

# Color Monitor

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**E74**

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User's Guide

**English**

# **E74 Color Monitor Users Guide**

6307-P7N

## Second Edition (July 2005)

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## Help and Service Information

If you are unable to correct the problem yourself, you may seek further help as follows:

Call the Customer Support Center.

In the US call 1-800-426-7378

In Canada (Toronto Only) call 416-383-3344

In Canada (all others) call 1-800-565-3344

***i** If possible, stay by your computer. Your Technical Support Representative may wish to go through the problem with you during the call.*

***i** More help, late-breaking news and details of the latest accessories for these products may be found on the worldwide web at:*

*<http://www.lenovo.com/accessories>*

In other countries contact your dealer, retailer, or other Lenovo authorized Servicer.

Before calling, please have available as much of the following information as possible:

1. Model and serial number from the label on your monitor.
2. Purchase receipt.
3. Description of problem.
4. Computer type and model.
5. System configuration (hardware fitted, etc.).
6. System BIOS version number.
7. Operating System and version number.
8. Display driver version number.
9. Video Adapter Type.

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# Safety information

Before installing this product, read the Safety Information.

مج، يجب قراءة دات السلامة

Antes de instalar este produto, leia as Informações de Segurança.

在安装本产品之前，请仔细阅读 **Safety Information** (安全信息)。

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

Ennen kuin asennat tämän tuotteen, lue turvaohjeet kohdasta Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφάλειας (safety information).

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza.

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

Les sikkerhetsinformasjonen (Safety Information) før du installerer dette produktet.

Przed zainstalowaniem tego produktu, należy zapoznać się z książką "Informacje dotyczące bezpieczeństwa" (Safety Information).

Antes de instalar este produto, leia as Informações sobre Segurança.

Перед установкой продукта прочтите инструкции по технике безопасности.

Pred inštaláciou tohto produktu si prečítajte bezpečnostné informácie.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

安裝本產品之前，請先閱讀「安全資訊」。

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## PRECAUTIONS

### Installation

Do not install the monitor in the following places:

- on surface (rugs, blankets, etc.) or near materials (curtains, draperies, etc.) that may block the ventilation holes.
- near heat sources such as radiators or air ducts, or in a place subject to direct sunlight.
- in a place subject to severe temperature changes.
- in a place subject to mechanical vibration or shock
- on an unstable surface.
- near equipment which generates magnetism, such as a transformer or high voltage power lines.
- near or on a magnetically charged metal surface.
- in a small space around the top, bottom and sides of the monitor that may block the ventilation holes.

### Maintenance

- Clean the cabinet, panel and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent, such as alcohol or benzine.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items such as a ballpoint pen or screwdriver. This type of contact may result in a scratched picture tube.
- Clean the screen with a soft cloth. If you use a glass cleaning liquid, do not use any type of cleaner containing an anti-static solution or similar additive as this may scratch the screen's coating.

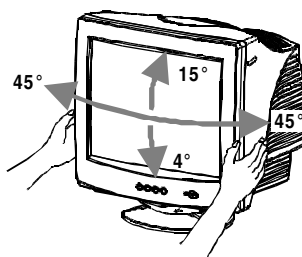
### Transportation

When you transport this monitor for repair or shipment, use the original carton and packing materials.

### Use of the Tilt-Swivel

This monitor can be adjusted within the angles shown below.

Hold the monitor at the bottom with both hands when you turn it horizontally or vertically. Be careful not to pinch your fingers at the back of the monitor when you tilt the monitor up vertically.



### Note

Do not remove the tilt-swivel base from the monitor.

### Power connection Information

- Use an appropriate power cord for your local power supply.

Example of plug types:



for 100 to 120 V AC



for 200 to 240 V AC



for 240 V AC only

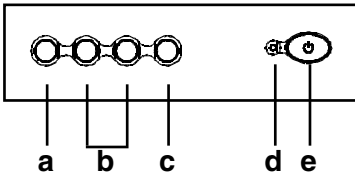
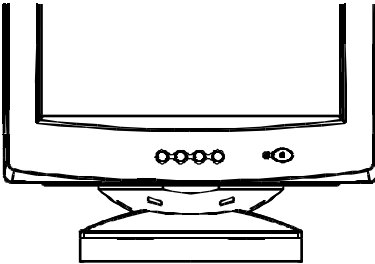
- Before disconnecting the power cord, wait at least 30 seconds after turning off the power to allow the static electricity on the CRT display surface to discharge.
- After the power has been turned on, the CRT is demagnetized (degaussed) for a few seconds. This generates a strong magnetic field around the metal frame, which may affect the data stored on magnetic tapes and disks near the bezel. Place magnetic recording equipment, tapes, and disks away from this monitor.

The equipment should be installed near an easily accessible electrical outlet.

## IDENTIFYING PARTS AND CONTROLS

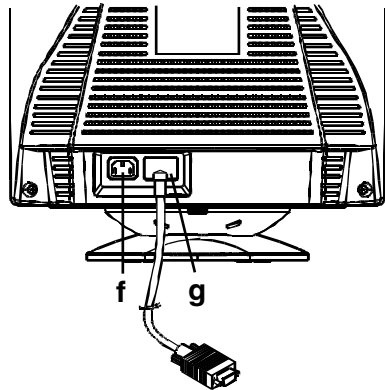
See the pages in parentheses for further detail.

### Front

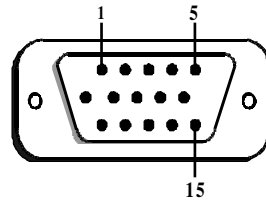


- a. Displays menu & exits menu
- b. Scrolls through menu to choose an icon for adjustment / Adjusts level of selected icon
- c. Confirms menu selection
- d. Power LED
- e. Power ON/OFF switch

### Rear



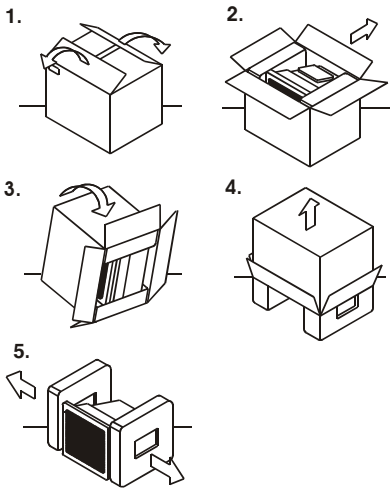
- f. AC input connector  
This connector provides AC power to the monitor.
- g. Video input cable  
Inputs RGB video signals (0.700 Vp-p, positive) and sync signals.



Pin	Function	Pin	Function
1	Red signal	9	+5V (from computer)
2	Green signal	10	Digital ground
3	Blue signal	11	Ground
4	Ground	12	SDA (DDC2B)
5	NC (*NOTE)	13	Horizontal Synchronization
6	Red return	14	Vertical synchronization & VCLK
7	Green return	15	SCL (DDC 2B)
8	Blue return		

**\*NOTE:** This pin is used for self test detection; at MONITOR side, this pin has to be connected to ground.

## UNPACKING PROCEDURE



## REREPACKING

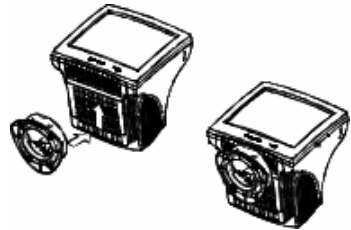
Save the original box and all packing material for future shipping needs.

## SETUP

This monitor works with platforms running at horizontal frequencies between 30 and 69 kHz.

### Step 1: Install the monitor

- To connect the tilt/swivel base to the monitor, align hooks with the sockets on bottom side of the monitor, and gently push the base towards the front of the monitor.
- Put monitor on a flat and stable working bench.



### Step 2: Connect your monitor to your computer

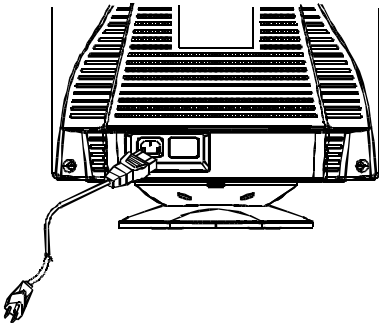
- Turn off the monitor and computer and unplug the computer power cord before connecting. Connect the video signal cable to the video output of your computer
- The 15-pin D-shell signal connector on the signal cable will connect easily to the video adapter output on your personal computer. Tighten both screws on the connector to ensure a firm connection.

### Note

- Do not touch the pins of the video signal cable connector as this might bend the pins.
- When connecting the video signal cable, check the alignment of the video input connector. Do not force the video input connector in the wrong way or the pins might bend.

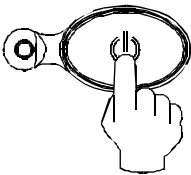
### Step 3: Connect the power cord

With the monitor and computer turned off, first connect the proper power cord for your local supply to the monitor, then connect it to a properly grounded power outlet.



### Step 4: Turn on the monitor and computer

- Turn the monitor power switch ON. Then turn the computer power switch ON, by pressing the switch inward. The green power indicator will light up.
- Allow about 30 seconds for the CRT tube to warm up. Data will be displayed on the screen.
- If your display fails to function properly, please first refer to the section "Troubleshooting" in this manual.



## Workplace Preparation

### Positioning the Monitor

Choose a suitable place to position the monitor where it is not near fluorescent desk lighting or any equipment that produces magnetic field that could cause interference.

Ensure that the furniture or equipment can support the weight of the monitor. Allow at least 2 inches (50 mm) ventilation space around the monitor.

### Height

The monitor should be positioned so that the top of the screen is slightly below your eye level when you sit at your workstation.

### Orientation

Choose a position that gives the least reflection from lights and windows, usually at a right angle to any windows. The monitor should be positioned directly in front of you so that you do not have to twist your body. Tilt the monitor to a comfortable viewing angle.

## Working Practices

### Rest

Take regular breaks. Vary your posture, and stand up and stretch occasionally as prolonged use of computer workstations can be tiring.

### Back

You should sit back in the chair and use the backrest.

### Hands

Use a light touch on the keyboard, keeping your hands and fingers relaxed. Allow a space in front of the keyboard to rest your wrists when not typing. Consider using a wristpad.

### Eyesight

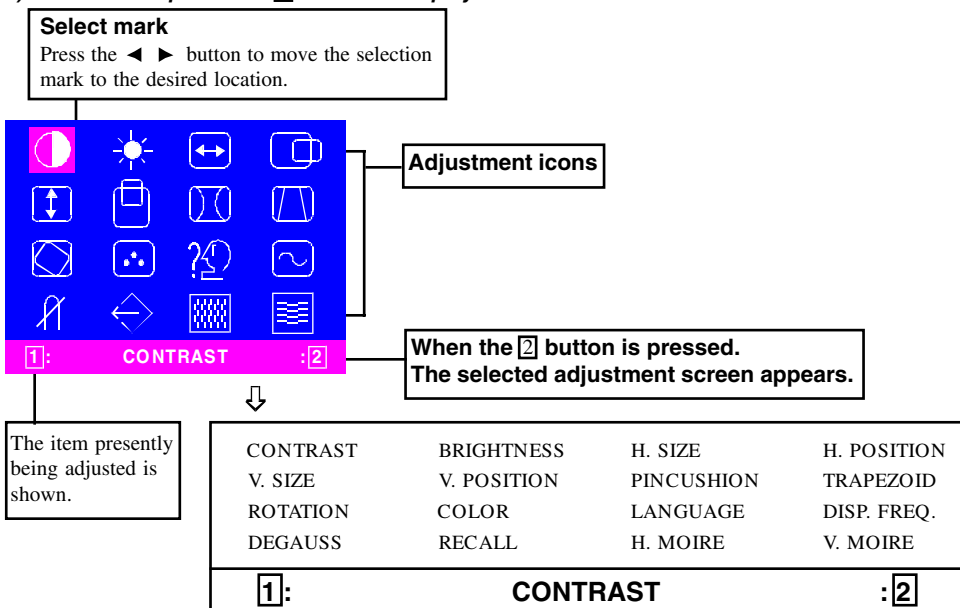
Working with monitor, in common with any kind of prolonged close work, can be visually demanding. Look away from the screen periodically and have your eyesight checked regularly.

### Screen settings

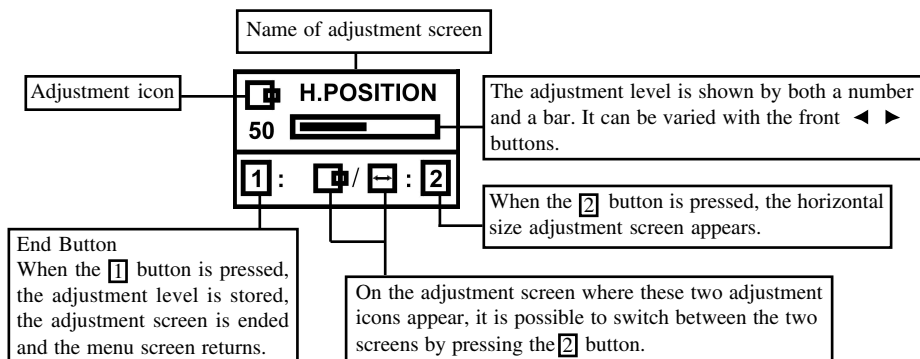
Set the screen brightness and contrast to a comfortable level. You may have to adjust this as the lighting changes during the day. Many application programs let you select color combinations which can help you to view in comfort.

## USING THE ON-SCREEN MENU

1) Menu screen-press the [1] button to display the menu below and exit menus



2) Adjustment screen (example: horizontal position adjustment)



**NOTE:** The amount of adjustment depends upon how long you depress the adjustment button. You may have to tap the button to obtain the desired results.

## INDIVIDUAL ADJUSTMENT



### **CONTRAST adjustment**

Adjust the screen contrast to match your personal preference.

Press the ◀ button to decrease contrast and press the ▶ button to increase it.

Direct operation: You can access the CONTRAST adjustment screen by pressing the ◀ or ▶ before entering the menu screen.

Press the [2] key toggles between CONTRAST and BRIGHTNESS.



### **BRIGHTNESS adjustment**

Adjusts the brightness to get the desired background level.

Press the ▶ button to make the background lighter, the ◀ button to make it darker.

Press the [2] key toggles between CONTRAST and BRIGHTNESS.



### **HORIZONTAL SIZE adjustment**

Fills the viewable area horizontally.

Press the ◀ button to make the image narrower, or press the ▶ button to make it wider.

Press the [2] key toggles between HORIZONTAL SIZE and HORIZONTAL POSITION.



### **HORIZONTAL POSITION adjustment**

Shifts the image on the screen horizontally.

Press the ◀ button to move the screen image to the left, or press the ▶ button to move it to the right.

Press the [2] key toggles between HORIZONTAL SIZE and HORIZONTAL POSITION.



### **VERTICAL SIZE adjustment**

Fills the viewable area vertically.

Press the ◀ button to make the image smaller, or press the ▶ button to make it larger. Press the [2] key toggles between VERTICAL SIZE and VERTICAL POSITION.



### **VERTICAL POSITION adjustment**

Shifts the image on the screen vertically.

Press the ◀ button to move it downward, or press the ▶ button to move it upward.

Press the [2] key toggles between VERTICAL SIZE and VERTICAL POSITION.



### **PINCUSHION adjustment**

The image can be corrected for barrel distortion.

Press the ◀ button or the ▶ button to eliminate curved vertical lines.

Press the [2] key toggles between PINCUSHION and TRAPEZOID correction.



### **TRAPEZOID adjustment**

The image can be corrected for the trapezoidal distortion.

Press the ◀ button to narrow the top edge, or press the ▶ button to make the top edge wider.

Press the [2] key toggles between PINCUSHION and TRAPEZOID correction.



### **ROTATION adjustment**

The image can be corrected for tilted picture.

Press the ◀ button to tilt the image to the left, or press the ▶ button to tilt the image to the right.

**COLOR selection**

The white of the image can be adjusted.

- 1) Use the ◀▶ button to select: (1)9300°K, (2)6500°K or (3)User color.
- 2) If the (3):the user's color is selected, "2" appears in the lower right of the On-Screen Menu.

Press the [2] button to display the USER COLOR adjustment screen.

**USER COLOR**

The white of the video image can be adjusted to the user's preferred color.

- 1) Use the [2] button to select R (red), G (green) or B (blue).
- 2) Use the ◀▶ button to adjust the color as desired.

IMPORTANT-Memory recall of the user's color is not possible, so take note of the initial setting before adjusting.

When the monitor is turned OFF, user color keeps the last adjustment.

**LANGUAGE selection**

The language of the On-Screen Menu can be selected among English, French, German, Italian and Spanish. Select with the ◀▶ buttons.

**DISP. FREQ (Input frequency display)**

This displays the input synchronization signal frequency.

It identifies the horizontal and vertical frequency sent to the monitor from the video card currently in use.

**MANUAL DEGAUSSING**

After moving the selector to the degauss icon, press the [2] button. The degaussing action takes place a few seconds later.

Note: A sharp snap noise may be heard when degaussing occurs. This is normal.

**MEMORY RECALL**

It is possible to restore adjustments to the original factory settings. If the monitor is operating in a user defined mode, this control has no effect.

**HORIZONTAL MOIRE**

Reduce the dark wavy line Moire pattern on the screen.

Press the ◀ or ▶ button to minimize the horizontal moire image on the screen.

**VERTICAL MOIRE**

Reduce the dark wavy line Moire pattern on the screen.

Press the ◀ or ▶ button to minimize the vertical moire image on the screen.

## TECHNICAL FEATURES

### Preset modes

Mode	Resolution (H x V)	V. Freq. (Hz)
1	640 x 480	60 (VESA)
2	640 x 480	66 (VESA)
3	640 x 480	75 (VESA)
4	640 x 480	85 (VESA)
5	720 x 400	70 (Ind. Standard)
6	800 x 600	60 (VESA)
7	800 x 600	75 (VESA)
8	800 x 600	85 (VESA)
9	1024 x 768	60 (VESA)
10	1024 x 768	70 (VESA)
11	1024 x 768	75 (VESA)
12	1024 x 768	85 (VESA)
13	1280 x 1024	60 (VESA)
14	1152 x 864	75 (VESA)

### Note for Windows users

For Windows users, check your graphics board manual or the utility program which comes with graphics board and select the highest available refresh rate to maximize monitor performance.

### Power Saving function

The monitor will be driven into “Power Saving” mode by the control signal from the display controller, as indicated by the amber-color power LED.

State	Power Consumption	LED Light
ON	Normal	Green
Active OFF	< 3W	Amber

The power saving states will be kept until a control signal has been detected or the keyboard or mouse is activated. The recovery time from Active OFF state back to ON state is around 10 seconds.

## TROUBLESHOOTING

Before contacting technical support, refer to this section.

Problem	Check & Adjust
Blank screen	<ul style="list-style-type: none"> <li>• Monitor power switch, power cord, signal cable, or connector</li> <li>• Computer power switch</li> <li>• Brightness &amp; contrast controls</li> </ul>
Display position off-center	<ul style="list-style-type: none"> <li>• Vertical centering &amp; horizontal phase controls</li> </ul>
Display too small or too large	<ul style="list-style-type: none"> <li>• Vertical &amp; horizontal size controls</li> </ul>
Display too bright or too dim	<ul style="list-style-type: none"> <li>• Brightness &amp; contrast controls</li> </ul>

Refer to the operation instructions of your computer/video adapter to ensure that you have the correct signal output source for the monitor. Ensure that the switches on the video adapter are set correctly for operation with this monitor.

If the above steps fail to correct the problem contact your dealer for servicing by qualified service personnel.



## SELF-DIAGNOSIS FUNCTION

This monitor is equipped with a self-diagnosis function. You can easily distinguish if the problem is on the monitor or on the computer by using the monitor's built-in selftest function. With the monitor power ON, disconnect the signal cable from computer. If you see a "NO SIGNAL" image on the screen, the monitor is functioning properly, and the problem is with the MONITOR side or signal cable.



## SPECIFICATIONS

<b>Screen Size</b>	17 in. visual diagonal Viewable screen size 15.9 in. Anti-Glare, Anti-Reflective Coating*
<b>Dot Pitch</b>	0.27 mm diagonal 0.24 mm horizontal
<b>Display Area Default</b>	230 x 306 mm (9.05 x 12.04 in.), typical
<b>Full Scan (H x W)</b>	242 x 322 mm (9.52 x 12.67 in.), depends on signal timing
<b>Display Colors</b>	Infinite
<b>Max. Resolution</b>	1280 Dots x 1024 Lines
<b>Compatibility</b>	Graphic modes with horizontal frequencies between 30 KHz to 69 KHz
<b>Synchronization</b>	
<b>Horizontal:</b>	30 to 69 KHz
<b>Vertical:</b>	50 to 120Hz
<b>Bandwidth</b>	110 MHz
<b>Input Signal</b>	Video: RGB Analog Sync.: TTL Separate
<b>Signal Cable</b>	15-pin D-sub connector

## **US-10**

<b>Power Input</b>	
<b>Voltage/</b>	100 to 240V AC
<b>Frequency</b>	50 - 60 Hz
<b>Current Rating</b>	1.5 A
<b>Power</b>	75 W (MAX.)
<b>Consumption</b>	
<b>Dimension</b>	404 x 419 x 420 mm
<b>(W x H x D)</b>	(15.9 x 16.4 x 16.5 in.)
<b>Weight</b>	14.7 kg
<b>Operating</b>	5°C to 40°C
<b>Temperature</b>	(41°F to 104°F)
<b>Storage</b>	-20°C to 45°C
<b>Temperature</b>	(-4°F to 113°F)
<b>Humidity</b>	<b>10%</b> to 80%
	(non-condensing)
<b>Altitude</b>	Up to 10000ft

\* TCO version has a different surface treatment.

## ***SERVICE INFORMATION***

The following parts are for use by Lenovo services, or Lenovo authorized dealers, to support customer warranty. Parts are for service use only.

### **Monitor Information**

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>M/T</b>	<b>MODEL</b>	<b>COLOR</b>
40Y6871	E74 FRU - Monitor MPR-II, NH	6307	P7N	Business Black
40Y7517	E74 FRU - Tilt/Swivel	---	---	Business Black

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