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Hardware Requirements

You will need:

- Any computer capable of running Windows 3.1.
- RAM: The amount you have will determine at what resolution you will be able to display images, and how many image windows you will be able to have open at once. We recommend a minimum of eight megabytes; more is better.
- CD-ROM player and driver supporting Photo CD. If your CD-ROM drive is not multisession-capable, you will be able to access only images stored in the first session.
- Monitor and Video Card: The higher resolution and more colors your system can support, the more options you will have for viewing images. We recommend as a minimum Super VGA at 256 colors.

Software Requirements

- Windows 3.1

Installing Magic Lantern

From the **File** menu in Windows' Program Manager, select *Run*.

In the text box type `n:install`, where `n`: is the letter of the drive containing the *Magic Lantern* software.

Answer the questions as prompted. The default directory name in which all files will be stored is `C:\LANTERN`.

Removing Magic Lantern

If for any reason you need to deinstall *Magic Lantern*, all you need to do is delete the entire directory where you installed it (the default is C:\LANTERN). No files have been written anywhere else, nor have modifications been made to WIN.INI, so this simple operation will remove all traces of *Magic Lantern*.

Warning!

Note: If you install *Magic Lantern* from CD, the file LANTERN.INI will be in the Windows directory. Be sure to delete it from there if you want to remove all traces of *Magic Lantern*.

Elements of Magic Lantern

The Toolbar

The Status Bar

The Toolbar

Check *Toolbar* in the **Window** menu

Keys: ALT W, T

The Toolbar contains one-button shortcuts for the *Magic Lantern's* most important functions; click on any button to jump to a full description (these buttons are never all active at the same time).



- **Load Thumbnails** (from Photo CD)
- **Load Photo** (from source other than a Photo CD disc)
- **Close All**
- **Memory**
- **Rights**. With a photo active, displays the copyright (if available) for the selected photo. With the *Thumbnails* window active, displays *Photo CD Info* for the entire disc.
- **Wallet Size**. *Load* as if the Thumbnails windows is active, *Transform to* if a Photo window is active.
- **Snapshot Size**. *Load* as if the Thumbnails windows is active, *Transform to* if a Photo window is active
- **Standard Size**. *Load* as if the Thumbnails windows is active, *Transform to* if a Photo window is active
- Crop
- **Export**
- **Setup Slideshow**
- **Run Slideshow**
- **Play Portfolio**
- **Help**

The Status Bar

Check *Status Bar* in the **Window** menu

Keys: ALT W, S

The Status Bar at the bottom of the *Magic Lantern* window keeps you informed of operations in progress and the status of the active window. If you click and hold on any button in the Toolbar or command in a menu, a brief explanation of its purpose will show in the Status bar. (Slide off the item while still holding down the mouse button if you do NOT want to execute that command.)

Setting Memory



Select *Memory* from the **Photo CD** menu
Keys: ALT + C, M

Related Topics:

[About Memory Availability and Configuration](#)

About Memory Availability and Configuration

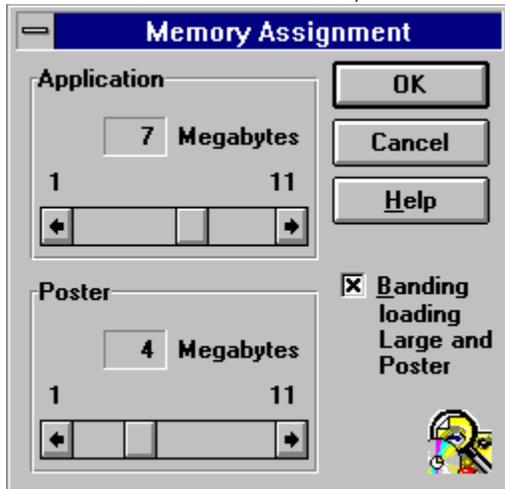
If this is the first time you're running *Magic Lantern*, you will want to set memory use according to the amount of memory available in your system. First, some explanation.

Your PC uses two types of memory, conventional and extended:

- Conventional memory is the first megabyte the RAM you have installed. Of this first megabyte, 640 kilobytes are used for starting programs. You will never have the entire 640K free since a number of device drivers and TSRs take up space. It is important, however, to fine-tune your machine to free as close to 640K as possible, otherwise some programs may not even start.
- Extended memory is used by Windows to move large amounts of data. In addition to extended memory, Windows also uses virtual memory, which is a swap file that is usually installed when you install Windows.

The resolution and speed at which images can be loaded depend on the combined amount of extended memory and virtual memory; the more the better. If you have less than eight megabytes of combined extended and virtual memory, you cannot expect *Magic Lantern* to perform at its highest capable speed, nor load images of large size.

Click the button in the Toolbar, or select *Memory* from the **Photo CD** menu. This dialog box opens:



Set the amount of memory you want to assign to *Magic Lantern* by moving the slider until the correct number appears in the box.

Similarly, set the maximum size of the image you want to display in the Poster resolution, and whether to load Large and Poster resolutions using a "Banding" technique. (Windows imposes a maximum of 16 megabytes.)

If Banding is checked, the images will be loaded in chunks rather than continuously. This technique is slower, but allows you to work with a slower PC (386) without much memory (up to 8 megabytes), or with computers that, in spite of being fast and having a lot of memory, do not have an optimized configuration. However, if you have a 486 with more than eight megabytes of memory, it is recommended that you uncheck Banding, which will speed up the process considerably.

Click on **OK** to accept the values defined and close the window.

Setting the CD-ROM Drive

Select *Drive* from the **Photo CD** menu
(when no image windows are open)

Keys: ALT + C, D

When you start *Magic Lantern* for first time, the first CD-ROM drive found on the system is set as the default drive. If when you attempt to load a CD from this drive it does not contain a Photo CD, is incapable of reading a Photo CD, or is otherwise invalid, you will be warned, then this dialog box will open:



Select the correct drive and make sure a Photo CD is inserted.

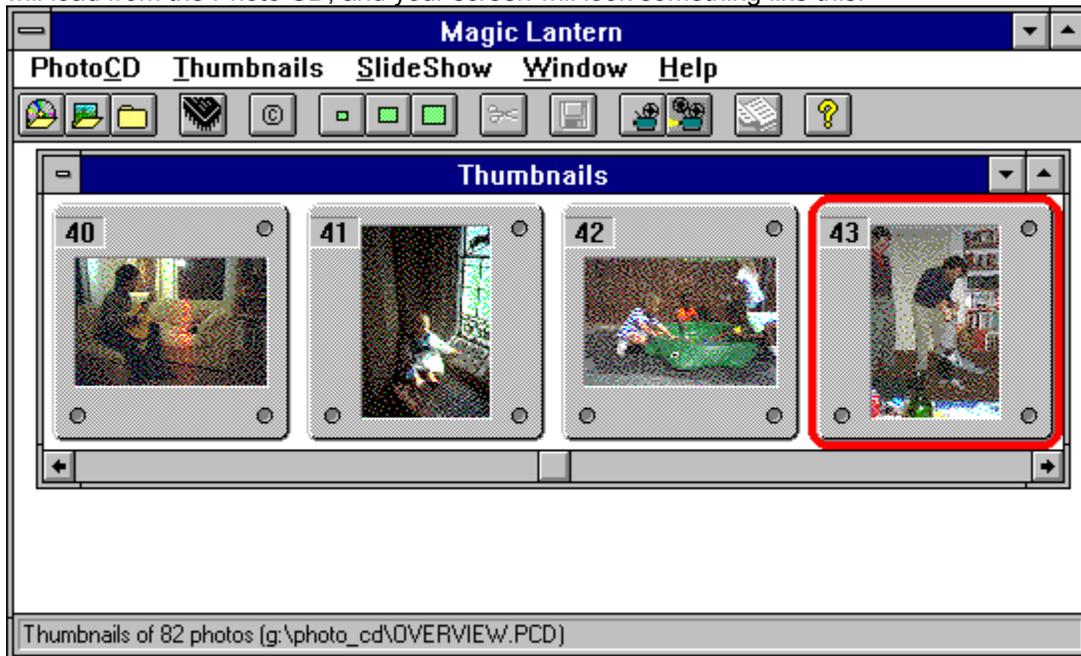
Loading Thumbnails from Photo CD



Hotkey: CTRL + T

Keys: ALT + C, T

Click on the  button in the Toolbar, or select *Load Thumbnails* from the **Photo CD** menu. The thumbnails will load from the Photo CD, and your screen will look something like this:



The number of thumbnails visible at one time will depend on the resolution of your monitor and the size of the *Thumbnails* window. The thumbnails will automatically rearrange when you resize the window.

Related Topics:

[Exact Size](#)

[Slide Frame](#)

Exact Size

If *Exact Size* is checked in the **Windows** menu, the window will always "snap to" the nearest size which will fit whole rows and columns of slides – that is, no slides will be shown half cut off by the window. If you prefer to size the window without regard to fitting the slides exactly, uncheck *Exact Size* in the **Windows** menu.

Slide Frame

When *Slide Frame* is checked in the Windows menu, all thumbnails are shown as above, oriented correctly for viewing and with "slide mounts" around them. If *Slide Frame* is unchecked, they are shown in a contact sheet format:



Note that the menu bar changes when the *Thumbnails* window is open – the **Thumbnails** and **SlideShow** menus become available – and that one of the thumbnails is selected (outlined in red). You can click on any slide to select it, or use the *Go to...* command from the **Thumbnails** menu to select by number the slide you wish to view.

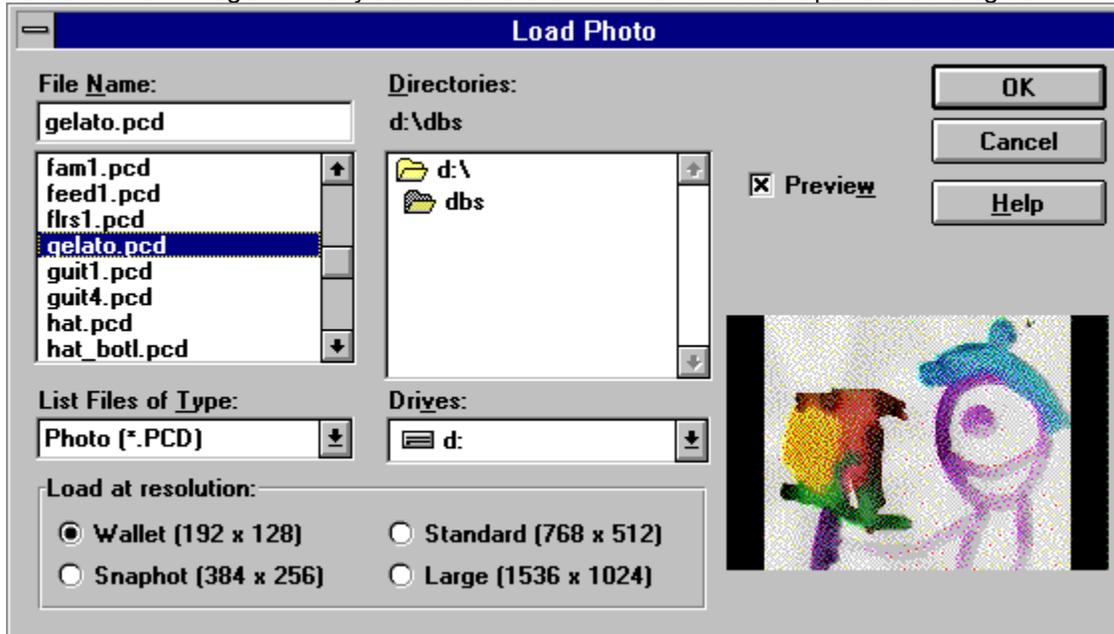
Load Photo



Hotkey: CTRL + P

Keys: ALT + C, P

To load a PCD image from any source other than a Photo CD disc. Opens this dialog box:



This is a Windows standard *Open* dialog box, with the addition of:

- Preview. Check to preview the selected image within the dialog box as shown.
- Load at resolution. Select the resolution at which to load the selected image.
- You can make multiple selections in this dialog box, by holding down the SHIFT key while selecting a group of contiguous files, or holding down the CTRL key to select several non-contiguous files. In this way up to 40 PCD images may be loaded in one operation.

Loading an Image

Before loading an image, select the desired options from *Load as...* and *Load colors...* sections of the **Thumbnails** menu.

The color options available will depend on the video card installed in your computer. You can always choose to load an image with fewer colors than you actually have available.

There are a number of ways to load an image:

- Double-click on the desired thumbnail; it will be loaded at the resolution currently selected in the **Thumbnails** menu.
- Select the thumbnail and then choose *Load Current* from the **Thumbnails** menu.
- Choose *Load...* from the **Thumbnails** menu. In the subsequent dialog box, the number of the currently-highlighted thumbnail will appear as default. Enter the number of the photo you wish to load directly in the Photo: text box, or select the number from the scroll box below. Click on **OK** to load the photo.

Any loading operation can be canceled at any time using either the ESC key or pressing the Cancel button.

Related Topics:

[About Photo CD Image Resolution](#)

[About Video Resolution](#)

About Photo CD Image Resolution

Images on a Photo CD disc are saved in a special graphic image format called PCD. For each image there is an Image Pac made up of five different resolutions of the same image. The resolutions are:

- Wallet: 128 pixels vertically x 192 pixels horizontally
- Snapshot: 256 x 384
- Standard : 512 x 768
- Large: 1204 x 1536
- Poster: 2048 x 3072

About Video Resolution

When you load an image, the viewing size of the image on screen will depend on the resolution of your monitor and video card *relative to* the resolution at which you have selected to load the image. For example, a Standard-size Photo CD image is 768 x 512 pixels; a VGA screen is 640 x 480 pixels. Obviously, the entire Standard-size image cannot fit on the screen.

Thumbnails Menu

Goto

Load Current

Load...

Load as... Resolutions

Load in... Colors

Goto

Hotkey: CTRL + G

Keys: ALT + T, G

Select by number a thumbnail image to display in the *Thumbnails* window. Select the desired number from the scroll box, or type it directly into the text box, and click on **OK**.



Load Current

Hotkey: CTRL + L

Keys: ALT + T, C

Load the image currently selected (highlighted) in the *Thumbnails* window at the resolution currently checked in the *Load as...* section of this menu.

Load...

Hotkey: CTRL + L

Keys: ALT + T, O

Select an image to load by either highlighting it in the scroll box or typing the number directly into the text box:



Load as... Resolutions

Load as Wallet



(if a *Photo* window is active this button *Transforms to Wallet*)

Keys: ALT + T, W

Sets the option to load the next image to be selected in wallet size. This command merely sets the size to load; you must subsequently choose *Load* or *Load as* to actually load the image.

Load as Snapshot



(if a *Photo* window is active this button *Transforms to Snapshot*)

Keys: ALT T + P

Sets the option to load the next image to be selected in snapshot size. This command merely sets the size to load; you must subsequently choose *Load* or *Load as* to actually load the image.

Load as Standard



(if a *Photo* window is active this button *Transforms to Standard*)

Keys: ALT T + S

Sets the option to load the next image to be selected in standard size. This command merely sets the size to load; you must subsequently choose *Load* or *Load as* to actually load the image.

Load as Large

Keys: ALT T + L

Sets the option to load the next image to be selected in large size. This command merely sets the size to load; you must subsequently choose *Load* or *Load as* to actually load the image.

Load in... Colors

Load in 16 Colors

Keys: ALT T+ I

Sets the option to load the next image to be selected in 16 colors. This command merely sets the color palette; you must subsequently choose *Load* or *Load as* to actually load the image.

Load in 256 Colors

Keys: ALT T+ 2

Sets the option to load the next image to be selected in 256 colors. This command merely sets the color palette; you must subsequently choose *Load* or *Load as* to actually load the image. *The color options available will depend on the video card installed in your computer.*

Load in Grayscale

Keys: ALT T+ Y

Sets the option to load the next image to be selected in grayscale. This command merely sets the color palette; you must subsequently choose *Load* or *Load as* to actually load the image. *The color options available will depend on the video card installed in your computer.*

Load in TrueColor

Keys: ALT + T, T

Sets the option to load the next image to be selected in True Color. This command merely sets the color palette; you must subsequently choose *Load* or *Load as* to actually load the image. *The color options available will depend on the video card installed in your computer.*

Photo CD Menu

Close All

CD Info

Exit

Close All



Keys ALT + C, A

Closes all open windows.

CD Info



(if the *Thumbnails* window is active; if a *Photo* window is active, this button displays Photo Rights)
ALT + C , I

Gives the following information about the currently loaded Photo CD:



Exit

ALT + C, X

Exit the program.

Photo Menu

Copy

Export

Rights

Full Screen

Copy

Hotkey: CTRL + C

Keys ALT + P, C

Copies the active image to the Windows clipboard. You can then paste it into another Windows application.

Export



Keys ALT + P, X

Exports the selected image in one of the following formats:

- Windows bitmap (.BMP)
- Encapsulated PostScript (.EPS)
- Paintbrush (.PCX)
- RIFF (.RIF)
- TIFF (.TIF).

Rights



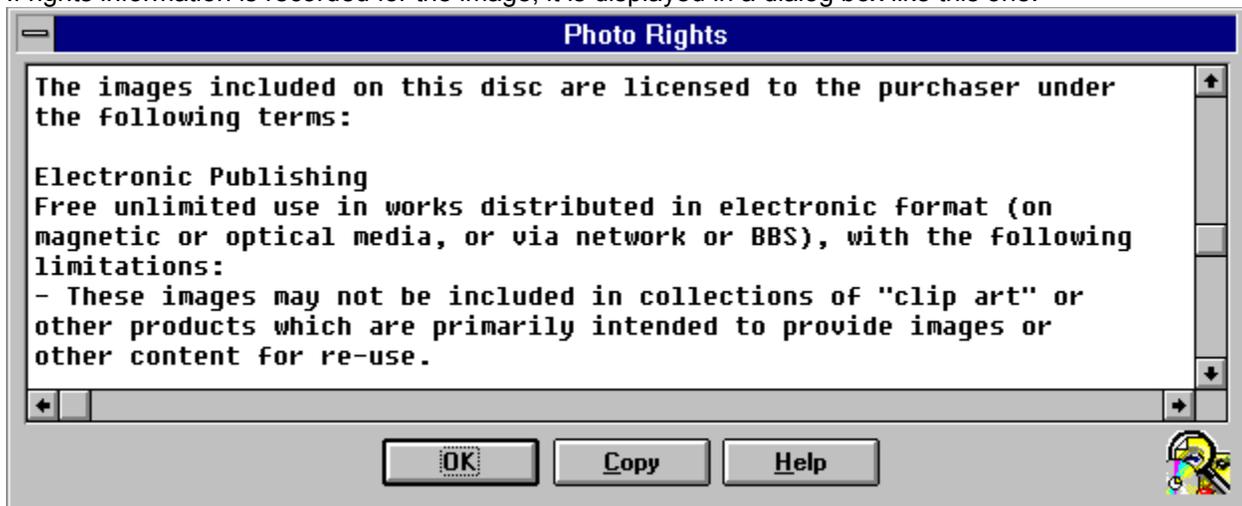
(if a *Photo* window is active; if the *Thumbnails* window is active this button displays *CD Info* for the entire disc)

Keys ALT + P, R

Shows what copyrights are listed (if any) for the current photo. If no rights are available, this dialog box appears:



If rights information is recorded for the image, it is displayed in a dialog box like this one:



You may use the **Copy** button to copy the entire text to the Windows clipboard.

Full Screen

Hotkey: CTRL + F

Keys ALT + P, T

Displays the image at its currently selected size against a black background. Press any key or the right mouse button to return to normal viewing.

Transformation Menu

Change attributes of the selected image. These commands are similar to the *Load* settings in the **Thumbnails** menu, but operate on a selected image which is already open in its own window.

The resolution given in parentheses will be the size in pixels of the image on screen. If the resolution of your screen is less than the resolution of the image, not all of the image will fit on the screen, and the image will be centered and its borders trimmed.

Related Topics:

[Transform to... Resolution](#)

[Crop](#)

[Uncrop](#)

[Transform to... Colors](#)

Transform to... Resolution

Wallet (192x128 pixels)



(if the *Thumbnails* window is active this button sets *Load as* to Wallet resolution)
Keys ALT + T, W

Snapshot (384x256 pixels)



(if the *Thumbnails* window is active this button sets *Load as* to Snapshot resolution)
Keys ALT + T, P

Standard (768x512 pixels)



(if the *Thumbnails* window is active this button sets *Load as* to Standard resolution)
Keys ALT + T, S

Large (1536x1024 pixels)

Keys ALT + T, L

Poster (3072x2048 pixels)

Keys ALT + T, R

Not available for uncropped photos.

An entire image in the maximum Photo CD resolution is approximately 16 megabytes in size when decompressed. Many PC systems are not equipped to manage such a large file, and many CD-ROM drives, with a transfer rate of 150 kilobytes per second (1x) would take over one and a half a minutes just to load it.

So, in order to keep Poster images to a manageable size, we have imposed a limit on the portion of the image that can be transformed into Poster. The default limit is four megabytes, but you can set it higher in the *Memory* dialog box. The larger the amount of memory set for Poster size, the larger the portion of the image that will be "Transformable to Poster."

1. Use the Crop feature as described above to define the area of the image that you want to transform into Poster size.
2. After cropping, open the **Transformation** menu.
3. Select *Poster*. If the *Poster* selection is gray, it means you have cropped an area larger than can be transformed to Poster size under the current memory settings. Return to the *Crop* dialog box and select a smaller portion of the image.

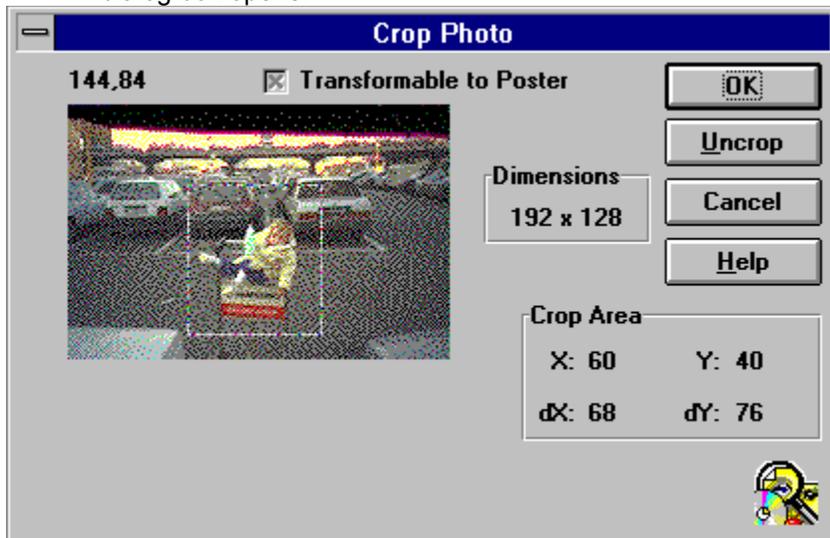
Crop



Keys ALT + T, C

The **Crop** function allows you to define a portion of an opened image to save. After cropping you may export the image to the Clipboard or in a different graphic format. *You cannot rotate or mirror a cropped image, perform these operations **before** cropping.*

1. To crop an image first load it, in any resolution.
2. With the photo window active, from the **Transformation** menu choose *Crop*. The *Crop Photo* dialog box opens:



3. Move the cursor onto the image in the dialog box. The pointer will become a crosshair, and at the upper left of the image you will see the X,Y coordinates of the current position of the pointer on the image.
4. Click and drag the mouse from one diagonal corner to the other of the area you wish to crop. Release the mouse button. A box shows the defined area. If you don't like the box you made, draw it again till you get it right. If the area you select is small enough, given the current Memory settings, to be transformed to Poster size, the Transformable to Poster check box will be checked.
5. The Crop Area will display the absolute X, Y coordinates of the starting point and the relative dX, dY coordinates of the selected image portion.
6. Exit the *Crop* dialog box by clicking on **OK**. You can now use the **Transformation** menu to resize the cropped image as desired.

Uncrop

Keys ALT + T, U

Reverses the Crop operation and reloads the original image.

Transform to... Colors

16 Colors

Keys ALT + T, 1

Transforms the selected image into 16 colors.

256 Color

Keys ALT + T, 2

Transforms the selected image into 256 colors. *The color options available will depend on the video card installed in your computer.*

Grayscale

Keys ALT + T, Y

Transforms the selected image into grayscale; the bit depth of the grayscale will depend on the capabilities of the video card installed in your computer.

TrueColor

Keys ALT + T, T

Transforms the selected image into True Color. *The color options available will depend on the video card installed in your computer.*

Any options not supported by your display card will be grayed out.

Rotation Menu

To rotate an image, mirror (flip) it, or both. The rotation and mirroring indicated is always performed in relation to the original image As Stored. Vertical images are already considered to be rotated.

As Stored

Keys ALT + R, A

Rotate 90° Counterclockwise

Keys ALT + R, 9

Rotate 180°

Keys ALT + R, 1

Rotate 90° Clockwise

Keys ALT + R, 0

Mirror Left to Right

Keys ALT + R, M

Mirror & Rotate 90° C.Clockwise

Keys ALT + R, 9

Mirror & Rotate 180°

Keys ALT + R, 1

Mirror & Rotate 90° Clockwise

Keys ALT + R, 0

Photo Windows

All Photo windows are standard modal windows, meaning that many can be open at one time (depending on the amount of memory available). You can iconize any window by clicking on the  in its upper right corner of the; double-click on the icon to reopen it.

You can resize a photo window by dragging its sides; by this method you cannot make the window larger than the image at its currently loaded resolution.

To close any window, double-click on the  area in the upper left corner.

To close all windows including the *Thumbnails* window, choose *Close All* from the **Photo CD** menu.

Window Menu

Tile Horizontal, Tile Vertical

Cascade

Arrange Icons

1, 2, 3,...

Tile Horizontal, Tile Vertical

Keys: ALT + W, H/ALT + W, V

The standard Windows *Tile* commands, to position all open windows within the main program window.

Cascade

Keys: ALT + W, C

The standard Windows *Cascade* command, to position all open windows overlapping within the main program window. The title bar of each window remains visible, making it easy to select any window.

Arrange Icons

Keys: ALT + W, I

Arranges icons (directory windows that have been reduced to icons) so that they line up neatly and do not overlap.

1, 2, 3,...

Keys ALT + W, 1.2.3...

Displays a list of the currently open windows.

When you choose an open window, you make that image window active. You can have as many image windows open at one time as memory allows. A check mark appears in front of the name of the active window.

Up to nine windows will be listed; if you have more you get a *More Windows* option which displays the a dialog box which allows you to select among the available windows.

Setup



Keys: ALT + S, S

You can create a self-running or prompted slide show of any or all of the images on one disc.

1. With the *Thumbnails* window open and active, the **SlideShow** menu appears. Select *Set Up*. The *Slide Show Setup* dialog window appears:



Related Topics:

[Adding Photos](#)

[Display Options](#)

[Password Protection](#)

Adding Photos

There are several ways to add photos to a slideshow:

- The *Thumbnails* window and the menu bar are still active when the *Slide Show Setup* window is open, so you can use the Thumbnails window to select the photos you wish to include in the slide show. Select the thumbnail of an image you want to insert into the slide show; its number will be



listed in the box. Click on **Insert** to add this photo to the slideshow. If there are already some photos listed in the scroll box, the new number will be inserted immediately *before* the item currently highlighted in the scroll box.



- Type the number of a photo you want to include directly into the box, then click on **Insert**. Again, the new number will be inserted immediately before the highlighted item in the scroll box.
- To insert all photos into the show, click on **Insert All**.

Other options are:

- To delete a slide from the show, highlight it in the scrolling list and click on **Delete**.
- To randomize the order of photos listed in the scroll box, click on **Shuffle**.
- To empty the scroll box, click on **Clear**.

The Total Slides and Total Time counters are constantly updated to reflect your changes.

Display Options

Then set how you want your show to be displayed:

- Choose Snapshot, Standard, or Large from the Size area.
- From the Slide Flip area, set the Time out – the amount of time (in seconds) that each slide should be displayed. Note: If this time is shorter than the time actually required to load the image from disc (which can easily happen when loading Large images), a new slide will begin loading as soon as the old one appears on screen. The total time of the slide show listed below always reflects the number of slides in the show multiplied by the Time out, which will not be accurate if each photo actually takes longer to load than the Time out time given.
- If the Keyboard or Click box is checked, the next slide will begin loading the moment a key on the keyboard is pressed or the mouse button is clicked, regardless of whether the Time out time has elapsed. If this option is checked and Time out is unchecked, control is completely manual – the program will always wait for a keypress or mouse click before loading the next slide.

Password Protection

You can create a slideshow that cannot be interrupted except upon typing in a password. This password (or phrase) is stored in the Protect box. It can be up to 32 characters in length, and is case-insensitive (that is, you can use upper- and lower-case characters, but the program will not distinguish between them in accepting the password.)

The Protect option is useful if you wish to use *Magic Lantern* to run a slideshow in a public area; with the protect option, the computer is effectively locked against anyone who does not know the password, and will continue to run the slideshow as set. Windows' task switching and other operations are also disabled.

If nothing is entered in the Protect box, the slideshow may be stopped by pressing the ESC key on the keyboard.

Run



Hotkey; CTRL + R

Keys: ALT + S, R

You may begin running your sideshow immediately by clicking on **Run**, or you may exit the *Setup* dialog box (and even *Magic Lantern*) and the current sideshow will be saved. You can then run it at any time by choosing *Run* from the **Slide Show** menu. This slide show will be saved, even if you exit the program, until it is cleared or replaced by another one.

To stop the slideshow, if nothing is entered in the Protect box, press the ESC key on the keyboard.

What is Portfolio?

Portfolio is a multimedia format combining still images (based on the Photo CD image technology), high-quality sound, and user-selectable numbered options. A Portfolio disc would typically run on a Photo CD or CD-I player attached to a television, with the user controlling interaction via a remote control, but using *Magic Lantern's* Portfolio Player, you can run a Portfolio disc on your PC system with the same kind of interactivity you would enjoy on a Photo CD or CD-I player.

Not all Photo CDs are Portfolio discs; Portfolio discs are usually identified as such. In addition, the Demo Discs which Kodak provides with its Photo CD players are Portfolio discs.

Note: To hear the sound from a Portfolio disc on your PC, you will need to have installed a sound system capable of playing back 44.1 MHz (Red Book standard) sound.

How Portfolio Discs Work

On a Photo CD or CD-I Player

On a PC with Magic Lantern Portfolio Player

On a Photo CD or CD-I Player

A Photo CD or CD-I player is essentially a small computer designed to be attached to a standard television set. The user controls it via a TV-style remote control. The number of buttons and options may vary, but for a Portfolio disc the essential ones are the digits 0 through 9 (which allow the user to select from a menu of items), the Previous and Next buttons (which usually move one photo forward or back in the image sequence), and a Stop button (which halts the action and returns to the opening screen). A CD-I player also has a "thumbstick" on the remote control which allows the user to move a cursor around on the screen. This can be used to point and click on "hot" areas just as you would with a mouse on a personal computer.

On a PC with Magic Lantern Portfolio Player

Using the Portfolio Player on your PC, you get exactly the same functionality as you would with a dedicated player: menu items are selected either by operating the on-screen remote control by keyboard commands, using the mouse to operate the on-screen remote control, or by using the mouse to point and clicking directly on the buttons in the image.

Using the Portfolio Player



Keys: ALT + S, P

When a Portfolio disc is loaded in Magic Lantern, the Portfolio button becomes available on the Toolbar and the *Play* command becomes available in the **SlideShow** menu. Use either to start the Portfolio Player.

The screen becomes black, with the first image displayed in its center, and the remote control appears:



The options and features are:

- **Pause.** Pause the presentation. When clicked, this button becomes **Play**; click it again to resume playing.
- **Stop.** Stop the presentation and return to the opening screen.
- **<< and >>.** (Previous and Next) Go to the previous or next picture in the presentation.
- **Numbers.** When a screen offers numbered choices, select the desired number.
- **Number Box.** Displays the number of the image currently on screen.
- **Mute.** Check the box if you don't want to hear sound while the presentation is being shown.
- **Wallet, Snapshot, Standard.** Select the size at which you want the pictures to be displayed.
- **Close.** Exit the Portfolio Player. You can also press the ESC key on the keyboard.

Glossary of Terms

[Bit Depth](#)
[Color YCC](#)
[Compression](#)
[Crop](#)
[CPU](#)
[Grayscale](#)
[Image Pac](#)
[Photo CD](#)
[Pixel](#)
[RAM](#)
[Resolution](#)

Bit Depth

In color images, the number of colors that can be used to represent the image. Typical values are 8-, 16-, and 24-bit color, allowing 256, 65,536 and 16,777,216 colors to be represented. The latter is known as true color, because 16.8 million different colors is about as many as the human eye can distinguish. In grayscale images, the number of levels of gray. Typical values are 8- and 16-bit grayscale.

Color YCC

A device-independent color encoding method developed by Kodak for Photo CD. It separates each color pixel into one 8-bit luma (light intensity) component and two 8-bit chroma (color) components (totalling 24 bits). Color YCC also defines a method of converting RGB to luma and chroma and vice versa, which allows both efficient image data compression and sufficient dynamic range and color gamut to support present and future video displays, as well as high-quality color printing devices.

Compression

Translating data into a more compact form for storage. As data files grow ever-larger (image, video, and sound files particularly), compressing them for storage becomes increasingly important. Most data files can be compressed by removing redundant information. There are several methods, some standard and some proprietary. Compressed files require a decompression process to make them usable. See also Symmetrical and Asymmetrical Compression.

Crop

To cut one or more sides of an image to make it fit a space, or to eliminate unwanted parts of the image.

CPU

Or microprocessor. The chip that is the "brain" of the computer.

Grayscale

A method of representing images on screen or paper using tones of gray rather than color or plain black-and-white. Suitable for reproducing black-and-white photographs, which are themselves actually analog images made up of shades of gray.

Image Pac

In Photo CD, a set of five versions of the same image, at varying resolutions.

Photo CD

A compact disc format based on the Hybrid Disc specification, used to store photographic images for display and printing.

Pixel

Or picture element. The smallest element of a screen image that can be identified and manipulated; one glowing dot on a television screen or computer monitor. Screen resolution is measured in pixels. Sometimes also called pels.

RAM

(Random-Access Memory) A set of chips in the computer in which information can be held for very fast access by the microprocessor. The operating system and application programs are loaded into RAM, where the computer can use them to perform operations as requested.

Resolution

Fineness of detail. In computer monitors it is measured in pixels (usually horizontal x vertical) or in pixels per inch.

First check the Magic Lantern directory to ensure that you are not going to lose information you want to keep!

The time required to load an image will depend on: the transfer rate of your CD-ROM drive, the size of the image being loaded, and the speed of your CPU.

