JpegWatch for Palm version 1.4.5
The Most Featured JPEG Viewer for Palm Devices
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Introduction

Most of the latest Palm devices, such as Palm m500 series, m125, Visor Edge (with Compact Flash Spring Board module) and Sony CLIÉ, all have memory card capability. One of many convenient features memory cards bring is to store photo images taken by digital cameras. Most digital cameras store photo images in JPEG format.

Viewing JPEG images requires complex mathematical computation and memory. Due to lack of computation power and small memory footprint, Palm users have always unable to view photo images on their Palm devices quickly and easily.

JpegWatch uses advanced algorithms to speed up JPEG decoding. The Palm's rule of thumb has always been focusing on what is needed. Thus, **JpegWatch** is designed in a way that only visible image pixels are decoded. Doing so enhances the decoding speed greatly.

Not only the decoding speed is greatly enhanced, but also the way users can interact with images. Unlike other image viewer software, which limits images to be viewed in certain sizes and locks up the entire Palm device when decoding, **JpegWatch** allows users to interact with the image in the following ways:

Zoom Levels	Change image zoom levels. Even while the image is being displayed.
Image Panning	Move the image around to the part desired. Even while the image is being displayed.
EXIF*	Displaying EXIF information, such as Resolution, Exposure time, etc.
Exif Thumbnail	View thumbnails in EXIF if available, making quick browsing possible.
Annotation	Each image can be annotated. The annotation is directly saved as text (.txt) file.
Brightness Control	Image brightness can be adjusted. Viewing dark photos will not be a problem anymore.
Slide Show	Shows each image in the folder by self-running. Making viewing multiple photos a leisure.
m500/m125 support	**JpegWatch** uses Error Diffusion to enhace image viewing on black and white Palm devices.
Sony Jog-Dial Support	One hand image browsing using Sony Jog-Dial.
Full Sony Hi-Res (320x320) Support	Support 320x320 screen resolution on Sony CLIÉ devices.
No UI Blocking	Unlike many other image viewers, **JpegWatch** follows Palm's principle of programming strictly. User can stop a lengthy operation and jump to other Palm applications, such as HotSync, at any time.

*Exif: Exchangeable Image File Format. The format is used by most digital cameras.

There are many more exciting features can be found in **JpegWatch** waiting to be explored.


JpegWatch Application
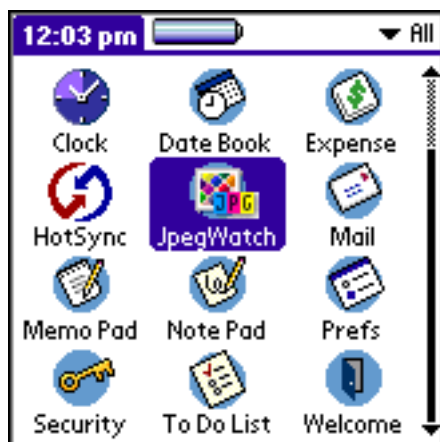
Simply tap on **JpegWatch** icon to use the application. This will bring up the **File List** panel.

File List Panel

File List Panel allows users to manage image files and directories on memory card. There are two types of file items. One is JPEG files (with file extension .jpg or .jpeg) files and the other is directory folders (with <dir> attribute). Tap on the directory file item would change the current folder to that directory. Tap on the

JPEG files would highlight the file and make the file available for operations.
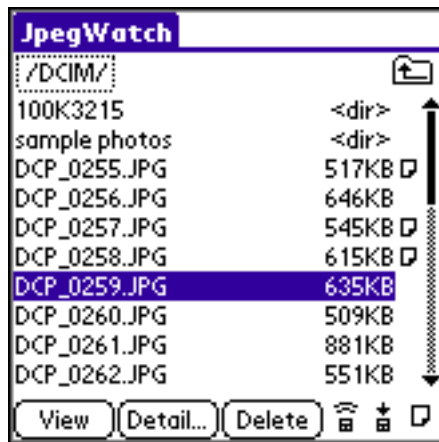
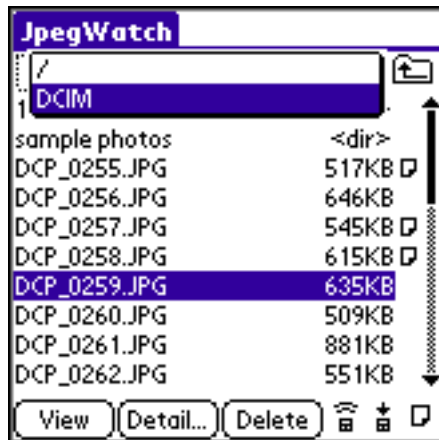| Button Name	Functionality
View	View Image
Detail	Display the Exif information (Exposure Time, Date, etc.)
Delete	Deletes the file.
⬚ IR Beam File	User InfraRed to beam the currently selected file.
⬚ IR Receive File	Use InfraRed to receive incoming file. The file will be stored in the current directory.
⬚ Note	Make annotation of the selected image file.

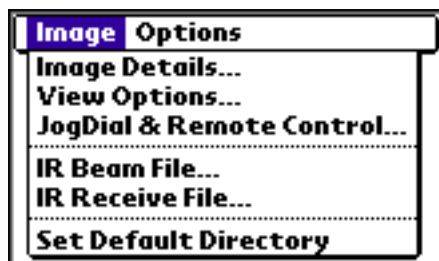| Directory Control	Functionality
/DCIM/ Directory Path Menu	If the current directory is not at root directory, tap on it would show up directory menu.
⬆ Up Directory Button	If the current directory is not at root directory, tap on it would bring the directory level up by one level.

Image Menu Name	Functionality
Image Details	Shows EXIF information, such as Exposure and Date/Time of the image.
View Options	Shows the **View Options Dialog**.
JogDial & Remote Control	Shows options for **Sony Jog-Dial** and **Audio Remote Control**. Only available for Sony CLIE with MP3 audio capability.
IR Beam File	User InfraRed to beam the currently selected file.
IR Receive File	Use InfraRed to receive incoming file. The file will be stored in the current ddirectory.
Set Default Directory	Sets the default directory. **JpegWatch** would try to open the default directory first when the memory card is inserted. If the default directory does not exist, **JpegWatch** would open the root directory.

Options Menu Name	Functionality
About JpegWatch...	Shows **JpegWatch** About Dialog.

Load Panel

Load Panel shows up when an image is being processed, such as right after user selects **View Button** in **File List Panel**. It shows the name and size of the image file being processed.

Cancel Button: Return to File List Panel
Up/Down Keys: Previous/Next Image.

Image Panel

Image Panel is where all the magics happen. The image is displayed and decoded and the same time. **JpegWatch** uses algorithm that only visible pixels (image dots) are decoded. The result is the fastest decoding speed ever seen on Palm devices. While decoding, the image can be set to the needed zoom level and moved around to the desired area. There is no need to wait for the decoding to completely finish.

Tip: Because only visible pixels are being calculated, decoding is much faster if visible area is smaller. There fore, decoding is faster if the scale is larger (i.e. 1/1 scale is faster than 1/4 scale).

Original image

Move the image

Image being decoded at new position

Finished decoding

1/8 Scale

Image Panel shows the image. The image was processed in the **Load Panel** and then displayed in this panel. There are quite some options for viewing image. The most obvious ones are the buttons on the right-hand side of the panel. Tapping on the buttons would show the corresponding results.

Double-Tapping on the image zooms into the next available scale level. For instance, if the image is currently at 1/8 scale, double-tapping would bring the image into 1/4 scale and centered around the tapping point on the image.

1/4 Scale

1/2 Scale

1/1 Scale

2/1 Scale

Button Icon	Button Name	Functionality
② ① ½ ¼ ⅛	**Scale Buttons:**	Scale to corresponding sizes.
ⓘ	**Detail Button:**	Shows Exif information.
ⓓ	**Annotation Button:**	Annotates the image.
ⓡ	**Return Button:**	Return to **File List Panel**.

Menus:

| Image Menu	Functionality
Brightness	Shows **Brightness Panel**.
Scale Menus	Sets the image at corresponding scales
View Thumbnail/ Original	Uses Exif Thumbnail if available. If the thumbnail isn't available, the original image is displayed
Dither (4-bit)	Use Error Diffusion to enhance 4-bit (16 level) gray scale images. Only available under 4-bit screen mode.
No Dither (4-bit)	Disable Error Diffusion. Only available under 4-bit screen mode.
IR Beam Image	Use InfraRed to beam the current image.

Options Menu	Functionality
Help Menu	Shows help menu with quick-key list.
Show/Hide Buttons	Shows/Hides buttons.
Image Detail	Shows **Detail Panel** (Exif nformation).
View Options	Shows **View Option Panel**.
File List	Return to **File List Panel**.

Dithering Option is only available in black and white devices such as Palm m500 and m125. Such devices can only display 16 levels of gray scale. When viewing photo images, it is common the "banding" effect would occure. Enabling dithering can remove the banding effect and make the image appears a lot smoother. However, dithering is needed when displaying line art images, such as stock charts.
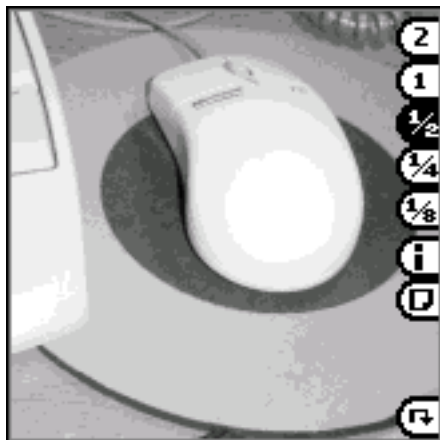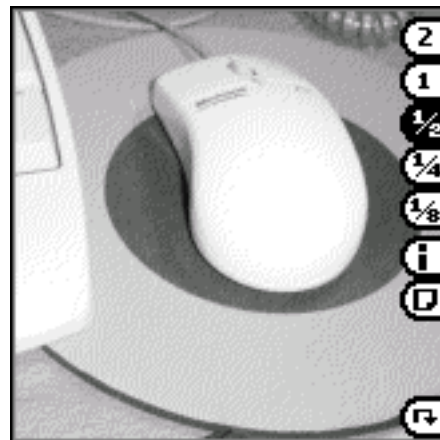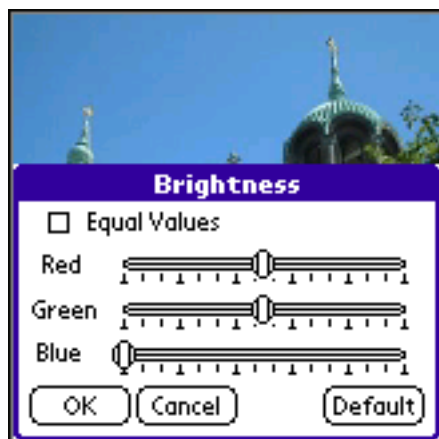

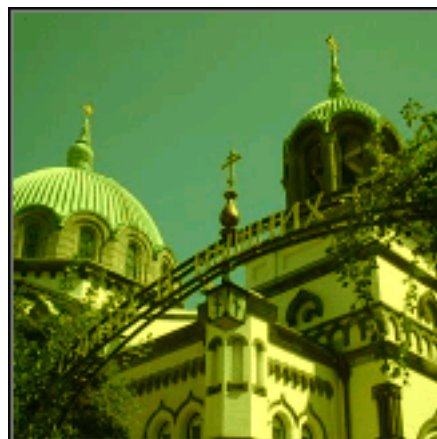| Without Dithering	With Dithering

Brightness Panel:

Many digital cameras are specially susceptible to dark environments. If photos are shot under low-light situation, such as indoors, the image would come out much darker. Making images hard to see. **Brightness Panel** allows to adjust the image brightness without modifying the image itself. Making reverting the image brightness possible.

Not only brightness adjustment helps viewing images, but it also helps to view images better. Some LCD screen on particular Palm devices appear to have incorrect color. For example, **Sony CLIE T600** users may find Red color too weak. Just make the red brightness stronger can help improving the image quality.
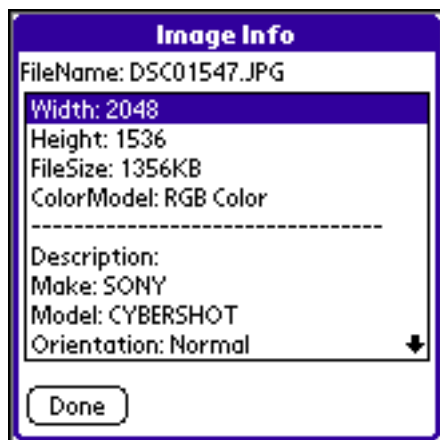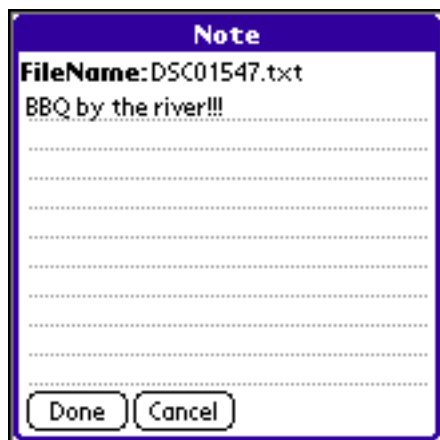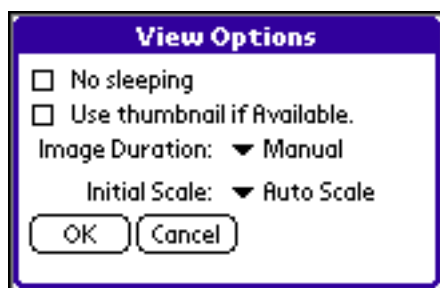
Panels:

Image Info
FileName: DSC01547.JPG
Width: 2048
Height: 1536
FileSize: 1356KB
ColorModel: RGB Color

Description:
Make: SONY
Model: CYBERSHOT
Orientation: Normal

[Done]

Image Information Panel

Image Information Panel shows the Exif information contained in the image file.

Note
FileName: DSC01547.txt
BBQ by the river!!!

[Done][Cancel]

Annotation (Note) Panel

Note Panel allows users to create/edit the note (annotation) text.

View Options
☐ No sleeping
☐ Use thumbnail if Available.
Image Duration: ▼ Manual
    Initial Scale: ▼ Auto Scale
[OK][Cancel]

View Options Panel

Item Name	Funcationality
No Sleeping	Disable Auto Power-off.
Thumbnail	Use Exif thumbnail image if available.
Image Duration	Sets the duration time for each image.
Initial Scale	Initial scale when displaying image.

QuickKey List

In **Image Panel**, quick keys are available to perform operations quickly and easily. The same information can be found in Help Menu. The list is provided here for quick reference.

Key	Function
'H'	Help Menu
'0'	Scale 2/1
'1'	Scale 1/1
'2'	Scale 1/2
'4'	Scale 1/4
'8'	Scale 1/8
'A'	Note (Annotation)
'I'	Image Detail (Exif Information) Panel
'B'	Brightness Panel
'V'	View Options Panel
'N'	No Dithering (only in 4-bit screen)
'D'	Dithering (only in 4-bit screen)
'M'	Show/Hide buttons
'T'	Show Thumbnail/Original Image
'.'	Return to File List Panel

Sony CLIÉ Hi-Resolution (320x320) Support

Sony CLIÉ Hi-Resolution screen is fully supported. Under PalmOS 3.5 (CLIÉ 700c/710c), the images are shown in 8-bit gray scale (256 gray levels) as PalmOS 3.5 does not support 16-bit color. Please upgrade to PalmOS 4.0 and above to support high color screen mode.

320x320 @ 1/4 Scale

Sony Jog-Dial Support

Sony Jog-Dial is fully supported in **JpegWatch** to allow one-hand image browsing. Each panel has different supports, and is listed as following:

File Panel

Roll CW	Selects previous file item.
Roll CCW	Selects next file item.
Push	Opens the file item, or opens the directory.
Back	Back up one directory. If the current directory is at root, quit the application.

Load Panel

Roll CW	Skip to previous image file.
Roll CCW	Skip to next image file.
Back	Return to File List Panel

Image Panel

Push	Show/Hide buttons
Back	Return to File List Panel
Roll CW	Zoom-in to next scale level when buttons are visible. Jump to previous image file when buttons are hiding.
Row CCW	Zoom-out to next scale level when buttons are visible. Jump to next image file when buttons are hiding.

CW: Clock-wise
CCW: Counter Clock-wise

Sony Audio Remote Control(RMC)

For Sony CLIE 700 series, or any CLIE devices that have MP3 adapter, an Audio Remote Control (RMC)is provided. Users can use RMC to browse images. While Jog-Dial is good for one-hand browsing, RMC is perfect for doing presentation.

File Panel

Play	Opens the file item, or opens the directory.
Stop	Back up one directory. If the current directory is at root, quit the application.

Fast Forward	Selects next file item.
Fast Reverse	Skip to previous image file.

Load Panel

Stop	Return to File List Panel
Fast Forward	Skip to next image file.
Fast Reverse	Selects previous file item.

Image Panel

Play	Show/Hide buttons.
Stop	Return to File List Panel
Fast Forward	Selects next file item.
Fast Reverse	Selects previous file item.
Volume Up	Zoom-in to next scale level.
Volume Down	Zoom-out to next scale level.

Sony CLIE Screen Rotation (RMC)

On color Sony CLIE with PalmOS 4.0 and above, JpegWatch supports screen rotation at 0, 90, 180, and 270 degree. When the screen is rotated to different orientation, pen coordinates and Graffiti writing area in Silk Screen are both adjusted. However, the buttons in Silk Screen remains the same.
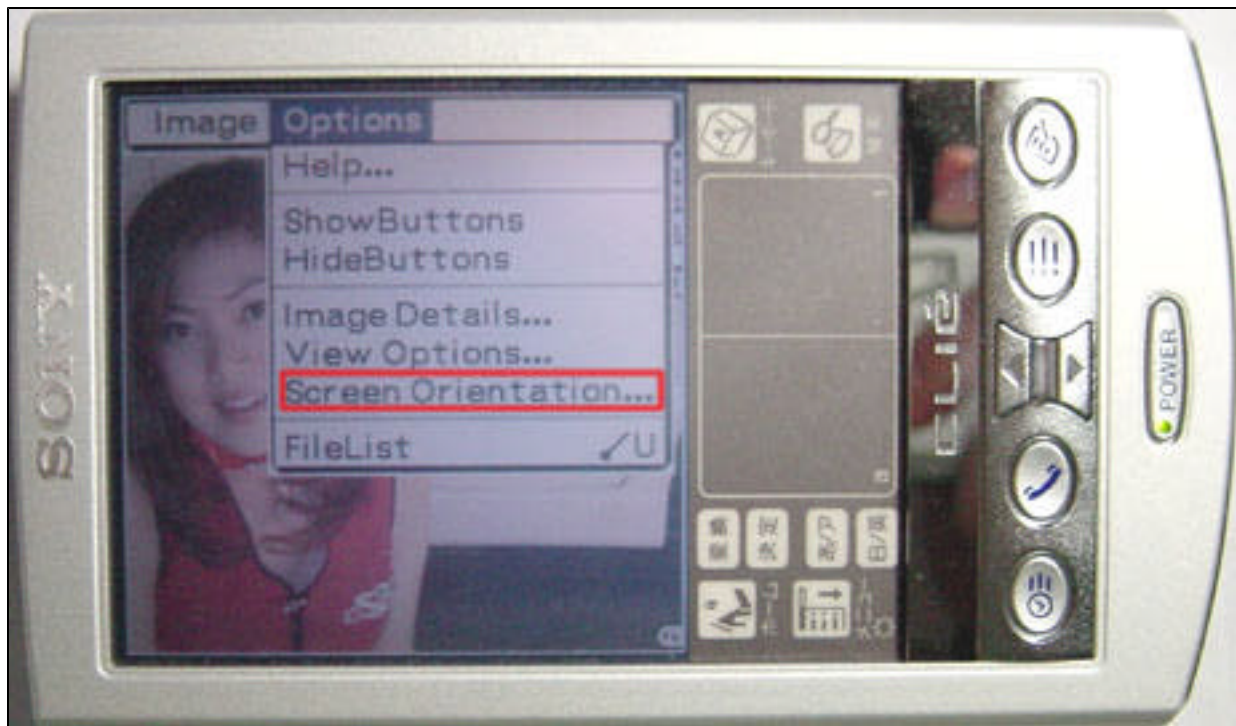
**Button positions at Silk Screen remain the same**
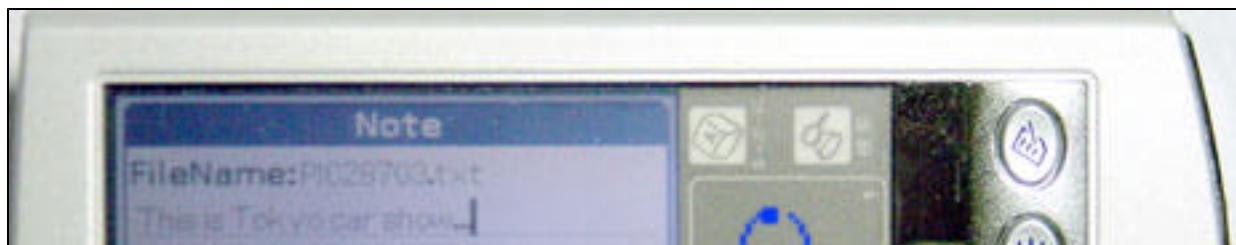
Graffiti writing area at Silk Screen is adjusted

Free Review and Evaluation Copy

If you wish to write a review about **JpegWatch**, or wish to evaluate a copy for quantity purchase, a free review/evaluation copy is provided. Please email **JpegWatch Serial Number** to **handwatch@handwatch.com** for a free evaluation key. The key will be unlocked application for certain period of time. After the review is published, or the quantity purchase is made, the review author or buyer will be emailed the unlock key to unlock the application permenantly.
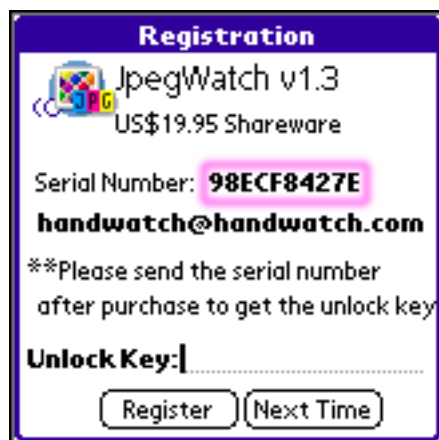
Contact Information

For any suggestions and bug reports, please send the email to
jpegwatch@handwatch.com

For latest version on **JpegWatch**, please visit HandWatch web site at
http://www.handwatch.com