Hansol

User's Guide

730D(D17DL)

COLOR MONITOR

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■ Regulatory Information

- FCC Information

This equipment has been tested and found to comply with 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 can generates, uses, and 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 unacceptable interference to radio and 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 party responsible for compliance could void the user's authority to operate the equipment.

- Canadian Notice

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

- Avis Canadien

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

- Energy Star

As an ENERGY STAR partner, Hansol Electronics Inc. has determined that this product meets energy Star guidelines for energy efficiency.

Notice

The information contained in this document is subject to change without notice.

■ Introduction
- Features

Superior image

- The exclusive double dynamic focus system with a hyperbolic focus compensation circuit controls the electron beams resulting in a fine image display over the entire area of the screen.
- Super contrast screen for superior contrast and richer color.
- Advanced INVAR Shadow mask for superior focus, brightness and color.
- On screen menu color control system easily allows the white of the image to be adjusted as well as R.G.B signals, resulting in true-to-life colors.

Ergonomic Design

- Flat, square screen to reduce image distortion and glare, thus relieving eye strain.
- Low-leak radiation prevention meeting MPR Ⅱ and the very stringent TCO(optin) magnetic field emissions standards for increased user safety.

Environmentally Friendly

- Power management circuit conforming to VESA DPMS standards controls energy consumption when monitor is not in use, you save energy.
- All plastic parts are recyclable. All materials are strictly selected to ensure ease of maintenance, inspection and disposal.

Timing

- Automatic tracking of horizontal frequencies of 30 to 95 kHz, and vertical frequencise of 50 to 160 Hz.
- Ten timings are factory preset for image size and position.
- Ten additional timings are user definable.

System Flexibility

- Equipped with DDC1, DDC2B and DDC2Bi for Plug & Play compatibility.
- Monitor is compatible with VGA, SVGA, VESA and high resolution video modes up to 1600(H) x 1200(V) @ 75Hz.
- Automatic universal power supply is built in permitting AC power input of 100 - 240V AC, 50 or 60Hz.
- Power supply operates on AC 200-240V(± 10%), 50/60Hz for use all over the world.(Europe Version)
- Self-test menu allows the display unit to be checked on screen without connecting to a computer.

■ Controls
- OSD controls

"ON SCREEN MENU" controls include the following extended controls such as Size, Position, Geometry, Color Adjust, Brightness and Contrast Utilities. Adjustments are saved instantly. The currently addressed control can be reset to factory settings by pressing the Reset button.

Function of OSD buttons on the front of the monitor

■ ↵ In the main menu, exits the OSD controls. In a submenu, exits to the OSD main menu.

■ – / +

1) When no OSD on the Screen,
   – : Direct access to Brightness controls.
   + : Direct access to Contract controls.
2) When Main menu is displayed. : Moves to function what you want to adjust.
3) When the Sub menu is displayed. : Controls the amount what you want to adjust.

■ MENU : Displays OSD main Menu.

1) When Main menu is displayed. : Selects function with RED ICON.
2) When Sub menu is displayed. : Selects function with RED ICON.

Additional front controls

■ Power Switch : Turns the monitor power on or off. When the power is on, the LED is on.

■ LED Power indicator Light : Located left side of the power switch and indicates the monitor's power mode. Each mode reduces the amount of power used by the monitor.

Accessing on screen menu

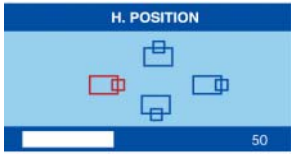
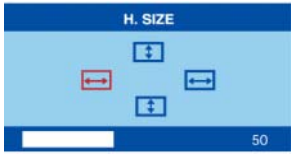
Press MENU Button.

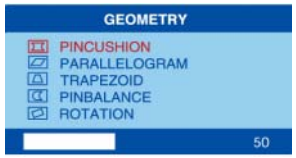
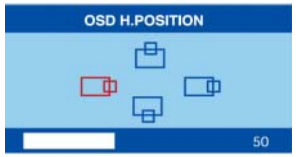
Turning off on screen menu

When in the main menu, press ↵ button.

When in submenus, press the ↵ button twice.

Controls
- OSD Menu

OSD MENU	MENU	CONTROL
1. NO OSD	Proceeds to NO.2	– Proceeds to NO.3 + Proceeds to NO.4 ↵ No meaning
2. MAIN MENU 	The function with RED ICON is - Performed : Recall, Degauss - Selected and blinked : Color Adjust, Zoom - Proceeded : Others	– + Moves to function you want. ↵ Exit to No.1
3. BRIGHTNESS 	Moves to No.2	– Decreases the brightness + Increases the brightness ↵ Exit to No.1
4. CONTRAST 	Moves to No.2	– Decreases the contrast + Increases the contrast ↵ Exit to No.1
5. H/V-POSITION  	Toggles horizontal or vertical position	– Moves the image down or left in the selected function. + Moves the image up or right in the selected function. ↵ Exit to No.2
6. H/V-SIZE  	Toggles horizontal or vertical size	– Shrinks the image in the selected function. + Expands the image in the selected function. ↵ Exit to No.2

7. GEOMETRY  	Odd press : Selects and blinks the function with RED ICON.	– + Controls the amount of the Selected function. (Refer to Geometry controls menu in detail) ↵ Exit to No.2
	Even press : Stops blinking and ready to move function you want.	– + Moves to function you want. ↵ Exit to No.2
8. MOIRE 	Odd press : Selects and blinks the function with RED ICON.	– + Controls the amount of the seleccted function. Please control these key in order the image not to shiver. ↵ Exit to No.2
	Even press : Stops blinking and ready to move function you want.	– + Moves to function you want.
9. LANGUAGE 	Selects the languages with RED ICON and Exit to No.2.	– + Moves to language you want. ↵ Exit to No.2
10. OSD POSITION  	Toggles OSD position horizontally or vertically.	– Moves the OSD menu left or down in the selected function. + Moves the OSD menu right or up in the selected function. ↵ Exit to No.2
11. COLOR MODE 	Odd press : Blinks the RED ICON - color menu ICON.	– + Moves to color mode you want and the selected “color mode” will blink. ↵ Exit to No.1
	Even press : Stops blinking and ready to move function you want.	– + Moves to function you want. ↵ Exit to No.1
	When the color mode ICON is blinking in user mode, press, then go to color adjust mode No.12.	–

12. COLOR ADJUST MODE RB GB BB RG GG BG USER 50 RB - Red background raster GB - Green background raster BB - Blue background raster RG - Red level gain GG - Green level gain BG - Blue level gain	Odd press : Selects and blinks the function you want.	– + Controls the amount of function you want. ↵ Exit to No.11
	Even press : Stops blinking and ready to move function you want.	– + Moves to function you want. ↵ Exit to No.11
13. ZOOM ZOOM 50	Odd press : Selects zoom and blinks the zoom ICON.	– Shrinks the image horizontally and vertically. + Expands the image horizontally and vertically. ↵ Exit to No.1
	Even press : Stops blinking and ready to move another function.	– + Moves to the function you want. ↵ Exit to No.1
Recall ( )	Recall control to the factory setting resets all the controls within the all menu. If you want to return to the factory mode setting, press menu key on Recall ICON.	
Degauss( )	Eliminates the build-up of stray magnetic fields which alter the correct scan of the electron beams and affect the purity of the screen colors, focus, and convergence. When pressed, you screen image will jump and waver a bit as the screen is demagnetized. **Caution** : Please allow a minimum of 20 minutes to elapse between uses of the Degauss button. Do no hold the button down continuously to avoid decreasing the life the Deguass circuitry.	

※ Geometry Controls Menu

GEOMETRY
PINCUSHION
PARALLELOGRAM
TRAPEZOID
PINBALANCE
ROTATION
50

The Geometry controls allow you to adjust the curvature or angle of the sides of you display.

•Pincushion : Increases or decreases the curvature of the sides either inward or outward.
•Parallelogram : Increases or decreases the tilt of the sides either to the left or right.
•Trapezoid : Increases or decreases the bottom of the screen to be the same as the top.
•Pin Balance : Increases or decreases the curvature of the sides either to the left or right.
•Rotation : Increases or decreases the tilt of the screen image relative to a horizontal line.

Power Management Feature

The monitor is equipped with a power saving circuit that confirms to the world-standard Display Power Manager Signalling (DPMS) mode of Video Electronics Standard Association(VESA).

The power management feature requires that the video card of the computer should support DPMS function.

Status	LED Sign	Power Consumption
Normal mode	Green	100 Watts
DPMS mode	LED Off	Less than 5 W

No image is displayed with Green blinking.
Monitor is in power saving mode.
Use mouse or keyboard to release power saving mode.

No image is displayed without LED on.
Power cable plug must be pulled out.
Check the power plug on monitor and on the wall.

"Out of range" displayed on the screen.
This message is displayed when the signal from video card exceeds the maximum frequency of the monitor. Readjust resolution and frequency in accordance with the monitor capacity.(Refer to Standard Signal Table).

Standard Signal Table

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)	Clock Frequency (MHz)	Sync Polarity (H/V)
VGA (720 x 400)	31.469	70.087	28.322	– / +
VGA (640 x 480)	31.469	59.940	25.175	– / –
VGA (640 x 480)	43.269	85.008	36.000	– / –
VGA (720 x 400)	37.927	85.039	35.500	– / –
SVGA (800 x 600)	46.875	75.000	49.500	+ / +
SVGA (800 x 600)	53.674	85.061	56.250	+ / +
XGA (1024 x 768)	60.023	75.029	78.750	+ / +
XGA (1024 x 768)	68.677	84.997	94.500	+ / +
SXGA (1280 x 1024)	79.976	75.025	135.000	+ / +
SXGA (1280 x 1024)	91.146	85.024	157.500	+ / +
UXGA (1600 x 1200)	93.750	75.000	202.500	+ / +

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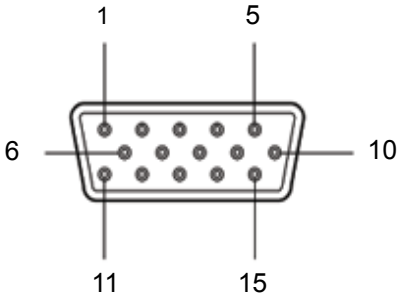
■ Specifications

ITEM		730D(D17DL)
CRT Type		17", 90° deflection FLAT
CRT Horizontal Dot pitch		0.20mm
CRT Surface		Non-glare, Anti-Reflection & Anti-Static
Input Signal	Sync.	H/V Separate, TTL, positive/negative H/V Composite, TTL, positive/negative
	Video	RGB Analog (0.7Vp-p), positive 75 Ω Terminated
Scanning frequency	Horizontal	30KHz~95KHz (Automatically)
	Vertical	50Hz~160Hz (Automatically)
Maximum Resolution		1600Dots x 1200Lines (Non-interlace)
Pixel Clock(Max.)		157.8 MHz
Display Size (Standard)		Horizontal 306mm, Vertical 230mm
Power Consumption(Max.)		100 Watts
Power Supply		AC 100~240Volt, 60/50Hz ± 3Hz AC 220~240V(± 10%), 50/60Hz ± 3Hz(Europe Version)
Input Connector		D-Sub, 15Pin Connectors
Display Colors		Unlimited
Dimension	Unit	15.6" (W) x 16.2" (D) x 16.1"(H) / 397mm(W) x 412.7mm(D) x 410.2mm(H)
	Carton	18.1" (W) x 20.3" (D) x 18.1"(H) / 460mm(W) x 515mm(D) x 460mm(H)
Weight	Net	34.8lbs (15.8kg)
	Gross	38.1lbs (17.3kg)
Temperature	Operating	32°F to 104°F (0℃ to 40℃)
	Storage	-4°F to 140°F (-20℃ to 60℃)
Humidity		10% to 85% R.H. Non-condensing

Pin assignment table D-Sub Mini 15pin connector

Pin No.	Assignment
1	Red Video
2	Green Video
3	Blue Video
4	Frame Ground
5	Ground
6	Red Video Ground
7	Green Video Ground
8	Blue Video Ground
9	N.C
10	Sync. Ground
11	Ground
12	SDA
13	H-Sync.
14	V-Sync.
15	SCL

The 15-pin D-Sub connector (male) of the signal cable (IBM Systems) :



(15 Pin D-Sub)

Troubleshooting

Problem	Solution
No picture	■ Check that the AC cord is correctly connected. ■ Check that the AC socket is live by plugging in another piece of equipment. ■ Power switch and computer power switch should be in position. ■ Ensure that the signal cable is properly connected to the video card or PC. ■ Ensure that the video card is securely seated in the PC. ■ Check the connector for bent or pushed-in pins. ■ Press a key on the keyboard or move the mouse, in case the screen power-saver mode has blanked the screen.
Image is scrolling or unstable	■ Signal cable should be securely attached to the computer. ■ Check the pin assignments and signal timings of the monitor and your video card with respect to recommended timings and pin assignments. ■ Ensure that the video card is securely seated in the PC.
Picture is fuzzy	■ Adjust the Contrast and Brightness Controls. ■ Push the Degauss Button once. **Caution** *A minimum interval of 20 minutes should exist before the Degauss Button is used a second time. Do not hold the button down continuously.*
Picture bounces or a waving pattern is present in the picture	■ Move electrical devices that may be causing electrical interference away from the monitor. ■ See the inside front cover of this manual for FCC information. ■ Unshielded audio speakers placed next to the monitor can cause picture distortion. Move the speakers away.
Edges of the display image are not square	■ Adjust the distortion using the Side Pincushion or Trapezoid Pincushion Balance, Parallel adjustment controls under the on screen menu.
Display image is not centered, too small, or too large	■ Adjust the horizontal and vertical image sizes using the Horizontal and Vertical Size adjustment controls under the on screen menu.