

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.

190M LCD Monitor

User Manual



Notice

This equipment is one of first class quality. The LCD panel is composed of about 4 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.

190M LCD Monitor

IMPORTANT SAFEGUARDS

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Always be careful when using your LCD Monitor. To reduce the risk of fire, electrical shock, and other injuries, keep these safety precautions in mind when installing, using, and maintaining your machine.



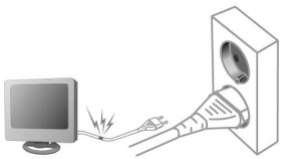
Do not open the monitor. Contact your dealer if the monitor is not operating properly.



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 lightning 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

IMPORTANT SAFEGUARDS



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.

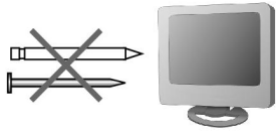


When moving the monitor, turn it off and disconnect all cables and the plug. - Product damage, electric shock, or fire hazard may result.

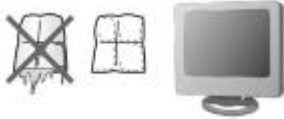


When disconnecting from the wall outlet, grab the plug. - Grabbing the cord may result in heat generation or fire hazard.

IMPORTANT SAFEGUARDS



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.

| FCC Part 15 Notice |

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

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 to correct the interference by one or more of the following measures:

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





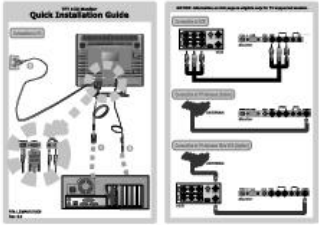
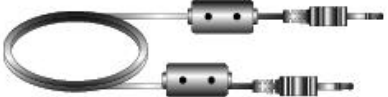

CAUTION : Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

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ACCESSORIES

ACCESSORIES

Please make sure the following accessories are provided with your LCD Monitor. If any items are missing, contact your dealer.

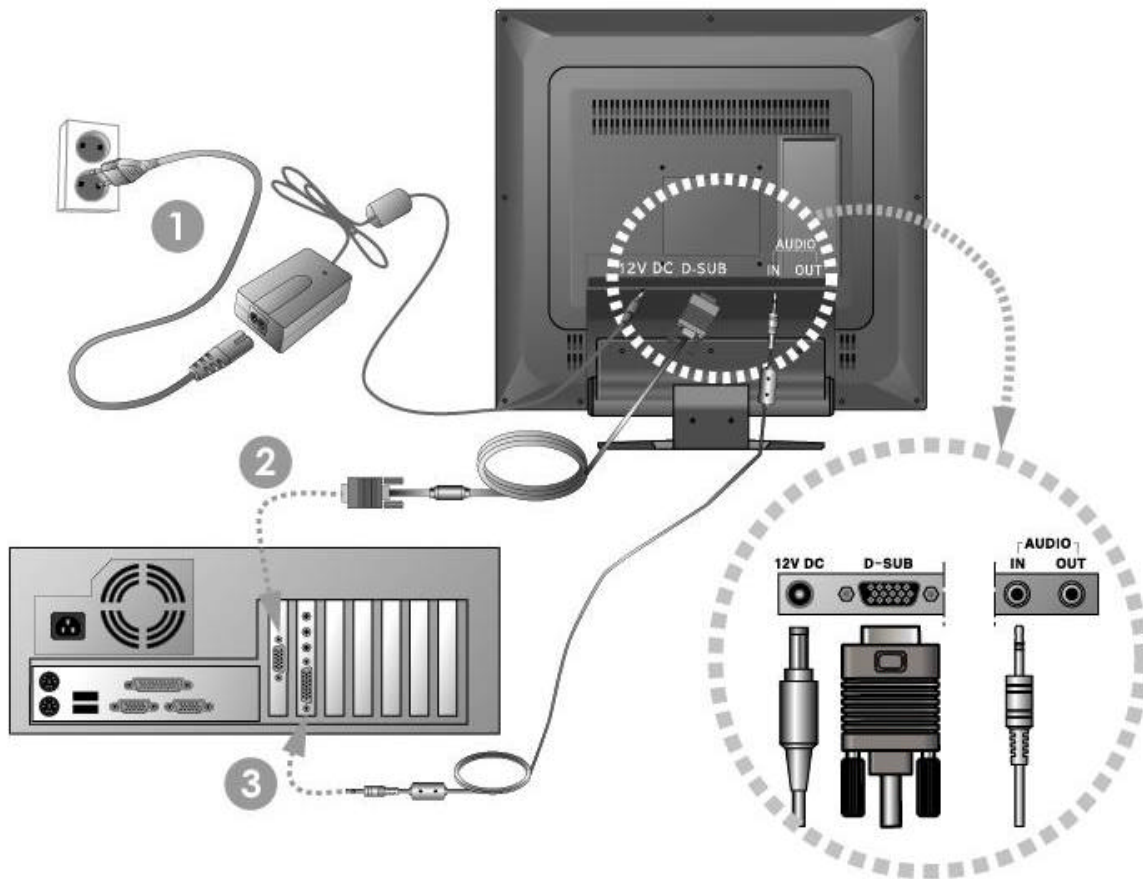
Monitor	AC Adapter
	
D-Sub Cable	CD Manual(CD Title)
	
Quick Installation Guide	Audio Cable
	
Warranty Card	
	

190M LCD Monitor

PREPARATION

PREPARATION

● Connection



1. Power Connection : Connect the [POWER Cable] 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 the external speakers.

PREPARATION

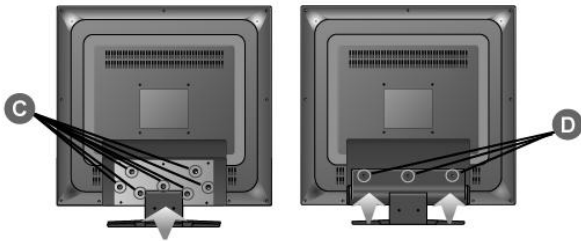
● Mounting Device [Separation] & [Union]

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.
- 4) Remove the screws(B) 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.
- 2) Cover the Mounting Device with the Mounting Device cover and secure it with screws(D).

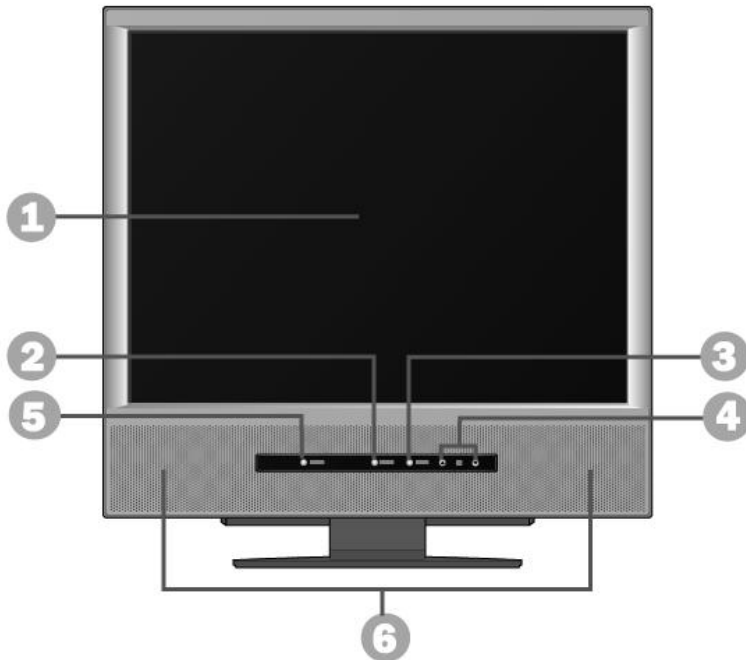
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OPERATION AND CONTROL

OPERATION & CONTROL

● LCD Monitor Control Overview

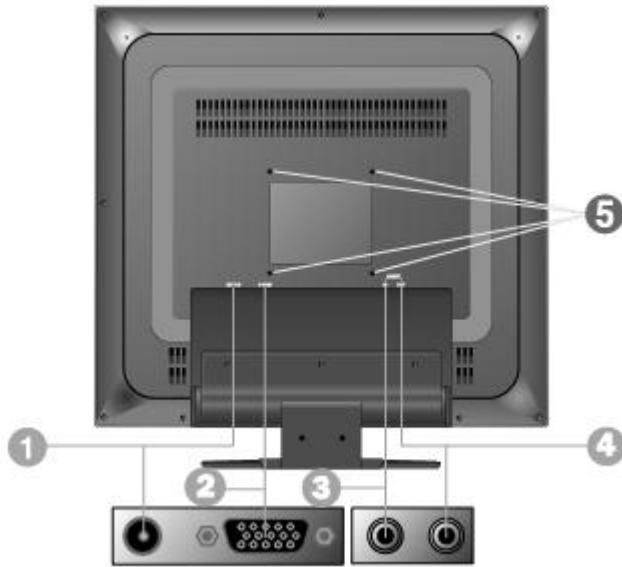
1) Controls



1. LCD Panel
2. Menu Button : Use this button to open the OSD and activate a highlighted menu items.
3. Select Button : Use this button to activate a highlighted menu item.
Allows the monitor to self-adjust to the incoming video signal.
4. Adjust Buttons : These buttons allow you to highlight and adjust items in the OSD.
Increases or decreases the level of speaker volume.
5. Power Button : Turns ON/OFF the monitor.
6. Built-in Speakers

OPERATION & CONTROL

2) Terminals



1. Power In Terminal

: Connect the [POWER Cable] 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. AUDIO IN Terminal : Connect the audio output of the PC.

4. AUDIO OUT Terminal : Connect the stereo speaker system to Audio output.

5. VESA HOLE for fixing on the wall.

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

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BASIC EXPLANATION

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

● Power Button

Turns ON/OFF the monitor.

● Menu Button

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

● SELECT Button

Use this button to activate a highlighted menu item.

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

● Adjust Buttons

These buttons allow you to highlight and adjust items in the OSD.

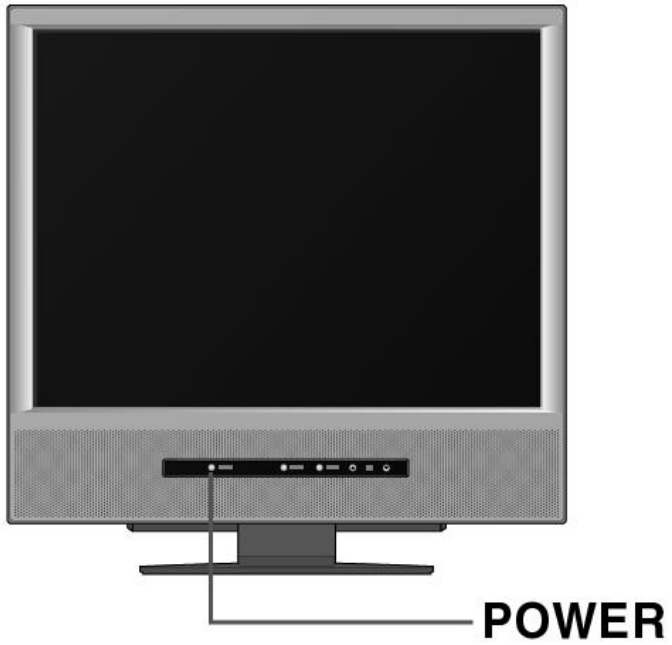
Increases or decreases the level of speaker volume.

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BASIC OPERATION

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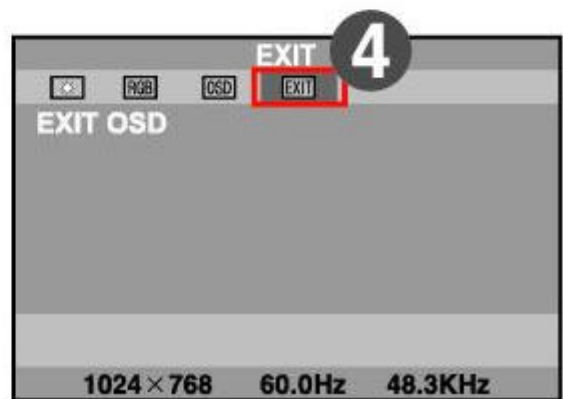
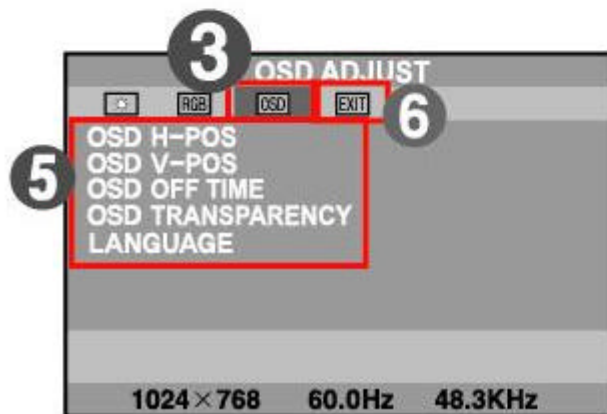
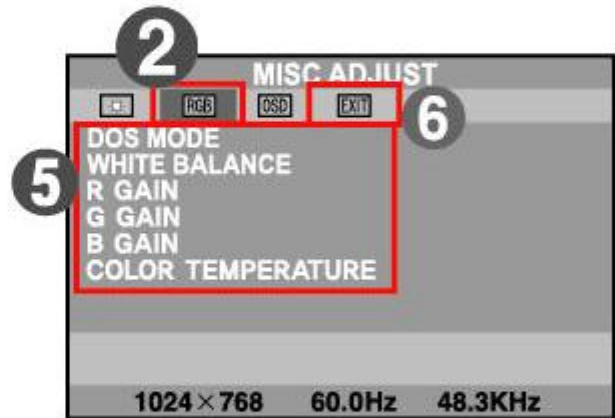
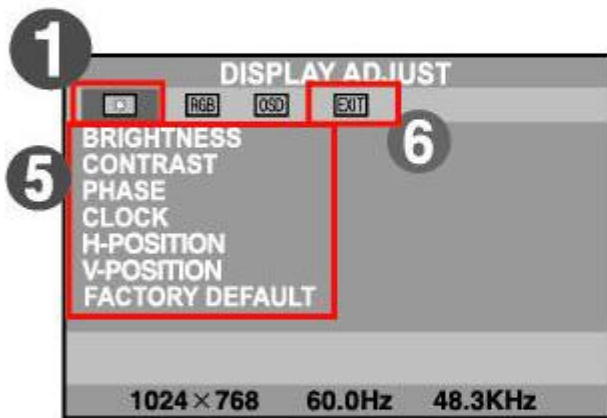
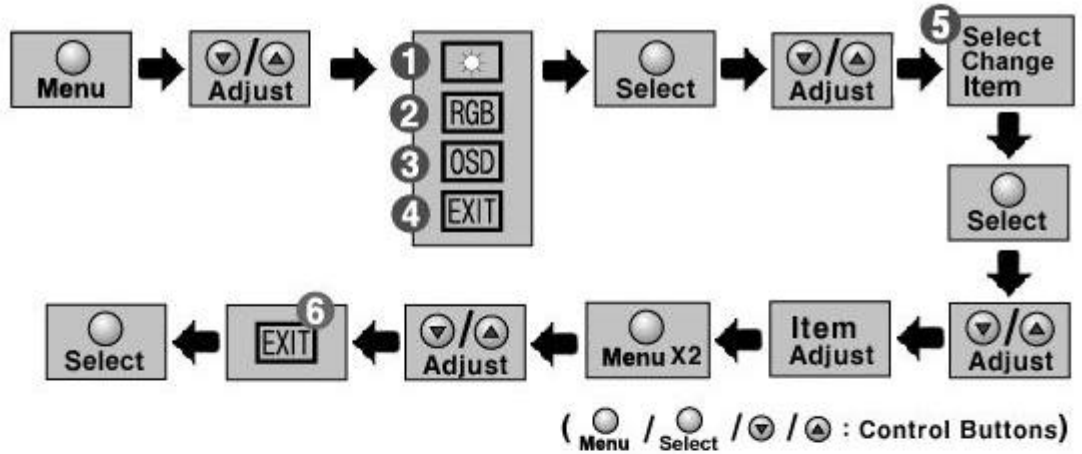
- Turning on POWER
Press MAIN POWER.



BASIC OPERATION

● OSD Adjustment

Set OSD value with the instructions described below.



BASIC OPERATION

● Frequently used function

1) Monitor Self-Adjust

Self-Adjust to the incoming video signal.

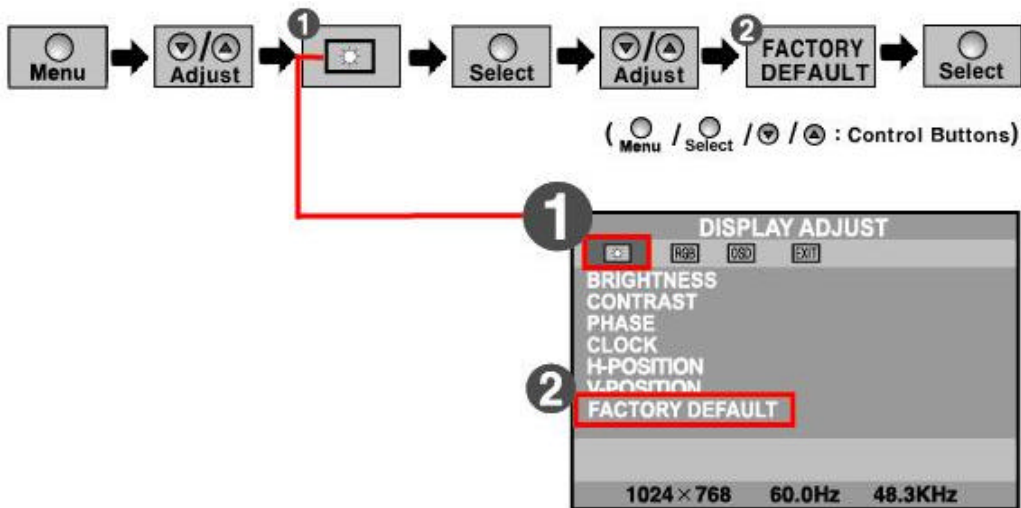
Press the "SELECT" Button. (SELECT -> YES -> Self-Adjust)

2) Adjust Speaker Volume

Increases or decreases the level of speaker volume.

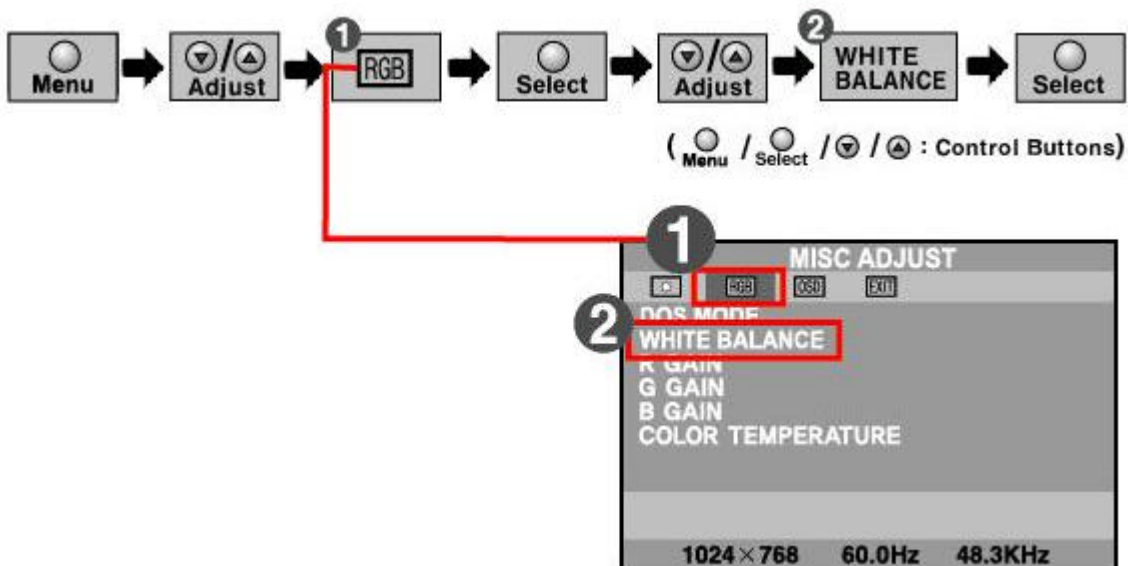
3) Reset Factory Default

Screen parameters are replaced with the factory default values.



4) White Balance

Select this menu to use automatic color balance function.



190M LCD Monitor

DESCRIPTION AND DIRECTORIES OF ALL MENUS

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● OSD for Each Adjustment Items

1. DISPLAY ADJUST

- a. BRIGHTNESS : Adjust to brighten or darken the picture.
- b. CONTRAST : The contrast control determines the white level of the picture.
- c. PHASE : Fine tuning of the screen even though it is not easily distinguishable with naked eyes.
- d. CLOCK : Adjust the horizontal-size(size of horizontal screen)of the entire screen.
- e. H-POSITION : Move the entire screen to the left or right.
- f. V-POSITION : Move the entire screen to the below or upper.
- g. FACTORY DEFAULT : Screen parameters are replaced with the factory default values.

2. MISC ADJUST

- a. DOS MODE : Use this menu to select either 640X400 or 720X400 of Dos mode.
- b. WHITE BALANCE : Select this menu to use automatic color balance function.
- c. R GAIN : The user can adjust the Red Settings.
- d. G GAIN : The user can adjust the Green Settings.
- e. B GAIN : The user can adjust the Blue Settings.
- f. COLOR TEMPERATURE : Use this menu to adjust color temperature.

3. OSD ADJUST

- a. OSD H-POS : You can change the horizontal position where the OSD menu appears on your monitor
- b. OSD V-POS : You can change the vertical position where the OSD menu appears on your monitor
- c. OSD OFF TIME : The OSD will automatically turn off if no adjustments are made for a certain time period.
- d. OSD TRANSPARENCY : Changes the transparent(or opaque) status of the background of the OSD.
- e. LANGUAGE : OSD language and appearance can be changed.

4. EXIT : Use this menu to exit from OSD menu screen.

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VOCABULARY

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● 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.

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TROUBLESHOOTING

TROUBLESHOOTING

Before calling for repair services, make the following checks for possible remedies to the encountered symptoms.

Problem	Possible Remedies
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. Ensure that the PC 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 is an available mode for your Monitor. 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. Adjust the PHASE.
Vertical bars or stripes on the image.	Adjust the AUTO. Adjust the CLOCK.

190M LCD Monitor

SPECIFICATIONS

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● Product Specification

MONITOR TYPE	TFT LCD Flat Panel	
VIEWABLE SCREEN SIZE	19.0" (48.184Cm)	
RESOLUTION	1280 x 1024 (SXGA)	
DISPLAY COLOR(Max.)	16.7M colors	
PIXEL ARRANGMENT	RGB Vertical stripe	
PIXEL PITCH	0.294mm(H) x 0.294mm(V)	
VIEWING ANGLES (H/V)	170 / 170 (Typ.)	
RESPONSE TIME (ms)	25ms (Typ.)	
CONTRAST RATIO	500:1 (Typ.)	
BRIGHTNESS (cd/m ²)	250 (Typ.)	
OPERATING TEMPERATURE	0 (Min.), +50 (Max.)	
STORAGE TEMPERATURE	-20 (Min.), +60 (Max.)	
RATED POWER	Adapter 100-240V, 50~60Hz, DC 12V/5A	
POWER CONSUMPTION	MAX. 40W (standby : 3W)	
POWER MANAGEMENT	VESA DPMS Standard	
PLUG & PLAY LEVEL	VESA DDC 1/2B Compatible	
BUILT-IN SPEAKERS	3W * 2 Stereo Type	
VIDEO INPUT	Analog/R.G.B., 0.7 Vp-p	
CONNECTOR	INPUT CONNECTOR	DC Power in, Audio in, VGA 15-pin D-sub
	OUTPUT CONNECTOR	Audio out
USER CONTROLLER	KEYPAD	Power, Menu, Select, Adjust Up/Down
REGULATORY APPROVAL	MIC,CE,CB,TCO99	
COLOR MANAGEMENT	sRGB & ICC Profile	
CABINET COLOR	Ivory, SV, BK, Wh	
DIMENSION (W X H X D)	443 x 453 x 216 mm	
WEIGHT (kg)	6.95Kg(Net)	

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

SPECIFICATIONS

● Display Mode

RESOLUTION	REFRESH RATE	HORIZONTAL FREQUENCY	PIXEL FREQUENCY	STANDARD TYPE
640 X 350	70 Hz	31.5 KHz	25.175 MH	VESA Standard
640 X 400	70 Hz	31.5 KHz	25.175 MH	VESA Standard
720 X 350	70 Hz	31.5 KHz	28.35 MHz	VESA Standard
640 X 480	60 Hz	31.5 KHz	25.175 MH	Industry 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	Industry 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
1152 X 864	75 Hz	67.5 KHz	108.000 MHz	VESA Standard
1280 x 1024	60 Hz	64.0 KHz	108.000 MHz	VESA Standard
	75 Hz	80.0 KHz	135.000 MHz	VESA Standard