APPENDIX E
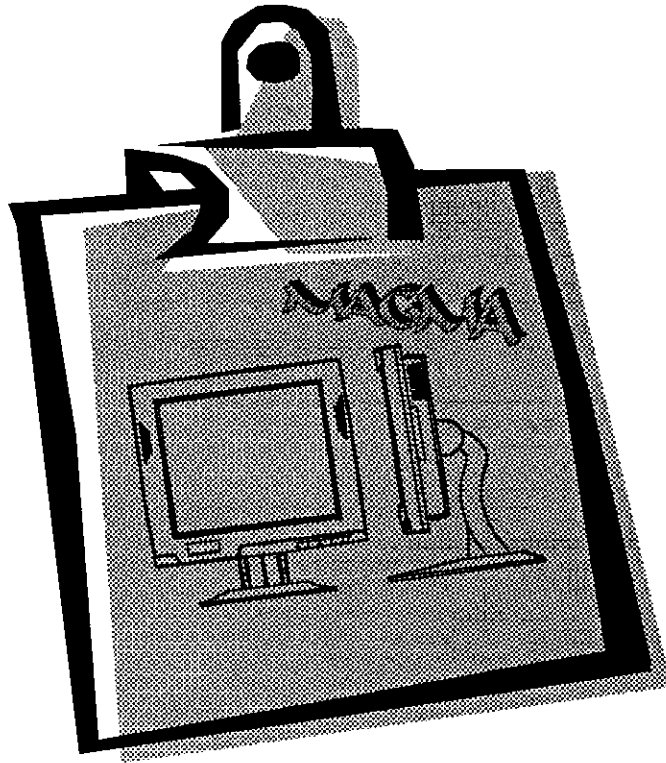
USER'S MANUAL
(With relevant FCC statements)

Datamini

612A

USER MANUAL

March 1998

Who should use this manual...
If you have just started to use this super slim LCD Monitor but you do not know how to set it up. Without any prior technical knowledge, this manual can guide and assist you to set up the system and connect to the proper devices correctly. Useful graphics are included in this manual that will help illustrate several tasks.

Part No.

NOTICE

Our company may make improvements and/or changes in the product(s) described in this publication at any time without notice. Changes are made periodically to the information herein, these changes will be incorporated in new editions of the publication. This publication may include technical inaccuracies or typographical errors.

TRADEMARKS

All registered trademarks are the property of their respective owners.

FCC Information

This equipment has been tested and found to comply with limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, and uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, 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 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 following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is located.
- Consult the dealer or an experienced radio/TV technician for help
- Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- Any changes or modifications not expressedly approved by the manufacturer could void the user's authority to operate the equipment.

FCC ID: JUK0398GES612

CE Certification

This device complies with the requirements of the EEC directive 89/336/EEC with regard to "Electromagnetic compatibility."

CONTENTS

Warning

Troubleshooting

CHAPTER 1
INTRODUCTION

Welcome to the era of compact and space saving equipment. This LCD monitor is slim and compact and can still be used like any other colour CRT based monitor. As this LCD monitor uses only 30% of the normal space required by other conventional monitors it increases your workspace tremendously. This LCD monitor provides superior image quality in a small space.

The LCD monitor's unique design stands apart from all current systems. A simple and elegant case provides the optimum viewing position, from a forward or backward tilt, both the angle of viewing and the height can be adjusted to provide the user with an ideal viewing posture. User controls for the OSD (On Screen Display) are placed in an easily reachable level to the right of the screen.

For a monitor this slim, its performance is both very impressive as well as outstanding. The LCD Monitor has a SVGA (800x600) resolution. It delivers bright, sharp screen performance in a slim, lightweight package with exceptional image clarity, focus and intense colour saturation and tailored specifically for everyday home and office applications.

CHAPTER 2
MAGMA'S FEATURES

1.   High quality TFT LCD panel is used

The screen is 12.1 inch viewable and is comparable to the conventional 15-inch CRT monitor. Radiation free screen, providing high resolution and high contrast. Not susceptible to external magnetic interferences that causes colour impurity. Provides sharp and flicker-free images

2.   Environmentally-friendly

The display power consumption can be suppressed by using this unit in combination with a computer that conforms to the VESA DPMS (Video Electronics Standards Association Display Power Management Signalling) standards. This product conforms to the Energy Star program. Thus reducing energy consumption when Magma is not in use.

3.   Plug and Play compatibility

Equipped with DDC1 and DDC2B for Plug and Play compatibility.

4.   Digital adjustment using the OSD

Adjustments can be performed easily with 3 OSD control buttons (4th button is the power switch) and the on-screen menu.

5.   Ergonomically designed

Magma provides good viewing posture and easily adjustable angles for superior viewing.

6.   Low power consumption

Due to the high technology of the LCD used, with its power consumption at an extremely low (less than 25W) level compared to other conventional CRT monitors (at ~190W) in the current market.

7. No build up of static

This monitor does not build up static electricity and thus is isolated from any external interference caused by external magnetic sources. Degaussing is not necessary as there will not be any irregularities resulting from these magnetic sources.

☞ **Note:**

Magma is essentially a green monitor. It conforms to the Energy Star program and more importantly, it does not emit any harmful radiation. The power consumption of this product is also exceptionally low.
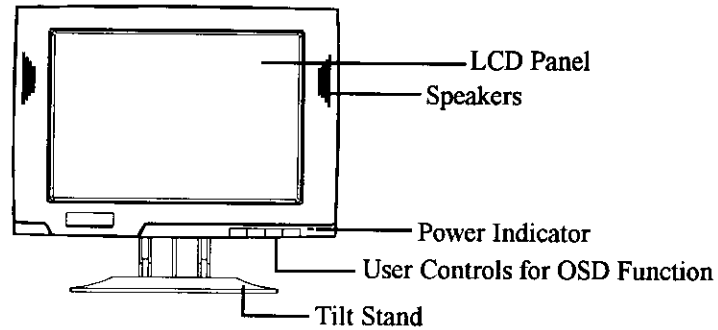

LCD Panel
Speakers
Power Indicator
User Controls for OSD Function
Tilt Stand

Figure 1 Front View
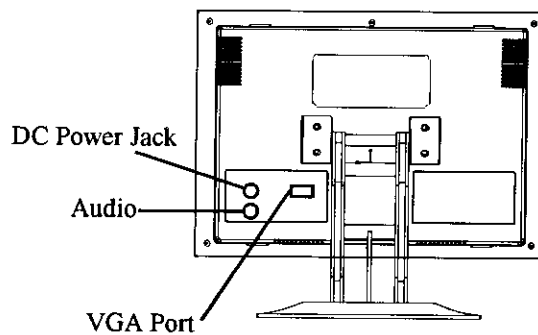

DC Power Jack
Audio
VGA Port

Figure 2 Rear View

CHAPTER 3
GETTING STARTED

Power and VGA Cable Connection

Insert the power adapter into the main power outlet and the other end to the rear side of the monitor. Connect the monitor and your host computer with the VGA cable.
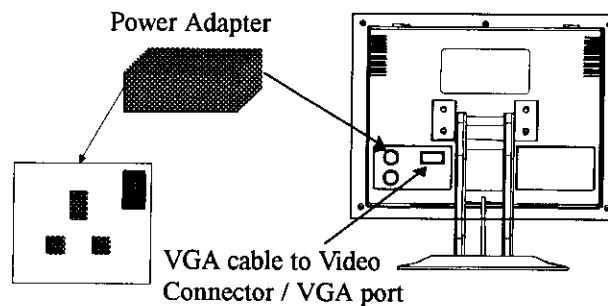
Power Adapter

VGA cable to Video
Connector / VGA port

**Figure 3 Power and VGA Cable Connection**

☞ **Note**

Find the power supply enclosed in the shipping carton. Connect the power supply cord to the connector marked "DC IN" on the rear side of the monitor. Connect the other side of the cable to electrical outlet. Use the power supply cords enclosed in the shipping carton to use this unit safely.

Power On

To switch on the monitor, switch on the power adapter at the main power socket, followed by the power button found at the lower right of the screen. The display power indicator will be lighted and if all settings are correctly set, the display will appear on the screen. Finally, adjust the tilt stand for an excellent viewing angle.

## Button Assignments
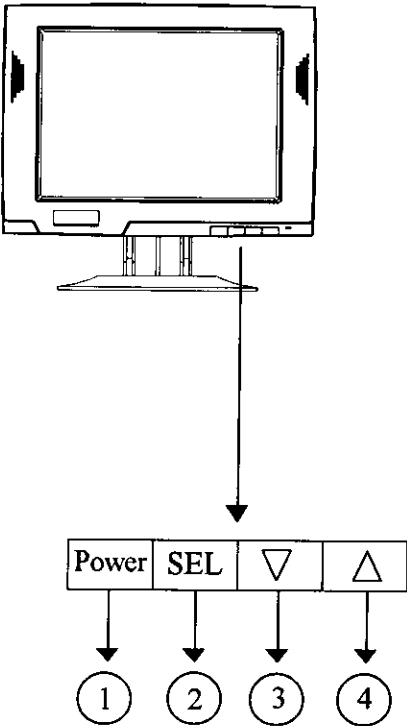
| Item No.	Key	Function
1	Power	LCD Monitor ON/OFF button
2	SEL	Select Button
3	▽	To decrease the setting or move left
4	△	To increase the setting or move right

OSD Control Function

Magma has an On Screen Display (OSD) function, which helps you adjust the display to attain the best visual performance. Use the 3 OSD control buttons "SEL", "▽", "△", to select the perfect settings for your viewing pleasure.

To start the OSD setting, press the "SEL" button once. You should see the following menu on the screen.

```
Ver 2.122
Basic Adjustment
Image Position
System
Exit
```
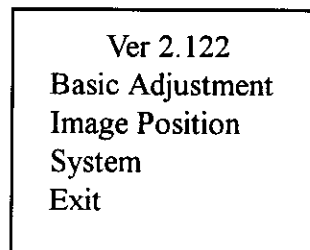
You can scroll up or down to your choice using the corresponding buttons. To activate the selection, press "SEL" and "SEL" again if you want to go back to the main menu at any time. Exit saves changes, closes the menu and clears the screen.

Basic Adjustment

```
Brightness
Contrast
Phase
Default Settings
Exit
```
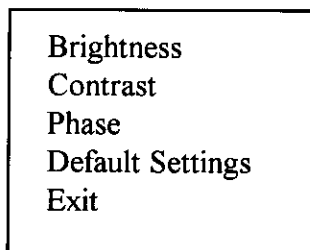
Brightness
Brightness can be increased or decreased by pressing the right and left arrow keys. Holding down the up or down buttons continuously, increases or decreases the count in steps of 10.

Contrast

Contrast can be increased or decreased by pressing on the right and left arrow keys. Holding down the up or down buttons continuously, increases or decreases the count with steps of 10.

Phase

This function enables you to fine-tune your display. Phase sharpens focus by aligning the illuminated pixels. Press the respective keys until the screen image looks focused, crisp and sharp.

A suggested method of testing out your LCD Monitor display quality would be to start a word processor like Notepad. Type a series of the letter "L" across the screen. If the vertical lines of the the letters appear clear and defined, then the display quality is good. However, if it appears to be a bit unclear, you might want to adjust the phase level making sure that the full range of "L"s are clearly displayed.

☞ **Note**

The Phase settings is also useful when you have changed your VGA card. The display may become unstable and the display may flicker. Adjust the Phase setting to accomodate the new hardware and to adjust your LCD monitor for a good quality display.
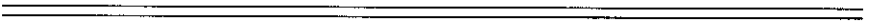
The display quality may vary in different VGA cards. Therefore, it is advisable to change settings to suit you whenever you change any display hardware.

Default Settings

Choosing this option will set all selections to their factory default settings.

Image Position

```
Horizontal Position
Horizontal Size
Vertical Position
Expand Center
Exit
```

If necessary, make small adjustments using the Horizontal Positon and Horizontal Size until the screen image is completely visible. (The black border around the edge of screen should barely touch the illuminated "active area" of the LCD.

Horizontal Position
You can adjust the display screen image horizontally to the right or left with the respective arrow keys.

Horizontal Size
You can increase and decrease the display image size by selecting this option and pressing the right and left keys.

Vertical Positon
You can adjust the entire display screen image vertically up and down by pressing the right and left arrow keys.

Expand Center
This option is only available in text mode and VGA mode (e.g. DOS). This will change the screen from its default size (smaller than the full screen) to an enlarged full screen size. It will expand the screen to the full screen width for better and easier viewing.

☞ **Note:**
When you are using VGA mode (640x480 pixel), your screen may be unclear. The display may not look that nice as the recommended setting of 800x600 pixels.

System

```
Language
OSD Position
OSD Turn Off Time
Mode Indication
Exit
```

System menu gives you options to set for the actual OSD Menu such as its language, position and the menu turn off time. It also provides an indication of the current mode the display is in.

Language

```
English
Francais
Italiano
Deautsch
Exit
```

You may change the language of the OSD Menus. However at this point in time, the only functional option is English.

OSD Position

```
Top left
Top Right
Center
Bottom Right
Exit
```

This menu gives you 4 position options to place your OSD Menu. It will apply only when you next invoke the OSD function.

OSD Turn Off Time

```
15 sec
30 sec
60 sec
120 sec
Exit
```

When there has been no activity for a period of time, the OSD Menu will automatically close. You are able to set the Menu closing time, from 15 seconds to 120 seconds since the last OSD menu activity.

Mode Indication

```
800 x 600        H + 37.8k        V + 60
```

This is an indication of the current mode the monitor is in, the pixel value and the horizontal and vertical synch frequency.

CHAPTER 4
SPECIFICATIONS

Specifications are subject to change without notice for the purpose of improvement.

TFT LCD panel

Thin Film Transistor Liquid Crystal Display Panel.

TFT active matrix

Type: 12.1" viewable flat screen

Display Area: 246.0(H) x 184.5(V) mm

Display colours: 262, 144 colours

Number of pixels: 800 x 600

Pixel arrangement: RGB vertical stripe

Pixel Pitch: 0.3075(H) x 0.3075(V) mm

Contrast Ratio: 150:1 (typ)

Viewing Angle (more than the contrast ratio of 10:1)

   Horizontal: 50° (typ. Left side, right side)

   Vertical: 20° (typ. Up side), 40° (typ. Down side)

Response time: 70ms (max). "White" to "Black"

Luminance: 90cd/m^2 (typ.) Lamp current:3.0mArms

Backlight: Edge light type: one fluorescent lamp (cold cathode type)

Dot Pitch:0.33mm

Input Signal

Video: RGB analog

Signal Level: 0.7Vp-p (without synchronisation signal)

Synchronisation: H/V separate (TTL level)

Horizontal frequency sync: 31.5-53.8kHz

Vertical frequency sync: 56Hz-85Hz

Connectors

Signal: 15-pin D-sub connector (female pins)
Power supply: external power adapter – 2-pin dedicated power socket

Controls

Front Panel: Power, SEL,∇ $\triangle$.
On Screen Display: Basic Adjustment, Image Position and System.

Maximum Resolution

800 dots (H) x 600 lines (V)

Adapter Input Power

DC 12V 2A

Power consumption

During operation: <25W
Standby Mode: <5W

Dimensions width x height x depth

330mm x 324mm x 185mm (Refer to the next page for drawings).

Weight

2.5kg.

Screen angle adjustment: Up, Down, Left and Right

90° (Up), 4° (Down), and since Magma is small and lightweight, easily adjustable rotation can be achieved by rotating the stand together with the LCD panel for your optimum viewing position.

External Power Adapter

Input voltage: 100 ~ 240AC
Output voltage: 12VDC 2A

Display Mode

Mode	Resolution
Text	720 x 400
VGA	640 x 480
SVGA	800 x 600

The On-Screen-Display (OSD) menu allows the user to define settings for the screen display. These user adjustable settings are basic adjustment, Image Position and System.

After the settings have been selected, they are stored into the built-in . EEPROM memory when the OSD menu is exited, This allows the user to power off the unit without affected these settings which were set previously.

Thus, when the monitor is powered up again, it would be unneccessary to redefine the settings. The monitor will automatically restore the preset configuration.

Dimensions

When adjusting the angle, hold the bottom corners of the display with both hands and turn it slowly. Do not press on the upper part of the display.
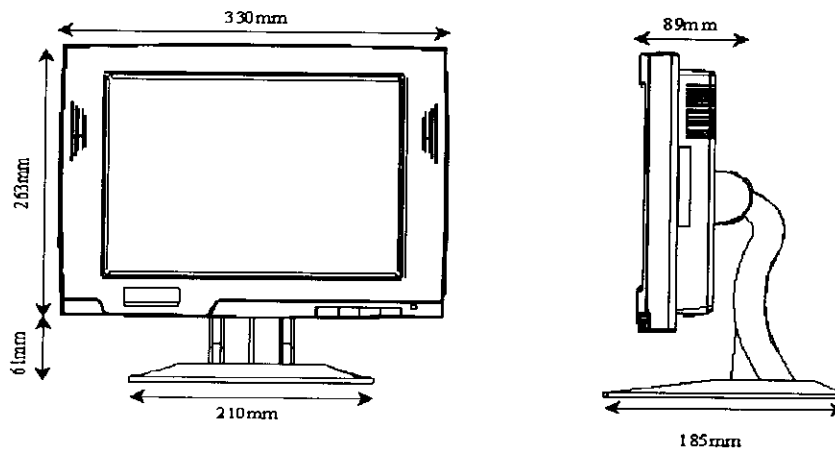

**Figure 4 Dimensions of the LCD monitor**

Power Management System

This monitor conforms to the VESA DPMS standard. Power consumption can be suppressed by putting the display unit into stand-by mode. However, to maintain this standard, equipment used with the monitor must also conform to the VESA DPMS standard.

APM State	Screen Status	LED colour	Power Consumption
ON	Active	Green	<25W
STAND-BY	Black Out	Blinking	<5W

APM: Advanced Power Management

Connectors
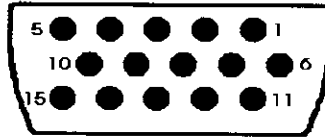
Pin Number	Signal
1	Red Signal
2	Green Signal
3	Blue Signal
4	Ground
5	Ground
6	Red Signal Ground
7	Green Signal Groun
8	Blue Signal Ground
9	Open
10	Ground
11	Ground
12	DDA
13	Horizontal Sync. Signal
14	Vertical Sync. Signal
15	DDCK

✋ **Warnings and Cautions**

Please read the following for a guide on how to take care and prevent accidents or damages from improper handling or operation.

☑ Make sure all power is switched off when connecting, disconnecting, and cleaning.

☑ Install in a well-ventilated location to position Magma. This is to allow adequate dissipation of heat.

☑ Keep the monitor away from dirt or dust.

☑ For added protection, when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the monitor due to power-line surges.

☑ Always handle your LCD monitor with care when moving it.

☑ Avoid placing the monitor in direct sunlight and heat sources. Do not install in a location with a great deal of moisture or dust.

☒ Do not apply pressure to the screen. The LCD is very delicate.

☒ Do not touch the screen directly with your fingers. You may damage the screen, and oil from your skin is difficult to remove.

☒ Do not drop, scratch, and bump it on a hard surface as the LCD panel. It may break or crack as a result of incorrect handling.

☒ Do not use this monitor near water or drop water on the surface of the LCD panel. If it is wet, wipe off with soft cloth to prevent discolouring.

☒ Do not place this monitor in an unstable position. The monitor may topple causing serious injury to a child or adult and serious damage to the appliance.

☒   Never push objects of any kind into this monitor through the ventilation slots as they may touch dangerous voltage points or short out parts that could result in fire or electric shock.

Cleaning the LCD Monitor

To clean the Magma screen:
- Gently wipe the screen with a clean anti-static cloth, or a soft, clean, lint-free cloth. This removes the dust and other particles that can scratch the screen.
- If it is still not clean, blow on the screen and gently wipe with a soft, clean, lint-free cloth.
- DO NOT APPLY PRESSURE TO SCREEN.

Never pour or spray any liquid directly onto the screen or case of Magma.

Disclaimer

There is no recommended use of any liquid cleaners on the Magma screen or case. Chemical cleaners may have detrimental effect on the Magma screen or case. It is also not recommended applying pressure when wiping the Magma screen clean. GES Singapore Pte Ltd will not be held liable for damage resulting from use of liquid cleaners or resulting from applying pressure on the screen.

Do not attempt to service this monitor yourself since opening or removing covers may expose you to dangerous high voltage or other hazards. Refer all servicing to qualified service personnel.

☞ Note:

If you are not sure about anything regarding the operation and the care of this appliance, consult your monitor dealer.

☞ Troubleshooting

➤ No Power

- Set the power switch (found on the right of the screen) ON. Check to see if the LED light comes on.
- Make sure the AC power cord in the back of the monitor is securely connected into a power outlet.
- Check the power source with another electrical device to make sure that you are receiving voltage.

➤ No Display

- Make sure the video cable supplied with Magma is tightly secured to the video card in the computer.
- Check to see if there is any disruption of the power supply. Eg. Power cord not plugged into the AC outlet and the monitor is not switched on.
- Check for the contrast and brightness settings.

➤ Display is not centred and of a wrong size

- By pressing the OSD key at the button to the right of the monitor, adjust the vertical and horizontal settings in the OSD menu.

➤ Wrong Colours

- If any of the red, green, or blue colours are missing, check the signal cable to make sure it is tightened correctly. The pins in the cable could be loose and cause a bad connection.
- You can also try using Magma with another computer.

➤ OSD Control buttons do not work

- Press only one button at a time.

☛ Poor Image

- Set the Graphic card to 800 x 600Hz at refresh rate of 56Hz. To do this, go to the Start Menu-Settings-Control Panel and choose Display. Go to the menu with your VGA card settings to change it.
- Use Phase to fune tune your display quality.

☛ Display does not look normal

- Check the graphics card for proper sync scheme that matches Magma's specs. Make sure the input signals are within Magma's specififed range.
- By pressing the OSD key at the bottom right of the monitor, adjust the contrast and brightness