

**NLM18S / NLM19S**

**Color TFT-LCD Monitor**  
**User's Manual**

# **NLM18S / NLM19S**

## **Color TFT- LCD Monitor**

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## **OPERATION MANUAL**

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# **NLM18S / NLM19S**

## **Color TFT- LCD Monitor**

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### **Notes On LCD Monitors**

1. The LCD panel used in this monitor is a very high technology product with 3,932,160 thin film transistors, giving you fine picture details. Occasionally, a few non-active pixels may appear on the screen as a fixed point of red, green, blue, white or black. Please note that this does not indicate a defective panel.
2. Set your resolution to 1280 x 1024 pixels at 60Hz refresh rate for optimum display quality. The display may become a bit blurry when you set the resolution to other than 1280 x1024. Please note that this does not indicate a defective product.
3. The screen surface is very soft. Do not rub, touch or tap the screen surface with sharp object such as pen or pencil. This contact may scratch or damage the screen. These damages are not covered under the warranty.
4. Turn your computer OFF before installing your new monitor.

## SAFETY PRECAUTIONS

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Improper use can result in electric shock and/or fire. In order to prevent potential danger, please observe the following instructions when installing, operating and cleaning the product. To ensure your safety and prolong the service life of your color TFT-LCD monitor product, please read the following precautions carefully before using the product.

- All operating instructions must be read and understood before the product is operated.
- These safety and operating instructions must be kept in safe place for future reference.
- All warnings on the product and in the instructions must be observed closely.
- All operating instructions must be followed.
- Do not use attachments not recommended by the manufacturer. Use of inadequate attachments can result in accidents.
- This product must be operated on a power source specified on the specification label. If you are not sure of the type of power supply used in your home, consult your dealer or local power company. For units designed to operate on batteries or another power source, refer to the operating instructions.
- The power cords must be routed properly to prevent people from stepping on them or objects from resting on them. Check the cords at the plugs and product.
- Do not overload AC outlets or extension cords. Overloading can cause fire or electric shock.
- Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.
- Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing.
- If any of the following conditions occurs, unplug the power cord from the AC outlet, and request a qualified service person to perform repairs.
  - a. When the power cord or plug is damaged.
  - b. When a liquid was spilled on the product or when objects have fallen into the product.
  - c. When the product has been exposed to rain or water.
  - d. When the product does not operate properly as described in the operating instructions.  
Do not touch the controls other than those described in the operating instructions.  
Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.
  - e. When the product has been dropped or damaged.
  - f. When the product displays an abnormal condition. Any noticeable abnormality in the product indicates that the product needs servicing.
- In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.
- Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.
- When mounting the product on a wall or ceiling, be sure to install the product according to the method recommended by the manufacturer.

## SAFETY PRECAUTIONS (Continued)

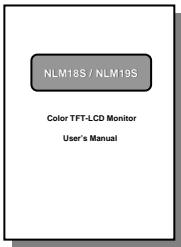
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- Unplug the power cord from the AC outlet before cleaning the product. Use a damp cloth to clean the product. Do not use liquid cleaners or aerosol cleaners.
- Unplug the power cord from the AC outlet if you do not use the product for considerably long time.
- Do not use the product near water, such as bathtub, washbasin, kitchen sink and laundry tub, swimming pool and in a wet basement.
- Keep the product away from direct rays of the Sun-light.
- Do not place the product on an unstable cart, stand, tripod or table. Placing the product on an unstable base can cause the product to fall, resulting in serious personal injuries as well as damage to the product. Use only a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the product. When mounting the product on a wall, be sure to follow the manufacturer's instruction. Use only the mounting hardware recommended by the manufacturer.
- When relocating the product placed on a cart, it must be moved with the utmost care. Sudden stops, excessive force and uneven floor surface can cause the product to fall from the cart.
- The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.
- The LCD panel used in this product is made of glass. Therefore, it can break when the product is dropped or applied with impact. Be careful not to be injured by broken glass pieces in case the LCD panel breaks.
- Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers).

## **SUPPLIED ACCESSORIES**

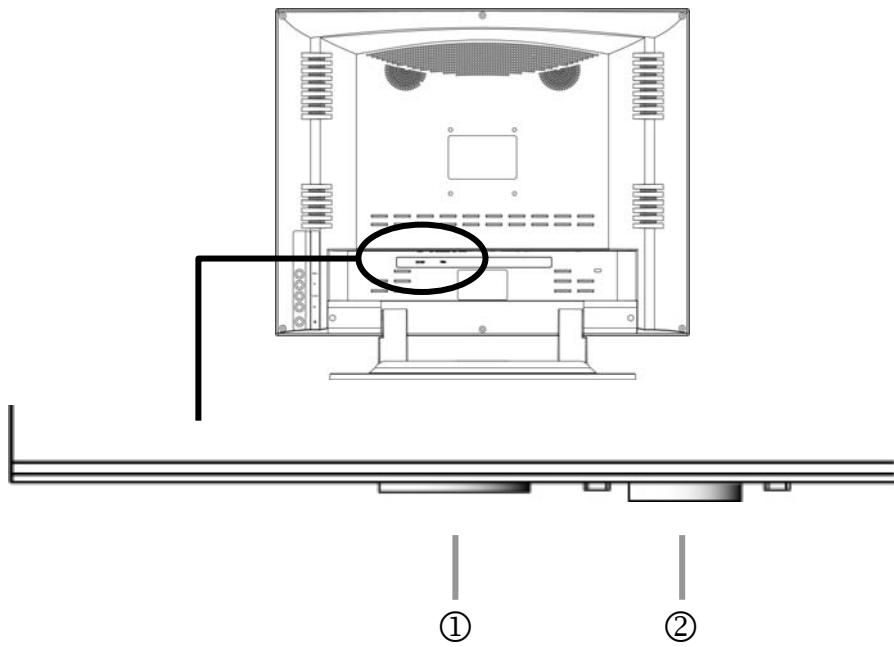
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Make sure the following accessories are provided with the product.

 User's Manual (*1)	 Monitor Driver Diskette (x1)
 PC VGA Cable(*1)	 AC Cord (*1)

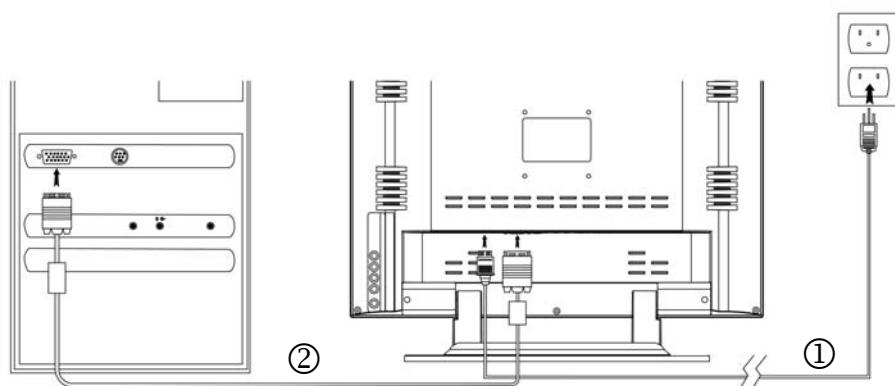
## PREPARATION – Cable Connection

### Cable Connector Description



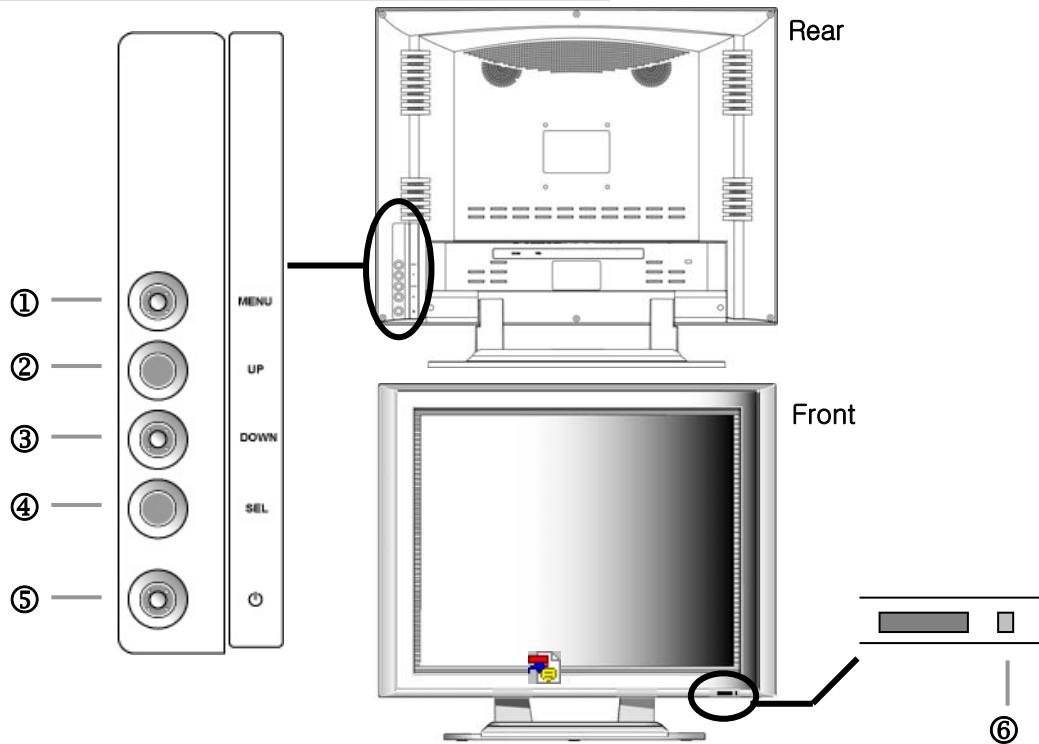
- ① Power Input : AC 100~240Vac
- ② Analog RGB : PC VGA Cable

### VGA & Power Cable Connection



## LOCATION OF CONTROL PANEL

### Control Panel on the front of main unit



① MENU : Display menu window / Exit from sub menu

Exit from OSD window

② UP : Adjust setting value (Increase) / Move up

③ DOWN : Adjust setting value (Decrease) / Move down

④ SEL : Select menu item on OSD window

“Hot key for auto adjustment”

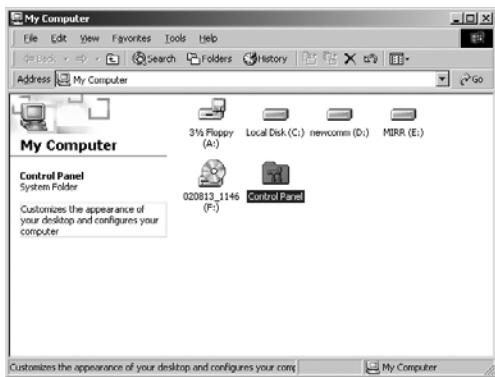
⑤ POWER : On / Off

⑥ POWER LED :

On	LED Status	Remak
Power On	Green LED	-
Sleep Mode	Orange LED	No signal (PC Mode)
Power Off	LED 깨짐	-

# MONITOR INSTALLATION

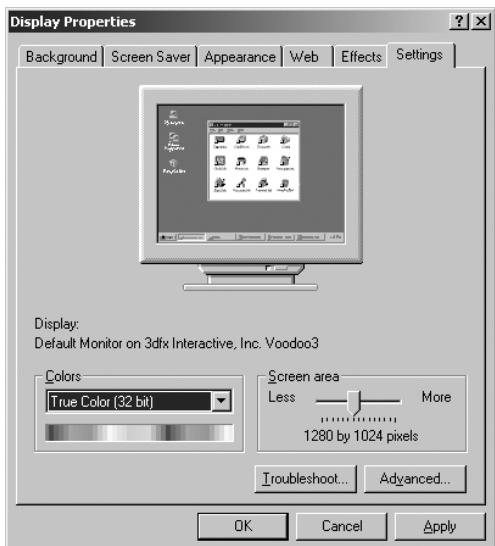
The instruction below is for Windows 2000



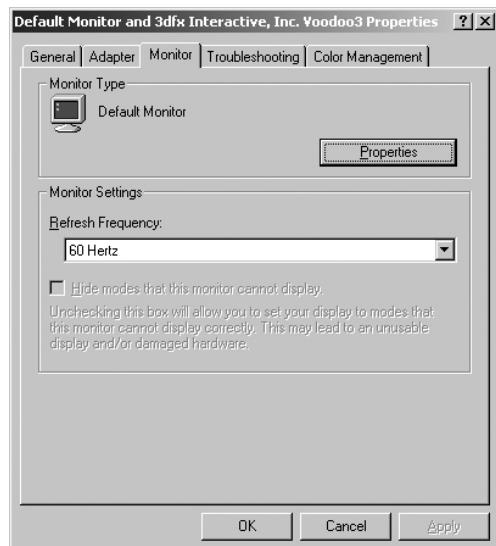
**1** Double click **[Control Panel ]** icon from **[My Computer]** folder.



**2** Double click **[Display]** icon from **[Control Panel]** folder.

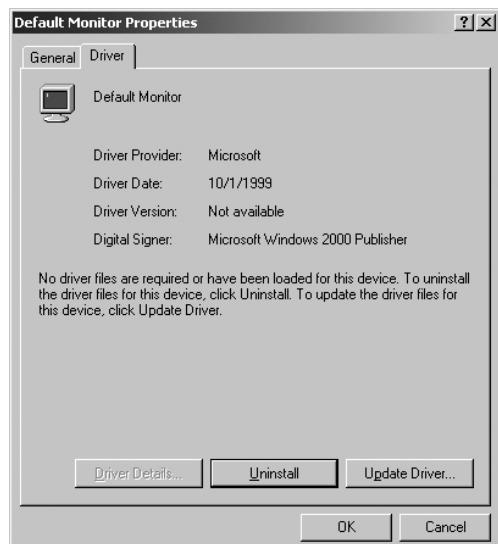


**3** Select **[Settings]** in **[Display Properties]** window and then click **[Advanced...]**.



**4** Select **[Monitor]** in the window shown above and then click **[Properties]**.

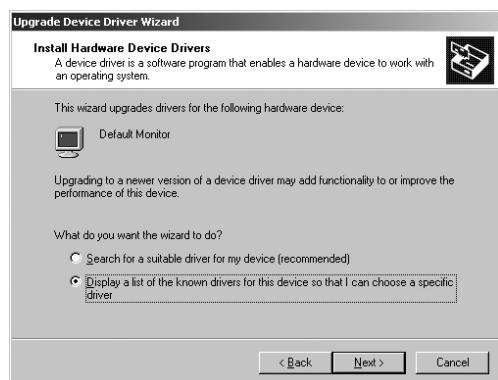
# MONITOR INSTALLATION(Continued)



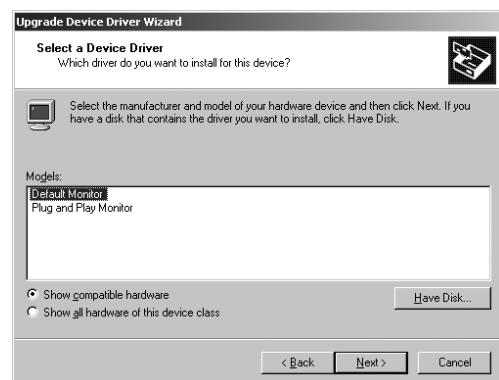
**5** Select **[Driver]** and then click **[Update Driver...]**.



**6** Click **[Next >]**.

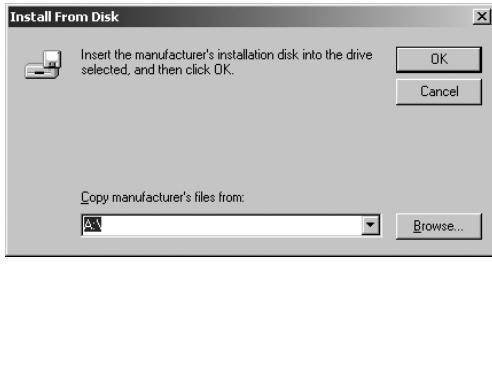


**7** Select the **second list** and then click **[Next >]**.

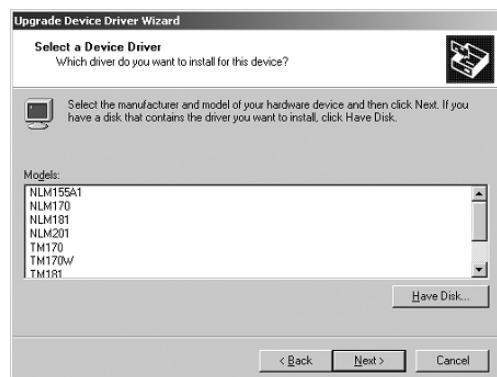


**8** Click **[Have Disk...]**.

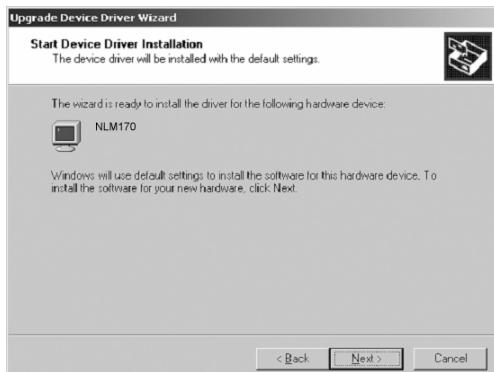
## MONITOR INSTALLATION(Continued)



**9** Click [**Browse...**] to select CD-ROM drive.



**10** Choose **Your Monitor Model**, then click [**Next >**] to proceed to the next step.



**11** Click [**Next >**] to start installation.

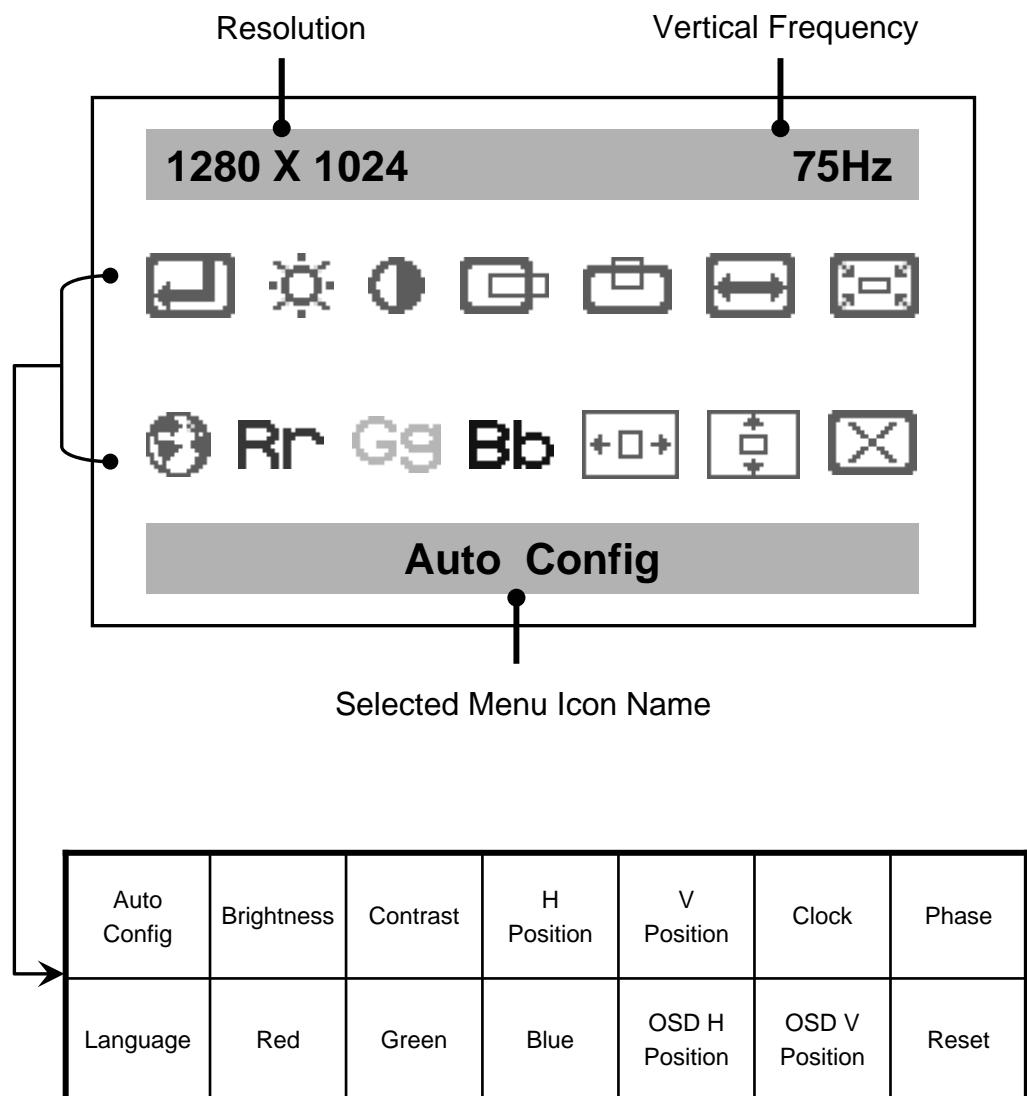


**12** Click [**Yes**] to proceed to the next step.



**13** Click [**Finish**].  
(Be sure the screen shows correct model name.)

## STATUS INFORMATION



## OSD USAGE

Menu	Operation
Auto Config	Operate the auto adjustment
Brightness	DOWN : Decrease Brightness      UP : Increase Brightness
Contrast	<ul style="list-style-type: none"> <li>■ Contrast is ratio of luminance between black and white.</li> <li>■ When contrast is reduced (DOWN button), the luminance of white is reduced and the display becomes darker.</li> <li>■ When contrast is increased(UP button), the luminance of white is increased and the display becomes clear.</li> </ul> <p>DOWN Button : Decrease Contrast      UP Button : Increase Contrast</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div>
H Position	<p>DOWN Button: Move Left      UP Button : Move Right</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div>
V Position	<p>DOWN Button Move Down      UP Button : Move Up</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div>
Clock	<ul style="list-style-type: none"> <li>■ Adjust horizontal size by using Down or UP buttons.</li> </ul> <p><b>▲ Caution</b></p> <p><b>Do not make manual adjustment when the picture is in its Normal shaped or you will create problem on it.</b></p>
Phase	<ul style="list-style-type: none"> <li>■ When noise remains on the screen after operating the auto adjustment, adjust it by using Down or UP buttons.</li> </ul> <p><b>▲ Caution</b></p> <p><b>Perform this adjustment just in the case of having horizontally unmatched picture after operating the auto adjustment</b></p>
Language	<ul style="list-style-type: none"> <li>■ Select the language of OSD menu <ul style="list-style-type: none"> <li>- English / Français / Italiano / Deutschland / Korean</li> </ul> </li> </ul>
Red	<ul style="list-style-type: none"> <li>■ Adjust Red Color by using DOWN or UP buttons.</li> </ul>
Green	<ul style="list-style-type: none"> <li>■ Adjust Green Color by using DOWN or UP buttons.</li> </ul>
Blue	<ul style="list-style-type: none"> <li>■ Adjust Blue Color by using DOWN or UP buttons.</li> </ul>

## **OSD USAGE (continued)**

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Menu	Operation
OSD H Position	■ Adjust OSD H Position by using DOWN or UP buttons.
OSD V Position	■ Adjust OSD V Position by using DOWN or UP buttons.
Reset	■ Reset values to initial value at time of forwarding at the factory.

## **BEFORE CALLING FOR REPAIR SERVICE...**

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**Before calling for repair service, check the following items for possible remedies to the encountered symptoms.**

<b>Problem</b>	<b>Check below</b>	<b>Reference Pages</b>
There is no picture	<ul style="list-style-type: none"><li>• Make sure the power cord is properly inserted in the power outlet.</li><li>• Make sure the main power button of the main unit is on.</li><li>• Make sure the signal cable is free of connections.</li><li>• Make sure whether the power of an external input device is on.</li><li>• Fluorescent lamp may have reached the end of service life.</li></ul>	7 8 7 - 16
Picture is not clear	<ul style="list-style-type: none"><li>• Operate the auto adjustment</li><li>• Adjust the Frequency and the Phase.</li></ul>	8 13

# SPECIFICATIONS

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## Color TFT LCD Monitor

Resolution	1280 * 1024, SXGA	
Color	16,777,216 Colors (Full Color)	
Brightness	250 cd/m <sup>2</sup> (nit)	
Contrast Ratio	NLM18S : 400 : 1 NLM19S : 500 : 1	
Viewing Angle	NLM18S : 160° (H) / 160° (V) NLM19S : 170° (H) / 170° (V)	
Panel	Type	Amorphous Si TFT-LCD
	Actual Display Size	NLM18N : 357.12(H) x 285.696(V) mm NLM19N : 376.32(H) x 301.056(V) mm
	Diagonal Length	NLM18S : 18.0", 457.34 mm NLM19S : 19.0", 481.92 mm
PC Signal (Analog RGB)	H-Frequency	30~80 KHz
	V-Frequency	56~75 Hz
	Signal Level	0.7Vp-p
Power Voltage	Input	AC100~240V, 50/60Hz
Power Consumption	On	NLM18S : Max. 45 Watt NLM19S : Max. 45 Watt
	Off- Mode	Max. 3 Watt
Size	W*H*D mm	485 x 383 x 57 mm , 174 mm (Stand Depth)
Weight	NLM18S : 7.0 Kg (w/o accessories) NLM19S : 7.2 Kg (w/o accessories)	

# SPECIFICATIONS

## Available PC VGA Mode

Resolution	Vertical		Horizontal		Pixel Rate (MHz)	Standard Type	Remark
	Frequency (Hz)	Polarity	Frequency (KHz)	Polarity			
640 x 350	70.09	N	31.47	N	25.175	IBM	DOS
720 x 400	70.09	P	31.47	N	28.322	IBM	
640 x 480	59.94	N	31.47	N	25.175	VESA	VGA
	66.67	N	35.00	N	30.240	MAC	
	72.81	N	37.86	N	31.500	VESA	
	75.00	N	37.50	N	31.500	VESA	
800 x 600	56.25	N/P	35.16	N/P	36.000	VESA	SVGA
	60.32	P	37.88	P	40.000	VESA	
	72.19	P	48.08	P	50.000	VESA	
	75.00	P	46.88	P	49.500	VESA	
832 x 624	74.55	N	49.73	N	57.283	MAC	
1024 x 768	60.00	N	48.36	N	65.000	VESA	XGA
	60.00	N	48.78	N	64.000	MAC	
	70.07	N	56.48	N	75.000	VESA	
	72.10	P	57.52	P	75.000	IBM	
	74.93	N	60.24	N	80.000	MAC	
	75.03	P	60.02	P	78.750	VESA	
1280 x 1024	60.02	P	63.98	P	108.000	VESA	SXGA
	75.03	P	79.98	P	135.000	VESA	

# **INTERNATIONAL STANDARDS**

## **FCC**

**CAUTION** : Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**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.

## **CE**

EN55022 "Limits and methods of measurement of radio disturbance characteristics of information technology equipment (ITE)"

EN55024 "Information technology equipment - Immunity characteristics - Limits and methods of measurement"

EN61000-3-2 "Limits for harmonic current emissions (equipment input current <= 16A per phase)"

EN61000-3-3 "Limitation of voltage fluctuations and flicker in low-voltage supply system for equipment with rated current <= 16A"

EN60950 "Safety for information technology equipment including electrical business equipment"