

**User's Guide**

# **C117 Color Monitor**

**First Edition (October 2005)**

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## **PACKING LIST**

The product package should include the following items:

1. Monitor
2. Quick set up guide
3. Power cord
4. Swivel base
5. CD manual
6. Safety and warranty booklet



## **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 ασφαλείας (safety information).

לפני יציאתך לדרך, קרא את כל המידע הבטיחותי.

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.

Prad 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」。

مع، يجب قراءة ذات السلامة

Les 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 lee 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.

## **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 in. (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. 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.

## **Work Practices**

### **Caring for your Monitor**

Be sure to disconnect the power cord from your monitor before you perform any maintenance on the monitor. Clean your monitor as follows:

- Gently wipe the covers and the screen with a soft cloth, do not use solvents or abrasives.
- Never drop water or other liquid into your monitor.
- 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.
- 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.
- Do not use any type of cleaner containing an anti-static solution or similar additive as this may scratch the screen's coating.
- Never apply detergent or other liquid directly to the screen. Dampen the cloth and then wipe.

## Precautions

### 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 back rest.

### 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 might 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.

## INSTALLATION INSTRUCTIONS

### Swivel Base

To attach the swivel base to the monitor, do the following:

- 1 Carefully turn the monitor on its side or upside down. (see figure 1)
- 2 Locate the cavities at the bottom front of the monitor.
- 3 Insert the pegs on the swivel base into these cavities. Push the swivel base forward until the swivel base locks in place.

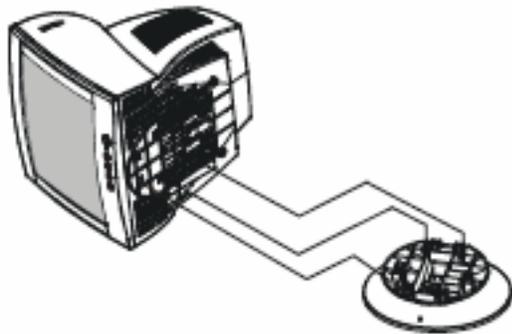


Figure 1 Installing and removing the Swivel Base

To remove the swivel base, hold the bottom of the swivel base, then push it out.

### Power Source:

1. Make sure the power cord is the correct type that is required in your area.
2. This monitor has a universal power supply that allows operation in 100/120V ac or 220/240V ac voltage (No user adjustment is required)
3. Connect the power cord into your monitor's power input socket, and then plug the other end into a 3-pin ac power outlet. The power cord can be connected to either a wall power outlet or the power outlet socket on your computer, depending on the type of power cord supplied with your monitor.

1 2  
Figure 2 Connecting cables

1. Power Cord
2. Signal Cable

### Power cord:

**Connecting the power cord:** Plug the power cord into the monitor's ac power socket. Then plug the power cord into a grounded ac outlet or ULapproved power strip or the power output socket on your computer.

**Attention:** *If the ac outlet is not grounded(only two holes), install the proper grounding adapter (not supplied).*

For safe operation, use the power cord supplied with the unit.

### Video cable

**Connecting the video cable:** The monitor comes with a built-in video cable. Plug the signal cable's 15-pin connector into the computer's video port and tighten the two screws on the cable connector. (see figure 2)

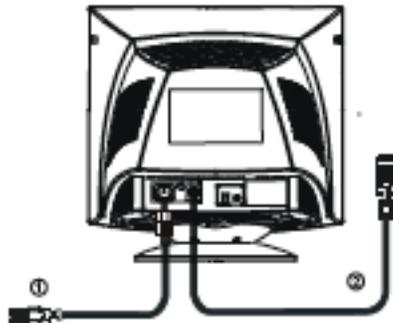


Figure 2 Connecting cables

1.	Power Cord	2.	Signal Cable
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# OPERATING INSTRUCTIONS

## General Instructions

The power switch is located at front panel of the monitor. Press the power switch to turn the monitor on or off. The other control knobs are located at the base of the monitor (See Figure 3). By changing these settings, the picture can be adjusted to your personal preferences.

- The power cord must be connected.
- Connect the video cable from the monitor to the video card.
- To turn the monitor on, press the POWER switch to ON position. The power indicator will light up.
- Your monitor features a unique quick switch system which provides a picture within seconds after the monitor is switched on.

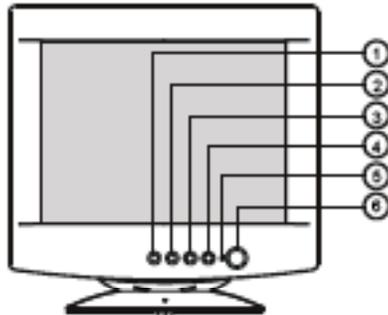


Figure 3 External Control Knob

## EXTERNAL CONTROLS

1.	EXIT Key	4.	MENU
2.	BRIGHTNESS/◀	5.	Power Indicator
3.	CONTRAST/▶	6.	Power Switch

## Notes

- Do not install the monitor in a location near heat sources such as radiators or air ducts , or in a place subject to direct sunlight , or excessive dust or mechanical vibration or shock.
- Save the original shipping carton and packing materials, as they will come in handy if you ever have to ship your monitor.
- For maximum protection, repackage your monitor as it was originally packed at the factory.
- To keep the monitor looking new, periodically clean it with a soft cloth. Stubborn stains can be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents such as thinner, benzene, or abrasive cleaners, since these will damage the cabinet. As a safety precaution, always unplug the monitor before cleaning it.

## Front Panel Control

- **Power** : Press this knob to switch ON/OFF of monitor's power.
- **MENU** : Active OSD menu or function adjust confirm.
- **Contrast** ◐ / ▶ : Adjust contrast or function adjust.
- **Brightness** ✨ / ◀ : Adjust brightness or function adjust.
- **EXIT** : Exit a function or inactive OSD menu.

• **Power Indicator :**

- Green — Power On mode.
- Orange — Off mode

**How to adjust a setting**

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

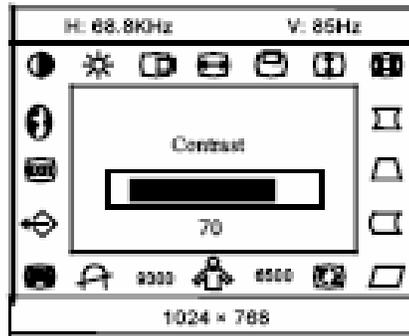


Figure 4 The OSD Message

**Note:** If adjustment or selection of any OSD menu is not made for more than 10 seconds, the current setup will be saved and the OSD will disappear automatically.

**ADJUSTING THE PICTURE**

1		CONTRAST	Adjust the picture contrast.
2		BRIGHTNESS	Adjust the picture brightness.
3		H-CENTER	Adjust the horizontal position of the picture.
4		H-SIZE	Adjust the picture's horizontal size.
5		V-CENTER	Adjust the vertical position of the picture.
6		V-SIZE	Adjust the picture's vertical size.
7		ZOOM	Adjust the picture's horizontal and vertical size simultaneously.
8		PINCUSHION	Adjust the pincushion and barrel
9		TRAPEZOID	Adjust the picture's trapezoid distortion.
10		PIN-BALANCE	Adjust to compensate the pincushion unbalance.
11		PARALLELOGRAM	Adjust the picture to be a rectangle.
12		ROTATION	Adjust the picture tilt to horizontal position.

13		6500°K/9300°K (COLOR TEMPERATURE )	The color temperature for 6500°K is x=0.313, y=0.329 and 9300°K is x=0.283, y=0.297. It presents two different color sets on the screen. You can
14		USER COLOR ( Red / Blue )	If the 9300°K normal white or 6500°K warmer white do not satisfy your desire, properly adjust R . B GAIN controls to obtain your optimum whiteness level.
15		DEGAUSS	If color impurity occurs when moving or swiveling the monitor, press the MENU and degauss to fix the picture condition.
16		MOIRE REDUCE	osphor layout and the video signal. In some cases, you may find the moire very noticeable. Press the MENU to enter in the moire reduce setting. Please adjust the level to the optimum condition. Note: Too high of a setting will cause the picture to shake.
17		RECALL	Press RECALL to restore the monitor to factory settings
18		EXIT	Close OSD window
19		SELECT LANGUAGER	Select the language you like

## FEATURES

### Green monitor

- The monitor has a power saving function This feature will switch off your monitor to conserve energy, after a user-specified period of inactivity.

The power-saving mode is indicated by the light-emitting diode (LED) on the front panel:Properties.

Mode	Signal				Power	
	Cabel	H-Sync	V-Sync	Video	Indicator	Consumption
On	Attached	Yes	Yes	Active	Green	W
Stand-by	Attached	No	Yes	Blank	Orange	W
Suspend	Attached	Yes	No	Blank	Orange	W
Off	Attached	No	No	Blank	Orange	W

\* Power consumption at on mode is measured at 1152X864@75Hz

**IF THERE IS NO VIDEO INPUT SIGNAL OR THE MONITOR CABLE HAS BEEN DISCONNECTED, THE FOLLOWING MESSAGE IS DISPLAYED: NO SIGNAL INPUT OR CABLE DISCONNECTED.**

This monitor is designed to conserve electrical energy by reducing power consumption when there is no video input signal present. When there is no video input signal, this monitor following a time-out period, will automatically switch to an OFF mode. This reduces the monitor's internal power supply consumption. After the video input signal is restored, full power is restored and the display is automatically redrawn. The appearance is similar to a "Screen Saver" feature except the display is completely off. The display is restored by pressing a key on the keyboard or clicking the mouse.

**Plug & Play**

**Plug & Play DDC2B Feature**

This monitor is equipped with VESA DDC2B capability according to the VESA DDC STANDARD. It allows the monitor to inform the host system of its identity and, depending on the level of DDC used, communicate additional information about its display capabilities.

The DDC2B is a bidirectional data channel based on the I2C protocol. The host can request EDID information over the DDC2B channel.

## TECHNICAL SUPPORT (FAQ)

Problem & Question	Possible Solution
Power LED is not on	*Check if the Power Switch is in the ON position *Power Cord should be connected
No Plug & Play	*Check if the PC system is Plug & Play compatible *Check if the Video Card is Plug & Play compatible *Check if the D-15 plug pin of Video Cable is bent *Make sure the Monitor Drivers are installed
Picture is fuzzy	*Adjust the Contrast and Brightness Controls.
Picture bounces or a wave pattern is present in the picture	*Move electrical devices that may cause electrical interference.
The power LED is ON (orange) but there's no video or no picture.	*Computer Power Switch should be in the ON position. *Computer Video Card should be snugly seated in its slot. *Make sure monitor's video cable is properly connected to the computer. *Inspect monitor's video cable and make sure none of the pins are bent. *Make sure computer is operational by hitting the CAPS LOCK key on the keyboard while observing the CAPS LOCK LED. The LED should either turn ON or OFF after hitting the CAPS LOCK key
Missing one of the primary colors (RED, GREEN, or BLUE)	*Inspect the monitor's video cable and make sure that none of the pins are bent.

## Product recycling and disposal

This unit must be recycled or discarded according to applicable local and national regulations. IBM encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed.

IBM offers a variety of product return programs and services in several countries to assist equipment owners in recycling their IT products information on IBM product recycling offerings can be found on IBM's Internet site at <http://www.ibm.com/ibm/environment/products/prp.shtml>.



**Notice:** This mark applies only to countries within the European Union (EU) and Norway.

This appliance is labeled in accordance with European Directive 2002/96/EC concerning waste electrical and electronic equipment (WEEE). The Directive determines the framework for the return and recycling of used appliances as applicable throughout the European Union. This label is applied to various products to indicate that the product is not to be thrown away, but rather reclaimed upon end of life per this Directive.

注意: このマークは EU 諸国およびノルウェーにのみ適用されます。  
この機器は、EU 諸国に対する廃電気電子機器指令 2002/96/EC (WEEE) のラベルが施されています。この指令は、EU 諸国に適用する廃電気電子機器の回収およびリサイクルの手続きを定めています。このマークは、使用済みになった時に指令に従って適正な処理をする必要があることを知らせるために製品の製品に貼られています。

**Remarque :** Cette marque s'applique uniquement aux pays de l'Union Européenne et à la Norvège.

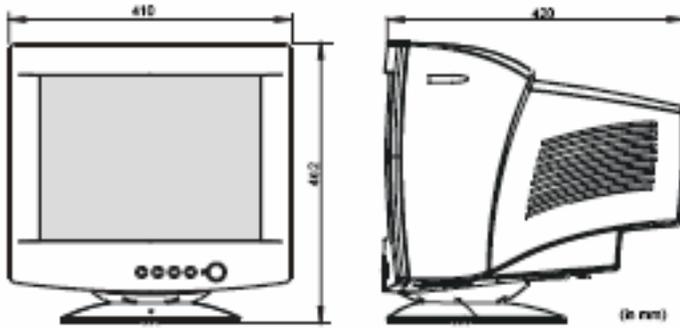
L'étiquette du système respecte la Directive européenne 2002/96/EC en matière de Déchets des Equipements Electriques et Electroniques (DEEE), qui détermine les dispositions de retour et de recyclage applicables aux systèmes utilisés à travers l'Union européenne. Conformément à la directive, ladite étiquette précise que le produit sur lequel elle est apposée ne doit pas être jeté mais être récupéré en fin de vie.

In accordance with the European WEEE Directive, electrical and electronic equipment (EEE) is to be collected separately and to be reused, recycled, or recovered at end of life. Users of EEE with the WEEE marking per Annex IV of the WEEE Directive, as shown above, must not dispose of end of life EEE as unsorted municipal waste, but use the collection framework available to customers for the return, recycling, and recovery of WEEE. Customer participation is important to minimize any potential effects of EEE on the environment and human health due to the potential presence of hazardous substances in EEE. For

proper collection and treatment, contact your local IBM representative.

## APPENDIX A – SPECIFICATIONS

CRT	CRT Size	43.2 cm (17 in.), 90° deflection, 29mm neck
	Viewable Image Size	40.6 cm (16.0 in.), diagonal
	Type	0.27 mm dot pitch.
Input	Video	0.7 Vpp, R,G,B Analog
	Separate Sync	TTL Level
		Positive / Negative
Scanning	H-Frequency	30 - 69 kHz
Frequency	V-Frequency	50 - 130 Hz
Max Resolution		1280 x 1024
Video dot rate		110 MHz
Factory preset mode:		9
User Programmable mode:		8
Power Source		Universal 100 – 240 V ac, 50 Hz / 60 Hz
Operating		0 to 40° C (0 to 104° F)
Humidity		10% to 85% relative, non-condensing
Dimensions	carton	495 mm (1.62 ft) °; 455mm (1.49 ft) °; 525 mm (1.72 ft) (W °; H °; D) (World wide) 540 mm (1.73 ft) °; 537mm (1.72 ft) °; 570 mm (1.82 ft) (W °; H °; D) (China market)
	Monitor&Base	410 mm (1.35 ft) x 402 mm (1.32 ft) x 420 mm (1.38 ft) (W x Hx D)
Weight	Unit(net)	15.5 kg ( Net )
	Carton(gross)	18.0 kg ( Gross ) (World wide) 19.0kg ( Gross ) (China market)
Signal cable		Attached Mini D-sub 15 Male



External Controls:	<b>Switch</b>	<ul style="list-style-type: none"> <li>•Power On/Off switch</li> <li>• MENU Key</li> <li>• Contrast/ UP Key</li> <li>• Brightness/ Down Key</li> <li>• EXIT Key</li> </ul>
	<b>Function</b>	Contrast Brightness H-Center H-Size V-Center V-Size Zoom Pincushion Trapezoid Pin-Balance Parallelogram Rotation K User Color K Degauss Moire Reduce Recall Exit Select Language
Plug & Play		<b>DDC2B</b>
Power Consumption*		<b>68W</b>
Pre-set Display Area		<b>300mm(11.81in)x230mm(9.06in)</b>
Regulatory Compliance		CUL,CB,NEMKO,TUV,CCC,SASO,CE,FCC EK,MIC,BSMI,C-tick,DHHS,DNHW,JEIDA, VCCI,WEEE,TUV-ERGO,NOM,TUV-S

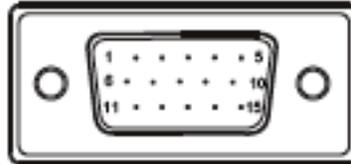
\* Power consumption at on mode is measured at 1152X864@75Hz



## APPENDIX B – FACTORY PRESET TIMING TABLE

STANDARD	RESOLUTION	HORIZONTAL FREQUENCY	VERTICAL FREQUENCY
IBM	720 × 400	31.33kHz	70Hz
VGA	640 × 480	31.47kHz	60Hz
VESA/85	640 × 480	43.27kHz	85Hz
VESA/75	800 × 600	46.88kHz	75Hz
VESA/85	800 × 600	53.67kHz	85Hz
VESA/75	1024 × 768	60.02kHz	75Hz
VESA/85	1024 × 768	68.68kHz	85Hz
VESA/60	1280 × 1024	64.98kHz	60Hz
VESA/75	1152 × 864	67.50kHz	75Hz

### Connector pin assignment



15 - Pin Color Display Signal Cable

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1.	Red	9.	NC
2.	Green	10.	Ground
3.	Blue	11.	Monitor Ground
4.	Ground	12.	DDC-Serial Data
5.	Ground	13.	H-Sync
6.	R-Ground	14.	V-Sync / *V-CLK
7.	G-Ground	15.	DDC-Serial Clock
8.	B-Ground	*	For DDC

**Service Information**

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

Model Type 4938 (for C117)

40K5325 4938-7NU FRU C117 Monitor - Northern Hemisphere BB

40K5326 4938-7NX FRU C117 Monitor - Northern Hemisphere BB

40K5327 4938-7SU FRU C117 Monitor - Southern Hemisphere BB

40K5328 4938-7SX FRU C117 Monitor - Southern Hemisphere BB

40K5329 4938-7EU FRU C117 Monitor -Equatorial BB

40K5330 4938-7EX FRU C117 Monitor -Equatorial BB

40K5343 ----- C117 FRU - Tilt/Swivel Stand for 4938-7\*\* models WW

39M5074 ----- C117 FRU - US Line Cord for 4938-7\*\* models WW