# Compaq MP1400 Microportable Projector

User's Guide

**COMPAQ**

# Notice

## *User's Guide*

**Compaq MP1400 Microportable Projector**

**Compaq Computer Corporation**

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# Using This Guide

The User's Guide includes general information about your projector, troubleshooting and diagnostics, and technical specifications.

## Symbols and Conventions

The following words and symbols mark special messages throughout this guide:

**WARNING:** Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

**CAUTION:** Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

Text set off in this manner presents clarifying information, specific instructions, commentary, sidelights, or interesting points of view.

# Warning Messages

Before operating the projector, please read the following messages.

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 **WARNING:**

- To reduce the risk of harm to your eyes, do not look directly into the bright light of the projection lens.

- To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.

- To reduce the risk of electric shock, do not disassemble the projector other than to replace the lamp module.

- To reduce the risk of personal injury, allow the unit to cool down before changing the lamp, and always unplug the power cord first.

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*Chapter 1*

# Getting Started

## Product Features

The Compaq MP1400 Microportable Projector generates crisp, clear images onto a projection screen by using Digital Light Processing (DLP) technology. The features include:

- $800 \times 600$ native SVGA resolution

- Maximum input resolution: $1024 \times 768$ (XGA)

- User replaceable 120-watt high-efficiency, long-life lamp

- Electronic zoom to $32\times$

- Standard VGA analog connection

- All digital DFP connection

- Convenient auto-image adjustment

- 16.7 million displayable colors

- Multilingual on-screen adjustment menu

- Plug and Play capability

- Flash ROM upgradeable

- Compaq Presentation utility for ease of use in setting up the projector with portable computers

- Compaq Projector Display Assistant utility to adjust screen settings

- Carrying case and projector carrying handle included

- Security lock slot

- Optional multimedia adapter and remote control

# Introduction
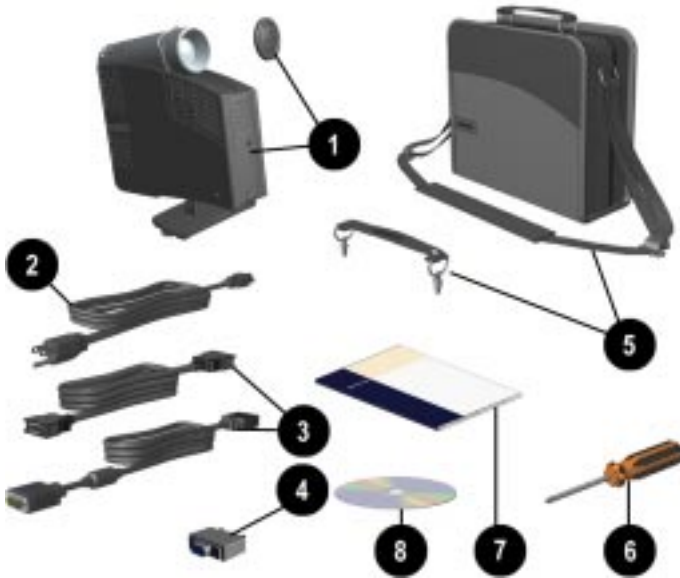


Before setting up your Compaq MP1400 Microportable Projector, be sure your shipping box includes the following items:

❶  Projector and lens cap

❷  10-foot power cable

❸  Two signal cables

   ■ One VGA signal cable for use with computers, portables, and some handheld products

   ■ One DFP (digital flat panel) to DVI (digital video information) upgrade cable for use with compatible digital sources

❹  One RS232 (serial) to DVI upgrade adapter

❺  Carrying case and separate projector carrying handle

❻  Phillips screwdriver

❼    Quick Setup card and other documentation

❽    CD-ROM containing the Compaq Presentation utility
     program, Compaq Projector Display Assistant utility,
     and a *User's Guide* in ten languages

If your shipping box does not contain all of the listed items, please
contact your Compaq authorized dealer, reseller, or service
provider.

## Setting Up the Projector

To set up the projector, follow the instructions below and on the
following pages. Separate setup instructions are described for the
following products:

■ Portable and desktop computers

■ Handheld computers with VGA capability

■ VCR, DVD, or camcorder (requires optional Multimedia
  Adapter)

✎    The projector is hot pluggable and can be connected, while
     powered on, to these products while they are powered on.

**IMPORTANT:** Place the projector on a stable desk or table at a
distance not less than 3.3 feet and not greater than 35 feet (1 meter
to 10.8 meters) from the projection screen.

⚠ **WARNING:** To reduce the risk of electric shock or damage to your equipment:

- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.

- Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.

- Disconnect power from the projector by unplugging the power cord from the electrical outlet.

- Do not place anything on power cords or cables. Arrange them so that no one may accidentally step on or trip over them. Do not pull on a cord or cable. When unplugging from the electrical outlet, grasp the cord by the plug.

# Balancing the Projector

The projector has a built-in elevator foot used to balance and elevate the projector. Always balance the projector before connecting anything to it.

To balance the projector, turn the foot sideways.



⚠️ **WARNING:** To reduce the risk of the projector tipping or overturning, always turn the elevator foot 90 degrees from its original position when the projector is being set up or before pressing the elevator button.

## Connecting the Projector to a Portable Computer

1. Rotate the elevator foot to balance the projector.

2. Connect one end of the projector signal cable to the projector and the other end to the VGA connector ❶B or the DFP connector ❶A on the portable computer and tighten the screws. Use the VGA cable OR the DFP cable; do not connect both cables.

✎ Be sure the signal cable aligns with the connector. Do not force the cable onto the connector or you may damage the signal cable or the projector.

3. Connect one end of the power cord ❷ into the back of the projector, and the other end to an electrical outlet that is easily accessible and close to the projector.



4. Turn on the projector first, then turn on the computer.

✎ For more information on setting up the projector with a portable computer, see the white paper included on the CD-ROM.

## Connecting the Projector to a Desktop Computer

1.  Rotate the elevator foot to balance the projector.

2.  Connect one end of the projector signal cable ❶B to
    the projector and the other end to the VGA connector
    on the desktop computer and tighten the screws.

✎ If your computer has a digital connector, connect one end of
the digital flat panel (DFP) signal cable ❶A to the digital
connector on the projector and the other end to the digital
connector on the computer. Connect either the VGA cable
OR the DFP cable; do not connect both cables.

✎ Be sure the signal cable aligns with the connector. Do not
force the cable onto the connector or you may damage the
signal cable or the projector.

3.  Connect one end of the power cord ❷ into the back
    of the projector, and the other end to an electrical
    outlet that is easily accessible and close to the
    projector.

4.  Turn on the projector first, then turn on the computer.
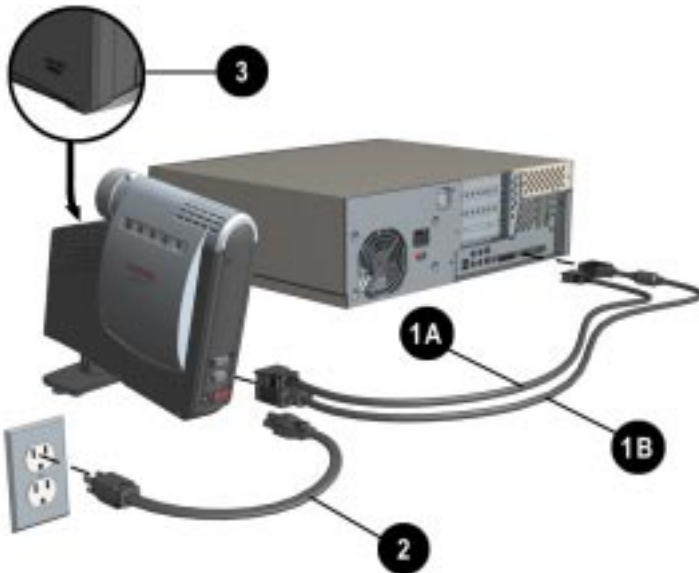
✎ For security purposes, this projector has been fitted with a
security lock slot ❸ (located on the left, front side) for use with
a security cable lock that can be purchased separately at most
computer stores.

# Connecting the Projector to a Compaq PC Companion

To connect the projector to a Compaq PC Companion, the PC Companion must have a male connector adapter and a VGA-out PC Card with a 15-pin connector.

✎ The VGA-out PC Card with the 15-pin connector is not included with the Compaq PC Companion. It is sold separately. For information on purchasing this card, call your Compaq authorized dealer, or reseller. To locate a reseller near you, call Compaq at 1-800-AT-COMPAQ or visit the Compaq web site at http://www.compaq.com/products.

1. Connect one end of the signal cable ❶ to the projector and connect the other end to the VGA-out PC Card. The VGA-out PC Card may be inserted into the PC slot on the Compaq PC Companion before or after connecting the signal cable.

2. Connect one end of the power cord ❷ into the back of the projector, and the other end to an electrical outlet that is easily accessible and close to the projector.

✎ Be sure the signal cable aligns with the connector. Do not force the cable onto the connector or you may damage the signal cable or the projector.

3. Turn on the projector first, then turn on the computer. Refer to the "Powering On the Projector" section later in this chapter for instructions on turning on the projector.

## Connecting the Projector to Other Video Sources

To connect the projector to a camcorder, DVD player, or VCR, the optional Compaq Multimedia Adapter must be connected to the projector. The optional Compaq Multimedia Adapter has been specifically designed to fit the Compaq MP1400 Microportable Projector. This adapter converts signals from the camcorder, DVD, or VCR, for compatibility with the projectors.

✎ The optional Compaq Multimedia Adapter is not included with the Compaq MP1400 Microportable Projector. It is sold separately and includes a remote control. For information on purchasing the optional Multimedia Adapter and remote control, call your Compaq authorized dealer, or reseller. To locate a reseller near you, call 1-800-AT-COMPAQ or, to purchase directly from Compaq, visit the Compaq web site at http://www.Compaq.com/products/projectors.

For information on attaching and using the optional Compaq Multimedia Adapter, refer to Chapter 3, "Using the Optional Multimedia Adapter."

# Powering On the Projector

Follow these instructions to power on the projector:

1.  Ensure that the power cord and signal cable are securely connected.

✎   Make sure the projector is perpendicular to the projection screen.

2.  Remove the lens cap ❶ from the projector by pulling it straight out.

3.  Turn on the Main power switch ❷ on the back of the projector and allow the projector to warm up for one to two minutes.

✎   When the projector has warmed up, the Compaq startup screen displays, and the LED on the **STANDBY** button ❸ turns green.



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4. Power on your source (computer, PC Companion, or VCR, etc.) and launch the software application being used to display images on the projection screen. If applicable, press the Function key on the computer designated for external display.

✎ If there is a long delay between the time the startup screen displays and the time the presentation software is launched, the lamp may shut off and the projector will automatically go into standby mode. If this happens, press the **Standby** button ❸ to power on the lamp.

✎ When the startup screen disappears, the video from the attached computer displays. If there is no incoming video, the "Check Video Cable" message will display on the projection screen.

# Powering Off the Projector

Follow these instructions to power off the projector.

1. Press the **Standby** button to turn off the projector lamp.

The message "Going to Standby" displays, and the LED on the **Standby** button blinks amber.

**IMPORTANT:** Allow the projector to cool down for about five minutes before turning it off.

2. Turn off the Main power switch on the back of the projector.

3. Disconnect the power cord from the electrical outlet and the projector.

**CAUTION:** After the projector is turned off, wait at least one minute before turning the projector back on. Failure to follow this caution can result in damage to the projector.

# Adjusting the Projected Image

There are two ways to adjust the projected image:

- Adjusting the projector height

- Adjusting the projector focus

## Adjusting the Projector Height

This projector has a built-in elevator foot that can raise the projector approximately one inch. To adjust the height:

1.   Ensure the foot is turned sideways to balance the projector.

2. Raise the projector to the desired display angle, then press the elevator button ❶ on the front of the projector to release the foot ❷.



3. To lower the display angle, press the elevator button on the front of the projector again and press down on the projector to lower it.

⚠ **WARNING:** To reduce the risk of the projector tipping or overturning, always turn the elevator foot 90 degrees from its original position before pressing the elevator button.

✎ To fine-tune the leveling of the projector, rotate the knobs ❸ on either side of the foot and adjust the leveling.

## Adjusting the Projector Focus

To focus the projected image, rotate the focus ring ❶ until the image is clear. The projector will focus at distances from 3.3 feet to 35.64 feet (1 meter to 10.8 meters).

If vertical bars appear on the display after adjusting the focus, press the **Resync** button ❷ to automatically synchronize and track the display. If the button does not correct the display, use the Digital Conversion feature in the on-screen menu to manually adjust the synchronization and tracking (refer to the "Analog On-Screen Menu Adjustments" section in Chapter 2).

# Image Size Adjustment
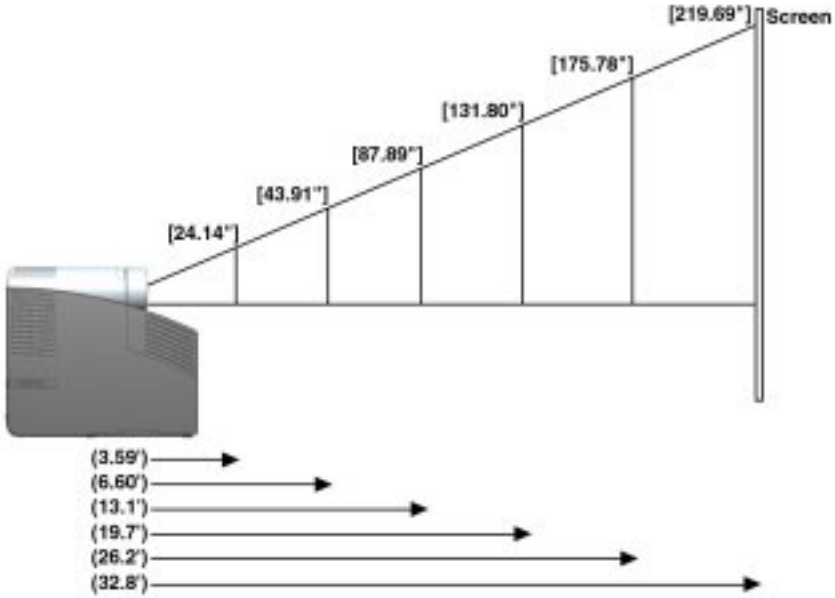


| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Screen Diagonal** | 33.0" | 43.9" | 65.9" | 87.9" | 109.8" | 131.8" | 153.8" | 175.8" | 197.7" | 219.7" |
| **Screen Width** | 26.4" | 35.2" | 52.7" | 70.3" | 87.8" | 105.5" | 123.0" | 140.6" | 158.1" | 175.8" |
| **Screen Height** | 19.8" | 26.3" | 39.5" | 52.7" | 65.9" | 79.1" | 92.3" | 105.5" | 118.7" | 131.8" |
| **Projection Distance** | 4.9' | 6.6' | 9.8' | 13.1' | 16.4' | 19.7' | 23.0' | 26.2' | 29.5' | 32.8' |

✎ If the projector is used at the maximum distance indicated in this chart, the display may appear to be dimmer than usual.

# Using the Compaq Presentation Utility

The Compaq Presentation utility included on the CD-ROM is for use with portable computers only. The purpose of the Presentation utility is to disable power management features of the portable computer while the Compaq MP1400 Microportable Projector is connected to it. The utility also disables the computer's screen savers and auto-suspend feature.

A graphical user interface (GUI) is required to control the MP1400 Projector's resolution settings and the enabled/disabled status. The Compaq Presentation utility supports the following GUI operating systems: Microsoft Windows 95, Windows 98, Windows 2000, and Windows NT 4.0.

To install the Compaq Presentation utility onto a portable computer:

1. Insert the CD-ROM into the computer's CD drive. The CD-ROM menu will automatically launch on the screen.

2. From the launch menu, click on **Install Software→Install Compaq Presentation Utility** and follow the on-screen instructions.

3. Select **Next** in the dialog box to install the program. The Compaq Presentation utility installs on the hard drive and prompts you to restart the computer. Upon restart, a program icon (displaying a yellow beam of light) is placed in the Windows system tray.

4. Double-click the program icon to launch the Presentation Properties dialog box.

5. Set the Presentation Mode Duration time in the dialog box or accept the default settings to turn off the computer's power management features and screen saver features.

6. Select **OK** from the dialog box to execute the settings. The software dialog box closes, and the computer is ready to continue with the presentation.

The Presentation utility is provided on the CD-ROM in the following languages: English, Dutch, French, German, Italian, and Spanish. When setup begins, the appropriate language is installed on the computer according to the language of the computer's operating system. If the computer's operating system language is not included as one of the six languages above, then, by default, the English version will install on the computer.

## Using the Compaq Projector Display Assistant

The Compaq Projector Display Assistant utility included on the CD-ROM is an adjustment tool for improving the display quality of the MP1400 projector. Adjustments need to be made when the projector is first attached to a computer or when a different display mode is selected for the first time. This utility can be run directly from the CD-ROM or copied to a directory on the computer hard drive and run from there.

To run the Projector Display Assistant for Microsoft Windows 95, Windows 98, Windows 2000, or Windows NT 4.0:

1.  Insert the CD-ROM into the computer's CD drive. The CD-ROM menu will automatically launch on the screen.

2.  From the launch menu, click on **Install Software→Install Compaq's Projector Display Assistant** and follow the on-screen instructions.

*Chapter 2*

# Using the Projector

## Identifying the Projector Buttons



| Symbol | Control | Function |
| --- | --- | --- |
| ❶ ⏻ | Standby button and LED | Powers the projector lamp on and off. The Standby LED changes color to indicate the following operating modes:<br><br>1. Green glow indicates power is on.<br>2. Amber glow indicates warm-up or suspend modes.<br>3. Flashing amber indicates the projector is going into standby mode and cannot be restarted until the LED glows amber steadily.<br>4. All five LED buttons rapidly flashing amber indicates the lamp has overheated and the projector has automatically shut down. |
| ❷ ▤ | Select button | 1. Launches first, second, and third-level on-screen menus.<br>2. Exits the on-screen menus. |

**Projector Buttons** *(Continued)*

| Symbol | | Control | Function |
|---|---|---|---|
| ❸ | − | Minus button | Selects and adjusts the on-screen menu functions. |
| ❹ | + | Plus button | Selects and adjusts the on-screen menu functions. |
| ❺ | R | Resync button | Automatically synchronizes the projector to track the input source. |

**IMPORTANT:** To use standby mode, press the **Standby** button and, after a 6- to 10-second delay, the unit enters standby mode and the projector lamp turns off. A "Going to Standby" message appears on the screen for the duration of the 6- to 10-second delay. When the message disappears from the screen, there is a 45-second delay before the lamp can be turned back on. Wait 45 seconds to allow the lamp to cool before pressing the **Standby** button again.

# Introducing the On-Screen Menu

The adjustments for screen settings are located in the on-screen menu and can be viewed in one of seven available languages.

## Analog On-Screen Menu Adjustments

To display the Analog on-screen menu, press the **Select** button on the projector. The following table shows the functions at each level:

| Analog Menu | Analog Menu Level 2 | Analog Menu Level 3 |
|---|---|---|
| Brightness | Adjustment scale | |
| Contrast | Adjustment scale | |
| Position | Horizontal Position<br>Vertical Position<br>Save and Return<br>Cancel | Adjustment scale<br>Adjustment scale |
| Zoom | Zoom<br>Panning Left-Right<br>Panning Up-Down | Adjustment scale<br>Adjustment scale<br>Adjustment scale |
| | Save and Return<br>Cancel | |
| Keystone | Adjustment scale | |
| Picture | Dark—Light | |

*Continued*

**Analog On-Screen Menu** *(Continued)*

| Color | (Color Temperature) | |
|---|---|---|
| | Custom Color | Adjustment scale |
| | Saturation | Adjustment scale |
| | Save and Return | |
| | Cancel | |
| Digital Conversion | Clock | Adjustment scale |
| | Clock Phase | Adjustment scale |
| | Save and Return | |
| | Cancel | |
| Language | Deutsche | |
| | English | |
| | Espanol | |
| | Francais | |
| | Italiano | |
| | Nederlands | |
| | Brazilian Portuguese | |
| | Save and Return | |
| Menu Location | Up-Down | Adjustment scale |
| | Left-Right | Adjustment scale |
| | Save and Return | |
| | Cancel | |
| Management | Power Saver | On-Off |
| | Lamp Hours | Display hours - 5 digits |
| | Reset Lamp Hours | Confirmation |
| | Flip Image | Horizontal |
| | | Vertical |
| | | Both |
| | | Save and Return |
| | | Cancel |
| | Serial Number | Display Serial Number |
| | Master Reset | Confirmation |
| | Save and Return | |
| | Cancel | |
| Factory Reset | Confirm Reset | |
| Exit | | |

## Adjusting the On-Screen Menus

To launch and make adjustments to the on-screen menus:

1. Press the **Select** button ❶ located on the projector panel or, if you are using the optional remote control, press the **Menu** button. The menu will display on the projection screen.

2. To select a function, press the **Minus** (-) button ❷ to scroll down the Display menu. To reverse the scroll direction, press the **Plus** (+) ❸ button.

3. Highlight the function to be adjusted and press the **Select** button ❶ again or, if you are using the optional remote control, press the **Menu** button.
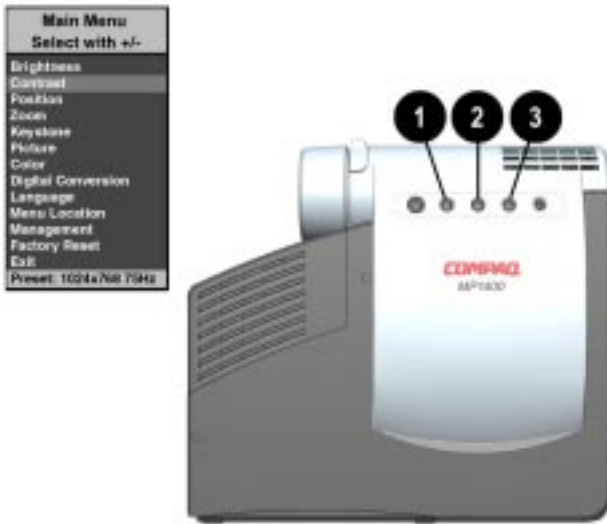


✎ The bar on the bottom of the on-screen menu shows the current operating resolution.

For example, to select the **Position** function, press the **Minus** button ❷ until **Position** is highlighted, then press the **Select** button ❶ to display the level 2 menu for **Position.** The level 2 menu displays expanded menu items.

4. To make a selection from the level 2 menu, press the **Minus** (-) button to scroll down the level 2 menu, or press the **Plus** (+) button to reverse the scroll direction.

5. Highlight the selection and press the **Select** button to confirm the selection. The level 3 menu displays.

6. Level 3 for **Position** functions display the adjustment scales. Use the **Minus** button to decrease and the **Plus** button to increase the screen Horizontal and Vertical positions.

✎ Some menu functions display adjustment scales in the level 2 menu, while others display adjustment scales in the level 3 menu.

7. After making the adjustment, select **Save and Return.** To void any changes made, select **Cancel.**

8. To exit from the on-screen menu, select **Exit** from the Main menu. If the display is a second- or third-level menu, select **Save and Return** or **Cancel,** then select **Exit** from the Main menu.

The on-screen menu is easy to use; just follow the instructions on the screen.

## Explaining Functions in the On-Screen Menu

■ Brightness and Contrast—Adjusts the displayed image brightness and contrast ranges from 0 to 100.

✎ An example of a standard setting is to set the contrast level to 67 and the brightness level to 50.

- Position—Fine-tunes the horizontal and vertical positions of the display.

- Zoom—Magnifies an image up to a factor of 32 on the projection screen (zooms in to a specific area on the screen, and pans left, right, up, and down).

- Keystone—Adjusts image distortion at the top and bottom widths of the screen caused by tilting the projector.

- Picture—Adjusts the gamma value or degree of contrast of darkness or light for the projected image.

- Color—Adjusts color balance to compensate for ambient conditions using three submenus:
  - (Color Temperature)—The factory default.
  - Custom Color—Modifies the color temperature balance.
  - Saturation—Magnifies the color intensity.

- Digital Conversion—Improves picture stability of user modes by adjusting:
  - Clock—Increase/decrease the value to stretch or shrink the image on the screen.
  - Clock Phase—Increase/decrease the value to minimize video distortion or video jitter.

    ✎ If the projector image becomes distorted when adjusting the Clock and Clock Phase values, continue adjusting the values until the distortion disappears. To restore the factory settings, select **Factory Reset** in the on-screen menu, or press the **Resync** button on the projector.

- Language—Allows the user to change the on-screen display to one of seven languages in their native spelling. The current language is highlighted. Select another language in which to display all menu functions.

- Menu Location—Positions the on-screen menu at a convenient location on the projector screen; positions the menu up or down, left or right.

- Management—Allows the user to control power saver characteristics of the display, or to view the cumulative lamp hours, reset the lamp hour timer, view the unit's serial number, or perform a Master Reset.

- Factory Reset—Resets the current operating option to its original factory setting.

## Special On-Screen Messages

The following on-screen messages will appear on the projection display to identify the following conditions:

- **Check Video Cable**—Indicates the video cable may not be plugged into the projector or the selected video input is not accurate.

- **Input Signal Out of Range**—Indicates the projector is unable to access the appropriate input signal.

- **2 Inputs Active - Remove One**—The projector has two data inputs: one is an analog D-Sub input, and the other is a digital DFP input. This message indicates that both inputs are active simultaneously and the user should detach one of them.

- **Going to Standby**—Indicates the projector is entering a sleep mode or is powering off the lamp.

- **Lamp May Fail Soon, Replacement Suggested**—Indicates the lamp is approaching failure. The message will remain on the screen for five seconds or until the on-screen menu **Select** button is pressed.

When the optional Compaq Multimedia Adapter is attached to the projector, the following messages, in addition to the previous messages, will appear on the projection display to identify the following conditions:

■ **Analog, Use Source to change input—**Indicates Analog and DVI inputs are both connected. Since the projector will default to display Analog, you must use the **Source** button to switch to DVI.

■ **DVI, Use Source to change input**—Indicates DVI along with other video sources and/or analog sources are present. Analog is the default setting. Use the **Source** button to switch to DVI.

■ **Analog, Use PIP for picture-in-picture or use Source to change input**—Indicates Analog plus video and DVI are present. Audio is the default setting. Use PIP for picture-in-picture, or change setting using the **Source** button.

■ **Composite Video, Use Source to change input**—Indicates Composite Video or other inputs present. Default is Composite Video. Use the **Source** button to change the setting.

■ **S-Video, Use Source to change input**—Indicates S-video with other inputs are active. Use the **Source** button to change the setting.

*Chapter 3*

# Using the Optional Compaq Multimedia Adapter

## Identifying the Multimedia Adapter Components



| Item | Component | Function |
|------|-----------|----------|
| ❶ | Infrared Receiver | Interprets signals received from the remote control |
| ❷ | Speaker | Provides audio performance |
| ❸ | Volume +/− | Increases/Decreases volume |
| ❹ | S-Video connector | Connects camcorders or DVDs |
| ❺ | 8-pin connector | Connects back to computer allowing remote mouse functionality |
| ❻ | DVI connector | Connects digital equipment |
| ❼ | Source button | Selects between two video or two computer inputs |

*Continued*

**Multimedia Adapter Components** *(Continued)*

| Item | Component | Function |
|------|-----------|----------|
| ❽ | Video LED | When lit, indicates video input |
| ❾ | Computer LED | When lit, indicates computer input |
| ❿ | Video/RCA connector | Connects video equipment |
| ⓫ | Audio-in connector | Connects audio equipment, videocassette recorders and DVD players, allowing sound to be played. |
| ⓬ | Install buttons | Use to install adapter on projector |

✎ The optional Compaq Multimedia Adapter is not included with the Compaq MP1400 Microportable Projector. It is sold separately and includes an optional remote control. For information on purchasing the optional Multimedia Adapter and remote control, call your Compaq authorized dealer, or reseller. To locate a reseller near you, call 1-800-AT-COMPAQ or, to purchase directly from Compaq, visit the Compaq web site at http://www.compaq.com/products/projectors.

## Attaching the Optional Multimedia Adapter to the Projector

1. Push in the two buttons ❶ on the bottom sides of the optional Multimedia Adapter.

2. Insert the hooks on top of the optional Multimedia Adapter into the upper slots ❷ on the projector by inserting and pushing upward, then insert the adapter plug into the digital connector ❸ on the back of the projector.

3. Release the buttons on the sides of the optional Multimedia Adapter to complete the connection.



✎ When the adapter is activated, one of the LEDs ❹ on the Multimedia Adapter turns green.

## Connecting a Camcorder, VCR, or DVD Player to the Optional Multimedia Adapter

✎  A rubber boot cover protects the DFP (digital) connector on the projector. Be sure to remove the cover before connecting the Multimedia Adapter to the projector and replace the cover when the projector is not in use to prevent electrostatic discharges from damaging the connector.

1.  Use an RCA cable to connect a VCR to the video connector ❶ on the optional Multimedia Adapter. Use an S-video cable to connect a camcorder or DVD player to the S-video connector ❷ on the optional Multimedia Adapter.

2.  Connect one end of the power cord ❸ into the back of the projector and the other end to an electrical outlet that is easily accessible and close to the projector.

3.  To connect the multimedia adapter speaker for sound, connect the RCA audio cable ❹ to the audio-in port on the optional Multimedia Adapter and the audio-out port on the VCR, camcorder, or DVD player. If you are not using the speaker at this time, skip to the next step.
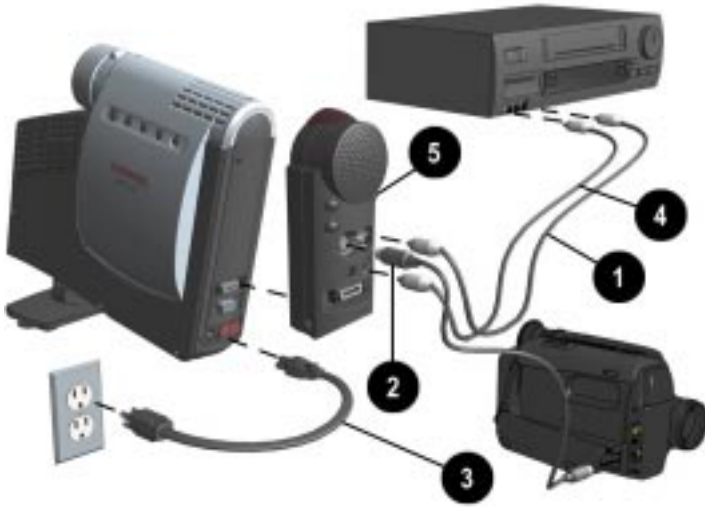
4. Press the **Source** button ❺ on the Multimedia Adapter to toggle and select between the connected input sources.

The optional Compaq Multimedia Adapter can remain attached to the projector, or it can be removed and stored in the carrying case.

## Connecting a Video Player

> ✎ If your video player uses a round, one-prong composite video connector, use the RCA video cable. If your video player uses a round, four-prong S-video connector, use the S-video cable. Both cables are included with the optional Compaq Multimedia Adapter.

1. Plug the RCA video cable into the video-out port on the video player and the video port on the video adapter. If you are using the S-video cable, connect it to the S-video out connector on the video player and the S-video port on the video adapter.

2. Turn on the projector first, then the video player.

3. Push the **Source** button on the back of the multimedia adapter to toggle and switch the projector signal from data (computer icon) to video (TV icon). The data mode receives computer inputs, and the video mode receives video input such as a TV tuner, VCR, video, or camera.

With the optional Compaq Multimedia Adapter attached, the projector is compatible with major video standards such as NTSC, PAL, and SECAM. Use the on-screen menu to adjust the video performance manually, or press the **Resync** button on the projector panel to optimize it automatically.

## Video On-Screen Menu Adjustments

When the optional Multimedia Adapter is attached to the projector and the video source is selected, an alternate video on-screen menu can be displayed on the projected screen. This menu includes some selections that are relevant to the multimedia functions of the video adapter.

To display the Video on-screen menu:

1. Attach the optional Compaq Multimedia Adapter to the projector.

2. Attach a video source to the projector.

3. Set the **Source** button on the optional multimedia adapter or optional remote control to video.

4. Press the **Select** button on the projector or the **Menu** button on the optional remote control to display the following menu.

| Video Menu | Video Menu Level 2 | Video Menu Level 3 |
|---|---|---|
| Brightness | Adjustment scale | |
| Contrast | Adjustment scale | |
| Zoom | Zoom<br>Panning Left-Right<br>Panning Up-Down<br>Save and Return<br>Cancel | Adjustment scale<br>Adjustment scale<br>Adjustment scale |
| Keystone | Adjustment scale | |
| Color | (Color Temperature)<br>Custom Color<br>Saturation<br>Save and Return<br>Cancel | Adjustment scale<br>Adjustment scale |
| Tint | Adjustment scale | |
| Sharpness | Adjustment scale | |
| Language | Deutsche<br>English<br>Espanol<br>Francais<br>Italiano<br>Nederlands<br>Brazilian Portuguese<br>Save and Return | |
| Audio | Mute<br>Volume<br>Bass<br>Treble<br>Cancel<br>Save and Return | On - Off<br>Adjustment Scale<br>Adjustment Scale<br>Adjustment Scale |
| Source | S-Video<br>Composite<br>DVI<br>Analog<br>Save and Return | |
| Menu Location | Up-Down<br>Left-Right<br>Save and Return<br>Cancel | Adjustment Scale<br>Adjustment Scale |

*Continued*

**Video On-Screen Menu** *(Continued)*

| Management | Power Saver | On-Off |
|---|---|---|
| | Lamp Hours | Display hours - 5 digits |
| | Reset Lamp Hours | Confirmation |
| | Standby Lamp Delay | Delay adjustment |
| | Flip Image | Horizontal - Vertical - Both |
| | Serial Number | Display Serial Number |
| | Master Reset | Confirmation |
| | Save and Return | |
| | Cancel | |
| Factory Reset | Confirm Reset | |
| Exit | | |
| Current Mode | | |

To make adjustments to the Video on-screen menu, follow the steps in "Adjusting the On-Screen Menu" in Chapter 2, "Using the Projector."

## Explaining Functions in the Video On-Screen Menu

In addition to the Analog on-screen menu functions, the Video on-screen menu includes the following additional functions:

■ Tint—Adjusts screen image tint

■ Sharpness—Adjusts screen image sharpness

■ Audio—Adjusts the audio controls for the speaker on the multimedia adapter

■ Source—Selects between composite, S-video, DVI, and analog input

*Chapter 4*

# Using the Optional Remote Control

## Identifying the Remote Control Buttons
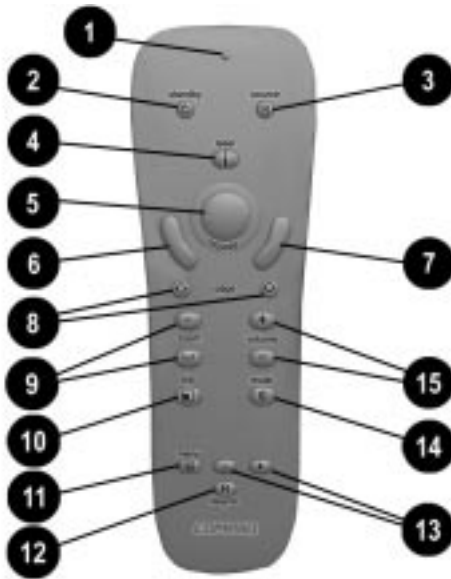


| Item | Component | Function |
|------|-----------|----------|
| ❶ | LED | Glows green when the remote is operating |
| ❷ | Standby button | Powers the projector into and out of Standby mode |
| ❸ | SCE—Source button | Selects the input source |
| ❹ | Laser | Activates laser pointer for use in presentations |
| ❺ | Mouse ball | 1. Controls the on-screen cursor and alternate left-mouse functions |
| | | 2. Calibrates the mouse ball for pointing performance |

*Continued*

**Remote Control Buttons** *(Continued)*

| Item | Component | Function |
|------|-----------|----------|
| ❻ | Left Mouse button | Controls left mouse functions |
| ❼ | Right Mouse button | Controls right mouse functions |
| ❽ | Page Up/Down buttons | Scrolls up/down projected image |
| ❾ | Zoom In/Out buttons | Zooms in to a specific area on the screen, and zooms out to include a larger screen area |
| ❿ | PIP (Picture-in-Picture) button | Displays an inset video picture from an alternate source connected to the projector |
| ⓫ | On-screen Menu button | Launches the Video on-screen menu |
| ⓬ | Resync button | Resynchronizes the projector with the input source |
| ⓭ | On-screen Menu Adjustments +/− | Adjusts the Video on-screen menu |
| ⓮ | Mute button | Silences the speaker |
| ⓯ | Volume +/− | Increases/decreases speaker volume |

⚠ **WARNING:** To reduce the risk of injury to the eyes, do not look directly into the laser light on the remote control and do not point the laser light into anyone's eyes. This remote control is equipped with a Class II laser that emits radiation.

✎ The optional remote control operates only when the optional Compaq Multimedia Adapter is connected to the projector.

✎ The optional remote control is not included with the Compaq MP1400 Microportable Projector. The optional remote control is included with the optional Compaq Multimedia Adapter kit, which is sold separately. For information on purchasing the optional Compaq Multimedia Adapter kit, call your Compaq authorized dealer, or reseller. To locate a reseller, call Compaq at 1-800-AT-COMPAQ or, to buy directly from Compaq, visit the Compaq web site at http://www.compaq.com/products/projectors.

## Calibrating the Mouse

The mouse ball should be calibrated the first time the optional remote control is used or when the batteries are changed to adjust or fine-tune the mouse pointing performance.

To calibrate the mouse ball on the remote control:

1.  Ensure that the projector, multimedia adapter, and remote control are powered on.

2.  Press down on the top of the mouse ball and hold it down until it clicks,

3.  Then move the mouse ball around in as large a circle as possible.

# Remote Control Functions

The optional remote control performs the following functions:

- Duplicates the functions of the projector buttons, including adjusting the on-screen menus

- Controls the computer connected to the projector by navigating through the computer directories, and opening and closing files

**IMPORTANT:** To operate a computer using the remote control, an 8-pin to-USB/RS232- cable (included in the optional Multimedia Adapter kit) must be used. Connect the 8-pin connector cable to the appropriate connector on the multimedia adapter and connect the USB connector to the USB connector on the computer (preferred) **or** the RS232 connector to the serial connector on the computer. Do not connect **both** the USB and RS232 connectors to the computer.



Microsoft Windows 95 (OSR Version 2.1), Windows 98, and Windows 2000 support USB connection; Microsoft Windows NT does not currently support USB connection.

# Picture-in-Picture On-Screen Menu Adjustments

When the optional Multimedia Adapter is attached to the projector, a data source is connected, and the S-video and Composite connectors are attached to input sources, a second alternate Picture-in-Picture (PIP) on-screen menu displays on the projector screen. The PIP on-screen menu includes functions that are relevant to the PIP function only.

✎ PIP is functional only with a VGA and S-video or Composite video input.

To display the PIP on-screen menu:

1. Attach the optional Mutimedia Adapter to the projector.
2. Connect both the S-Video and Composite input connectors to input sources.
3. Press the PIP button on the optional remote control or the **Select** button on the projector panel.

✎ To make adjustments to the PIP on-screen menu, follow the steps in "Adjusting the On-Screen Menu" in Chapter 2.

| PIP Menu | PIP Menu Level 2 | PIP Menu Level 3 |
|---|---|---|
| Brightness | Adjustment scale | |
| Contrast | Adjustment scale | |
| Zoom | Zoom<br>Panning Left-Right<br>Panning Up-Down<br>Save and Return<br>Cancel | Adjustment scale<br>Adjustment scale<br>Adjustment scale |
| Keystone | Adjustment scale | |
| Picture | Dark—Light | |
| Color | (Color Temperature)<br>Custom Color<br>Saturation<br>Save and Return<br>Cancel | Adjustment scale<br>Adjustment scale |

*Continued*

| | | |
|---|---|---|
| Digital Conversion | Clock | Adjustment scale |
| | Clock Phase | Adjustment scale |
| | Save and Return | |
| | Cancel | |
| Language | Deutsche | |
| | English | |
| | Espanol | |
| | Francais | |
| | Italiano | |
| | Nederlands | |
| | Brazilian Portuguese | |
| | Save and Return | |
| Audio | Mute | On—Off |
| | Volume | Adjustment scale |
| | Bass | Adjustment scale |
| | Treble | Adjustment scale |
| | Cancel | |
| | Save and Return | |
| Source | S-Video | |
| | Composite | |
| | DVI | |
| | Analog | |
| | Save and Return | |
| PIP | On—Off | |
| | Location | (Toggles 5 locations) |
| | Source | Composite, S-Video |
| | Save and Return | |
| Menu Location | Up-Down | Adjustment scale |
| | Left-Right | Adjustment scale |
| | Save and Return | |
| | Cancel | |
| Management | Power Saver | On-Off |
| | Lamp Hours | Display hours - 5 digits |
| | Reset Lamp Hours | Confirmation |
| | Standby Lamp Delay | Delay adjustment |
| | Flip Image | Horizontal |
| | | Vertical |
| | | Both |
| | | Save and Return |
| | | Cancel |
| | Serial Number | Display Serial Number |
| | Master Reset | Confirmation |
| | Save and Return | |
| | Cancel | |
| Factory Reset | Confirm Reset | |
| Exit | | |
| Current Mode | | |

## Explaining Functions in the PIP On-Screen Menu

While the PIP on-screen menu includes most of the analog on-screen functions, it also includes the additional functions:

■ Audio—Adjusts the audio controls for the speaker on the multimedia adapter.

■ Source—Selects between composite, S-video, DVI, and analog input.

■ PIP—Turns PIP on/off; changes the PIP location on the projected image; and selects the input source.

*Chapter 5*

# Care and Maintenance

This chapter explains how to care for and maintain your Compaq projector during normal everyday use.

## Protecting the Projector

To protect your projector from overheating and other types of damage, follow these suggestions:

■ Use only a power source and connection appropriate for this projector as indicated on the marking label.

■ Do not overload an electrical outlet, power strip, or convenience receptacle. The overall system load must not exceed 80 percent of the branch circuit rating. If an extension cord or power strip is used, make sure that the cord or strip is rated for the product and that the total ampere ratings of all products plugged into the extension cord or power strip do not exceed 80 percent of the extension cord or strip ampere ratings limit.

■ Install the projector near an outlet that you can easily reach. Disconnect the product by grasping the plug firmly and pulling it from the outlet. Never disconnect it by pulling the cord.

■ Unplug the projector from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners.

■ Slots and openings in the cabinet are provided for ventilation. These openings must not be blocked or covered. Never push objects of any kind into cabinet slots or other openings.

■ Do not drop the projector or place it on an unstable surface.

■ Do not expose this product to rain or moisture.

- Do not allow anything to rest on the power cord. Do not walk on the cord.

- Do not open the projector or attempt to service this product for any other reason than to replace the lamp module. Adjust only those controls that are covered by the operating instructions. If the projector is not operating properly or has been dropped or damaged, contact your Compaq authorized dealer, reseller, or service provider.

# Cleaning the Lens

To minimize the risk of damaging the coating or scratching the lens surface, this cleaning procedure has been developed. The first recommendation is to remove any dust particles from the lens by blowing them off with clean, dry, deionized air. However, this may not be a convenient method, and an alternate method is described below using the cloth included with the projector.

To clean the lens, use the **clean** cloth that was included with the projector and follow these steps:

> △ **CAUTION:** Do not spray any type of fluid or cleaner directly on the lens surface. Do not use liquid cleaners on the cloth as this may contaminate the cloth. Do not directly touch the lens surface.

1. Wipe the lens in a single direction with the clean, lint-free, dry cloth. Do not wipe back and forth across the lens surface.

2. If the cloth is dirty or smears the lens, wash the cloth. If the cloth is still dirty after washing it or the fabric is damaged, replace it.

✎ **Do not** use fabric softener when washing the cloth or softener sheets when drying the cloth.

> △ **CAUTION:** Do not store the cloth in contact with the lens for a long time as doing so may contaminate the lens with dye from the cloth. Keep the cloth in its case when it is not being used. The cloth can be contaminated if left in the open air or in a lab coat pocket.

# Replacing the Projector Lamp Module

When the projector lamp reaches its end of life, it may pop when it burns out. The lamp will need to be replaced before the projector can be used again.

> ⚠ **WARNING:** When the lamp reaches its end of life, it may pop or rupture. To reduce the risk of personal injury, be careful when removing the lamp cover as broken glass may be present. Never open the lamp cover while the projector is operating or when the lamp is hot.

The projector will alert you when the lamp approaches its failure mode or end of life. When the message "Lamp May Fail Soon - Replacement Suggested" displays on the projection screen, you should change the lamp as soon as possible.

Contact your local Compaq authorized dealer, seller, or reseller to purchase a replacement lamp or have the lamp changed. To locate a reseller near you, call 1-800-AT-COMPAQ. To purchase the lamp directly from Compaq, visit the Compaq web site at http://www.Compaq.com/products/projectors.

To replace the projector lamp module, follow these steps:

1.  Turn off the power to the projector by pressing the Standby button ❶.

2.  Allow the projector to cool down for at least 30 minutes.

⚠ **WARNING:** The lamp assembly operates at a very high temperature. To reduce the risk of personal injury, allow the projector to cool down for at least 30 minutes before opening the lamp cover. Never open the lamp cover while the projector is operating or when the lamp is hot.

3.  Turn off the main power switch ❷.

4.  Disconnect the power cord ❸.

5. Use the provided Phillips screwdriver to remove the screw ❹ from the lamp cover.

6. Remove the cover ❺.

7. On the left side of the lamp module, push the electrical connector ❻ up to disengage it from the projector base.

8. Remove the three screws ❼ from the lamp module.

9. Pull out the lamp module ❽.
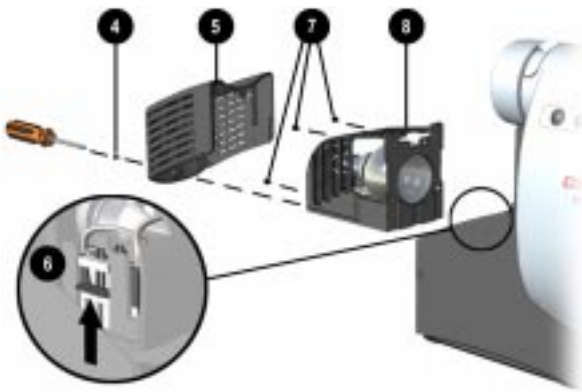


⚠ **WARNING:** To reduce the risk of personal injury, do not drop the lamp module or touch the glass bulb. The glass may shatter and cause an injury if it is dropped.

To replace the lamp module, reverse the previous steps.

✎ After replacing the lamp module, remember to reset the lamp hours in the on-screen menu.

**IMPORTANT:** This lamp contains < 0.125 percent mercury by weight. If the projection lamp breaks, the mercury may be released into the atmosphere. Please follow applicable federal, state, and local regulations for disposal and/or recycling.

*appendix A*

# Troubleshooting

## Solving Display Problems

**Image does not appear on the projection screen**

1. Make sure the projector is powered on.

2. Ensure the lens cap has been removed.

3. Ensure your portable computer's external video port is turned on. Toggle the **Fn + F4** function keys. To identify any alternate function keys to be used, refer to your portable computer's user manual.

4. Press the **Resync** button on the projector panel.

5. Ensure that the power cable is securely connected.

6. Ensure the pins on the connectors are not crooked or broken.

7. Turn off or disable the portable or desktop computer screen saver function. Compaq recommends installing the Compaq Presentation Utility to disable computer screen savers.

8. Ensure the projection lamp has been securely installed.

*Continued*

| | |
|---|---|
| **Scrolling, cut-off, or incorrect image displayed** | 1. Press the **Resync** button on the projector panel. |
| | 2. Turn everything off; first power on the portable or desktop computer, then power on the projector. |
| | 3. If the above steps do not correct the display image, adjust the resolution of the portable or desktop computer to $800 \times 600$. |

| | |
|---|---|
| **Portable computer or PC Companion screen is not displaying the presentation** | |
| **Portable computer:** | Most portable computers have a monitor loop-through or simultaneous viewing function. Press the **Fn** + **F4** function keys on the portable computer to switch the image from the portable screen to the projection screen or to toggle through the following three options: |
| | 1. LCD: Output displays only on the portable screen. |
| | 2. CRT: Output displays only on the projection screen. |
| | 3. CRT/LCD: Output displays on the portable screen and the projection screen. |
| | Activate CRT/LCD "ON" at the same time. To identify any alternate function keys to be used, refer to your portable computer's user manual. |

*Continued*

| | |
|---|---|
| **Portable computer or PC Companion screen is not displaying the presentation *(continued)*** | |
| **Mac PowerBooks:** | 1. To control video mirroring, click Control Panel→Display, then set Video Mirroring to ON for both internal and external viewing. |
| | 2. Set Video Mirroring OFF for image on external monitor only or internal only, depending on monitor selection in Monitors. |
| **Image is flickering or unstable** | Press the **Resync** button on the projector panel to adjust the tracking. If that doesn't stop the flickering, adjust the Clock Phase function in the on-screen menu. |
| **Image is out of focus** | 1. Adjust the Focus Ring on the projection lens. |
| | 2. Make sure the projection screen is within the required distance (3.3 - 35 feet/1 - 10.8 meters) from the projector. |
| | 3. Check the projection lens to see if it needs cleaning. Follow the "Cleaning the Lens" procedures in Chapter 5, "Care and Maintenance." |

*Continued*

| | |
|---|---|
| **Projected colors do not match computer or camcorder color** | 1. Adjust the Brightness, Contrast, or Color functions in the on-screen menu.<br><br>2. Make sure the pins on the cable connectors are not bent or broken.<br><br>3. If this does not resolve the problem, contact your Compaq authorized service provider or call Compaq Customer Support for help. (Refer to the *Contacting Customer Support* manual included with the projector documentation kit for a complete list of customer support numbers.) |
| **Black or gray border visible outside the usable area of the projection screen** | The black border surrounding the active area of the projection screen is part of the total projected image; however, it is an inactive area and cannot display any part of the image. |
| **Only the Compaq startup screen displays** | 1. Check that the cables are connected securely.<br><br>2. Verify that the proper input source is connected.<br><br>3. Make sure your portable computer's external video port is activated. |
| **Blue screen displays on the projection screen when a VCR is connected to the projector** | Check the Play button or TV/Video button on the VCR. If that doesn't work, refer to your VCR manual. |

# Solving Lamp Problems

| | |
|---|---|
| **Lamp shuts off** | 1. If all five projector panel buttons flash amber, the projector has overheated and will automatically shut down. Wait 5-10 minutes until the buttons stop flashing and the **Standby** button turns amber before restarting the projector again. |
| | 2. A minor power surge may cause the lamp to shut off. Turn the projector off. Wait a few minutes, then turn it back on. |
| **Lamp burns out or makes a popping sound** | When the lamp reaches its end of life, it will burn out and may make a loud popping sound. If this happens, the projector will not turn back on until the lamp module has been replaced.<br><br>For information on purchasing a replacement lamp module, call your Compaq authorized dealer, seller, or reseller. To locate a reseller near you, call 1-800-AT-COMPAQ. To purchase directly from Compaq, visit the Compaq web site at http://www.compaq.com/products/projectors.<br><br>To replace the lamp, follow the procedures in the "Replacing the Projector Lamp Module" section in Chapter 5, "Care and Maintenance." |

# Solving Miscellaneous Problems

| | |
|---|---|
| **Multimedia speaker doesn't function** | 1. Make sure the RCA audio cable is correctly connected to the Multimedia Adapter and the audio source.<br><br>2. Check the audio source to be sure it's operating.<br><br>3. Make sure the **Mute** button is off. |
| **PIP doesn't operate** | Check the cable connections. If there is a digital source connected, PIP will not operate. PIP is always the inset picture; data will always be the larger screen. |
| **Remote control doesn't operate** | 1. The three AAA batteries may need to be replaced.<br><br>2. Be sure the optional Multimedia Adapter is properly attached to the projector. |
| **Remote mouse doesn't function** | Make sure the USB cable is connected to the USB slots on the Multimedia Adapter and the computer. |
| **Compatibility issues with equipment attached to the projector** | Upgrade the projector ROM using the Flash ROM download kit included in the Compaq MP1400 Microportable Projector's packing box. For more information, refer to Appendix C, "Flash ROM Upgrade."<br><br>If this does not resolve the problem, contact your Compaq authorized service provider or call Compaq Customer Support for help. (Refer to the *Contacting Customer Support* manual included in the projector documentation kit for a complete list of customer support numbers to call.) |

*appendix B*

# Agency Regulatory Notices

## Federal Communications Commission Notice

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. 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 communications. 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 or more of the following measures:

■ Reorient or relocate the receiving antenna.

■ Increase the separation between the equipment and the receiver.

■ Connect the equipment into an outlet on a circuit different from the circuit that the receiver is connected.

■ Consult the dealer or an experienced radio or television technician for help.

### Modifications

The FCC requires the user to be notified that if any changes or modifications are made to this device, not expressly approved by Compaq Computer Corporation, this may void the user's authority to operate the equipment.

### Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

## Declaration of Conformity for Products Marked with the FCC Logo—United States Only

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For questions regarding your product, contact:
Compaq Computer Corporation
P.O. Box 692000, Mail Stop 530113
Houston, Texas 77269-2000

Or, call 1-800-652-6672 (1-800-OK COMPAQ)

For questions regarding this FCC declaration, contact:
Compaq Computer Corporation
P.O. Box 692000, Mail Stop 510101
Houston, Texas 77269-2000

Or, call (281) 514-3333

To identify this product, refer to the Part, Series, or Model number found on the product.

## Canadian Notice

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

## Avis Canadien

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

## European Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European norms:

■ EN55022 (CISPR 22) - Radio Frequency Interference

■ EN50082-1 (IEC801-2, IEC801-3, IEC801-4) - Electromagnetic Immunity

■ EN60950 (IEC950) - Product Safety

## Japanese Notice

　この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
　取扱説明書に従って正しい取り扱いをして下さい。

# Specifications

## Compaq MP1400 Microportable Projector

| | | |
|---|---|---|
| **Projection Panel** | SVGA 800 × 600 × 1 | |
| **Lamp Type** | 120 watt High Brightness Lamp | |
| **Image Size** | See the Image Size Adjustment table. | |
| **Avg. Lamp Life in Hours** | 1,500 hours | |
| **Projection Distance** | 3.3 feet - 35.64 feet | 1 meter - 10.8 meters |
| **Maximum Weight (Unpacked)** | 4.2 lbs (without cables) | 1.9 kg |
| **Maximum Dimensions** | | |
| W × H × D | 3 in × 8 in × 9 3/8 in | |
| **Maximum Graphics Resolution** | 1024 × 768 compression | |
| **Displayable Colors** | 16.7 million colors | |
| **Horizontal Frequencies** | | |
| **Analog signals** | 15 - 69 kHz | |
| **Digital signals** | 15 - 60 kHz | |
| **Vertical Frequencies** | | |
| **Analog signals** | 48 - 85 Hz | |
| **Digital signals** | 48 - 75 Hz | |
| **Required Environmental Temperatures for the Following Altitudes:** | | |
| **Sea Level** | | |
| Operating Temperature | 50 to 104°F | 10 to 40°C |
| Storage Temperature | -22 to 149°F | -40 to 65°C |
| **2,500 - 5,000 Feet** | | |
| Operating Temperature | 50 to 95°F | 10 to 35°C |
| Storage Temperature | -22 to 149°F | -40 to 65°C |
| **5,000 - 10,000 Feet** | | |
| Operating Temperature | 50 to 82°F | 10 to 28°C |
| Storage Temperature | -22 to 149°F | -40 to 65°C |
| **Humidity (Non-Condensing)** | | |
| Operating | 20 to 80% | |
| Non-Operating | 5 to 95% | |
| **Power Source** | 90 - 265 VAC, 50-60 Hz | |
| **Power Consumption** | < 185 watts | |
| **Input Terminal** | One 15-pin D-type connector with one cable included | |
| | One Digital FP connector with one cable included | |

## Preset Display Resolutions Table

This projector automatically recognizes the preset display resolutions listed in the following table.

| Display Resolutions | |
|---|---|
| **Preset Modes** | **Resolutions** |
| 1. Industry Standard | 640 × 350 at 31.5 kHz/70 Hz |
| 2. VESA Standard | 640 × 350 at 37.8 kHz/85 Hz |
| 3. Industry Standard | 640 × 480 at 31.5 kHz/60 Hz |
| 4. Industry Standard | 640 × 480 at 37.8 kHz/72 Hz |
| 5. VESA Standard | 640 × 480 at 37.5 kHz/75 Hz |
| 6. VESA Standard | 640 × 480 at 43.3 kHz/85 Hz |
| 7. Industry Standard | 720 × 400 at 31.5 kHz/70 Hz |
| 8. VESA Standard | 720 × 400 at 37.9 kHz/85 Hz |
| 9. VESA Standard | 800 × 600 at 35.1 kHz/56 Hz |
| 10. VESA Standard | 800 × 600 at 37.8 kHz/60 Hz |
| 11. VESA Standard | 800 × 600 at 48 kHz/72 Hz |
| 12. VESA Standard | 800 × 600 at 46.9 kHz/75 Hz |
| 13. VESA Standard | 800 × 600 at 53.7 kHz/85 Hz |
| 14. Macintosh-compatible | 832 × 624 at 49.7 kHz/75 Hz |
| 15. VESA Standard | 1024 × 768 at 35.5 kHz/43.4 Hz |
| 16. VESA Standard | 1024 × 768 at 48.4 kHz/60 Hz |
| 17. VESA Standard | 1024 × 768 at 56.4 kHz/70 Hz |
| 18. VESA Standard | 1024 × 768 at 60 kHz/75 Hz |
| 19. VESA Standard | 1024 × 768 at 68.7 kHz/85 Hz |
| 20. Macintosh-compatible | 1152 × 870 at 68.7 kHz/75 Hz |

## Power Cords

The projector power supply is provided with Automatic Line Switching (ALS). This feature allows the projector to operate on input voltages between 100-240V.

The power cord set (flexible cord or wall plug) received with the projector meets the requirements for use in the country where you purchased the equipment.

If you need to obtain a power cord for a different country, you should purchase a power cord that is approved for use in that country.

The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product. In addition, the diameter of the wire must be a minimum of 0.75 mm$^2$ or 18AWG, and the length of the cord must be between 6 feet (1.8 m) and 12 feet (3.6 m). If you have questions about the type of power cord to use, contact your Compaq authorized service provider.

A power cord should be routed so that it is not likely to be walked on or pinched by items placed upon it or against it. Particular attention should be paid to the plug, electrical outlet, and the point where the cord exits from the product.

*appendix C*

# Flash ROM Upgrade

The Compaq MP1400 Microportable Projector can be upgraded by flashing the ROM (Read Only Memory) on the projector.

**NOTE:** Before attempting these steps, make sure the projector is turned off.

The Flash ROM upgrade provides the following functions:

■ Implements new features on the projector.

■ Provides upgrades to existing features.

■ Resolves compatibility issues.

First, locate the following items in the Compaq MP1400 Microportable Projector shipping box:

■ DFP to DVI cable

■ RS232 to DVI upgrade adapter

To upgrade the projector's ROM, complete the following steps:

1. Connect the DFP end of the cable to the DFP connector on the projector and the DVI end of the cable to the input end of the Flash ROM RS232 adapter.

2. Connect the other end of the Flash ROM RS232 adapter to the RS232 (serial) connector on the computer.

3. Power on the computer and monitor only.

4. Access the Compaq Web site at
   http://www.Compaq.com/Support.

5. Follow the steps outlined on the Web site.

6. Power on the projector.

7. Wait about two minutes to allow the Flash Upgrade program
   to complete the upgrade, then the projector will
   automatically reset and be ready to use.

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