

# Color Monitor

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C220p

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User's Guide

English

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**First Edition (December/2003)**

Note: For important information, refer to the Monitor Safety and Warranty manual that comes with this monitor.

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## Safety: Read first

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### Safety: Read first

Before installing this product, read the 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

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

Läs säkerhetsinformationen innan du installerar den här produkten.

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

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

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

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

Pred inštaláciou tohto zariadenia si prečítajte Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

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

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

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

安裝本產品之前，請先閱讀「安全資訊」。

مج، يجب قراءة دات السلامة

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

製品を設置する前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Antes de instalar este producto lea la información de seguridad.

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

Перед установкой продукта прочтите инструкции по технике безопасности.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

Always observe the following precautions to reduce the risk of injury and property damage.

Do not attempt to service a product yourself unless instructed to do so by the IBM HelpCenter. Use only an IBM authorized service provider who is approved to repair your particular product.

Note: Some parts can be upgraded or replaced by the customer. These parts are referred to as Customer Replaceable Units, or CRUs. IBM expressly identifies CRUs as such, and provides documentation with instructions when it is appropriate for customers to replace those parts. You must closely follow all instructions when performing such replacements. Always make sure that the power is turned off and that the product is unplugged from any power source before you attempt the replacement. If you have any questions or concerns, contact the IBM HelpCenter.

Use only the power cords and power adapters supplied by the product manufacturer.

Never wrap a power cord around the power adapter or other object. Doing so can stress the cord in ways that can cause the cord to fray, crack or crimp. This can present a safety hazard.

Always route power cords so that they will not be walked on, tripped over, or pinched by objects.

Protect the cord and power adapters from liquids. For instance, do not leave your cord or power adapter near sinks, tubs, toilets, or on floors that are cleaned with liquid cleansers. Liquids can cause a short circuit, particularly if the cord or power adapter has been stressed by misuse. Liquids can also cause gradual corrosion of the power cord terminals and/or the connector terminals on the adapter which can eventually result in overheating.

Always connect power cords and signal cables in the correct order and ensure that all power cord connectors are securely and completely plugged into receptacles.

Do not use any power adapter that shows corrosion at the ac input pins and/or shows signs of overheating (such as deformed plastic) at the ac input or anywhere on the power adapter.

Do not use any power cords where the electrical contacts on either end show signs of corrosion or overheating or where the power cord appears to have been damaged in any way.

Ensure that extension cords, surge protectors, uninterruptible power supplies, and power strips that you use are rated to handle the electrical requirements of the product. Never overload these devices. If power strips are used, the load should not exceed the power strip input rating. Consult an electrician for more information if you have questions about power loads, power requirements, and input ratings.

If a receptacle (power outlet) that you intend to use with your computer equipment appears to be damaged or corroded, do not use the outlet until it is replaced by a qualified electrician.

Do not bend or modify the plug. If the plug is damaged, contact the manufacturer to obtain a replacement.

Some products are equipped with a three-pronged plug. This plug fits only into a grounded electrical outlet. This is a safety feature. Do not defeat this safety feature by trying to insert it into a non-grounded outlet. If you cannot insert the plug into the outlet, contact an electrician for an approved outlet adapter or to replace the outlet with one that enables this safety feature. Never overload an electrical outlet. The overall system load should not exceed 80 percent of the branch circuit rating. Consult an electrician for more information if you have questions about power loads and branch circuit ratings.

Be sure that the power outlet you are using is properly wired, easily accessible, and located close to the equipment. Do not fully extend power cords in a way that will stress the cords.

Connect and disconnect the equipment from the electrical outlet carefully

All IBM personal computers contain a non-rechargeable coin cell battery to provide power to the system clock. In addition many mobile products such as Thinkpad notebook PCs utilize a rechargeable battery pack to provide system power when in portable mode. Batteries supplied by IBM for use with your product have been tested for compatibility and should only be replaced with IBM approved parts.

Never attempt to open or service any battery. Do not crush, puncture, or incinerate batteries or short circuit the metal contacts. Do not expose the battery to water or other liquids. Only recharge the battery pack strictly according to instructions included in the product documentation.

Battery abuse or mishandling can cause the battery to overheat, which can cause gasses or flame to “vent” from the battery pack or coin cell. If your battery is damaged, or if you notice any discharge from your battery or the buildup of foreign materials on the battery leads, stop using the battery and obtain a replacement from the battery manufacturer.

Batteries can degrade when they are left unused for long periods of time. For some rechargeable batteries (particularly Lithium Ion batteries), leaving a battery unused in a discharged state could increase the risk of a battery short circuit, which could shorten the life of the battery and can also pose a safety hazard. Do not let rechargeable Lithium-Ion batteries completely discharge or store these batteries in a discharged state.

Computers generate heat when turned on and when batteries are charging. Notebook PCs can generate a significant amount of heat due to their compact size. Always follow these basic precautions:

- Do not leave the base of your computer in contact with your lap or any part of your body for an extended period when the computer is functioning or when the battery is charging. Your computer produces some heat during normal operation. Extended contact with the body could cause discomfort or, potentially, a skin burn.
- Do not operate your computer or charge the battery near flammable materials or in explosive environments.
- Ventilation slots, fans and/or heat sinks are provided with the product for safety, comfort, and reliable operation. These features might inadvertently become blocked by placing the product on a bed, sofa, carpet, or other flexible surface. Never block, cover or disable these features.

CD and DVD drives spin discs at a high speed. If a CD or DVD is cracked or otherwise physically damaged, it is possible for the disc to break apart or even shatter when the CD drive is in use. To protect against possible injury due to this situation, and to reduce the risk of damage to your machine, do the following:

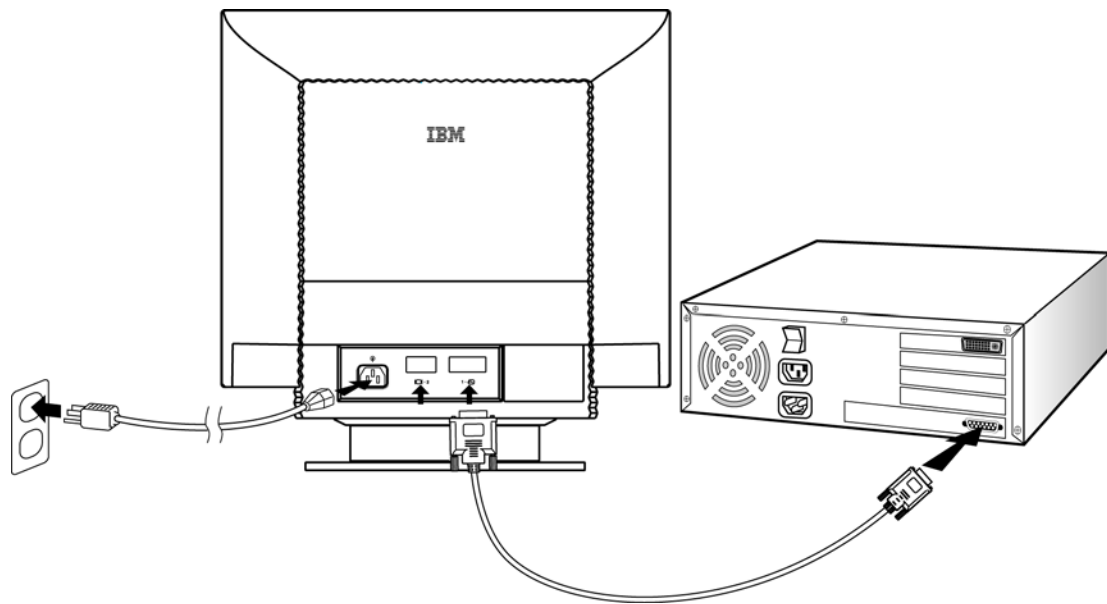
- Always store CD/DVD discs in their original packaging
- Always store CD/DVD discs out of direct sunlight and away from direct heat sources
- Remove CD/DVD discs from the computer when not in use
- Do not bend or flex CD/DVD discs, or force them into the computer or their packaging
- Check CD/DVD discs for cracks before each use. Do not use cracked or damaged discs

**Important:** Before connecting the monitor, turn off the computer and attached devices. **Also,** ensure the power at the electrical outlet matches the power requirements of the monitor. Refer to the “Specifications” section on page 20 for more details.

## ***Connecting your monitor***

1. Connect the signal cable to the video port on the back of your computer. Your computer may have a video adapter card installed. In this case, attach the signal cable to the connector on the video adapter card.
2. Connect the power cord to the monitor first, and then firmly insert the plug into a properly grounded electrical outlet.
3. Turn on the monitor, and then the computer.

If your monitor does not seem to be working correctly, refer to the “**Troubleshooting**” section on page 17 for help.



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

### **Height**

Position the monitor 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. Position the monitor 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**

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 wrist pad.

### **Eyesight**

Working with monitors, in common with any 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.



## ***Installing the device driver***

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This section provides instructions for installing the device driver in Microsoft® Windows® 95, Windows 98, Windows 2000, Windows Millennium Edition (Me), and Windows XP.

### ***Installing the device driver for Windows 95 or Windows 98***

To install the device driver in Microsoft Windows 95 or Windows 98, do the following:

**Note:** You must download files from the IBM Monitor CD to use the Plug and Play feature in Windows 95 or Windows 98.

1. Turn off the computer and all attached devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then the system unit. Allow your computer to start the Windows 95 or Windows 98 operating system.

Your computer's Plug and Play code might warn you that your system hardware has changed. This means that it has detected your new monitor for the first time.

4. Open the Display Properties window by clicking **Start, Settings, Control Panel** and then double clicking on the **Display** icon.
5. Click the Settings tab.
6. If you are using Windows 95, do the following:
  1. Click the **Change Display Type** button.
  2. Click the **Change Monitor Type** button.

If you are using Windows 98, do the following:

1. Click the **Advanced** button.
2. Click the **Monitor** tab.
3. Open the Upgrade Device Wizard window by clicking on the **Change** button and then select the **Next** button.
4. Click **Display a list of the known drivers for this device so that I can choose a specific driver** and then select the **Next** button.
7. Insert the *IBM Monitor CD* into the CD drive and click the **Have Disk** button.
8. Click **OK**.
9. Ensure that the CD drive letter is selected, and then **select the DRIVERS** folder.
10. Select **IBM C220p CRT monitor** and click **OK**. The files will be copied from the CD to your hard disk drive.
11. Close all open windows and remove the CD.
12. Restart the computer.

The system will automatically select the maximum refresh rate and corresponding Color Matching Profiles.

## ***Installing the device driver for Windows 2000 or Windows Me***

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To install the device driver in Microsoft Windows 2000 Professional or Microsoft Windows Millennium Edition (Me), do the following:

Note: You must download files from the IBM Monitor CD to use the Plug and Play feature in Windows 2000 or Windows Me.

1. Turn off the computer and all attached devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then the system unit. Allow your computer to start the Windows 2000 or Windows Me operating system.
4. Open the Display Properties window by clicking **Start, Settings, Control Panel** and then double-clicking the **Display** icon.
5. Click the **Settings** tab.
6. Click the **Advanced** button.
7. Click the **Monitor** tab.
8. Click the **Properties** button.
9. Click the **Driver** tab.
10. Open the Upgrade Device Driver Wizard window by clicking on **Update Driver** and then click the **Next** button.
11. Select **Display a list of the known drivers for this device so that I can choose a specific driver** and then click the **Next** button.
12. Insert the *IBM Monitor CD* into the CD drive and click the **Have Disk** button.
13. Click **OK**.
14. Ensure that the CD drive letter is selected, and then select the DRIVERS folder.
15. Select **IBM C220p CRT monitor** and click **OK**. The files will be copied from the CD to your hard disk drive.
16. Close all open windows and remove the CD.
17. Restart the computer.

The system will automatically select the maximum refresh rate and corresponding Color Matching Profiles.

## ***Installing the device driver in Windows XP***

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To install the device driver in Microsoft Windows XP, do the following:

Note: You must download files from the IBM Monitor CD to use the Plug and Play feature in Windows XP.

1. Turn off the computer and all attached devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then the system unit. Allow your computer to start the Windows XP operating system.
4. Open the Display Properties window by clicking **Start, Settings, Control Panel** and then double-clicking the **Display** icon.
5. Click the **Settings** tab.
6. Click the **Advanced** button.
7. Click the **Monitor** tab.
8. Click the **Properties** button.
9. Click the **Driver** tab.
10. Open the Hardware Update Wizard window by clicking on **Update Driver** and then click the **Next** button.
11. Select **Install from a list or Specific location (Advanced)** and then click the **Next** button.
12. Insert the *IBM Monitor CD* into the CD drive and click the **Have Disk** button.
13. Click **OK**.
14. Ensure that the CD drive letter is selected, and then select the DRIVERS folder.
15. Select **IBM C220p CRT monitor** and click **OK**. The files will be copied from the CD to your hard disk drive.
16. Close all open windows and remove the CD.
17. Restart the computer.

The system will automatically select the maximum refresh rate and corresponding Color Matching Profiles.

## User controls

The image is already optimized for many display modes. However, the controls can be used to adjust the image to your liking.



## OSD key function

<i>Icon</i>	<i>Control</i>	<i>Description</i>
⏻	Power switch	Switches the monitor on and off.
↵	OSD/OK	Activates the On-Screen-Display/Select control icon/Save Adjustment
➡	Move right; Brightness adjustment selection	Moves the highlight to the icon to the right, or on adjustment screens it increases the effect of the adjustment.
⬅	Move left; Contrast adjustment selection	Moves the highlight to the icon to the left, or on adjustment screens it decreases the effect of the adjustment.
↻	Hotkey; Exit	Hotkey for signal input selection, or exit OSD control.

## Hotkey functions

Brightness and contrast can be adjusted as follows, without the need to display the OSD: Select the function and use the buttons to adjust. If adjustment is not made within 15 seconds, the current settings will be saved and the control screen will disappear automatically.

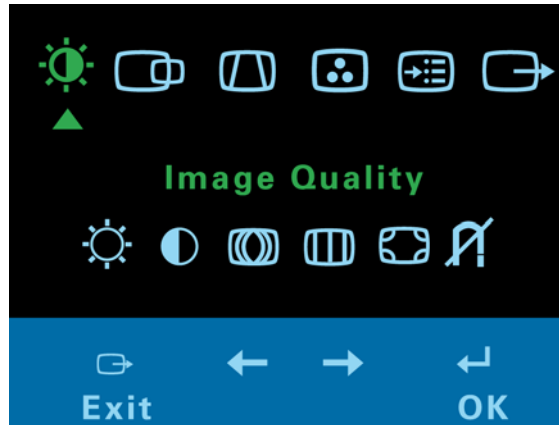
<i>Icon</i>	<i>Control</i>	<i>Description</i>
☀	Brightness	Adjusts the background brightness
◐	Contrast	Adjusts the contrast between foreground and background
1↔2	Signal input selection	Select the video signal input, D-Sub or DVI-A.

## On-Screen-Display

This section provides instructions for activating the On-Screen-Display (OSD) and using the menu controls and functions.







### Activating the On-Screen-Display

The monitor controls are accessed by pressing button “←” to enable OSD (On-Screen-Display). The main menu will be displayed as follows.



Each **sub-menu** icon is selected by highlighting it via the “←” “→” control and pressing button “←” to select. To exit the main or **sub-menu** then press the exit button “→”.






















### Main OSD menu controls

<b>Icon</b>	<b>Control</b>	<b>Function instruction</b>
	Image Quality	Adjusts Brightness, Contrast, Moiré, Convergence, Purity, and Degauss.
	Image Position/Size	Adjusts Horizontal/Vertical Position, Horizontal/Vertical Size, Zoom, and Rotation.
	Image Shape	Adjusts Parallelogram, Trapezoid, Pincushion, Pincushion balance, and Geometry reset.
	Color	Adjusts Preset color point, Custom, and Reset User color.
	Options	Adjusts Information, Menu Languages, Accessibility, Factory Default, Menu Position, and Input Signal.
	Exit	Closes the OSD menu.




















### OSD functions

Note: After a function is selected, use the “←” and “→” buttons to increase or decrease the adjustment. If the OK “←” or Cancel “→” button is not pushed within the menu time out period, the current setup will be saved and the control screen will disappear automatically.















## Image Quality

	Image Quality		
Sub-menu			
<i>Icon</i>	<i>Control</i>	<i>Function</i>	<i>Sub-menu function</i>
	Brightness	Adjusts overall screen brightness.	Left 
			Right 
	Contrast	Adjusts difference between light and dark areas.	Left 
			Right 
	Moiré	Reduces elliptical or wavy interference patterns.	 / 
	Convergence	Reduces colored shadows on letters or lines.	Horizontal  / 
			Vertical  / 
	Purity	Improves the image quality in the corners.	Top Left 
			Top Right 
			Bottom Left 
			Bottom Right 
			Save
	Degauss	Demagnetizes screen to reduce image distortion.	Yes/No Option





## Image Position/Size

	Image Position/Size		
Sub-menu			
<i>Icon</i>	<i>Control</i>	<i>Function</i>	<i>Sub-menu function</i>
	Horizontal Position	Moves image left or right.	Left 
			Right 
	Vertical Position	Moves image up or down.	Left 
			Right 
	Horizontal Size	Adjusts image width.	Left 
			Right 
	Vertical Size	Adjusts image height.	Left 
			Right 
	Zoom	Adjusts image width and height.	 / 
	Rotation	Turns image clockwise or counterclockwise.	 / 













## Image shape

	Image Shape		
Sub-menu			
<i>Icon</i>	<i>Control</i>	<i>Function</i>	<i>Sub-menu function</i>
	Parallelogram	Leans image to the left or right.	Left 
			Right 
	Trapezoid	Adjusts top or bottom image width.	Left 
			Right 
	Pincushion	Expands or contracts image sides.	 / 
	Pincushion balance	Moves image center left or right.	 / 
	Geometry reset	Resets image shape to original settings.	Yes/No Option

## Color

	Color		
Sub-menu			
<i>Icon</i>	<i>Control</i>	<i>Function</i>	<i>Sub-menu function</i>
	Preset Color Point	Select from standard white color.	With three choices 9300K/6500K/5500K
	Custom	Adjusts red green and blue intensity.	Red/Green/Blue/Save
	Reset User Color	Resets custom color to original value.	Yes/No Option

## Options

	Options			
Sub-menu				
<i>Icon</i>	<i>Control</i>	<i>Function</i>	<i>Sub-menu function</i>	
	Information	Shows resolution, refresh rate, product details.		
	Menu Language	Changes language of menu.	English, French, Italian, German, Spanish	
	Accessibility	Changes Menu timings.	Button repeat rate	Off/Default/Slow Option
			Menu time out	5/10/15/20/25/30 second options
	Factory Default	Resets monitor to original settings.	Yes/No Option	
	Menu Position	Adjusts menu location.	Horizontal	 / 
			Vertical	 / 
			Save	
	Input Signal	Select video signal.	Input 1/2	
	Exit	Closes the OSD menu.		



## Further information

### Display modes

The display modes and monitor uses are controlled by the computer. Therefore, refer to your computer documentation for details on how to change display modes.

The image size, position, and shape may change when the display mode changes. This is normal and the image can be readjusted using the monitor controls.

To ensure flicker-free operation, select the highest (non-interlaced) refresh rate **that** both the computer and the monitor can support, (generally 75 Hz or higher), for the addressability that your application requires.

For the display modes listed below, the screen image has been optimized during manufacture.

<b>Resolution</b>	<b>Refresh Rate</b>	<b>Horizontal Frequency</b>
640 x 480	60Hz	31.5kHz
720 x 400	70Hz	31.5kHz
1024 x 768	85Hz	68.6kHz
1280 x 1024	85Hz	91.1kHz
1600 x 1200	85Hz	106.3kHz
1920 x 1440	75Hz	112.5kHz
1920 x 1440	85Hz	128.5kHz
2048 x 1536	75Hz	120.5kHz

Table1. Factory Preset Mode

### Power Management


To benefit from power management, the monitor must be used in conjunction with a computer that implements the Video Electronics Standards Association (VESA) Display Power Management Signalling (DPMS) Standard.

The power management feature is invoked when the computer recognizes that you have not used your mouse or keyboard for a user-definable period of time. There are several states described in the table below.

<b>State</b>	<b>Power indicator</b>	<b>Screen</b>	<b>Restoring Operation</b>	<b>Compliance</b>
On	Green	Normal	Press a key or move the mouse.	ENERGY STAR®
Off	Amber	Blank		

## Troubleshooting

If you have a problem setting up or using your monitor, you may be able to solve it yourself. Before calling your retailer or IBM you should try the suggested actions that are appropriate to your problem.

<b>Problem</b>	<b>Possible Cause</b>	<b>Suggested Action</b>	<b>Reference</b>
Screen is blank and power indicator is off.	No power to monitor.	<ul style="list-style-type: none"> <li>• Ensure the electrical outlet and the monitor are both switched on.</li> <li>• Check power cord is firmly plugged into the monitor and the electrical outlet.</li> <li>• If the power cord plug has a removable fuse, replace it.</li> <li>• Try another power cord.</li> <li>• Try another electrical outlet.</li> </ul>	Connecting your monitor starting on page 6.
Screen is blank and power indicator is steady green.	Brightness and Contrast may be too low.	<ul style="list-style-type: none"> <li>• Adjust brightness and contrast.</li> </ul>	User controls section starting on page 11.
SIGNAL OUT OF RANGE message is displayed.	Display mode of the computer is outside the range of the monitor.	<ul style="list-style-type: none"> <li>• Reconfigure the computer to use a supported display mode.</li> </ul>	Further information starting on page 16.
CHECK SIGNAL CABLE message is displayed.	Video cable connection.	<ul style="list-style-type: none"> <li>• Check that the signal cable is firmly connected to the computer.</li> <li>• Check no pins are bent in the signal cable connector.</li> </ul>	
Screen is blank and power indicator is amber.	The monitor is in Power Management Standby/Suspend or Off state.	<ul style="list-style-type: none"> <li>• Press any key on the keyboard or move the mouse to restore operation.</li> </ul>	
	No video signal from the computer.	<ul style="list-style-type: none"> <li>• Check that the computer is powered on.</li> <li>• Check the signal cable is firmly connected to the computer.</li> <li>• Check no pins are bent in the signal cable connector.</li> </ul>	
	Wrong input is selected.	<ul style="list-style-type: none"> <li>• Select the right signal input by switching the Hotkey of  2.</li> </ul>	
Image appears to be flickering.	The monitor is operating in an interlaced or low refresh rate display mode.	<ul style="list-style-type: none"> <li>• Reconfigure the computer to use a non-interlaced display mode with a refresh rate of at least 75 Hz.</li> </ul>	Further information starting on page 16.

<b>Problem</b>	<b>Possible Cause</b>	<b>Suggested Action</b>	<b>Reference</b>
	The monitor may be affected by interference from nearby equipment.	<ul style="list-style-type: none"> <li>• Move fluorescent desk lighting or any equipment that produces magnetic fields further away from the monitor.</li> <li>• If another monitor is close by, separate the two monitors by at least 300mm (12 in.) for optimal performance.</li> </ul>	
Image appears to be discolored.	The monitor may be affected by interference form nearby equipment.	<ul style="list-style-type: none"> <li>• Move any equipment that produces magnetic fields (For example, sub woofer loud speakers) further away form the monitor.</li> <li>• If another monitor is close by, separate the two monitors by at least 300mm (12 in.) for optimal performance.</li> </ul>	
	Magnetization of monitor components has built up.	Degauss the monitor using OSD manual demagnetize function. This function can only be used once in a 30 minute period.	

## Further help

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

Call IBM HELPCENTER.

In the US call 1-800-426-7378

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

(All other areas) call 1-800-565-3344

In other countries, contact your dealer, retailer, or other IBM authorized servicer.

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

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

If possible, stay by your computer system. Your technical support representative might want to go through the problem with you during the call.

More help, **late breaking** news and details of the latest accessories for these products may be found on the **World Wide Web** at:

<http://www.pc.ibm.com/us/accessories>

## Specifications

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The C220p (MT6735) color monitor uses a 22-inch Aperture Grille CRT with a viewable image size of 508mm (20.0 in.).

Dimensions	Width: Depth: Height:	512.8 mm (20.19 in.) 483.6 mm (19.04 in.) 516.4 mm (20.33 in.)
Weight	With Packaging: Without Packaging:	35.5 kg (78.19 lb) 30.5 kg (67.18 lb)
Tilt Swivel	Forward tilt: Backward tilt: Swivel:	5° 15° +90°/-90°
Image	Maximum Height: Maximum Width: Dot Pitch:	304.80 mm (12.00 in.) 406.44 mm (16.00 in.) 0.24 mm (0.0094 in.)
Power Input	Supply Voltage: Max Supply Current:	90-264 V ac, <b>47-63 Hz</b> 1.8A at 100 V ac
Video Input	Input Signal:  Horiz. Addressability: Vert. Addressability: Clock Rate	Analog Direct Drive, 75 ohm 0-0.7 V 2048 pels (maximum) 1536 lines (maximum) 360 MHz
Communications	VESA DDC	2B
Synchronization Range	Horiz. Frequency: Vert. Frequency:	30 kHz-130 kHz 50 Hz-160 Hz
Power Consumption (Typical)	Normal Operation: Off:	<130 W <1 W
Environment	Operating Temperature: Storage Temperature: Shipping Temperature:  Operating Humidity: Storage Humidity: Shipping Humidity: Emissions:	0 to 35 °C (32 to 95 °F) -25 to 65 °C (-13 to 149 °F) -25 to 65 °C (-13 to 149 °F)  10 to 90 % 5 to 95 % 5 to 95 % TCO'03/TCO'99

## ***Service Information***

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The following parts are for use by IBM Service, or IBM authorized dealers, to support the customer warranty. Parts are for service use only.

<b>Part Number</b>	<b>Machine type-6735</b>	<b>Description</b>
73P2300	6735-K0N	Two Tone
73P2301	6735-60N	Black
73P2302	6735-K0N	Two Tone
73P2303	6735-60N	Black
73P2304	6735-70N	Black
73P2305	6735-K0S	Two Tone
73P2306	6735-60S	Black
73P2307	6735-K0S	Two Tone
73P2308	6735-60S	Black
73P2316	Tilt/Swivel	Black
73P2317	Tilt/Swivel	Pearl White

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