



USER'S GUIDE

17" CCTV MONITOR

19" CCTV MONITOR

TFT-LCD Monitor

IMPORTANT SAFEGUARDS

1. Read all of these instructions.

2. Save these instructions for later use.



3. Unplug this monitor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

4. Do not use attachments not recommended by the monitor manufacturer as they may cause hazards.

5. Do not use this monitor near water, e.g., near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.



6. Do not place this monitor on an unstable cart, stand, or table. The monitor may fall, causing serious injury to a child or adult, and serious damage to the appliance.



7. Slots and openings in the cabinet and the back or bottom are provided for ventilation, to ensure reliable operation of the monitor, and to protect it from overheating.

These openings must not be blocked or covered. The openings should never be blocked by placing the monitor on a bed, sofa, rug, or other similar surface. This monitor should never be placed near or over a radiator or heat register. This monitor should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.



8. This monitor should be operated only from the type of power source indicated on the marking label. If you are not sure of the power supplied to your home, consult your monitor dealer or local power company.



9. This monitor is equipped with a 3-wire grounding-type plug. That is, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.



10. Do not allow anything to rest on the power cord. Do not locate this monitor where the cord will be abused by people walking on it.

11. Follow all warnings and instructions marked on the monitor.



12. For added protection for this monitor during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the monitor and/or the computer due to lightning and power line surges.

13. Do not overload wall outlets and extension cords as this can result in fire or electric shock.

14. Never push objects of any kind into this monitor through cabinet slots, as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the monitor.



15. Do not attempt to service this monitor yourself, as opening or removing covers may expose you to dangerous voltages or other hazards. Refer all servicing to qualified service personnel.

16. Unplug this monitor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a. When the power cord or plug is damaged or frayed.

b. If liquid has been spilled into the monitor.

c. If the monitor has been exposed to rain or water.

d. If the monitor does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore normal operation.

e. If the monitor has been dropped or the cabinet has been damaged.

f. When the monitor exhibits a distinct change in performance, this indicates a need for service.



17. When replacement parts are required be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

18. Upon completion of any service or repairs to this monitor, ask the service technician to perform routine safety checks to determine that the monitor is safe to operate.



FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

NOTE : This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial 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 to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or TV technician for help.

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

CANADIAN NOTICE

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS CANADIEN

Cet appareil numérique de la Class A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms (in brackets are the equivalent international standards):

- EN55022 (CISPR 22) - Electromagnetic Interference
- EN55024 - Immunity Test for ITE Product
- EN61000-3-2 (IEC555-2) - Power Line Harmonics

**WARNING: FOR CONTINUED SAFETY, REPLACE POWER ADAPTOR ONLY WITH
MANUFACTURER'S RECOMMENDED MODELS**

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INTRODUCTION

This manual explains how to correctly install, operate and get the best performance from your monitor. Please read this user's guide carefully before installing your monitor, then keep it near your monitor for quick reference.

First, please check that the contents of the box corresponds with the following checklist :

- TFT LCD monitor
- Power cord
- 15 pin signal cable
- User's guide

If any item is missing or damaged, please contact your dealer. Please keep the box and packing materials so that you may properly store or transport your monitor.

PRODUCT FEATURES

- The monitor is designed for use in a small work area or for those who need more work space on the desk.
- The convenient and user-friendly on-screen display allows for easy and accurate adjustments of screen size, position and screen color.
- The monitor complies with the VESA Display Data Channel (DDC) specification for Plug and Play compatibility. Advanced microcircuitry makes setup and configuration fast and effortless.
- The monitor features Advanced Color Controls for fine-tuning to meet your own personal tastes or application requirements. Use the on-screen controls to adjust the color temperature, RGB gain value for the best possible screen color and intensity.
- Press the menu button and activate the Self-Diagnosis menu to determine whether your monitor is functioning normally, not receiving a signal or is receiving a signal that is out of scanning range.
- Activate the higher refresh rates of the monitor to stabilize the screen and eliminate the annoying flicker that contributes to eye-strain and headaches.

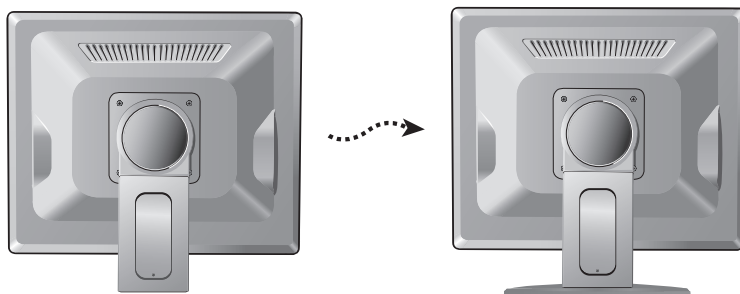
The monitor supports the optimal display performance with 1280x1024 at 75Hz.

- The monitor can be connected to various types of video devices with supporting video input signals like Composite video(CVBS), Seperate video.

SETUP

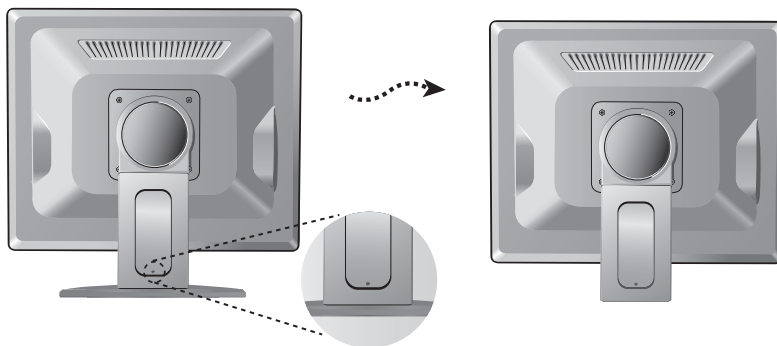
Stand Assembling Procedures

1. Put some smooth pad or cloth on the level surface and place the monitor on it with the face downward.
2. Insert the protrude of stand thoroughly into pedestal.



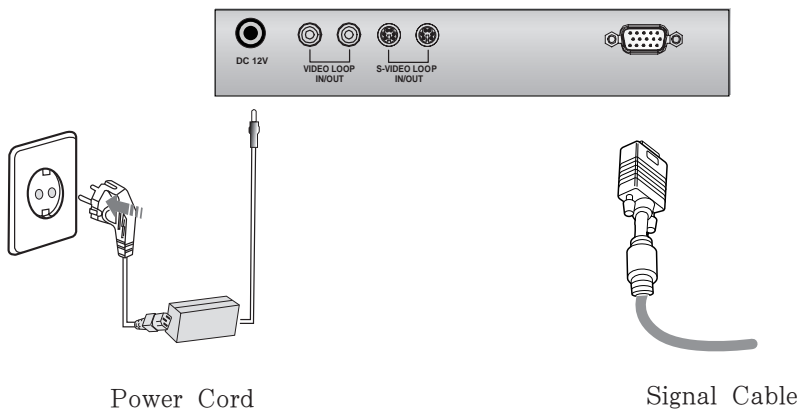
Stand Disassembling Procedures

1. Put some smooth pad or cloth on the level surface and place the monitor on it with the face downward.
2. In order to detach pedestal, press the groove on the back of protrude connected to the body, using an object with sharp end. (Note that fixation spot can be broken with too much force)



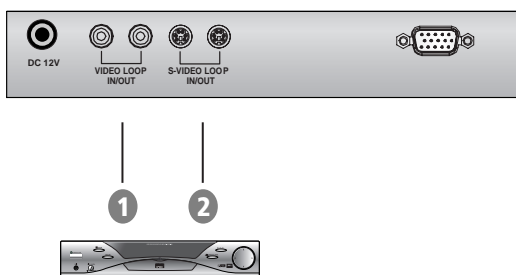
CONNECTING THE 15 PIN SIGNAL CABLE AND POWER CORD

- ① Turn off the computer and monitor.
- ② Connect the 15 pin signal cable to the output port of the video card in your computer and monitor.
- ③ Plug the DC jack into the DC port located on the back of the monitor.
- ④ Plug the power cord into the AC receptacle of the Adapter.
- ⑤ Plug the other end of the power cord into the AC outlet.



CONNECTING THE OTHERS

1. Plug the connector to the BNC port **1** on the rear of the monitor (ex : Camcorder, VCR, DVD, ---).
2. Plug the connector to the SVHS port **2** on the rear of the monitor (ex : Camcorder, VCR, DVD, ---).



How to watch DVD, VIDEO

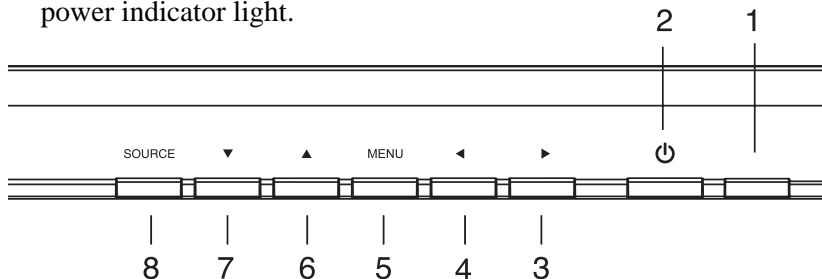
1. Turn on monitor.
2. Choose “VIDEO & S-VIDEO” connected to DVD player, using buttons of remote controller or SOURCE button from exterior adjustment buttons.
3. Put tape or DVD into VCR or DVD player and play.

OPERATION & ADJUSTMENT

CONTROL PANEL

1 POWER Indicator

Shows both normal operation and power management status with power indicator light.



2 POWER

Switches the monitor on and off.

3 ► Right Arrow

Selects menu.
Moves cursor to the right in the OSD window and increases the value of any selected menu.

4 ◀ Left Arrow

Selects menu.
Moves cursor to the Left in the OSD window and decreases the value of any selected menu.

5 MENU

Turns the OSD window on.
Turns the OSD (On-Screen Display) window off and moves from sub menu to top menu in the OSD window.

6 ▲ Up Arrow - Auto Adjustment (*)

Primary Function: Automatically adjusts the display to the most optimal setting possible.(Analog MODE)

Secondary Function: Allows for Vertical scrolling in the OSD Menu and to INCREASE the value of the selected menu function.

7 ▼ Down Arrow

Allows for Vertical scrolling in the OSD Menu, and to DECREASE the value of the selected sub menu function.

8 SOURCE (*)

Used to select from different input sources. Press the UP or DOWN arrow to scroll through the available sources, and press LEFT or RIGHT arrow to confirm selection.

(*) HOT KEY

KEY PROCESS

- ① To select MENU press the Main Menu button.
- ② Use Left-Right button to select the menu.
- ③ Use Down button to select the sub menus.
- ④ Press SOURCE button, then using left-right buttons you can make adjustments as necessary
- ⑤ To press MENU button, Turns the OSD (On-Screen Display) window off and moves from sub menu to top menu in the OSD window.



HOT KEY

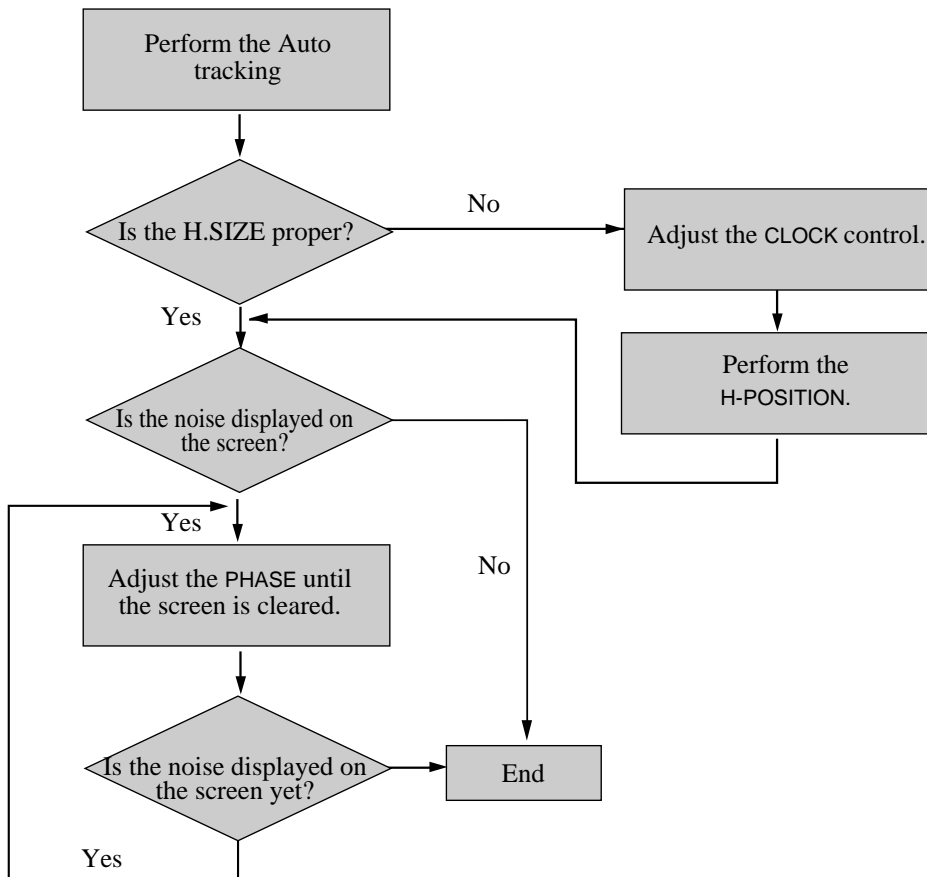
SOURCE

- Selects signal in order.
PC-AV-SVIDEO



- When there is no OSD, if you press this ▲ (AUTO/UP) button, you can use the best displayperformance fit for a current mode. (PC MODE ONLY)

ADJUSTMENT PROCEDURE

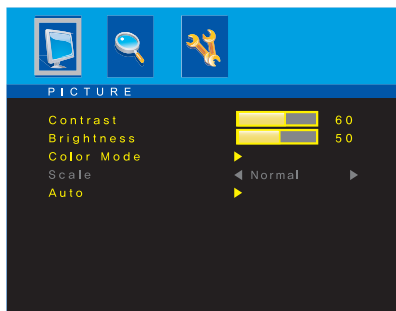


OSD FUNCTION

◆ PC MENU

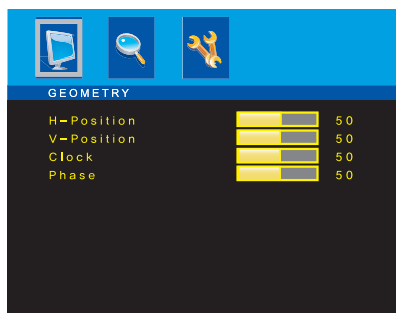
PICTURE

1. Contrast
Adjust the contrast of image, the difference between light and dark areas on the screen.
2. Brightness
Adjust the brightness of image.
3. Color Mode
Choose different preset color temperatures or set your own customized color parameters.
(Normal/Warm/Cool/User)
4. Scale
This function is currently unavailable for this model.
5. Auto
Choose automatically the proper horizontal Position and vertical position & size of the screen image.



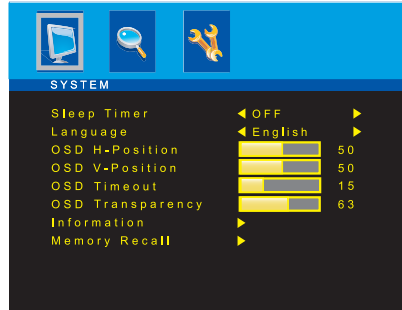
GEOMETRY

1. H-Position
Adjust the position of the display horizontally (left or right).
2. V-Position
Adjust the position of the display vertically (up or down).
3. Clock
Adjust the width (horizontal size) of the Screen image.
4. Phase
Remove any horizontal noise and clear or sharpen the image of characters.



SYSTEM

1. Sleep Timer
Select time to turn off the monitor.
(OFF/15/30/45/60 Minutes)
2. Language
Select language for OSD.
English/Deutsch/Español/Italiano/Français/PolSKI
3. OSD H-Position
Adjust the OSD position of the display horizontally (left or right).
4. OSD V-Position
Adjust the OSD position of the display vertically (up or down).
5. OSD Timeout
Adjust the display OSD Time.
(5~60 sec)
6. OSD Transparency
Adjust the OSD Transparency
7. Information
Shows the status of the current Display settings.
8. Memory Recall
Reset the screen to the Factory Preset Display Settings.



◆ AV MENU(AV/SVIDEO)

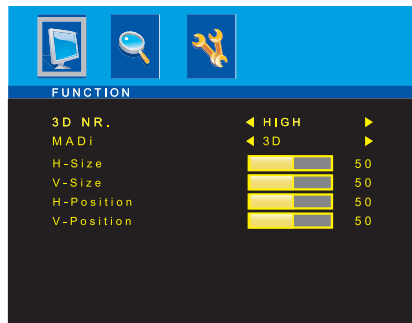
PICTURE

1. Contrast
Adjust the contrast of image, the difference between light and dark areas on the screen.
2. Brightness
Adjust the brightness of image.
3. Tint
Adjust the Tint of image.
4. Color
Adjust Color of image.
5. Sharpness
Adjust the display image quality (if the screen proceed to scaling up).
6. Color Tone
Choose different preset color temperatures or set your own customized color parameters.
(Normal/Warm/Cool)
7. Picture Mode
Select the picture mode.
(Standard/Movie/Dynamic/User)
8. Screen Format
Select the aspect ratio.
(Full/Zoom1/Zoom2/Subtitle/Wide/Panorama)



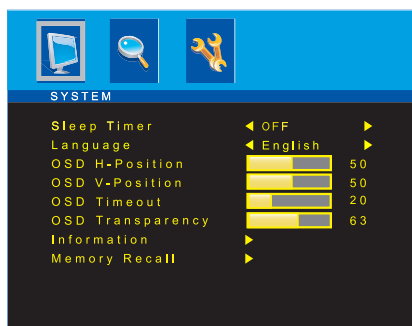
FUNCTION

1. 3D NR.
Reduce the noise in the picture due to poor reception or poor picture quality.
(OFF/LOW/MIDDLE/HIGH)
2. MADi
Generation advanced color engine automatic picture enhancement gives.
(2D/3D)
3. H-Size
Adjust the width (horizontal size) of the Screen image.
4. V-Size
Adjust the height (vertical size) of the Screen image.
5. H-Position
Adjust the position of the display horizontally (left or right).
6. V-Position
Adjust the position of the display vertically (up or down)



SYSTEM

1. Sleep Timer
Select time to turn off the monitor.
(OFF/15/30/45/60 Minutes)
2. Language
Select language for OSD.
English/Deutsch/Español/Italiano/Français/Polski
3. OSD H-Position
Adjust the OSD position of the Display horizontally (left or right).
4. OSD V-Position
Adjust the OSD position of the Display vertically (up or down).
5. OSD Timeout
Adjust the display OSD Time.
(5~60 sec)
6. OSD Transparaency
Adjust the OSD Transparency
7. Information
Shows the status of the current Display settings.
8. Memory Recall
Reset the screen to the Factory Preset Display Settings.



SELF DIAGNOSIS

If there is no image, the Self Diagnosis screen will be displayed. Self Diagnosis function checks if the status of the monitor screen is No Signal, Out of range or None support.

NO SIGNAL

No Signal screen is displayed when the D-Sub signal connector is connected but the status of the monitor is on DPMS mode.

OUT OF RANGE

Out of Range screen is displayed when the applied frequency is under or over normal range.

- Normal range
(Non-interlaced mode only)
H : 30 - 80 KHz
V : 56 - 77 Hz

ANALOG CHECK CABLE

Check cable screen is displayed when the Analog signal cable is disconnected.

SPECIFICATIONS

<17 inch>

Panel	Size	17-inch(43.2cm) diagonal
	Pixel Pitch	0.264(H)mm x 0.264(V) mm
	Viewing Angle	160°(H)
		160°(V)
	Contrast Ratio	1000:1(typ)
	Brightness	300cd/m ² brightness (typ)
	Response Time	5ms
	Color Filter	RGB vertical stripe
Synchronization	Horizontal	30 - 80 KHz
	Vertical	56 - 77 Hz
Video Bandwidth		165 MHz
Max Resolution		1280 x 1024@75Hz
Optimal Resolution		1280 x 1024 @ 60Hz
Colors		16.7 M Colors
Display Area		337.9(H)mm x 270.3(V)mm
PC Input Signal	Sync	H/V separate(TTL)
	VIDEO	15 pin D-sub(Analog RGB)
AV Input Signal	VIDEO	BNC Input / Output
	S-VIDEO	Input / Output
Plug and Play		VESA DDC Compatible
Power Source		DC 12V, 4.16A
Power Consumption		< 40W
Dimension-W x H x D		383(W) x 386(H) x 202(D) mm(with stand)
		383(W) x 321(H) x 60(D) mm(without stand)
Weight-net/gross		3.6Kg / 5.0Kg (7.9 / 11.0 Lbs)
Power Saving		EPA, VESA DPMS, Nutek Compliant
Tilt Range		5° forward, 30° backward
Operating Temperature		0 ~ 40°C /50 ~ 104°F

<19 inch>

Panel	Size	19-inch(48cm) diagonal
	Pixel Pitch	0.294(H)mm x 0.294(V) mm
	Viewing Angle	160°(H)
		160°(V)
	Contrast Ratio	1000:1(typ)
	Brightness	300cd/m ² brightness (typ)
	Response Time	5ms
	Color Filter	RGB vertical stripe
Synchronization	Horizontal	30 - 80 KHz
	Vertical	56 - 77 Hz
Video Bandwidth		165 MHz
Max Resolution		1280 x 1024@75Hz
Optimal Resolution		1280 x 1024 @ 60Hz
Colors		16.7 M Colors
Display Area		376.32(H)mm x 301.056(V)mm
PC Input Signal	Sync	H/V separate(TTL)
	VIDEO	15 pin D-sub(Analog RGB)
AV Input Signal	VIDEO	BNC Input / Output
	S-VIDEO	Input / Output
Plug and Play		VESA DDC Compatible
Power Source		DC 12V, 4.16A
Power Consumption		< 40W
Dimension-W x H x D		427(W) x 415(H) x 202(D) mm(with stand)
		427(W) x 357(H) x 58(D) mm(without stand)
Weight-net/gross		4.4Kg / 6.0Kg (9.7 / 13.2 Lbs)
Power Saving		EPA, VESA DPMS, Nutek Compliant
Tilt Range		5° forward, 30° backward
Operating Temperature		0 ~ 40°C / 50 ~ 104°F

- The specification can be changed without any prior notice to improve the quality of the product.
- The LCD panel may have some defective pixels (e.g. slightly light or dark) due to a characteristic of the LCD panel. But there is no defect in your LCD product itself.

FACTORY PRESET TIMINGS

VESA MODES				
Mode	Resolution (dots X lines)	HFreq (KHz)	VFreq (Hz)	Remark
VGA	640 X 480@60Hz	31.5	60	Non-interlaced
VGA	640 X 480@72Hz	37.9	72	Non-interlaced
VGA	640 X 480@75Hz	37.5	75	Non-interlaced
SVGA	800 X 600@56Hz	35.2	56	Non-interlaced
SVGA	800 X 600@60Hz	37.9	60	Non-interlaced
SVGA	800 X 600@72Hz	48.1	72	Non-interlaced
SVGA	800 X 600@75Hz	46.9	75	Non-interlaced
XGA	1024 X 768@60Hz	48.4	60	Non-interlaced
XGA	1024 X 768@70Hz	56.5	70	Non-interlaced
XGA	1024 X 768@75Hz	60.0	75	Non-interlaced
SXGA	1280 X 1024@60Hz	64.0	60	Non-interlaced
SXGA	1280 X 1024@75Hz	80.0	75	Non-interlaced
SXGA	1152 X 864@75Hz	67.5	75	Non-interlaced
SXGA	1280 X 960@60Hz	60.0	60	Non-interlaced
IBM MODES				
Mode	Resolution (dots X lines)	HFreq (KHz)	VFreq (Hz)	Remark
EGA	640 X 350@70Hz	31.5	70	Non-interlaced
DOS	720 X 400@70Hz	31.3	70	Non-interlaced
MAC MODES				
Mode	Resolution (dots X lines)	HFreq (KHz)	VFreq (Hz)	Remark
VGA	640 X 480@67Hz	35.0	67	Non-interlaced
SVGA	832 X 624@75Hz	49.7	75	Non-interlaced
SXGA	1152 X 870@75Hz	68.7	75	Non-interlaced
THE OTHERS				
Mode	Resolution (dots X lines)	HFreq (KHz)	VFreq (Hz)	Remark
SXGA	1280 X 1024@70Hz	74.4	70	Non-interlaced

- The LCD Monitor has only Non-interlanced modes without flicker.

CHANGING THE STAND

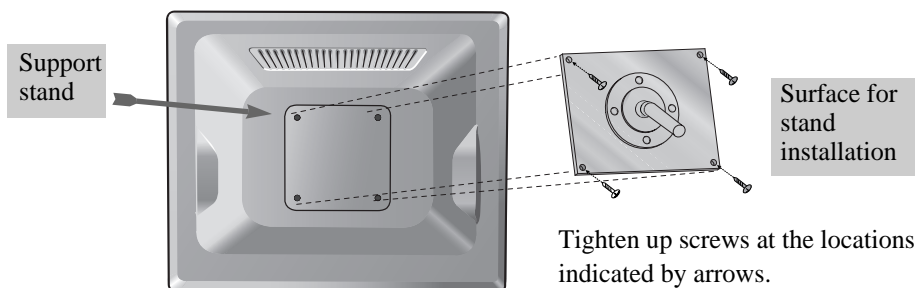
Removing Original Stand

- Turn off the monitor and pull out the power cable.
- Place a cushion or a soft cloth on the floor and put the product on it with the front of the monitor facing the floor.



- 1.** Detach the rear cover of the stand with a screwdriver.
- 2.** Remove the four screws connecting the stand and the body and the stand is disassembled.

ATTACHING THE MONITOR WITH THE ARM-STAND(OPTION)



- This monitor's installation surface is compatible with various kinds of VESA standard stands.
- Hole spacing : 100x100 mm
- Screw Length : 8~12 mm

TROUBLESHOOTING

Symptom	Check
Picture is jitterd.	Adjust Clock to set the screen position and adjust Clock fine until a noise isn't displayed.
No picture.	<p>Check if power switch and computer power switch are in the on position.</p> <p>↓</p> <p>Check if the signal cable is correctly connected to the video card.</p> <p>↓</p> <p>Check if the pins of D subconnector are not bent.</p> <p>↓</p> <p>Check if the computer is in the power- saving mode.</p>
POWER LED is not lit.	<p>Check if power switch is in the on position.</p> <p>↓</p> <p>Check if the power cord is correctly connected.</p>
Image is unstable.	Check if the signal cable is suitable to the video card.
Image is not centered, too small or too large.	Adjust Clock or H&V Center to get the proper image.
Picture bounces or a wave pattern is present in the picture.	<p>Keep the devices that may cause electrical interference away from the monitor.</p> <p>↓</p> <p>See the FCC information at the front cover of the manual.</p>
Picture is blurred.	Adjust Contrast and Brightness.
No sound.	<p>Check the audio cable are correctly connected to the computer.</p> <p>↓</p> <p>Adjust the volume after checking the sound is muted.</p> <p>↓</p> <p>Check the audio system in the computer.</p>

Symptom	Check
Low sound.	Adjust the volume on the OSD Menu. ↓ Adjust the volume of the sound card in the computer.
VIDEO screen cannot be seen.	Check if PICTURE mode has been set. ↓ Check if the video terminal is properly connected.
No video.	Check if the video cable is correctly connected to the computer and set to the Functions on the OSD picture menu.
Poor color in the video.	Adjust the Color or Tint on the OSD Picture Menu.
Grainy picture in the video.	Adjust the Sharpness on the OSD Picture Menu.

MEMO

