## User's Guide

L1760TQ L1960TQ L1760TG L1960TG L1760TR L1960TR L1960TC

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

See the label attached on the monitor 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 electrical 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.
- Do not drop an object on or apply impact to the product. Do not throw any toys or objects on the product screen.
  - It can cause injury to human, problem to product and damage the display.

### 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.
- When the display is to be left unattended for an extended period of time, unplug it from the wall outlet.
- In the presence of thunder and lightning, never touch the power cord and signal cable because it can be very dangerous. It can cause electric shock.

### 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.
- Main power breaker is the power cord and this breaking device must be located at a location where it is easy to operate.

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

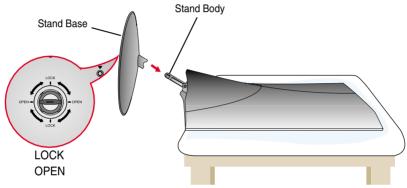
- The fluorescent lamp used in this product contains a small amount of mercury.
- Do not dispose of this product with general household waste. Disposal of this product must be carried out in accordance to the regulations of your local authority.

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

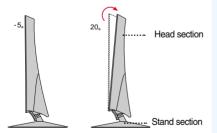
## Attaching/Separating the stand base

- ${f 1.}$  Place the monitor with its front facing downward on a soft cloth.
- 2. Make sure the stand base directs to the correct direction(Front, Rear) and turn the locking device at the bottom to OPEN to assemble the unit. After assembling the unit, turn the locking device to LOCK before use.

Turn the locking device to OPEN to separate the stand base.



- **3.** Once assembled take the monitor up carefully and face the front side
- **4.** After connecting the cable, adjust the angle of the panel for easy use. (To connect the cable, see page A5 for reference.)
  - Tilt Range: -5°~20°



**Warning:** Do not put your hand (finger) between head section and stand section when adjusting angle of screen.

Your hand (finger) may get caught or wounded.

### **Ergonomic**

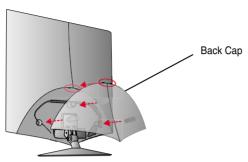
It is recommended that in order to maintain an ergonomic and comfortable viewing position, the forward tilt angle of the monitor should not exceed 5 degrees.

### Important

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

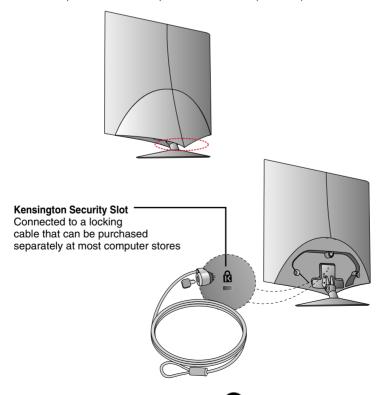
## To attach or separate the back cap

1. To attach the back cap, fix into the 3 holes first then slide it up to fit to the upper groove.



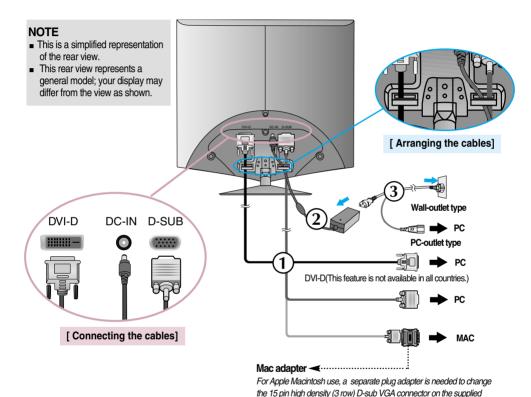
### NOTE

- Cover the back cap after connecting the cables before use. (To connect the cable, see page A5 for reference.)
- 2. To separate the back cap, hold the bottom part and pull it out.



## **Connecting with the PC**

- Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices is turned off.
- Connect the signal cable ①. When attached, tighten the thumbscrews to secure the connection.
- **3.** Connect the power cable **3** with the AC-DC adapter (AC-DC power supply) **2**, and then plug the cable in the outlet.



**4.** Touch the power button **(**) in front to turn on the monitor. The 'Self Image Setting Function' will automatically run when the monitor is on. (Only Analog Mode)



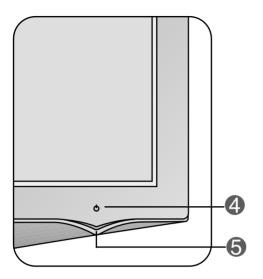
### **NOTE**

'Self Image Setting Function'? This function provides the user with optimal display settings. When the user connects the monitor for the first time, this function automatically adjusts the display to optimal settings for individual input signals.

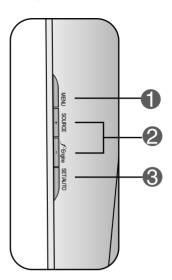
cable to a 15 pin 2 row connector.

'SET/AUTO' Function? When you encounter problems such as blurry screen, blurred letters, screen flicker or tilted screen while using the device or after changing screen resolution, press the SET/AUTO function button to improve resolution.

### **Front Panel Controls**



### Side



#### Control **Function**



**MENU Button** 

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

### OSD LOCKED/UNLOCKED



This function allows you to lock the current control settings, so that they cannot be inadvertently changed. Press and hold the **MENU button** for several seconds. The message "OSD LOCKED" should appear.

You can unlock the OSD controls at any time by pushing the **MENU button** for several seconds. The message "OSD UNLOCKED" should appear.



**Buttons** 

Use these buttons to select or adjust functions in the On Screen Display.

+ Button

Use this button to make D-Sub or DVI connector active. (SOURCE Hot key) This feature is used when two computers are connected to the display. The default setting is D-Sub.

- Button ( **f** Engine )

For more information, refer to page A13.



### Control

### **Function**



### SET/AUTO Button

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

#### **AUTO IMAGE ADJUSTMENT**

When adjusting your display settings, always press the **SET/AUTO** 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).

The best display mode is

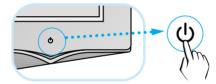
PROCESSING AUTO
IMAGE ADJUSTMENT

17 inch monitor : **1280 x 1024** 19 inch monitor : **1280 x 1024** 



### **Power Button**

Touching on the  $\circlearrowleft$  button for several seconds will power up the unit and touching on it again for several seconds will power 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:

$$\texttt{MENU} \rightarrow \textbf{-} + \rightarrow \texttt{SET/AUTO} \rightarrow \textbf{-} + \rightarrow \texttt{MENU}$$

- Press the MENU Button, then the main menu of the OSD appears.
- 2 To access a control, use the or + Buttons. When the icon you want becomes highlighted, press the SET/AUTO Button.
- Use the / + Buttons to adjust the image to the desired level. Use the SET/AUTO Button to select other sub-menu items.
- Push the MENU Button once to return to the main menu to select another function. Push the MENU Button twice to exit from the OSD.

The following table indicates all the On Screen Display control, adjustment, and setting menus.

Main menu	Sub-menu		Α	D	Reference	
PICTURE	BRIGHTN	ESS			To adjust the brightness,	
	CONTRAST GAMMA				contrast and gamma of the	
					screen	
COLOR	PRESET	sRGB			To customize the color of	
		6500K			the screen	
		9300K				
	RED					
	GREEN					
	BLUE					
	HORIZON	TAL			To adjust the position of the	
POSITION	VERTICAL	_			screen	
TRACKING	CLOCK				To improve the clarity and stability, sharpness of the	
	PHASE					
	SHARPNE	ESS			screen	
CENTER	LANGUAGE				To customize the screen	
SETUP	OSD	HORIZONTAL			status for a user's operating environment	
	POSITION	VERTICAL			enviioninent	
	WHITE BALANCE POWER INDICATOR FACTORY RESET					
FLATRON	MOVIE/TEXT				To select or customize	
F-ENGINE	USER				desired image settings	
	NORMAL					
				Adjus	table	

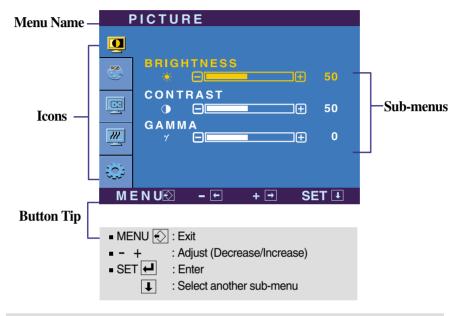
A: Analog Input D: Digital Input

### NOTE

■ The order of icons may differ depending on the model (A9~A13).

You were introduced to the procedure of selecting and adjusting an item using the OSD system. Listed below are the icons, icon names, and icon descriptions of the all items shown on the Menu.

Press the MENU Button, then the main menu of the OSD appears.



### NOTE

■ OSD (On Screen Display) menu languages on the monitor may differ from the manual.

### Sub menu Main menu Description **PICTURE** To adjust the brightness of the screen. PICTURE BRIGHTNESS BRIGHTNESS To adjust the contrast of the screen. CONTRAST GAMMA E **GAMMA** Set your own gamma value. : -50/0/50 777 On the monitor, high gamma values display whitish images and low gamma - F + → SET I values display high contrast images. ■ MENU : Exit - : Decrease + : Increase ■ SET: Select another sub-menu RGB **COLOR PRESET** sRGB: Set the screen color to fit the COLOR SRGB standard color specification. RED • 6500K: Slightly reddish white. • 9300K: Slightly bluish white. 111 RED BLUE Set your own red color levels. GREEN SET 1 Set your own green color levels. MENU : Exit BLUE - : Decrease Set your own blue color levels. + : Increase ■ SET: Select another sub-menu **POSITION** HORIZONTAL To move image left and right. POSITION **VERTICAL** To move image up and down. 111 MENUÐ - ⊞ + ⊞ SET ₺ MENU : Exit - : Decrease

+ : Increase

■ SET: Select another sub-menu

Main menu Sub menu Description TRACKING CLOCK RACKING To minimize any vertical bars or stripes visible on the screen background. The horizontal screen size will also change. PHASE SHARPNESS PHASE To adjust the focus of the display. This item allows you to remove any horizontal noise and clear or sharpen MENUÐ -⊟ +⊟ SET [] the image of characters. ■ MENU · Fxit : Decrease **SHARPNESS** To adjust the clearness of the screen. ± : Increase SET : Select another sub-menu SETUP LANGUAGE To choose the language in which the control names are displayed. OSD To adjust position of the OSD window O **POSITION** on the screen. HORIZONTAL VERTICAL If the output of the video card is different WHITE **" BALANCE** the required specifications, the color level may deteriorate due to video signal distortion. Using this function, the SETUP signal level is adjusted to fit into the • standard output level of the video card

SET UP

WHITE BALANCE NO
POWER INDICATOR ON
FACTORY RESET NO

ANALOG
1280 x 1024 60Hz

MEN US - + SET V

: Adjust

+ : Adjust

MENU® - ● + ● SET ▼ POWER INDICATOR

■ SET : Select another sub-menu

Use this function to set the power indicator on the front side of the monitor

in order to provide the optimal image.

Activate this function when white and black colors are present in the screen.

to ON or OFF.

If you set **OFF**, it will go off.

If you set **ON** at any time, the power indicator will automatically be turned on.

FACTORY RESET Restore all factory default settings except "LANGUAGE."

Press the + button to reset immediately.

If this does not improve the screen image, restore the factory default settings. If necessary, perform the white balance function again. This function will be enabled only when the input signal is an analog signal.

■■ The OSD screen will appear when you touch the FEngine button on the right side of the monitor.



### FLATRON F-ENGINE

When you execute F-ENGINE, two tones will appear on the screen as shown. The applied screen will appear on the left side, whereas the non-applied screen will appear on the right side. Touch the SET button to use the adjusted screen.



### Main menu

### Sub menu

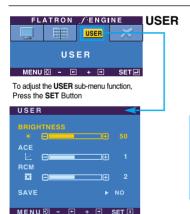
### Description



This feature lets you easily select the best desired image condition optimized to the environment (ambient illumination, image types etc).

MOVIE: For animation images in videos or movies

**TEXT**: For text images (Word processing etc.)



#### User

You can manually adjust brightness, ACE or RCM. You can save or restore the adjusted value even when using a different envir

- ... (Brightness): Adjusts screen brightness.
- ... **ACE**(Adaptive Clarity Enhancer): Selects the clarity mode.
- ---RCM(Real Color Management): Selects the color mode.



Select the SAVE sub-menu using the SET button and save the YES value using the buttons.



**NORMAL** This is under normal operating conditions.

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 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.
- 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 "OSD LOCKED" message on the screen?

- Do you see "OSD 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 button for several seconds: the message
  - "OSD UNLOCKED" will appear.

### Display image is incorrect

- Display Position is incorrect.
- Press the SET/AUTO 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 SET/AUTO 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 SET/AUTO 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.

## 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.

Display	17 inches (43.2 cm) Flat Panel Active matrix-TFT LCD Anti-Glare coating or Glare coating 17 inches viewable		
	0.264 mm pixel pit	ch	
Sync Input	Vertical Freq. Input Form	Analog: 30 - 83 kHz (Automatic) Digital: 30 - 71 kHz (Automatic) 56 - 75 Hz (Automatic) Separate TTL, Positive/Negative SOG (Sync On Green), Digital	
Video Input	Signal Input Input Form	15 pin D-Sub Connector DVI - D connector (Digital) RGB Analog (0.7 Vp-p/ 75 ohm), Digital	
Resolution	Max Recommend	Analog : VESA 1280 x 1024 @ 75 Hz Digital : VESA 1280 x 1024 @ 60 Hz VESA 1280 x 1024 @ 60 Hz	
Plug&Play	DDC 2B		
Power Consumption	On Mode Sleep Mode Off Mode	: 30 W(Typ.) : 1 W(Typ.) ≤ 1 W	
Dimensions &Weight	(1) (Width)	(Height) (2) (Height)	
	Width x Height x	(Vidil) (Denth)	
	[1] 39.21cm(15.44incl [2] 39.21cm(15.44incl	nes) x 39.10cm(15.39inches) x 22.60cm(8.90inches) nes) x 44.19cm(17.40inches) x 9.62cm(3.78inches)	
T'' 5	Net	3.7 kg (8.16 lbs)	
Tilt Range Power Input	Tilt = 3.0A	-5°~20°	
AC-DC Adapter	DVE, DSA-0421S-12 1 42 or Lien Chang, LCAP07F		
Environmental Environmental			
Conditions	Operating Condition Temperature Humidity Storage Condition	10°C to 35 °C 10 % to 80 % non-Condensing s	
	Temperature Humidity	-20°C to 60 °C 5 % to 90 % non-Condensing	
Stand Base	Attached( ), Detached ( O )		
Power cord	Wall-outlet type or PC-outlet type		

### NOTE

■ Information in this document is subject to change without notice.



Display	19 inches (48.19 cm) Flat Panel Active matrix-TFT LCD Anti-Glare coating 19 inches viewable 0.294 mm pixel pitch		
Sync Input	Horizontal Freq.  Vertical Freq. Input Form	Analog: 30 - 83 kHz (Automatic) Digital: 30 - 71 kHz (Automatic) 56 - 75 Hz (Automatic) Separate TTL, Positive/Negative SOG (Sync On Green), Digital	
Video Input	Signal Input Input Form	15 pin D-Sub Connector DVI - D connector (Digital) RGB Analog (0.7 Vp-p/ 75 ohm), Digital	
Resolution	Max Recommend	Analog : VESA 1280 x 1024 @ 75 Hz Digital : VESA 1280 x 1024 @ 60 Hz VESA 1280 x 1024 @ 60 Hz	
Plug&Play	DDC 2B		
Power Consumption	On Mode Sleep Mode Off Mode	: 35 W(Typ.) : 1 W(Typ.) ≤ 1 W	
Dimensions &Weight		Depth nes) x 42.61cm(16.78inches) x 22.60cm(8.90inches) nes) x 47.86cm(18.84inches) x 9.71cm(3.82inches)	
	Net	4.6 kg (10.14 lbs)	
Tilt Range	Tilt	-5°~20°	
Power Input	12V = 3.0A		
AC-DC Adapter	DVE, DSA-0421S-12 1 42 or Lien Chang, LCAP07F		
Environmental Conditions	Operating Condition Temperature Humidity Storage Condition Temperature Humidity	10°C to 35°C 10 % to 80 % non-Condensing s	
Stand Base	Attached( ), Detached ( O )		
Power cord	Wall-outlet type or PC-outlet type		

### NOTE

■ Information in this document is subject to change without notice.



## **Preset Modes (Resolution)**

Di	splay Mode	s (Resolution)	Horizontal Freq. (kHz)	Vertical Freq. (Hz)
1	VGA	640 x 350	31.469	70
2	VGA	720 x 400	31.468	70
3	VGA	640 x 480	31.469	60
4	VESA	640 x 480	37.500	75
5	VESA	800 x 600	37.879	60
6	VESA	800 x 600	46.875	75
7	MAC	832 x 624	49.725	75
8	VESA	1024 x 768	48.363	60
9	VESA	1024 x 768	60.023	75
10	MAC	1152 x 870	68.681	75
11	VESA	1152 x 900	61.805	65
*12	VESA	1280 x 1024	63.981	60
**13	VESA	1280 x 1024	79.976	75

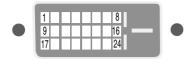
<sup>\*</sup> Recommend Mode

## **Indicator**

MODE	LED Color
On Mode	blue
Sleep Mode	amber
Off Mode	Off

<sup>\*\*</sup> Only Analog Mode

## **Signal Connector Pin Assignment**



### DVI-D Connector

Pin	Signal(DVI-D)
1	T. M. D. S. Data2-
2	T. M. D. S. Data2+
3	T. M. D. S. Data2/4 Shield
4	T. M. D. S. Data4-
5	T. M. D. S. Data4+
6	DDC Clock
7	DDC Data
8	Analog Vertical Sync.
9	T. M. D. S. Data1-
10	T. M. D. S. Data1+
11	T. M. D. S. Data1/3 Shield
12	T. M. D. S. Data3-
13	T. M. D. S. Data3+
14	+5V Power
15	Ground (return for +5V, H. Sync, and V. Sync.)

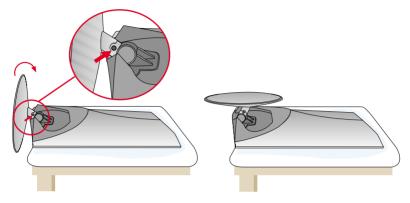
Pin	Signal(DVI-D)
16	Hot Plug Detect
17	T. M. D. S. Data0-
18	T. M. D. S. Data0+
19	T. M. D. S. Data0/5 Shield
20	T. M. D. S. Data5-
21	T. M. D. S. Data5+
22	T. M. D. S. Clock Shield
23	T. M. D. S. Clock+
24	T. M. D. S. Clock-

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

## Installing the Wall mount plate

# This monitor satisfies the specifications of the Wall mount plate or the interchange device.

- 1. Place the monitor with its front facing downward on a soft cloth.
- 2. Separating the back cap
- **3.** Press and hold on to the button on the right side of the stand body and fold the stand base in the direction of the arrow which it indicates.

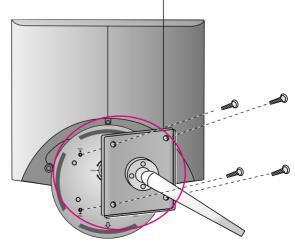


### **4.** Install the Wall mount plate.

### Wall mount plate(Separate purchase)

This is stnad-type or will mount type and is connectable with Wall mount plate.

Please refer to the installation guide for more details, which is provided when Wall mount plate is purchased.



# Digitally yours ••••····

