

## **NIO150SG**

### **Desktop Touch Monitor**

**VGA, Composite, S-video & Audio supported**



## **LCD Monitor User Guide**

**Please see the following page for the latest enhancements.**

**Revised 02/08**

Thank you for your selection of new TFT LCD Monitor.

Please take a few minutes to read this User's manual for the best performance of this monitor. Information in this manual is subject to change without prior notice for improving design, function and etc. IBM, DOS, PC and VGA are trademarks of International Business Machines Corporation.

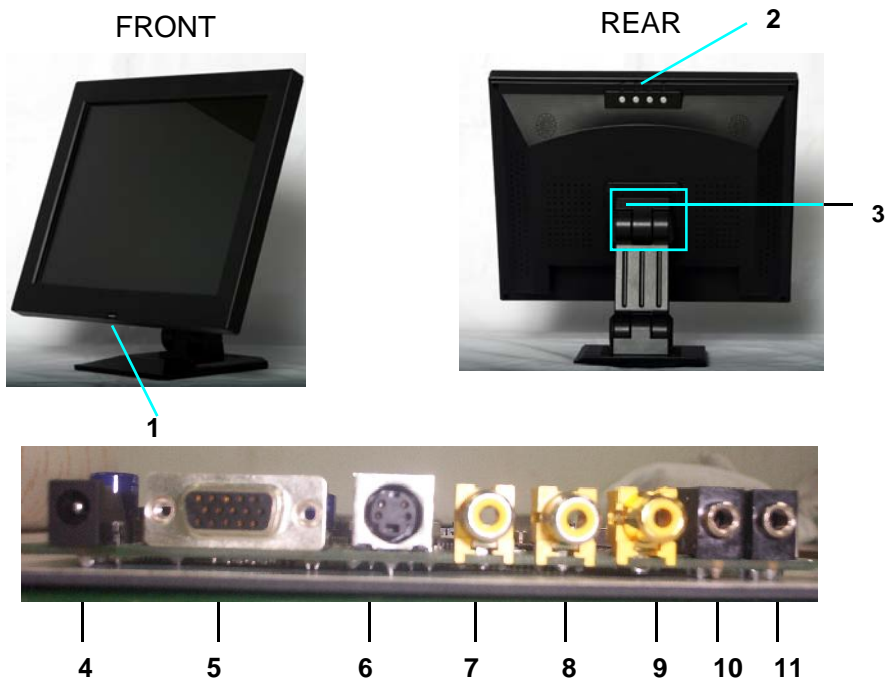
## **CONTENTS**

- **Feature**
- **Monitor Parts**
- **Packing Contents**
- **Connecting to PC**
- **Recommended Use**
- **Adjusting The Display**
- **OSD Menu**
- **Troubleshooting**
- **Specification**
- **Touch screen specification**
- **Drawing**

## Features

- ☞ The NIO150 is capable of displaying 16M colors in a continuous spectrum. The height contrast LCD enhances the image with no geometric distortion.
- ☞ This LCD monitor is designed to act as a full monitor interface with the main functionality of an analogue RGB, Video( Composite & S-Video ) and Audio.
- ☞ The NIO150 is supplied with touch screen such as resistive and infrared in case of touch screen option or an anti-glare impact window on non touch screen models as per request from customers.
- ☞ This TFT-LCD monitor conforms to the VESA (Video Electronics Standards Association) standard and DDC1/DDC2B.  
A picture adjustment function makes it possible to adjust the image quality to match the input signal.
- ☞ Auto-setup control on OSD screen adjust image position, horizontal size or fine settings.
- ☞ The power consumption can be reduced by using this TFT-LCD monitor in combination of a computer that conforms to the VESA DPMS(Display Power Management Signaling) standard.

## Monitor Parts



1. Power button
2. OSD control button
3. VESA standard hole (75mm x 75mm)
4. 12V DC
5. VGA
6. S-VHS. 7. CVBS
8. AV(L). 9. AV(R)
10. Audio in
11. Audio out

## Package Contents

Your LCD monitor package will consist of the primary components listed below.

Open shipping container and lay all components on a flat clean surface

- 🔗 LCD Monitor
- 🔗 DC Power adapter : Connects to DC In port on the base of monitor
- 🔗 Power cord : Connects wall outlet to DC Power adapter
- 🔗 D-SUB 15pin VGA cable : Connects PC to LCD monitor
- 🔗 RS232 or USB Touch Interface cable( touch screen option units only)
- 🔗 Manual and Touch Driver CD-ROM( touch screen units only)

## Connecting to PC

To attach your TFT-LCD monitor to your system, follow the instructions hereunder

1. Connect 15-pin D-SUB cable to the connector or display card of your computer system.  
Tighten all the screws
2. Connect 15-pin D-SUB cable to the appropriate connectors on the back of the monitor head
3. Connect AC adapter cable to the power input connectors on the back of the monitor head
4. Connect one end of the power cord to the AC adapter and the other end to the power outlet
5. If the unit has a touch screen, connect the touch screen interface cable to the computer.
6. Turn on the monitor
7. To complete the setup
  - A. set up your computer system to :

1024 x 768 resolution @ 60Hz.( NIO150 )

B. Use the following OSD controls

- Auto adjust
- Auto Color

- ❑ **Adjustment of the H/V Position and Image Adjust H. Size controls may be required to complete setup of your TFT- LCD monitor. For a full description of these OSD controls, refer to OSD menu functions**

## **Recommended Use**

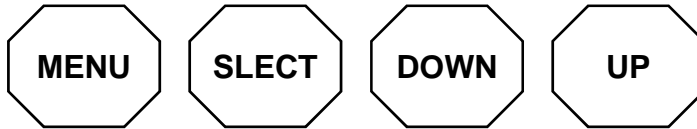
**FOR OPTIMUM PERFORMANCE, PLEASE NOTE THE FOLLOWING WHEN SETTING UP AND USING THE TFT-LCD MONITOR.**

- **DO NOT OPEN THE MONITOR.**  
Opening or removing covers may expose you to dangerous shock hazards or other risks.  
Once you open it the warranty voids.
- To protect from electrical shock, unplug the display power supply from the wall before moving.
- Do not put anything on top of the monitor.
- Do not spill any liquids into the cabinet or use your monitor near water.
- Do not place this product on a sloping or unstable cart, stand or table, as the monitor may fall, causing serious damage to the monitor.
- If you connect or disconnect the VGA cable while both of PC's and LCD monitor's power is turned on, the monitor might show some garbage on the screen or could be damaged. Please turn off the TFT-LCD monitor's power before connect or disconnect VGA cable.
- Ensure that sufficient space is available around the display to provide air circulation for cooling.
- Ensure that ambient air temperature will not exceed the specified maximum temperature.
- Handle with care when transporting. Save packaging for transporting.
- Do not touch or press the surface of the LCD panel, it will cause a permanent damage. Use only soft cloth with non-ammonia glass cleaner to clean the panel.

# Adjusting the displays

The microprocessor in the display has the capability to adjust itself to the computer to which it is attached. This auto adjustment will take place when the unit is first installed and connected to a computer and there after. If the video input change, or is user imitated. If the picture is not satisfactory, the first step is to allow the unit to attempt to re-adjust itself to your computer.

Located on the rear of unit are OSD keypads used for adjusting the display. Please see the figure below :



## OSD menu functions

**OSD (On-Screen-Display) control functions as follows :**  
**To access OSD Menu, press MENU button**

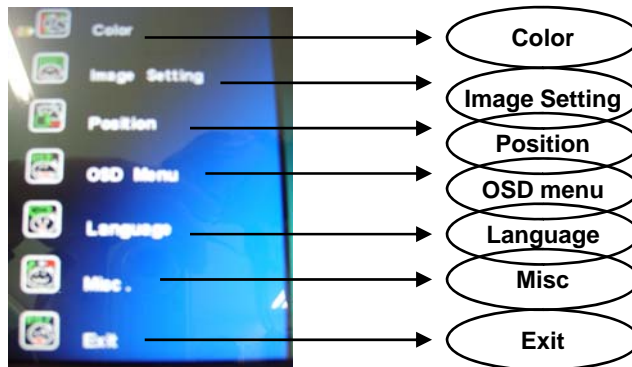
### Display mode

To change the display mode, press the select key each time



### OSD Screen for Monitor Mode

Press MENU key, OSD screen appears as below.



Press UP/DOWN Key, you can move between the ten primary functions.  
Press Select key at Picture group to highlight this sub menu. You can now navigate the sub menu using the UP/DOWN keys. To make an adjustment to an item, use the UP/DOWN buttons to make your adjustments. At anytime, press the Menu button three times to exit and save your settings.

## Color

Press MENU key to bring up the OSD. Press UP/DOWN key to move between the 7 primary screen functions. Press the Select button at Color to select it. Press the UP/DOWN key, you can now move between functions and press Select to adjust the value of each item with the UP/DOWN key. Please MENU key to return previous state.

- \* Brightness            Adjust the brightness of the screen
- \* Contrast             Adjust the contrast of the screen
- \* Color Adjust         Adjust the color of the screen's image
- \* Color Temp          9300 and 6500 Temperature and user  
                                 Temperature, Red, Green & Blue.

## Image Setting

Press MENU key to bring up the OSD. Press UP/DOWN key to move between the 7 primary screen functions. Press the Select button at Image Setting to select it. Press the UP/DOWN key, you can now move between functions and press Select to adjust the value of each item with the UP/DOWN key. Please MENU key to return previous state.

- \* Clock                 Adjust the horizontal size of the screen's image
- \* Phase                 Adjust the focus of the screen's image
- \* Sharpness             Adjust the clearness of the screen's image

## Position

Press MENU key to bring up the OSD. Press UP/DOWN key to move between the 7 primary screen functions. Press the Select button at Position to select it. Press the UP/DOWN key, you can now move between functions and press Select to adjust the value of each item with the UP/DOWN key. Please MENU key to return previous state.

- \* H. Position            Adjust the horizontal position of the screen's image
- \* V. Position            Adjust the vertical position of the screen's image.

## OSD Menu

Press MENU key to bring up the OSD. Press UP/DOWN key to move between the 7 primary screen functions. Press the Select button at OSD Menu to select it. Press the UP/DOWN key, you can now move between functions and press Select to adjust the value of each item with the UP/DOWN key. Please MENU key to return previous state.

- \* Language                      Select one of the six language (Korean, English, French, German, Italian, Spanish)
- \* OSD H. Pos                   Adjust the horizontal position of the OSD Window
- \* OSD V. Pos                   Adjust the vertical position of the OSD window
- \* OSD Timer                    Adjust the maintain timing of the OSD window

## Language

Press MENU key to bring up the OSD. Press UP/DOWN key to move between the 7 primary screen functions. Press the Select button at Language to select it. Press the UP/DOWN key, you can now move between functions and press Select to adjust the value of each Item with the UP/DOWN key. Please MENU key to return previous state.

- \* Language                      Select one of the seven language(English, French, German, Spanish, Korean, Chinese, Japanese)

## Miscellaneous

Press MENU key to bring up the OSD. Press UP/DOWN key to move between the 6 primary screen functions. Press the Select button at Misc to select it. Press the UP/DOWN key, you can now move between functions and press Select to adjust the value of each Item with the UP/DOWN key. Please MENU key to return previous state.

- \* Signal Source                Select the input signal source.(Ex. Analog/Video etc...)
- \* Reset                          Initializing that memory in store of the user mode
- \* Audio                          Adjust the volume of sound
- \* Mute                            Function of Mute

## Exit

Exit the OSD menu

Note : This OSD button is used to select other inputs to the LCD, such as Video and S-Video.



## Troubleshooting

<b>No Picture</b>	<p>Check that the signal cable is properly connected to the display.</p> <p>Try disconnecting the video cable from the display and connecting to another display if available to confirm the presence of proper video.</p> <p>Make sure power is connected to the proper AC source.</p> <p>Make sure the resolution mode is supported by the display and check display settings of the PC</p> <p>Confirm that the video cables is not defective.</p>
<b>Image Persistence</b>	<p>Image persistence occurs when a ghost of an image remains on the screen after the screen image has been changed.</p> <p>Unlike a CRT monitor, and LCD monitor's image persistence is not permanent. To erase an image ghost, turn the monitor off for several hours. What happens is the liquid crystals after extended periods of operation. Check for proper Max. Resolution and Frequency.</p>
<b>Picture Quality &amp; Image Stability</b>	<p>Check for proper video cable for proper grounding and shielding.</p> <p>Check the signal source for proper signal.</p> <p>Check for proper adjustment of the Phase and Frequency controls.</p> <p>Check for proper recommended signal timing.</p>
<b>Green LED not lit</b>	<p>Check for proper power and power connections.</p>
<b>Display image is not properly sized</b>	<p>Press the "Select" button to Auto Adjust the display.</p> <p>Adjust the Vertical and Horizontal size controls via the OSD. (Reference setup adjustments)</p> <p>Ensure that a supported mode is selected on the display card or system being used. Consult the display card or system manual for proper video.</p>
<b>Display is present but "bar" Appear or roll across screen</b>	<p>Ground loop problem between computer and display.</p> <p>Interference from adjacent equipment.</p>

<b>Image will not adjust</b>	Video timing outside of range Use the one-screen menu to adjust the clock setting. Make sure timing is within VESA standard.
------------------------------	--

<b>Slight distortion in text or Graphics</b>	Not working in native resolution.
--	-----------------------------------

<b>Vertical shaded bars on Screen image</b>	Horizontal size not properly adjusted. Adjust horizontal size.
---	--

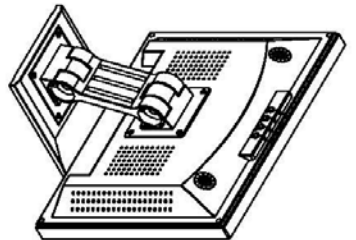
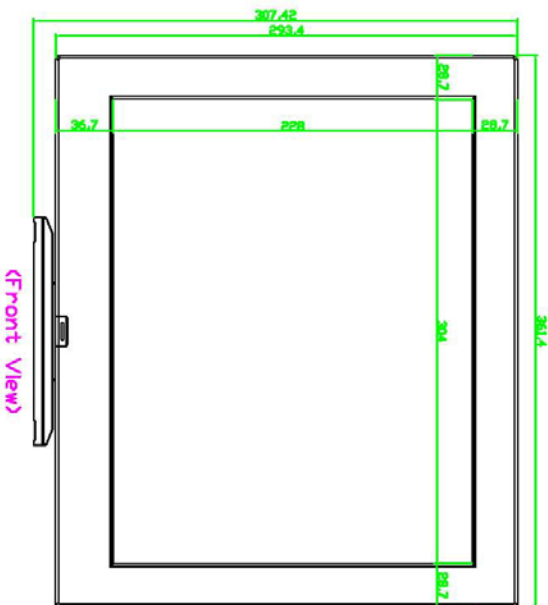
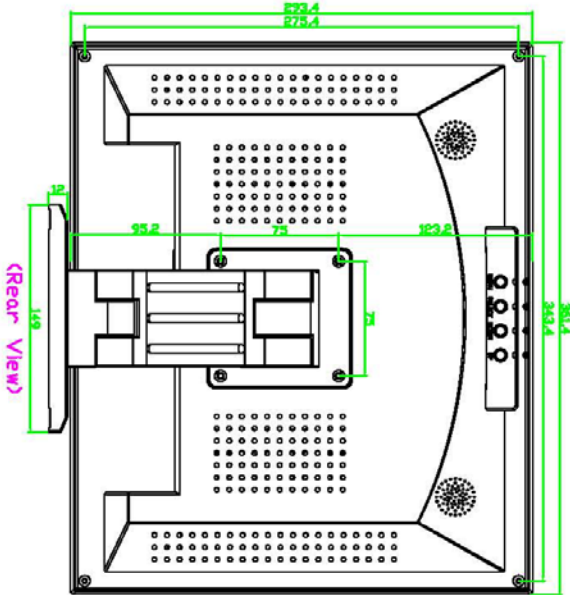
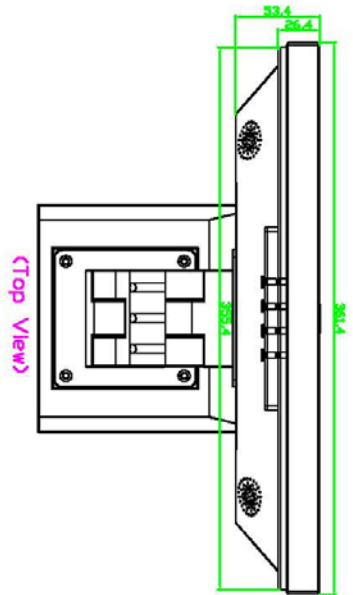
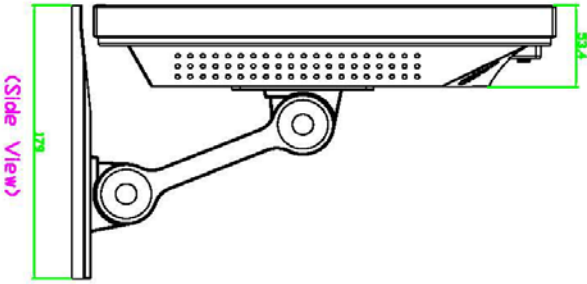
<b>Image is not stable</b>	Monitor has incorrect or bad sync signals. Check for proper video cable installation. Replace suspected faulty cable. Check to ensure that video source is within the display's operating range.
----------------------------	---

# Specification

<b>SIZE</b>		15.0"
<b>PANEL</b>	<b>Display Type</b>	XGA TFT
	<b>Max. Resolution</b>	1024 x768
	<b>Screen (Diagonal) Size</b>	15Inche
	<b>Display Colors</b>	16M Colors
	<b>Pixel Pitch</b>	0.297 x 0.297mm
	<b>Brightness</b>	300cd/m <sup>2</sup>
	<b>Contrast Ratio</b>	450 : 1(Typical)
	<b>Viewing Angle (typical)</b>	65°/65°(L/R) & 50°/60°(U/D)(CR>10)
	<b>Display Area</b>	304.1 x 228.1mm
<b>IINPUT SIGNAL</b>	<b>Supported Video Signal</b>	VGA (15Pin D-Sub), Audio Input/output
	<b>Option</b>	Composite, S-Video (PAL/Secam/NTSC)
<b>RESOLUTION SUPPORT</b>	<b>Supported</b>	640 x 350 @ 70 Hz 720 x 400 @ 70 HZ 640 X 480 @ 60Hz ~ 75Hz 832 x 624 @ 75Hz (MAC) 800 x 600 @ 56Hz ~ 75 Hz 1024 X 768 @ 60Hz ~ 75Hz
	<b>Recommended</b>	1024 x 768@60Hz
<b>POWER CONSUMPTION</b>	<b>On working</b>	<36 watt (Max.)
	<b>Off</b>	<3 watt
<b>OSD CONTROL</b>	<b>Function</b>	Color( Contrast, Brightness, Gamma, Color Temp., Color Adjust), Picture( H.Position, V.Position, Phase, Clock, Sharpness), Function ( Auto Adjust, Auto Color), OSD Menu ( Language, OSD H.V. Position, OSD Timer, Translucent), MISC( Signal Source, Power Light, Reset), Sound ( Sound, Volume)
	<b>Language</b>	Korean, English, French, German, Italian, Spanish
<b>Plug &amp; Play</b>		DDC1/DDC2B
<b>POWER SAVING</b>		VESA DPMS
<b>POWER SUPPLY ADAPTER</b>	<b>Input</b>	AC 100V~240V, 50~60Hz
	<b>Output</b>	12V DC
<b>OPERRATING Temperature</b>		0-50 C
<b>STORAGE Temperature</b>		0-60 C
<b>OPERRATING Humidity</b>		10-95% (Non Condensing)
<b>DIMENSIO</b>		361 x 293.4 x 52mm (Head)
<b>WEIGHT</b>		
<b>STANDARD ACCESSORIES</b>		15-PIN VGA cable, AC adapter, Power cord, Video & Audio Cable, Manual CD-ROM
<b>Options</b>	<b>Front Bezel</b>	
	<b>Touch Screen</b>	Infrared , 5wire Resistive Touch
	<b>Touch Interface</b>	USB / Serial

# Infrared Touch Screen Specification

<b>MECHANICAL</b>	
Input Method	Finger or gloved hand activation
<b>ELECTRICAL</b>	
Position Accuracy	Typical centroid accuracy 2.5mm
Resolution	Touch point density is based on controller resolution of 16,384x16,384
Touch Activation Force	No minimum touch activation force
Operating Voltage	DC 5V
Power	0.6W(Current) 120mA at DC 5V
<b>PANEL</b>	
Transmission	92%, Up to 100%
Response Time	Under 10ms
Touch Intensity	Over 60,000,000 single point touch
Thickness of glass	3.2mm with anti-vandal
<b>ENVIRONMENT</b>	
Temperature	Operating -20 °C to 85 °C Storage -40 °C to 85 °C
Humidity	Operating 10% to 85% Storage 0 to 95%
Altitude Operating	3,000m
Seal Ability	Can be sealed to meet NEMA4 and IP65 standard
Interface	RS232(C) or USB
Multi monitor	Split, Dual, multi monitor support
Drift	No drift
Mouse Click	Right click function support
Available size	10.4" to 103"(custom size for OEM available)
Warranty	5 years – limited warranty



NO.	REVISION	REASON	DATE	APP.

NOTE

NO.	PART NAME	PART NO.	QTY	DESCRIPTION	REMARK
001	DRIVER			DRIVER	
002	BEZEL			BEZEL	
003	PANEL			PANEL	
004	BASE			BASE	

**NEXIO** Nendo Co., Ltd. **DRAGON**

NO. SHEET 1 OF 1