

FlashProtm

REV E
MARCH 10, 2000

FlashProtm is one of the most essential software programs available for the Palm connected organizer, a must for any user. This program takes advantage of the unused flash memory on the Palm device.

- FlashPro frees up RAM so there is more room for applications, databases, etc.
- FlashPro allows applications and data to be stored in flash memory not used by the Palm device's operating system (OS).
- FlashPro keeps programs safe in flash memory so they won't be affected by power loss or system crashes.
- FlashPro allows the user to move programs from RAM to flash or flash to RAM without the need for a desktop computer.

What is required to run FlashPro?

FlashPro requires a Palm-type device running Palm OS 3.0, 3.1, 3.2, 3.3, or 3.5 with at least 2MB (Megabytes) of flash memory. The supported devices include the Palm III, IIIx, IIIxe, IIIc, V, Vx, IBM WorkPad 20x, 30x, c3, 50u, Symbol 1500, 1700, 1740, and TRGpro.

The Japanese version of the Palm OS3.1, uses the entire 2MB of flash for itself. Users of the IBM WorkPad-30J can only run FlashPro on OS3.1J if they also obtain a TRG xtra xtra Pro memory board, which includes unused flash memory. For Palm OS3.5J, the OS requires 4M of flash memory, so a 4MB flash Palm-type device or a 2MB flash Palm-type device with a TRG xtra xtra Pro board is required.

Supported Devices and Palm OS Releases

Each Palm OS version occupies a specific amount of flash memory. FlashPro makes use of the remaining unused flash for user usage. The amount of user flash memory by Palm OS release is shown below:

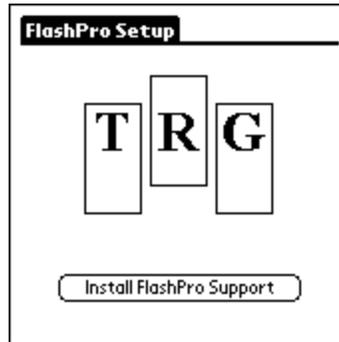
Palm OS release / Device	Available User Flash Memory
3.0 on Symbol 1500	696KB
3.0 on Palm III, IBM Workpad 20x	824KB
3.1 on Palm IIIx, V, Workpad 30x, c3	824KB
3.2 on Symbol 1700/1740	504KB
3.3 on TRGpro	568KB
3.3 on Palm III, IIIx, V, Vx, Workpad 20x, 30x, c3	760KB
3.5 on TRGpro	440KB
3.5 on Palm III, IIIx, IIIxe, IIIc, Workpad 20x, 30x, c3, 50u	568KB

FlashPro Quick Tutorial

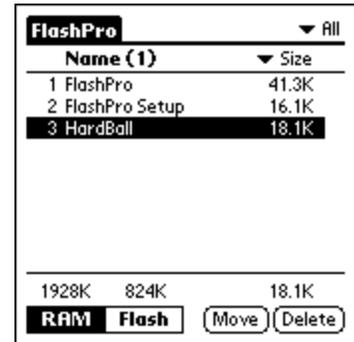
To get up and running quickly, perform the following steps....



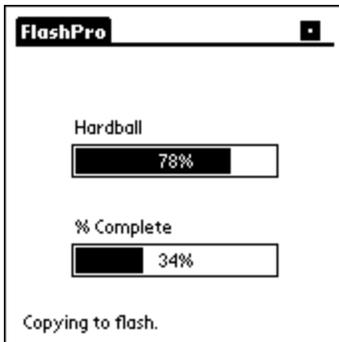
Use HotSync to install FPSetup.prc and FlashPro.prc to the Palm device. The icons FlashPro and Flash Setup should now appear.



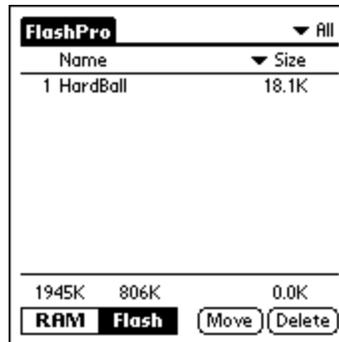
Launch Flash Setup and tap on the “Install Flash Support” button. During the installation process, status messages will be displayed at the bottom of the screen. Once complete, the Palm device will reset.



Launch FlashPro. A list of the current files in RAM will be displayed. Select a file to move to flash memory. Tap the “Move” button.



A progress gauge will be displayed during the “move” process.



Tap the “Flash” button to verify that the program has been successfully moved to flash memory.

Note: Once FlashPro Setup is complete, it may be removed from the Palm device.

FlashPro Screen Description

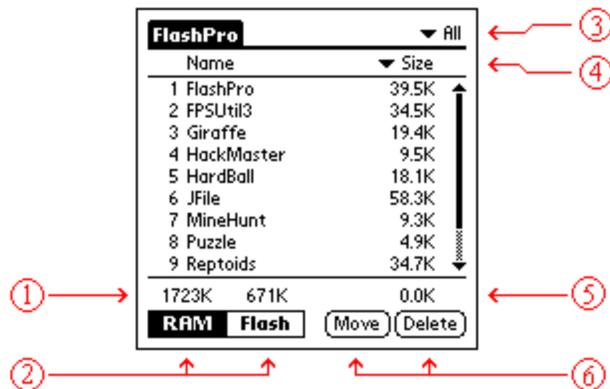


Figure 1

After FlashPro is started, the main RAM view is displayed. This view displays all the files (programs and databases) currently in RAM. Figure 1 illustrates the look of the screen.

1. Label indicating free RAM and flash memory. These numbers show the total amount of free RAM and flash on the Palm device. As programs are moved between RAM and flash, these numbers will reflect the memory usage changes.
2. Buttons to select either the RAM or Flash views. FlashPro starts up in the RAM view as indicated by the highlighted "RAM" button. Tapping on the "Flash" button will switch to the flash view, highlighting the "Flash" button.
3. Pop up list to select which types of files to display in the list -- All, Applications, Databases. This option acts as a display filter.
4. Pop up list to select Size, Type, Creator, or Version of the file. Each file on the Palm device has certain attributes that may be displayed by FlashPro, including its size, type, creator and version. The attribute selection does not affect FlashPro operations. It is provided to give the user more information about the files on the Palm device.

Note: Only applications have version numbers associated with them. Databases will have "db" displayed in the attribute column.

5. Label indicating total size of all selected files. This number is the running total size of all selected files. This number can be compared with free RAM or free flash numbers in item 1 to determine if the selected files will fit.
6. Action buttons to either move or delete the selected files.

FlashPro Menu Description

Tap on the Menu silk screen button in the lower left-hand corner of the Palm device to bring up the menu bar for FlashPro. There are three menus available in FlashPro ...

Options Menu

- *Preferences*
- *About FlashPro*

Edit Menu

- *Select All*
- *Unselect All*

Tools Menu

(RAM View)

- *Copy to Flash*
- *Move to Flash*
- *Delete from RAM*

(Flash View)

- *Copy to RAM*
- *Move to RAM*
- *Delete from Flash*
- *Format Flash*
- *Defragment Flash*

Options Menu

After tapping on the “Options” selection on the menu bar, the following screen will be displayed.



Figure 2

- *Preferences*. Tapping on this item will start the “Preferences” dialog.
- *About FlashPro*. Tapping on this item will start the “About FlashPro” dialog.

Options Menu -> About FlashPro

After selecting “About FlashPro” from the Options Menu, the following dialog box will be displayed.



Figure 3

This screen displays version, copyright, and contact information for FlashPro. Tap on the “OK” button to exit this screen.

Options Menu -> Preferences

After selecting “Preferences” from the Options Menu, the following dialog box will be displayed.

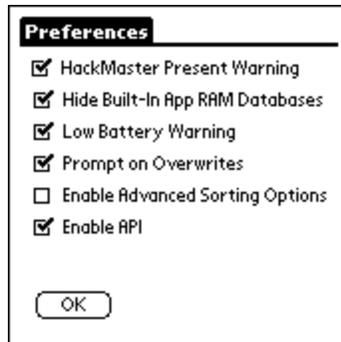


Figure 4

- *HackMaster Present Warning.* Warns the user if FlashPro detects HackMaster is installed on the Palm device. It is recommended that this option remain enabled.
- *Hide Built-In App RAM databases.* When enabled, FlashPro hides the databases associated with the built-in applications on the Palm device, such as the Address Book or Date Book.
- *Low Battery Warning.* Warns the user if the battery level is too low to safely run FlashPro.
- *Prompt on Overwrites.* When enabled, FlashPro will warn the user before overwriting a file.

- *Enable Advanced Sorting Options.* Allows the user greater flexibility in the display of the file list. When enabled, the screen will appear as in Figure 5.

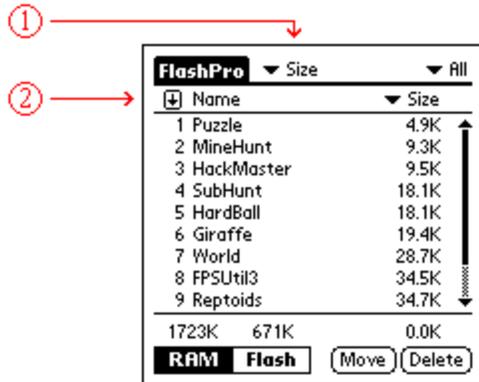


Figure 5

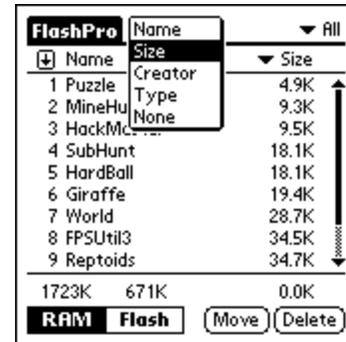


Figure 6

1. This pop-up allows the user to sort the file list based on its name, size, creator or type (Figure 6). The "None" option displays the files in the order stored by the PalmOS.
 2. This arrow determines the direction of sorting (ascending or descending). Tap on the arrow to toggle the order.
- *Enable API.* Enables FlashPro's API for 3rd party applications. It is recommended that this option remain enabled.

Edit Menu

After tapping on the “Edit” selection on the menu bar, the following screen will be displayed.

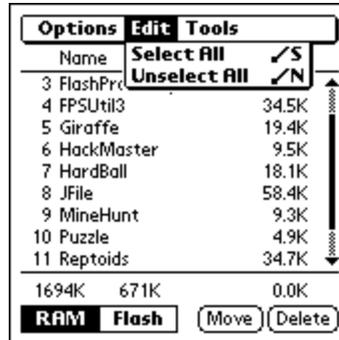


Figure 7

- *Select All.* Tapping on this item selects all files in the list. Individual files may then be unselected.
- *Unselect All.* Tapping on this item unselects all files from the list. Individual files may then be selected.

Tools Menu

The tools menu is dependent on the RAM / Flash view. After tapping on the “Tools” selection on the menu bar, one of the following screens will be displayed.

RAM View



Figure 8

Copy to Flash – Copies the selected files from RAM to flash. The original files remain in RAM.

Move to Flash – Moves the selected files from RAM to flash. The original files are deleted from RAM. This performs the same operation as the “Move” button at the bottom of the screen.

Delete from RAM – Deletes the selected files from RAM. This performs the same operation as the “Delete” button at the bottom of the screen.

Flash View

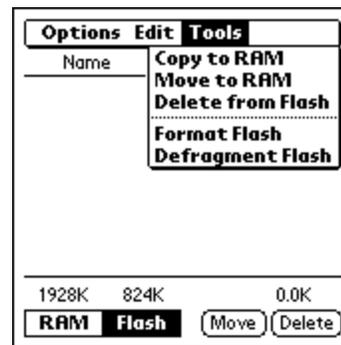


Figure 9

Copy to RAM – Copies the selected files from flash to RAM. The original files remain in flash memory.

Move to RAM – Moves the selected files from flash to RAM. The original files are deleted from flash memory. This performs the same operation as the “Move” button at the bottom of the screen.

Delete from Flash – Deletes the selected files from flash memory. This performs the same operation as the “Delete” button at the bottom of the screen.

Format Flash – Removes all files from flash memory. This operation does NOT affect the OS or built-in applications.

Defragment Flash – Merges all free space in flash memory. See the section on Defragmenting Flash for more details.

Tools Menu -> Defragmenting Flash

Over time, moving files to and from flash will cause the free flash memory to be split into many small fragments. Eventually, programs small enough to fit within the “free flash” will be too large to fit within any single fragment. To fix this problem, the flash must be defragmented. Figure 10 shows a fragmented flash. After performing a defragment operation, the free fragments are merged into a single large piece, as shown in Figure 11.

Before

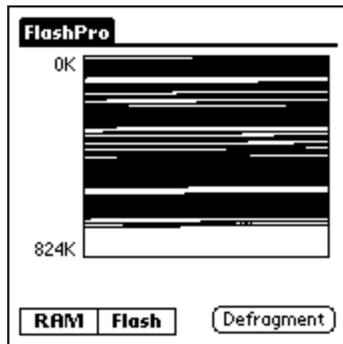


Figure 10

After

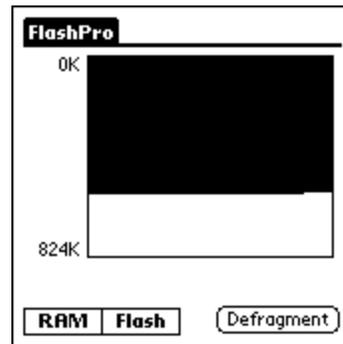


Figure 11

Troubleshooting

Not all Palm programs are compatible with flash memory. Moving an incompatible program into flash may prevent the Palm device from booting. In order to restore proper operation to a Palm device, perform the following steps ...

- Perform a soft reset by pressing the reset button on the back of the Palm device.
- If a soft reset fails, hold down the PageUp button and repeat the reset. This will bypass application initialization. If the device boots, rerun FlashPro and remove the offending application from flash.
- If the Palm device does not boot after a PageUp reset, hold down the MemoPad button and press reset. This procedure will put the Palm device in TRG's **Recovery Mode**. The Palm device should display the screen shown in Figure 12.

Press the ToDo button to format the flash, clear all of RAM and reset the unit.

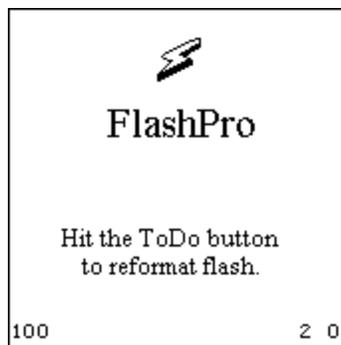


Figure 12

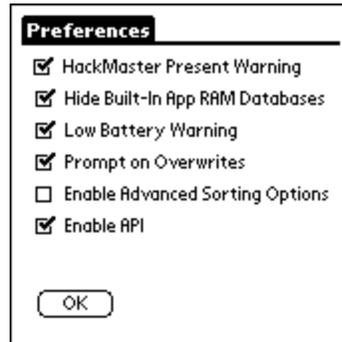
- If all else fails, contact TRG Technical Support at (515) 252-7522 or e-mail "support@trgnet.com".

Example: Backing Up a Database to Flash

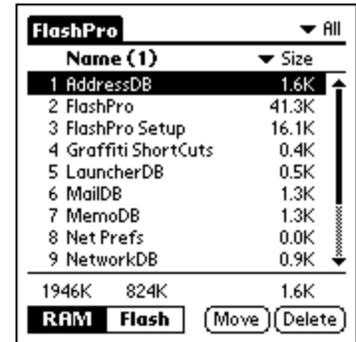
This section describes how to backup and restore the Address Book to flash. These same steps can be used to backup and restore any database. To backup the Address Book, follow these three steps.



If it doesn't currently reside in flash memory, copy FlashPro from RAM to flash

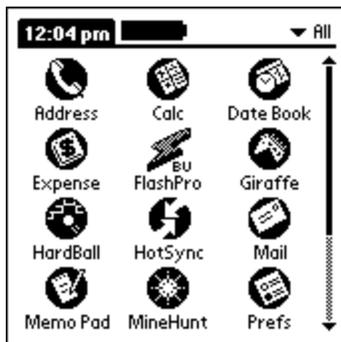


Uncheck *Hide Built-in App RAM Databases* in the Preferences dialog. The built-in application databases will now appear in the file list.

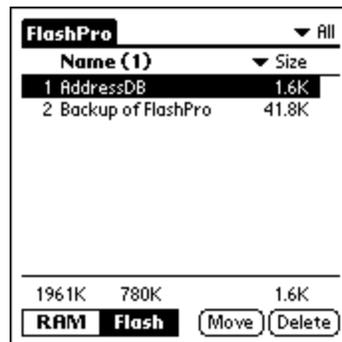


Select AddressDB and copy it to flash memory.

To restore the Address Book after a power failure, follow these steps ...



When power is restored, the FlashPro backup icon will appear. Launch FlashPro to restore FlashPro to RAM. The RAM copy will run automatically.



From the Flash view, select AddressDB and copy it to RAM.

Flash Memory Issues

Compatibility List

A list of applications and databases that have been tested for FlashPro compatibility is available at the following web site: <http://www.trgnet.com/compat.htm>

HackMaster and 3rd Party Launch Programs

It is strongly recommended that all Hacks and 3rd party launch programs be disabled when moving files to and from flash memory. If Hackmaster is installed on the Palm device, FlashPro will display the following warning message ...



Figure 13

FlashPro cannot determine if Hacks are enabled. If all Hacks are currently disabled, tap the “OK” button. If all Hacks are not disabled, tap the “Run HackMaster” button and disable all Hacks before rerunning FlashPro.

Note: This warning message can be disabled via the “Preferences” dialog under the “Options” menu.

Uninstalling FlashPro Support

In order to fully uninstall FlashPro support from your Palm device, run the program FPUinst.prc. Note: Uninstalling FlashPro support, will delete all programs put into flash using FlashPro. FlashPro setup may be run again to reinstall FlashPro support.

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