This equipment has been designed for the normal use. It is certified to comply with Electron Wave Suitable Registration. The user this equipment in everywhere including residential areas.

**151P**

# USER GUIDE

**Notice**

This equipment is one of first class quality. The LCD panel is composed of more than 2 Million pixels and may have some faulty pixels. LCD panels with a maximum of 10 faulty pixels are classified as products of good quality. This standard is accepted by other manufacturers of LCD panels. An LCD panel without any faulty pixels is too expensive for the average customer. Our ”A” class panels have the least 5 faulty pixels. We guarantee that our panels will provide the user with high quality performance. Therefore, no product exchanges or refunds will be made in regards to this matter.

**FCC Information**

This device complies with Part 15 of the FCC Results. Operation is subject to the following two conditions:

(1) This Device may not cause harmful interface, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for CLASS B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try correct the interference by one or more of the following measures:

1.1. Reorient or relocate the receiving antenna.
1.2. Increase the separation between the equipment and receiver.
1.3. Connect the equipment into an outlet on a circuit different from that to which receiver is connected.
1.4. Consult the dealer or experienced radio/TV technician for help.

**WARNING**

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

# Safety Precautions

● Please observe all following rules for installation, usage, and services so as to not defeat the safeguards incorporated into this monitor.

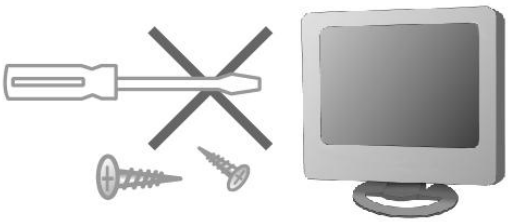
● Safety precautions are divided into Warning and Attention.

**Warning** : Please ensure that no water leaks or gets onto or into the LCD monitor. Accidental exposure to water may cause fire or electrical damage. If case occurs, please turn off and unplug the monitor. If there is smoke or abnormal noises, please contact the store or customer service center.

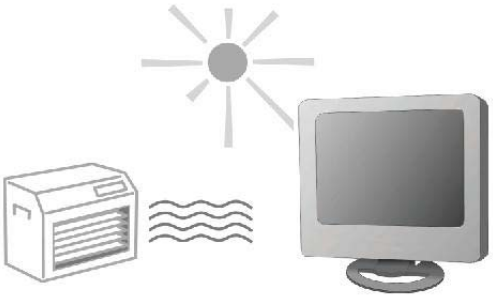
**Attention** ; Breaking the basic rules can cause injury can cause injury to yourself or damage to the equipment.

● Save the manual near to future users after you read it.

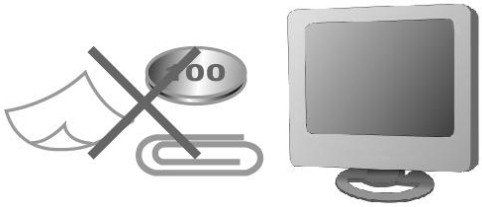
Do not open the monitor. Contact your dealer if the monitor is not operating properly.



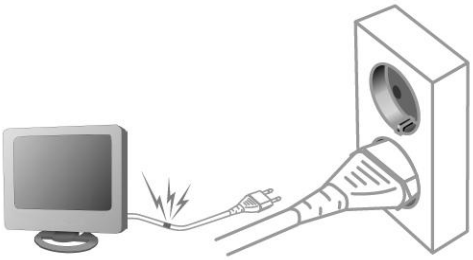
Do not place the monitor in direct sunlight or close to any heat source. -Product malfunction or fire hazard may occur.



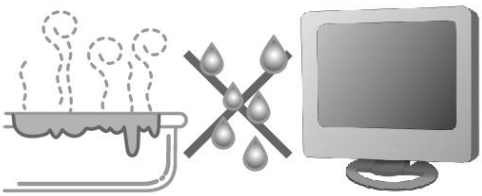
Do not drop metal objects like coins or hairpins into the monitor. -Electrical shock or fire hazard may result.



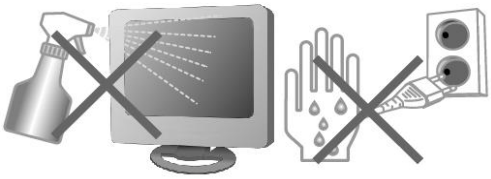
Provide a secure connection to the power supply and do not use damaged power cords or plugs. -Electrical shock or fire hazard may result.



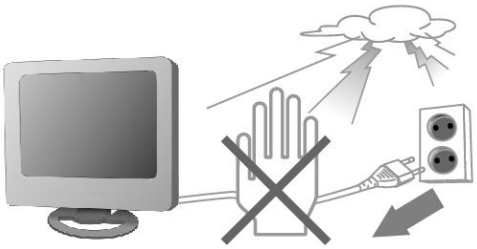
Do not place the monitor in exposed places or near water.



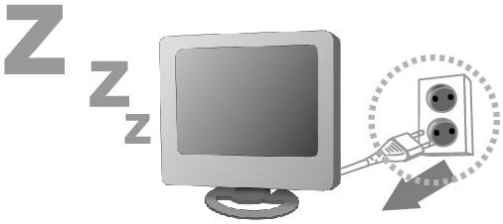
Do not clean the monitor with water or touch it with wet hands. -Electrical shock or fire hazard may result.



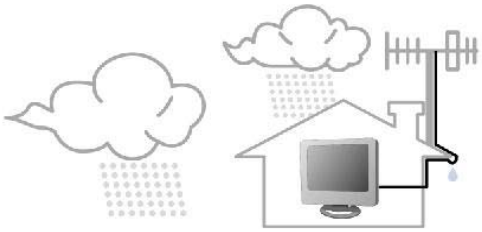
During lightening storms, unplug the monitor from the wall outlet and do not touch it. -Electrical shock or fire hazard may result



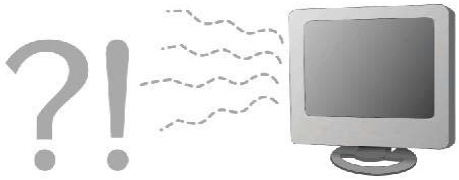
Not using the monitor for hours, unplug the monitor from the wall outlet.  - Dust may cause heat, fire, shock or short circuit



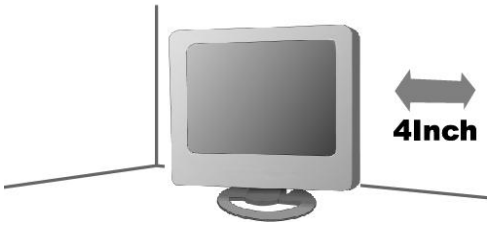
If you use an outdoor antenna, be ensure that no water leaks through connectors and get onto the monitor.  - Any liquid spill on the TV may cause fire or electric shock



In case of any smoke or abnormal noise, immediately stop use of product and pull the power cord from the wall outlet. Then call your local dealer or service representative for assistance.  -Any subsequent use may result in fire or electric shock.

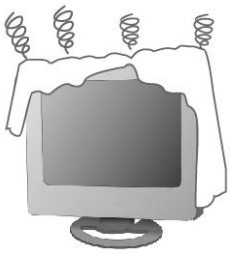


Install the monitor at the specified position from the wall to be well ventilated.  - A rise in temperature of monitor may cause fire.

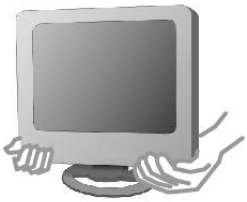



Install the monitor in stable place. - An unstable monitor may crash or fall. Personal injury, damage, or malfunction may result.

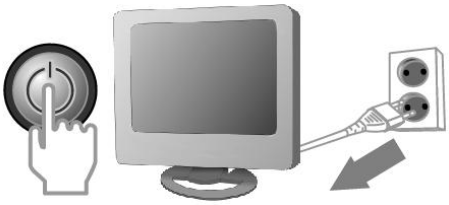
Do not block ventilation openings with any curtain or tablecloths. - The increase of inside temperature may cause fire



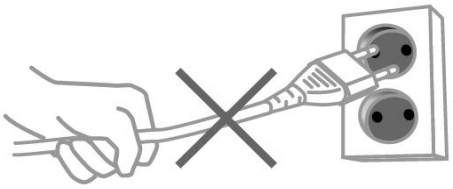
DO not drop the unit or make any scratch on the panel when you move the product. -Any scratch on the panel or drop of the product may cause functional failure.



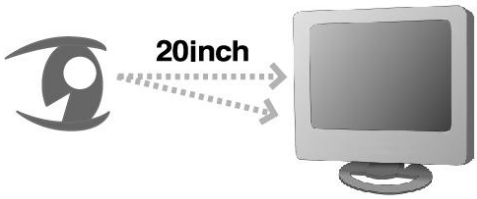
When moving the monitor, turn it off and disconnect all cables and the plug. - Product damage, electric shock, or fire hazard may result.



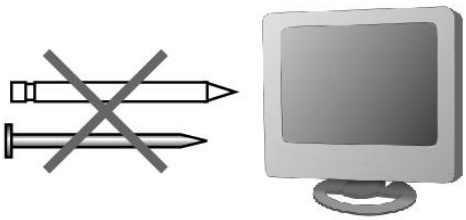
When disconnecting from the wall outlet, grab the plug. - Grabbing the cord may result in heat generation or fire hazard.



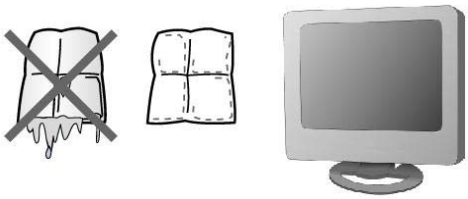
Keep your eyes 20 inch away from the screen and 0~15° down in relation to the screen. - Viewing at too close a position and wrong posture can weaken your eyes.



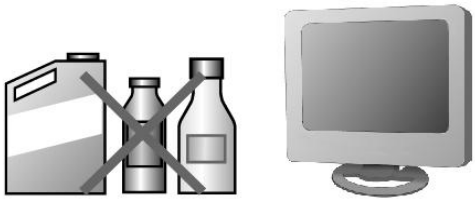

Do not press hard with your finger or scratch with sharp object on the surface of the LCD. -Any damage on the surface of the LCD may cause functional failure.



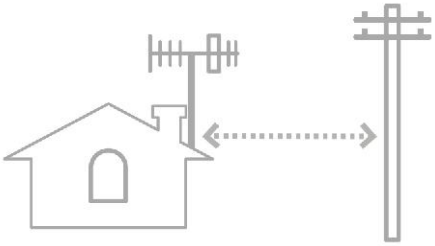
When you clean the monitor and the surface of LCD, be sure to pull the plug from wall outlet. Use soft cloth instead of using damp duster.



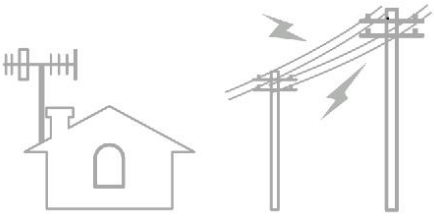
Do not use any chemicals such as industrial polisher, abrasive solution, wax, benzene, alcohol, or clearing detergents. - Chemical cleaners may fade, dissolve, or crack the monitor surface.



If you install outdoor antenna, be sure to install it at the distance from power wire. - If the antenna contacts with the power wire, it may cause electric shock.

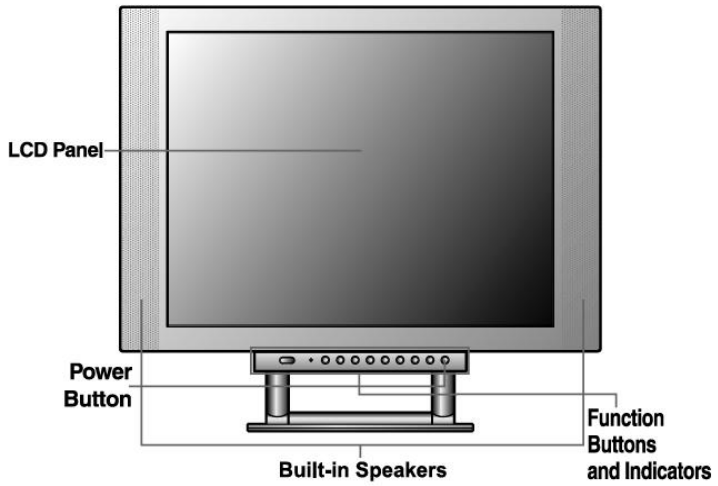


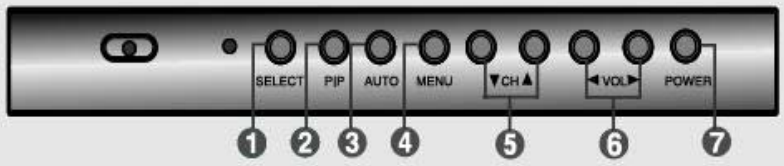
Be sure to keep the distance of the outdoors antenna so that it would not touch electric wire in case it falls by heavy wind. - If the antenna touches electric wire, it may cause injury and electric shock.



# Operation and Controls

## Front View

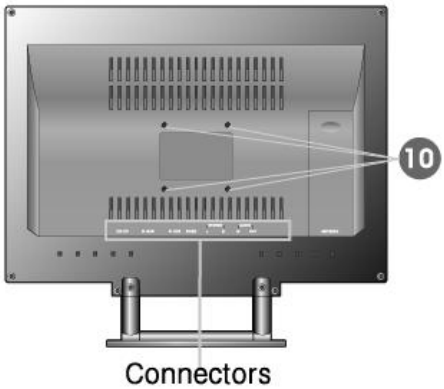


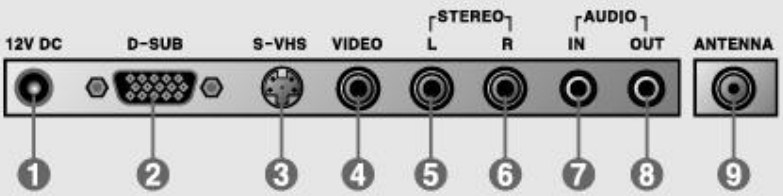




1. Select Button : Displays a OSD of all of the available input source.
   (PC / TV / VIDEO 1 / VIDEO 2).
   Exit the active the OSD
2. PIP Button : Activates PIP(Picture-in-Picture) window directly in PC mode.
   Selects video sources(Video/S-VHS/TV)
3. Auto Button : Allows the monitor to self-adjust to the incoming video signal.
4. Menu Button : Use this button to open the OSD and activate a highlighted menu items.
5. Channel Buttons : Increases or decreases the channel number.
   Moves the selector up or down on the OSD.
6. Volume Buttons : Increases or decreases the level of speaker volume.
   Adjusts OSD Settings on the OSD.
7. Power Button : Turns ON/OFF the Monitor.

# Operation and Controls

## Rear View




**1. Power In Terminal**

Connect the DC Adaptor to the power terminal on the back of the monitor.

**2. D-SUB Terminal**

Connect the monitor D-SUB connector and the PC using the D-SUB signal cable.

**3. S-Video Input Terminal**

Connect S-Video cable to this input.

**4. Composite Video Input Terminal**

Connect video cable to this input.

**5. Audio Input (Left) Terminal**

Connect left audio cable to this input.

**6. Audio Input (Right) Terminal**

Connect right audio to this input.

**7. PC Audio Input Terminal**

Connect the audio output of the PC.

**8. PC Audio Output Terminal**

Connect the stereo speaker system to Audio output.

**9. Antenna Input Terminal**

Use to connect antennas (AIR/CATV) and VCR.

**10. VESA HOLE for fixing on the wall.**

Supports VESA mounting standard for use with various VESA mounting devices.

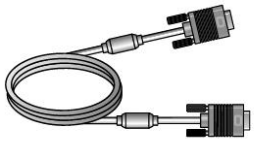
# Basic Accessories

- Please make sure the following items are included with your monitor.

  If any items are missing, contact your dealer.

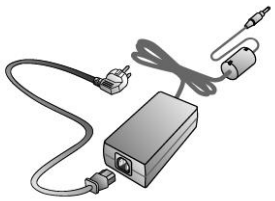
LCD Monitor

Quick Installation Guide

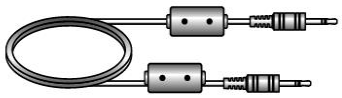


D-SUB Signal Cable

CD-ROM Title



Adaptor



Audio Cable

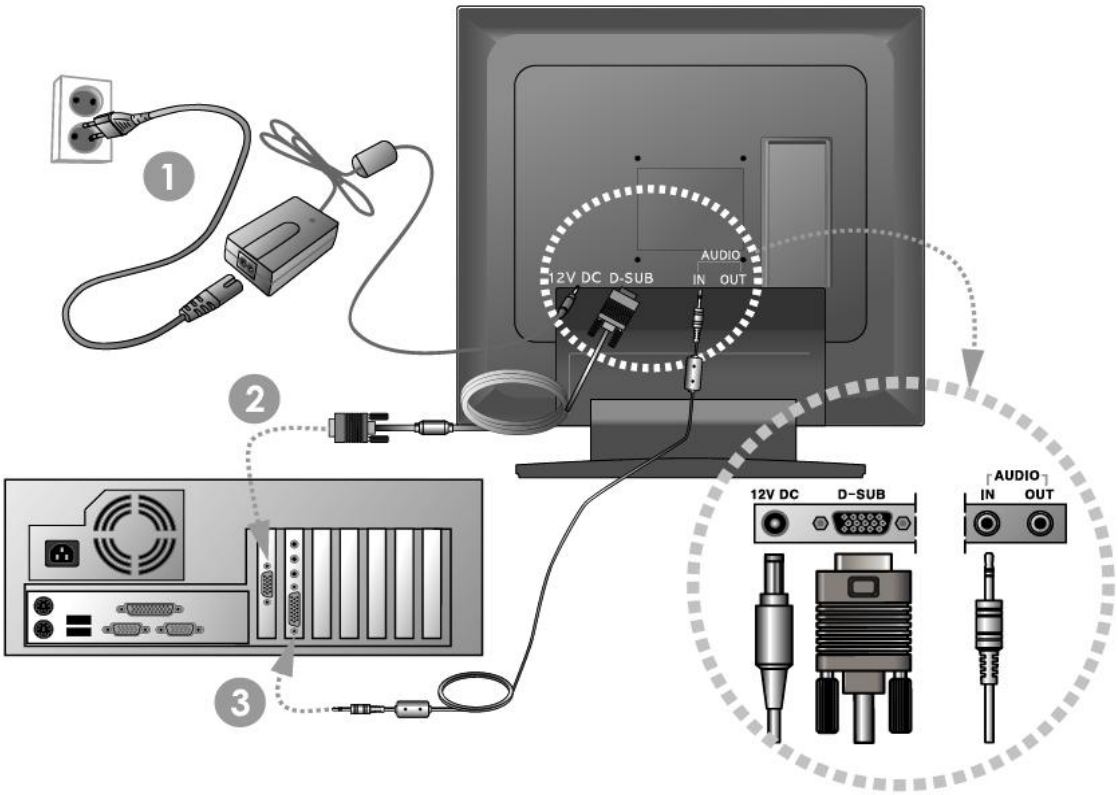
TV Tuner

Remote controller

## Batteries

# Connection To the PC

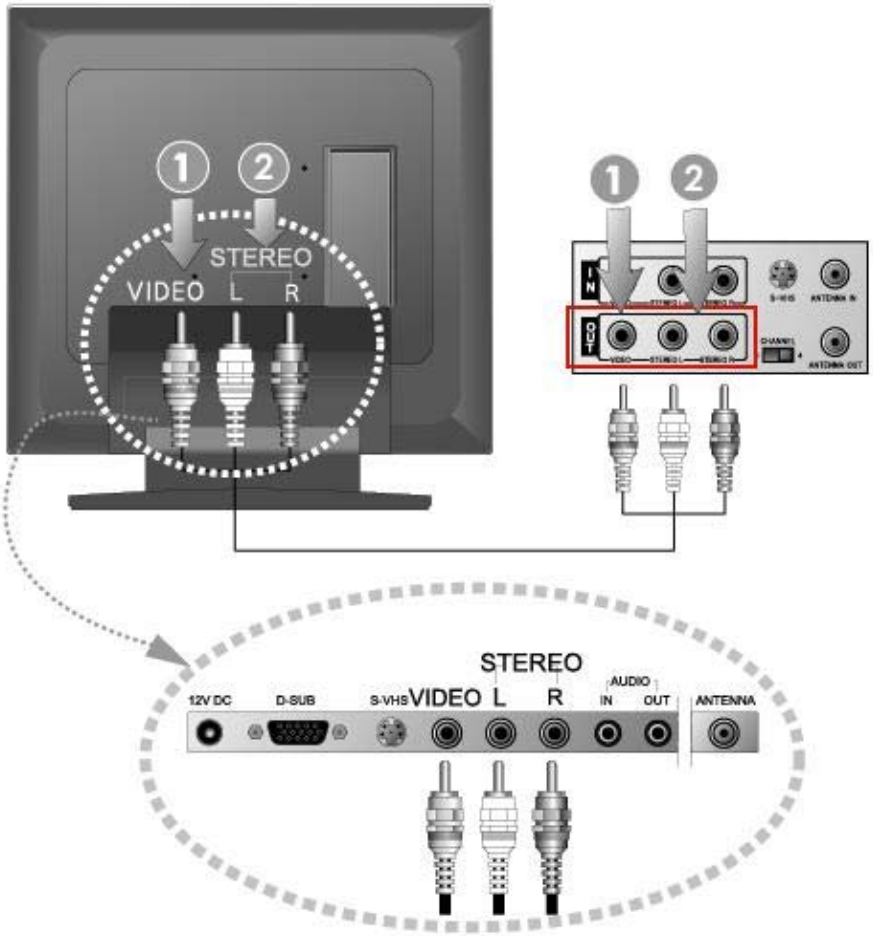
● Attention : Power off your Monitor before making any connections.




1. Power Connection : Connect the DC Adaptor to the power terminal on the back of the monitor.
2. Connection of PC : Connect the signal cable(D-SUB cable) to the monitor output socket of the computer and the other end to D-SUB on the back of the monitor.
3. AUDIO IN : Connect an audio cable to AUDIO IN on the back of the Monitor and the other end to AUDIO OUT terminal of the sound card on your computer.
   AUDIO OUT : Connect an audio cable to the AUDIO OUT of the back of the Monitor and the other end to to the external speakers.

# Connection to the VCR

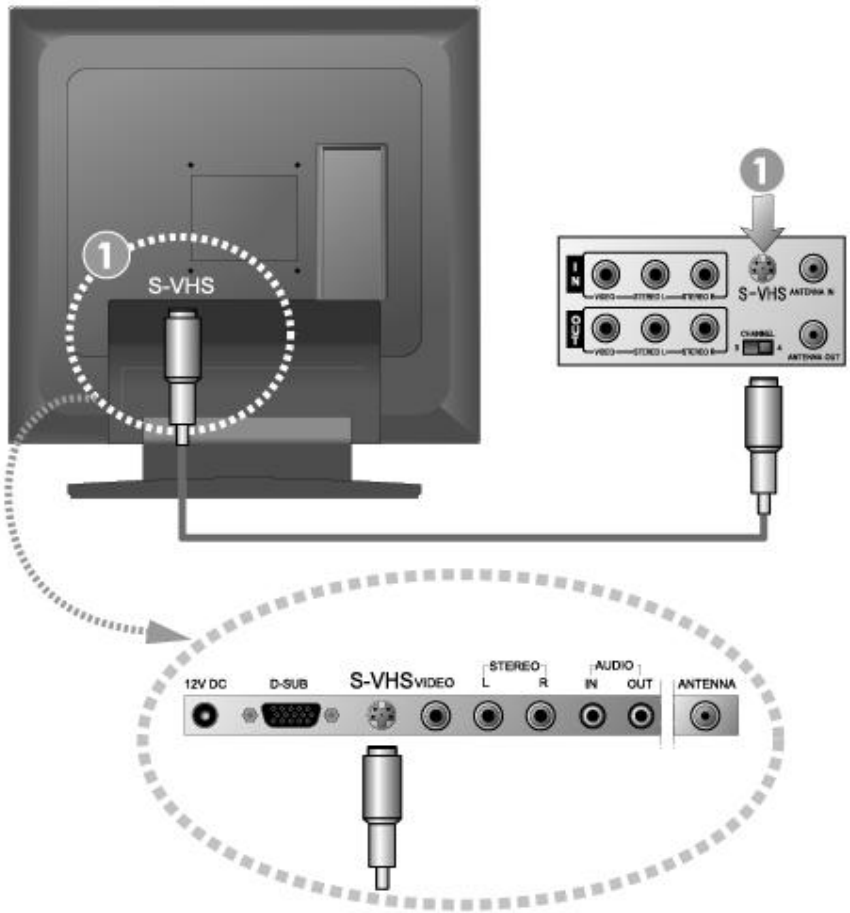
1. Connecting VIDEO 1




1) Connect RCA cable(Yellow) to VIDEO terminal on the back of the monitor and the other end to an appropriate external A/V device such as VCR, DVD.

2) Connect Audio RCA cable(White, Red) to STEREO terminal on the back of the monitor and the other end to an appropriate external A/V device such as VCR, DVD.

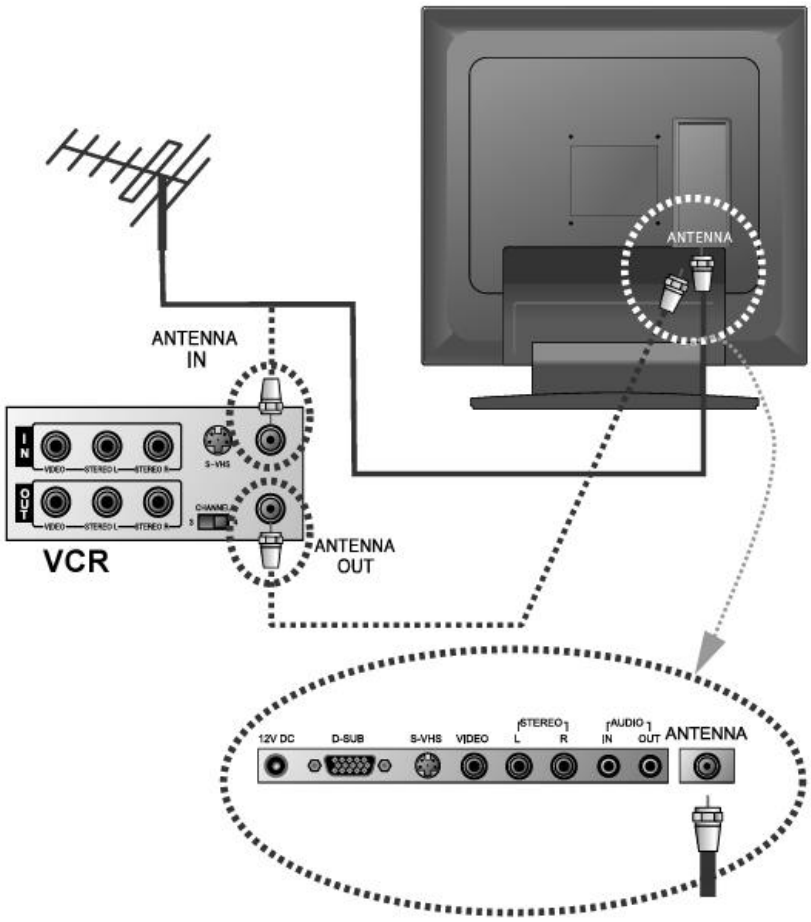
2. Connecting VIDEO 2




1) Connect S-VHS cable to an appropriate external A/V device such as VCR, DVD or Camcorder.

# Connection to the TV Antenna

●Connect to TV Antenna : Connect an antenna(or CATV cable) to the antenna terminal on the back of the monitor.



# Product Specification

**1. Product Specification**

| | | |
|---|---|---|
| **Monitor Type** | TFT LCD Flat Panel | |
| **Resolution / Color** | 1024 x 768 (XGA) | |
| **Display Colors** | 16.7M Max. : True Color | |
| **Pixel Type** | RGB stripe arrangement | |
| **Pixel pitch** | 0.3mm(H) x 0.3 mm(V) | |
| **Viewable Screen Size** | 15.1 " | |
| **Viewing Angles(H/V)** | 130/110 | |
| **Video Input** | Analog / R.G.B., 0.7 Vp-p | |
| **Contrast Ratio** | 400 :1 | |
| **Brightness** | 250 cd/m² | |
| **AC/DC Adapter?** | Adapter 100-240V, 50 ~ 60 Hz , DC 12V / 3.3A | |
| **Plug & Play Level** | VESA DDC 1/2B Compatible | |
| **Built-in Speakers** | 2W * 2 Stereo Type | |
| **I/O Connector** | DC Power in, VGA 15-pin D-sub , Audio in | |
| **Power Requirements** | DC 12V, 3.3A | |
| **Power Management** | VESA DPMS Standard | |
| **Power Consumption** | 30W Saving Mode : MAX 1W | |
| **Video/T.V** | Video Signaling | NTSC,PAL,Composite,S-Video |
| | T.V. Signaling | NTSC or PAL |
| **User Control method** | Remote Controller | PC/TV/Video/SVHS mode select Power etc. In each mode, All function can be controlled. |
| | Keypad | Power , TV Channel Up/Down, Volume Up/Down |
| **Weight** | 4.0 kg (Net) | |
| **Dimensions (WxLxH)** | 399 x 168 x 348 mm | |
| **Agency Approval** | FCC, CE, MIC, VCCI | |

●This specification of the product might be changed without any notice.

**2. Product's Display Specification**

| RESOLUTION | REFRESH RATE | HORIZONTAL FREQUENCY | PIXEL FREQUENCY | STANDARD TYPE |
|---|---|---|---|---|
| 640 X 350 | 70 Hz | 31.5 KHz | 25.175 MHz | VESA Standard |
| 640 X 400 | 70 Hz | 31.5 KHz | 25.175 MHz | VESA Standard |
| 720 X 350 | 70 Hz | 31.5 KHz | 28.35 MHz | VESA Standard |
| 640 X480 | 60 Hz | 31.5 KHz | 25.175 MHz | Indurstry Standard |
| | 72 Hz | 37.9 KHz | 31.500 MHz | VESA Standard |
| | 75 Hz | 37.5 KHz | 31.500 MHz | VESA Standard |
| 800 X 600 | 56 Hz | 35.1 KHz | 36.600 MHz | VESA Guidelines |
| | 60 Hz | 37.9 KHz | 40.000 MHz | VESA Guidelines |
| | 72 Hz | 48.1 KHz | 50.000 MHz | VESA Standard |
| | 75 Hz | 46.9 KHz | 49.500 MHz | VESA Standard |
| 1024 X 768 | 43 Hz | 35.5 KHz | 44.900 MHz | Indurstry Standard |
| | 60 Hz | 48.4 KHz | 65.000 MHz | VESA Guidelines |
| | 70 Hz | 56.5 KHz | 75.000 MHz | VESA Standard |
| | 75 Hz | 60.0 KHz | 78.750 MHz | VESA Standard |

# Basic Explanation

**The front part of panel of this model consists of following function buttons. Description for each of function button is shown below.**

- Select Button

  1. Displays a OSD of all of the available input source. (PC / TV / VIDEO 1 / VIDEO 2).
  2. Exit the active the OSD

---

- PIP(Picture in Picture) Button (171P1 / 171P2 : Remote Control)

  Activates PIP(Picture-in-Picture) window directly in PC mode.

  Selects video sources(Video/S-VHS/TV)

---

- Auto Button

  Allows the monitor to self-adjust to the incoming video signal.

---

- Menu Button

  Use this button to open the OSD and activate a highlighted menu items.

---

- Power Button

  Turns ON/OFF the Monitor.

---

- , Buttons

  1. Increases or decreases the channel number.
  2. Moves the selector up or down on the OSD.

---

- , Buttons

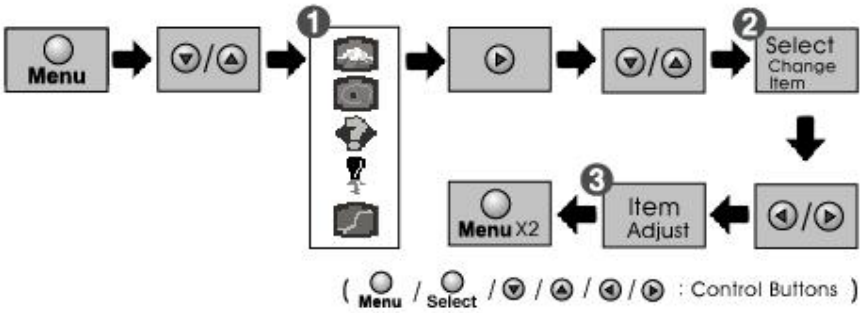
  1. Increases or decreases the level of speaker volume.
  2. Adjusts OSD Settings on the OSD.

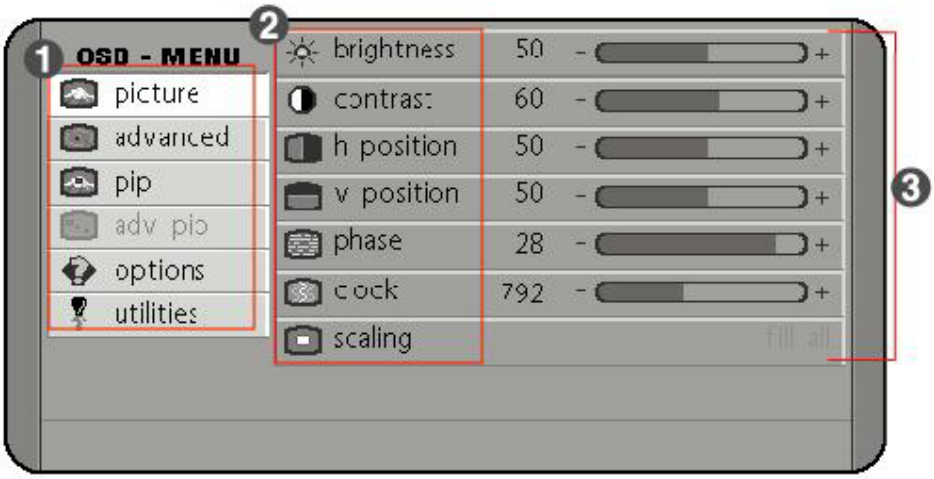
# Basic Operations

**1. OSD Adjustment**

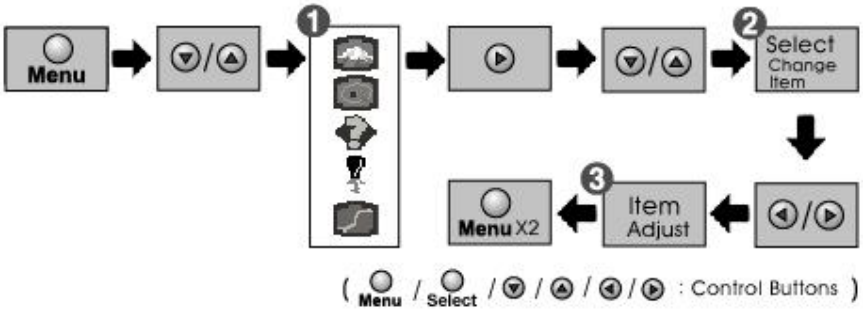
- Set OSD value with the Instructions described below.

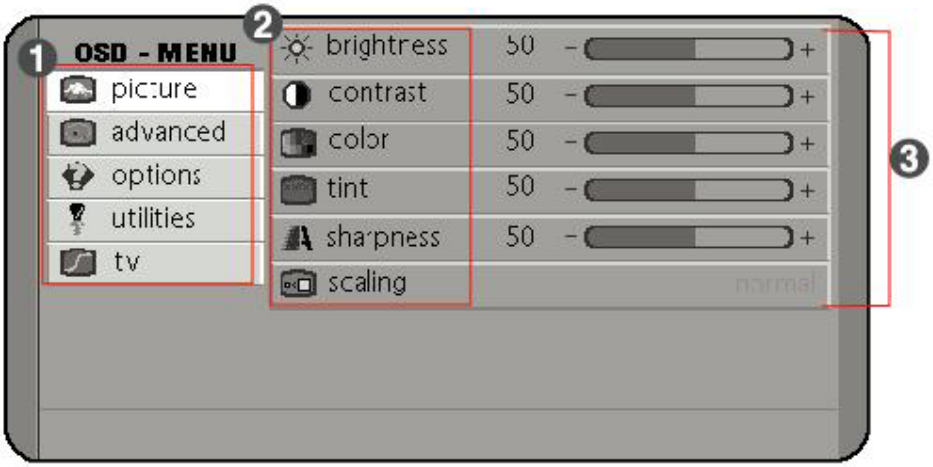
1) Adjustment procedure for PC Monitor Mode



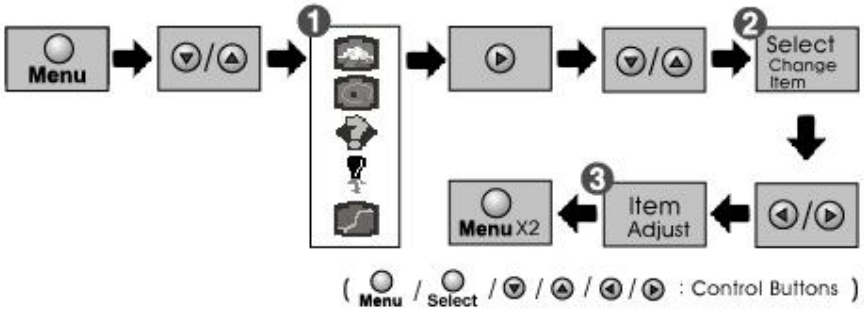



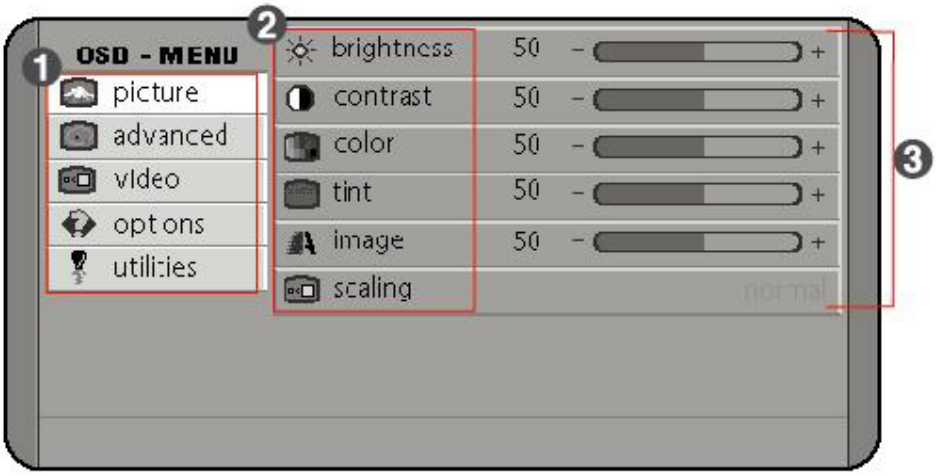

2) Adjustment procedure for TV Monitor Mode




3) Adjustment procedure for VIDEO 1 / 2 Monitor Mode




**2. Frequently used functions**

1) Monitor Self-Adjust

- Allows the monitor to self-adjust to the incoming video signal.

  Press the AUTO Button.

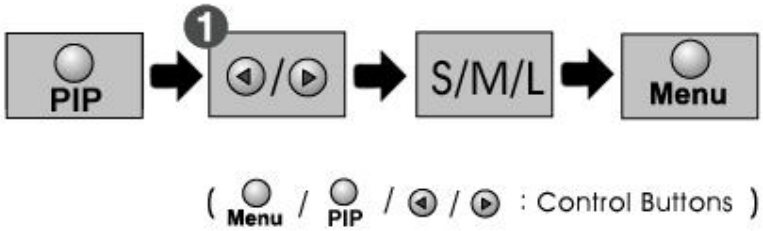
2) Adjust Speaker volume

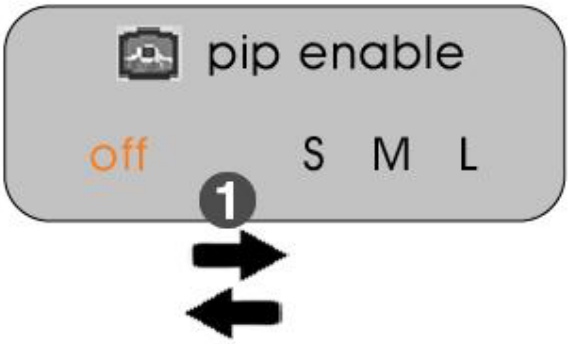
- Increases or decreases the level of speaker volume.

  Press the buttons.

3) Adjust PIP(Picture in Picture)

- Activates PIP(Picture-in-Picture) window directly in PC mode.


PIP
1
S/M/L
Menu
( Menu / PIP / / : Control Buttons )


pip enable
off
S M L
1

# Description and Directories of All Menus

**1. Menus when using PC Mode**

1) PICTURE

- Brightness : Adjust to brighten or darken the picture.
- Contrast : The contrast control determines the white level of the picture.
- H-Position : Move the entire screen to the left or right.
- V-Position : Move the entire screen to the below or upper.
- PHASE : Fine tuning of the screen even though it is not easily distinguishable with naked eyes.
- CLOCK : Adjust the horizontal-size(size of horizontal screen)of the entire screen.
- SCALING : Resize the input screen image and display.

---

2) Advanced

- Sharpness : Adjust the sharpen or soften the picture.
- GAMMA : Adjust the coordinates of color.
- COLOR TEMP : Adjust the color temperature.(Adjust the value of red, green and blue when the user selects).

---

3) PIP

- PIP SIZE : Adjust the size of screen piped.
- PIP POS : Adjust the PIP screen into 9 positions designated in the window.
- SOURCE: Change the input format you want to view in PIP screen.
- Brightness : Adjust to brighten or darken the picture.
- Contrast : The contrast control determines the white level of the picture.
- Color : Change the richness of color.
- Tint : Change the tone of the color.
- Sharpness : Adjust the sharpness of video or TV image.

---

4) ADV PIP

- PIP H-POSITION : Adjust the PIP screen to the right/left using the volume button.
- PIP V-POSITION : Adjust the PIP screen upper or lower using the volume button.
- VIDE FORMAT : Determine the input video type (AUTO, NTSC, PAL, SECAM)
- VIDE TYPE : Determine video type (DVD, VCR)

---

5) Options

- OSD POS : Adjust the position of OSD screen to 9 positions designated in the window screen.
- OSD H-POS : you can change the horizontal position where the OSD menu appears on your monitor
- OSD V-POS : You can change the vertical position where the OSD menu appears on your monitor
- OSD TIMEOUT : The OSD will automatically turn off if no adjustments are made for a certain time period.
- OSD BACKGROUND : Changes the transparent(or opaque) status of the background of the OSD.

---

6) Utilities

- LANGUAGE : OSD language and appearance can be changed.
- Volume : Increases or decreases the level of speaker volume..
- FREEZE FRAME : Stop the screen image..
- FACTORY RESET : Screen parameters are replaced with the factory default values.

# Description and Directories of All Menus

**2.** Menus when using TV Mode

1) Picture

- Brightness : Adjust to brighten or darken the picture.
- Contrast : The contrast control determines the white level of the picture.
- Color : Adjust to increase or decrease color intensity..
- Tint : Change the tone of the color.
- Image : Adjust the sharpen or soften the picture.
- SCALING : Resize the input screen image and display.
  (nomal, zoom, anamorphic, zoom 2, wide - Resizing)

---

2) Advanced

- Sharpness : Adjust the sharpen or soften the picture.
- GAMMA : Adjust the coordinates of color.
- COLOR TEMP : Adjust the color temperature.(Adjust the value of red, green and blue when the user selects).

---

3) Options

- OSD POS : Adjust the position of OSD screen to 9 positions designated in the window screen.
- OSD H-POS : you can change the horizontal position where the OSD menu appears on your monitor
- OSD V-POS : You can change the vertical position where the OSD menu appears on your monitor
- OSD TIMEOUT : The OSD will automatically turn off if no adjustments are made for a certain time period.
- OSD BACKGROUND : Changes the transparent(or opaque) status of the background of the OSD.

---

4) Utilities

- LANGUAGE : OSD language and appearance can be changed.
- Volume : Increases or decreases the level of speaker volume..
- FREEZE FRAME : Stop the screen image..
- FACTORY RESET : Screen parameters are replaced with the factory default values.

---

5) TV

- Source : Selects the desired source, AIR or CABLE.
- Channel : Adjust the Channel.

- Tune option : Manually or automatically performs tune in. (Fine tuning in case of manual)
- Fine Tune : Due to weak signals or a wrong antenna configuration, some of the channels may not be tuned correctly. With fine tune function, you can tune in each channel precisely which has a grainy picture.
- Channel edit : You can exclude the channels of your choice from the channel scan operation.
- Channel search : Searches available channels and stores all automatically.
- Channel swap : Change the current channel .
- TV SYSTEM : Select a broadcasting system that is being used in your region.

# Description and Directories of All Menus

**3. Menus when using VIDEO 1(Composite) / VIDEO 2 (S-VHS) Mode**

1) Picture

- Brightness : Adjust to brighten or darken the picture.
- Contrast : The contrast control determines the white level of the picture.
- Color : Adjust to increase or decrease color intensity..
- Tint : Change the tone of the color.
- Image : Adjust the sharpen or soften the picture.
- SCALING : Resize the input screen image and display.
  (nomal, zoom, anamorphic, zoom 2, wide - Resizing)

---

2) Advanced

- Sharpness : Adjust the sharpen or soften the picture.
- GAMMA : Adjust the coordinates of color.
- COLOR TEMP : Adjust the color temperature.(Adjust the value of red, green and blue when the user selects).

---

3) VIDEO

- VIDEO FORMAT : Determine the input video format(AUTO,NTSC,PAL,SECAM)
- VIDEO TYPE : Determine video type(DVD, VCR)

---

4) Options

- OSD POS : Adjust the position of OSD screen to 9 positions designated in the window screen.
- OSD H-POS : you can change the horizontal position where the OSD menu appears on your monitor
- OSD V-POS : You can change the vertical position where the OSD menu appears on your monitor
- OSD TIMEOUT : The OSD will automatically turn off if no adjustments are made for a certain time period.
- OSD BACKGROUND : Changes the transparent(or opaque) status of the background of the OSD.

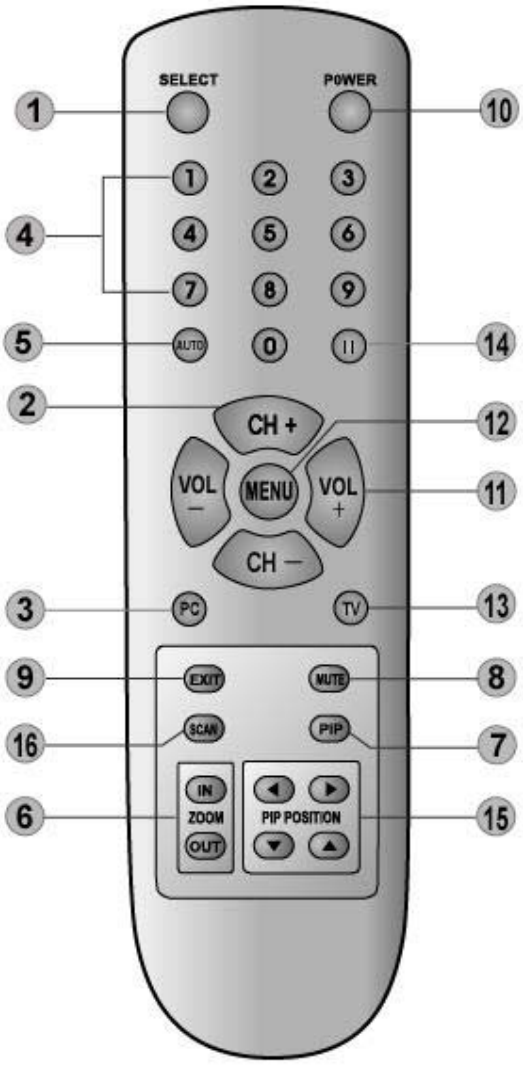
---

5) Utilities

- LANGUAGE : Changes OSD language and appearance can be changed.
- Volume : Increases or decreases the level of speaker volume..
- FREEZE FRAME : Stop the screen image..
- FACTORY RESET : Screen parameters are replaced with the factory default values.

# Description on Remote Controller

**(TV Only-Option)**



1. **SELECT** Button : Displays a menu of all of the available input source.
(PC / TV / VIDEO 1 / VIDEO 2).
2. **CHANNEL UP/DOWN** Buttons : Press to select channels or menu settings.
3. **PC** Select Button : PC Select.
4. **Number** buttons : Press to directly select channels.
5. **AUTO** Button : Self-Adjust to the incoming video signal.
6. **ZOOM IN/OUT** Button : adjust the Screen size using ZOOM button
7. **PIP** Button : Activates PIP(Picture-in-Picture) window directly in PC mode.
8. **MUTE** Button : Switches the sound on or off.
9. **EXIT** Button : To exit from the OSD
10. **POWER** Button : Press to turn the monitor on and off.
11. **VOLUME UP/DOWN** Buttons : Adjusts the sound level. Adjusts menu settings.
12. **MENU** Button : To display or exit from the OSD..
13. **TV** Select Button : TV Select.
14. **PAUSE** Button : : Current screen pause.
15. **PIP POSITION** Button : Display Video or TV Screen on the pc Screen.
16. **SCAN** Button : Automatically scan the channel.

# Troubleshooting

**In case of trouble, check these before calling the service center.**

| What you see... | Suggested Actions |
|---|---|
| Screen is black and power indicator is off | Ensure that the power cord is firmly connected and the Monitor is on. |
| Screen is black and power indicator is blinks. | Ensure that the signal cable is firmly connected to the PC or video sources.<br>Ensure that the PC or video sources are turned on. |
| Screen position and size is incorrect. | Press the AUTO Button. |
| Image is not stable and may appear to vibrate. | Check that the display resolution and frequency from your PC or video board is an available mode for your Monitor.<br>On your computer check : Control Panel -> Display -> Settings. |
| The image is too light or too dark. | Adjust the Brightness and Contrast. |
| Horizontal noise on the image. | Adjust the AUTO.<br>Adjust the PHASE. |
| Picture OK, No Sound. | Check the Volume.<br>Make sure that MUTE is not on and the volume level. |
| Vertical bars or stripes on the image. | Adjust the AUTO.<br>Adjust the CLOCK. |

# Vocabulary

- **Dot pitch**

  The image on a monitor is composed of red, green and blue dots. The closer the dots, the higher the resolution. The distance between two dots of the same color is called the 'Dot Pitch'.

- **Horizontal Frequency**

  The time to scan one line connecting the right edge to the left edge of the screen horizontally is called Horizontal Cycle. The inverse number of the Horizontal Cycle is called Horizontal Frequency.

- **Vertical Frequency**

  The screen must be redrawn several times per second in order to create and display an image for the user. The frequency of this repetition per second is called Vertical Frequency or Refresh Rate.

- **Resolution**

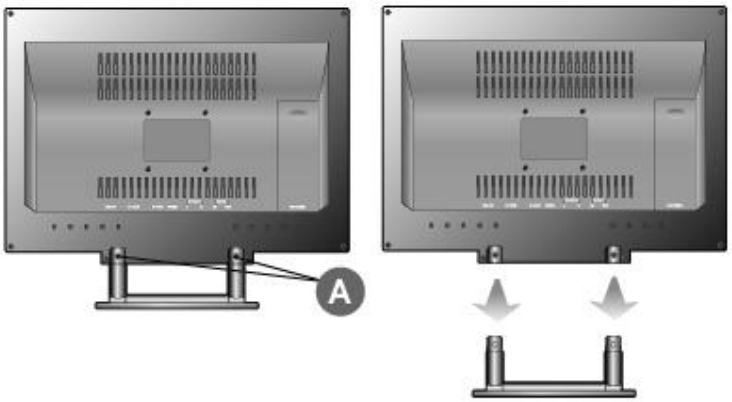
  The number of horizontal and vertical dots used to compose the screen image is called 'resolution'.

- **Plug and Play**

  This is a function  that provides the best quality screen for the user by allowing the computer and the monitor to exchange information automatically.

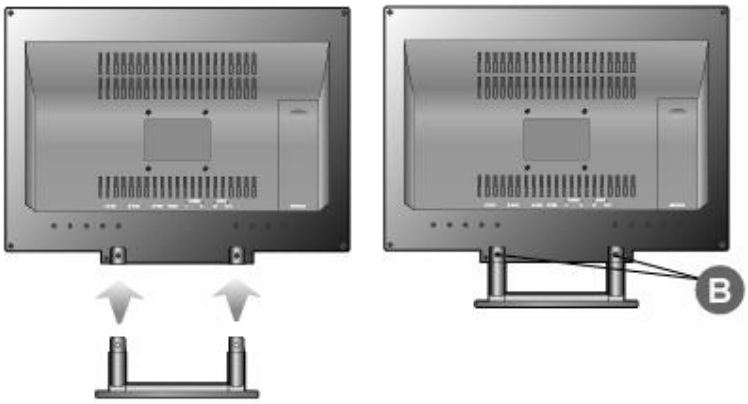
# Mounting Device Separation & Union

1. Separation




1) Turn off your monitor and unplug its power cord.
2) Lay the Monitor face-down ward on a flat surface with a cushion beneath it to protect the screen.
3) Remove the screws( A ) and then remove the Mounting Device from the monitor.

2. Union




1) Align the Mounting Device with the holes( B ) in the Rear Cover and secure it with the screws.