Contents

User's Guide

English

How to get the most enjoyment with monitor

This is a 15.0"color LCD monitor to display signals from PC or Video equipment.
This manual has been prepared to assist you in becoming familiar with your new display monitor.

Features

- 15 .0" viewable XGA (1024 X 768) resolution LCD module
- 262,144 Color Display
- Brightness (250cd/m^2)
- Viewing angle (U/D: 55°/60°, R/L: 70°/70°)
- DPMS (Display Power Management Signaling)
- OSD (On screen Display) controls, Multi Language OSD Menu
- Implement the DDC 1/2B features.
  DDC 1/2B uses a formerly unconnected signal pins in the 15-pin VGA connector.
  The system will perform "Plug&Play" feature if both monitor and host systems support DDC 1/2B protocol.

Note

Some computer systems are not compatible with the DDC standard.
If your monitor is displaying a wrong resolution, please check your computer system including a DDC compatible video card and contact HANSOL Service Center.

General Safety precautions

This Monitor has been engineered and manufactured to assure your safety, and you can prevent your safety from serious electrical shock and other hazards by keeping in the following attentions.

1 Do not place heavy, wet or magnetic on the monitor or the power cord. Never cover the ventilation openings with any material and never touch them with metallic of inflammable materials.

2 Avoid operating the monitor in the place extremely heated, humid or affected by dust.

Temperature : 0 ~ 40°C
Humidity : 30 ~ 80RH

3 Be sure to turn the monitor off before plugging the power cord into the socket of power source.
Make sure that the power cord and the other cords are securely and rightly connected.

4 Overloaded AC outlets and extension cords are dangerous. So are frayed power cords and broken plugs. They may result in a shock or fire hazard. Call your service technician for replacement.

5 Do not use the sharp tool such as pin or pencil to avoid the scratch on the LCD surface.

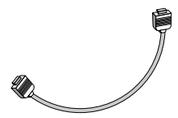
6 Do not use the solvent such as benzene to clean the monitor. It will damage to LCD surface.

Maintenance

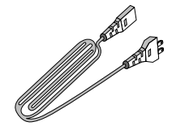
Do not open the monitor. There are no user serviceable components inside.
There is dangerous high voltage inside, even when power is off. If the display monitor does not operate properly, remove the power cord from the wall outlet, and contact your dealer. Careless use and un-professional maintenance are able to cause serious electrical shock and other hazards.

Packing List

► *LCD 15.0" MONITOR*

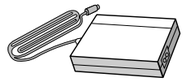


► *VGA CABLE*



► *POWER CORD*

► *USER'S GUIDE*

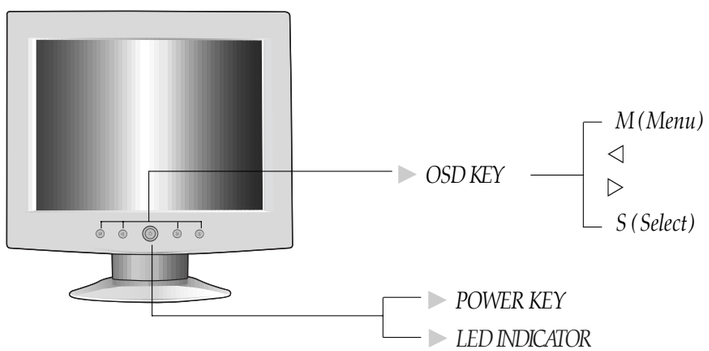


► *AC/DC ADAPTOR*

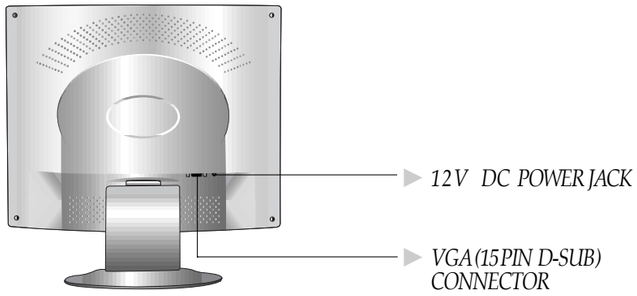
► *MONITOR INSTALLATION PROGRAM DISKETTE*

Control description

■ Front View



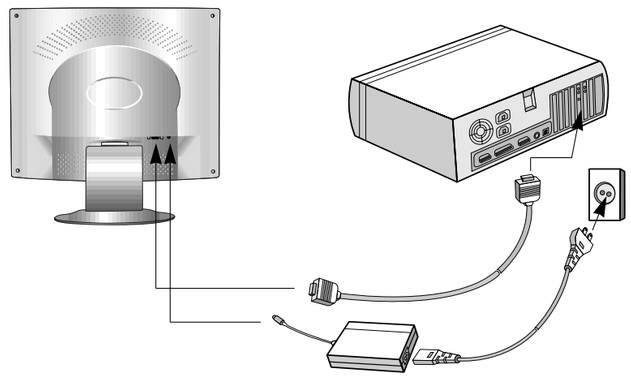
■ Rear View



Connecting with external equipment

■ Cautions

Be sure to turn off the power of your computer before connecting the Monitor.

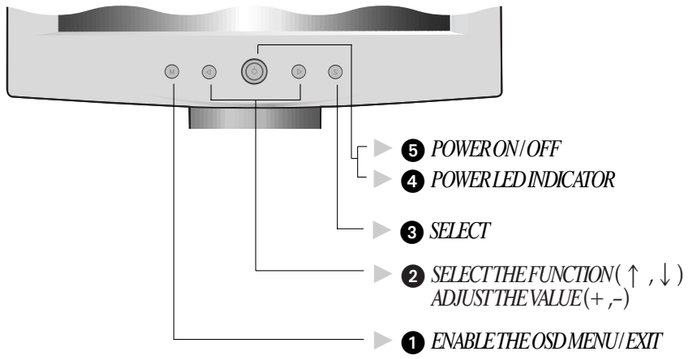


Video input terminal

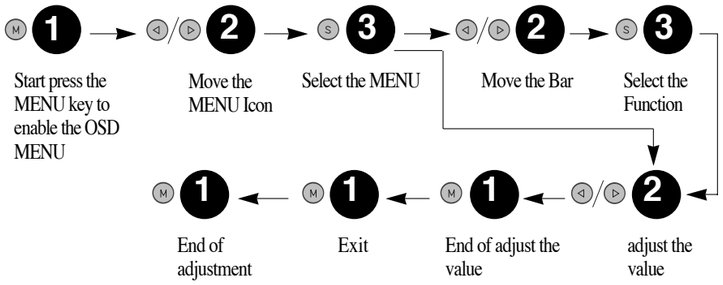
A 15 pin D-sub connector is used as the input signal connector.
Pin and input signs are shown in the table below

Pin number	Signal name	Pin number	Signal name	Pin number	Signal name
1	Red	2	Green	3	Blue
4	N.C	5	GND	6	RED-GND
7	GREEN-GND	8	BLUE-GND	9	+5V
10	Logic-GND	11	N.C	12	SDA (DDC)
13	H-sync	14	V-sync	15	SCL (DDC)

On Screen Display (OSD) Control Button



OSD Control Procedure



■ Main menu & control selection

Press the MENU key to access the main menu.
The power LED is blinking.
Please the select MENU Icon the control function you wish to adjust by the ◁ or ▷ key.

English

■ Exit Menu

Press the MENU key to exit.
The power LED is lit green.

■ Auto exit

The OSD images are disappeared automatically after few seconds inactivity.

■ Auto save

The monitor automatically saves the new setting while OSD is exit.

■ Normal mode

When video signal is working with normal display condition, power LED is lit Green.

■ DPMS mode

The LED indicates different status when this unit operates in different power saving modes.

■ Not Supported Video

When unsuitable signal is detected, the OSD displays “Not Supported Video” message.

Using Hotkey

Frequent adjustments such as AUTOMATIC ADJUSTMENT, BRIGHTNESS and CONTRAST can be done in easy without using MENU key which display all of the control menu.

Following table describes the allocation of the HotKey

OSD Button	Function
S	Automatic Adjustment
▷	Contrast
◁	Brightness

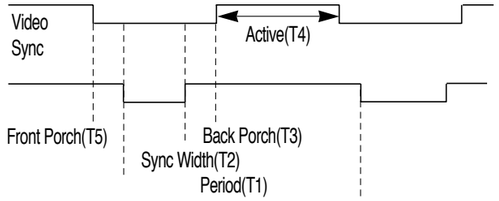
On Screen Display Setting

Auto Adjustment		
	Geometry	Automatically adjust the vertical position, Horizontal position, Horizontal size and Phase
	Color Balance	Automatically adjustment the contrast of the screen
Horizontal Position		Adjust the horizontal position
Vertical Position		Adjust the vertical position
Horizontal Size		Adjust the width of the screen's image
Phase		Adjust the noise of the screen's image
Brightness		Adjust the intensity of the screen
Contrast		Adjust the contrast of the screen
Color		
	Temperature	Adjust the color temperature of the screen's image
	Red	Control the intensity of the Red colour of the screen's image
	Green	Control the intensity of the Green colour of the screen's image
	Blue	Control the intensity of the Blue colour of the screen's image
OSD Language		Language
	English	English
	French	French
	German	German
	Italian	Italian
	Spanish	Spanish
Advanced		
	Factory Preset	Load the factory preset mode
	Sharpness	Adjust the sharpness of the screen's image
	DOS/GFX	Select resolution 720 X 400 or 640 X 400 mode
	OSD H. Position	Adjust the horizontal position of the OSD
	OSD V. Position	Adjust the vertical position of the OSD
Cancel		Exit Without Saving

Preset Mode chart

Timing Charts

Support video timings this monitor shall be capable of display following video timing chart.



Input timing limits

H-sync pulse width 1.0us§ZSync Pulse Width§Z8.0us
V-sync pulse width 0.04ms§ZSync Pulse Width§Z0.5ms

Note
If the width of Sync pulse is out of input timing range, monitor may be able to operate abnormal. Be sure to check the sync pulse width of input timing.

Input level limits

Low level : 0.4V max
High level : 2.4V min

Note
For better quality of display image, use the timing and polarity shown in the preset mode table.
Please see your video card user's guide to ensure compatibility.

Preset Mode Table

The timing shown in the following table will be factory preset for display.

Horizontal	Pixel	640	720	640	640	640	640	800	800	800	800	1024	1024	1024	1024
Frequency	KHz	31.469	31.469	31.469	37.500	37.861	35.000	35.156	37.879	46.875	48.077	48.363	56.476	60.023	57.928
Period(T1)	µs	31.778	31.778	31.778	26.667	26.413	28.571	28.444	26.400	21.333	20.800	20.677	17.707	16.660	17.247
Sync Width(T2)	µs	2.542	3.813	3.813	2.032	1.270	2.116	2.000	3.200	1.616	2.400	2.092	1.813	1.219	1.662
Back Porch(T3)	µs	3.178	1.907	1.907	3.810	3.810	3.175	3.555	2.200	3.232	1.280	2.462	1.920	2.235	2.078
Active(T4)	µs	25.422	25.422	25.422	20.317	20.317	21.164	22.222	20.000	16.162	16.000	15.754	13.653	13.003	13.299
Front Porch(T5)	µs	0.635	0.636	0.636	0.508	0.762	2.116	0.667	1.000	0.323	1.120	0.369	0.320	0.203	0.208

Vertical	Line	350	400	480	480	480	480	600	600	600	600	768	768	768	768
Frequency	Hz	70.087	70.087	59.940	75.000	72.809	66.667	56.250	60.317	75.000	72.188	60.004	70.069	75.029	72.117
Period(T1)	ms	14.268	14.268	16.683	13.333	13.735	15.000	17.778	16.579	13.333	13.853	16.666	14.272	13.328	13.866
Sync Width(T2)	ms	0.095	0.064	0.064	0.080	0.079	0.086	0.057	0.106	0.064	0.125	0.124	0.106	0.050	0.121
Back Porch(T3)	ms	1.905	1.080	1.048	0.427	0.528	1.110	0.626	0.607	0.448	0.478	0.600	0.513	0.466	0.448
Active(T4)	ms	11.136	12.711	15.253	12.800	12.678	13.714	17.067	15.840	12.800	12.480	15.880	13.599	12.795	13.246
Front Porch(T5)	ms	1.145	0.413	0.318	0.027	0.238	0.086	0.028	0.026	0.021	0.021	0.062	0.053	0.017	0.086
Interlaced	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Sync Polarity	H	P	N	-	-	-	-	-	-	-	-	-	-	-	-
	V	N	P	-	-	-	-	-	-	-	-	-	-	-	-

English

Microcontroller features

The microcontroller automatically detects the video board installed in your system. When you turn on the monitor, the Micro controller first checks the display mode memory stored in the user setting area and the factory presetting area.

Display modes memory

The microcontroller has memory capacity to store 24 different display modes including timing formats and display settings. This memory capacity is divided into two parts. One is the user setting area, the other is the factory presetting area.

User setting area

The user can add nonstandard modes. If you adjust display Image, the image is saved automatically. Then the microcontroller always detects and displays the last mode stored in the user setting area when the monitor is turned on.
The user setting area maintains the last 6 display modes set by the user in its memory. When the user setting area is full(6 modes are registered), if new nonstandard timing is registered, the oldest timing settings will be deleted.

Factory presetting area

There are 14 display modes stored in this area. These display modes are preset at the factory and include most of the display modes currently available(see Timing Chart of this manual).
You can also retrieve the factory preset mode by selecting the RECALL menu.

Automatic save

The monitor automatically saves the setting value after certain times (20 sec) of adjusting OSD menu.

Power management

This monitor equipped with DPMS(Display Power Management Signaling) function which automatically leads the monitor to the state of power saving that consumes just a little power less than 5Watt, when the computer is left unattended.
Although the monitor can be left in power-saving mode for longer periods, we recommend that you turn it off after your daily work

Operation

The DPMS function requires support from the computer system of any software DPMS function applied, currently being used. If the keyboard(or mouse) is left unattended for a certain period, the program or system will set the sync signals to DPMS modes. The DPMS function has three status.
The recommended signals, power consumption and recovery times are shown in the table below.

Status	Signal			Power Consumption	Recovery Time	LED Indicator
	Hsync	Vsync	Video			
On	Pulse	Pulse	Active	30Watt (Max)		Green
Standby	No Pulse	Pulse	Blank	Less than 5 Watt	Within 2 sec	Alternating Green/Orange (0.5sec)
Suspend	Pulse	No Pulse	Blank			Alternating Green/Orange (1sec)
Off	No Pulse	No Pulse	Blank			Orange

English

Specifications

LCD	Type	TFT Color
	Size Dot Pitch Brightness Response Time Viewing Angle	15.0" viewable, diagonal 0.297 X 0.297(mm) 250 cd/m²(Typ) 40 msec Max. U/D : 55°/60°, R/L: 70°/70°
Input	Signal Type	RGB Analog 15 pin D - sub
Sync	H - Freq V - Freq	31.5KHz ~ 60KHz 56Hz - 75Hz
Video Band Width		80 MHz Max
Display	Active Area	304.1(H) X 228.1(V)
	Color	262.144 (Normal), 16.777.216 (Expansion)
Resolution (max)		1024 X 768@75Hz
User Controls & OSD Controls		Contrast, Brightness, H/V Position etc.
Power Management		VESA DPMS
Power Consumption		30Watt (Max)
Power		DC 12V 2.5A
Plug & Play		VESA DDC1/2B
Tilt	U/D	35°/ 5°
Temperature	Operating	0 to 40°C
	Storage	- 10 to 50°C
Humidity	Operating	30% to 80%(Non - condensing)
	Storage	5% to 90%(Non - condensing)
Approval		TCO99, FCC, CE, UL, MPRII
Weight	Unit	4.35Kg
	Carton	6.25Kg
Dimension(W X H X Dmm)		393 X 190 X 393 mm