T860 Flat Panel Monitor
User Guide

First Edition (Dec / 2001)

Notices

Trademarks

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T860 Flat Panel Monitor User Guide

Contents

Setting up the monitor

The IBM T860 Flat Panel Monitor comes in models with a stand for desktop use and models without a stand for arm or wall Mounting. Please refer to the appropriate sections on your model. Monitor installation is the same for ether model.

Product Description

The IBM T860 Color Monitor supports SXGA 1280 X 1024, XGA 1024 x 768, SVGA 800 x 600, or VGA 640 x 480 at 60Hz.

In addition to the monitor, your option package includes the following:

IBM Monitor CD
Monitor Safety and Warranty manual
T860 Color Monitor Quick Start Guide
T860 Color Monitor

System Hardware Requirements

This monitor requires a computer with a suitable on-board sub-system or Video Adapter card that can support SXGA 1280 x 1024, XGA 1024 x 768, SVGA 800 x 600, or VGA 640 x 480 at 60Hz.

Handling Instructions

Do not support the monitor within the screen area. The Liquid Crystal Display is glass and can be damaged by rough handling or excessive pressure.

1. Lift the monitor by placing both hands under the bottom side of the bezel. (The display will rise to maximum lift height when locking clip has been removed. See page 3 for details on removing the locking clip.)
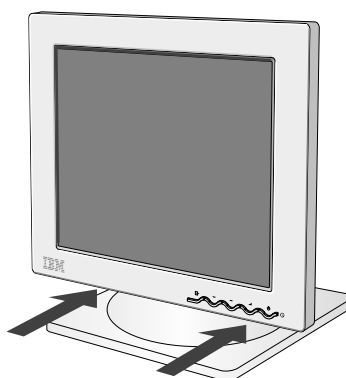
2. Before using your monitor for the first time, remove the clear protective film from the front of the screen.

Desk Top Use - Remove the clip on stand models

Before adjusting your monitor for the first time, remove the locking clip on rear of the stand. Carefully hold the screen of the monitor and then sqeeze at arrows shown to remove(figure A).

(A)
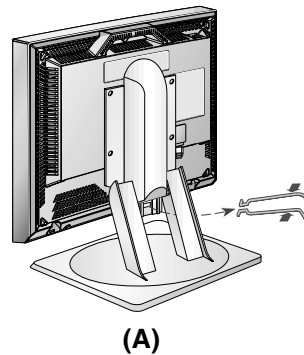
Arm or Wall Mount Use
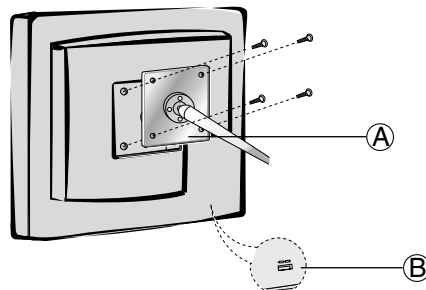
Ⓐ **Arm or Wall Mounting (VESA)**
Connected to a wall or arm monuting device using the VESA standard mounting plate. If you have a stand model and want to mount the monitor on an arm. please refer to page 22 for detailed instructions.

Ⓑ **Kensington Security Slot**
Connected to a locking cable that can be purchased separately at most computer stores.

Monitor Installation

Connecting your Monitor

1. Turn off your computer and all attached devices. Next, unplug the power cord(s) to your computer and all attached devices.

2. Connect the signal cable.
   The ac adapter and the analog signal cable are already connected to your monitor. ❶ The analog connector is the blue connector.
   ▪ When connecting the analog signal cable **(**Figure A)
   Connect the free end of the attached signal cable to the 15-pin Monitor port on the computer and tighten screws. ❷
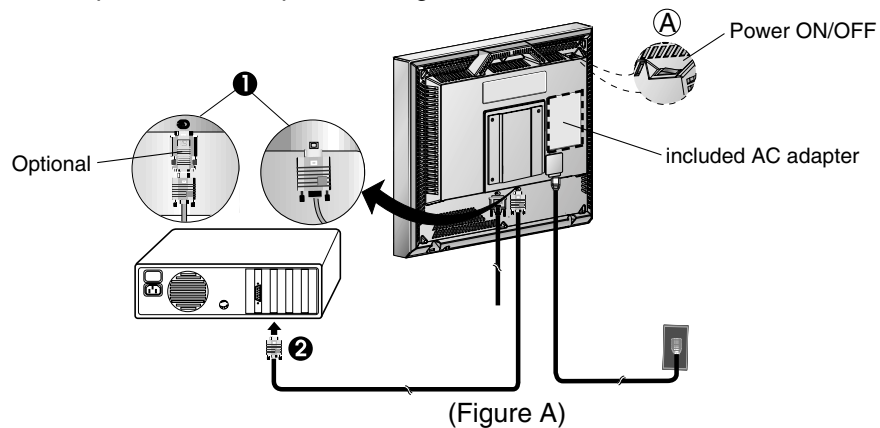
(Figure A)

   ▪ When connecting the digital signal cable (Figure B)
   Connect one end of the monitor signal cable to the white connector ❶ on the rear panel of the monitor. Connect the other end to the white connector ❷ on the rear panel of the computer and tighten the screws.

(Figure B)

4
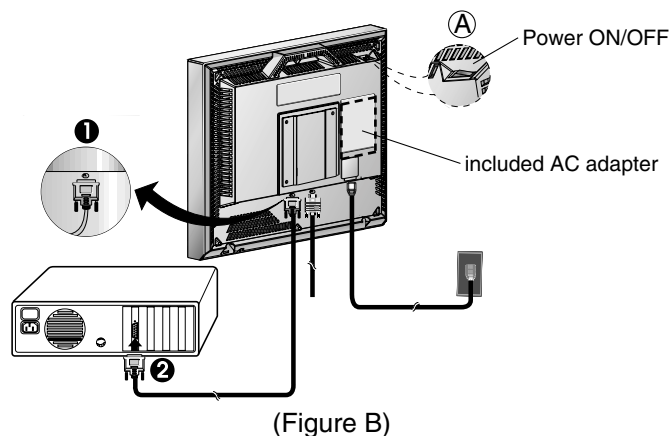
3. Connect the power cord to the power adapter and then plug the power cord into a properly grounded outlet. Next, reconnect the power cord(s) to your computer and all attached devices.

Switching on your Monitor

1. Switch on the adapter power source by pushing the power switch Ⓐ on the top rear panel of the monitor.

2. Switch on your monitor by pushing and releasing the power switch marked [⏻] at the front of the bezel.
    [To switch off your monitor, push and release the power switch again.]

3. Switch on your computer.

4. If you are using the analog connector, run AUTO SETUP by following the instructions in the *Auto Setup* section on page 9.

Monitor Driver Installation

Driver installation for Windows 95 or Windows 98

This section must be completed before continuing with the Windows95 or Windows98 Auto Setup on page 10.

To use the Plug and Play feature in Microsoft®Windows®95 or Windows 98, files should be loaded from the *IBM Monitor CD.*

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 the system to boot into Windows95 or Windows98.

   Your computer's Plug and Play code may 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.

i On LCD monitors, unlike CRTs, a faster refresh rate does not improve display quality. IBM recommends using either 1280 x 1024 at a refresh rate of 60Hz or 640 x 480 at a refresh rate of 60Hz.

• *In case of Windows 95 :*

6 - 1. Click the CHANGE DISPLAY TYPE button.

2. Click the CHANGE MONITOR TYPE button.

• *In case of Windows 98 :*

6 - 1. Click the ADVANCED button.

2. Click the MONITOR tab.

3. Open the UPGRADE DEVICE DRIVER WIZARD window by clicking on CHANGE button and then select the NEXT button.

4. Click the "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 Setup CD into the CD driver: and click the HAVE DISK button.

8. Click OK.

9. Ensure that the CD drive letter is selected.

10. Choose **IBM T860** 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 system.

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

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Driver Installation for Windows 2000 or Windows Me

This section must be completed before continuing with the Windows2000 ,Windows Me Auto Setup on page 10.

i *On LCD monitors, unlike CRTs, a faster refresh rate does not improve display quality. IBM recommends using either 1280 x 1024 at a refresh rate of 60Hz or 640 x 480 at a refresh rate of 60Hz.*

To use the Plug and Play feature in Microsoft Windows 2000 or Microsoft Windows Millennium Edition(Me) files should be loaded from the ***IBM Monitor CD**.*

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 the system to boot into Windows 2000 or Windows Me.
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 the "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 Setup CD into the CD drive : and click the **HAVE DISK** button.
13. Click OK.
14. Ensure that the CD drive letter is selected.
15. Choose **IBM T860** 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 system.

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

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Driver Installation for Windows XP

i On LCD monitors, unlike CRTs, a faster refresh rate does not improve display quality. IBM recommends using either 1280 x 1024 at a refresh rate of 60Hz or 640 x 480 at a refresh rate of 60Hz.

To use the Plug and Play feature in Microsoft Windows XP files should be loaded from the ***IBM Monitor CD***.

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 the system to boot into Windows XP.
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 the "Install from a list or Specific location(Advanced)" and then Click the NEXT button.
12. Insert the Setup CD into the CD drive : and click the HAVE DISK button.
13. Click OK.
14. Ensure that the CD drive letter is selected.
15. Choose **IBM T860** 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 system.

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

Image Setup for analog input

Auto Setup

ℹ️ The Setup Utility included on the setup CD displays a test pattern of dots. It does not replace or modify the display drivers.

ℹ️ The Auto Setup instructions require the monitor to be warmed up for 15 minutes. This is not required for normal operation.

For digital input, setup is not required.

When you first use your monitor, you must perform Auto Setup for analog input. If you are using digital input, continue with the instructions on page 14. This procedure sets up your monitor to process the video signals from your computer without image discoloration or smearing. After you perform Auto Setup, the settings are stored and used each time you turn on the monitor.

In order to optimize the displayed image a set-up utility is provided on the IBM Monitor CD. Operation of this utility is dependent on the operating system on your computer. You may choose to run AUTO SETUP for each operating system that you use. This means that if you sometimes use your monitor while running any version of Windows and sometimes also use it from within DOS (not a DOS window), you must run AUTO SETUP for both Windows and DOS. You may run versions of AUTO SETUP in any order.

Before you begin AUTO SETUP for your computer:

1. Make a backup copy of the setup CD supplied with the monitor.

2. Make sure the computer video mode is set in the range of the supported screen resolution shown in the table on page 20.

You should perform AUTO SETUP for each screen mode you use.

AutoSetup for Windows 3.1, Windows 95, Windows 98, Windows 2000, Windows Me, Windows XP or Windows NT

i *If the monitor is in standby mode (STANDBY ON), it may automatically turn off while you are waiting for it to warm up.*

1. Turn on the monitor first; then the computer.

    If the message CHECK VIDEO CABLE is displayed, or if nothing is displayed, check:

    • that the video interface cable is not connected properly.
    • the correct video adapter card is not installed.

2. Wait approximately 15 minutes, until the monitor warms up.

3. Ensure that the icon bar and tool bar, if displayed are at the bottom of the screen.

4. Insert the CD labelled *'IBM Monitor CD'* into the CD drive.

i *The size and diversity of the dot pattern varies with the screen resolution.*

5. Check the operating system installed on your computer and follow the instructions from the table below.

| Operating System	Step1	Step2	Step3
Windows 3.1	Open PROGRAM Manager	Select RUN	Type **'P:\TESTPAT'** and press ENTER
Windows 95			
Windows 98	Select START	Select RUN	
Windows 2000			
Windows Me			
Windows XP			
Microsoft Windows NT®4.0			

6. When the test pattern appears, press the OSD Enter button ↵ at the bottom of the monitor to display the initial OSD menu.

i *Position the mouse pointer at the bottom center of the screen. This allows AUTO SETUP to run properly*

7. Use an Arrow button (← or →), to select the IMAGE SET-UP icon ⬚ and press the OSD Enter button ↵ to access the function.

8. Using an Arrow button (← or →), select AUTO and press the OSD Enter button ↵ . This activates the AUTO SETUP procedure, which will optimize the display settings with the provided test pattern. The image may be affected during this procedure and you may notice small changes to the test pattern.

    To abort the AUTO SETUP function, press the ESC key.

9. When finished, the OSD main menu returns. Press the Exit button ⬚ once to exit from the OSD.

10. Press the ESC key on your keyboard to return to Windows.

You have completed the monitor setup for Windows. If you use other operating systems, perform the appropriate AUTO SETUP for those systems and also see *Adjusting the image settings in DOS* on page 12.

Adjusting the image settings in DOS

1. Turn on the monitor first; then the computer.

   If the message CHECK VIDEO CABLE is displayed, or if nothing is displayed, check:
   - that the video interface cable is not connected properly.
   - the correct video adapter card is not installed.

2. Wait approximately 15 minutes, until the monitor warms up.
3. Insert the CD labelled 'IBM Monitor CD' into the CD drive.
4. Display the command prompt screen of the DOS full-screen display.
5. At the command prompt, type '**P**:' and press ENTER.
6. Type '**TESTPATD**' and press ENTER.
7. Select from the screen the number for the color or text mode you want to setup.
8. Select from the screen the number for the video mode you want to setup.
   You may repeat this process for as many of the color and video modes as you need.
9. When the dot pattern appears, press the OSD Enter button ↵ at the bottom of the monitor to display the initial OSD menu.
10. Use an Arrow button (← or →), to select the IMAGE SET-UP icon ⊠ and press the OSD Enter button ↵ to access the function.
11. Using an Arrow button (← or →), select AUTO and press the OSD Enter button ↵ . This activates the AUTO SETUP procedure, which will optimize the display settings with the provided dot patterns.
    The image may be affected during this procedure and you may notice small changes to the test pattern.
12. When finished, the OSD main menu returns.
    Press the Exit button ⊡→ to exit from the OSD.
13. Press the ESCAPE key to exit the test pattern program.
14. Type '**Exit**' at the command prompt to return to Windows.

If you use other operating systems, perform the appropriate Image Setup for those systems and also see
***Image Setup Windows 3.1, Windows 95, Windows 98, Windows 2000, Windows Me, Window XP or Windows NT workstation** on page 10.*

Manually adjusting the image settings

Normally, you can complete the setup procedure using Image Setup, however, if your screen image is still distorted after you perform Image Setup or the setup CD does not run on your system, perform MANUAL SETUP.

1. Have your monitor turned on for about 15 minutes, until the monitor warms up.

2. Display the image you most frequently use on the screen.

3. Press the OSD Enter button ↵ at the botton of the monitor to display the initial OSD menu.

4. Use an Arrow button (← or →) to select the **IMAGE SET-UP** icon ▨ and press the OSD Enter button ↵ to access the function.

5. Using an Arrow button (← or →), select MANUAL, press ← and then press → once to select COARSE. Left and right arrow adjustment indicators become illuminated (see page 18).

6. Use the Arrow buttons to manually adjust to correct (as much as possible) for jitter or noise in the image, then press ⊟► to save the changes.

7. Use an Arrow button to select FINE and press the ↵ button.

8. Use the Arrow buttons again to tune the image to your liking.

9. When finished, press the Exit button ⊟► four times to exit from the OSD.

You have completed the monitor setup.

Ergonomic Considerations

Workplace Preparation

i *This section gives advice on what you should consider before you set up your 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.

- Positon the monitor directly in front of you so that you do not have to twist your body to use it.

- Tilt the monitor to a comfortable viewing angle.

Working Practices

i *This section gives advice on how you can work comfortably and reduce fatigue.*

Rest

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

Back

Sit back in your 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 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 these settings as the lighting changes during the day. Many application programs let you select color combinations which can help you to view in comfort. See the ***User controls*** section on page 16 for more information.

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Adjusting the Monitor Position

i *With the IBM Flat Panel Monitor, you can adjust its position in various ways for maximum comfort.*

Viewing Angle
You can tilt the screen forward and backward as shown below(figure A).

Swivel
You can swivel the screen leftward and rightward as shown below(figure A).

Height
You can adjust height of the screen(figure B).
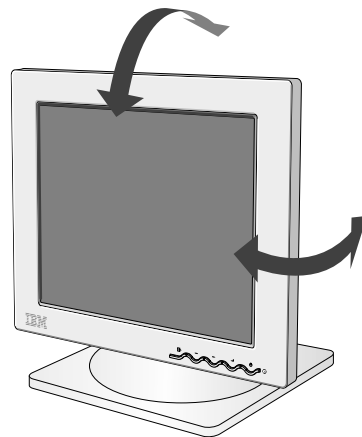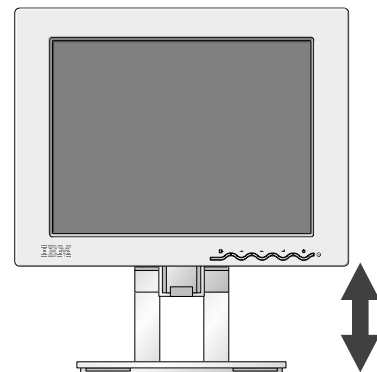
(Figure A)   (Figure B)

Caring for your Monitor

Be sure to turn off the power before you perform any maintenance on the monitor. Clean your monitor as follows:

- Gently wipe the covers and the screen with a soft cloth.

- Remove finger marks and grease with a damp cloth and mild detergent.

- Never use flammable cleaning materials to clean your IBM monitor or any other electrical apparatus.

Adjusting Your LCD Monitor

User controls

USER CONTROL FEATURES

Icon	Monitor controls
⏻	Switches the monitors on and off.
↵	Display main OSD menu and selects highlighted menu item. If the monitor is in DPM mode(Active off/off), this button is shown the INPUT SELECT menu.
← and →	Moved the cursor to highlight icons or make adjustments. Left and Right arrows pressed together bring up auto setup menu.
⎆→	Exits from current OSD menu.

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

Icon	Direct Access Functions
→	Bring up Contrast adjustment.
←	Bring up Brightness adjustment.
↵	**CONTROLS LOCK / UNLOCK** This feature allows you to secure the current control settings, while allowing the user to adjust Brightness or Contrast, so that they cannot be inadvertently changed. Push and hold the enter button[↵] for 10 seconds; the message "Controls Locked" appears. You can unlock the OSD controls at any time by pushing the enter button[↵] for 10 seconds; the message "Controls Unlocked" will appear.
⎆→	switch between input signals.

i *The settings are saved after adjustment and when exiting the OSD and will be effective thereafter.*

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On-screen display (OSD) controls

ℹ The LCD monitor needs time to become thermally stable the first time you turn it on each day. Thus, to achieve more accurate adjustments for parameters, allow the LCD monitor to warm up (be On) for at least 15 minutes before making any screen adjustment.

The settings adjustable with the user controls are viewed through the On - Screen Display (OSD). Press the enter button [↵] to display the main OSD menu.
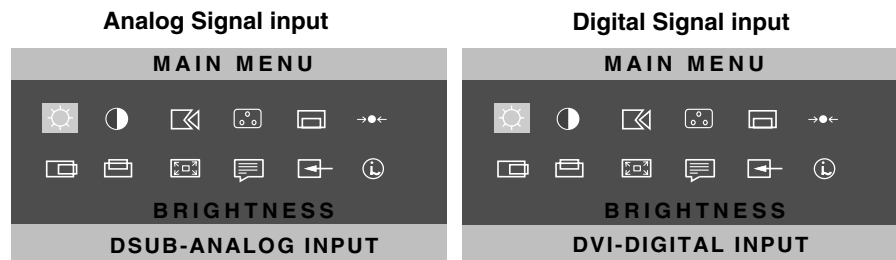
Initial appearance of OSD

main menu;

Analog Signal input

```
          MAIN MENU

  ☼   ◑   ⊠   ⊡   ⊟   →•←

  ⊟   ⊟   ⊠   ▤   ⊡   ⓘ

         BRIGHTNESS
     DSUB-ANALOG INPUT
```

Digital Signal input

```
          MAIN MENU

  ☼   ◑   ⊠   ⊡   ⊟   →•←

  ⊟   ⊟   ⊠   ▤   ⊡   ⓘ

         BRIGHTNESS
     DVI-DIGITAL INPUT
```

sub menu;

```
     ☼   BRIGHTNESS



  ◄         7 5         ►
```
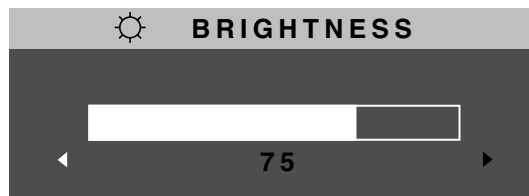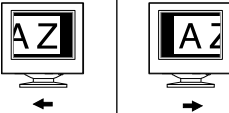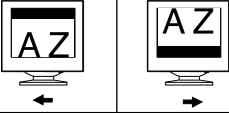
OSD functions

OSD Icon	Description	sub-menu(s)	Control and Adjustments
☼ **BRIGHTNESS**	Adjusts brightness		← →
◑ **CONTRAST**	Adjusts contrast		← →
⊠ **IMAGE SET-UP**	The IMAGE SET-UP function is used to adjust the level of noise in the video signal which causes horizontal lines or areas on the screen where the image appears to be unstable and jitters or shimmers. This can be done automatically or manually. • It is not applicable to digital input.	**AUTO**	If **AUTO** is selected the image will automatically adjust

OSD Icon	Description	Sub-menu(s)	Controls and Adjustments
◁ **IMAGE SET-UP CONT**	If manual is selected, the user will go to the manual adjustment screen.	**MANUAL** • **Fine** • **Coarse**	To adjust the focus of the display. This item allows you to remove any horizontal noise and clear or sharpen the image of characters. **Fine** adjustments should be done after adjusting the **Coarse** .
[°°] **COLOR**	Select the COLOR MODE you find most comfortable or fine tune the colors using the USER COLOR MODE menu, if necessary.	**COLOR MODE**	**Preset 1** (Pink White) **Preset 2** (Normal White) **Preset 3** (Blue White)
		USER COLOR MODE- • Red • Green • Blue	 Increases or decreases redness Increases or decreases greenness Increases or decreases blueness
🔲 **OSD Position**	Changes the position of the OSD on the screen.	**H-POSITION**	◁ ▷
		V-POSITION	◁ ▷

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OSD Icon	Description	Sub-menu(S)	Controls and Adjustments
→O← **RESET**	Reset should return all available functions (apart from language which should not change unless adjusted via the LANGUAGE menu) fo their factory presets.	• **YES** • **NO**	
▭ **H-POSITION**	Moves the screen left and right . • Is not availible with a digital input		A Z ← A Z →
▭ **V-POSITION**	Moves the screen up and down. • Is not availible with a digital input		A Z ← A Z →
▦ **IMAGE SIZE**	This function displays the image in its original size or enlarged size so as to fit in the full screen of the LCD panel.		**NORMAL-**image at normal size. **EXPANDED-**image enlarged to fill screen.
▤ **Language**	The language chosen affects only the language of the OSD. Select one of the five language to use for the OSD. It has no effect on any software running on the computer.	• **ENGLISH** • **FRANCAIS** • **DEUTSCH** • **ITALIANO** • **ESPANOL**
▣ **INPUT SELECT**	Use this button to make the analog or digital connector active. This feature is used when two computers are connected to the monitor. The default setting is analog.	• **DSUB-ANALOG** • **DVI-ANALOG** • **DVI-DIGITAL**
ⓘ **Information**	Display model name, serial number, year of manufacture and microcode level. Display all preset modes stored in the monitor. Display all user modes stored in the monitor. The current display mode will be shown at the base of all information screens.	• **INFORMATION** • **PRESET MODES** • **USER MODES** Use the ← and → buttons to move between information screens.

Further Information

Display modes

The display mode the monitor uses is controlled by the computer. Therefore, you should 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 AUTO SETUP and the monitor controls.

Unlike CRT monitors, which require a high refresh rate to minimize flicker, TFT technology is inherently flicker-free. If possible, configure your computer for 1280 x 1024 addressability at 60Hz vertical refresh rate.

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

Factory Set Display Modes

Addressabillty	Refresh Rate	Horizontal Frequency
640 x 480	60 Hz	31.5 kHz
640 x 480	75 Hz	37.5 kHz
640 x 480	85 Hz	43.3 kHz
640 x 350	70 Hz	31.5 kHz
720 x 400	70 Hz	31.5 kHz
800 x 600	60 Hz	37.9 kHz
800 x 600	75 Hz	46.9 kHz
800 x 600	85 Hz	53.7 kHz
832 x 624	75 Hz	49.7 kHz
1024 x 768	60 Hz	48.4 kHz
1024 x 768	75 Hz	60.0 kHz
1024 x 768	85 Hz	68.7 kHz
1152 x 870	75 Hz	68.7 kHz
1152 x 900	65 Hz	61.8 kHz
1280 x 1024†	60 Hz	63.98 kHz
1280 x 1024	75 Hz	79.98 kHz

Note : VESA timings are as detailed in the VESA "Display Monitor Timing Specification". Version 1.0, Revision 0.8, Dated 09/17/98.

† Recommended

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 Signaling (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. There are several states as described in the table below.

As an ENERGY STAR 2000® Partner, **IBM** has determined that this product meets the ENERGY STAR 2000® guidelines for energy efficiency.

IBM recommends that you switch off your monitor at the end of each working day, or whenever you expect to leave it unused for long periods during the day.

State	Power Indicator	Screen	Restoring Operation	Compliance
On	Steady green	Normal		
Active off	Steady amber	Blank	Press a key or move the mouse.	ENERGY STAR 2000®
Off	Steady amber	Blank	Press a key or move the mouse.‡	ENERGY STAR 2000®

‡ There may be a slight delay before the picture reappears.

Arm or Wall Mounting

Removing the stand and cables

Alternative stands for your IBM Flat Panel Monitor may be available from specialist suppliers.

This product is equipped with mounting facilities that conform to the VESA Flat Panel Monitor Physical Mounting Interface Standard (FPMPMI).
This product is shipped with the signal cable and the power cord attached to the monitor. If you want to use other cables for reasons such as having the monitor wall-mounted, follow the instructions below:

1. Power off the monitor. Next, disconnect the power cord and then the signal cable to the monitor.

2. Lay the monitor facedown on a cushion and remove the four screws holding the hinge mechanism on the monitor.
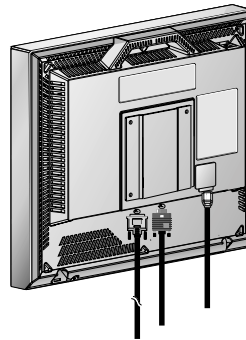
3. You have to use the four screw holds on the bottom of the stand to attach the monitor to the surface of wall. For additional information, see the instructions supplied with the purchased arm.

4. Locate a place to which you want to attach the monitor. When locating the place, you have to consider the lengths of the signal cable and the power cord.

5. Place the monitor in the location you selected in the step 4.
Next, reconnect the signal cable and then the power cord to the monitor.
To obtain the correct cables and/or to get further instructions on installing them, call the IBM HELPCENTER at the above numbers or contact your dealer, retailer, or other IBM authorized Servicer.

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, try the suggested actions that are appropriate to your problem.

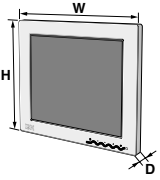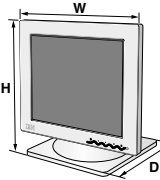| Problem	Possible Cause	Suggested Action	Reference
Screen is blank and power indicator is off.	No power to monitor.	• Ensure that the electrical outlet and the monitor are both switched on. • Check that the power cord is firmly plugged into the electrical outlet and the power supply unit. • If the power cord plug has a removalble fuse, replace it. • Try another power cord. • Try another electrical outlet. • Check the power connection at the back of the panel.	*Connecting your Monitor* section on page 4.
Screen is blank and power indicator is steady green.	Brightness and Contrast may be too low.	• Adjust brightness and contrast.	*User controls* section on page 16.
Screen is blank and power indicator is steady amber.	The monitor is in the Power Management Standby state.	• Press any key on the keyboard or move the mouse to restore operation. • Check the Power Management software on your computer. • Press the ⊡► to switch between analog and digital mode. If the panel is the wrong mode for the signal being provided, the monitor appears to go into sleep mode.	*Power Management* section on page 21.

Problem	Possible Cause	Suggested Action	Reference
Screen is blank and power indicator is flashing green every 0.5 second	Display mode of the computer is outside the range of the monitor	• Reconfigure key on the computer to use a supported display mode.	***Further Information*** section on page 20.
CHECK VIDEO CABLE message is shown and power indicator is steady amber.	The monitor is not receiving a video signal	• Check that the signal cabel is firmly connected to the computer. • Check that no pins are bent in the signal cable connector.	***Connecting your monitor*** section on page 4.
Image appears to be smeared	There are noises in the video signal	• Select IMAGE SET-UP menu in the OSD. Then select MANUAL to adjust FINE / COARSE settings.	***User Controls*** section on page 16.
Image appears to be discolored	The color setting may be incorrect.	• Adjust the Color settings.	***User Controls*** section on page 16.
A few dots are missing, discolored, or inappropriately lighted.	The LCD contains over 3,900,000 thin-film transistors (TFTs). A small number of missing, discolored, or lighted dots may be present on the screen, which is an intrinsic characteristic of the TFT LCD technology and is not an LCD defect.		

*𝒊 For image problems, you may want to run AUTO SETUP again before consulting to this section. In most cases, AUTO SETUP can fix the problems. See **Auto Setup for the computer** on page 9 for details.*

Specifications

This color monitor (Type-model 9494-Hxx) uses a 18.1-inch TFT LCD.

Without Stand		With Stand

	Height:
	  13.01inch(330.5mm)
	Width:
	  15.63inch(397mm)
	Depth:
	  2.97inch(75.4mm)
		Height:
		  13.76inch(349.7mm)
		  17.68inch(449.1mm)
		Width:
		  15.63inch(397mm)
		Depth:
		  10.19inch(259mm)

Weight	Without Stand: With Stand:	5.7 kg (12.57 lbs) 8.1 kg (17.86 lbs)
Image	Viewable Image Size: Maximum Height: Maximum Width: Pixel Pitch:	18.1inch (459.74 mm) 389 mm 317.2 mm 0.28 mm (H) x 0.28 mm (V)
Power Input	Supply Voltage: Rated Current:	100 - 240 Vac 60/50 ± 3Hz 1A
Power Consumption	Normal Operation: Active off: Off:	< 55 W < 3 W < 3 W
Video Input	Input Signal:	Analog-75 ohm 0.7V Digital-DVI 1.0
	Horiz. Addressability: Vert. Addressability: Clock Frequency:	1280 pixels (max) 1024 lines (max) 108 MHz (Digital) 135 MHz(Analog)
Sync Input	Type	Analog - Separate, Composite, SOG Digital-DVI 1.0
Communications	VESA DDC:	E-DDC
Supported Display Modes	Standard modes : Horiz / Vert Freq:	IBM, VESA, MAC See Factory Set Display Modes on page 20. See Display Mode Ranges on page 26.

Environment	Temperature:
	  Operating:
	  Storage:
	  Shipping:
	Humidity:
	  Operating:
	  Storage:
	  Shipping:
		
		10 to 35° C
		- 20 to 60° C
		- 20 to 60° C
		
		10 to 80%
		5 to 95%
		5 to 95%

Display Mode Ranges

Addressabillty	Refresh Rate / Range (+ / - 3%)	Horizontal Frequency / Range (+ / - 3%)
640 x 480	60 Hz	31.5 kHz
640 x 480	75 Hz	37.5 kHz
640 x 480	85 Hz	43.3 kHz
640 x 350	70 Hz	31.5 kHz
720 x 400	70 Hz	31.5 kHz
800 x 600	60 Hz	37.9 kHz
800 x 600	75 Hz	46.9 kHz
800 x 600	85 Hz	53.7 kHz
832 x 624	75 Hz	49.7 kHz
1024 x 768	60 Hz	48.4 kHz
1024 x 768	75 Hz	60.0 kHz
1024 x 768	85 Hz	68.7 kHz
1152 x 870	75 Hz	68.7 kHz
1152 x 900	65 Hz	61.8 kHz
1280 x 1024	60 Hz	63.98 kHz
1280 x 1024	75 Hz	79.98 kHz