

**EXHIBIT 7**  
**USER'S MANUAL OF EUT**

# USER'S MANUAL

15.0"/14.1"

TFT COLOR LCD MONITOR



## L e g a l t i e s

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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 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 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:** Use only shielded cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not expressly approved by the manufacturer for compliance with the above standards could void your authority to operate the equipment.

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## S a f e t y

### SAFETY & PLACEMENT INSTRUCTIONS

The LCD monitor is the part of your computer system you'll see the most. To get the best performance from it, please keep the following guidelines in mind.

#### SAFETY

- **Stability** Make sure it's on a stable, clean surface. If the monitor falls, the case and other components could be damaged.
- **Temperature** Keep the monitor and power adapter away from any kind of heating element. Although the LCD is "cooler" than a CRT monitor, excessive heat can damage components.
- **Interference** Keep the monitor away from high capacity transformers, electric motors, and other strong magnetic fields. These can create interference.
- **Keep it dry** This is an electrical appliance. *If water or any other liquid gets into it, unplug it immediately and consult your service representative. Do Not Turn it ON.*
- **Windows** Don't place the monitor near a window. Air-borne particles (i.e. dust, rain etc.) can damage the electronics and sunlight may discolor the plastic casing.

#### ERGONOMICS

- **Position** The center of the monitor screen should be slightly below eye-level.
- **Lighting** Indirect lighting of the work area is best. Orient the screen so it doesn't reflect anything. This will reduce glare and eyestrain.
- **Distance** The monitor should be 40 to 60cm (about 16 to 24 inches) directly in front of you.
- **Tilt** You can tilt the monitor up to 25°. Orient the screen to reduce reflections and/or glare.

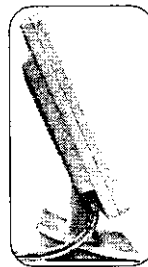


fig. 1  
5° Backward Tilt

fig. 2  
20° Forward Tilt

## S a f e t y

### **POWER**

- **Adapter**

Only use a power adapter approved for use with this monitor.

- **Power**

Your AC adapter may be designed for international use but it still requires a steady, uninterrupted power supply. If you are unsure of your local power specifications, consult your dealer or local power company. If your area is subject to power fluctuations, we strongly recommend using an uninterruptible power supply (UPS) and/or power conditioner.

- **Prongs**

The power adapter may have either a 2-prong or a 3-prong-grounded plug. In some areas, the third prong is an important safety feature; do not defeat its purpose. If you do not have access to a compatible outlet, have a qualified electrician install one.

- **Extensions**

Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.

- **Plugging-in**

Whenever you unplug the power cord, hold it by the plug head, never pull on the wire.

- **Vacations**

If you don't plan on using the monitor for an extended period of time, unplug it and loosely drape it with a dust-cover.

### **CLEANING**

- Do not apply cleaner directly to the monitor, use a soft clean cloth.
- Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the monitor.

### **SERVICING**

**Do not attempt to service the monitor yourself.** Doing so may violate your warranty and expose you and the monitor to electric shock. Refer all servicing to authorized service personnel.

**Unplug the monitor from the power supply.** Then contact qualified service personnel for any of the following conditions:

- When the power cord or AC/DC adapter is damaged or frayed.
- If the monitor has been exposed to rain or other liquids.
- If the monitor does not work normally when you follow the operating instructions.
- If the monitor has been dropped or damaged.

## L a y o u t

### THE MONITOR

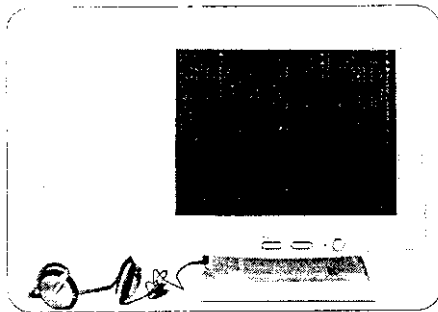


fig. 3  
Front view  
(with a pair of headphones attached)

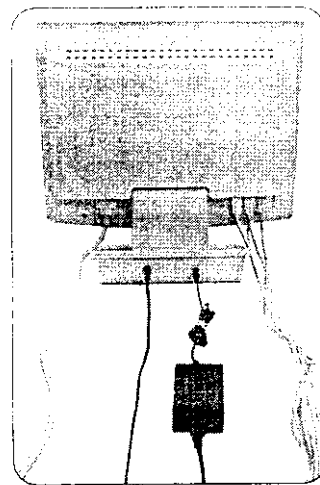


fig. 4  
Rear view  
(with USB & audio connections in use)

### THE LAYOUT

The monitor has six controls:

1. **Menu** button
2. **Select** button
3. **+** (increase) control
4. **-** (decrease) control
5. **⏻** (on/off) switch
6. **▬** (volume) control

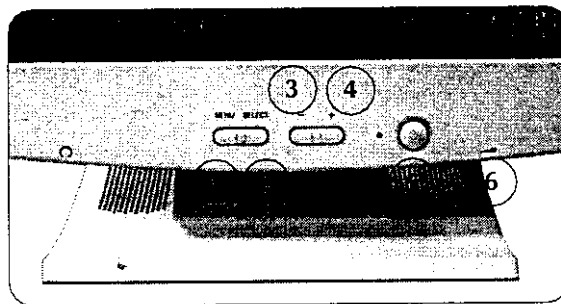


fig. 5  
Controls

## Connections

### CONNECTIONS

Before making any connections, make sure all devices are turned off.

There are nine connections:

1. VGA
2. Audio Line-in
3. AC/DC adapter
4. USB input
- 5-9. USB outputs
10. Phones

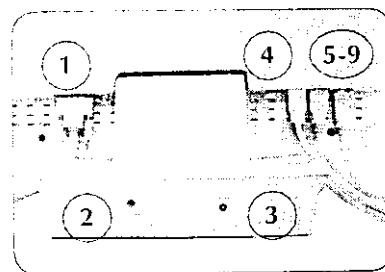


fig. 6

Connections (rear view)

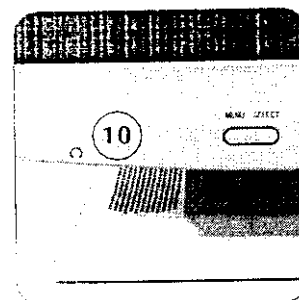


fig. 7

Connections (front view)

### BASIC SETUP

To get started, you only need to connect the **VGA** and **AC/DC adapter**.

The other connections (audio and USB) are for independent functions which have no effect on the display properties of the LCD monitor.

### VGA

As you attach the VGA connector make sure to secure it with the side screws.

You should also secure the other end of the VGA cable to the VGA port on your computer.

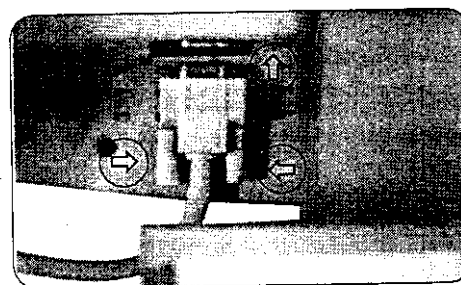


fig. 8

VGA Connection



## Connections

### AUDIO (OPTIONAL FUNCTION)

#### LINE-IN

Connect one end of the stereo audio cable to the Line-In socket on the LCD base. Connect the other end of the audio cable to your computer's Line-out socket.

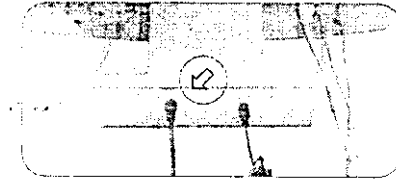



fig. 9

Line-in Connection

#### AUDIO PHONES

Connect your favorite headphones to the  socket. You can control the volume with the control on the right side of the monitor.

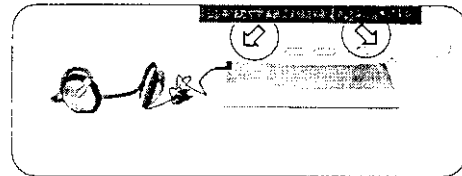


fig. 10

Phones Connection & Volume Control

### USB HUB (OPTIONAL FUNCTION)

Your LCD Monitor also includes a powered USB hub (as long as the AC/DC adapter is plugged in). The devices and function of this hub have no impact on the LCD monitor's functions.

#### USB "UPSTREAM" INPUT

Connect the rounded, USB input end of the USB cable to this socket (1). The other, flat, end of the cable goes to a USB output on your computer, or the USB output socket of another hub or device.

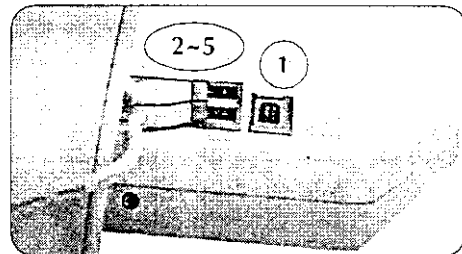


fig. 11

USB Connection

#### USB "DOWNSTREAM"

##### OUTPUT SOCKETS x 4

The LCD Monitor hub has four USB outputs (2-5). You can connect USB devices (i.e. a mouse, scanner, printer) or be the "upstream" source for another USB hub.

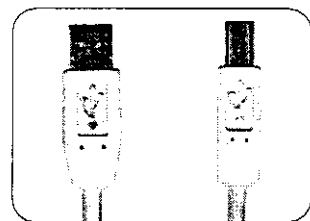


fig. 12

USB Cables

left: downstream (to devices)

right: upstream (from source or hub)

**Do Not Connect the USB output from another hub to any of these sockets.**

## Resolutions

### WHAT THE MONITOR CAN DO

The LCD monitor connects to any standard (analog) video card. It can display resolutions from 640 x 480 pixels (VGA) through 1024 x 768 pixels (XGA). Within that range, the monitor is only limited by your video card.

#### ANALOG TO DIGITAL ?

The LCD monitor is a digital device with a built-in analog converter. This means that the monitor takes the incoming analog signal from your favorite video card and converts it to the digital equivalent.

The monitor's firmware includes a conversion table for most common display signals and three registers for additional signal types:

#### REFRESH RATES?

CRT monitors constantly refresh their screen phosphors. If it scans too slowly, the image flickers (the recommended minimum rate is 75Hz). Higher resolutions are often compromised as the video card tries to balance resolution, color depth and refresh rates.

Your LCD monitor doesn't have that limitation. Each pixel stays "on" until it receives a signal to change. So refresh rates don't apply. This means you always get a flicker free picture.

VGA mode	Resolution	Horizontal sync	Vertical sync	VCLK
1	640x350	+31.469 KHz	-70.00 Hz	25.175 MHz
2	720x350	+31.469 KHz	-70.00 Hz	28.322 MHz
3	640x400	-31.469 KHz	+70.00 Hz	25.175 MHz
4	720x400	-31.469 KHz	+70.00 Hz	28.322 MHz
5	640x350	+37.861 KHz	-84.14 Hz	31.500 MHz
6	720x350	+37.736 KHz	-84.14 Hz	36.000 MHz
7	640x400	-37.861 KHz	+84.05 Hz	31.500 MHz
8	720x400	-37.736 KHz	+84.05 Hz	36.000 MHz
9	640x400	-24.828 KHz	-56.43 Hz	21.029 MHz
A	640x480	31.469 KHz	59.94 Hz	25.175 MHz
B	640x480	35.000 KHz	66.67 Hz	30.240 MHz
C	640x480	-37.861 KHz	-72.00 Hz	31.500 MHz
D	640x480	-37.500 KHz	-75.00 Hz	31.500 MHz
E	640x480	-43.269 KHz	-85.00 Hz	36.000 MHz
F	640x480	+45.000 KHz	+90.00 Hz	36.000 MHz

VGA mode	Resolution	Horizontal sync	Vertical sync	VCLK
10	800x600	+35.156 KHz	+56.25 Hz	36.000 MHz
11	800x600	+37.879 KHz	+60.32 Hz	40.000 MHz
12	800x600	+48.077 KHz	+72.19 Hz	50.000 MHz
13	800x600	+46.875 KHz	+75.00 Hz	49.500 MHz
14	800x600	+53.674 KHz	+85.06 Hz	56.680 MHz
15	NA			
16	1024x768i	+35.587 KHz	+86.96 Hz	44.991 MHz
17	1024x768	-48.363 KHz	-60.00 Hz	65.000 MHz
18	1024x768	-56.476 KHz	-70.07 Hz	75.000 MHz
19	1024x768	58.088 KHz	72.98 Hz	79.000 MHz
1A	1024x768	+60.023 KHz	+75.03 Hz	78.750 MHz
1B	1024x768	70.838 KHz	84.03 Hz	92.940 MHz
1C	New mode1			
1D	New mode2			

Note : "NA" and "New" modes 1 & 2 are programmable

fig. 13  
VGA Mode Chart

## CONTROLLING THE MONITOR

### STARTUP

Turn the LCD monitor on before you turn on the computer (switch 5).

If the LCD's power comes through a "slave" socket on the computer, you may miss some of the computer's powering-up information.

### PLUG 'N PLAY

Plug'n Play systems (i.e. *Windows 95* and *Windows 98*) auto-detect the presence of the LCD and try to configure their output accordingly. To make this possible, the accompanying disk has an identification file.

### ADJUSTMENTS

If the image on-screen isn't quite right, use the following buttons to activate the LCD's OSD (On Screen Display):

- |                  |  |
|------------------|--|
| <b>1. Menu</b>   | starts the OSD and toggles through pages 1 ~ 3 and exit. |
| <b>2. Select</b> | toggles through the items on an OSD page.                |
| <b>3. +</b>      | increases the value of a selected item.                  |
| <b>4. -</b>      | decreases the value of a selected item.                  |

### Windows 95

#### & Windows NT 4.0 Setup

1. Open the **Control Panel**
2. Double-Click on the **Display** icon.  
Click on the **Settings** tab.
3. Click on the **Advanced Properties\*** button and then the **Monitor** tab.
4. Click on the **Change...** button
5. Insert the LCD Setup disk in your system's Floppy drive slot.
6. Click on **Have Disk...**
7. On the "Install From Disk" page, use the **Browse...** button to locate the "inf" file for your operating system on the floppy (drive A:\).
8. Click the **OK** button and follow the instructions from there.

\* In Windows NT 4.0 & Windows 98 this is the "Advanced" button.

### Windows 98 Setup

1. Follow *Windows 95*'s steps 1-4.
2. The Update Device Driver Wizard will guide you from there.

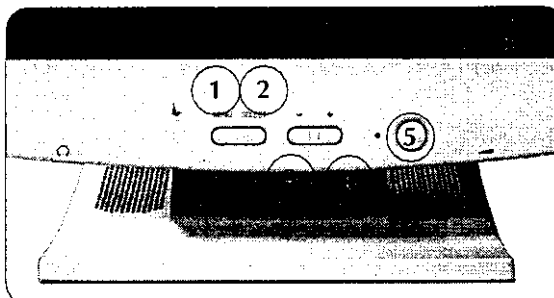


fig. 14  
OSD Controls

## On Screen Display

### THE OSD

The On Screen Display controls are divided into three "pages"

#### PAGE 1

**Brightness** (Range 0 - 255) This control increases or lowers the monitor's brightness.

**Contrast** (Range 0 - 127) This control raises and lowers the contrast levels for red, green and blue together. If you've adjusted any of the next three controls, it will maintain the ratios.

**Red Contrast** (Range 0 - 127) This control adjusts the intensity of red in the image.

**Green Contrast** (Range 0 - 127) This control adjusts the intensity of green in the image.

**Blue Contrast** (Range 0 - 127) This control adjusts the intensity of blue in the image.

**Back Light** (Range 0 - 15) This control adjusts the LCD back light level.

Note: Once you've found the perfect level, make a note of the settings for red, green and blue contrast levels, then only use the "Contrast" setting to make "gross" adjustments.

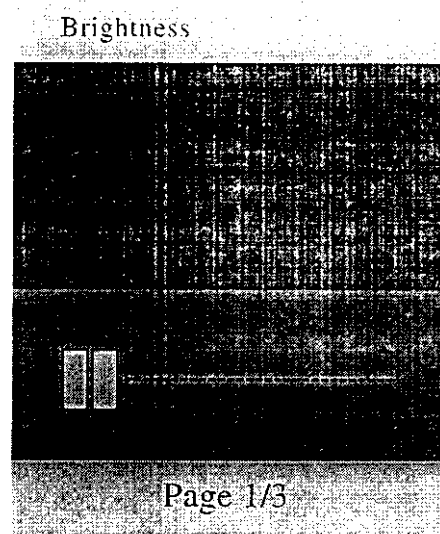


fig. 15  
OSD Page 1

Note: Adjusting the on-screen image will not have any effect on printed or transmitted images. As you make any contrast adjustments you should compare the on screen image with a printed guide. Most image editing programs (e.g. Adobe Photoshop® 5.0) include such guides in their documentation. Some programs help you tune the RGB levels to match a "gamma" (you should review the program's documentation about that process).

## On Screen Display

### PAGE 2 :

The items on this page control the mechanical aspects of the LCD panel.

*H. Position* (Range 0 – 255) Adjust this control to move the screen image to the left or right.

*V. Position* (Range 0 – 255) Adjust this control to move the screen image up or down.

*Frequency* (Range 0 – 2047) This controls how often the VGA input is sampled. This has to be balanced against the response time of other components. Adjust this control only if the image seems unclear. This control is for large-scale adjustments, for fine tuning use the Phase or Track control. Adjusting this control also has the effect of stretching (or contracting) the image along the horizontal axis.

*Phase* (Range 0 – 31 ) A fine-tuning control. Make major adjustments using the Frequency control. Don't make any adjustments, unless the screen image is blurry and/or the Red, green and Blue pixels are out of alignment. This control adjusts the VGA analog input sampling clock phase.

*Track*

(Range 0 – 63) A fine-tuning control. Make major adjustments using the *Frequency* control. Don't make any adjustments, unless the screen image is blurry and/or the Red, green and Blue pixels are out of alignment. Adjusts the VGA digital input sample clock phase.

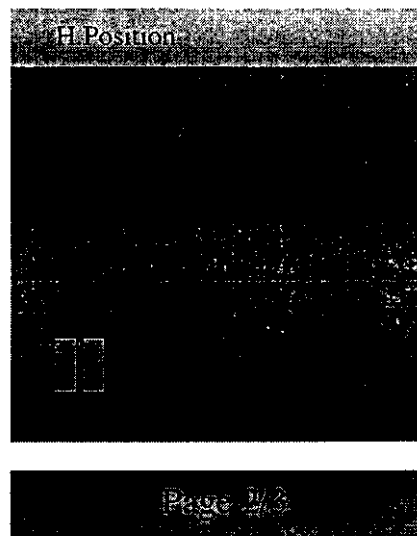


fig. 16  
OSD Page 2

## On Screen Display

<i>Text / Graphics</i>	This control is useful only if you are working in DOS mode. The control has no effect in <i>Windows</i> or other operating systems with their own graphic user interfaces (GUIs). Text mode expands characters to 9 pixels (screen display is 720 x 400 pixels). Graphics mode allocates 8 pixels per character (screen display is 640 x 400 pixels).	<i>ROM Version</i>	Another information display; this shows the BIOS ROM version for your LCD monitor. This is useful if your monitor ever need servicing.
<i>Expansion</i>	In DOS mode, this makes expands the image to fill the screen. Note: this may result in some distortion. If this is not selected, the image will be centered in the LCD panel screen.	<i>Load Mode</i>	This loads a set of values based on the VGA Mode table. <b>This control will erase any customized settings on Pages 1 and 2.</b>
		<i>Load Default</i>	This loads a set of default values. <b>This control will erase any customized settings on Pages 1 and 2.</b>

### PAGE 3 :

The information on this page describes your LCD monitor's performance.

#### *Display Mode/ Frequency:*

This is an information display which shows the display mode. It also shows the Horizontal and Vertical synchronized frequencies.

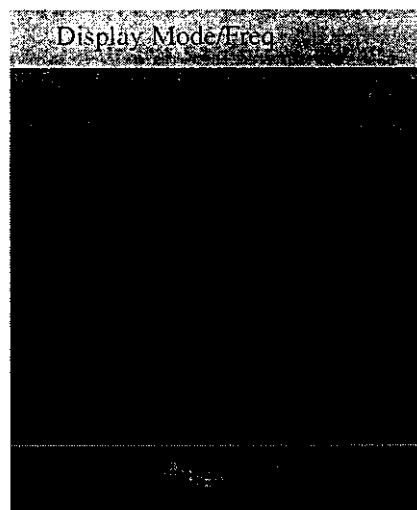


fig. 17  
OSD Page 3

## Troubleshooting

### TROUBLESHOOTING

This section can't anticipate every possible problem, but you should check here before you panic. If you don't find the answer, make sure you've followed the instructions carefully and observed the safety precautions in the front part of this manual. If, after you've tried everything, and the monitor still won't cooperate, try turning it off for a few minutes and then on again. If that doesn't help, call your dealer or service representative. You should also make a record of what happened and what remedies you tried.

Note: Some of these problems and solutions may seem obvious but you'd be surprised at how many "experienced" users have similar problems.

#### Won't turn on.

*Power* - Make sure all power connections (including extension cords) are secure.

#### Dim picture

*Brightness* - Turn on the OSD, page 1 and raise the brightness level.

*Glare* - Area lighting washes out the picture. Refer to the front of this manual on positioning.

#### Flickering

*Interference* - reposition the monitor away from possible sources of interference.

*Frequency* - Turn on the OSD, page 2, and adjust the Frequency setting.

*Connector* - make sure the VGA connection is on securely.

#### Focus (blurry images)

*Phase & Track* - Turn on the OSD, page 2, and adjust these settings.

#### Colors

*Contrast* - Turn on the OSD, page 1, and adjust the Red, Green and Blue levels independently. Don't load any of the default settings after you've made these adjustments.

#### Banding (vertical or horizontal bands)

*Frequency* - Turn on the OSD, page 2, and adjust the Frequency setting.

*Interference* - reposition the monitor away from possible sources of interference.

#### Sound

*No Sound* - Make sure the audio line-in is attached. Make sure your computer is generating the sound (use headphones attached to the system's sound-output).

*Interference or static* - reposition the monitor away from possible sources of interference.

*Distortion* - If the sound source is not a "line-out", reduce the volume on the source. Also make sure the original recording file is not corrupted (try listening to it through headphones attached directly to the sound source).

#### USB devices don't work

*Power* - Are all USB hubs between the device and computer turned on?

*Load* - Make sure the devices are getting enough power from their upstream connections.