear. Select the signal type you want using the • • button.

Child lock

This feature can prevent unauthorized viewing.

In order to lock the OSD screen adjustment, set the **Child lock** tab to the '**On**' position. In order to unlock it, do the following:

*Press and hold the MENU and (+) Button for several seconds. The message

"Controls locked" should appear.

Language To choose the language in which the control names are displayed.

Power Indicator Use this function to set the power indicator on the front side of the product to

On or Off.

Transparency

To adjust the transparency of the OSD menu screen.

Reset

Use this function to reset the product to the factory default. However, language

selection will not be initialized.

DDC-CI

DDC/CI(Display Data Channel Command Interface) is communication protocol for

communications between PC and monitor.

DDC/CI makes it possible to adjust and setup detailed functions on PC instead of the

monitor OSD.

Monitor can be adjusted with PC by connecting communication between PC and monitor when DDC/CI is ON, and monitor cannot be adjusted with PC because communication

between PC and monitor is disconnected when DDC/CI is OFF.



Screen Adjustment



ARC

To select the image size of the screen.

* Menu varies depending on the type of input signal. ARC is activated in Video signal but deactivated in 1080i.

<HDMI(Video), Component input only>







Auto-Configure

This function is suitable for analogue signal input only. This button is for the automatic adjustment of the screen **Position**, **Clock** and **Phase**.

Clock

This function is suitable for analogue signal input only. To minimize any vertical bars or stripes visible on the screen background. The horizontal screen size will also change.

Phase

This function is suitable for analogue signal input only. To adjust the focus of the display. This item allows you to remove any horizontal noise and clear or sharpen the image of characters.



When the Interlace Signal is inputted at the RGB source input level, the Auto-Configure, Clock, Phase menu can't be used.

Position



This function is suitable for analogue signal input only. To adjust position of the screen. Press the **AUTO/SET** button to display the sub-menu for position.

H-Position: Moving the screen position horizontally.

V-Position: Moving the screen position vertically.

HDMI

Video: Used when it is connected with DVD or SET-TOP BOX through HDMI.

* If you want to connect VCR, select VIDEO in this menu. Otherwise, you may see noise in the margin of the screen due to the difference in the screen size.

PC: Used when it is connected with PC through HDMI.

* If you want to connect PC, select PC in this menu. Otherwise, the screen may be too large to support PC sub screen



When the Interlace Signal is inputted at the RGB source input level, the Position menu can't be used.



Adjusting PIP Mode (Multiple Screen) Functions

(To adjust the sub screen)



On/Off



PIP

After selecting **PIP** in the **PIP On/Off** menu, the following menu items can be adjusted.

PIP Input To select an input signal for PIP

Position



To adjust the position of PIP screen.

* The following table is the available option to match the main screen and PIP screen.

| PIP | | | | | |
|-------------|-----|-----|-----------|--------------|-----------------|
| PIP Main | RGB | DVI | Component | HDMI (PC) | HDMI (Video) |
| RGB | | 0 | Х | 0 | 0 |
| DVI | 0 | | 0 | Х | Χ |
| Compentnt | Χ | Х | | Х | Χ |
| HDMI(PC) | 0 | Х | 0 | | Х |
| HDMI(Video) | Х | Х | Х | Х | |

Troubleshooting

Check the following before calling for service.

No image appears

- Is the power cord of the display connected?
- Check and see if the power cord is connected properly to the power outlet.
- Is the power indicator light on?
- · Press the Power button.
- Is the power on and the power indicator blue or green?
- · Adjust the brightness and the contrast.
- Is the power indicator amber?
- If the display is in power saving mode, try moving the mouse or pressing any key on the keyboard to bring up the screen.
- Try to turn on the PC.
- O Do you see an "OUT OF RANGE" message on the screen?
- This message appears when the signal from the PC (video card) is out of horizontal or vertical frequency range of the display. See the 'Specifications' section of this manual and configure your display again.
- Do you see a "CHECK SIGNAL CABLE" message on the screen?
- This message appears when the signal cable between your PC and your display is not connected. Check the signal cable and try again.

Do you see a "Controls locked" message on the screen?

- Do you see "Controls locked" when you push MENU button?
- You can secure the current control settings, so that they cannot be inadvertently changed. You can unlock the OSD controls at any time by pushing the MENU and (+) button for several seconds: the message "Controls unlocked" will appear.

Display image is incorrect

- Display Position is incorrect.
- Press the AUTO/SET button to automatically adjust your display image to the ideal setting.
 If the results are unsatisfactory, adjust the image position using the H position and V position icon in the on screen display.
- Check Control Panel --> Display --> Settings and see if the frequency or the resolution were changed. If yes, readjust the video card to the recommend resolution.
- On the screen background, vertical bars or stripes are visible.
- Press the AUTO/SET button to automatically adjust your display image to the ideal setting.
 If the results are unsatisfactory, decrease the vertical bars or stripes using the CLOCK icon in the on screen display.
- Any horizontal noise appearing in any image or characters are not clearly portrayed.
- Press the AUTO/SET button to automatically adjust your display image to the ideal setting.
 If the results are unsatisfactory, decrease the horizontal bars using the PHASE icon in the on screen display.
- Check Control Panel --> Display --> Settings and adjust the display to the recommended resolution or adjust the display image to the ideal setting. Set the color setting higher than 24 bits (true color).
- The screen color is mono or abnormal.
- Check if the signal cable is properly connected and use a screwdriver to fasten if necessary.
- Make sure the video card is properly inserted in the slot.
- Set the color setting higher than 24 bits (true color) at **Control Panel Settings**.
- The screen blinks.
- Check if the screen is set to interlace mode and if yes, change it to the recommend resolution.
- Make sure the power voltage is high enough, It has to be higher than AC100-240V 50/60Hz.

Troubleshooting

Have you installed the display driver?

- Have you installed the display driver?
- Be sure to install the display driver from the display driver CD (or diskette) that comes with your display. Or, you can also download the driver from our web site: http://www.lge.com.
- Do you see an "Unrecognized monitor, Plug&Play (VESA DDC) monitor found" message?
- Make sure to check if the video card supports Plug&Play function.

| The audio function does not work. | | |
|-----------------------------------|--|--|
| No sound? | See if the audio cable is connected properly. Adjust the volume. See if the sound is set properly. | |
| Sound is too low. | Adjust the volume. | |

Specifications

| Display | 22 inches (55.868 cm) Flat Panel Active matrix-TFT LCD Anti-Glare coating 22 inches viewable 0.282 mm pixel pitch | | | |
|--------------------------|--|---|--|--|
| Sync Input | Horizontal Freq. Vertical Freq. Input Form | Digital: 30 - 83 56 - 75 Hz (Au Separate TTL, | 3 kHz (Automatic) 3 kHz (Automatic) tomatic) Positive/Negative n Green), Composite | |
| Video Input | Signal Input 15 pin D-Sub Connector, HDMI connector DVI connector (Digital), Component Input Form RGB Analog (0.7 Vp-p/ 75 ohm), Digit | | (Digital), Component | |
| Resolution | Max Analog : VESA 1680 x 1050 @60Hz Digital : VESA 1680 x 1050 @60Hz Recommend VESA 1680 x 1050 @60Hz | | 1680 x 1050 @60Hz | |
| Plug&Play | DDC 2B | | | |
| Power Consumption | 0n Mode : 45 W(Typ.) Sleep Mode ≤ 1 W Off Mode ≤ 1 W | |).) | |
| Dimensions | With Stand | | Without Stand | |
| &Weight | Height 42.19 cm / | 19.75 inches 16.61 inches 9.21 inches | 50.17 cm / 19.75 inches 33.74 cm / 13.28 inches 5.95cm / 2.34 inches | |
| | Net | 5.8 kg (12.78 ll | bs) | |
| Tilt/Swivel Range | Tilt -5°~20° Swivel range 355° | | | |
| Power Input | AC 100-240V~ 50/60Hz 1.0A | | | |
| Environmental Conditions | Operating Conditions Temperature 10°C to 35°C Humidity 10 % to 80 % non-Condensing | | non-Condensing | |
| | Storage Conditions Temperature -20°C to 60 °C Humidity 5 % to 90 % non-Condensing | | on-Condensing | |
| Stand Base | Attached (), Detached (O) | | | |
| Power cord | Wall-outlet type or PC-outlet type | | | |
| | | | | |

NOTE

 $\,\blacksquare\,$ Information in this document is subject to change without notice.

■PC INPUT Preset Modes (Resolution)

| | splay Modes esolution) | Horizontal Freq. (kHz) | Vertical Freq. (Hz) | | splay Modes esolution) | Horizontal Freq. (kHz) | Vertical Freq. (Hz) |
|---|---|---|---|-----------|----------------------------|---------------------------|------------------------|
| 1 2 3 4 5 6 7 8 9 | 720 x 400 640 x 480 640 x 480 800 x 600 800 x 600 1024 x 768 1024 x 768 1152 x 864 1280 x 1024 1280 x 1024 | 31.468 31.469 37.50 37.879 46.875 48.363 60.123 67.5 63.981 79.976 | 70.08 59.94 75 60.317 75 60 75.029 75 60.02 75.035 | 11 *12 | 1680 x 1050 1680 x 1050 | 64.674 65.290 | 59.883 59.954 |

^{*} Recommend Mode

■ **HDMI** Video INPUT

| | play Modes | Horizontal | Vertical |
|---|------------|-------------|------------|
| | solution) | Freq. (kHz) | Freq. (Hz) |
| 1 | 480p | 31.25 | 60.00 |
| 2 | 576p | 31.50 | 50.00 |
| 3 | 720p | 37.50 | 50.00 |
| 4 | 720p | 45.00 | 60.00 |
| 5 | 1080i | 28.12 | 50.00 |
| 6 | 1080i | 33.75 | 60.00 |

■ Component Video INPUT

| Display Modes | | Horizontal | Vertical |
|---------------|-------|-------------|------------|
| (Resolution) | | Freq. (kHz) | Freq. (Hz) |
| 1 | 480i | 15.75 | 60.00 |
| 2 | 576i | 15.62 | 50.00 |
| 3 | 480p | 31.25 | 60.00 |
| 4 | 576p | 31.50 | 50.00 |
| 5 | 720p | 37.50 | 50.00 |
| 6 | 720p | 45.00 | 60.00 |
| 7 | 1080i | 28.12 | 50.00 |
| 8 | 1080i | 33.75 | 60.00 |

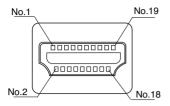
Notice

Forte Manager does not work in HDMI Video mode.

Indicator

| LED Color |
|-----------|
| Blue |
| Amber |
| Off |
| |

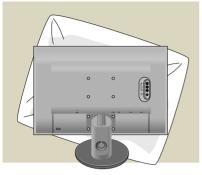
HDMI Type Pin Assignment



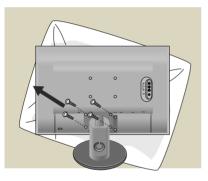
| Type A pin | Signal Name | Wire | Type A pin |
|------------|---------------------------------------|------|------------|
| 1 | T. M. D. S. Data2+ | Α | 1 |
| 2 | T. M. D. S. Data2 Shield | В | 2 |
| 3 | T. M. D. S. Data2- | Α | 3 |
| 4 | T. M. D. S. Data1+ | Α | 4 |
| 5 | T. M. D. S. Data1 Shield | В | 5 |
| 6 | T. M. D. S. Data1- | Α | 6 |
| 7 | T. M. D. S. Data0+ | Α | 7 |
| 8 | T. M. D. S. Data0 Shield | В | 8 |
| 9 | T. M. D. S. Data0- | Α | 9 |
| 10 | T. M. D. S. Clock+ | Α | 10 |
| 11 | T. M. D. S. Clock Shield | В | 11 |
| 12 | T. M. D. S. Clock- | Α | 12 |
| 13 | CEC | С | 13 |
| 14 | Reserved(In cable but N.C. on device) | С | 14 |
| 15 | SCL | С | 15 |
| 16 | SDA | С | 16 |
| 17 | DDC/CEC Ground | D | 17 |
| 18 | +5V Power | 5V | 18 |
| 19 | Hot Plug Detect | С | 19 |

T. M. D. S. (Transition Minimized Differential Signaling)

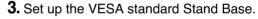
This monitor meets VESA-compliant mounting interface pad specifications.

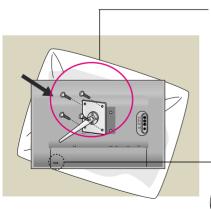


 After moving the product to face downward, make sure to place it on a soft cloth or a cushion to avoid surface damage.



2. Separate the head and the stand with the use of a screwdriver.





VESA wall mounting

Connected to another object (stand type and wall-mounted type. This monitor accepts a VESA-compliant mounting interface pad.-

This has to be purchased separately if required.)

For further information, refer to the VESA Wall Mounting Instruction Guide.



Kensington Security Slot

Connected to a locking cable that can be purchased separately at most computer stores



Digitally yours ••••····

