

WQV M Link User's Guide

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Introduction

Foreword

This manual describes the proper operating procedures for CASIO WQV M Link, a Macintosh computer link application specially designed for the CASIO Wrist Camera.

Note that the instructions in this manual assume that you are already familiar with the following Macintosh basic operations.

- **Mouse operations, such as click, double-click, drag, and drag and drop**
- **Menu operation using the mouse**
- **Entering text using the keyboard**
- **Window operations common to the Macintosh**

If you need more information about the above operations, see the documentation that came with your Macintosh.

Before installing WQV M Link on your Macintosh, be sure to read "Minimum System Requirements" on page 4 to make sure that your system conforms.

WQV M Link Features

Image data exchange with a CASIO Wrist Camera

You can use a CASIO IR adapter (PAD Series) and USB-Serial adapter cable to transfer images between your Wrist Camera and Macintosh. Note that infrared data communication using a portable Macintosh's built-in infrared port is not supported.

Image data display on your Macintosh

You can view BIN, JPEG, and PICT format images on your Macintosh screen.

Large-volume archiving of recorded images

You can save image data recorded with the Wrist Camera to a floppy or your Macintosh's hard disk.

Multiple image file editing

WQV M Link provides tools you can use to edit BIN, JPEG, and PICT image data on your Macintosh. Edited images can be transferred back to the Wrist Camera as required.

Album-based image data management

Album capabilities let you view thumbnails of all the BIN, JPEG, and PICT images stored in a specific folder. You can even display albums of multiple folders, and move, copy, and delete images quickly and easily.

Photo retouching

Photo retouching capabilities let you correct for underexposure, overexposure, etc.

Drag and drop

WQV M Link supports Macintosh drag and drop operations, which means you can transfer images to other applications quickly and easily.

Minimum System Requirements

The following shows the minimum system requirements to run WQV M Link.

- Operating System: Mac OS 8.6 or higher
- CPU: PowerPC G3, G4
- Available Memory: 8MB minimum
- Hard Disk: 5MB minimum free space
- Data Communication Port: USB only*
 - * *Proper operation is guaranteed only for a computer equipped with a USB port as standard.*
- Monitor: 640 × 480 dots, 32,000 or more colors (recommended)
- Other: CD-ROM drive, keyboard, mouse or other equivalent pointing device

Operating Precautions

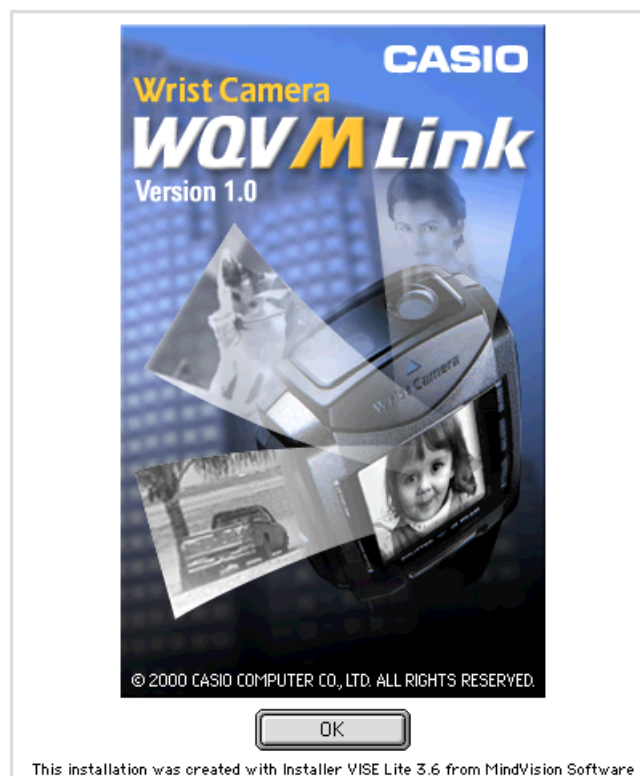
- This application supports BIN, JPEG, and PICT image file formats only. Before transferring another type of file, you must first use other image editing software to convert it to one of the supported formats noted above.
- This software does not support progressive JPEG.
- An album that contains a large number of images can take a long time to open. Since an album window can show only a limited number of images at one time, we recommend that you divide your images among multiple albums.

Installing WQV M Link

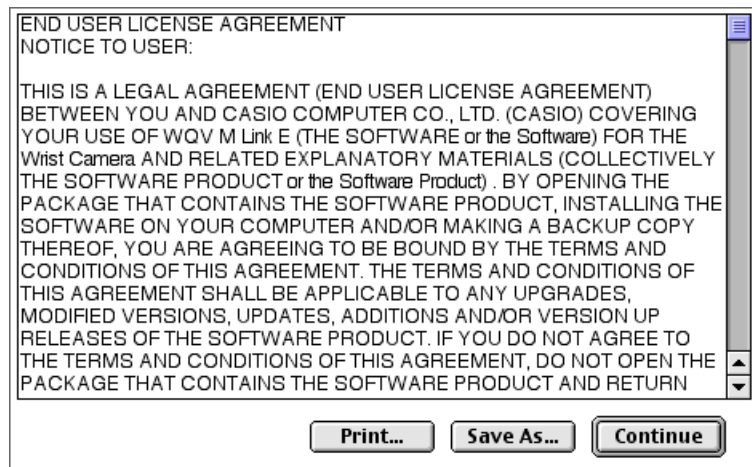
1. Start your Macintosh and place the **CASIO Wrist Camera Software** CD-ROM into its CD-ROM drive.
2. On the CD-ROM window, double-click **Software**.
3. On the next window that appears, double-click **English**, and then double-click **WQV M Link E Installer**.



4. On the start up dialog box that appears, click **OK**.



5. Carefully read the Software License Agreement that appears, and then click **Continue** to accept its terms and proceed with the installation.



6. On the installer dialog box that appears, specify the location where you want to install WQV M Link, and then click **Install**.



7. Follow the directions that appear on the screen to complete the installation. After you are finished, restart your Macintosh.

Uninstalling WQV M Link

Use the following procedure when you want to uninstall WQV M Link.

Important!

- Deleting the wrong file can cause abnormal operation of your system. Always exercise caution whenever uninstalling this or any other application.
1. On the startup disk, open the **System Folder** and then the **Extensions** folder.
 2. Drag the **USB RS232 Support** and **SerialShimLib** files from the **Extensions** folder into **Trash**.
 3. Restart your Macintosh.

Basic Operation

Launching WQV M Link

1. Start up your Macintosh.
 2. In the **WQV M Link** folder, double-click **WQV M Link E**.
- This starts WQV M Link and displays the startup window.

Quitting WQV M Link

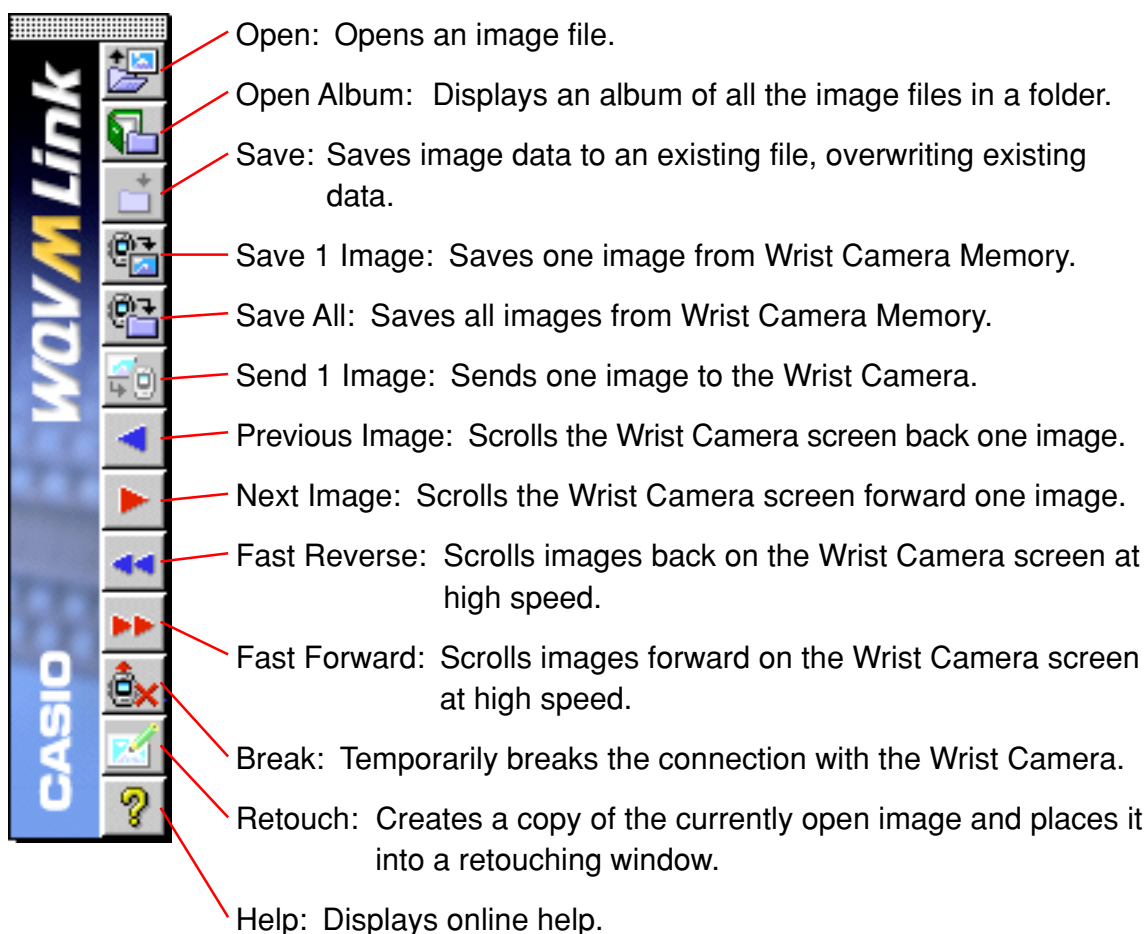
To quit WQV M Link, select **Quit** from the **File** menu.

About the Tool Palette

The buttons of the tool palette provide you with one-click access to menu command operations.

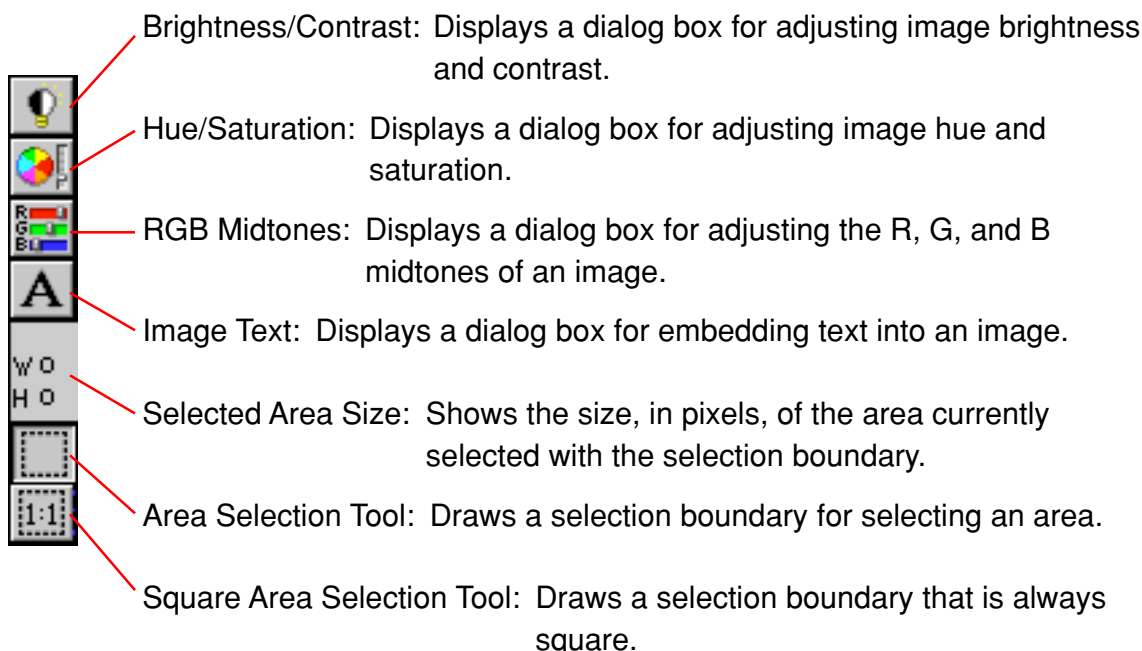
Application Window Tool Palette

You can toggle the display of the tool palette in the application window on and off by clicking **Show Tool Palette** on the **Window** menu.



Retouching Window Tool Palette

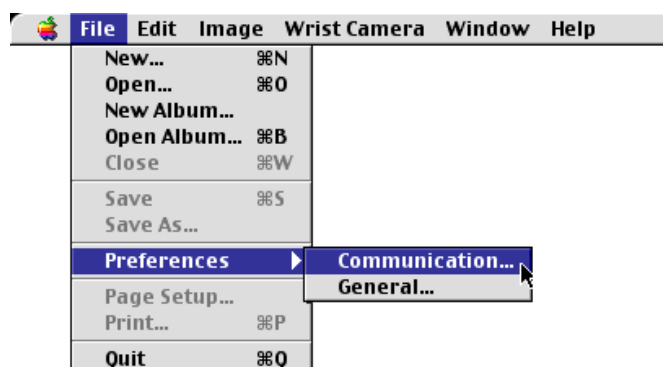
The following shows the tool palette that appears in the retouching window. See “Opening an Image Retouching Window” on page 39 for information about how to open a retouching window.



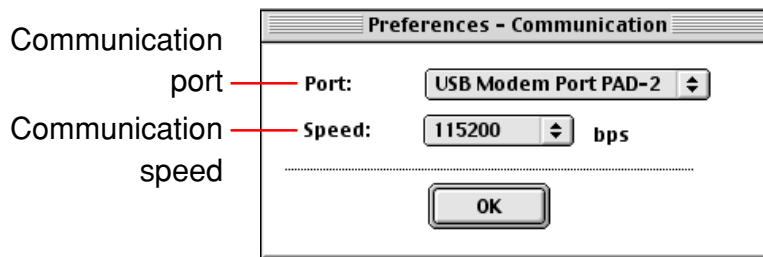
Checking Wrist Camera and WQV M Link Communication Setup

Be sure to perform the following procedure to check the communication setup before actually trying to transfer image data.

1. Start up WQV M Link.
 - See “Launching WQV M Link” on page 8 for details.
2. Select **Preferences** from the **File** menu, and then select **Communication**.



3. Check the port and speed settings, and then click **OK**.



Connecting the IR Adapter to Your Macintosh

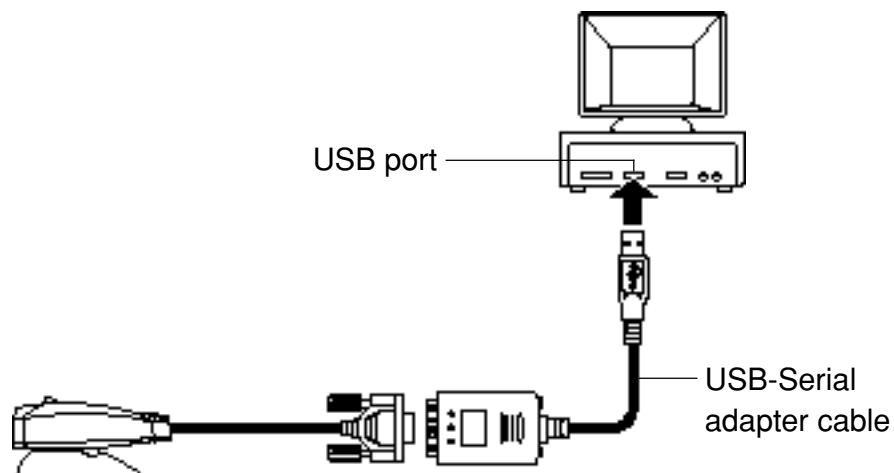
See “Saving Wrist Camera Images to Your Macintosh” on page 21 and “Transferring an Image to the Wrist Camera” on page 25 for information about transferring and saving images.

Important!

- Use only the CASIO brand PAD Series IR adapter and the CASIO brand USB-Serial adapter cable. Use of other products is not supported.

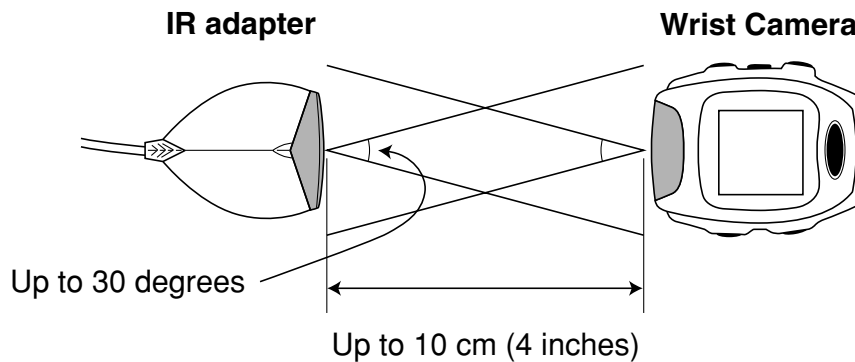
IR Adapter ↔ USB-Serial Adapter Cable ↔ Macintosh Connection

Connect the USB-Serial adapter cable to the USB port of your Macintosh, and then connect the cable to the IR adapter.



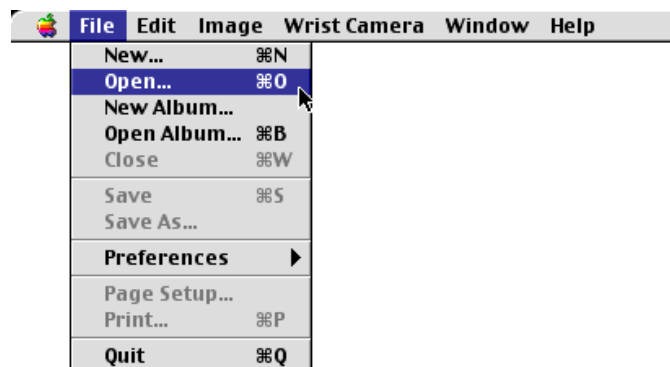
IR Adapter ↔ Wrist Camera Connection

Orient the IR adapter and Wrist Camera so they are within about 10 cm (4 inches) of each other, at a maximum angle of about 30 degrees.

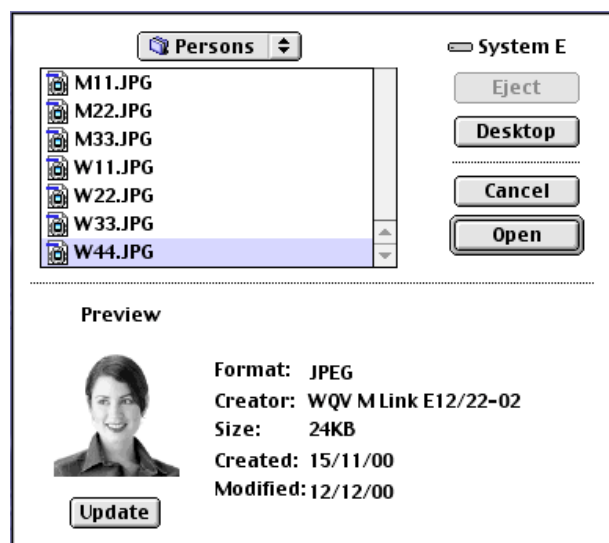


Viewing Images Stored in an Image File

1. Select **Open** from the **File** menu.
- You can also open an image file by clicking the tool palette  button.



2. Use the dialog box to select the image file you want to open.



3. After selecting the image file you want, click **Open**.
- This displays a window showing the image.

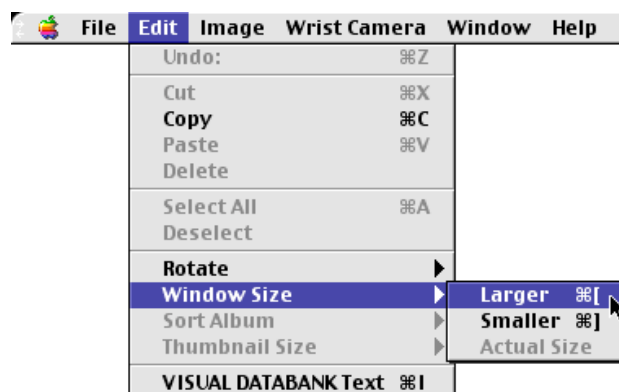


Changing the Size of an Image

The following procedures explain how to make image windows larger and smaller. Note that you cannot change the size of a retouching window (page 39).

To enlarge an image window

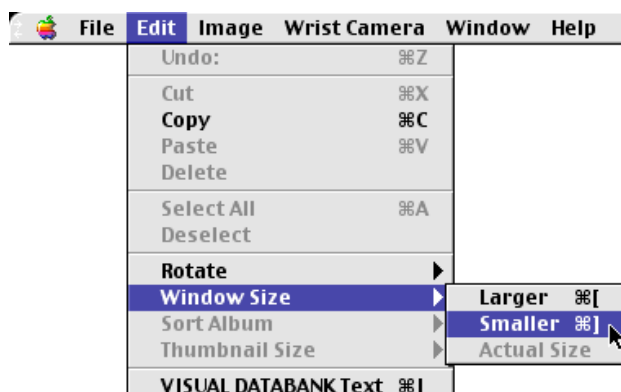
1. From the **Edit** menu, select **Window Size** and then **Larger**.



2. Repeat step 1 until the image window is the size you want.
- Each time you perform step 1, the size of the image window changes sequentially in the sequence: 25% → 50% → 100% → 200% → 300% → 400%.

To reduce the size of an image window

1. From the **Edit** menu, select **Window Size** and then **Smaller**.

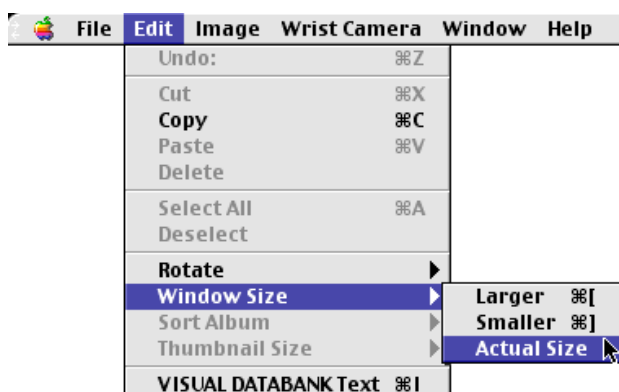


2. Repeat step 1 until the image window is the size you want.
- Each time you perform step 1, the size of the image window changes sequentially in the sequence: 400% → 300% → 200% → 100% → 50% → 25%.

To return an image to its actual size

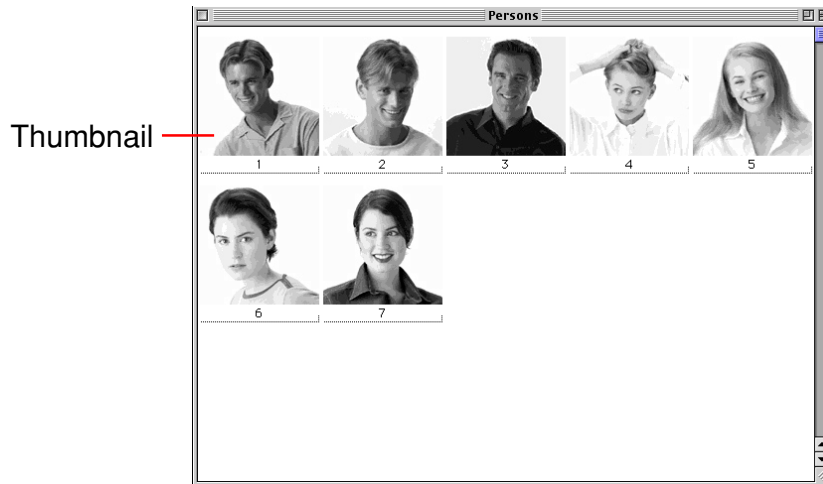
From the **Edit** menu, select **Window Size** and then **Actual Size**.

- The size of the image changes to 100% (actual size).



Viewing an Album Window

An “album window” shows thumbnails (small versions) of multiple BIN, JPEG, and PICT format image files. It comes in handy when you want to locate an image quickly.

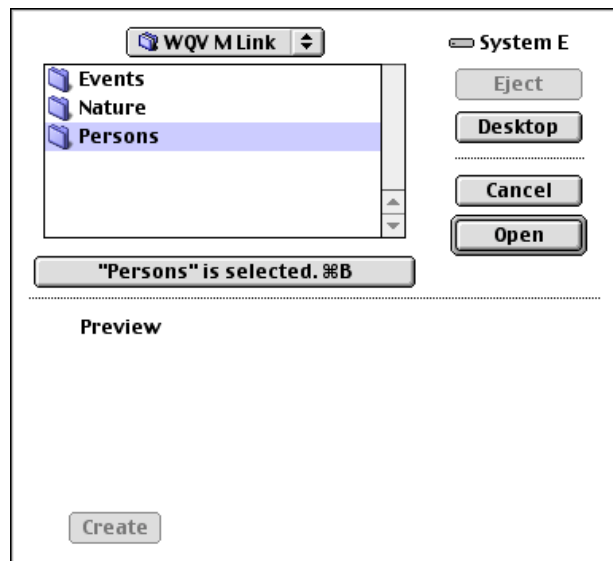


To display an album window

1. Select **Open Album** from the **File** menu.
- You can also open an album by clicking the tool palette  button.



2. Select the folder where the image files are located.

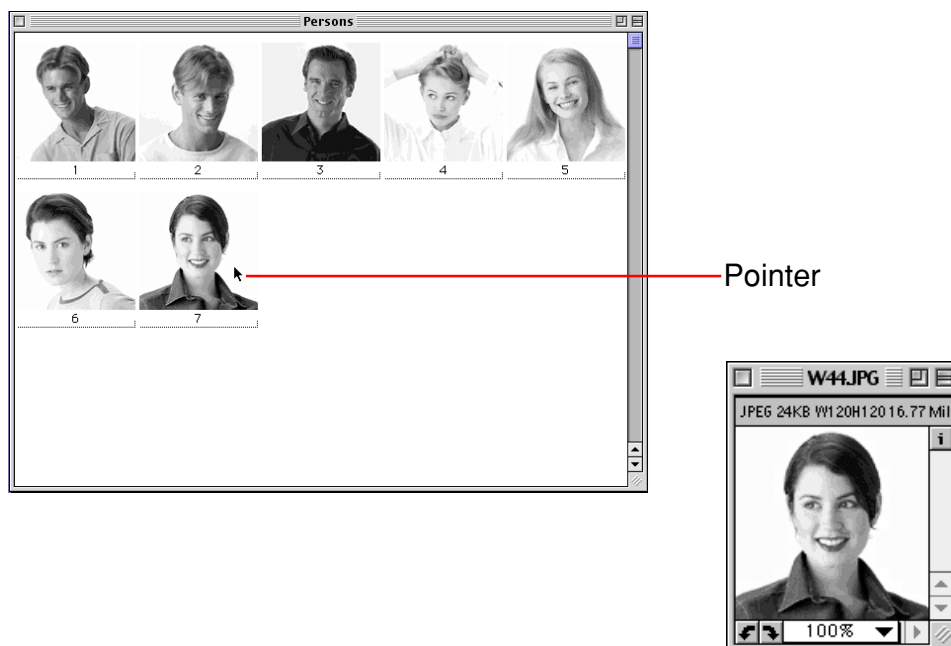


3. Click **Open** or click the button below the list of folders to open the currently selected album.
- This causes an album window to appear with thumbnails of all BIN, JPEG, and PICT files in the folder you specified.

To select an image file from an album window

Move the pointer to the thumbnail of the image you want to select, and then double-click it.

- This displays a window showing the image.



Album Window Indicators

Thumbnail of selected image is surrounded by a selection boundary.

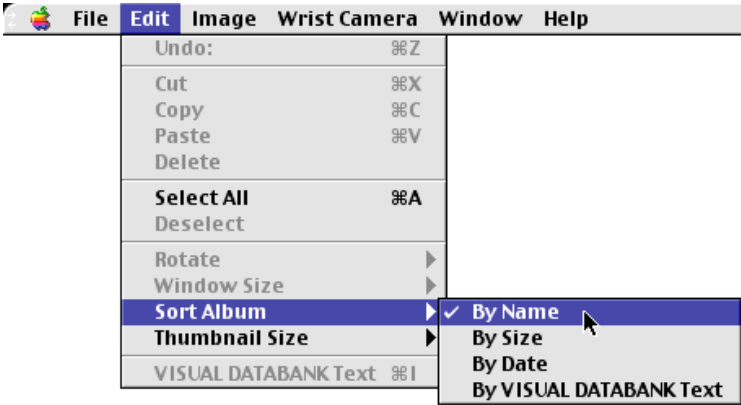


Sequential number

A lock mark indicates that the image has been locked using your Macintosh system or another application. Note that images cannot be locked (protected) using either the Wrist Camera or the WQV M Link application.

Changing the Order of Files in an Album

Select **Sort Album** from the **Edit** menu, and then select **By Name**, **By Size**, **By Date**, or **By VISUAL DATABANK Text**.



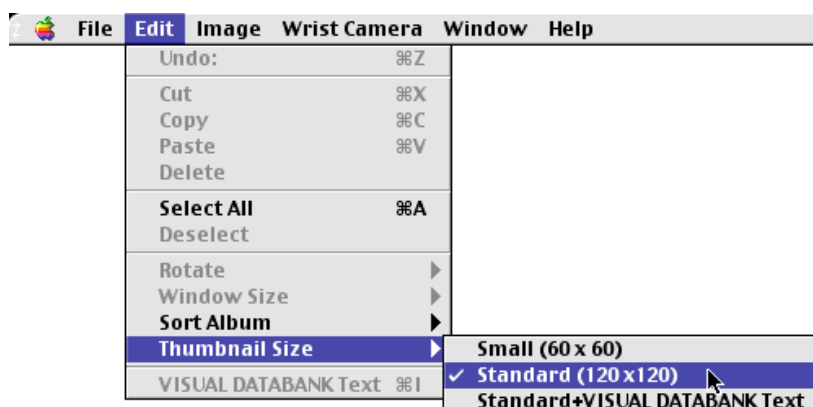
When you want to do this:	Select this submenu item:
Sort album images alphabetically by their file names	By Name
Sort album images by their file sizes	By Size
Sort album images by their last modified dates	By Date
Sort album images alphabetically by their VISUAL DATABANK text See page 17 for information about how to input VISUAL DATABANK text for an image.	By VISUAL DATABANK Text

Changing the Size of Thumbnails

Select **Thumbnail Size** from the **Edit** menu, and then select **Small (60 × 60)**, **Standard (120 × 120)**, or **Standard+VISUAL DATABANK Text**.

Note

- For more information about VISUAL DATABANK text, see “To input and edit VISUAL DATABANK text” on page 18.



Inputting and Editing Text

WQV M Link supports three different types of text: VISUAL DATABANK text, memo text and image embedded text. This section describes how to input and edit each type of text.

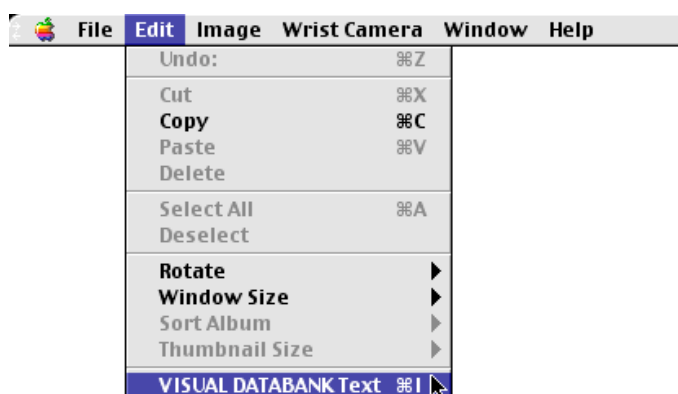
VISUAL DATABANK Text

VISUAL DATABANK text is text that appears on the screen of your Wrist Camera along with the date and time when the image was recorded. When you transfer an image between the Wrist Camera and your Macintosh, VISUAL DATABANK text associated with the image is also transferred.

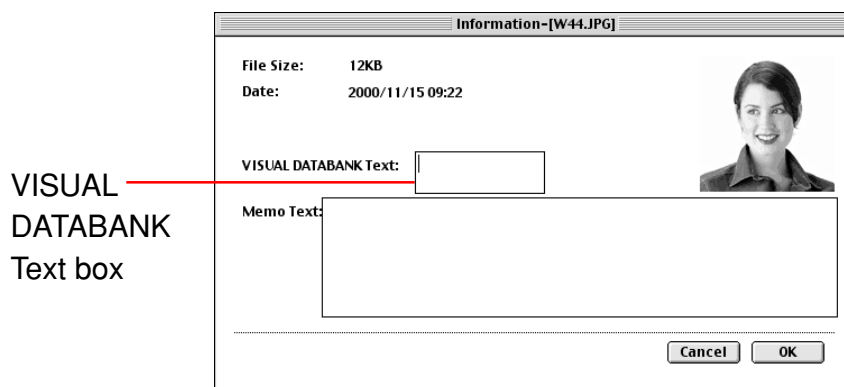
- You can also input and edit VISUAL DATABANK text on the Wrist Camera. The Wrist Camera supports input of upper-case alphabetic characters (**A** to **Z**), numbers (**0** to **9**), spaces, and certain symbols (**&**, **'**, **(**, **)**, **,**, **-**, **.**, **/**, **:**, **?**, **_**, **~**, **•**).
- The **•** and **~** characters input on the Wrist Camera appear respectively as ***** and **~** when the VISUAL DATABANK text is transferred to a Macintosh. Conversely, ***** and **~** input on a Macintosh appear as **•** and **~** when transferred to the Wrist Camera. Any character input on a Macintosh that is not included in those shown above is replaced by a space when transferred to the Wrist Camera.
- The above does not apply to memo text or image text.

To input and edit VISUAL DATABANK text

- 1.** Display the image whose VISUAL DATABANK text you want to input or edit.
 - If you want to view the VISUAL DATABANK text currently assigned to images, display the album window, and then select **Edit** → **Thumbnail Size** → **Standard+VISUAL DATABANK Text**.
- 2.** Select **VISUAL DATABANK Text** from the **Edit** menu.
 - The **VISUAL DATABANK Text** command is available only while an image window is active. It is dimmed while a retouching window or album window is active.



- 3.** Type text into or edit the text already inside of the VISUAL DATABANK Text box.
 - You can input up to 24 characters for VISUAL DATABANK text.



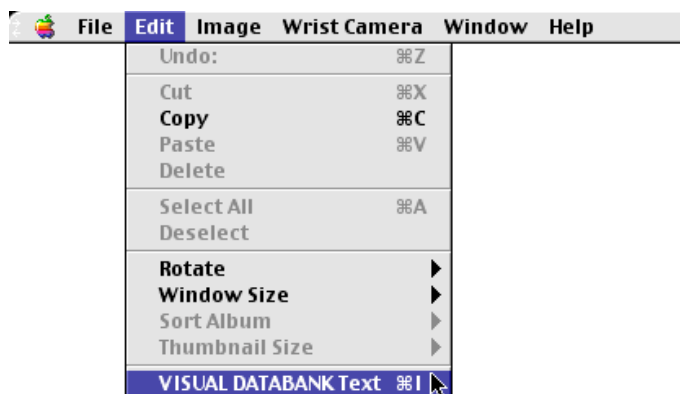
- You can also input or edit memo text at this time, if you want. See the following section for information about memo text.
- 4.** After everything is the way you want, click **OK**.

Memo Text

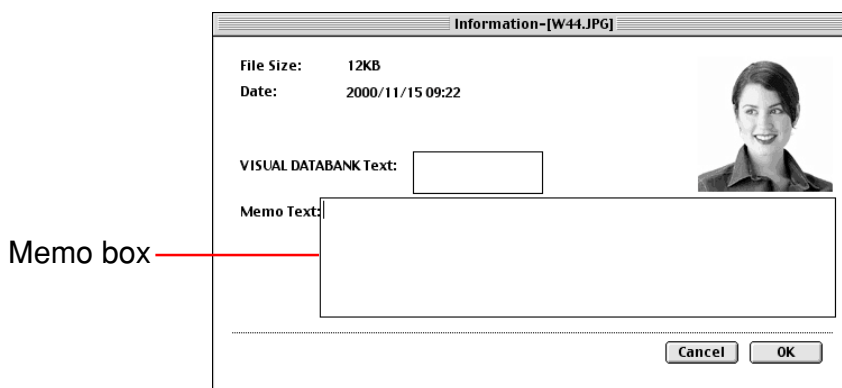
You can use memo text to make notes about the image, the circumstances under which it was recorded, or any other information you like. Note that memo text is not included when you send an image to the Wrist Camera.

To input and edit memo text

1. Display the image whose memo text you want to input or edit.
2. Select **VISUAL DATABANK Text** from the **Edit** menu.
- The **VISUAL DATABANK Text** command is available only while an image window is active. It is dimmed while a retouching window or album window is active.



3. Type text into or edit the text already inside of the Memo box.
- You can input up to 255 characters and up to six lines for memo text.



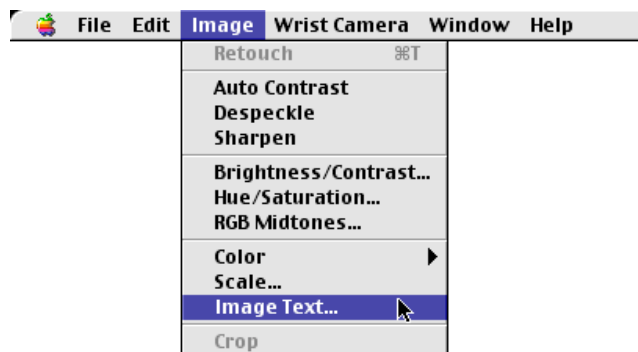
- You can also input or edit VISUAL DATABANK text at this time, if you want. See the previous section for information about VISUAL DATABANK text.
4. After everything is the way you want, click **OK**.

Image Text

Image text is embedded into and becomes an actual part of the image where you input it.

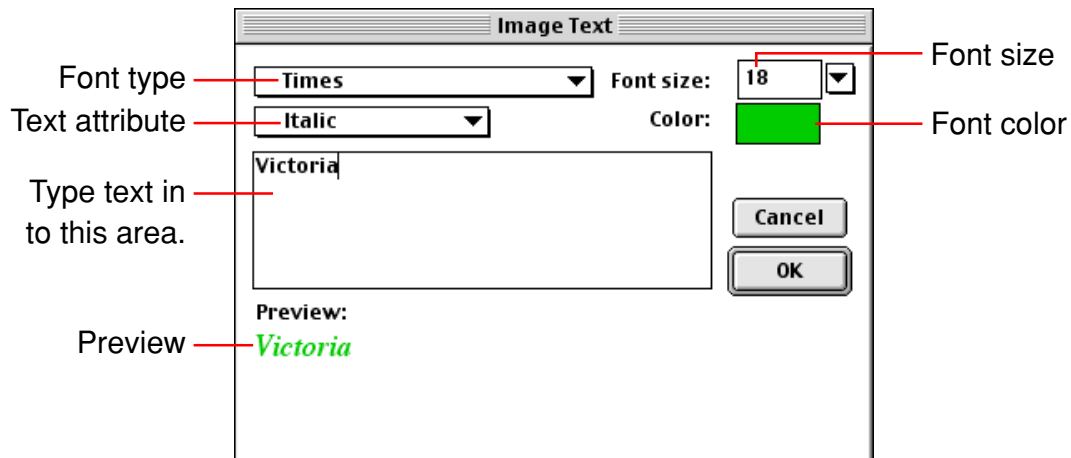
To embed text into an image

1. Display the retouching window of the image into which you want to embed text.
 - See “Opening an Image Retouching Window” on page 39 for more information.
2. Select **Image Text** from the **Image** menu.
 - You can also click the tool palette **A** button on the retouching window.



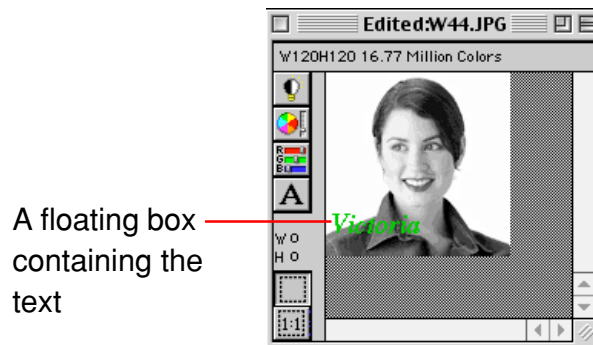
3. Type in the text and specify the font, size, color and text attributes you want.

Image Text dialog box



4. Click **OK**.
5. A floating box containing the text appears on the image in the retouching window. Move the box to the position on the image you want by dragging it with the mouse.

6. When the text is in the position you want, press the **return** key on the keyboard or click anywhere outside the box.



Saving Wrist Camera Images to Your Macintosh

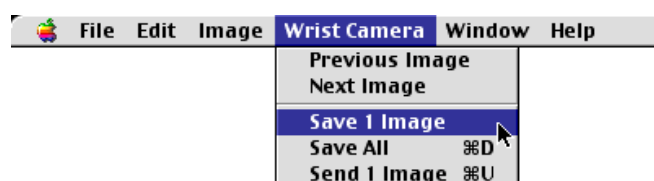
This section describes how to save images from the Wrist Camera to a Macintosh running WQV M Link. Besides the operations you need to perform on your Macintosh with WQV M Link, you also need to perform other steps on your Wrist Camera to prepare it for data communication. These steps are always the same, regardless of whether you are saving single images or all the images in Wrist Camera Memory.

Note

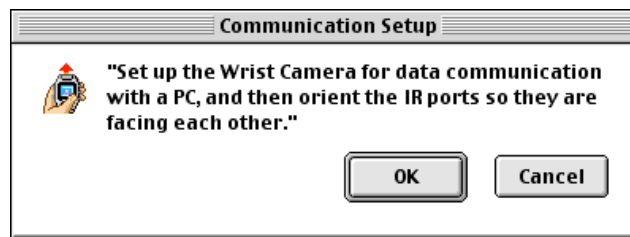
- See the User's Guide that comes with the Wrist Camera for details about its operation.
- Any image you save to your Macintosh also remains in the memory of your Wrist Camera.

To save a single image from the Wrist Camera

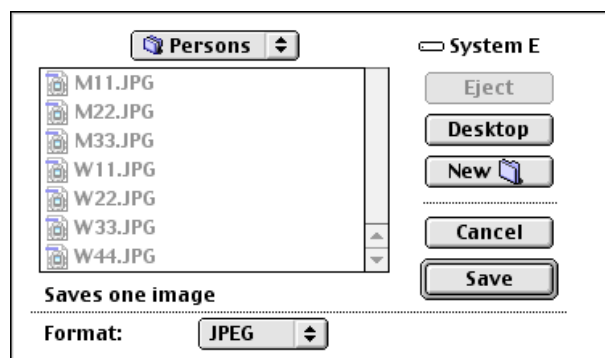
1. On your Wrist Camera, enter the VISUAL DATABANK™ Mode and display the image you want to save.
2. Prepare the Wrist Camera for data communication.
 - See "To prepare the Wrist Camera for data communication" on page 25.
3. On your Macintosh, select **Save 1 Image** from the **Wrist Camera** menu.
 - You can also click the  button on the tool palette.



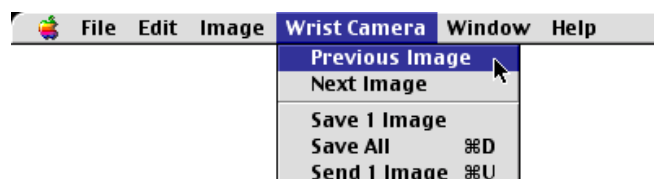
4. Click **OK** to start image transfer.



- The progress of the transfer is shown on your Macintosh screen.
 - Clicking **Cancel** on the dialog box cancels data communication with the Wrist Camera. You can also temporarily interrupt the connection by clicking and holding the tool palette  button.
5. A file save dialog box appears after data communication is complete. Specify the storage location and image file format and then click **Save**.
 - The image you save is shown in the album of the folder where the image file is located.
 - If you do not specify a folder, the image is saved automatically to the folder whose images are displayed in the currently active album.



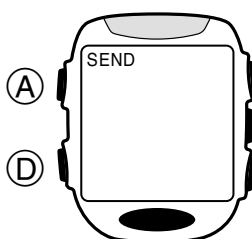
6. Transfer and save other images, if you want. Otherwise, skip to step 7.
- You can use the **Wrist Camera** menu's **Previous Image** and **Next Image** commands to scroll images on the Wrist Camera screen and display the next image you want to save.



- You can also use the tool palette buttons described below to display the next image you want to save.

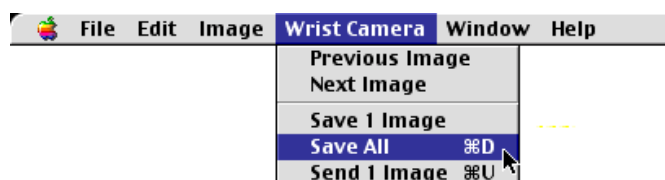
When you want to do this:	Click this button:
Scroll forward at high speed	
Scroll back at high speed	
Advance to the next image	
Return to the previous image	

- If  or  takes you too far past, use  and  to scroll image-by-image back to the one you want.
7. After saving all the images you want, press the (A) button or (D) button on your Wrist Camera to terminate the transfer.
- Pressing (A) terminates the connection and returns to the Communication Menu.
 - Pressing (D) returns to the Timekeeping Mode.

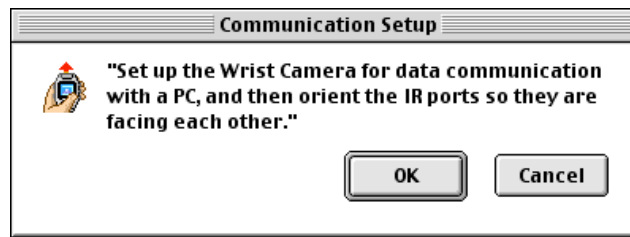


To save all the images from the Wrist Camera

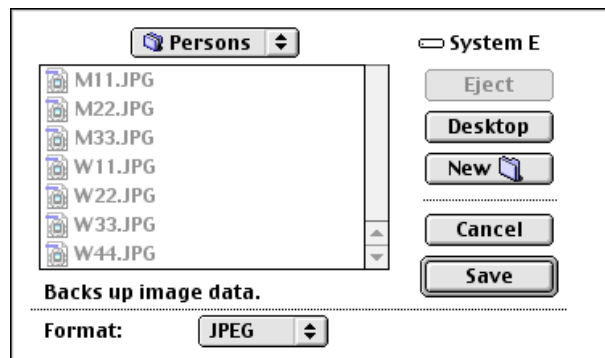
1. Prepare the Wrist Camera for data communication.
 - See “To prepare the Wrist Camera for data communication” on page 25.
2. On your Macintosh, select **Save All** from the **Wrist Camera** menu.
 - You can also click the  button on the tool palette.



3. Click **OK** to start the transfer.



- The progress of the transfer is shown on your Macintosh screen.
 - Clicking **Cancel** on the dialog box cancels data communication with the Wrist Camera. You can also temporarily interrupt the connection by clicking and holding the tool palette  button.
4. A file save dialog box appears after data communication is complete. Specify the storage location and image file format and then click **Save**.
 - The file you save is shown in the album of the folder where the file is located.
 - If you do not specify a folder, the images are saved automatically to the folder whose images are displayed in the currently active album.

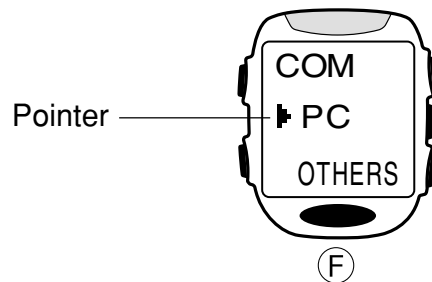


Important!

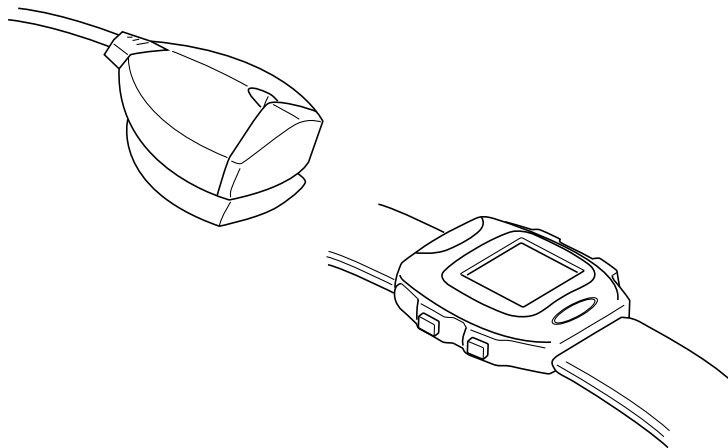
- When you save all images from Wrist Camera memory, file names are assigned automatically according to the following rule: **first 20 characters of folder name + _ + serial number + extension**.
- The data save operation is interrupted automatically if an error showing insufficient free space appears during save operation. If this happens, use the album function to check for image data that was not saved. After that, you can specify another disk (or drive) using **Save As** from the **File** menu and save more images.

To prepare the Wrist Camera for data communication

1. On the Wrist Camera, enter the IR Mode, display the Communication Menu, and make sure that the pointer is located next to **PC**.



2. Press the (F) button on the Wrist Camera.
 - This causes the message **REMOTE** to appear on the Wrist Camera screen, indicating that it is standing by for data communication.
3. Align the IR port of the Wrist Camera with the port of the IR adapter.



- Now you are ready to perform the required WQV M Link operation on your Macintosh to start image transfer.

Transferring an Image to the Wrist Camera

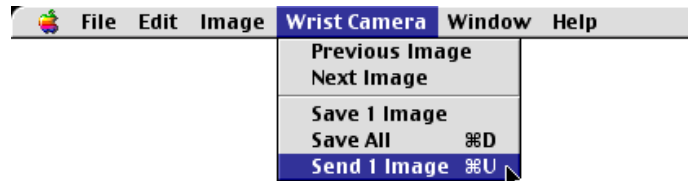
Use the following procedure to use WQV M Link to transfer an image from your Macintosh to your Wrist Camera.

Note

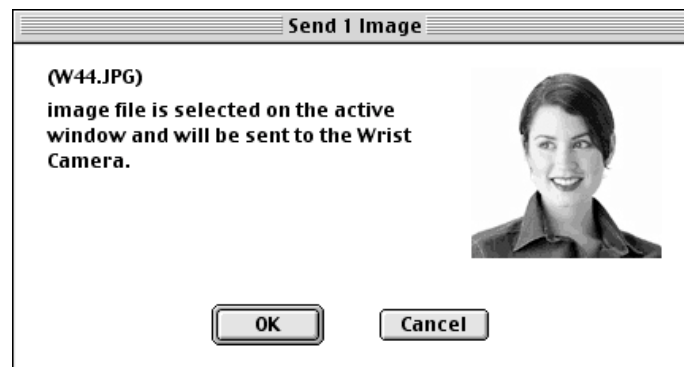
- See the User's Guide that comes with the Wrist Camera for details about its operation.
- Any image you transfer to your Wrist Camera also remains on the disk of your Macintosh.

To transfer an image to the Wrist Camera

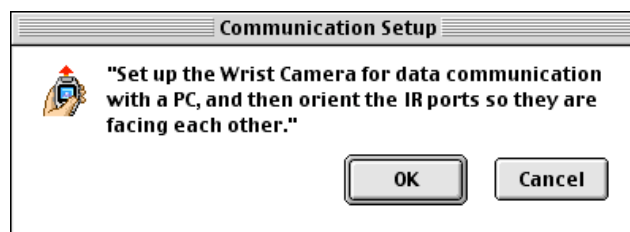
1. On your Macintosh, select the image you want to send on the album window or display the image you want to send.
2. On your Macintosh, select **Send 1 Image** from the **Wrist Camera** menu.
- You can also click the  button on the tool palette.



3. After checking the image is the one you want, click **OK** to send it.
- Click **Cancel** to close the confirmation dialog box without transferring anything.



4. Prepare the Wrist Camera for data communication.
 - See "To prepare the Wrist Camera for data communication" on page 25.
5. Click **OK** to start the transfer.

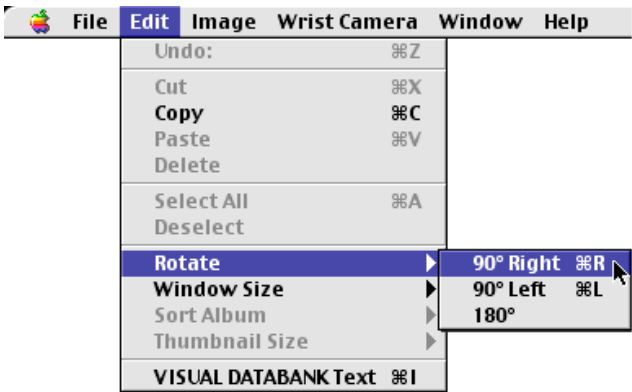


- The progress of the transfer is shown on your Macintosh screen.
- Clicking **Cancel** on the dialog box cancels data communication with the Wrist Camera. You can also temporarily interrupt the connection by clicking and holding the tool palette  button.
- The data transfer screen remains on the display of the Wrist Camera for a few seconds after transfer is complete.
- If you want to transfer more images, repeat steps 1 through 5.

Rotating an Image

You can rotate BIN, JPEG, and PICT images on your Macintosh screen using the following procedure.

1. Display the image you want to rotate.
 - See “Viewing Images Stored in an Image File” on page 11 and “Viewing an Album Window” on page 14 for details on displaying images.
 - You can also use the retouching window (page 39) to display the image you want to rotate.
2. Select **Rotate** on the **Edit** menu to rotate the displayed image.



When you want to do this:	Select this submenu item:
Rotate the image 90 degrees right	90° Right
Rotate the image 90 degrees left	90° Left
Rotate the image 180 degrees	180°

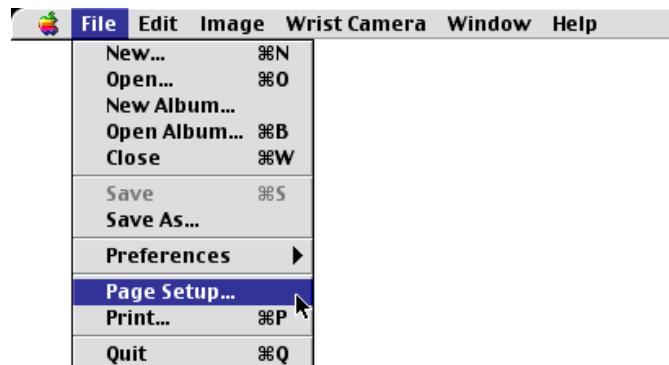
Printing Images

You can print any BIN, JPEG or PICT format image currently on your Macintosh screen. You can even print an album.

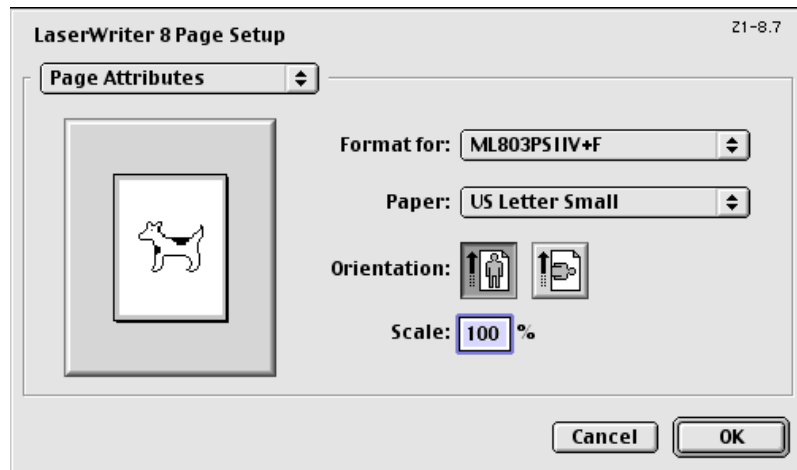
Make sure to do any necessary printer setups and other preliminary operations before performing the following procedure. See the documentation that comes with your Macintosh and printer to find out how to set up for printing.

1. Display the image or album you want to print.
 - See “Viewing Images Stored in an Image File” on page 11 and “Viewing an Album Window” on page 14 for details on displaying images and albums.

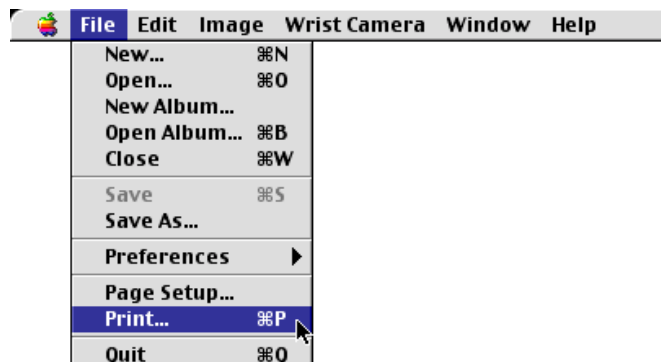
2. Select **Page Setup** from the **File** menu.



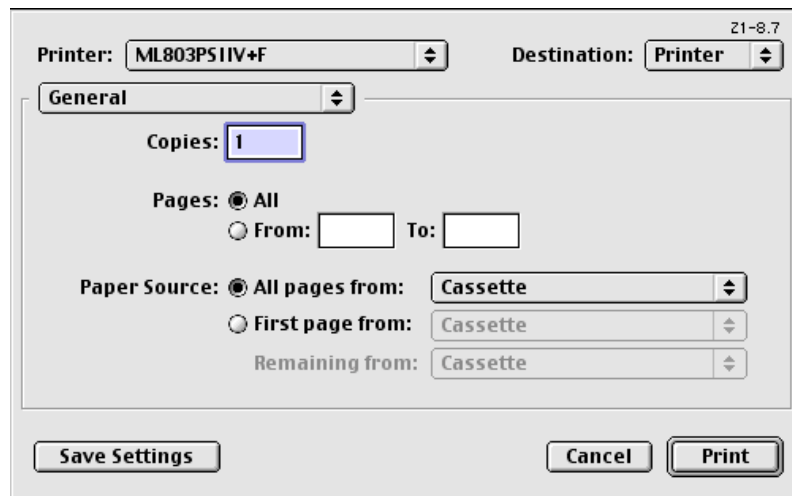
- This causes a page setup dialog box to appear. Make settings in accordance with the documentation that came with your Macintosh and printer.



3. Click **OK**.
4. Select **Print** from the **File** menu.



- This causes a print dialog box to appear. Make settings in accordance with the documentation that came with your Macintosh and printer.



5. Click **Print.**

Note

- If you are printing a single image, it will be printed in the center of the paper. A message appears to alert you if the image is too large to fit on a single piece of paper.

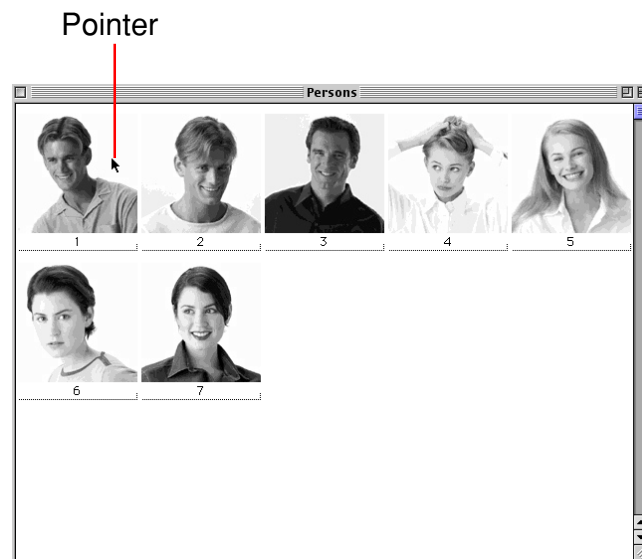
Album Operations

Selecting an Image in an Album Window

An album window shows thumbnails of all the BIN, JPEG, and PICT format images in a folder. You can use any of a number of different procedures to select one of the images in an album window.

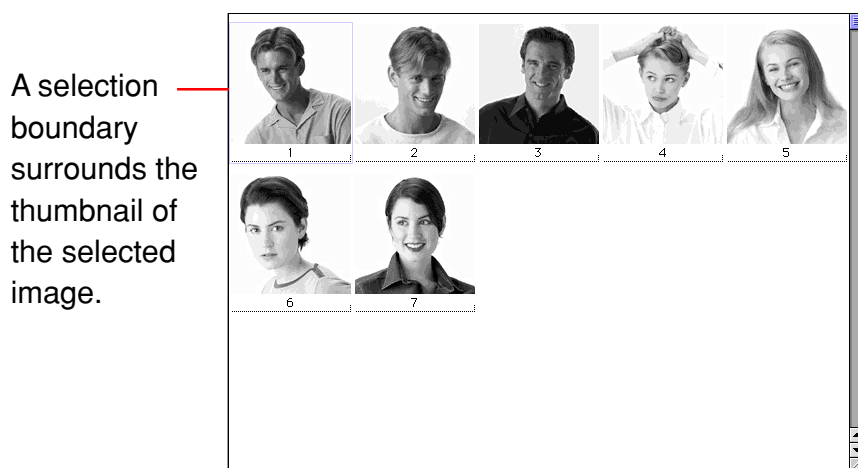
To select a single image

1. Move the pointer to the thumbnail of the image you want to select.



2. Click the thumbnail.

- Any operation you now perform affects the image whose thumbnail is selected.

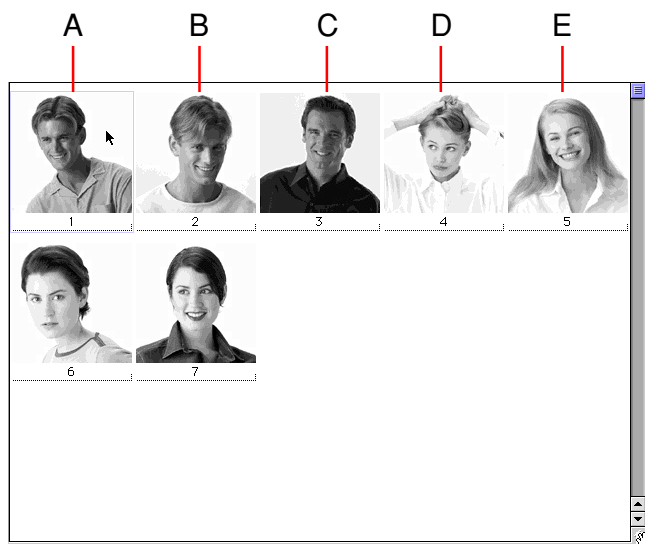


- To deselect a thumbnail, press the keyboard **esc** key, click anywhere outside the thumbnail, or click **Deselect** on the **Edit** menu.

To select a range of images

Example: To select images A, B, C, D, and E in the following album window

1. Move the pointer to the thumbnail of the first image you want to select (image A in our example) and then click.



2. Move the pointer to the thumbnail of the last image in the series you want to select (image E). Then hold down the keyboard **shift** key as you click the last image in the series.
- All the images (A through E) are surrounded by a selection boundary to indicate they are selected. Any operation you now perform affects all the images whose thumbnails are selected.

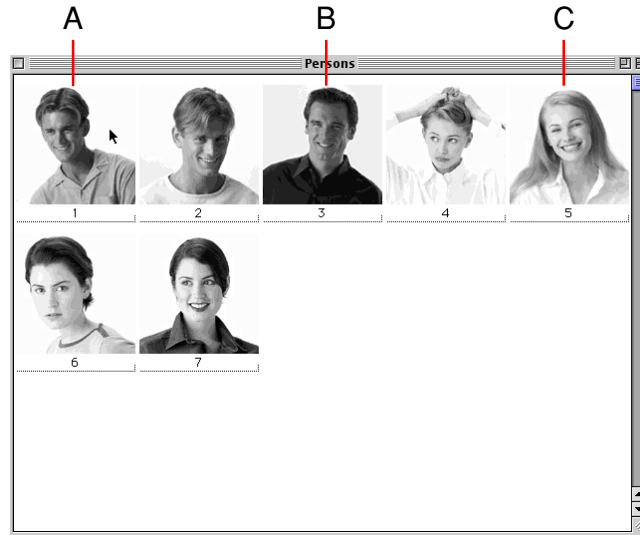


- To deselect thumbnails, press the keyboard **esc** key, click anywhere outside the thumbnails, or click **Deselect** on the **Edit** menu.

To select multiple images

Example: To select images A, B, and C in the following album window

1. Move the pointer to the thumbnail of the first image you want to select (image A in our example) and then click.



2. Move the pointer to the next image (image B) and then hold down the keyboard ⌘ (Command) key as you click.
3. Repeat step 2 for image C, holding down the keyboard ⌘ (Command) key as you click.
- Each of the images (A through C) is surrounded by a selection boundary to indicate it is selected. Any operation you now perform affects all the images whose thumbnails are selected.
- To deselect thumbnails, press the keyboard **esc** key, click anywhere outside the thumbnails, or click **Deselect** on the **Edit** menu.

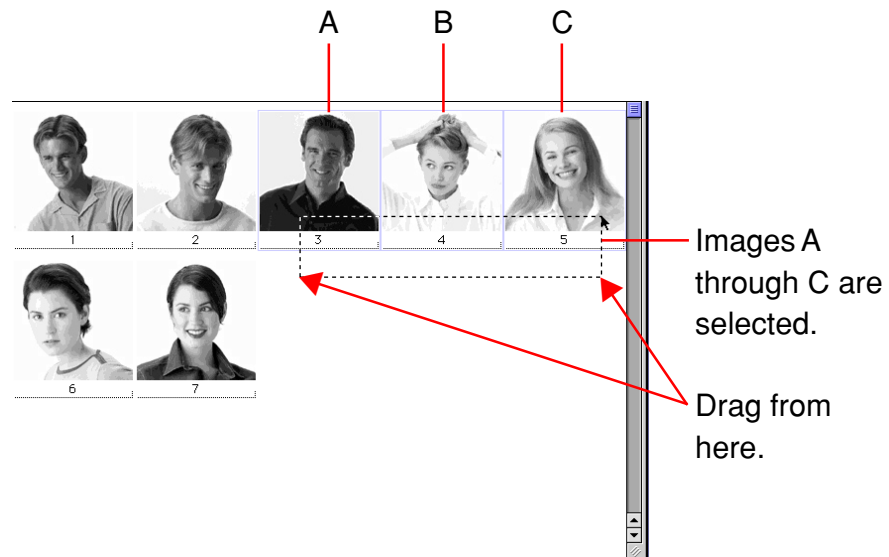
To select multiple images by dragging

Example: To select images A through C

1. Holding down the mouse button, drag the mouse across images A through C.
- Start the drag operation with the mouse pointer located where there is no image. If you start the drag operation while the pointer is located on an image, the image will move.

2. Release the mouse button.

- Each of the images (A through C) is surrounded by a selection boundary to indicate it is selected. Any operation you now perform affects all the images whose thumbnails are selected.



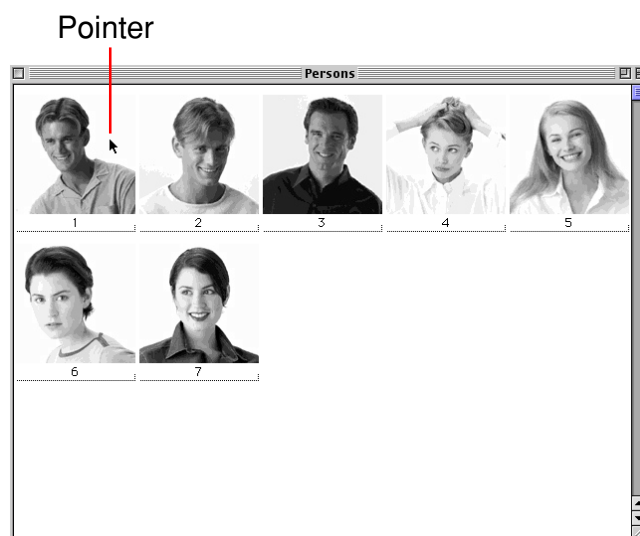
- To deselect thumbnails, press the keyboard **esc** key, click anywhere outside the thumbnails, or click **Deselect** on the **Edit** menu.

Displaying an Image from an Album Window

You can use the following procedures to open image files.

To open a single image

1. Move the pointer to the thumbnail of the image you want to open.

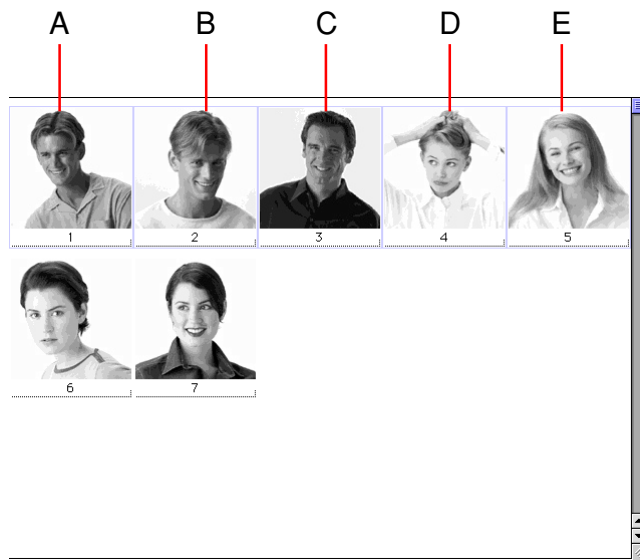


2. Double-click the thumbnail.

To open multiple images

Example: To open images A, B, C, D, and E in the following album window

1. Select thumbnails A, B, C, D and E.
- See “To select a range of images” on page 31, “To select multiple images” on page 32, or “To select multiple images by dragging” on page 32 for details on how to select multiple images.

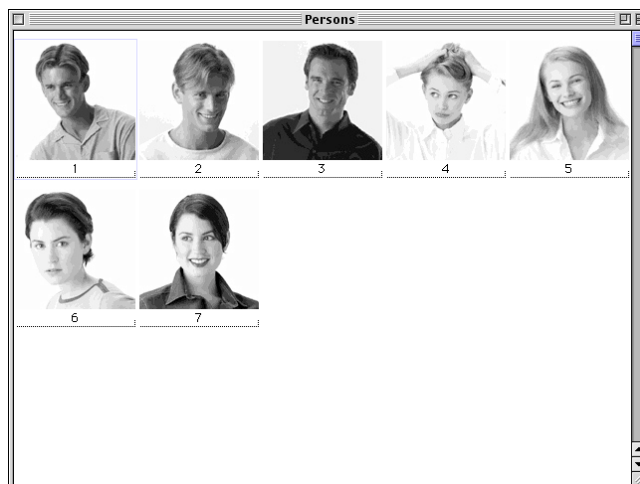


- To deselect thumbnails, press the keyboard **esc** key, click anywhere outside the thumbnails, or click **Deselect** on the **Edit** menu.
2. Move the pointer to the thumbnail of any of the selected images and double-click.

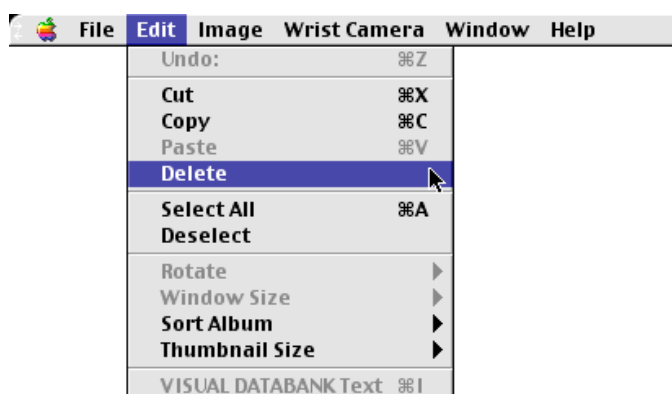
Deleting an Image from an Album Window

You can use the following procedure to delete an image file from your Macintosh.

1. Select the thumbnail of the image you want to delete.

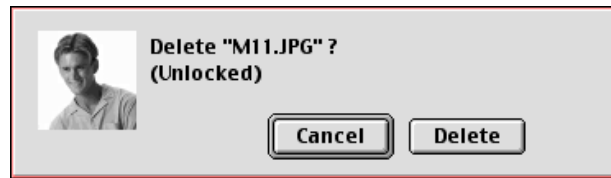


- You can select either a single image or multiple images.
2. Select **Delete** from the **Edit** menu.
- Instead, you could also press the **delete** key on the keyboard.



3. On the confirmation dialog box that appears, click **Delete** to delete the selected image.
- If you have selected more than one image, clicking **Delete All** causes them all to be deleted without further confirmation.

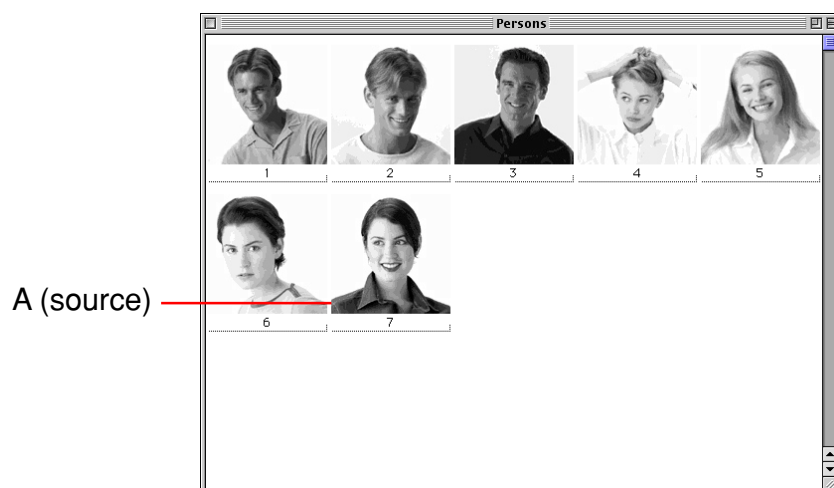
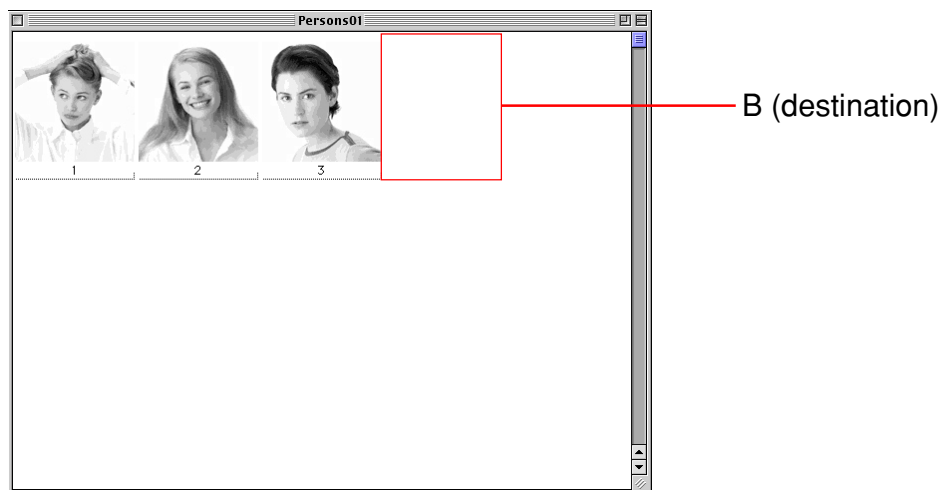
- Note that you cannot delete an image if it is locked (protected). You cannot unlock (unprotect) an image using WQV M Link. For information about how to unlock (unprotect) an image, see the documentation that came with the application you used to lock it and with your Macintosh.



Copying and Moving Images between Album Windows

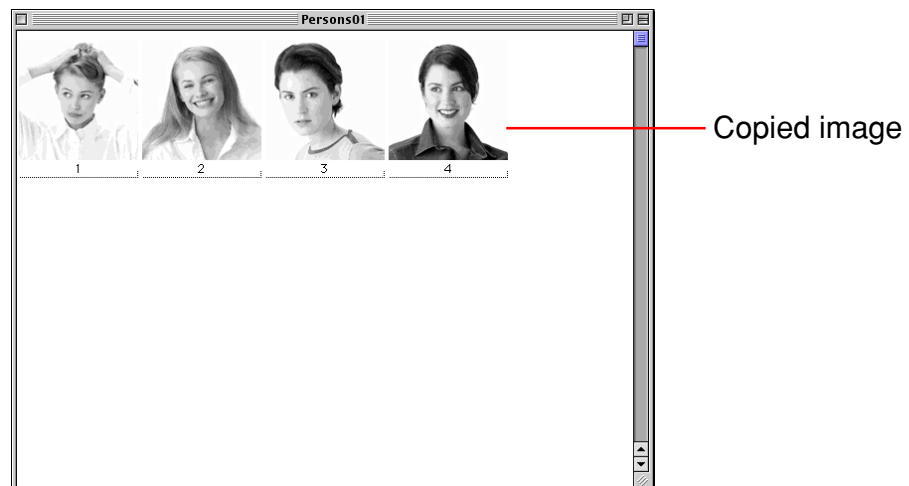
This explanation uses the following windows to illustrate how to copy and move images stored on your Macintosh from one window to another.

Example: To copy (move) from A to B



1. Open the album window you want to copy (move) from and the album window to which you want to copy (move) the image.

2. Drag the image to the album window you want to copy to and drop it into the window. To move an image, hold down the keyboard **option** key while dragging and dropping it.
- You can also select multiple images for copying and moving. See “To select a range of images” on page 31, “To select multiple images” on page 32 and “To select multiple images by dragging” on page 32 for details on how to select multiple images.

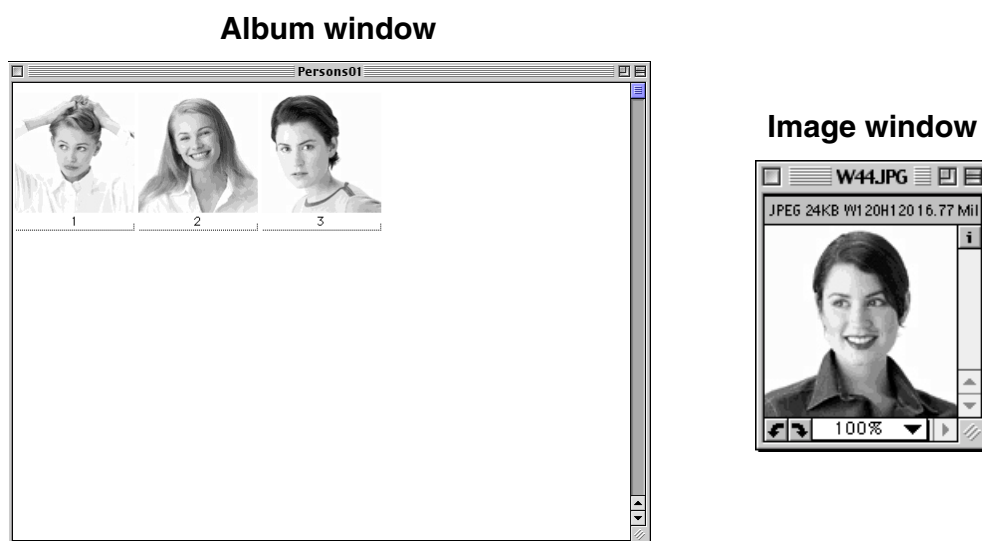


- After the copy operation is complete, there are two identical copies of the same image file: one in the original album window and one in the destination album window.

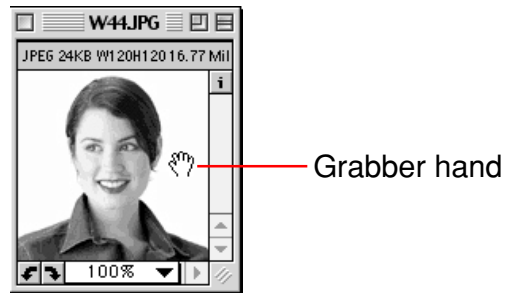
Saving a Displayed Image to an Album Window

You can drag and drop a displayed image into the album window.

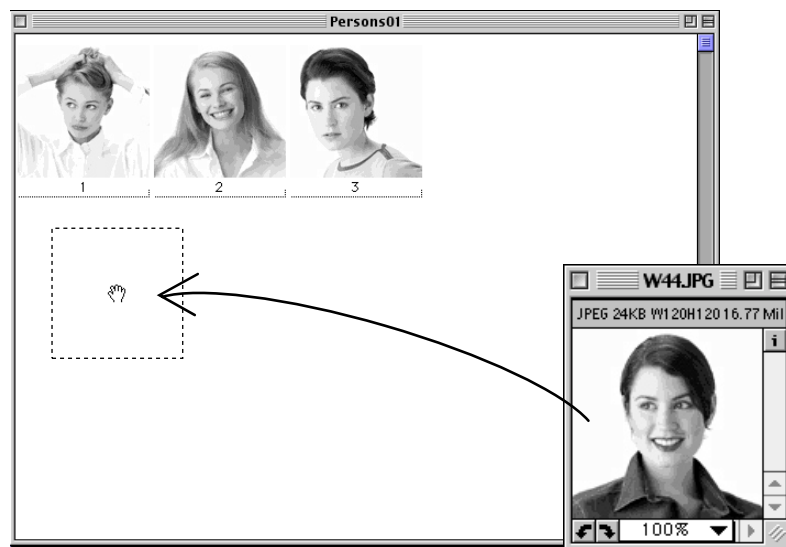
1. Open the image and the album window where you want to save it.



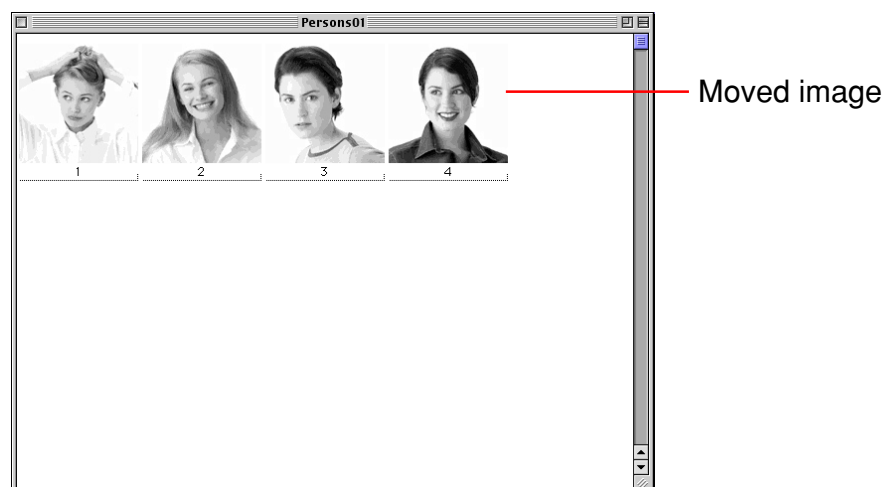
2. Move the grabber hand anywhere inside the image window and hold down the mouse button.



3. Drag the image to the album window and drop it inside.



- The above operation saves the image in the album as soon as you drop it.



Retouching Images with WQV M Link

You can use WQV M Link to retouch images when you need to correct for poor recording conditions.

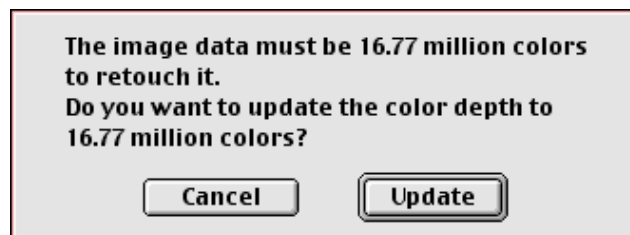
Opening an Image Retouching Window

WQV M Link does not immediately retouch the original image. Instead, it opens a copy of the image in the retouching window.

1. Display the image you want to retouch.
 2. Select **Retouch** from the **Image** menu.
- You can also click the  button on the tool palette.



- A message appears if the image uses fewer than 16.77 million colors. If this happens, click **Update**.



- A copy of the selected image appears in the retouching window.



Basic Image Retouching

The following are the general steps you should follow when retouching an image. Use the **Image** menu to select the type of retouching you want to perform.

Note

- You can also use the retouching window tool palette buttons to perform the Brightness/Contrast () , Hue/Saturation () and RGB Midtones () operations.
- 1) Use **Scale** before retouching, if necessary (page 43).
 - 2) Use **Despeckle** to remove noise from the image, if necessary (page 40).
 - 3) Use **Auto Contrast** to enhance brightness and shading (page 40).
 - 4) Use **Brightness/Contrast** to make fine adjustments in brightness and contrast (page 41).
 - 5) Use **Hue/Saturation** and **RGB Midtones** to retouch coloring (pages 41 and 42).
 - 6) Use **Sharpen** to make the edges of items in the image sharper (page 42).

Despeckle

Selecting **Despeckle** from the **Image** menu removes the noise from an image. Note, however, that **Despeckle** may not be able to remove all the noise from an image. It affects the entire image in the retouching window.

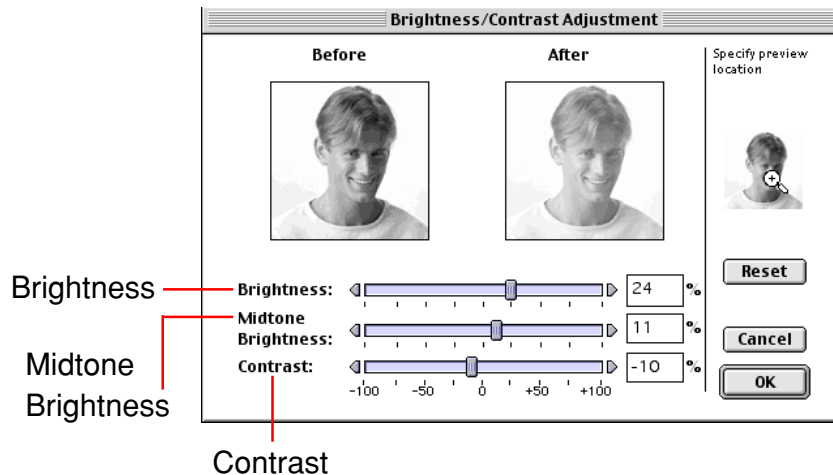
Auto Contrast

Adjusting contrast can make bright areas brighter and dark areas darker, which helps to better bring out the highlights of an image. **Auto Contrast** automatically calculates the optimal contrast offset. It affects the entire image in the retouching window.

Brightness/Contrast

Use **Brightness/Contrast** instead of **Auto Contrast** to make manual adjustments while checking image brightness on the display.

Brightness/Contrast affects the entire image in the retouching window.



Hue/Saturation and RGB Midtones

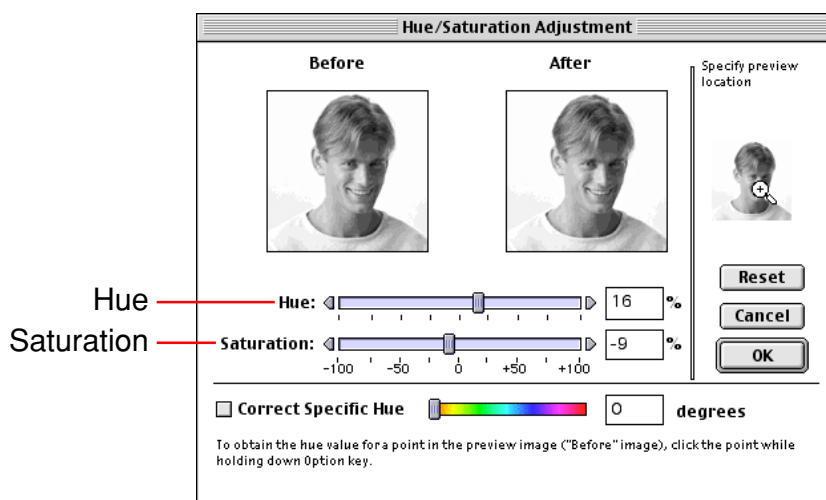
Note

- To obtain the hue value for a point (pixel) on the “Before” image, first put a check mark in the box next to the **Correct Specific Hue** option. Next, click the point while holding down the keyboard **option** key. Then you can change the hue setting with the slider.

Hue/Saturation

This corrects the hue and saturation of an image. Hue is a value that determines whether a color is closer to red, blue, or green. Saturation determines the degree to which a color is mixed with white, and the higher the saturation value the closer the color is to its original.

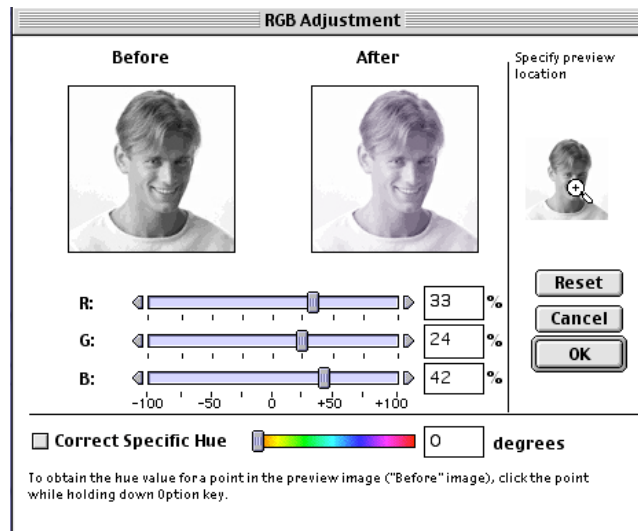
Hue/Saturation affects the entire image in the retouching window.



RGB Midtones

This setting modifies the medium-range colors of an image. **RGB Midtones** allows you to add corrections to the red, green and blue colors of the image, but not to the true black and white.

RGB Midtones affects the entire image in the retouching window.



Sharpen

Sharpen makes the outline of an image sharper. Sharpening, however, may also end up enhancing digital noise specks in the image. When changing the pixel size of an image, you should first execute **Scale** and then **Sharpen** for the best results. Executing **Sharpen** first and then **Scale** can make edges fuzzy again.

Sharpen affects the entire image in the retouching window.

Common Problems and Solutions

Digital noise

Use **Despeckle** to remove most of the noise. Note that, however, **Despeckle** may not remove all the noise in some cases.

Indistinct contrast

Execute **Auto Contrast** or move the lower slider in the **Brightness/Contrast** dialog box towards the plus side.

Completely dark, indistinguishable images

Move the middle slider in the **Brightness/Contrast** dialog box towards the plus side. You can use the same method to correct images recorded against backlight.

Fuzzy edges

Execute **Sharpen**. Note that this may also result in enhanced digital noise specs in the image.

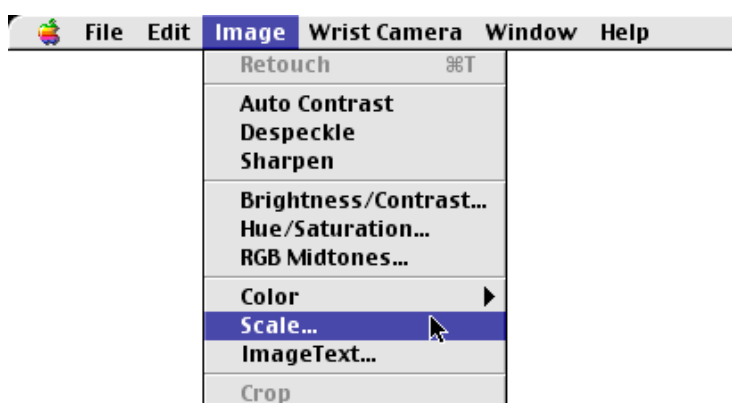
Simple Image Processing

In addition to the image retouching tools described above, you can embed text into an image (page 20), change image size, crop a specific area, and change the color of an image. These tools can be used only for an image in the retouching window.

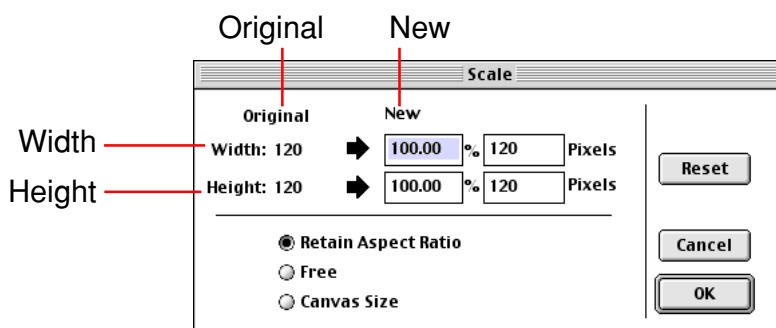
Scale

The **Scale** command allows you to change the pixel size of an image. Changes in pixel size affect the entire image in the retouching window.

1. Select **Scale** from the **Image** menu.



2. Define the desired pixel size and check the desired options, if necessary.



Option	Description
Retain Aspect Ratio	The aspect ratio is retained, regardless of any newly entered pixel size. Specifying a value for the width, for example, causes the value for the height to be adjusted automatically so the aspect ratio is retained.
Free	You can define any size for the image. This setting may cause distortion of the resulting image.
Canvas Size	Only the canvas size is enlarged or reduced. If you enlarge the canvas, white spaces are added around the image. If you reduce it, the area of the image outside the canvas is cut off.

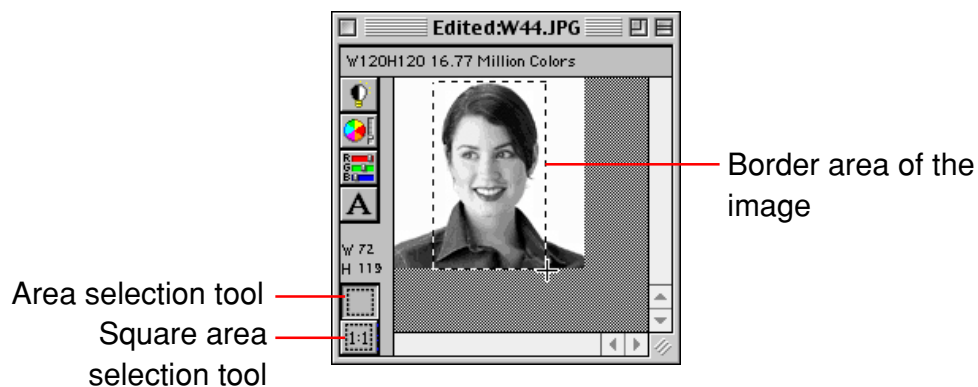
3. Click **OK**.

- The image is enlarged or reduced according to the option you selected.

Crop

The **Crop** command allows you to cut away unnecessary parts around an area you select.

1. Click the area selection tool () on the retouching window tool palette and drag the mouse to specify the area of the image you want to retain.
- If you want the selection boundary always to be a square, click the square area selection tool () on the retouching window tool palette before dragging.



2. Select **Crop** from the **Image** menu.



- The part of the image outside the selection boundary is cut away, leaving only the selected area on the retouching window.

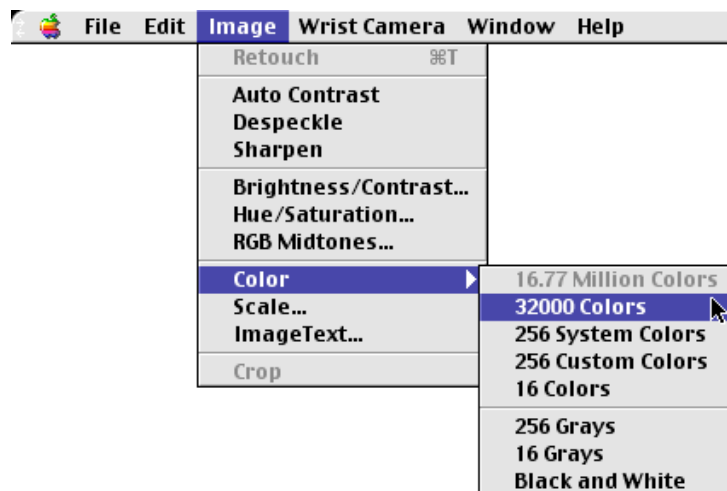


Color

Color is a measure of an image's color information, which is used for displaying and printing pixels. A larger color value, means more colors are available, which allows a higher level of color reproduction fidelity in a digital image.

You can use the **Color** command to specify the number of colors.

1. Select **Color** from the **Image** menu.



2. Make the color setting you want for the image.

Menus and commands

File Menu

New

Opens a new image window.

- You can specify the window size and the number of colors.
- You can also open a new image window that contains image data currently on the clipboard.

Open

Opens an image file.

New Album

Opens a new album window.

Open Album

Displays an album of all the image files in a folder.

Close

Closes the currently active window.

Save

Saves image data to an existing file, overwriting existing data.

- If you have not already saved the file, use **Save As** to save it.

Save As

Saves an image as a new file.

Preferences/Communication

Displays a dialog box for changing the following configuration and communication parameters.

- Communication Speed (Speed): 115200 bps
- Communication Port (Port): USB Modem Port PAD-2

Preferences/General

Displays a dialog box for configuring preferences.

- Print Options
- Resources: Turning on (checking) these options, you can preview resource data to be generated when you save an image as another format, and you can generate custom icons.
- Default: Click this button to restore factory default settings.

Page Setup

Displays a dialog box for specifying the page format and number of pages for printing.

- Macintosh standard

Print

Prints image data.

- You can also print all the images in a folder (album).

Quit

Quits WQV M Link.

Edit Menu**Undo**

Undoes the operation last performed using the **Image** menu.

Cut

Cuts a selected image to the clipboard.

Copy

Copies a selected image to the clipboard.

Paste

Pastes the clipboard contents.

Delete

Deletes a selected image.

- This command deletes images selected in an album window.

Select All

Selects the entire area of an image window or all the thumbnails in an album window.

Deselect

Deselects a selected area.

Rotate/90° Right

Rotates the displayed image 90 degrees right.

Rotate/90° Left

Rotates the displayed image 90 degrees left.

Rotate/180°

Rotates the displayed image 180 degrees.

Window Size/Larger

Enlarges the size of the image window.

- Each execution of this command enlarges the image window in the following sequence: 25% → 50% → 100% → 200% → 300% → 400%.

Window Size/Smaller

Reduces the size of the image window.

- Each execution of this command reduces the size of the image window in the following sequence: 400% → 300% → 200% → 100% → 50% → 25%.

Window Size/Actual Size

Returns an image window to its actual size (100%).

- Note that the size of a window is not saved with the image data.

Sort Album/By Name

Sorts album images alphabetically by their file names.

Sort Album/By Size

Sorts album images by their file sizes.

Sort Album/By Date

Sorts album images by their last modified dates.

Sort Album/By VISUAL DATABANK Text

Sorts album images alphabetically by their VISUAL DATABANK text.

Thumbnail Size/Small (60 × 60)

Displays small-size (60 × 60) images in an album.

Thumbnail Size/Standard (120 × 120)

Displays standard-size (120 × 120) images in an album.

Thumbnail Size/Standard+VISUAL DATABANK Text

Displays standard-size images in an album, along with their VISUAL DATABANK text.

VISUAL DATABANK Text

Displays a dialog box for inputting or editing VISUAL DATABANK text and memo text.

Image Menu**Retouch**

Creates a copy of the currently open image and places it into a retouching window.

Auto Contrast

Automatically adjusts contrast by making bright areas brighter and dark areas darker.

Despeckle

Removes noise from an image using a Median filter.

Sharpen

Sharpens an image using Unsharp Mask.

Brightness/Contrast

Displays a dialog box for adjusting image brightness and contrast.

Hue/Saturation

Displays a dialog box for adjusting image hue and saturation.

- **Correct Specific Hue** option makes it possible to correct only a specific hue.

RGB Midtones

Displays a dialog box for adjusting the red, green, and blue midtones of an image.

Color

Displays a submenu of color settings.

- The submenu provides selection of 16.77 Million Colors, 32000 Colors, 256 System Colors, 256 Custom Colors, 16 Colors, 256 Grays, 16 Grays, and Black and White.

Scale

Displays a dialog box for adjusting image size. The dialog box allows the following settings.

- Number of pixels
- Retain or change the aspect ratio
- Option allowing change of canvas size only, without affecting the image

Image Text

Displays a dialog box for embedding text into an image.

- Besides text input, the dialog box also includes settings for font type, size, color, and text attributes.

Crop

Deletes any part of the image outside a selection boundary area, and changes the pixel size in accordance with the size of the selected area.

Wrist Camera Menu

Previous Image

Scrolls the Wrist Camera screen back one image.

- You can also use the tool palette  button to scroll Wrist Camera display images back at high speed.

Next Image

Scrolls the Wrist Camera screen forward one image.

- You can also use the tool palette  button to scroll Wrist Camera display images forward at high speed.

Save 1 Image

Saves one image from Wrist Camera memory.

- This command displays a dialog box you can use to specify a folder and image file format.
- BIN, JPEG, and PICT image file formats are supported.
- If you are using a floppy diskette for data storage, the save 1 image operation will be cancelled automatically if there is insufficient room on the disk to store the image.

Save All

Saves all images from Wrist Camera memory.

- This command displays a dialog box you can use to specify a folder and image file format.

- If you are using a floppy diskette for data storage, the save all operation will be cancelled automatically if there is insufficient room on the disk to store the images.

Send 1 Image

Sends one image to the Wrist Camera.

Window Menu

1, 2, 3...

Shows a list of the names of all currently open windows.

Show Tool Palette

Turns display of the application window tool palette on and off.

Redraw

Uses this command to redraw the screen contents.

Apple Menu

About WQV M Link

WQV M Link Help

Hints for Communication

Troubleshooting

This section provides suggestions about things you should check whenever you encounter problems exchanging image data between the Wrist Camera and your Macintosh.

Communication port setting

Select **Preferences** from the **File** menu, and then select **Communication** to open the settings dialog box and check if the port selected in the dialog box matches the port where the cable is actually connected.

Virtual Memory

Turning on **Virtual Memory** increases the frequency that your Macintosh needs to access its hard disk, which can cause data communication problems. If you experience such problems, display the Control Panel, go to **Memory**, and then turn off **Virtual Memory**.

Infrared communication

Check the following points whenever you have problems transferring images.

- ☐ Is another application using the same USB Modem port?
- ☐ Is the USB Modem port set up correctly?

Check the following whenever you have problems with IR data communication.

- The sunlight, fluorescent lighting, or light from other sources can hinder IR data communication. Always make sure that the IR ports of both the Wrist Camera and the IR adapter are positioned so there is no outside light shining directly on them.
- Operating the remote control unit of a TV set or other appliance in the vicinity of the Wrist Camera or IR adapter can cause IR data communication problems. Be sure to keep remote control units and other devices that use infrared away from the Wrist Camera and IR adapter when you are performing IR data communication.
- Check the distance and the angle between the Wrist Camera and IR adapter. See "Connecting the IR Adapter to Your Macintosh" on page 10 for information about correct Wrist Camera and IR adapter orientation.

WQV M Link Precautions

Note the following precautions whenever you are having problems with the Wrist Camera and/or your Macintosh.

Communication cable connection

Data communication between WQV M Link and the Wrist Camera is performed via the IR adapter, which you connect to your Macintosh using the USB-Serial adapter cable. Never disconnect the cable from your Macintosh while a data communication operation with the Wrist Camera is in progress.

ScreenSaver

Launching ScreenSaver or any other application that issues forced interrupts while running WQV M Link (and especially when exchanging image data with the Wrist Camera) not only terminates communications, it may, in the worst case, even cause serious damage to your Macintosh and Wrist Camera. Be sure always to disable ScreenSaver and other such programs while running WQV M Link.

Appendix

Automatic File Naming Rules

The following is the format for automatically assigned file names: **first 20 letters of an album name + 3-digit serial number + extension.**

If you add images to an existing album, the new image files are automatically named using the next sequential serial number.

File Naming and Save Operation

Automatic naming

Automatic file naming is performed in the following cases.

- Save 1 Image
- Save All
- When an image is pasted into a window.

Retention of existing name

A file retains its existing name in the following cases.

- When **File/Save As** is executed while an album window is active.
- When drag and drop is performed from an album window to another album window.

Change to another input name

The following operation displays a dialog box that prompts for specification of a new file name.

- When **File/Save As** is executed while a BIN, JPEG or PICT file image is active.

Image Formats

WQV M Link supports the image formats listed below.

- BIN, JPEG, PICT