digital™

PCXBV-Tx Auto-Scanning Color Monitor

Installation Guide

Order Number: ER–XBVTX–IM. A01

Digital Equipment Corporation
Maynard, Massachusetts

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Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Any changes or modification made to this equipment may void the user's authority to operate this equipment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio and television reception; however, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

DO NOT attempt to modify this equipment. If modified, the FCC may void your authority to operate this equipment.

Canadian Department of Communications Statement

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.

As an ENERGY STAR™ partner, Digital Equipment Corporation has determined that this product meets the ENERGY STAR™ guidelines for energy efficiency.

Contents

Tables

Figures

Audience

This guide is intended for user's who wish to install the monitor

Conventions

The following conventions are used in this document:

Convention	Meaning
Note	Provides general information.
Caution	Provides information to prevent damage to equipment.
Warning	Provides information to prevent injury.

Introduction

Overview

The PCXBV-Tx Monitor is a 15-inch, 13.9 " viewable, *auto-scanning* color monitor with high resolution, compatible with VGA, SVGA, 1024 x 768, and 1280 x 1024 modes. The PCXBV-Tx has the following features:

- 1280 x1024 non-interlaced mode.
- Power Management system that exceeds EPA ENERGY STAR™ requirements for saving energy.
- VESA Data Display Channel - DDC1/2b
- Complies with Swedish MPR2 standards for low emissions*
- Complies with Swedish TCO ’92 standards for even lower emissions**
- Anti-glare screen with anti-static coating
- Tilt-swivel base

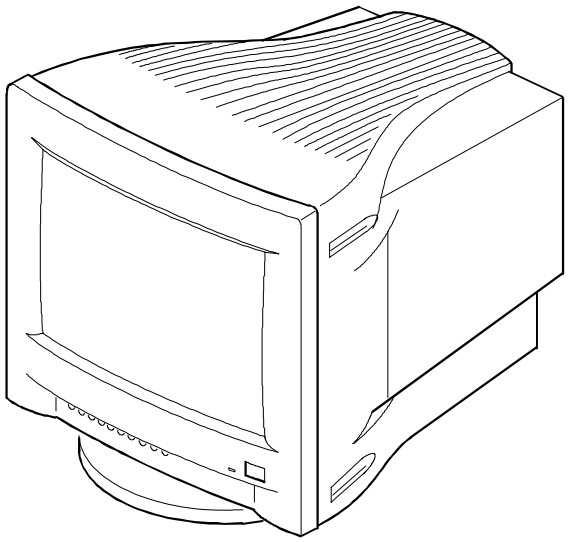

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Figure 1. PCXBV-Tx Color Monitor

*Models PCXBV-TA/TB/TC/TW/TX/TY.

** Models PCXBV-TD/TZ.

This product has been designed and manufactured to minimize the impact to the environment. The monitor also has a power management feature, which a personal computer can control to reduce the monitor's output power levels while not in use, thus saving energy.

DDC (Display Data Channel)

DDC is a communication channel over which the monitor automatically informs the host system about its capabilities. DDC uses a formerly unconnected signal pin in the 15-pin VGA connector. The system performs the "Plug 'n Play" feature if both the monitor and the host implement DDC protocol.

Installation

Installation/Operating Guidelines

Observe the following basic rules for installation and use.

Do . . .

- Use the power cord supplied with the monitor, which is UL-, CSA-, and VDE-approved.
- Turn the monitor off when not being used for an extended period of time, or use Power Management if applicable.

Do Not . . .

- Overload the ac outlet.
- Move the monitor on a stand over carpet or thresholds.
- Push objects into the monitor's openings.
- Add accessories that are not designed for this monitor.
- Operate the monitor near water or in a damp environment, which could cause and an electrical hazard.
- Operate the monitor near magnets, motor devices, transformers, high power lines, or large steel pillars, which can cause distortion in the picture.
- Obstruct the ventilation openings in the monitor's cabinet, such as placing the monitor on a rug or within an enclosure.
- Place the monitor near a radiator or heat source.

Tilt/Swivel Stand Installation

To install the stand:

1. Insert the hooks on the stand into the slots in the bottom of the monitor.
2. Apply pressure near the latch so it is secure. (To remove the stand, pull on the latch).

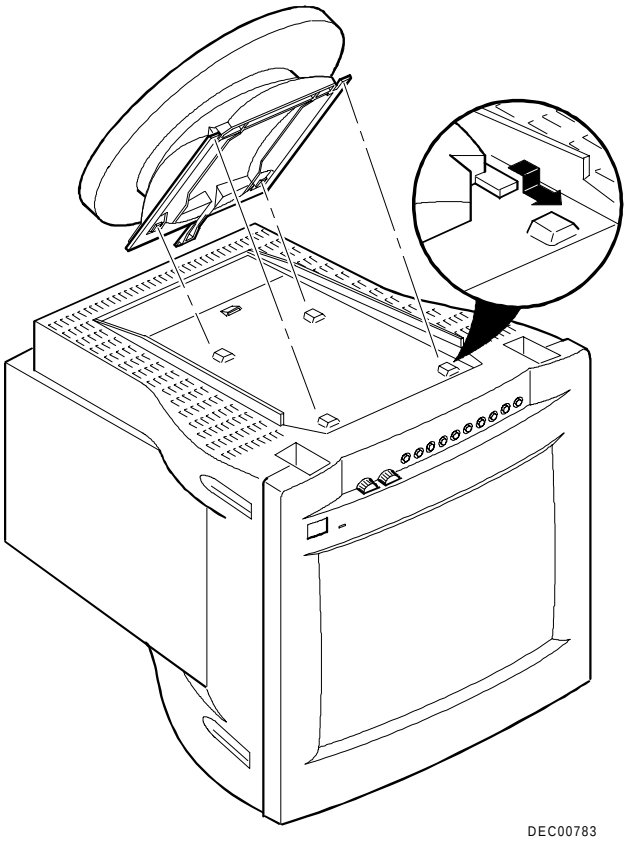

Figure 2. Tilt/Swivel Stand Installation

Monitor Installation

To connect the monitor:

1. Make sure the power to the monitor and the computer is off.
2. Connect the monitor's signal cable to the monitor, then to the 15-pin interface connector on the High Resolution Graphic Video Adapter on the back of the computer.
3. Plug the ac power cord to the monitor, then to a properly-grounded ac electrical outlet.

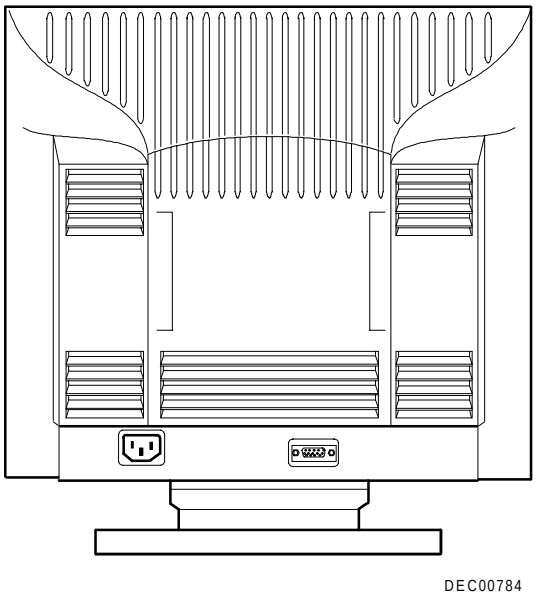

Figure 3. PCXBV-Tx Monitor (Rear View)

Turn On Power to Monitor

Push the power switch button (2) to turn on the monitor. The power indicator LED (1) to the left of the switch should light green.

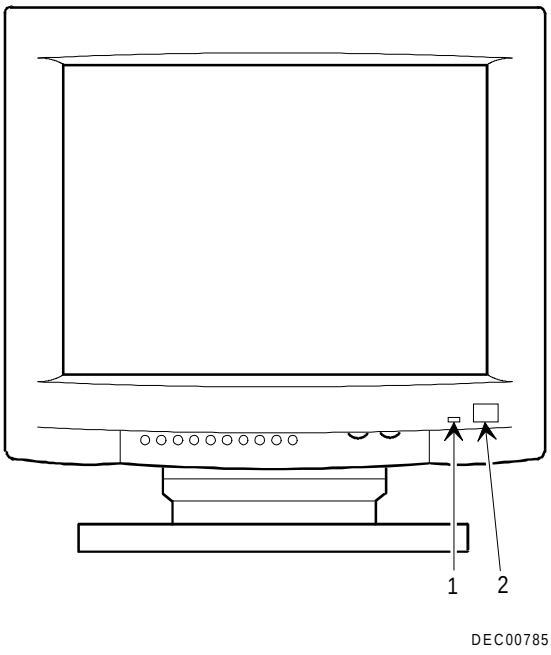

Figure 4. Power LED and Switch

Monitor Controls

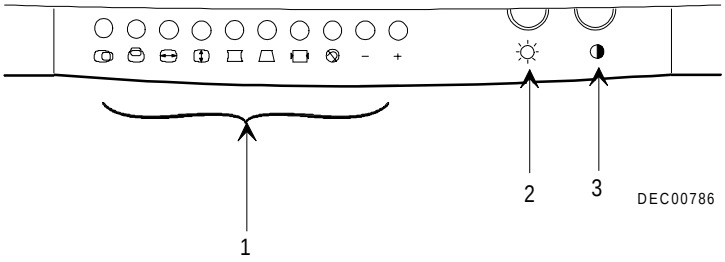

Figure 5. Monitor Controls

Table 1. User Controls and Functions

Item	Icon	Name	Function
1		H-Center	Adjusts the horizontal centering.
		V-Center	Adjusts the vertical centering.
		H-Size	Adjusts the horizontal size.
		V-Size	Adjusts the vertical size.
		Side Pin Control	Adjusts the vertical sides from bowing in or out.
		Trapezoid	Adjusts the bottom to be the same as the top.
		Recall	Recalls the factory default settings.
		Degauss	Clears picture impurity caused by moving the monitor to a new location.
	–	Decrease	Decreases the value of the selected item.
	+	Increase	Increases the value of the selected item.
2		Brightness	Adjusts black level for comfortable viewing.
3		Contrast	Adjusts white level for comfortable viewing.

Servicing

Cleaning the Monitor

To clean the monitor:

1. Unplug the monitor.
2. Clean the monitor with a soft, slightly damp cloth. **Do not** use an aerosol cleaner directly on the screen.

CAUTION

Do not use benzene, thinner, or any volatile substance to clean the monitor, as these products may discolor the monitor's cabinet. Likewise, do not place rubber or vinyl on the monitor.

Maintenance and Troubleshooting

Identifying and Correcting Problems

The following can be sources of problems:

- Communications cables
- Host system
- Nearby power or electrical sources

Troubleshooting Table

Use Table 2 to identify and correct any problems areas.

Table 2 Identifying and Correcting Problems

Symptom	Possible Cause	Suggested Solution
Display does not appear.	Brightness or contrast control is set too low. Power Management feature is active in the off state. There is no power.	Increase the *brightness* and *contrast* control settings. Press any key and allow 20 seconds for monitor to warm up. Check the power cord. Use another ac outlet.
Color impurity	Magnetic fields can build up on the CRT.	Press the *degauss* switch to demagnetize the CRT. See **Caution** below.
Video display has moving dots or distorted lines. The display rolls or flickers.	There is electromagnetic interference. Adjustments may be out of alignment.	Move any electromagnetic device, such as a fan or motor, away from the monitor or move the monitor. Press the *recall* button until the LED changes from amber to green. See **Caution** below.

CAUTION: Pressing the **Recall** button, or the **Degauss** button, for longer than 5 seconds, resets all of the data in the user memory area so you must remake your user adjustments.

Specifications

Scanning Modes

Table 3 Display Modes and Addressability

Mode	Display Mode	Address-ability	Horizontal Frequency (KHz)	Vertical Refresh (Hz)	H Sync	V Sync
1	VGA 60	640 x 480	31.47	59.95	–	–
2	720 x 400, 70	720 x 400	31.47	70.08	–	+
3	1024 x 768 8514 (I)	1024 x 768	35.52	86.96	+/–	+/–
4	VGA VESA 75	640 x 480	37.50	75.00	–	–
5	SVGA/60	800 x 600	37.88	60.32	+	+
6	SVGA VESA 75	800 x 600	46.88	75.00	+	+
7	1024 x 768 60	1024 x 768	48.36	60.00	–	–
8	1024 x 768 VESA 70	1024 x 768	56.48	70.07	–	–
9	1024 x 768 VESA 75	1024 x 768	60.02	75.03	+	+
10	1280 x 1024 60Hz S3	1280 x 1024	64.98	60.10	–	–

Monitor Specifications

Table 4 Monitor Specifications

Monitor	38.1 cm (15-inch, 13.9 maximum viewable) non-glare, non-static
Active Area	26.7 x 20.0 cm (10.5 x 7.87 in)
Height	40.4 cm (15.9 in) , includes tilt/swivel base
Width	37.3 cm (14.7 in)
Depth	38.8 cm (15.3 in)
Swivel	±45°
Tilt	-5° to +10°
Weight	13.5 Kg (29.7 lb)
Video Signal	0.7V p-p R, G, B color; separate Sync (positive or negative); 75Ω TTL
Horizontal Scan Rate	30 - 65 kHz
Vertical Scan Rate	50 - 120, non-interlaced
Connector	15-pin D-sub
Power input	100 - 240 Vac, 1.0 amp maximum, 50 - 60 Hz.
Environment	
Operating Temperature	0 - 40 °C
Humidity	10 - 90 % relative humidity (noncondensing)

Power Management System

The monitor has three power-saving states indicated by the LED on the front panel. For proper operation of this Power Management System, make sure that the monitor signal cable is connected to the host system and that the host is On.

Table 5 Power Saving States

LED	State	Power Consumption (Watts)*	Recovery Time
Green (Normal)	On	90 (max)	n/a
Blinking Amber/Green	Standby	< 70	3 s
Amber	Suspend	< 15	3 s
Alternating Amber/Off	Off	< 5	15 s

*These power-saving states exceed the Environmental Protection Agency (EPA) Energy Star requirements using the Video Electronics Standards Association (VESA) methodology for Display Power Management Signals.

Environment

This monitor has been designed and manufactured to minimize the impact to the environment. The packaging is recyclable and the monitor can be returned for proper disposal.

Acoustic Levels

Preliminary declared values per ISO 9296 and ISO 7779:

	Sound Power Level[1]		Sound Pressure Level[2]	
	L_{Wad} B		L_{pAm} dBA	
	Idle	Operate	Idle	Operate
PCXBV-Tx	N/A	3.3	N/A	25

[1] 1 B = 10 dBA

[2] Operator position

Asbestos

This monitor does not use asbestos in any form.

Flame Retardants

The enclosures do not contain polybrominated diphenylether (PBDE) as a flame retardant additive; therefore, they do not emit toxic dibenzofuran and dibenzodioxin gases.

Ozone Depleting Substances (ODS)

These monitors are in full compliance with the labeling requirements in the U.S. Clean Air Act Amendments of 1990. It does not contain, nor is it manufactured with, a Class 1 ODS, as defined in Title VI section 611 of this act.

PVC

The plastic enclosures are not made of rigid PVC. The material has a non-halogenated, flame-retardant system and is cadmium free.

Recyclable Material

The packaging material can be recycled, or you can save it to return the monitor to a service center for repair or disposal.

Monitor Disposal

WARNING

If you need to dispose of a monitor, ask a qualified service representative for the proper procedure. Improper disposal could result in personal injury from implosion.

VCCI Class 2