

Color Monitor



E50

User's Guide

English



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 peôitajte Bezpeônostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Ennen kuin asennat t m n tuotteen, lue turvaohjeet kohdasta Safety Information.

Před instalac tohoto produktu si přečtete 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.

First Edition (May 2003)

This publication could contain technical inaccuracies or typographical errors. Changes are made periodically to the information herein; these changes will be made in later editions. IBM may make improvements and/or changes in the product(s) and/or program(s) at any time. It is possible that this publication may contain reference to, or information about, IBM products (machines and programs), programming, or services that are not announced in your country.

Requests for copies of this publication and for technical information about IBM products should be made to your IBM Authorized Dealer or IBM Retailer.

No part of this publication may be reproduced or distributed in any form or by any means without prior permission in writing from the International Business Machines Corporation.

© Copyright International Business Machines Corporation 2003. All rights reserved.

Note to U.S. Government Users - Documentation related to restricted rights -Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract with IBM Corp.

Notices

References in this publication to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program or service is not intended to state or imply that only IBM's product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any of IBM's intellectual property rights or other legally protectable rights may be used instead of the IBM product, program, or service. Evaluation and verification of operation in conjunction with other products, programs, or services, except those expressly designated by IBM, are the user's responsibility.

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents.

Trademarks

The following terms, used in this publication, are trademarks or service marks of the IBM Corporation in the United States or other countries:

HelpCenter IBM

ENERGY STAR is a U.S. Govt. registered mark.

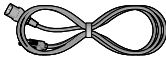
Other company, product, and service names may be trademarks or service marks of others.

Table of Contents

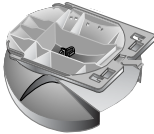
Your New Monitor	2
Connecting Your Monitor	2
Front Panel	3
Direct Access Buttons	3
Operation	4
On Screen Display(OSD)	4
Monitor function control	5
Brightness	5
Contrast	5
Horizontal Position	5
Vertical Position	5
Horizontal Size	5
Vertical Size	5
Pincushion	6
Geometry	6
Trapezoid	6
Parallelogram	6
Rotation	6
Pinbalance	6
V-Linearity	6
Language	7
Advanced	7
H- Moiré	7
V- Moiré	7
Video Input Level	7
Color Temperature	7
Zoom	8
Degauss	8
Recall	8
Display Timing	8
OSD Lock/Unlock	8
Troubleshooting	9
Help and Service	10
Power Saver	11
Display Modes	11
Specifications	12
Index	13
Compliances	

Your New Monitor

Please make sure the following items are included with your monitor. If any items are missing, contact your dealer.



Power Cord



Stand



Monitor



CD

(User's Guide & Installation Files)

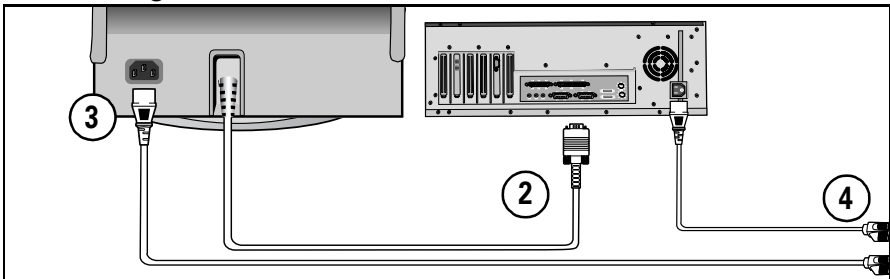


Warranty & Safety Manual



Setup Guide

Connecting Your Monitor

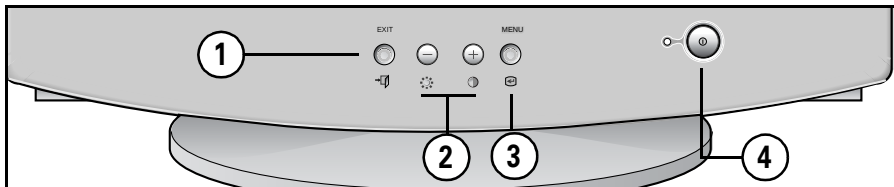


- 1** Turn off your computer and unplug the power cord.
- 2** **Signal cable**
Connect the end of the signal cable to your computer's video port (Video board, video card, or graphics card).
- 3** **Power port**
Connect the power cord for your monitor to the power port on the back of the monitor.
- 4** **Power cords**
Plug the power cord for the monitor

- 5** and the power cord for your computer into a nearby outlet.
- 5** Turn on your computer and monitor. If your monitor displays an image, installation is complete.
- 6** **Install monitor driver**
 - Insert the provided CD into the CD ROM drive, when prompted by the operating system.

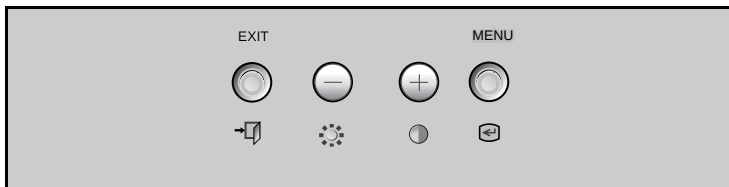
Your New Monitor

Front Panel



- 1 EXIT () button**
Closes the OSD. It is also used to return to the previous menu when using the OSD.
- 2 The  /  ( / ) buttons**
These buttons allow you to select and adjust items using the OSD. When adjusting an item using the OSD, the  button lowers the value of the selected function. The  button raises the value of the selected function. These buttons are also direct access buttons for the Contrast and Brightness feature controls. (See the section below on Direct Access Buttons.)
- 3 MENU () button**
Opens the OSD. It is also used to select a highlighted function, open a sub-menu, or move between menus when using the OSD.
- 4 Power button **
The power button turns the monitor on and off. The power indicator light glows green during normal operation, see "Specifications" section.

Direct Access Buttons



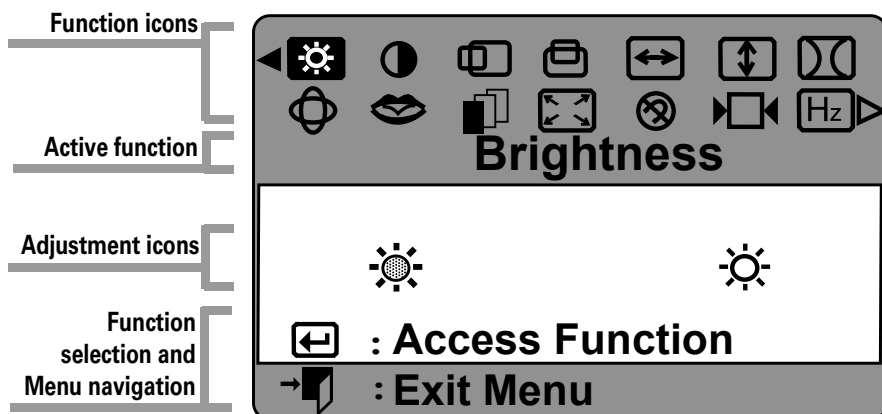
Most of the adjustments you make to your monitor will be accessed through the OSD described in the next section. The Contrast and Brightness features can also be accessed directly from the front of your monitor.

- 1** With the menu off, press the  or  button on the front of your monitor. The  button accesses the Brightness feature. The  button accesses the Contrast feature.
- 2** Push the  button to increase or the  button to decrease the value of the selection.
- 3** Press the EXIT button  twice to exit the OSD.

On Screen Display(OSD)

Your monitor has an OSD, accessed by the buttons on the front of your monitor, that allows you to adjust characteristics of the screen image. Display changes are indicated by on-screen adjustment icons. Some functions have sub-menus.

- 1** Push the menu button  to display the main menu. Function icons are arranged across the top of the OSD.
- 2** Push the  or  button to move through the icons. The name of the function will appear below the rows of function icons.
- 3** To select a function or open a sub-menu, push the  button. The screen will display the options for adjustment. If there is a sub-menu, use the  or  button to highlight the feature you want to adjust, then push the  button to select it.
- 4** Use the  and  buttons to make adjustments.  increases values and  decreases values. On-screen calibration numbers show the effect of your adjustment. If you are in a sub-menu, use the EXIT button  to return to the previous menu.
- 5** Push the EXIT button  to exit and save your changes.



Icon Monitor Function Control



Brightness

Background brightness of screen.

– Decreases brightness

+ Increases brightness

Brightness



Contrast

Contrast of screen image.

– Decreases contrast

+ Increases contrast

Contrast



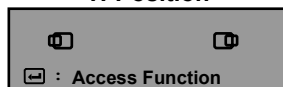
Horizontal Position

Horizontal screen position.

– Moves screen left

+ Moves screen right

H-Position



Vertical Position

Vertical screen position.

– Moves screen down

+ Moves screen up

V-Position



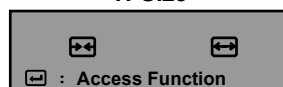
Horizontal Size

Horizontal screen size.

– Decreases size

+ Increases size

H-Size



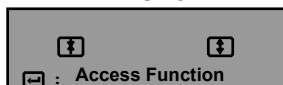
Vertical Size

Vertical screen size.

– Decreases size

+ Increases size

V-Size



Icon Monitor Function Control



Pincushion

Straightens screen vertical edges.

– Curves image inward

+ Curves image outward

Pincushion



Geometry



Trapezoid

Width of top and bottom of screen.

– Widens bottom of screen

+ Widens top of screen



Parallelogram

– Skews screen image left

+ Skews screen image right



Pinbalance

– Curves vertical lines to left

+ Curves vertical lines to right

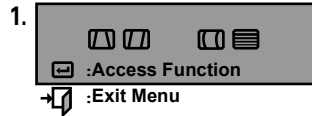


V-Linearity

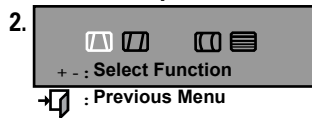
– Compresses image at top of screen

+ Compresses image at bottom of screen

Geometry



Trapezoid



Icon Monitor Function Control



Language

– and + scroll through on-screen language options.
(English/ Español/ Português/ Italiano/ Français/ Deutsch)

Language



Advanced

H- Moiré



Corrects for on-screen moiré pattern.
– and + clear Horizontal Moiré

V- Moiré



Corrects for on-screen moiré pattern.
– and + clear Vertical Moiré



Video Input Level

Selects the video signal level
– Select 0.7 V
+ Select 1.0 V



Color Temperature

– 9300k more blue
+ 6500k more red

Advanced



H-Moiré



Icon Monitor Function Control



Zoom

- Reduces view of display area
- + Enlarges view of display area

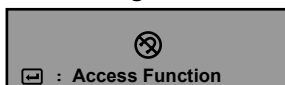
Zoom



Degauss

Removes color distortion caused by magnetic fields. Do not use more than once in 30 minutes.

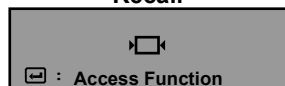
Degauss



Recall

- Returns monitor to original settings.
- No
 - + Yes

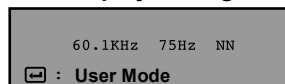
Recall



Display Timing

- Monitor display settings.
- Factory timing
 - + User timing

Display Timing



OSD Lock/Unlock

Allows you to secure the current control settings so that they cannot be inadvertently changed. You can unlock the OSD controls at any time by using the same procedure.

- Push and hold the Menu () button for 10 seconds or more to Lock or to Unlock.

OSD Lock/Unlock



Before calling for service, check the information in this section to see if you can solve the problem yourself.

There is no screen image

- Check to see that both the monitor and the computer are plugged in and turned on.

“No Connection, Check Signal Cable” appears

- Check the signal cable connection between the computer and the monitor.

“Sync. Out of Range” appears

- The input signal frequency is over or under the synchronization range of the monitor, see “Specifications” section.

The screen image is too light or too dark

- Adjust the brightness or contrast settings, see On Screen Display section.

The screen image is too large or too small

- Adjust the size settings, see H-size and V-Size On Screen Display section.
- Adjust the Zoom setting, see On Screen Display section.

The colors are distorted with dark or shadowed areas

- Activate the degauss feature, see On Screen Display section.
- Adjust the color temperature, see On Screen Display section.

The power indicator light is blinking green

- The monitor is using its power management system, see “PowerSaver” section.

You need the monitor driver software

- Download the driver from the internet at <http://www.ibm.com/support>

Machine Name - E50 Color Monitor (M/T 6518)

Warranty Period - Three (3) Years

See the IBM Statement of Limited Warranty included in this publication for IBM's warranty terms and conditions.

The IBM Machine Warranty worldwide Web site at

http://www-1.ibm.com/servers/support/machine_warranties/ provides a worldwide overview of IBM's Limited Warranty for IBM Machines, a Glossary of IBM definitions, Frequently Asked Questions (FAQs) and Support by Product (Machine) with links to Product Support pages.

The IBM Statement of Limited Warranty is also available on this site in 29 languages via pdf files.

Service and support

With the original purchase of an IBM machine, you have access to extensive support coverage. During the IBM machine warranty period, you may call IBM or your reseller for problem determination assistance under the terms of the IBM Statement of Limited Warranty. You may seek help as follows:

Call IBM HelpCenter

In the US call 1-800-772-2227

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

(all others) 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 (hardware fitted etc.).
6. System BIOS version number.
7. Operating System and version number.
8. Display driver version number.

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

PowerSaver

This monitor has a built-in power management system called PowerSaver. This system saves energy by switching your monitor into a low-power mode when it has not been used for a certain amount of time. The monitor automatically returns to normal operation when you move the computer's mouse or press a key on the keyboard. For energy conservation, turn your monitor OFF when it is not needed, or when leaving it unattended for long periods. The PowerSaver system operates with a VESA DPMS compliant video card installed in your computer. Use a software utility installed on your computer to set up this feature.

State	Normal Operation	Power-off Mode (EPA/ENERGY 2000)
Power Indicator	Green	Green, Blinking (1 sec. interval)
Power Consumption	75 W (Maximum) 61 W (Nominal)	Less than 2 W

NOTE: This monitor is EPA ENERGY STAR® compliant and ENERGY 2000 compliant when used with a computer equipped with VESA DPMS functionality.

Display Modes

Display Mode	Vertical Frequency (Hz)
IBM, VGA2, 720 x 400	70
IBM, VGA3, 640 x 480	60
VESA, 640 x 480	75
VESA, 640 x 480	85
VESA, 800 x 600	60
VESA, 800 x 600	75
VESA, 800 x 600	85

Specifications

Specifications	Model: IBM E50
Picture Tube	• 15" (38 cm) Full square type (35 cm Viewable) • 90° Deflection • Dot pitch: 0.28 mm (0.24mm horizontal) • Aluminized tri-color phosphor dot trio with black matrix. • Anti-doming invar shadow mask.
Synchronization	• Horizontal: 30 kHz to 54 kHz • Vertical: 50 Hz to 120 Hz
Display Color	• Over 16 million
Maximum Resolution	• 1024 Dots • 768 Lines
Active Display	• Horizontal: 10.5 ± 0.16 inch (267.0 ± 4 mm) • Vertical: 7.9 ± 0.16 inch (200.0 ± 4 mm)
Input Signal, Terminated	• Analog: 0.7 Vpp positive at 75 ohms • Separate Sync.: TTL level, positive or negative
Maximum Pixel Clock	• 65 MHz
Power Supply	• AC 100-240 V, 50 Hz / 60Hz
Power Consumption	• 75 W (maximum)
Dimensions/Weight (WxDxH)	• Unit : 356 x 379 x 369.5 / 11.9kg • Carton : 457 x 474 x 390 mm / 13.7kg
Environmental Considerations	• Operating temperature: 41°F to 104°F (5°C to 40°C) - Humidity: 10% to 80% • Storage temperature: -4°F to 113°F (-20°C to 45°C) - Humidity: 20% to 80%

Design and specifications are subject to change without notice.