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SAFETY SUMMARY

Please read these instructions carefully before using your LP 740. Failure to comply with them could result in fire, electrical shock, personal injury or damage to equipment.

These graphics are used throughout this manual to draw your attention to important information about the projectors.



NOTE: *Additional useful details or tips.*



CAUTION: *Steps to take to avoid damage to your equipment.*



WARNING: *Steps to take to avoid personal injury.*

These graphics are used on the projector's labels.



Attention - Refer to this User's Guide for important safety information.



CAUTION-Hot Surfaces - Avoid touching hot surfaces. Do not touch until the projector has cooled.



Do Not Look Into The Lens!

Be extremely careful not to look into the projection lens when the projector is turned on. The bright light may harm your eyes. Be especially careful to keep children from looking into the lens.



Power Source

Use only a three-wire grounding type power source. The power source should not exceed 250 volts rms between the supply conductors or between either conductor and the ground.



Power Cord

Use only the power cord that was shipped with the projector. Although other power cords might be similar in appearance, they have not been safety-tested with the projector. Do not use a power cord if it has become damaged or frayed. Contact your In Focus dealer or call In Focus if you need to replace your power cord.



Grounding

The projector is grounded through the grounding conductor on the power cord. To avoid electric shock, plug the power cord into a properly wired receptacle. Do not defeat the purpose of the grounding-type plug.

Lamp

To avoid overheating and unacceptable image quality, replace the projection lamp with a lamp of the specified type. Refer to page 33 for lamp specifications and to page 26 for instructions on replacing the lamp.



Lamp Compartment

To avoid burns, do not open the lamp module door until the projector is turned off and the lamp has cooled for at least 30 minutes. Follow the instructions in this manual for lamp replacement carefully.



Hot Surfaces

Allow the projector to cool at least 30 minutes before replacing a lamp. When you open the lamp housing, be very careful not to touch the hot surfaces inside.



Ventilation and Overheating

Openings in the projector case provide ventilation to protect it from overheating. Keep loose papers and other objects well away from the grills. Do not place the projector on top of or close to a computer or other heat-producing equipment.



Liquid Spills

Do not set drinks on top of the projector. Spilled liquids can flow inside and cause damage.



Do Not Disassemble

NOTE: If you open the projector case, you will void the warranty.

All service must be performed by an authorized In Focus service center. The only user-serviceable part in the projector is the projection lamp, which you can replace by opening the lamp cover on the bottom of the projector (see page 26). Do not open any other part of the projector. If your projector needs repair, call your local Authorized Service Provider or In Focus Technical Support as described on page 4. Before you call, refer to “Troubleshooting” starting on page 29 to see if you can resolve the problem yourself.

INTRODUCTION

The In Focus LP 740™ is a multimedia projector that packs SXGA graphics (1280x1024) with 16.7 million colors. It generates crisp, clear images using a new and innovative reflective technology. The LP 740 is ideal for high-performance business, engineering and imaging applications that demand exceptional resolution and color quality.

Image Resolution

The SXGA resolution of the 740's projected image is 1280x1024. If your computer's screen resolution is higher than 1280x1024, reset it to a lower resolution before you connect the 740.

Compatibility

The projector is compatible with a wide variety of computers and video devices, including:

- IBM, SUN, SGI, and selected HP and DEC workstations, up to 1280x1024 resolution.
- IBM-compatible computers, including laptops, up to 1280x1024 resolution.
- Apple Macintosh and PowerBook computers up to 1280x1024 resolution.
- Most standard VCRs, camcorders and laser disc players.

Unpacking the Projector

The projector comes with the items shown in Figure 1. Check to make sure all are included. **Contact your In Focus dealer immediately if anything is missing.**

If you are experienced in setting up presentation systems, use the *LP 740 Quick Start* card that was included in the shipping box. For complete details on connecting and operating the projector, refer to this User's Guide. User's Guides are also available for download from our website at www.infocus.com.



NOTE: You can resize your 640x480, 800x600, or 1024x768 images to 1280x1024 by pressing the *Resize* button on the keypad or remote.



NOTE: The contents of your shipping box may vary depending on the projector configuration you've ordered.

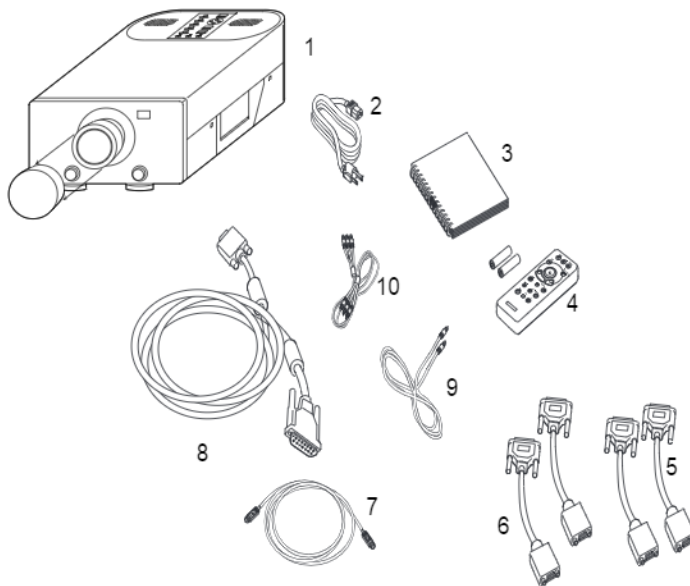


FIGURE 1

Shipping box contents

- | | |
|-----------------------------------|-------------------|
| 1. LP 740 projector with lens cap | 6. SGI adapters |
| 2. power cord | 7. S-video cable |
| 3. LP 740 User's Guide | 8. computer cable |
| 4. remote control and batteries | 9. video cable |
| 5. SUN adapters | 10. audio cable |

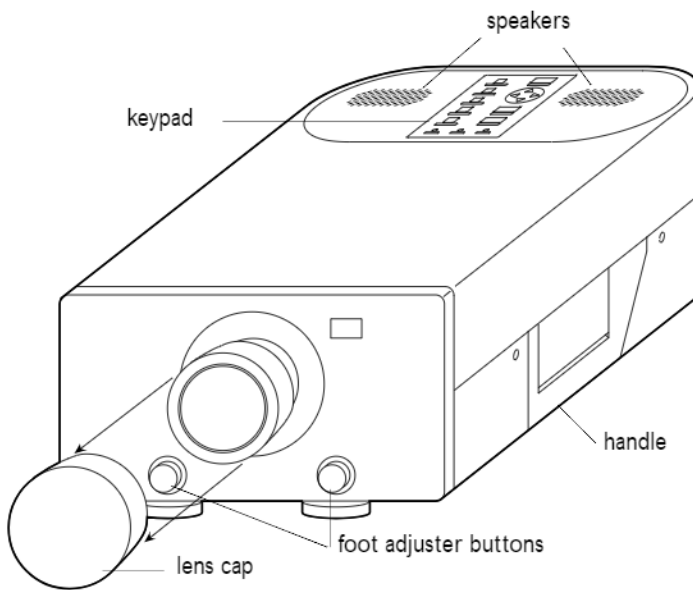


FIGURE 2

Side view of projector

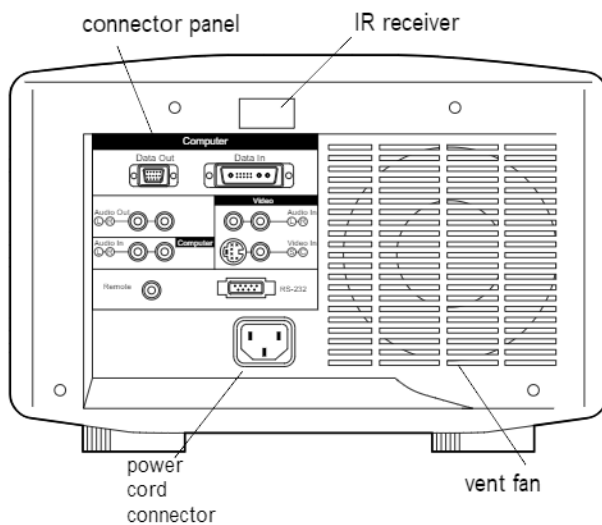


FIGURE 3

Back view of projector

Usage Guidelines

- Do not look directly into the projection lens when the projector is turned on. The bright light may harm your eyes.
- Do not block the grills on the projector. Restricting the air flow can cause it to overheat and turn off. If this happens, you must wait a minute before attempting to turn it back on.
- Handle the projector as you would any product with glass components. Be especially careful not to drop it.
- Avoid leaving the projector in direct sunlight or extreme cold for extended periods of time. If this happens, allow it to reach room temperature before use.
- This projector is not intended for use in a mainframe computer room as defined in the Standard for the Protection of Electronic Computer /Data Processing Equipment, ANSI/NFPA 75.
- Transport the projector in a vendor-approved hard or soft case. Part numbers for these cases are listed on page 34. Call your In Focus dealer to order.

If You Need Assistance

The first place to look for help is in this manual. Be sure to check the guidelines in “Troubleshooting” on page 29.

If this manual doesn't answer your question, call your In Focus dealer. You can also call In Focus Customer Service directly at **1-800-799-9911**. Call between 5 a.m. and 5 p.m. PST, Monday through Friday. In Europe, call In Focus in The Netherlands at **(31) 23-5540310**. In Singapore, call **(65) 740-6435**. Or, send us an e-mail at **techsupport@infocus.com**

Our World Wide Web address is **<http://www.infocus.com>**.

Warranty

This product is backed by a limited one-year warranty. The details of the warranty are printed at the back of this manual. Longer term warranties can be purchased from your In Focus dealer. Refer to page 34 for part numbers.

SETTING UP THE PROJECTOR

- 1 Place the projector on a flat surface parallel to the floor.
 - The projector must be within 10 feet (3 m) of your power source and within 6 feet (1.8 m) of your computer.

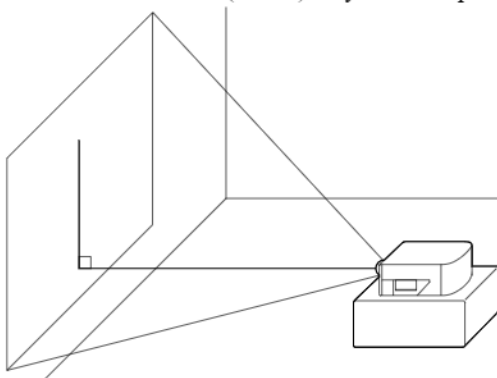


FIGURE 4

Placing the projector

- 2 Position the projector the desired distance from the screen.

The distance from the lens of the projector to the screen determines the size of the projected image. Figure 5 shows three projected image sizes. For more information about image size, see “Projected Image Size” on page 41.
- 3 Make sure the projector and your computer are turned off.

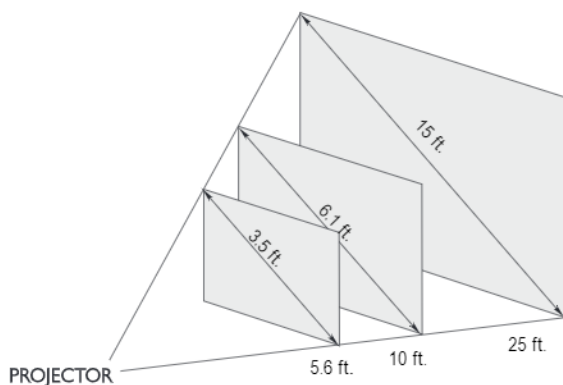


FIGURE 5

Projected image size



NOTE: Before you continue, make sure the projector and your equipment are turned off. If you're connecting a computer, make sure the distance between it and the projector is 6 feet or less.

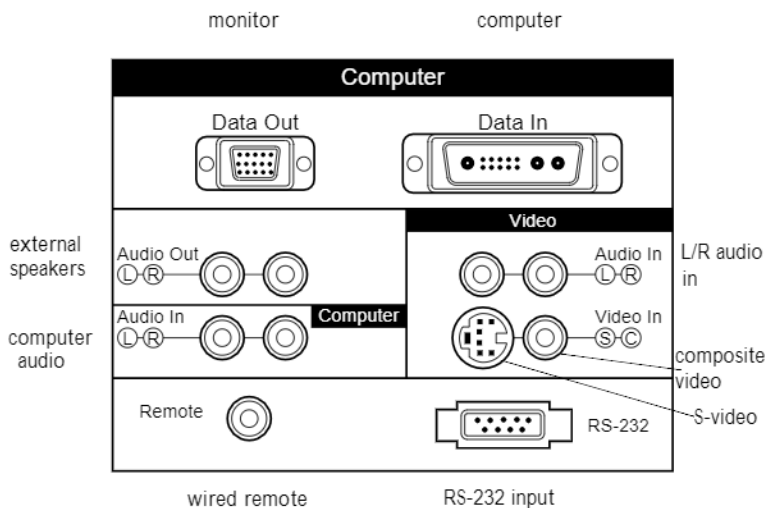


FIGURE 6

Connector panel

Connecting a Computer

- 1 (Desktop models only) Locate the cable that connects the monitor to your computer. Unplug it from the computer.
- 2 Plug one end of the computer cable into the video connector on your computer; plug the other end into the Data In connector on the projector.

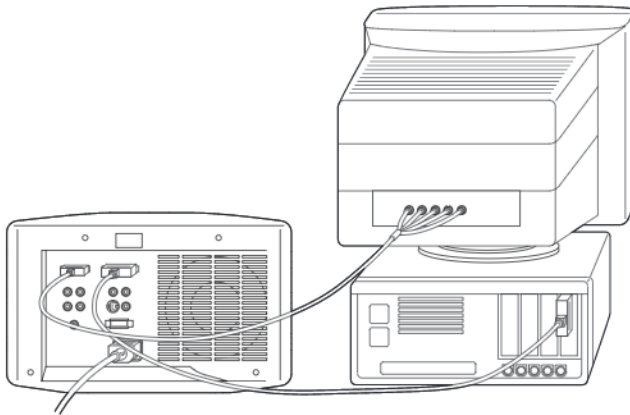


FIGURE 7

Connecting the projector to a computer

Do you want to display the image on your computer's monitor as well as on the projection screen?

- 1 Plug the monitor cable into the Data Out connector on the projector.

Do you want to play your computer's audio on the projector?

- 1 Plug either end of the audio cable into the audio connector on your computer.
- 2 Plug the other end of the audio cable into the Computer Audio In connector on the projector.



NOTE: To connect a workstation, use the appropriate adaptors between the computer and monitor cables. To connect a Macintosh computer, you must purchase the appropriate adaptors.



NOTE: Many laptop computers do not automatically turn on their external video port when a projector is connected. Activation commands for some laptop computers are listed in the Appendix of this manual on page 35.



NOTE: Some audio connectors may use the small radio jack plug and will require an adaptor to use the RCA composite connector.

Connecting a Video Player

- 1 If your video player uses a round, one-prong composite video connector, you'll need the audio and video cables.
 - If your video player uses a round, four-prong S-video connector, you'll need the S-video cable and the audio cable.
- 2 Plug the video cable's yellow connector into the "video-out" port on your video player (Figure 8). This port may be labeled "To Monitor."
- If you're using an S-video cable, connect it to the "S-video out" connector on the video player.
- 3 Plug the other yellow connector into the composite Video In connector on the back of the projector.
 - If you're using S-video, plug the other end of the cable into the "S-video" Video In connector on the projector.



CAUTION: Your video player may also have a "Video Out" port for a coaxial cable connection. **DO NOT** use this to connect to the projector.

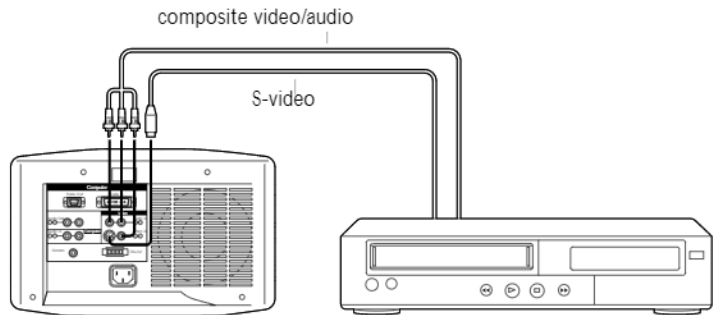


FIGURE 8

Connecting the projector to a video player

- 4 Plug the audio cable's white connector into the left "audio out" port on your video player. Plug the cable's red connector into the right "audio out" port on the video player.
- 5 Plug the other end of the cable into the left and right Audio In ports on the projector.

The projector is compatible with these major broadcast video standards: NTSC, NTSC 4.43, PAL and SECAM. It automatically adjusts to optimize its performance for the incoming video.

Powering up the Projector and Adjusting the Image

- 1 Remove the lens cap.
- 2 Plug the power cord into the back of the projector, then plug it into your electrical outlet. A surge-protected power strip is recommended if power surges are common in your area.



NOTE: Always use the power cord that shipped with the projector.

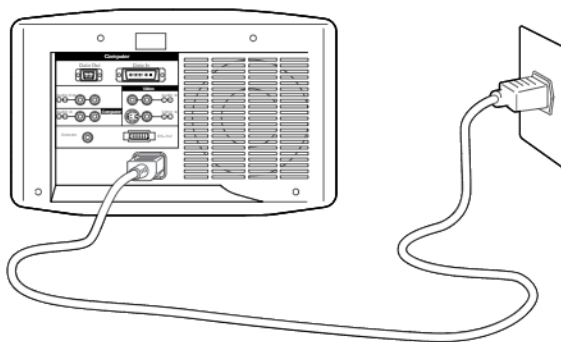


FIGURE 9

Connecting the power cord

- 3 Turn on the projector by pressing the Power button on the remote or keypad.
 - The Power LED on top of the projector lights. The Lamp LED blinks until the lamp reaches full power.

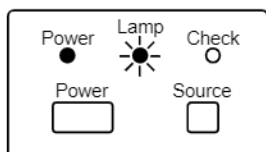


FIGURE 10

LEDs

- 4 If you connected a video player, turn it on.



NOTE: With some computers, the order in which you power up the equipment is very important. Most computers should be turned on last, after all other peripherals have been turned on. Refer to your computer's documentation to determine the correct order.

- Press the **S-video** or **Video** buttons on the remote or the **Source** button on the keypad (page 14) to display your video image.
- Use the **volume** buttons to adjust the volume.

5 Turn on your computer.

- Press the **Computer** button on the remote or the **Source** button on the keypad (page 14) to display your computer image.
- If necessary, make adjustments to the image from the projector's on-screen menus. You can do an automatic setup, or manually adjust different aspects of the image using the on-screen menus. To open the menus, press the **menu** button on the remote or keypad. For more information, see page 16.

Turning Off the Projector

To completely power off the projector, press and hold the Power button on the remote or keypad for 2 seconds. If you want to turn the projector back on immediately, you must allow 2 minutes for the lamp to cool. The lamp won't light if it's too hot.



CAUTION: When you disconnect the projector after you have switched it off, always remove the power cord from the electrical outlet first, then remove it from the projector.

USING THE PROJECTOR

This section describes how to use and make adjustments to the projector. It also provides a reference to the remote and keypad buttons and the options available from the on-screen menus.

Basic Image Adjustment

- 1 Make sure you have powered up your equipment in the right order (page 9). Press the **Auto** button on the remote or choose “Auto Set Up” (page 19) in the menus to optimize the image.
- 2 If the image doesn’t display completely, adjust the zoom, adjust the height of the projector (page 12) or center the image by adjusting its horizontal or vertical position (page 19). Be sure the projector is at a 90 degree angle to the screen.
- 3 If the image is out of focus, rotate the outer focus ring (page 11).
- 4 If the image appears to shimmer or if it has blurry vertical bars after you have adjusted the focus, adjust the Sync or Tracking (page 19).
- 5 If the colors don’t look right, adjust the brightness (page 15).

Adjusting the Projector

To focus the image, rotate the outer focus ring (Figure 11) until the image is clear. To zoom the image, rotate the inner zoom ring.

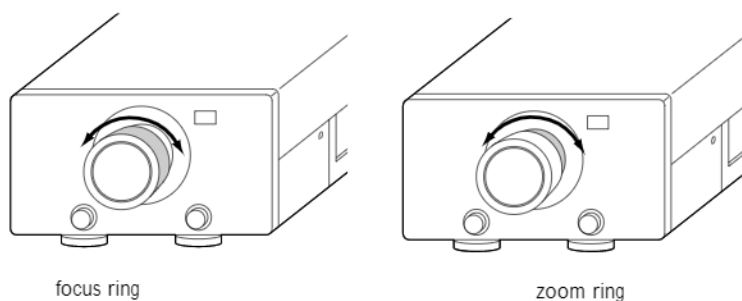


FIGURE 11

Focus ring and zoom ring



NOTE: *In Focus has created a software program called In Focus Presents that automatically optimizes your computer's display when used with any In Focus projector. This free program is included with every projector and available for download from our website at www.infocus.com.*

The projector is equipped with 2 self-locking foot adjuster buttons (Figure 12). They can vary in length from 0 to 50mm, allowing you to adjust the angle of projection.

To raise the projector:

- 1** Press and hold the foot adjuster buttons (Figure 12).
- 2** Raise the projector to the height you want, then release the buttons to lock the feet into position.

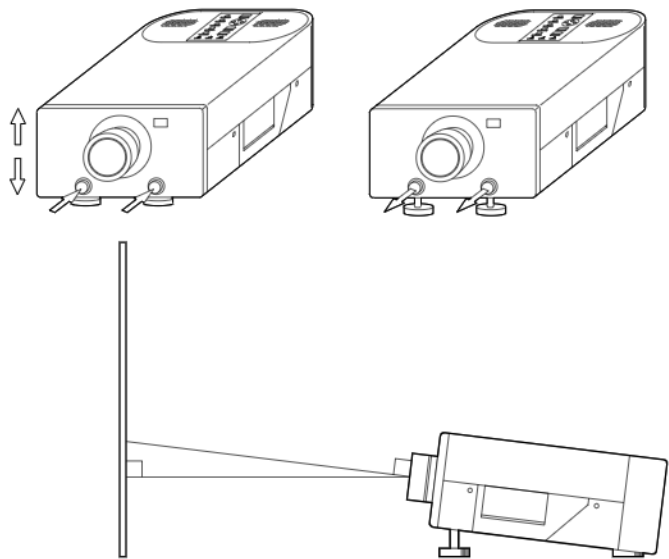


FIGURE 12

Adjusting the height of the projector

Using the Remote Control and Keypad Buttons

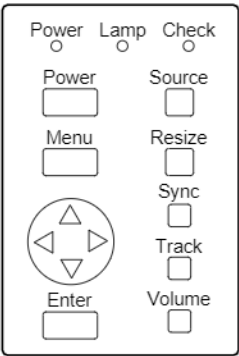


FIGURE 13

Keypad

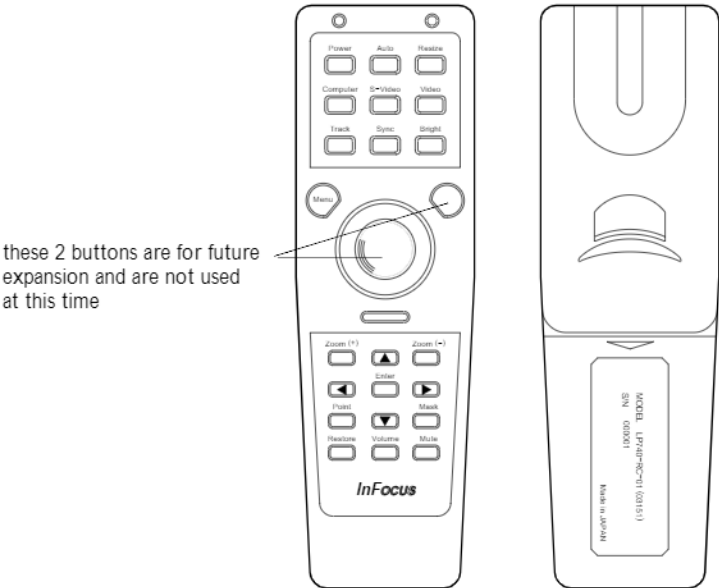


FIGURE 14

Remote

Point the remote control at the projection screen or at the front or rear of the 740. The range for optimum operation is 30 feet.

Power

This turns the projector off and on. Press and hold the **Power** button for 2 seconds to turn the projector off.

Source (Computer, Video, or S-Video on remote)

When you have more than one source (computer or video) connected to the projector, select between them by pressing the **Source** button.

Menu

Press **Menu** to open the on-screen menus. For more information about the on-screen menus, see page 16.

Resize

Press this to toggle the image size between standard and enlarged.

Arrow buttons

Use these to select and adjust menu settings.

Sync

Press the **Sync** button to adjust the synchronization of the computer source using the Arrow buttons. Press the **Sync** button again to close the Sync menu.

Tracking

Press the **Tracking** button to adjust the tracking of the computer source using the Arrow buttons. Press the **Tracking** button again to close the Tracking menu.

Enter

This enters the selected item or adjustment.

Volume

Press the **Volume** button to adjust the volume using the Arrow buttons. Press the **Volume** button again to close the menu.

Remote Control Only Buttons

Auto

This activates the automatic signal detection and image adjustment. When the adjustments are complete, you have the option of sending them to the projector or returning to the previous settings.

Bright

Press this button to open the Brightness control to brighten or darken the image.

Zoom (+) and Zoom (-)

This allows you to zoom the image in and out. To zoom a particular portion of the image, first use the **Point** button to position the cursor on the area you want to zoom, then press the **Zoom (+)** button. Press the **Restore** button to unzoom the image, or use the **Zoom (-)** button.

Point

This puts a crosshair cursor on the screen. Use the Arrow buttons to move the cursor. Press Point again to remove the cursor.

Mask

This allows you to cover the image with a “mask” or “curtain”, then reveal the image by moving the mask to the left or right or top or bottom. Use the Arrow buttons to move the mask. Press Mask again to remove the mask and view the entire image.

Restore

This restores the image to its unzoomed, unmasked state and removes the cursor.

Mute

This silences the speakers. To return the volume to its previous setting, press the Mute again.



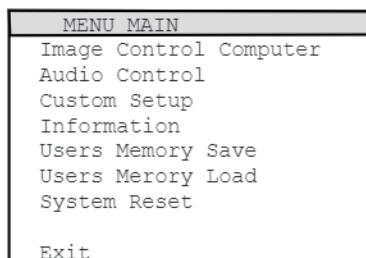
.....
NOTE: *You cannot use the Point feature while the image is zoomed or masked.*

Using the On-Screen Menus

The projector has on-screen menus that allow you to make image adjustments and change a variety of settings. Most of these adjustments aren't available directly from the remote or keypad.

To open the on-screen menus,

- 1 Press the **Menu** button on the remote or keypad to display the Main Menu.



- 2 Press the up and down Arrow buttons to move the cursor to the desired submenu. Press the **Enter** button to display that menu.

If the word "More" appears at the bottom of the menu, move the cursor down past it using the down arrow button to see additional menu options.

If the word "Submenu" appears opposite the selected submenu, press the **Enter** button to open a new submenu.

If a scale bar or "On" or "Off" appear opposite the selected menu, you can adjust the setting.

If arrows appear on both sides of an option, use the left and right arrow buttons on the remote or keypad to cycle through the options.

IMAGE CONTROL COMP 1/2	
Auto setup start	↵
Sync 25	-----
Track 1234	-----
• Contrast 7	-----
• Brightness 7	-----
Auto Adjust	OFF → ON
Resize	OFF → ON
Save Exit	
Exit	More ↓

IMAGE CONTROL VIDEO	
Color 65	
Tint -2	-----
Sharpness	OFF ON
Signal Type	→ NTSC ←
Brightness 7	-----
Contrast 7	-----
Color Balance Submenu	▶
Save Exit	
Exit	

AUDIO CONTROL	
Volume 24	
Mute	→ OFF ON
Balance 0	-----
Bass 0	-----
Treble 0	-----
Sound Mode	→ LINEAR ←
Save Exit	
Exit	

IMAGE CONTROL COMP 2/2	
	More ↑
H-Position	-----
V-Position	-----
H-Size	
V-Size	
Color Balance Submenu	▶
Save Exit	
Cancel	

- 3 Use the Arrow buttons (◀ and ▶) to adjust the desired setting.
- 4 To save the new setting and return to the previous menu, move the cursor to **Save Exit** and press the **Enter** button. To cancel the changes in the setting, move the cursor to **Cancel** and press the **Enter** button.



NOTE: The image control menu items are different for video and computer sources.

Here is the menu structure:

MAIN MENU	FUNCTION	SUBMENU
Image Control	Adjusts the projected image coming from different sources.	Input source: Computer Auto Setup, Sync Tracking, Contrast, Brightness Auto Adjust, Resize H-Position, V-Position H-Size, V-Size Color Balance
		Input source: S-video or Composite Color, Tint, Sharpness, Signal type, Brightness, Contrast, Color Balance
Audio Control	Adjusts quality of sound.	Volume, Mute, Right/Left Balance, Bass, Treble, Sound mode
Custom setup	Enables various projector modes and settings.	Menu position, View Source, Image mode, Power Save, Serial Set, Smooth Mode, Remote
Information	Displays projector information.	Lamp timer, Input Signal, System version, H sync, V sync, Resolution,
Users memory	Save & Load the settings	Save & Load 25 user's settings
System reset	Reverts to factory defaults	

Image control

IMAGE CONTROL COMP 1/2	
Auto setup start	←
Sync 25	-----
Track 1234	-----
Contrast 7	-----
Brightness 7	-----
Auto Adjust	OFF → ON
Resize	OFF → ON
Save Exit	
Exit	More #

IMAGE CONTROL COMP 2/2	
	More ↑
H-Position	-----
V-Position	-----
H-Size	
V-Size	
Color Balance Submenu	▶
Save Exit	
Cancel	

COLOR BALANCE COMP	
R_Contrast 7	
G_Contrast 7	
B_Contrast 7	
R_Bright 7	
G_Bright 7	
B_Bright 7	
Default Value	←
Save Exit	
Exit	

SUB MENU	FUNCTION
Auto Setup start	Optimizes image automatically for computer sources.
Sync	Adjusts synchronization.
Track	Adjusts tracking.
Contrast	Adjusts contrast.
Brightness	Adjusts brightness.
Auto Adjust	If you select ON, the projector automatically periodically adjusts the sync and tracking of the image.
Resize	Changes the image size to standard size or full size.
H-Position	Adjusts the horizontal position of the image.
V-Position	Adjusts the vertical position of the image.
H-Size	Adjusts the horizontal size of the image.
V-Size	Adjusts the vertical size of the image.
Color Balance	R Contrast: Adjusts the red contrast. G Contrast: Adjusts the green contrast. B Contrast: Adjusts the blue contrast. R Bright: Adjusts the red brightness. G Bright: Adjusts the green brightness. B Bright: Adjusts the blue brightness.
Video only adjustments	
Color	Adjusts color.
Tint	Adjusts tint.
Sharpness	Adjusts the definition of the outline of the image.
Signal type	Selects signal type from NTSC, PAL or SECAM. If the projector cannot automatically select the signal type, you can select it manually with this menu.

Audio control

AUDIO CONTROL	
Volume	24
Mute	➡OFF ON
Balance	0 ---+---
Bass	0 ---+---
Treble	0 ---+---
Sound Mode	➡LINEAR➡
Save Exit	
Exit	More

SUB MENU	FUNCTION
Volume	Adjusts the volume
Mute	Temporarily removes the sound
Balance	Balances the right and left sound output
Bass	Adjusts the bass
Treble	Adjusts the treble
Sound mode	Stereo enhance modes: Enhances the audio source. Linear: Normal stereo without extra processing Spatial: Simulates “3D space” feeling from a stereo source Mono: Mixes the mono audio source to the left and right channels Pseudo: Creates a “stereo-like” effect from mono inputs

Custom setup

CUSTOM SETUP		
Menu Posi	←	→
View Source	←OFF	ON
Image Mode	Submenu	→
Power Save	Submenu	→
Serial Set	Submenu	→
Smooth Mode	←OFF	ON
Remote	←Wireless	Wired
Save Exit		
Cancel		

IMAGE MODE SUB MENU		
Rear	← OFF	ON
Ceiling	← OFF	ON
Save Exit		
Cancel		

SERIAL SET SUB MENU		
Band Rate	←19200	9600
Stop Bits	←1	2
Parity	←NONE	EVN ODD
Save Exit		
Cancel		

POWER SAVE SUB MENU		
Power Save1	←OFF	ON
Power Save2	←OFF	ON
Power Save3	OFF	→ON
Save Exit		
Cancel		



NOTE: Serial set is used for RS-232 control from an external device. See “RS-232 Terminal Specifications” on page 43 for details.

SUBMENU	FUNCTION
Menu Posi	Adjusts the menu's position on the screen from upper-left or right to lower-right or left
View Source	Displays the active source (Computer, Video, or S-Video)
Image Mode	Rear: Reverses the image for rear projection Ceiling: Reverses the image for ceiling-mounted projection
Power Save	Allows you to turn on and off 3 different power save modes. mode 1: Shuts off the lamp after 3 hours if no keypad button is pressed mode 2: Shuts off the lamp after 10 minutes if no input signal is detected mode 3: Shuts off the fan automatically 2 minutes after the lamp is turned off
Serial Set	Sets up transmission of input signals from RS-232 control. Band rate: 9600, 19200 bps Stop bit: 1, 2 Parity: odd, even, no parity
Smooth Mode	Smooths the vertical lines of the image
Remote	Indicates if the remote is wired to the projector

Information

This is a read-only menu that provides status on the projector and input source.

INFORMATION		
Lamp Timer		1H
Input Signal		
→ Computer	Video	S-Video
Rev.		1.05
H-Sync		75.00kHz
V-Sync		60.00Hz
Resolution		1280x1024
Exit		

SUBMENU	FUNCTION
Lamp Timer	Shows the number of hours the lamp has been in use.
Input Signal	Shows the Input Source: Computer or Video or S-Video
Rev.	Shows the revision of software in the projector.
H-Sync	Shows the Horizontal sync frequency of the input source.
V-Sync	Shows the Vertical sync frequency of the input source.
Resolution	Shows the image resolution of the computer source.
Signal Type	Shows either NTSC, PAL, or SECAM (video source only)

Users memory Save

This option saves your settings so you can quickly restore them later. You must turn off Auto Adjust (page 19) to use the memory save feature.

- 1 Use the Arrow buttons to move the cursor to Users Memory Save, then press Enter.

USER MEMORY SAVE		1/2
1.*****	2.*****	
3.*****	4.*****	
5.*****	6.*****	
7.*****	8.*****	
9.*****	10.*****	
11.*****	12.*****	
13.*****	14.*****	
15.*****	16.*****	
Cancel		More ↓

USER MEMORY SAVE		2/2
		More ↑
17.*****	18.*****	
19.*****	20.*****	
21.*****	22.*****	
23.*****	24.*****	
25.*****		
Cancel		

- 2 Move the cursor to a memory number, then press Enter.
A file-naming dialog box appears.
- 3 Use the up arrow to increment through the letters and numbers to name the file. Use the right arrow to move to the next space and enter another character.
- 4 Move the cursor (using the right arrow button) to Save & Exit when you are finished, then press Enter.
- 5 Confirm your selection by choosing Yes or No, then press Enter.

Users memory Load

This option sends saved settings to the projector.

- 1 Use the Arrow buttons to move the cursor to Users Memory Load, then press Enter.
- 2 Move the cursor to the file you want to load, then press Enter.
- 3 Choose Yes to send the settings to the projector.

MAINTENANCE & TROUBLESHOOTING

This section describes how to:

- clean the lens
- clean the fan filter
- replace the projection lamp
- troubleshoot the projector

Cleaning the Lens

Follow these steps to clean the projection lens:

- 1 Apply a non-abrasive camera lens cleaner to a soft, dry cloth.
 - Avoid using an excessive amount of cleaner.
 - Abrasive cleaners, solvents or other harsh chemicals might scratch the lens.
- 2 Lightly wipe the cleaning cloth over the lens.
- 3 If you don't intend to use the projector immediately, replace the lens cap.

Cleaning the Fan Intake Filter

The fan intake filter on the bottom of the projector catches dust and particles in the air. If the filter becomes clogged, the projector does not cool properly and may malfunction. To prevent this, clean the filter after every 100 hours of use.

- 1 Turn off the power and unplug the power cord.
- 2 Remove the filter door (Figure 15).
 - Remove the screw on the filter door and lift the door out.

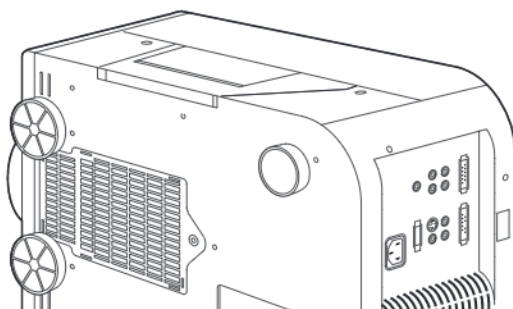


FIGURE 15

Removing the filter door

3 Clean the filter.

- Use a vacuum cleaner set on low power to remove the dust and dirt.

4 Re-install the filter.



WARNING: To avoid burns, allow the projector to cool for at least 30 minutes before you open the lamp module door. Never extract the lamp module while the lamp is operating.

Replacing the Projection Lamp

The lamp hour counter in the menus counts the number of hours the lamp has been in use. The LP 740 uses a metal halide bulb. These types of bulbs deteriorate over time. Replace the lamp when the brightness is no longer acceptable. The lamp LED blinks slowly after 950 hours; it blinks more rapidly after 1000 hours. You can order new lamp modules from your In Focus dealer. See “Accessories” on page 34 for information.

Follow these steps to replace the projection lamp:

- 1** Turn off the projector and unplug the power cord.
- 2** Wait 30 minutes to allow it to cool thoroughly.
- 3** Place the projector on its side, then remove the 2 screws on the lamp module door (Figure 16).
- 4** Pull the lamp door up and remove it.

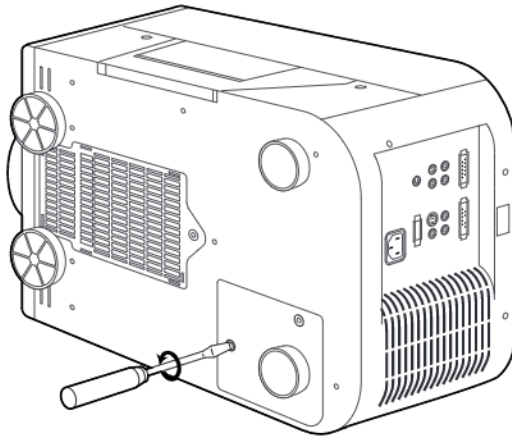


FIGURE 16

Removing the lamp door

- 5 Loosen the two non-removable screws on the outside of the module.
- 6 Remove the module (Figure 17).

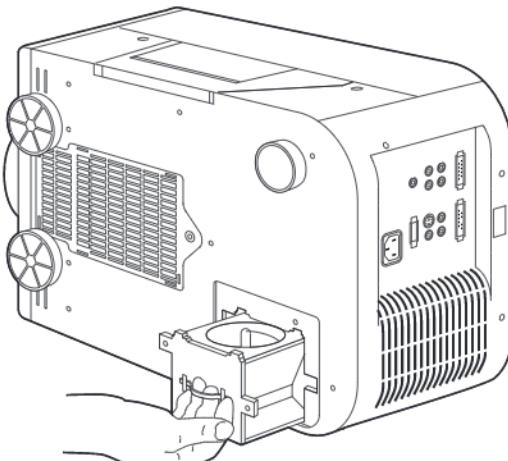


FIGURE 17

Removing the lamp module



CAUTION: *Never operate the projector with the lamp door open or removed. This disrupts the air flow and causes the projector to overheat.*

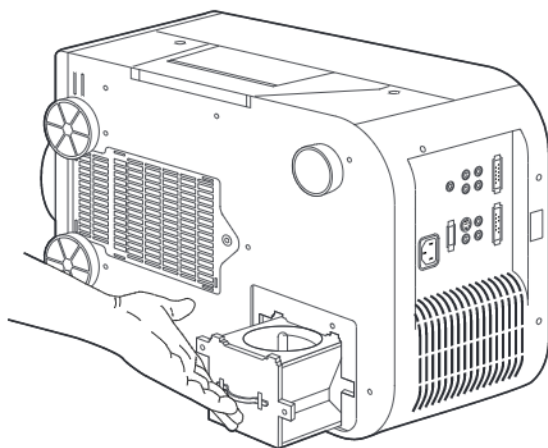


FIGURE 18

Installing a new lamp module



WARNING: Do not drop the lamp module or touch the glass bulb! The glass may shatter and cause injury.

- 7 Align the new lamp module in the correct direction.
- 8 Gently push the module in as far as it goes.
- 9 Tighten the screws on the outside of the module.
- 10 Re-install the lamp door.
- 11 Plug in the power cord and turn the projector back on.
- 12 To reset the lamp hour timer in the menus, press and hold the Track and Sync buttons, then press the Power button (while still holding down the other buttons) for 3 seconds. Verify that the timer was reset by pressing the menu button, navigating to the Information menu, and viewing the Lamp Timer setting (see page 22).

Troubleshooting

Problem: Nothing on projection screen

- Make sure that the power cord is properly connected to a functional AC electrical outlet. Make sure that the power cord is also properly connected to the projector.
- If the projector is plugged into a power strip, make sure the power strip is turned on.
- Make sure you have removed the lens cap on the projection lens at the front of the projector.
- Make sure the projector is switched on.
- Check the projector's lamp to ensure that it is securely connected in the lamp module. See "Replacing the Projection Lamp" on page 26.
- Make sure that the cables do not have any bent pins.

Problem: Color or text not being projected

- You might need to adjust the brightness up or down until the text is visible. Refer to "Bright" on page 15 for more information.

Problem: The screen resolution is not right

- Make sure the computer's video card is set for a resolution of no greater than 1280x1024.

Problem: Image isn't centered on the screen

- Reposition the image. Refer to "H-Position, V-Position" on page 18.
- Be sure the projector is at a 90 degree angle to the screen.

Problem: Only the blue start-up screen displays

- Verify that the cables are connected correctly. See page 7 through page 8 for connection procedures.
- Verify that the proper input source is connected. See "Source" on page 14.

- You might need to turn everything off and power up the equipment again in the proper order. Refer to your computer's documentation to determine the correct order.
- Make sure your laptop's external video port is turned on. See the "Portable and Laptop Activation Chart" on page 35 or your computer's manual for details.
- Make sure your computer's video board is installed and configured correctly.

If you're using Windows 3.x:

- 1 In the Windows Program Manager, double-click the Windows Setup icon in the Main program group.
- 2 Verify that the Display setting is 1280x1024 or less.

If you're using Windows 95:

- 1 Open "My Computer" icon, the Control Panel folder and then the Display icon.
- 2 Click the Settings tab.
- 3 Verify that the Desktop area is set to 1280x1024 or less.

Also check the following:

- Does your computer have a compatible video board? The projector isn't CGA or EGA compatible.
- Is your computer's video port activated? This is especially true for laptop computers. See "Portable and Laptop Activation Chart" on page 35.

Problem: Image is too wide or narrow for screen

- You might need to manually adjust the tracking to reduce or enlarge the projected image. Refer to Tracking on page 18.
- Adjust the resolution of your video card if it's greater than 1280x1024 pixels.

Problem: Image is out of focus

- Turn the projection lens to focus the image.
- Make sure the projection screen is at least 5 feet (1.5 m) from the projector.
- Check the projection lens to see if it needs cleaning.

Problem: Image and menus are reversed left to right

- Rear projection mode is probably turned on. Turn “Rear” off in the Custom Setup menu. The image should immediately return to forward projection. See “Image Mode” on page 21.

Problem: the projector displays vertical lines, “bleeding” or spots

- Adjust the brightness. Refer to “Bright” on page 15 for more information.
- Check the projection lens to see if it needs cleaning.

Problem: no sound

- Adjust volume.
- Verify audio / input connections.
- Adjust audio source.

Problem: Image is “noisy” or streaked

- Adjust the synchronization and tracking manually to find an optimal setting. See Sync and Tracking on page 18.
- The problem could be with your computer’s video card. If possible, connect a different computer.

Problem: Projected colors don’t match the computer or video player’s colors

- Adjust the brightness, tint and / or contrast from the menus. Just as there are differences in the displays of different monitors, there are often differences between the computer image and the projected image. Refer to “Bright” on page 15, or Tint or Contrast on page 18.

Problem: Lamp seems to be getting dimmer

- The lamp begins to lose brightness when it has been in use for a long time. Replace the lamp as described in “Replacing the Projection Lamp” on page 26.

Problem: Lamp shuts off

- A minor power surge may cause the lamp to shut off. Turn the projector off, wait at least 2 minutes, then turn it back on.

Before calling your dealer or In Focus Technical Support for assistance, please have the following information available:

- the projector’s serial number (located on the bottom label)
- the resolution of your computer.

Call In Focus Technical Support at **1-800-799-9911** between 5 a.m. and 5 p.m. PST, Monday through Friday.

APPENDIX

Specifications

The LP 740 must be operated and stored within the temperature and humidity ranges specified.

Temperature

Operating	0 to 35° C
Non-operating	-10 to 60° C

Humidity

Operating and non-oper.	5% to 95% relative humidity, non-condensing
-------------------------	---

Dimensions

13.4 x 17.5 x 8.7 inches (34 x 44.5 x 22 cm)
--

Weight

31.5 pounds (14.3 kg) unpacked

Altitude

Operating	0 to 10,000 feet (3,048 meters)
Non-operating	0 to 40,000 feet (12,192 meters)

Optics

Focus Range	5.6 - 80 feet
-------------	---------------

Lamp

Type	250-watt metal halide
------	-----------------------

Input Power Requirements

100-120V/220-240V, 4.3A/2.3A, 50/60 Hz
--

Remote Control

Battery	Two (2) AA alkaline batteries
---------	-------------------------------

Accessories

Standard Accessories (ship with the projector)

Part Number

LP 740 Quick Start card	009-0347-xx
LP 740 User's Guide	010-0162-xx
Remote control and batteries	590-0243-xx
Shipping Box	110-0220-xx
Projection Lamp Module	SP-LAMP-LP740
Lens Cap	340-0460-xx
A/V Cable 6 ft (1.8 m)	210-0053-xx
S-video Cable	210-0129-xx
Computer Cable	210-0130-xx
SUN Adaptor	210-0131-xx
SUN Monitor Adaptor	210-0132-xx
SGI Adaptor	210-0133-xx
SGI Monitor Adaptor	210-0134-xx



NOTE: Use only In Focus-approved accessories. Other products have not been tested with the projector.

Power Cords (one ships with projector, type depends on country)

North American Power Cord	210-0023-xx
Australian Power Cord	210-0027-xx
UK Power Cord	210-0028-xx
European Power Cord	210-0029-xx
Danish Power Cord	210-0030-xx
Swiss Power Cord	210-0031-xx

Optional Accessories

Soft Case	CA-C135
ATA Shipping Case	CA-C138
Ceiling Mount-LiteMount 740	SP-CEIL-LM740
LiteMount False Ceiling Plate	SP-LTMT-PLT
LiteMount Pipe Tubing Extension	SP-LTMT-EXT
Rhapsody II Speakers	SP-R2SPKR
JBL Subwoofer	SP-JBLSUB
Portable Projector Stand	SP-STND
2 nd Year Advantage Service Plan (1 year extension)	AS-LP740-12
3 rd Year Advantage Service Plan (2 year extension)	AS-LP740-24

Portable and Laptop Activation Chart

Many laptop computers do not automatically turn on their external video port when a secondary display device such as a projector is connected. Activation commands for some laptop computers are listed in the following table. (If your computer is not listed or the given command does not work, refer to the computer's documentation for the appropriate command.) On some laptops, the activation function key is labeled with an icon, for

example /  or the text CRT/LCD.



NOTE: Often, pressing the key commands once activates the external video port, pressing it again activates both the external and internal ports, and pressing it a third time activates the internal port. Refer to your computer's documentation for details on your specific model.

Computer	Key command to activate port	Key command to de-activate port
Acer	Ctrl-Alt-Esc (for setup)	Ctrl-Alt-Esc (for setup)
AST* **	FN-D or Ctrl-D Ctrl-FN-D FN-F5 type from A:/VGA/CRT FN-F12	FN-D or Ctrl-D Ctrl-FN-D FN-F5 type from A:/VGA/CRT FN-F12
AMS	FN-F2	FN-F2
AMT	setup screen	setup screen
AT&T	FN-F3 FN-F6	FN-F3 FN-F6
Advanced Logic Research	Ctrl-Alt-V	Ctrl-Alt-V
Altima	Shift-Ctrl-Alt-C setup VGA/ Conf.Simulscan	Shift-Ctrl-Alt-L setup VGA/ Conf.Simulscan
Ambra**	FN-F12 FN-F5 F2/Choose Option/F5	FN-F12 FN-F5 F2/Choose Option/F5
Amrel* **	setup menu Shift-Ctrl-D	setup menu Shift-Ctrl-D
Apple	see Mac Portable and Mac PowerBook	
Aspen	automatic	automatic

Computer	Key command to activate port	Key command to de-activate port
Austin	Ctrl-Alt-comma	Ctrl-Alt-comma
Award	FN-F6	FN-F6
BCC*	automatic	reboot computer
Bondwell	LCD or CRT options after bootup	reboot for LCD or CRT options to appear
Chaplet**	setup screen FN-F6 FN-F4	setup screen FN-F6 FN-F4
Chembook	FN-F6	FN-F6
Commax	Ctrl-Alt-#6	Ctrl-Alt-#5
Compaq* **	Ctrl-Alt-< FN-F4 automatic mode/? (for setup option)	Ctrl-Alt-> FN-F4 automatic mode/? (for setup option)
Compuadd* **	automatic Alt-F for screen setup option	automatic Alt-F for screen setup option
Data General	Ctrl-Alt-Command	Ctrl-Alt-Command
Data General Walkabout	2 CRT/X at DOS prompt	reboot
Datavue	Ctrl-Shift-M	Ctrl-Shift-M
DEC**	FN-F5 FN-F4	FN-F5 FN-F4
Dell**	Ctrl-Alt-< Ctrl-Alt-F10 FN-F8 (CRT/LCD) FN-D FN-F12	Ctrl-Alt-> Ctrl-Alt-F10 FN-F8 FN-D FN-F12
Digital*	automatic FN-F2	reboot FN-F2
Dolch	dip switch to CRT	dip switch to LCD
Epson	dip switch to CRT	dip switch to LCD
Everex*	setup screen option	setup screen option
For-A	Ctrl-Alt-Shift-C	Ctrl-Shift-Alt-L

Computer	Key command to activate port	Key command to de-activate port
Fujitsu	FN-F10	
Gateway	FN-F3 FN-F1/FN-F1 again simultaneous	FN-F3 FN-F1
Grid* **	FN-F2, choose auto or simultaneous Ctrl-Alt-Tab	FN-F2 Ctrl-Alt-Tab
Hitachi	FN-F7	FN-F7
Honeywell	FN-F10	FN-F10
Hyundai	setup screen option	setup screen option
IBM 970*	automatic	warm reboot
IBM ThinkPad**	reboot, enter setup menu FN-F7, select choice from setup menu FN-F1, select choice FN-F5, select choice PS/2 SC select choice (CRT, LCD, etc.)	FN-F2
Infotel	FN-F12	FN-F12
Kaypro	boot up, monitor plugged in	unplug monitor
Kris Tech	FN-F8	FN-F8
Leading Edge	FN-T	FN-T
Mac Portable 100	no video port: not compatible	
Mac PowerBook		
140, 145, 150, 170	no video port: requires a 3rd-party interface	
160, 165, 180, 520, 540, 5300	Control Panel folder, PowerBook Display folder; Activate Video Mirroring	warm reboot
210, 230, 250, 270, 280, 2300	requires Apple Docking Station or Mini Dock	

Computer	Key command to activate port	Key command to de-activate port
Magitronic	FN-F4	FN-F4
Mastersport	FN-F2	FN-F1
Micro Express*	automatic	warm reboot
Micron	FN-F2	FN-F2
Microslate*	automatic	warm reboot
Mitsubishi	SW2 On-Off-Off-Off	SW2 Off-On-On-On
NCR	setup screen option	setup screen option
NEC* **	setup screen option CRT at the DOS prompt FN-F3	setup screen option LCD at the DOS prompt FN-F3
Olivetti*	automatic	automatic
	FN-O/*	FN-O/*
Packard Bell* **	FN-F0	FN-F0
	Ctrl-Alt-<	Ctrl-Alt->
Panasonic	FN-F2	FN-F2
Prostar	Ctrl-Alt-S at bootup	Ctrl-Alt-S at bootup
Samsung*	setup screen option	setup screen option
Sanyo	setup screen option	setup screen option
Sharp	dip switch to CRT	dip switch to LCD
Sun SPARC-Dataview	Ctrl-Shift-M	Ctrl-Shift-M
Tandy**	Ctrl-Alt-Insert	Ctrl-Alt-Insert
	setup screen option	setup screen option
Tangent	FN-F5	FN-F5
Texas Instruments*	setup screen option	setup screen option
Top-Link* **	setup screen option	setup screen option
	FN-F6	FN-F6
Toshiba* **	Ctrl-Alt-End	Ctrl-Alt-Home
	FN-End	FN-Home
	FN-F5	FN-F5
	setup screen option	setup screen option

Computer	Key command to activate port	Key command to de-activate port
Twinhead*	FN-F7	FN-F7
	FN-F5	FN-F5
	Automatic	Automatic
WinBook	Ctrl-Alt-F10	Ctrl-Alt-F10
Wyse	software driven	software driven
Zenith**	FN-F10	FN-F10
	FN-F2	FN-F2
	FN-F1	FN-F1
Zeos**	Ctrl-Shift-D	Ctrl-Shift-D
	FN-F1	FN-F1

* These manufacturers have models that automatically send video to the external CRT port when some type of display device is attached.

** These manufacturers offer more than one key command depending on the computer model.

Using Video Mirroring with a PowerBook Computer

When you turn video mirroring (called SimulScan in newer PowerBooks—see below) on, the projector displays the same information that appears on your PowerBook's built-in screen. When video mirroring is off, the projector acts like a separate display.

To turn on video mirroring for the first time:

- 1** Open the Monitors control panel; click on Monitor 2.
- 2** Set the number of colors you want.
- 3** Open the Control Strip; click on the monitor icon.
- 4** Select "Turn Video Mirroring On."

Now you can turn video mirroring on and off from the Control Strip without having to open the Monitors control panel again.

When using video mirroring and high color graphics such as slide shows, the projected image occasionally might turn black and white. If this happens, perform the following steps:

- 1** Turn off video mirroring.
- 2** Open the Monitors control panel.
- 3** Move the white menu bar to Monitor 2 to set the projector as the primary monitor.
- 4** Restart the PowerBook.

Using SimulScan

Some newer PowerBooks display images on an external monitor or projector differently than previous ones. When using SimulScan, the projector displays the same information that appears on your PowerBook

To select SimulScan:

- 1** Open the Control Panel, then double-click Monitors and Sound.
- 2** In the Resolution list, choose the SimulScan mode, then click OK.
- 3** If this changes your display settings, a dialog box appears. Click OK to confirm the change.

Projected Image Size

Use the chart and tables to help you determine projected image sizes.

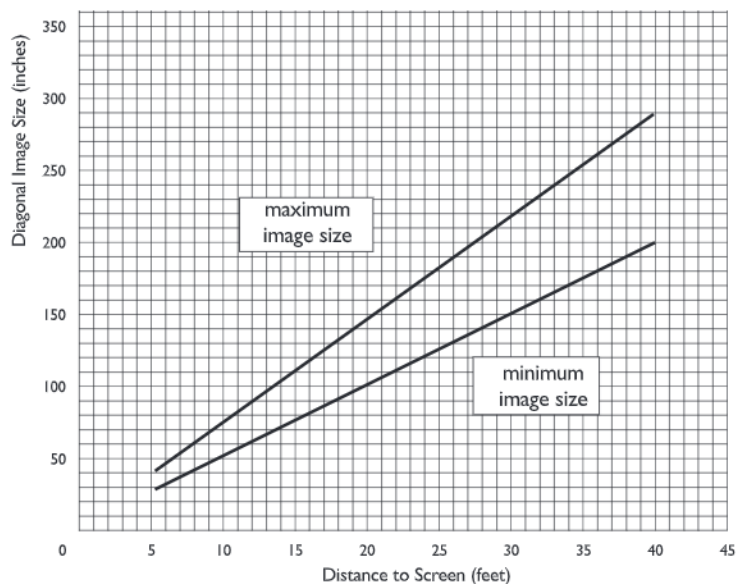


FIGURE 19

Projected image size

Table 1:

Image Size, Width and Height for lens at Maximum Image Size

Distance to Screen (feet)	Diagonal (inches)	Width (inches)	Height (inches)
5.6	42	33	26
10	73	57	46
15	109	85	68
20	144	113	90
25	180	141	112
30	216	169	135
35	252	197	157
40	287	225	179
45	323	253	202
50	359	281	224

Table 2:
Image Size, Width and Height for lens at Minimum Image Size

Distance to Screen (feet)	Diagonal (inches)	Width (inches)	Height (inches)
5.6	29	23	18
10	51	40	32
15	76	60	48
20	101	79	63
25	126	99	79
30	151	118	94
35	176	138	110
40	201	157	126
45	226	177	141
50	251	197	157

RS-232 Terminal Specifications

Communication configuration

To control the LP 740 from your computer, connect the RS-232 cable and set your computer's serial port settings to match this communication configuration:

Setting	Value
Bits per second	192000
Data bits	8
Parity	None
Stop bits	1
Start bit	1

Command format

All commands consist of 3 alpha characters followed by a request, all enclosed in parentheses.

An example: (AAA####) where

- (starts the command
- AAA denotes the command
- #### denotes the value to be written (leading zeros not necessary)
-) ends the command



NOTE: To assure the projector can process a command, wait 3 seconds before entering the next command.

Supported commands

Function	Command	Meaning
Power	PWR	1=ON, 0=OFF
Volume	LMP	1=Volume Up, 0=Volume Down
Mute	MTE	1=Mute On, 0=Mute Off
Track	TRC	1=Phase Up, 0=Phase Down
Sync	SYC	1=Sync Up, 0=Sync Down
Bright	BRT	1=Bright Up, 0=Bright Down
Resize	RES	1=Expansion On, 0=Expansion Off
Source	SRC	0=Computer 1=Video 2=S-video
Menu	MNU	1=Menu On, 0=Menu Off
Zoom	ZOM	1=Zoom +, 0=Zoom -
Point	PNT	1=Pointer On, 0=Pointer Off
Mask	MSK	1=Mask On, 0=Mask Off
Cursor	CSR	0=Up, 1=Down 2=Right, 3=Left

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