SYSINFO v4.3

November 24, 2005

Index

What is SysInfo?

SysInfo is a **SYS**tem **INFO**rmation tool for Palm devices, designed to help you know better and master your PalmOS based device.

SysInfo is a set of seven utilities for Palm OS devices:

- ✓ **Device**
  - Shows device's Serial Number and Display information (size and color depth).
  - Monitors the usage made of the device, provides statistics about it and the system's stability.
- ✓ **Processor**
  - Tells what processor is in your Palm device, providing information about the processor (frequency and clock speed).
  - Allows downclocking and overclocking of processor for the DragonBall family processors (USE AT YOUR OWN RISK - please read appropriate notice in this file).
- ✓ **Palm OS**
  - Gives version number of PalmOS (takes into account patches).
  - Shows whether Security password is set or not. Allows to remove this password with no loss of protected records when the similar option from PalmOS will delete these records.
  - Shows HotSync information (HotSync username and last successful HotSync date).
  - Allows to force the HotSync backup bit for all databases and applications, which is especially useful for applications that were beamed to the device or installed not using the Desktop install tool and which, very often, have their backup bit not set!
- ✓ **Memory**
  - For main memory card and eventual additional additional memory card, calculates memory's storage use by files in both ROM (Read Only Memory, including Flash memory) and RAM (Random Access Memory).
- ✓ **Files**
  - This utility is accessed from the Memory screen.
  - It draws a pie chart showing INTERNAL or EXTERNAL memory use (both ROM and RAM) by main programs. Tick on one piece of the pie to get details about one program (data and executable sizes) and eventually remove it from the pie chart view.
- ✓ **Battery**
  - Gives exact current, warning and critical voltage values.
  - Estimates Full battery voltage (not provided by PalmOS). SysInfo uses a special algorithm to guess it and precision incresases over time.
- ✓ **Off Time**
  - Shows automatic off time value for your Palm device.
  - Allows to change this auto off timer with wider options than PalmOS.

Contact Information

- ✓ World Wide Web main download Site : http://www.aldweb.com
- ✓ Author e-mail : info@aldweb.com

SysInfo is a shareware.

The limitations of the trial version of SysInfo are:

- Nag screen to remind you to buy the full version
- Limited to 10 uses
- Some functionalities are not activated or limited (save to memo, change processor frequency, remove password, backup bit set, long Auto off time, partial browsing in the Files pie charts)

To get a full version of SysInfo, please refer to the SysInfo.txt file that was shipped together with this software or look for SysInfo on my web site (http://www.aldweb.com) and follow instructions.
The cost of SysInfo is just as little as $15.

When you register, you receive a full version of SysInfo that you just need to install on top of the trial version.

Thanks for purchasing SysInfo.

How to install SysInfo?

Both black & white (for black & white and grayscaled devices) and color versions of SysInfo are available.
Whether your device is color enabled or not, SysInfo will automatically detect it and adapt to display all items in black & white or in color.

If you have the trial version of SysInfo then you will install this file:
SysInfo_trial.PRC
If you have the full version of SysInfo then you will install this file:
SysInfo_full.PRC

SysInfo is a PRC file that is installed like any other Palm OS file using HotSync.
So, extract **SysInfo_full.PRC** or **SysInfo_trial.PRC** from the ZIP archive file.
Double-click on it and the Palm install tool will popup.
SysInfo_full.PRC (or **SysInfo_trial.PRC**) will be transferred to your Palm device next time you synchronize your device with your PC with HotSync.

Avoid installing the current version of SysInfo over a previous one. I do not guarantee that it will work fine doing so. Please, uninstall any previously installed version of SysInfo before installing this one.

- ✓ **Minimum Palm OS requirement for SysInfo is version 3.0**
- ✓ **SysInfo is Palm OS version 5 compliant**
- ✓ SysInfo works on black & white, grayscaled and color enabled devices

How to use SysInfo?

User interface overview

If you tick on the SysInfo title (for devices with Palm OS >= 3.5) or on the Menu button (), you open the menu

This is the main screen in which each utility will provide its information

Here are the 6 main buttons to access the main 6 utilities (*the Files utility is accessed through the Memory utility*)

The (i) button opens the online help for the given utility, Device in this case

This button saves the information for the current utility to a Memo

The Menu Structure

Appl	Options	Help
Device Processor Palm OS Memory Battery Off Time	Options Reset Stats	Help Device Help Processor Help Palm OS Help Memory Help Battery Help Off Time
Save Info to Memo		About
Exit		

Notes:

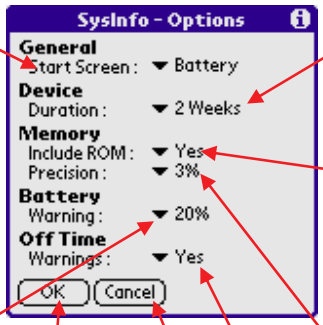
- Most of the menu items are duplicates of the controls which are on the screen, except for Exit and About (which are self explanatory!), and the Options window (see dedicated paragraph) and Reset Stats (See Device paragraph).
- The Save Info to Memo menu item differs from the Save to Memo button in that it saves ALL information for all 6 utilities to a memo

Options

The Options window is accessed through the Menu.
The options provide customization for SysInfo's main interface and its seven utilities' screens.

Start Screen is the screen to open when SysInfo is launched. This option is especially convenient if you map SysInfo to a hardware button to check often the same information (like Battery, Off Time, last HotSync).

Warning to pop up in the Battery screen for a given battery level. This option is especially useful as Palm OS pops up a warning only when battery reaches 10% of charge which can be, in many cases, too low.



Exit window and save changed options

Duration is the default length of time to take into account for usage statistics

Include ROM defines the default value affected to the ROM checkbox (include ROM in Memory analysis or not).

Precision defines the default memory storage percentage for files & directories to be highlighted.

Warnings to be turned on or off when selecting an off time setting which leads to a risk of running out of batteries.

Exit window but do not save changes made

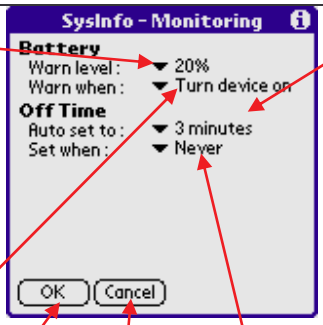
System Monitoring

The System Monitoring window is accessed through the Menu.
System Monitoring allows you to have SysInfo perform monitoring tasks in the background.

System Monitoring is available for most devices with Palm 0S >= 3.1 (notification manager feature required).
ⓘ System Monitoring tasks run only if SysInfo is installed on the main memory storage. If installed on an external card, SysInfo will not monitor these special tasks.

<table>
<tr>
<td>Warning to pop up for a given battery level when turning on the device. This option is especially useful as Palm OS pops up a warning only when battery reaches 10% of charge which can be, in many cases, too low.

Choose to display the warning (“Turn device on” option) or not (“Never”)

Exit window and save changed options</td>
<td> 

Exit window but do not save changes made</td>
<td>This option offers to set up the Off Time to a wanted value when the device is turned on.
This option is useful in two major cases:
1. if you want to make sure that your device will not be turned on with a too high Auto Off value that would increase the risk for a battery drain, even if you set it temporarily to a high level in order to read an eBook for example;
2. if another application changes this value (sometimes without even telling it!) and you want to make sure that it will be set back to your prefered setting whenever you turn

Choose to activate the forcing of the Auto Off Time (“Turn device on” option) or not (“Never”)</td>
</tr>
</table>

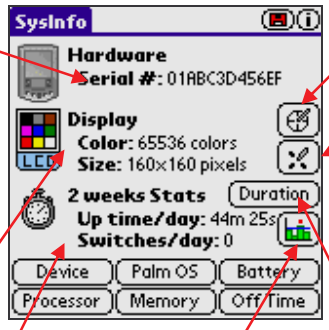
Device

- Shows device's Serial Number and Display information (size and color depth).
- Monitors the usage made of the device, provides statistics about it and the system's stability.

Returns the serial number of your device, which should be the same as the one printed on the back of your device
ⓘ *Note: some devices like the Palm Tungsten E and Treo 650 do not return their serial number*

Returns the number of colors available for your device's display and the size in pixels (width x height) of this screen

Display the average up time per day (so the time your device was turned on) and the average number of times it was switched on and off
Hint: if you divide the Up time/day by the number of switches/day, you will find the average session duration



For the given duration defined above, open the graph view of the usage statistics (see next page)
Note: may not be available in older devices with Palm OS <= 3.3

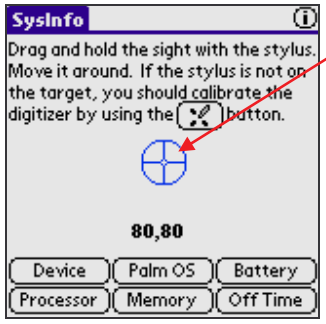
Opens the calibration test utility

If recalibration is required or if you just want to recalibrate the stylus, opens the standard Palm OS calibration tool

Change time duration to consider for the usage statistics as reported on the left side of the button (2 weeks in the screenshot). Clicking on this button will switch among possible values: Today ➔ 1 Week ➔ 2 Weeks ➔ 3 Weeks ➔ 4 Weeks ➔ All time (n days)

Calibration check utility

Just follow instructions given here



This is the sight to move around while holding down the stylus (moving the pen up closes this utility).
Hint: check coordinates of screen corners and pen's behavior in these corners too

Graph view of the usage statistics

Opened by clicking on the button.

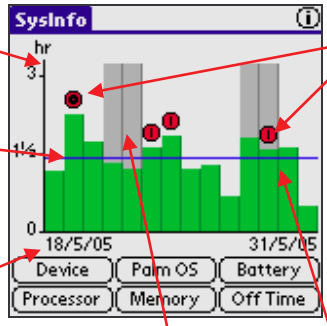
Notes:

- ✓ *This option may not be available in older devices with Palm OS <= 3.3*
- ✓ ⓘ *The usage statistics are recorded only if SysInfo is installed on the main memory storage, not if installed on an external card*

Usage axis (in minutes or hours)

This line returns the average up time over the period of time considered

Date axis: from date to date (according to the Duration defined in the previous screen)

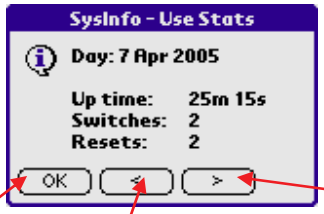


Week ends are highlighted in gray on top of the usage time

The red circle gives the number of times your device was soft reset per day. If a black circle appears instead of a digit, then more than 9 soft resets occurred.
Advise: too many soft resets might indicate an instability of your software…

Bar giving the time during which your device was turned on for each day over the period of time considered.

Ticking on any of the bars opens the details window for this day



Move to next day's details window

Exit the details window

Move to previous day's details window

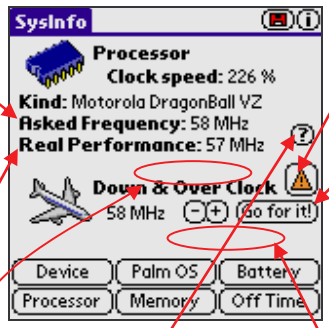
Processor

- Tells what processor is in your Palm device, providing information about the processor (frequency and clock speed).
- Allows downclocking and overclocking of processor for the DragonBall family processors (USE AT YOUR OWN RISK - please read appropriate notice in this file).

Asked Frequency is the speed required to the processor by the system, available for DragonBall equipped devices
For ARM equipped devices, Base Frequency, which is the standard CPU frequency mode, will be returned instead

Real Performance is a quick estimation given by SysInfo of the actual speed that the processor reaches

For real benchmark, please refer to my Speedy dedicated freeware benchmark tool



Reminds what Asked & Base Frequencies and Real Performance are

If Speedy is installed on your device, a button to launch it will appear in this area

Displays warning about overclocking

The option to set a new clocking for the processor is only available for the DragonBall equipped devices
Set the target speed with the (-) and (+) buttons and apply it with the (Go for it!) button

For the devices equipped with an ARM processor, and if one of the two overclockers available (LightSpeed or PXA Clocker) is installed on your device, this area will be replaced by a Launch overclocker button

<u>WARNING about the downclocking or overclocking functionality for DragonBall equipped devices</u>

Many people have been overclocking their Palm OS based devices (for those equiped with one of the DragonBall's family processor) and several tools are dedicated to this purpose.
I have never heard of any hardware damage due to overclocking.

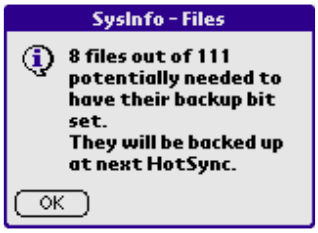
Having said that however, I really want to point out here that **YOU USE THIS FUNCTIONALITY OF SYSINFO AT YOUR OWN RISK**.
Be careful not to overclock when performing sensitive operations, like writing to flash, hotsyncing...

Palm OS

- Gives version number of PalmOS (takes into account patches).
- Shows whether Security password is set or not. Allows removing this password with no loss of protected records when the similar option from PalmOS will delete these records.
- Shows HotSync information (HotSync username and last successful HotSync date).
- Allows to force the HotSync backup bit for all databases and applications, which is especially useful for applications that were beamed to the device or installed not using the Desktop install tool and which, very often, have their backup bit not set!

Standard password removal option of Palm OS will delete all records marked private if you lost your security password. SysInfo Password remover will NOT delete these records. They will be readable again.

Launch the backup bit setter:



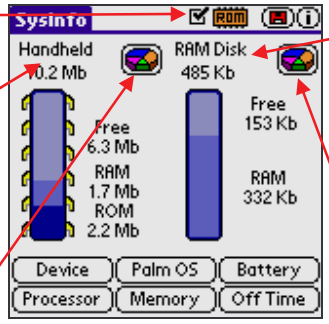
Memory

- For main memory card and eventual additional additional memory card, calculates memory's storage use by files in both ROM (Read Only Memory, including Flash memory) and RAM (Random Access Memory).

Include or exclude ROM files from pie chart analysis

If more than one INTERNAL memory card is available in your device, this area will be changed to a button to allow switching between cards

Launches the Files utility for the selected INTERNAL memory card



If more than one EXTERNAL memory card is available in your device, this area will be changed to a button to allow switching between cards

Launches the Files utility for the selected EXTERNAL memory card

Files

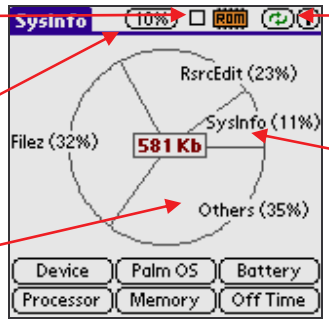
- This utility is accessed from the Memory screen with one of the two buttons.
- It draws a pie chart showing INTERNAL or EXTERNAL memory use (both ROM and RAM) by main programs. Tick on one piece of the pie to get details about one program (data and executable sizes) and eventually remove it from the pie chart view.

Most of the user interface is common for the INTERNAL and EXTERNAL memory Files screens. Therefore, common explanations are provided in the paragraph below.

Files for INTERNAL memory cards

Include or exclude ROM files from pie chart analysis

All files that use less than the given % of memory (% which can be changed thanks to this button) will be grouped in the Others category



Refresh display, thus go back to the original pie chart

If you tick on any portion of the pie chart with the stylus, a detailed information window will pop up for the given application:

There are 3 special categories:
- Others which was just explained above
- System which groups all system files
- Free which shows the % of free remaining memory

In the screenshot above, we excluded the Free and System categories with the (Remove / Chart) button

The (Remove / Chart) button is very useful for excluding applications that you for sure want to keep and analyze all other memory consuming applications.

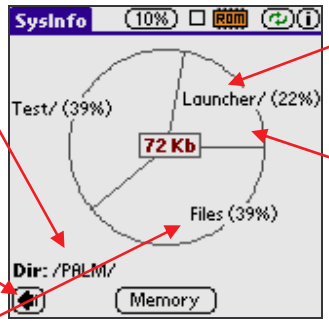
The (Remove / Chart) button only removes the file from the pie chart, it does not delete it from your device!

Most of the user interface is common for the INTERNAL and EXTERNAL memory Files screens. Therefore, common explanations are provided in the paragraph above.

Files for EXTERNAL memory cards

Displays which directory structure is drawn in the pie chart

Go up one level in the directory structure

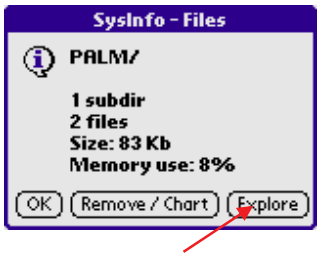


These are the files size in the current directory (all files in the directory are grouped in the Files category)

Note: Directories are separated by the "/" character, using the Unix way of showing a directory structure (which is also used by Palm OS). The root itself is the leading "/" character.

This is a directory as its name ends up with a "/" character

If you tick on any portion of the pie chart with the stylus, a detailed information window will pop up for the given directory or group of files:



The (Explore) button is available for directories and will show the pie chart for the given directory, being /PALM/Launcher/ in our sample

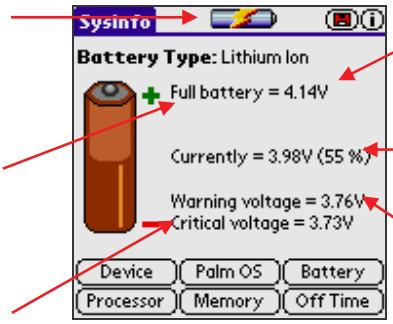
Battery

- Gives exact current, warning and critical voltage values.
- Estimates Full battery voltage (not provided by PalmOS). SysInfo uses a special algorithm to guess it and accuracy increases until you do a full charge.

When the battery is being charged, this image is shown

Full battery accuracy is obtained after a complete battery charge was made

When the critical voltage is reached, your device will be turned off to avoid loss of data. You should then recharge your battery as soon as possible!



"V" is the symbol for Volt which is the unit for voltage

Current voltage and % of remaining power

When the warning voltage is reached, Palm OS will gently warn you to recharge your battery

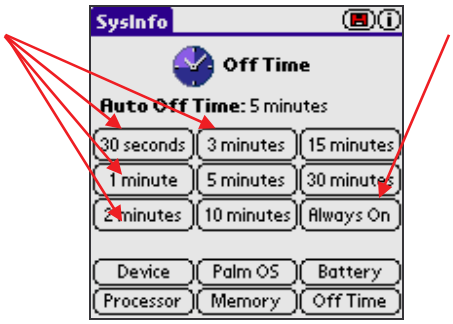
ⓘ The palmOne Treo 600 and Treo 650 devices do not return properly the warning and critical voltages (a bug in their PalmOS implementation?). So, for these devices, SysInfo uses a similar algorithm as for the Full battery voltage to guess their values which will become accurate after you do a full charge and then let your battery drain down to 9%.

Note: please refer to the Options paragraph (above) where you will find how you can set up a warning for a given battery level to pop up in the Battery screen and when you turn on your device. This option is especially useful as Palm OS pops up a warning only when battery reaches 15% or 10% of charge which can be, in many cases, too low.

Off Time

- Shows automatic off time value for your Palm device.
- Allows to change this auto off timer with wider options than PalmOS.

Standard auto off timer values provided by Palm OS are 30 seconds, 1 minute, 2 minutes and 3 minutes
In some cases, you might want to choose higher values…



Be careful with this option as your device will never turn off after setting it… your battery will then drain very quickly!

Updates description

v4.3 (11/24/05)
- added a System Monitoring function to have SysInfo perform 2 monitoring tasks in the background:
1- migrated the low voltage battery monitoring utility in this area
2- added a new option to check and force the Auto Off timer to the specified value in the case another application would change it without warning. This seems to be the case, for instance, with some version of the Palm Treo 650 ROM Updater which sets back the Auto Off value back to 30 seconds without telling it when using the phone application.
- added screen size and processor speed detections for various new devices: GSL M68, Palm Z22 and TX.
- cosmetic enhancement: fixed background transparency for some images and icons.

v4.2 (09/01/05)
- bug fix: the charging battery image would not be removed when required.
- the screen size information would always display Width x Height in the default portrait format when the display could have been rotated from portrait to landscape mode. If SysInfo succeeds to get from the system if the device is in the portrait or landscape mode, it now adapts the returned result accordingly.
- in the Usage Stats graph, the vertical axis was enhanced to display 2 additional intermediate values and the graph was enhanced with dotted horizontal bars that are now drawn (in color devices only) to better show the time scale.
- added Palm LifeDrive screen size and processor speed detections.
- the help message about Asked Frequency, Base Frequency and Real Performance was extended to include the definition for Base Frequency which was added in version 4.1 of SysInfo.

v4.1 (06/01/05)
- bug fix: in some cases, the External Files utility would crash while analyzing the external card's content.
- in the Usage Stats graph, the precision of vertical axis was fined tuned to display wider bars (for instance, before the axis was scaled from 0 to 6 minutes or hours, so always with an even upper value, with 3 as intermediate value for any usage time between 4 and 6, now it can be scaled from 0 to 5 minutes or hours, so with an odd upper value, with a 2 ½ intermediate value if between 4 and 5).
- in the Processor utility, a Base Frequency indicator is now returned for most of the ARM processors based devices (before, an Asked Frequency was returned only for the DragonBall processors based devices).
- in the Device utility, the display size was wrong for some devices (Palm Tungsten T3 for instance), the right value is now returned.
- in the Device utility, replaced the "Unknown" text by "Not available" when the serial number is not returned for a device, which I think is a more precise information.
- in the Battery utility, added lightning image if the device is charging its battery.
- in the Battery utility, for the palmOne Treo 600 and the Treo 650 devices, SysInfo now uses a special algorithm to guess the warning and critical voltages which are not provided by the system as they are for all other devices so far (Why? Good question!).
- accuracy progress of the full battery voltage for all devices, together with the warning and critical voltages for the palmOne Treo 600 and the Treo 650 devices, was improved by measuring them each time the battery status is checked (when turning on the device) and no more only when displaying the Battery utility screen.
- added the information in this user manual when some options are available if SysInfo is installed on the main memory storage and not available in the case SysInfo is installed on an external card.
- also added the information in the Device utility help paragraph that some devices do not return their serial number.

v4.0 (04/25/05)
- in the Device utility, the screen resolution comparison of the device against several common ones available (which was of little added value) has been replaced by a new sophisticated utility which monitors the usage made of the device and which provides statistics about it (on time, number of time switched on and off) and the system's stability (or "health", number of soft resets!). This new option is available for most devices with Palm 0S >= 3.1 (notification manager feature required, otherwise partial information is provided).
- added a new digitizer calibration check tool in the Devices utility.
- changed the Backup bit setup message from "xx files out of yy needed to have their backup bit set" to "xx files out of yy potentially needed to have their backup bit set", as this backup bit setup is preventive.
- upgraded this help file, adding bookmarks for quick and easy browsing.

v3.1 (03/21/05)
- added a sophisticated options window in which many new options can be set in addition to the 2 former options for the Memory & Files screens.
- added a new option in the Palm OS utility which allows forcing the HotSync backup bit for all databases and applications.
- added application high resolution icons (contribution from Mike Featherstone). I decided not to add high resolution images within the application itself to keep a small footprint to the application.
- even though the use of SysInfo is quite intuitive, I added a user manual.

v3.0 (11/24/04)
- changed of development tool to be able to implement new functions, with quite a heavy adaptation of the source code (because of some specificities between the HSPascal and the PP compilers)
- added HotSync information (HotSync username and last successful HotSync date) in the Palm OS window
- split Device window in two: Device (new information utility) and Processor
- added ARM 925T and ARM 926EJ-S processors detection
- if my Speedy freeware benchmark tool is installed on the device, shows a button for direct access to this software from the Processor utility screen
- for ARM devices, as SysInfo does not provide an internal overclocking utility for these devices, if an overclock software is found, shows a button for direct access to this software. These third party overclock software are:
    Lightspeed - http://www.clievideo.com/
    PXA Clocker - http://www.hexview.com/pxa/
- in the Palm OS utility screen, changed OS version displaying (from "v. M.m.f" to "M.m.f", where M is Major, m is minor and f is fix)
- enhanced the Memory utility by giving the information for all memory cards (previously, it only handled the first INTERNAL and the first EXTERNAL memory cards, when modern devices may have more than one storage now)
- changed the Files window access, now it is accessed through the Memory screen, with dedicated pie chart graphics buttons (or "files" text buttons for Palm OS < v3.5 devices)
- therefore, reorganized the utilities buttons
- enhanced the Files utility by providing pie chart also for the EXTERNAL memory cards
- in the Memory and Files utilities, show size in Kb (Kilobytes) if it is less than 1 Mb (Megabyte), show size in Mb otherwise
- SysInfo can now save memos to the new Memos application introduced in PalmOS 5.2.8?, PMem/DATA creator/type
- Save to Memo option now considers localized system date and time format preferences
- new more modern icon for this new major release
- source code optimization and minor bug fixes in various areas

v2.6 (10/14/03)
- upgraded the frequency estimator in the Device screen for estimating better ARM processors speed (for Palm OS 5 devices)
- changed files options from 5% 10% 15% to 3% 5% 10% in order to be able to see more files in the new devices with wider memory storage

v2.5 (05/13/03)
- Palm Tungsten C compatibility (64 MB of RAM!)

v2.4 (03/11/03)
- bug fix for big size (>=256 Mb) external memory cards (SD, MMC, Memory Stick...) in the Memory option that would badly calculate the memory cards size

v2.3 (01/01/03)
- added scan for EXTERNAL memory cards (SD, Memory Stick...) in the Memory option

v2.2 (10/31/02)
- fixed a bug that would in very rare cases hang the Device utility in a "Please wait..." state for some devices
- few optimizations in the source code

v2.1 (09/18/02)
- fixed a display bug that, for some devices, could hide the Warning voltage in the Battery screen
- upgraded the precision of the algorithm for Full battery voltage estimation
- replaced "Real Frequency" by "Real Performance" in the Processor screen as the previous appellation could confuse some users
- optimized source code
- cosmetic changes in the user interface

v2.0 (07/15/02)
- added a include/exclude ROM choice in Memory and Files analysis, with direct selection from main window
- direct selection from main window of memory storage % to show in Files analysis
- added DragonBall SuperVZ and new processors (ARM, Xscale...) detection
- added downclocking and overclocking of DragonBall processors (USE AT YOUR OWN RISK)
- save System Information to memo option added
- now gives the Asked Processor speed as returned by the system (for DragonBall processors) in addition to estimating the Real Processor speed
- added information of Private Records status (Show, Hide or Mask)
- added color for color enabled devices (black & white still available)
- highly upgraded the user interface (images, look & feel...)
- changed About window
- SysInfo is now SHAREWARE

v1.4 (05/24/02)
- minimum Palm OS version check
- update of contact info (web site, e-mail)
- remove additional INTERNAL card in Memory view if not present. This is the case for all devices so far, even though Palm OS opened this possibility! In addition, EXTERNAL memory cards are more fashion now...
- minor cosmetic changes in the user interface
- code update for Palm OS v5 compliancy

v1.3 (12/15/01)
- small icon for list view
- a few cosmetic changes in the menu bars

v1.2 (12/04/01)
- color icon
- a few cosmetic changes in the menu bars
- a small bug corrected in the Auto Off Timer management

v1.1 (11/16/01)
- source code debug

v1.0 (11/13/01)
- initial freeware release