

DL27-1
User's Manual

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I. FCC Compliance Statement

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 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.

WARNING

A shielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used.

Use only shielded cables to connect I/O devices to this equipment.

II. Safety Instructions

1. Read all of these instructions.
2. Save these instructions for later use.
3. Follow all warnings and instructions marked on the product.
4. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use this product near water.
6. Do not place this product on an unstable cart, stand or table. The product may fall, causing serious damage to the product.
7. Slots and openings in the cabinet and the back or bottom are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
8. This product should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
9. This equipment is intended to be electrically grounded. This product is equipped with a 3-wire grounding plug—a plug with a third (grounding) pin. This plug will only fit into a grounded AC outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug!
10. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
11. If an extension cord is used with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord ampere rating. Also, make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.

III. Safety Instructions

12. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
13. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to service personnel.
14. Unplug this product 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 product.
 - c. If the product has been exposed to rain or water.
 - d. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
 - e. If the product has been dropped or the cabinet has been damaged.
 - f. If the product exhibits a distinct change in performance, indicating a need for service.

1. About Your Home Monitor™

General Information

Congratulations on your purchase of a Gateway 2000 DL27-1 Home Monitor™, the color monitor that combines the size of a television and the performance of a computer monitor.

The 27-inch viewable diagonal and built-in stereo speakers make the DL27-1 perfect for viewing in a family computer setting.

The Home Monitor is capable of resolutions up to 800*600(non-interlaced).

The intelligent microprocessor-based design was implemented with the user in mind, and enables the DL27-1 to automatically synchronize and adjust to

most popular video modes. Digital controls are also integrated for convenient user-friendly, yet precise, adjustment and autosizing.

The DL27-1 complies with EPA Energy StarSM and VESA[®] DPMS[™] (Display Power Management Signaling) compatible power management.

We truly believe you will enjoy using the DL27-1, a symbol of our continuing search and research for product excellence, and invite you to read this manual to get the most value from your new Home Monitor. Thank you for making our product your choice.

1. About Your Home Monitor™

Features

- Multi-scanning at horizontal frequencies between 24-40KHz and vertical frequencies between 50-90Hz
- 800 * 600 maximum resolution
- 29" (27" viewable diagonal) Invar Shadow Mask picture tube
- Built-in stereo speakers
- Stereo audio input
- Microprocessor-based design with digital controls
- Horizontal and vertical overscanning capabilities
- A palette of unlimited colors
- Compatible with IBM VGA and VESA® ergonomic standards
- Windows® 95 Plug & Play compatible
- Universal power supply
- VESA® Display Power Management (DPMS™) compatible

*Not compatible with Mac II computers.

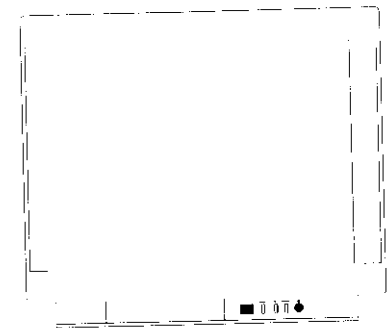
1. About Your Home Monitor™

Check List

Before operating the Home Monitor, please make sure that all of the following items are included:

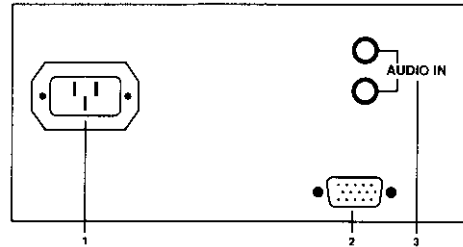
- DL27-1 Home Monitor
- Power cable
- VGA cable
- Audio cable
- Warranty

If any of these items are missing, please contact your dealer.



2. Getting To Know Your Home Monitor

Back Panel



1. Power Connector

Use with the power cord to connect the Home Monitor to a power outlet.

2. VGA Connector

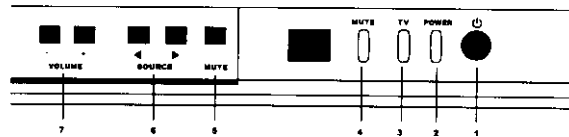
Use to connect the video output from a computer to the Home Monitor.

3. Audio In Jacks

Use to connect the audio output from a computer to the Home Monitor.

2. Getting To Know Your Home Monitor

Front Panel



1. Power Button

Turns the power ON or OFF

2. Power LED

Turns green when the power is ON and the power and signal cables are properly connected. Turns amber when in power saving mode.

3. TV Mode LED

Turns green when the Home Monitor is in video enhanced modes to indicate that TV mode is active.

4. Mute LED

Turns on when the Monitor speaker sound has been muted.

5. Menu Button

Activates or exits the OSD menu for the current video input mode.

6. Source Buttons

Use to alternate the TV or Computer Video Gain. The ◀ / ▶ buttons are used to scroll the highlight left/right the menu to select a control for adjustment when the OSD is active.

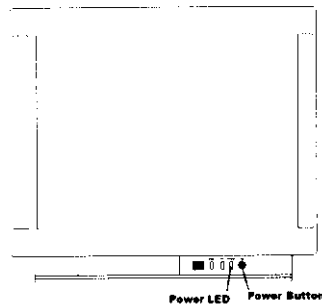
7. Volume Control Buttons

Adjust the loudness of the sound from the internal speakers. Also, when the On-Screen Display (OSD) menu is active, these buttons are used to adjust the value of the highlighted control function.

3. Installing Your Home Monitor

Power Off

Switch OFF the power to both the Home Monitor and computer. The power button is located at the lower-right corner of the monitor face.



Back Panel Connectors

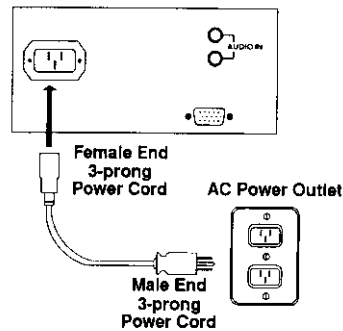
To properly install the Home Monitor read the following procedures on the next few pages before starting the installation.

3. Installing Your Home Monitor

Power Cable Connection

The Home Monitor comes with a 3-prong power cord.

1. Connect the female end of the power cable to the power input jack on the back panel.
2. Plug the male end of the power cable into the wall outlet.

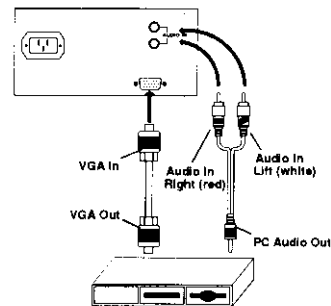


3. Installing Your Home Monitor

Computer Connections

The Home Monitor comes with a detachable computer signal cable with a male 15-pin D-sub connector on each end.

1. Attach one end of the signal cable to the female 15-pin connector of the computer's video adapter. Secure the screws on the connectors.
2. Attach the other end of the signal to the VGA port on the back of the Home Monitor and secure the connector screws.
3. Plug the color corresponding RCA jacks of the audio cable into the "AUDIO IN" jacks of the Home Monitor.



4. Adjusting Your Display

On Screen Display

This Home Monitor features On Screen Display (OSD) of the control functions to adjust the display settings to your viewing preference and comfort.

TV/Computer Mode

To adjust the display characteristics in the TV/Computer mode, press computer ("►") button to enter the computer mode and press TV ("◄") button to enter the TV mode (High Gain). The color Temperature will set at 9300K (Computer Mode) or 6500K (TV Mode). If the Monitor enter to TV Mode, the H-SIZE will overscan. Press the Menu button to activate the Computer mode OSD menu. The Menu button also selects the two Main menus and exits the OSD menu completely. The current timing mode is shown at the bottom of the menu with the horizontal and vertical frequencies. The value of the selected control is displayed in percentage at the middle of the OSD menu. The value bar indicates in which direction the adjustments are being made. Press the Volume -/ + Buttons until the control setting is adjusted to your preference. After all adjustments have been made, press the Menu button to exit the OSD menu. All display characteristic changes will be stored automatically. If ten seconds pass without pressing any buttons, the OSD menu will automatically disappear.

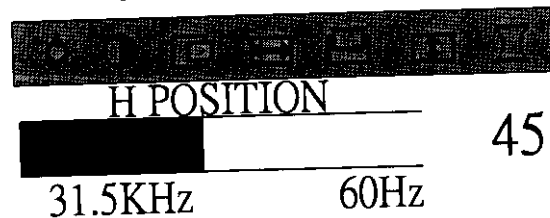
4. Adjusting Your Display

Audio Control :



Pressing the Volume “-/ +” button to adjust the loudness of sound from the internal speakers.

TV/Computer Mode Main Menu



Brightness

Adjusts the black level of the image.

Contrast

Adjusts the contrast between the black and white levels of the image.

H Position

Moves the display from side to side on the screen.

H Size

Adjusts the horizontal size (width) of the display.

V Position

Moves the display vertically (up and down) on the screen.

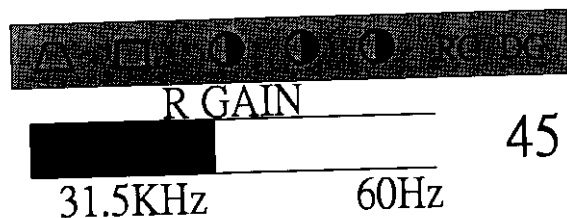
V Size

Adjusts the vertical size (height) of the display.

Pincushion

Bows the sides of the display inward or outward.

4. Adjusting Your Display



Keystone

Adjusts the width of the top of the display to the bottom of the display.

Rotation

Rotates the display on the screen.

Gain R

Adjusts the intensity of the red level in the image.

Gain G

Adjusts the intensity of the green level in the image.

Gain B

Adjusts the intensity of the blue level in the image.

Recall RC

Resets the display characteristics to the original factory preset values. Press either of the Volume buttons (-/+) until the OSD menu reads "Recall OK." **Note:** The timing mode must be set to one of the factory preset timing modes (see Section 5, "Timing") for the Preset function to work.

Degauss DG

Eliminates magnetic field buildup from the display that could cause discoloration. The Home Monitor automatically degausses on start-up. **Note:** Normally is it only necessary to degauss if the unit has been moved.

5. Timing

Description

This multifrequency Home Monitor operates at horizontal frequencies between 24KHz to 40KHz and vertical frequencies between 50Hz to 90Hz. Because of its microprocessor-based design, it offers autosynchronization and autosizing capabilities. The Home Monitor offers 6 preprogrammed settings as listed in the table to the right.

These preset modes cover most of the common video modes supported by popular graphics adapters. However, each adapter's implementation of these video modes may vary slightly in timings. If you find it necessary to make minor adjustments (i.e; Horizontal Size), please refer to Section 4 "Adjusting Your Display" for instructions on making these adjustments.

The Home Monitor is not limited to these preset factory timing modes. Because it is Multi-scanning, it can accept any signal within its horizontal and vertical frequency ranges. If the resolution and frequency are beyond the Home Monitor's capabilities, it will display, "OUT OF RANGE." In this case, the resolution and frequency should be changed to a range within the Home Monitor's capabilities (see Appendix A:Specifications).

5. Timing

Preset Modes	Resolution		Frequency	
	H (Pixels)	V (Lines)	H (KHz)	V (Hz)
1	640	480	31.5	59.9
2	720	400	31.5	70.1
3	640	350	31.5	70.1
4	640	480	37.9	72.8
5	640	480	37.5	75.0
6	800	600	37.9	60.3

DDC Plug & Play

This Home Monitor is VESA® DDC1/2B compatible. When a "Plug and Play" PC is powered on, it sends a command to the Home Monitor requesting identification. The Home Monitor sends back a string of data including its characteristics. Windows 95 then selects an optimum resolution and refresh.

6. Programming

User Modes

This Home Monitor incorporates a microprocessor that controls all of its programming functions. The Home Monitor offers 6 factory preset modes that store all of the default timings and display settings. This Home Monitor is also capable of storing customized display settings. The Home Monitor automatically stores these User Modes on a "First-In-First-Out" basis when you make any adjustments to the display characteristics. To adjust the settings of the Home Monitor display characteristics, please refer to Section 4, "Adjusting Your Display."

Factory Preset Recall

If you have made adjustments to the Home Monitor's display characteristics and wish to recall the original factory display setting of the current preset timing mode, simply activate the On-Screen Display menu. Highlight the "RC" control, and press volume (-/+) buttons until "RECALL OK" is displayed at the bottom of the OSD menu. The Home Monitor will automatically readjust itself to the display settings for that preset timing mode. **Note:** You must be using one of the factory preset timing modes for the Preset function to work.

7. Power Management

Power Management Modes

The power management feature enables the Home Monitor to recognize VESA® DPMS™ (Display Power Management Signaling) signals from a VESA® DPMS™ compliant video adapter and switch into one of three power modes: On, Suspend or Active Off.

Your computer may be set to go into power saving modes at selectable intervals (see your computer manual). It signals the Home Monitor by turning off one or both sync signals which, in turn, causes the Home Monitor to enter one of the modes shown in the chart below.

MODE	POWER CONSUMPTION
On	160W
Suspend	< 30W
Active Off	< 8W

In Suspend mode, the Home Monitor still maintains the detection and CRT heater circuitry to ensure a fast recovery time. In the Active Off mode, all circuitry in the Home Monitor is shut down except for a low power detection circuit. This circuit allows the Home Monitor to “wake up” when the horizontal and vertical signals become active again (when the mouse is moved or a key on the keyboard is pressed).

MODE	POWER LED
Normal	Green
Suspend	Amber
Active Off	Blank

Appendix A: Specifications

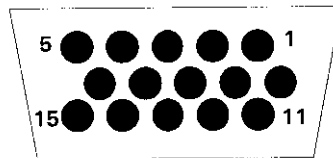
CRT Size	29"(27" viewable diagonal)
CRT Type	0.60mm stripe pitch at center, Microfilter. 108° diagonal deflection angle INVAR Shadow Mask
Max. Resolution	800 x 600 (non-interlaced)
Synchronization	
Horizontal (f _H)	24KHz-40KHz
Vertical (f _V)	50Hz-90Hz
Display Size (H x V)	
Default	21.10" x 15.59" (536mm x 396mm)
Full Scan	21.50" x 16.38" (546mm x 416mm)
Video Dot Clock	40MHZ
Input Signal	
Computer	RGB Analog 0.7V _{p-p} /75 Ohms
Sync.....	Separate Sync: TTL level
Horizontal sync	Positive/negative
Vertical sync	Positive/negative
Audio	
• Output Power (RMS).....	5W*2
• Input Signal Level	0.2~1.8 V _{rms} , > 10Kohm.
• Total Harmonic Distortion (THD).....	0.5%, 3W*2

Appendix A: Specifications

Power Input	Auto-switch, AC 90-240V, 50Hz/60Hz
Power Consumption	160 Watts (Typical)
Recommended Ambiance	
Operating Temp.	32°F to 104°F (0°C to 40°C)
Storage Temp.	-40°F to +140°F (-40°C to +40°C)
Humidity	5% to 90%
Dimensions (H x W x D)	22.5" x 29.1" x 19.5" (572mm x 739mm x 495mm)
Weight	
Net	81 lb. (36.8kg)
Gross	100 lb. (45.5kg)
Plug & Play	VESA® DDC1/2B
Certifications	
Safety	UL, CSA, DHHS, TUV, CE
EMI Standard	FCC Class B
Power Saving	EPA Energy Star™, VESA® DPMS™

Appendix B: Pin Assignment

The video signal cable pin assignment is listed in the table below. This is for your information only. Please do not attempt to devise your own connections as this may damage the Home Monitor.



Pin 1	Red video
Pin 2	Green video
Pin 3	Blue video
Pin 4	Ground
Pin 5	DDC return
Pin 6	Red ground
Pin 7	Green ground
Pin 8	Blue ground
Pin 9	+ 5V option
Pin 10	Ground
Pin 11	ID 0
Pin 12	SDA
Pin 13	Horizontal sync
Pin 14	Vertical sync
Pin 15	SCL