TealBackup User's Manual

Program Version 1.71
Last Updated: March 26, 2009

Table of Contents

Introduction

TealBackup is a powerful, all-in-one backup solution, supporting external expansion cards, manual and automated backups, and backups during HotSync using the Palm default backup mechanism.

Contents

This archive contains the following files:

Program files:
TEALBACK.PRC	The TealBackup program file
TPSETUP.EXE	Windows easy-installer program

Document files:
BACKDOC.PDF	This document in Adobe Acrobat (PDF) format
BACKDOC.PDB	This document in Palm (TealDoc) format
BACKDOC.HTM	This document in HTML format (sans images)
REGISTER.HTM	TealPoint Registration form in HTML format
REGISTER.TXT	TealPoint Registration form in text format

Installing

Use Palm Desktop's Install Tool (Quick Install) to install the program file **TEALBACK.PRC**. TealBackup can run from an external card, but must be installed into main memory if you wish to run scheduled automatic backups.

The Palm Install Tool can be found as an icon along the left hand side inside the Palm Desktop program on your desktop computer. Instructions on how to use the PalmOS Install Tool are in the User Handbook that came with your Palm, Handspring, CLIE, WorkPad, or other PalmOS handheld.

You may also wish to install the manual file **BACKDOC.PDB**, which is this document in handheld-friendly format for reading with our product TealDoc.

On a Windows PC, you can alternatively run the automatic installer program double-clicking on the **TPSETUP.EXE** installer program, and following the on screen prompts.

Terms used in this document

Hardware Buttons:

> The four physical buttons (typically labeled Date, Address, To Do, and Memo) on the bottom of the handheld below the screen.

Scroll Up/Down Buttons:

> The physical rocker switch or separate buttons at the bottom center of the handheld.

Graffiti:

> The special letter-like symbols you write to enter text with your stylus.

Graffiti Entry Area:

> The rectangular area at the bottom of the display screen where you can write letters using the graffiti input language. This can also be referred to as the silk screen.

Silkscreen Buttons:

> The four, printed circular, tap areas (typically labeled Home, Menu, Calculator, and Find) to the left and right of the graffiti drawing area.

Menus:

> The drop-down menus you get when tapping on the silkscreen Menu button.

Chapter 1 – Overview

PalmOS handhelds are invaluable tools for storing and organizing data for both business and personal use. They are generally stable and reliable, and yet, they are still vulnerable to occasional crashes, unexpected power loss, and theft. Backing up all your data to a desktop computer or removable storage card insures that one of these events doesn't turn into a catastrophic loss of personal work and information.

TealBackup is a flexible and powerful backup solution, unique in that it handles both card and Palm Desktop backups. With optional encryption, compression, and timed activation, it offers features for power users while still being easy to use.

Running TealBackup

Once installed, run *TealBackup* by tapping on the "TealBackup" application icon on the PalmOS application launcher screen, reachable by tapping the "Home" silkscreen or equivalent hardware button on the handheld.

NOTE: You must install and run TealBackup from main memory if you wish to use automatic backup features.

Main Screen
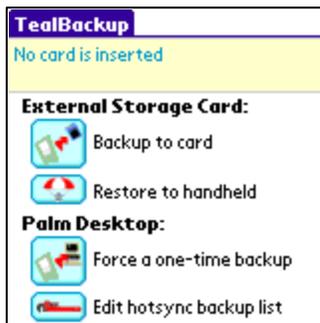
TealBackup's main screen has four options.

The first two, **Backup to card** and **Restore to handheld**, deal with backups to and restorations from a removable flash storage card.

The last two, **Force a one-time backup** and **Edit hotsync backup list**, select which files in main memory are monitored and backed up during HotSync using the *Palm Desktop backup mechanism.*

Chapter 2 – Backups to Card

Backup to Card operations copy selected files to an external removable storage card such as Compact Flash, Memory Stick, SD, MMC, or MemPlug SmartMedia adapters. The *Restore to Handheld* operations, on the other hand, allow you to restore selected files from previous backups.

Backup to card

Tap the *Backup to Card* icon on the TealBackup main screen to manually backup one or more files to an expansion card.

Step 1 – Select source and destination

On the screen that follows, you'll be allowed to choose one of the following sources of files to backup:

Source location
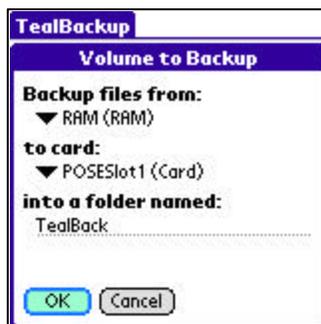
RAM:
Device main memory

Internal Volumes:
Internal "card-like" partitions, typically used for USB flash-drives or for hidden multimedia files

External Cards:
Removable flash cards (useful only for handhelds like the Tapwave Zodiac that have two card slots)

Destination card
Once you've selected a source location, choose the external card you wish to receive the backup files. If you have more than one card slot on your handheld, you can identify your cards by their volume name. Be sure your card is inserted so it will be listed in the *Backup to card* field.

Folder Names
You can also enter a custom folder name where you want your backups to be stored. You can choose any folder name you wish. A new folder will be created automatically if it does not already exist on the card.

Backup files are stored on your card in a subdirectory within the standard "PALM" root folder. The default path is set to /Palm/TealBack. To change backup folders, simply change the backup folder name.

HINT: When changing backup folders, any files present in the old backup folder will be left undisturbed. Thus, you can use this feature to switch back and forth between backup folders if you wish to manually manage them.

Card Names
When you backup your handheld, TealBackup makes a note of the destination card's name. Subsequent backups will default to that card if more than one card is present. If you insert a card with a different volume name, its name will also appear as one of the selectable "to card" options.

HINT: You can change the volume name of a card using the *Card Info* application that ships on newer Palm handhelds.

Step 2 – Select Files to Backup
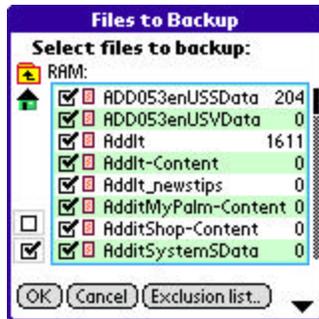
A list of files in memory will be presented for backup. If this is the first backup made to this card, all files will be auto-selected. Otherwise, only new files or file that have been changed since the last backup will be pre-selected.

Use the checkboxes to select or deselect files. To force a full backup of all files, choose *Select All* from the drop down menu. You can also select the "check" or "uncheck" buttons on the left side of the screen to select or unselect all files.

HINT: Devices with the PalmOS Non-Volatile File System (NVFS) like the Tungsten T5, TX or Treo650, do not run programs out of ROM memory. Instead, copies of the "built-in" programs are run from normal memory but are marked as "read only". In fact, it is impossible to tell definitively which files are stored in ROM and should not be backed up. Because of this, TealBackup never lists read-only files on these devices because these are typically ROM-based files that should not be backed up.

In rare instances, third party drivers, hacks, and background programs may mark themselves as "read-only" when they are set to run in the background. To back up these apps, temporarily deactivate them before running a backup. In many cases, you may also be able to temporarily turn off their "read-only" status bit using a file manager program like TealMover.

Step 3 – Set Exclusion Lists (optional)
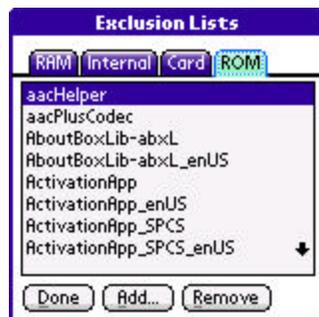
If you find yourself repeatedly deselecting the same files, you can optionally specify a list of files that you never want to backup. These may include sensitive files you don't want duplicated on an external card, large files that would be too slow to backup, temporary files that are inconsequential, or files that are currently in use by applications and have been found to caused problems if backed up.

5

Step 4 – Start Backup
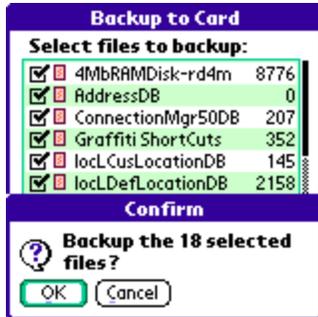
Once you've selected files to backup, tap on **OK** to start the backup process.
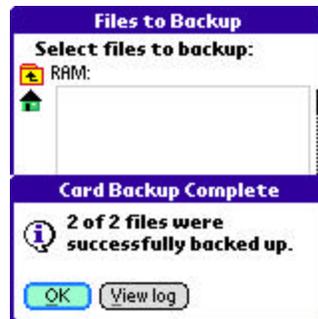
When the backup is complete, you can tap **View Log** to check backup times and any warning messages that may have been generated.

Restore to handheld

Tap the *Restore to handheld* icon to restore selected files from an expansion card.

Step 1 – Select Destination and Source

Destination type

Volume to Restore

Restore files of type:
▼ Main Memory (RAM)
from folder:
▼ TealBack [POSESlot1]
3/27/07 5:37 pm
to location:
▼ RAM (RAM)

[OK] [Cancel]

Select the destination volume where you'd like the restored files to go. Choices include **RAM**, **Internal Volumes**, or **External Expansion Cards**.

Because of the different native file formats used by these locations, you cannot restore files backed up in main memory to an internal volume and vice-versa.

Source folder
Next, after selecting the type, choose a backup folder to restore from. All appropriate backup folders from all inserted cards will then be displayed. The *From:* field displays the backup folder followed by the card name in parentheses. The date shown correlates to the last backup performed to that backup folder.

Destination location
Lastly, determine where you want your files to be restored (if more than one location applies) to and then select OK to continue to the next step. The next screen will ask you to select the individual files you want restored.

HINT: If you want to restore all files from a list of incremental auto-backups (folders that have had their backup date appended), the easiest way is to restore all files in each backup set starting with the oldest backup folder and ending with the newest. Automatic backups are detailed in Chapter 6.

Step 2 – Select Files to Restore
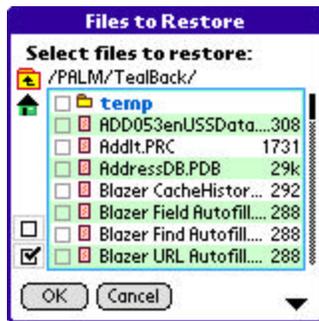
TealLock will show a list of files in the selected backup folder. Select files to restore from the list and tap *Restore* to start the restore process.

HINT: Make sure that any files you are restoring will not overwrite any active background apps or other files currently in use, as some applications may crash if their data files are unexpectedly overwritten. In general, you should turn off all hacks, control programs, or background applications before proceeding with a full restore. In addition, files marked read-only cannot be overwritten during the restore process (and can cause unexpected behavior in some versions of PalmOS), so check any files you are unsure of in a file manager like TealMover.

Step 3 – Start Restore
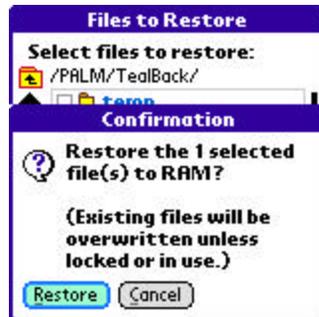
Select *OK* to begin the restore process.

Chapter 3 – Palm Desktop Backups

The built-in PIM (personal information management) applications such as the Calendar/Datebook, Contacts/Address Book, Tasks/ToDo list, and MemoPad, each have a custom HotSync conduit to backup and synchronize their data. Some third party applications also install custom conduits to handle their own files.

For all other files, however, the Palm Desktop uses a *Default Backup Conduit* to backup any changes made to these files. When a file marked for backup is changed on the handheld, a copy of it is made during HotSync and stored in a folder on the desktop PC. Files are stored in a folder called "Backup" in another folder named after your HotSync user name in the Palm Desktop install folder. They are automatically restored to your handheld if it gets blanked out (such as during a hard reset). You can also "reinstall" any of your backup files manually at any time by choosing them with the Palm "Quick" Installer.

This default backup mechanism is not always reliable, however, occasionally failing to backup files created on the handheld or beam or copied there from other devices. TealBackup supplements the mechanism by allowing you to specify which files are backed up. This makes sure that your backup folder always contains an accurate copy of your handheld's data.

Force a one-time backup

Tap the *Force a one-time backup* icon to copy selected files to the desktop during the next HotSync. Use this menu to make sure a list of files (or all files) are copied back to the PC at the next HotSync.

Step 1 – Select Files

A list of all files in memory will be displayed. Check the files you want to back up and tap *Backup* to mark them for backup processing.

Step 2 – HotSync
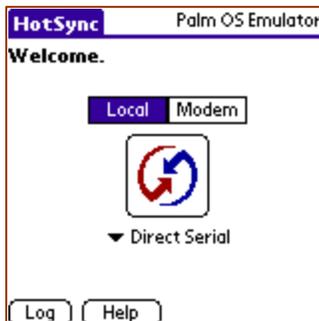
To transfer the selected files to the desktop backup folder, HotSync your handheld normally. Be sure beforehand that your *Backup* conduit in the Palm Desktop (set under the *Custom* menu) is set to "handheld overwrites desktop".

Step 3 – Return to TealBackup

To complete the backup process, return to TealBackup after HotSyncing. The program will restore the selected files to their original "unmarked" state. To permanently mark files for backup processing, use the *Edit HotSync Backup List* option instead.

Edit HotSync Backup List

Tap the *Edit HotSync Backup List* option to select which files are regularly managed by the Palm Desktop Backup Manager. Use this option to modify how Palm Desktop does its normal incremental backups. You would typically use this option after first performing a full *forced* backup.

Select Files
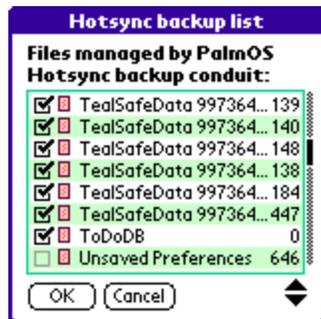
A list of files in memory will appear. Select or deselect files to be managed by the Backup Manager and tap *OK*.

HINT: Files selected here are not automatically backed up during HotSync, but are checked by the Backup Manager as part of the HotSync process. Selected files only get backed up if the Manager determines that they have changed since the last backup. To make sure a specific file gets backed up during the next HotSync, use the *Force a one-time backup* option instead.

Using the Backup Files on Your PC

Finding your backup folder

The Palm Desktop backs up files in a folder named *Backup* which in turn is stored in a folder named after your device HotSync name. For instance, if your device has the name "John Smith", then your backed up files are probably stored in a location similar to:

```
c:\program files\palm\smithj\backup
```

Automatic full restore

When HotSyncing a device that has been blanked out using a hard reset (pinhole+power button), the Palm Desktop will ask you for a user name. If you choose an existing name, the Palm Desktop will automatically look in that name's backup folder and restore all the files stored here. You can also "restore" to a new device in this way.

Manual restore

To manually restore any files in the HotSync backup folder, simply install them using the Palm Desktop *Install Tool* (aka "Quick Install"). On most operating systems, you can simply double-click the files to automatically load them into the *Install Tool*.

Tap the *Edit HotSync Backup List* option to select which files are managed by the Palm Desktop Backup Manager.

Cleaning up the backup folder

When files get deleted off the handheld, the Palm Desktop usually recognizes this and moves any backups to a folder named *Archive*. It sometimes, however, leaves behind old copies in the Palm Desktop backup folder. When this happens, the backup folder ends up accumulating programs and documents that you've previously tried on your handheld but no long keep there.

This is not normally a problem, except when the backup folder contains more files than can fit in the handheld memory. When this happens, an *automatic full restore* (after a hard reset) can fail because it tries to install all the files and runs out of memory.

To prevent this from happening, you can simply periodically clear out the backup folder, archiving (moving) its contents to a subfolder or other location of your choosing. Then perform a "forced" backup, filling the backup folder with an accurate snapshot of all the files currently on the handheld.

Chapter 4 – Prefs: Activation Options

The *Activation Options* screen is accessible from the Preferences drop down menu. It gives you more control over your backups. You can specify how detailed you'd like your log to be (which is useful when you see errors while backing up), whether files are verified, and what to do after an automated backup is complete.

The following options are available:

Copy TealBackup to the card

If this option is selected, TealBackup will copy itself to the "Launcher" folder on any card you backup files to. This way, if your device is erased, a copy of TealBackup will be readily available on the card to restore the saved files.

Create detailed logs

If you are having troubles with backups, you may wish to see a detailed log of what files are being backed up, and use it to determine if a specific file is problematic or if automatic backups are being scheduled properly. Once the backup or restore has occurred, you can view the log from the main screen by selecting the menu item 'View Log'. This option will make the backups considerably slower, so you probably won't want this feature selected most of the time.
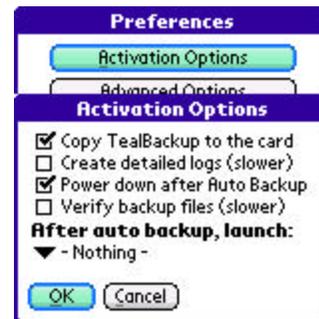
Power down after Auto Backup

If this option is selected, after files are automatically backed up, your device will power off immediately instead of waiting for the system timer to turn the unit off.

Verify backup files

If this option is checked, each file is verified to have copied correctly after being copied to an external card. This option add extra protection but may slow down backups significantly. **(New in 1.54)**

After auto backup, launch…

Use this option to select what happens after an automatic backup is completed. You may launch a specific application, return to the last app run, or stay in TealBackup showing the results of the last backup (default) **(New in 1.54)**

Chapter 5 – Prefs: Advanced Options

The *Advanced Options* screen is accessible from the Preferences drop down menu. It offers special options for advanced users, including:

Allow backup to internal cards

Some devices support virtual "cards" in memory that allows you to use your handheld as a USB storage drive. Normally, TealBackup does not allow you to perform a backup operation to an internal card volume, because these volumes are typically erased if the device is hard reset. If this option is checked, however, backups are allowed to internal cards, which may be useful, for instance, should you want to copy one external card to another using an internal drive volume as temporary intermediate storage.
(New in 1.54)

Backup PIM shadow databases

This is an advanced feature that most users will not need to use. Newer Palm handhelds with expanded contact and calendar databases create older "legacy" databases for backwards compatibility. These should not normally be backed up because they contain data duplicated by the expanded new databases. You should only use this option if you've manually disabled the "Datamanager Patch". If you don't know what this is, then you don't need this option.

Fancy system fonts

If this option is enabled on a high-resolution device, the system standard and bold fonts are replaced by new "thin-line" versions for a sleeker appearance. Setting this option to 'Auto' leaves buttons with the standard bold font for better readability but uses thin-line fonts elsewhere. **(New in 1.57)**

Restore over existing ROM or read-only files

Normally, read-only files indicate either a ROM-based file, or a background app or hack that has locked itself in memory while hooked up to PalmOS. By default, TealBackup will ask you before over attempting to overwrite a read-only file, as this can cause unpredictable results in some versions of PalmOS. Using this option, you can alternatively tell TealBackup to always or never copy over files that are currently marked as "readonly". **(New in 1.70)**

Chapter 6 – Prefs: Automated Backups

The *Automated Backups* screen lets you schedule backup operations for a specific time and day of the week. You can specify up to four automatic backup tasks, accessible by the tabs at the top of the screen.

NOTE: TealBackup must be in main memory to use *Automated Backups* because PalmOS does not process timed-events for card-based programs.

Tap the tabs on the top to view each backup task. If a task is turned on, the device that is set to be backed-up will be displayed in the tab. Select from the following options for each task:

Automatically Backup

Select this checkbox to turn on the selected automatic backup.

Files:

Select the subset of files to back up: *All Files*, *Modified Files*, or *Listed Files*. Select files for the last option by tapping on the *List* button.

NOTE: For the *Modified* option, TealBackup compares files found in the backup folder to files found on the device. If the *Append the date* option is selected, TealBackup will search all folders with the same base folder name and compare the most recent copy found to the one in memory.

From:

Select which device you'd like to backup.

To Card:

Selects what card the backup files will be stored on. Automatic backups are always designated to a specific named card, which prevents confusion on devices with two card slots. If the select card is not present when the backup begins, the program will put up a window asking you to select a new card.

Backup Folder

You may change the name of the backup folder. Note: The old backup folder and its contents will remain untouched by TealBackup.

Days of week

Select on which days the backup should occur. If no days are selected, backups will never happen.

Backup time

Select a time for the backup. TealBackup will set a silent systm alarm at this time to wake up the device and switch to TealBackup to start the process. Note that the device must either be unlocked to allow the backup to happen, or the locking program must support a special feature to allow specified programs to temporarily run when the device is locked. (TealLock supports this)

Append the date to the backup folder name

If this option is selected, backups will be stored in a folder with the day's date appended to the end of the name. Since older files do not get overwritten, the total size of the backup files can quickly grow on the card. Thus, you'll need to periodically delete old backup files manually. If doing "Modified" backups, be careful to also do regular full backups so rarely changed files are still backed up somewhere. The amount of space on your card will dictate how often you'll need to delete older backup folders. Any time you delete backup folders, we advise an immediate manual backup to verify that all your data is backed up.

HINT: If Timed Backups Don't Run…

Be sure you have TealBackup installed in RAM (not on a card). Otherwise, automated tasks will not work properly because PalmOS does not process timer events for applications on removable storage cards.

To perform timed backups when a handheld is locked, you must use a security solution that allows specified applications to temporarily take control of the handheld. The standard Security application does not support this functionality, but TealLock supports a "Run App when Locked" feature designed specifically for this purpose.

If alarms have sounded and the Alert Manager window is open, other applications cannot open. On OS 5.X devices, automated backups will still occur. TealBackup 'snoozes' the alarm, and then proceeds with its automated backup. However, automated backups will fail on older devices unless alarms are first dismissed by the user. (Note: Third party applications that popup their own alarm windows may still prevent TealBackup's automated backup from running.)

To diagnose automatic backup options, try also turning on "detailed logs" in TealBackup preferences.

Chapter 7 – Prefs: Encryption & Compression

The *Encryption/Compression* screen lets you set the following options:

Encryption Type and Password

The encryption option allows you to select an encryption method for both manual and automatic backups. This protects files on the card from use should the card get lost or misplaced. If you choose an encryption type, you must also select a password. If someone tries to restore an encrypted file on a different device, they must first enter the correct password in order to restore the file.

Three encryption types are available: 128-bit Blowfish, AES and Fast encryption. AES and 128-bit Blowfish provide the best security, but cause backup times to increase. Fast encryption is an XOR method that is less secure, but speedier. Both are significantly slower than no encryption/compression at all.

HINT: Each file must be restored using the same password used to encrypt it. Since files that aren't modified don't get automatically backed up, you'll probably want to do a full manual backup after changing passwords. Otherwise, you might find yourself later having to enter multiple passwords during the restore process, possibly with old passwords you no longer remember.

Compression

The compression option uses a simple compression method (run-length) to decrease the amount of space necessary to store your backups on your card. The savings depend on the type of file, but are generally modest—less than 10%—as many large files (like video files) on the handheld are already compressed. Because it slows down the backup, it's usually only useful when backup time is not a factor.

Don't Encrypt/Compress PRCs

When this option selected, only PDB files (databases) are compressed or encrypted according to selection settings. PRC files (programs) are copied uncompressed and unencrypted, speeding up backups for what are typically non-sensitive files.

Chapter 8 – Prefs: Exclusion Lists

Exclusion Lists

RAM | Internal | Card | ROM

aacHelper
aacPlusCodec
AboutBoxLib-abxL
AboutBoxLib-abxL_enUS
ActivationApp
ActivationApp_enUS
ActivationApp_SPCS
ActivationApp_SPCS_enUS

[Done] [Add...] [Remove]

Select *Exclusion List* from the main *Preferences* screen to exclude files from backup.

The exclusion list lets you specify files that should never be backed up. Any files found in the exclusion list will automatically disappear from all backup lists. Use the exclusion list to "hide" any temporary, sensitive or problematic files you don't wish to backup… ever.

Standard Exclusion Lists

There are three standard exclusion lists that are initially empty: one for files and folders in *RAM*, one for your built-in *Internal Volumes*, and one for removable expansion *Cards*.

ROM Exclusion List

ROM, a special fourth exclusion list, contains a list of all the system "readonly" files that normally do not need to be backed up because they are in ROM. Occasionally, however, you may wish to back up a file on this list because you have either downloaded a newer version of an application that ships in ROM, or because you are running a background application that falsely appears to be a ROM file because it sets its own "readonly" file flag. To back up one of these files, simply remove it from the default ROM Exclusion List. **(New in 1.70)**

Chapter 9 – Prefs: Locked Applications

The innovative **Lock Applications** tool helps improve stability on devices with the PalmOS Non-Volatile File System (NVFS), preventing certain crashes from occurring during backup and even normal use.

When devices running NVFS crash, the cause is usually linked to drivers, hacks, and background applications that are not *fully* compatible with the new memory architecture. The crashes can be difficult to track down, but usually occur anytime one accesses a large quantity of data, such as (unfortunately) during a file backup and restore operations. The crashes occur when PalmOS moves applications around to make space for files you are accessing. Background apps are supposed to lock themselves down when they are active, but ones that do not can crash at this point, typically causing a reset, "Fatal Exception" error, or "Unhandled Instruction" error.

If you get crashes during or after a backup, chances are you have an incompatible application somewhere on your device. Rather than live without that application, the **Lock Applications** tool can often be used to workaround some of the common bugs in these apps, allowing you to perform a successful backup.

Try locking any suspect applications by adding them to this list. Apps to look out for include any popup programs, hacks, text input programs, language utilities, or any other app that has an on/off switch and can do things when you're inside another application. If the crashes stop after locking an app, you've found the source of the problem. The apps will remain "locked" as long as they stay on the list, so this tool can even make your device more stable during normal use.

NOTE: If you later want to delete or upgrade a locked application, you'll need to first remove it from the *Locked Applications* list.

Chapter 10 – Prefs: Maintenance

The **Maintenance** preferences screen lets you select how old or orphaned files are automatically handled.

Delete auto dated backup folders…

After an automatic backup completes with no errors, this option lets you automatically delete any dated backup folders that are older than a specified number of days. When this option is active, the backup process automatically ignores any folders that are marked for deletion when calculating which files need to be backed up. **(New in 1.54)**

Delete manual undated backup folders…

After an manual backup completes with no errors, this option lets you automatically delete any undated backup folders that are older than a specified number of days. When this option is active, the backup process automatically ignores any folders that are marked for deletion when calculating which files need to be backed up. **(New in 1.54)**

Orphaned Backup Files

An *Orphan File* is one that has been backed up to a card, and then subsequently deleted from the handheld. Following each backup, TealBackup search the target folder for any orphan files from previous backups that no longer exist on the handheld. You can use the following options to select what is done when orphan files are found:

Leave them	- don't do anything
Delete them	- delete the orphan files from the backup folder
Rename them	- rename the orphan files (inserting "_orphan_" to the filename)
Prompt	- ask what to do when orphan files are found

Chapter 11 – Merging Backup Folders

A handy card maintenance tool, the *Merge Backup Folders* menu combines the contents of two or more backup folders, and optionally deletes the original source folders. **(New in 1.70)**

This tool is accessible from the main program drop-down menu. To use it, simply select the type of backup and select two or more backup folders to merge.

This tool is most useful in two circumstances if you are making regular incremental backups to separate dated folders:

Cleaning up old backups

If you perform incremental backups fairly frequently, you can quickly fill up an external storage card. To make more space, you can combine a number of older frequent (e.g. daily) backups and combine them into a single (e.g. weekly) incremental backup. TealBackup will save only the newest version of every file in the selected folders and place it in an existing or new backup folder of your choice.

Consolidating backups before restore

When restoring files, one typically starts with the last full backup and restores files from any incremental backups performed since the last full backup. To automate this process, simply select all the backup folders you would normally restore and use the *Merge* tool to create a new single backup folder with all the files you wish to restore. If you choose to keep all the original merged source folders, you can delete the new backup folder after restoring.

Chapter 12 – Backup Logs

Card Backup Log

Backup to card at: 9-8-2004 15:30
18 of 18 files were backed up
Backup to card at: 9-8-2004 17:33
19 of 19 files were backed up
Files restored: 9-8-2004 17:34
1 of 1 files were restored.

[OK] [Clear]

The *Backup Log*, accessible from the main menu, reports a history of operations and any errors that occur during backup or restoration of files. The file is periodically truncated, and you can also manually clear the log using the 'clear' button on the error log screen.

HINT: Used the *Detailed Log* option in *Preferences* to show more file-by-file status information in the log to help track down problematical files during backup or restore.

Appendix A – Troubleshooting

We cannot guarantee the compatibility or robustness of third party applications, but we try to resolve any issues that come up. Here are common issues you may encounter.

Timed backups aren't running

Make sure you are running TealBackup from main memory, as PalmOS timers do not function for programs run off external storage cards.

Also, TealBackup must run itself after turning on the device to perform the backup. If other applications are set to also run when a device is turned on, they may prevent TealBackup from running. Try turning them off to verify if this is the case.

Lastly, most security applications (including the PalmOS Standard Security) are designed to prevent applications from running when the handheld is locked. To backup files with a locked handheld, try TealLock, setting both the "Run app when locked" and "Wake up to lock handheld" options according to the instructions in the TealLock manual.

My device crashes during or immediately after backup or restore

Newer devices use the new PalmOS Non-volatile file system (NVFS). This system has a quirk in that in tends to crash certain background applications after large file moves if they haven't been patched to work with NVFS.

If you have certain background apps present on your device, they can crash when doing a backup if they have not been properly patched. TealLock, TealMaster, and TealScript, three of our own background apps, have recently been patched for Tungsten T5 compatibility. Many third party apps from other manufacturers may still be vulnerable on these devices.

To work around these problems, try Locking suspect apps using the **Lock Applications** feature in **Preferences**.

Certain files won't backup and/or restore

TealBackup cannot backup or restore some files while an application is currently using them. This is usually because the files are being used by a driver or background application that is protecting those files from access. When this is the case, an error will be generated in the backup log. You can usually successfully backup or restore the file by temporarily turning off the application by disabling it, unchecking certain functionality, or turning off some "global" functionality that can operate even after you leave the main application.

Lastly, make sure the card does not have its write-protect tab on. The card must be write-enabled to perform backups or compressed/encrypted restore operations.

Appendix B – External Storage Cards
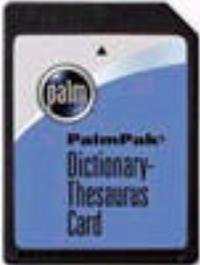
Background

External memory cards are also known as VFS cards because they use the Palm *Virtual File System*. They include a wide range of formats, including SanDisk® secure digital (SD) cards, compact flash cards, multimedia (MMC) cards, and Sony® Memory Sticks. They allow you to expand the storage capacity on your handheld as well as share data between devices.

In order to take advantage of TealBackup's card options, you should have a writeable memory card compatible with your specific handheld with enough capacity to store all of your backups. It is often handy to rotate between multiple cards, so you can keep a backup of your files should your whole handheld get lost or stolen.

Backup folder

TealBackup stores your backed-up files in a folder whose name you can specify in *Preferences*. This folder, in turn, is located inside the standard *PALM* folder on the target backup card.

Backup card

When you first perform a backup, you will be asked to select a target card from a list of all currently mounted storage cards. If you need to change this in the future, you can do so from within the **Advanced Preferences** screen.

Backup format

If you're like us, programs that store backups in a large proprietary file make you a little nervous, as you can never really be certain that you can recover all your data until you actually try to do so. For maximum flexibility, TealBackup stores each backed-up file separately in the backup folder. Doing so allows you to optionally move and/or copy these files with a third party file manager (like *TealMover*) and also keeps your data more robust from loss due to a data or storage error on the card.

Additionally, if the backup was made with no compression or encryption, the backed up files are exact copies of the original data file, so you can directly verify the backups with card-aware applications or install them onto other devices.

Appendix C – HotSync Backup Mechanism

Palm Desktop's HotSync program has two methods for dealing with the backup of files. The first method uses conduits, PC applications that couple with specific handheld apps to keep specific files backed up and synchronized with data on the desktop.

Handheld files not associated with any conduits on your PC are backed up using a second method, the HotSync Manager's default backup mechanism. This mechanism backs up selected files to the desktop only when those files change.

TealBackup uses this mechanism to perform and manage Palm Desktop backups. See Chapter 3 for more information on using the HotSync mechanism to back up your files.

Appendix D – Registering

Registering allows you to use the program past the 30 day expiration period and turns off registration reminders.

Currently, you may register by snail mail or online with a credit card and a secured server from the store where you downloaded the software. For the first option, send the following information on a sheet of paper separate from your payment.

- Product Name
- E-Mail Address
- HotSync User ID (Pilot Name Required for Passkey generation. It can be found on the main screen of the HotSync application on the Pilot as "Welcome _____" or in the corner on a PalmIII or higher)
- Check (drawn off a US Bank) or Money Order for ($19.95 US). No international checks or money orders please.

Appendix E – Contact Info

TealBackup by TealPoint Software
©2004-2008 All Rights Reserved.

TealPoint Software
454 Las Gallinas Ave #318
San Rafael, CA 94903-3618
We look forward to hearing from you.

Please visit us at www.tealpoint.com, or email us at support@tealpoint.com.

Appendix F – Products

Products Visit us online for our complete product line, including:

SHORTCIRCUIT (http://www.tealpoint.com/softshrt.htm)
A new twist on gameplay fused from your all time action puzzle favorite games, connect falling conduit pieces into explosive loops in this frantic race against the clock.

SUDOKUADDICT (http://www.tealpoint.com/softsudo.htm)
Sudoku Addict brings to your handheld the addictive worldwide puzzle craze that has displaced crossword puzzles in many newspapers in Great Britain and Japan.

TEALAGENT (http://www.tealpoint.com/softagnt.htm)
Get news, movie times, stock quotes, driving directions, web pages and more without need for a wireless connection. TealAgent fetches and formats web-based content for offline viewing.

TEALALIAS (http://www.tealpoint.com/softalia.htm)
Free up memory and make the most of external expansion cards. Placeholder 'Alias' shortcut files automatically find, load, and launch apps and data from external SD cards, increasing free main memory.

TEALAUTO (http://www.tealpoint.com/softauto.htm)
Track and graph automobile mileage, service, and expenses with TealAuto, the complete log book for your car or any vehicle. Extensive customization options and unmatched in features and functionality.

TEALBACKUP (http://www.tealpoint.com/softback.htm)
Backup your valuable data with TealBackup, supporting manual and automatic backups to SD/MMC/CF cards and Memory Stick, backups through HotSync, and optional compression and encryption.

TEALDESKTOP (http://www.tealpoint.com/softdesk.htm)
Launch applications with TealDesktop, the themed replacement for the standard system launcher screen with tabs, multiple card folders, drag and drop, and more

TEALDIET (http://www.tealpoint.com/softdiet.htm)
Shape up your life with TealDiet, the diet, exercise, and personal tracking application for mobile devices. Lose weight, build more muscle, and live healthier with TealDiet.

TEALDOC (http://www.tealpoint.com/softdoc.htm)
Read, edit, and browse documents, Doc files, eBooks and text files with TealDoc, the enhanced doc reader. Extensive display and customization options; TealDoc is unmatched in features and usability.

TEALECHO (http://www.tealpoint.com/softecho.htm)
Improve your Graffiti text input speed and accuracy, seeing what you write with TealEcho digital "ink". No more writing blind!

TEALGLANCE (http://www.tealpoint.com/softglnc.htm)
See the time, date, upcoming appointments and todo items at power-up with TealGlance. The TealGlance pop-up utility and key guard comes up when you power up, letting you see your day "at a glance."

TEALINFO (http://www.tealpoint.com/softinfo.htm)
Lookup postal rates, area codes, tip tables, schedules, airports, and info from hundreds of free
TealInfo databases. Create you own mini-apps; a handheld reference library.

TEALLAUNCH (http://www.tealpoint.com/softlnch.htm)
Launch applications instantly with the TealLaunch pop-up launcher and button/stroke-mapping
utility. Map applications to button presses and pen swipes so you can get to your apps quickly.

TEALLOCK (http://www.tealpoint.com/softlock.htm)
Secure and protect your handheld with TealLock, the automatic locking program with encryption
and card support. TealLock has unmatched features and customization options for personal or
corporate use.

TEALMAGNIFY (http://www.tealpoint.com/softlens.htm)
Save your eyesight with TealMagnify, an ever-ready magnifying glass that works with most any
program. TealMagnify lets you enlarge the screen for those times the text is too small to read.

TEALMASTER (http://www.tealpoint.com/softmstr.htm)
Replace Hackmaster with TealMaster, the supercharged 100%-compatible system extensions
manager. TealMaster adds enhanced stability, configuration and diagnostic features and PalmOS
5.0 hack emulation.

TEALMEAL (http://www.tealpoint.com/softmeal.htm)
Save and recall your favorite restaurants with TealMeal, the personal restaurant database. With
TealMeal's handy sorting and selection options, never ask "where to eat" again.

TEALMEMBRAIN (http://www.tealpoint.com/softmemb.htm)
Stop crashes and monitor your memory use with TealMemBrain, the application stack stabilizer.
TealMemBrain boosts your stack space on OS3 and OS4 handhelds, eliminating causes of
system instability.

TEALMOVER (http://www.tealpoint.com/softmovr.htm)
Beam, delete, rename, and copy files with TealMover, the file management utility for SD/CF/MS
cards. TealMover lets you see, move, modify, hex edit, and delete individual files.

TEALMOVIE (http://www.tealpoint.com/softmovi.htm)
Play and convert high-quality video and synchronized sound with the TealMovie multimedia
system. TealMovie includes a handheld audio/movie player and a Windows AVI/MPEG/Quicktime
converter program.

TEALNOTES (http://www.tealpoint.com/softnote.htm)
Insert freehand graphics anywhere with TealNotes "sticky notes" for Palm OS. TealNotes can be
inserted into memos, to-do lists, address book entries--almost anywhere you currently have
editable text.

TEALPAINT (http://www.tealpoint.com/softpnt.htm)
Paint, sketch, or draw with TealPaint, the all-in-one mobile graphics paint program and photo
editor. Highlights include 25 tools, 32 patterns, 49 brushes, zoom, layers, undo, &
JPEG/GIF/BMP support.

TEALPHONE (http://www.tealpoint.com/softphon.htm)
Supercharge the address book with TealPhone, the contacts replacement with superior interface
and options. Highlights include enhanced display, search, phone-dialing, groups, and linking.

TEALPRINT (http://www.tealpoint.com/softprnt.htm)
Print text and graphics to IR, serial, and Windows printers with TealPrint. With numerous
connection options, TealPrint, is the all-in-one text and graphic printing solution.

TEALSAFE (http://www.tealpoint.com/softsafe.htm)
Store your passwords, credit cards, PIN numbers, and bank accounts in the TealSafe data wallet.
With maximum security and encryption, TealSafe is a must for features and security.

TEALSCAN (http://www.tealpoint.com/softscan.htm)
Keep your PDA or Smartphone healthy, clean, and fast with TealScan, the system maintenance
utility. Use TealScan to fix crashes, find updates, and keep your device running smoothly and
efficiently.

TEALSCRIPT (http://www.tealpoint.com/softscrp.htm)
TealScript adds Graffiti text input to Treo and Centro smart phones. For devices that already
support Graffiti, TealScript adds a trainable system that supports both multi-stroke and Graffiti-1.

TEALTRACKER (http://www.tealpoint.com/softtrac.htm)
Track time and expenses with a fast, easy to use interface that requires minimal effort. Generate
reports and export data to a spreadsheet. TealTracker is your personal time clock.

TEALTOOLS (http://www.tealpoint.com/softtool.htm)
Improve productivity with TealTools pop-up Palm Desk Accessories. TealTools includes a popup
calculator, clock/stopwatch, preferences panel, editing panel, memopad, and a file/backup
manager.

Appendix G – Revision History

Version 1.71 – March 26, 2009
- Fixed ability to be launched from a card by third party launcher apps

Version 1.70 - June 11, 2008
- Added ability to backup readonly/ROM files by removing them from new special 'ROM' exclusion list
- Added new 'Activation' preference screen
- Added preference option to overwrite files during restore when a read-only or ROM copy already exists.
- Added new merge tool (menu) to allow merging of multiple incremental backup folders
- Improved backup code to keep device awake during countdown or copying large file
- Improved backup code to remove 0-sized deleted records before backup to improve speed
- Improved layout of scroll bar on file selection screens
- Fixed ability to select backups for restore when more than one volume (such as internal+SD) contains backups
- Fixed crash caused by navigating into subfolders on exclusion list
- Fixed PalmOS from locking up virtual graffiti area after rotating display

Version 1.60 – February 19, 2008
- Added support for backing up and restoring files with invalid record sizes (0 or >64k)
- Fixed file verification to work with records larger than available application working memory
- Improved auto-timeout dialogs to keep device open to keep short auto-sleep times from kicking in during auto backup

Version 1.57 – November 29, 2007
- Fixed restoring of large databases larger than 4000 records
- Added new 'Auto' prefs option to select thinline fonts for all except buttons
- Added extra messages if 'detailed logs' on showing causes when card restore fails

Version 1.54 – October 11, 2007
- Added option to verify each backed up file
- Added option to backup to internal storage volumes (for temporary copies)
- Added option to automatically delete old dated automatic backup folders
- Added option to automatically delete old undated manual backup folders
- Added option to launch specified app or return to previous app after automated backup
- Added new ability to delete folders even when not empty in delete screen
- Added new log entries when files verified and for folders deleted
- Added new standard wait dialogs for abortable functions
- Improved data consistency checking for card-to-card copies
- Improved visual style with new skinny fonts and shaded buttons
- Improved preferences settings with categorized screens and overall menu
- Improved progress bar display to advance consistently forward when scanning multiple folders
- Fixed automated backup failures when device reset 7 or more times between backups
- Fixed double-dates from being appended if device is reset after backup before exitting program

Version 1.46 – May 18, 2007
- Fixed card space display to show external card space instead of internal drive even if no previous backups

Version 1.45 – April 25, 2007
- Fixed main screen to redraw properly after entering registration key (would leave image of previous window open in 1.44)

Version 1.44 – April 21, 2007
- Fixed intermittent crashes after exiting program due to bug in external code library

Version 1.00 – July 25, 2004
- Initial Release

Appendix H – Legal Notice

This archive is freely redistributable, provided it is made available only in its complete, unmodified form with no additional files and for noncommercial purposes only. Any other use must have prior written authorization from TealPoint Software.

Unauthorized commercial use includes, but is not limited to:
- A product for sale.
- Accompanying a product for sale.
- Accompanying a magazine, book or other publication for sale.
- Distribution with Media, Copying or other incidental costs.
- Available for download with access or download fees.

This program may be used on a trial basis for 30 days. The program will continue to function afterwards. However, if after this time you wish to continue using it, please register with us for the nominal fee listed in the program.

CUSTOMER LICENSE AGREEMENT

YOU ARE ABOUT TO DOWNLOAD, INSTALL, OPEN OR USE PROPRIETARY SOFTWARE OWNED BY TEALPOINT SOFTWARE, INC. CAREFULLY READ THE TERMS AND CONDITIONS OF THIS END USER LICENSE BEFORE DOING SO, AND CLICK BELOW THAT YOU ACCEPT THESE TERMS.

1. License. You are authorized to use the Software Product owned and developed by TealPoint Software, Inc. on a single hand-held computing device on a trial basis for thirty (30) days. If after 30 days you wish to continue using it, you are required to register with TealPoint and pay the specified fee. This license is not exclusive and may not be transferred. You may make one copy of the Software for back-up and archival purposes only.

2. Ownership. You acknowledge that the Software Product is the exclusive property of TealPoint Software, Inc, which owns all copyright, trade secret, patent and other proprietary rights in the Software Product.

3. Restrictions. You may NOT: (a) decompile or reverse engineer the Software Product; (b) copy (except as provided in 1 above) sell, distribute or commercially exploit the Software product; or (c) transfer, assign or sublicense this license.

4. Disclaimer of Warranty and Liability. TEALPOINT MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS OR FUNCTIONING OF THE LICENSED SOFTWARE, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH TEALPOINT DISCLAIMS. ALL LIABILITY IS DISCLAIMED AND TEALPOINT ASSUMES NO RESPONSIBILITY OR LIABILITY FOR LOSS OR DAMAGES OF ANY KIND, DIRECT OR INDIRECT, INCIDENTAL, CONSEQUENTIAL OR SPECIAL, ARISING OUT OF YOUR USE OF THE LICENSED SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

5. Termination. You may terminate this Agreement at any time by destroying your copy(ies) of the Software Product. The Agreement will also terminate if you do not comply with any of its terms and conditions, at which time you are required to destroy your copy(ies) of the Software Product and cease all use.

6. Applicable Law. This Agreement is governed by the laws of the State of California.