BRAYDER
TECHNOLOGIES INC.

MemoryJack
Users Guide

Version 1.1

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Introduction

MemoryJack is an exciting new product for selected PalmOS 5 devices that provides the following major new functions:

- **Larger memory size** by using a portion of an expansion card as RAM memory.   Expansion Memory can be up to 256M.
- **Non-volatile "RAM" memory**, since the expansion card retains all data if power is lost (battery completely discharged, hard reset, etc).

MemoryJack is easy to install, and totally transparent to the user after installation.

How MemoryJack Works

MemoryJack essentially uses the expansion card to store all programs and files that were formerly stored in RAM. As programs are executed by the user, the necessary portions of the programs are copied to RAM and run from RAM.

As data files are used, RAM is used as a buffer area for the files that are stored on the MemoryJack Expansion Memory. As blocks of data are requested, they are copied to the MemoryJack RAM buffer.

MemoryJack re-writes the buffer back to expansion card at the following times:

1. Any power off (either manual power off or automatic device power off)
2. When a significant number of changes have accumulated

All products that function with PalmOS 5 will see the MemoryJack Expansion Memory as RAM memory, so no product changes are required. Normal function such as HotSync, beaming, utility functions, preferences, etc., all work as they would with normal RAM memory.

Supported Devices

MemoryJack supports the following PalmOS 5 devices:

Palm	Tungsten C
	Tungsten E
	Tungsten T
	Tungsten T2
	Tungsten T3
	Zire 31
	Zire 71
	Zire 72
	Treo 600

Sony	NX Series
	TG Series
	TH Series
	TJ Series
	UX Series
	VZ Series

Installation

Note that for the Tungsten E and Zire 71, an updated SD driver is required for MemoryJack installation. The updated SD driver can be downloaded from www.palm.com.

To install MemoryJack, HotSync the MemoryJack.prc file to your handheld. After the MemoryJack product is on the handheld, tap the MemoryJack icon **MemJack**.

The following screen will be displayed.
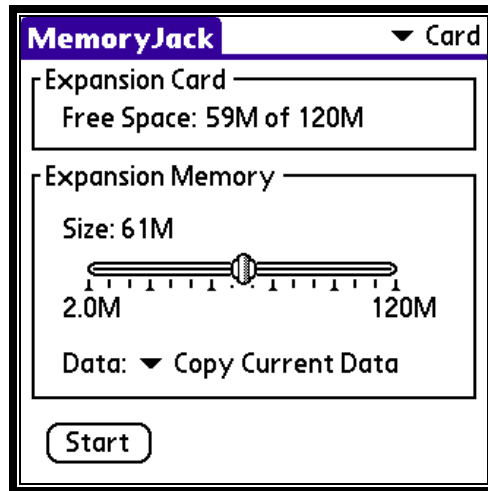
The slider bar can be moved to determine the size of the expansion memory desired. The Expansion Memory can be larger than the available RAM on the device, and can be as large as 256M or up to the free space on the expansion card.

Move the slider to the Expansion Memory size desired.

The Data popup menu gives two options:

- **Copy Current Data**
  This option should be used to start MemoryJack when files are already installed on the device. **Copy Current Data** creates the Expansion Memory and then moves the files from RAM Memory to Expansion Memory.
- **Restore From HotSync**
  This option should be used when files need to be restored via HotSync. **Restore From HotSync** creates the Expansion Memory,
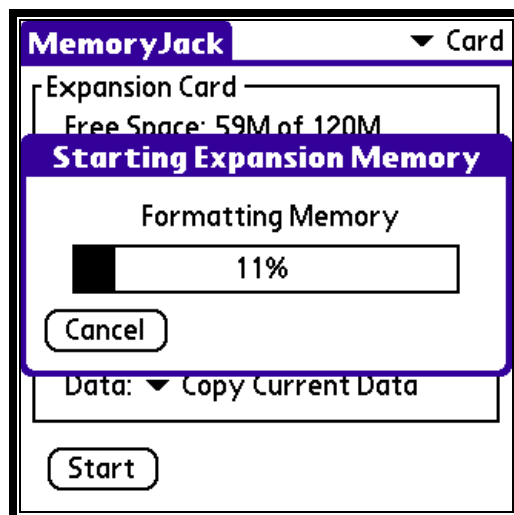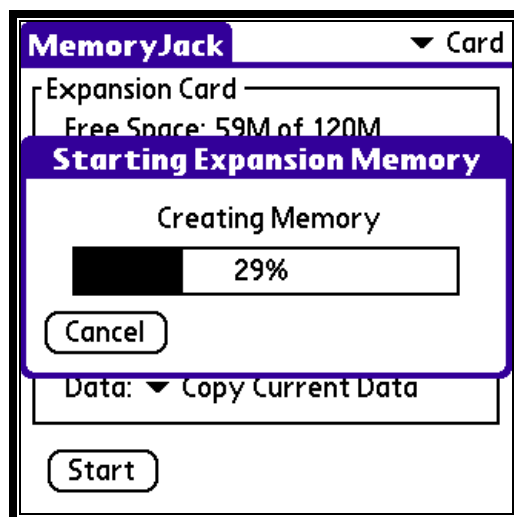
and resets the HotSync Name on the device. On the next HotSync, the files will be restored.
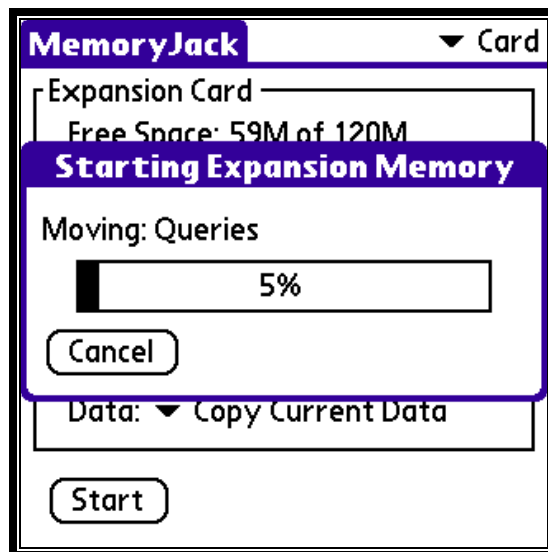
See the section **Restoring from HotSync Backup** for more details on this option.

For an initial installation, choose **Copy Current Data**.

1. Tap the **Start** button.

   The MemoryJack installation process will go through a series of steps to Create, Format, Scan, and Verify the new Expansion Memory, and then move the RAM files to the Expansion Memory. The following progress bar screens will be displayed.

MemoryJack ▼ Card

Expansion Card
Free Space: 59M of 120M

Starting Expansion Memory

Creating Memory

29%

Cancel

Data: ▼ Copy Current Data

Start

MemoryJack ▼ Card

Expansion Card
Free Space: 59M of 120M

Starting Expansion Memory

Formatting Memory

11%

Cancel

Data: ▼ Copy Current Data

Start

MemoryJack ▼ Card

┌ Expansion Card ────────
  Free Space: 59M of 120M

Starting Expansion Memory

Scanning Memory

| ■   11% |

(Cancel)

Data: ▼ Copy Current Data

(Start)

MemoryJack ▼ Card

┌ Expansion Card ────────
  Free Space: 59M of 120M

Starting Expansion Memory

Moving: Queries

| ■   5% |

(Cancel)

Data: ▼ Copy Current Data

(Start)

2. After the Expansion memory has been completely initialized and all files moved to Expansion Memory, the device will be soft reset.

MemoryJack is now completely installed, and the full Expansion Memory is available for use.
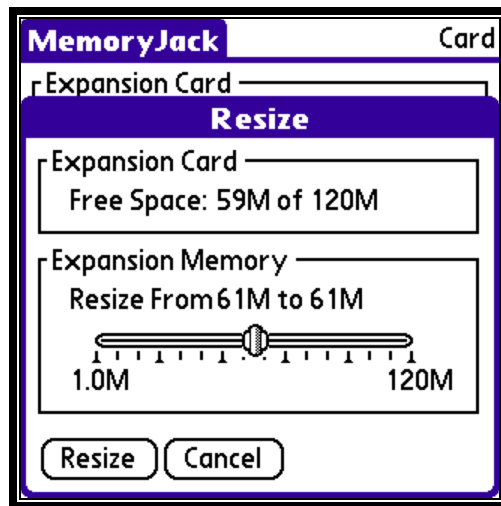
Resizing Expansion Memory

After installing and using MemoryJack Expansion Memory, the Expansion Memory can be resized with the following process.
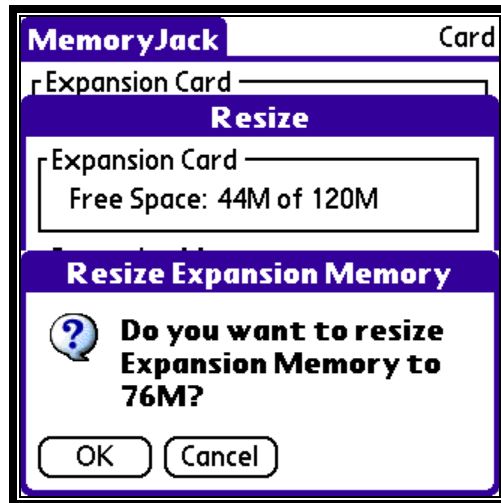
Tap the MemJack icon. The following screen will be displayed.
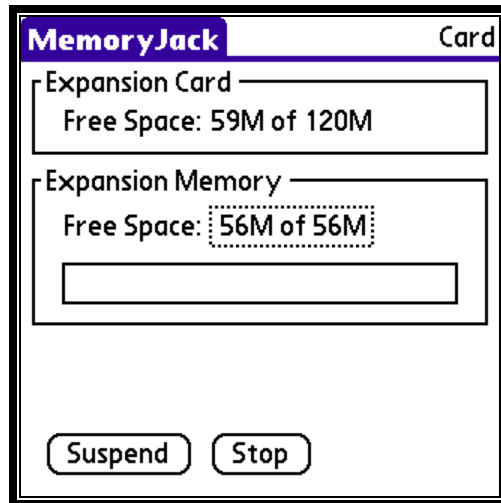
To resize the Expansion Memory, tap the **Free Space** box (in the above example, the box showing 56M of 56M). The following screen will be displayed.
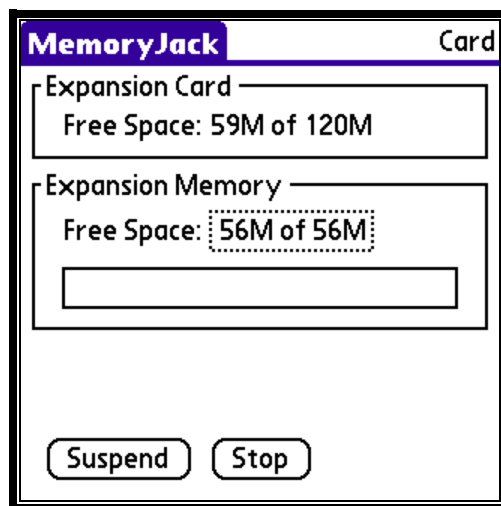

Move the slider bar to the desired size. Then tap **Resize**. A confirmation message will be displayed as shown below.
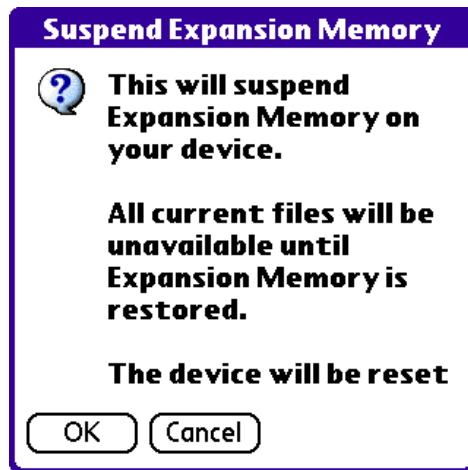
```
┌─────────────────────────────────────┐
│ MemoryJack              Card         │
│ ┌Expansion Card ──────────────       │
│ │     Resize                  │       │
│ │ ┌Expansion Card ───────┐    │       │
│ │ │  Free Space: 44M of 120M │  │       │
│ │ └──────────────────────┘    │       │
│ │  Resize Expansion Memory    │       │
│ │   ⊘?  Do you want to resize │       │
│ │       Expansion Memory to   │       │
│ │       76M?                  │       │
│ │  ( OK )  ( Cancel )         │       │
└─────────────────────────────────────┘
```

Tap OK to proceed with the resizing operation. The process and screens shown are similar to the screens when on initial MemoryJack installation.

Suspending or Stopping Expansion Memory

If it becomes necessary to temporarily **Suspend** or **Stop** the MemoryJack Expansion Memory, tap the MemoryJack icon and the following screen will be displayed.

```
┌─────────────────────────────────────┐
│ MemoryJack              Card         │
│ ┌Expansion Card ───────────────┐     │
│ │  Free Space: 59M of 120M     │     │
│ └──────────────────────────────┘     │
│ ┌Expansion Memory ─────────────┐     │
│ │  Free Space: ⌈56M of 56M⌉     │     │
│ │  ┌──────────────────────┐    │     │
│ │  └──────────────────────┘    │     │
│ └──────────────────────────────┘     │
│                                       │
│  ( Suspend )   ( Stop )              │
└─────────────────────────────────────┘
```
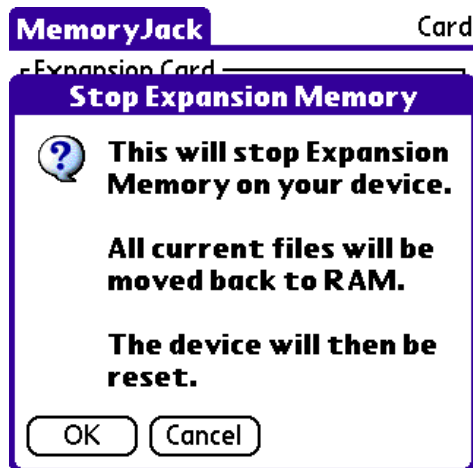
The **Suspend** process makes all Expansion Memory unavailable until it is restored. It may be necessary at times to suspend Expansion Memory if, for example, the expansion slot is temporarily needed for another purpose. Tap the **Suspend** button and the following screen will be displayed.

Suspend Expansion Memory

(?) **This will suspend Expansion Memory on your device.**

All current files will be unavailable until Expansion Memory is restored.

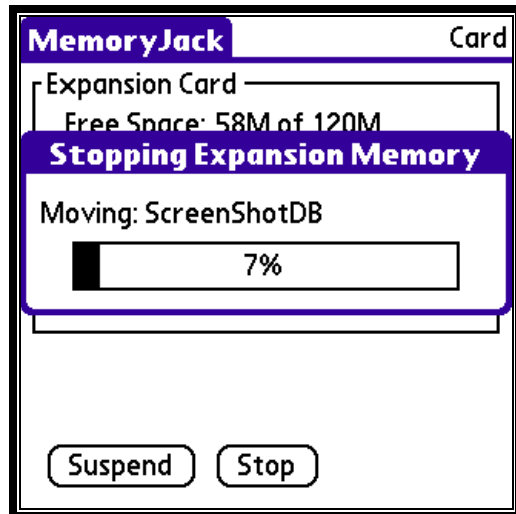**The device will be reset**

(OK) (Cancel)

Tap OK to proceed with the suspension of Expansion memory. After the Suspend process is complete, the expansion card can be removed.

Stopping MemoryJack Expansion Memory moves all files back to RAM from Expansion Memory. Note that if Expansion Memory is larger than RAM, not all files will fit back in RAM. You will need to delete some files before continuing.

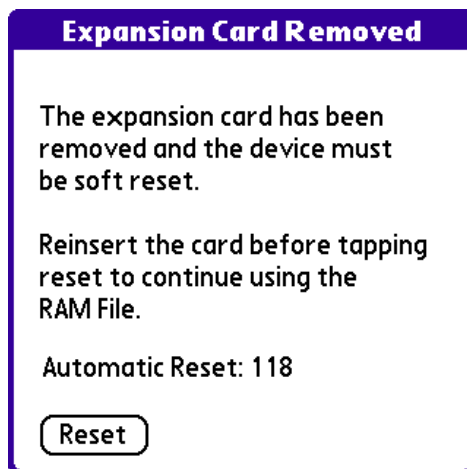If **Stop** is tapped, the following screens will be displayed.

MemoryJack   Card

Expansion Card

Stop Expansion Memory

(?) **This will stop Expansion Memory on your device.**

All current files will be moved back to RAM.

The device will then be reset.

(OK) (Cancel)

Tap **OK** to proceed with the Stop. The following screens will be displayed as files are moved back to RAM.

MemoryJack   Card
┌─ Expansion Card ─────────
│   Free Space: 58M of 120M
Stopping Expansion Memory

Moving: ScreenShotDB

| ■   7% |

(Suspend) (Stop)

When the **Stop** process is complete, the MemoryJack Expansion Memory is deleted from the expansion card and RAM is fully functional with the files that fit back into RAM.

Removing the Expansion Memory Card

Since the Expansion Memory file is essentially the complete RAM for the handheld device, the expansion card must be in the slot at all times. If the expansion card is removed, the following screen will be displayed.

Expansion Card Removed

The expansion card has been removed and the device must be soft reset.

Reinsert the card before tapping reset to continue using the RAM File.

Automatic Reset: 118

(Reset)

If the card is re-inserted within 120 seconds, and Reset is tapped, the device will be soft reset and all will be just as it was before the expansion card was removed.

If the expansion card is removed and not re-inserted before the 120 seconds expires, the device will be soft reset, and will be functional, but there will be nothing in RAM except for the MemoryJack program. This is

roughly equivalent to suspending MemoryJack Expansion Memory. However, any recent changes may be lost.
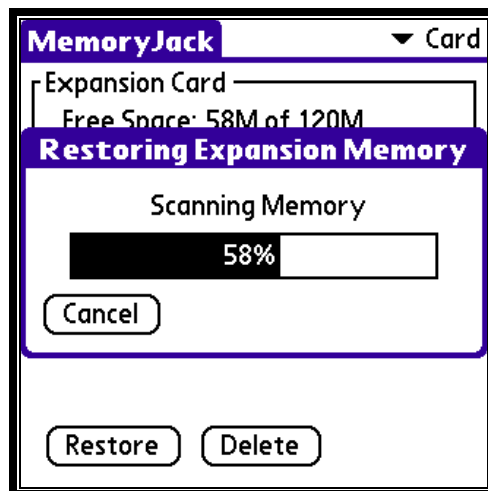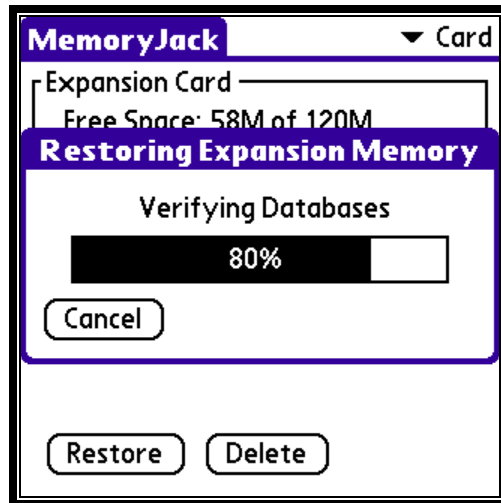
Restoring the Expansion Memory

To restore the MemoryJack Expansion Memory, re-insert the expansion card that houses the MemoryJack Expansion Memory file. The screen will show the MemoryJack icon.

Tap the MemoryJack icon and a screen will be displayed, giving the options of **Restore** (restore the Expansion Memory) or **Delete** (delete the Expansion Memory file from the expansion card).

Tap the **Restore** button, and the Expansion memory will be restored to full functionality. The Expansion memory restore process includes steps for Scanning Memory and Loading Databases.

The device will then be soft reset, and the MemoryJack Expansion Memory will be fully functional again. During the Restore process, the following screens will be displayed.

Tungsten E and Zire 71: For these devices, MemoryJack automatically backs up the updated SD driver to the expansion card. When MemoryJack is first launched after a hard reset, it will restore the updated SD driver and reset the device. After the reset, the Expansion Memory can be restored normally.

Restoring From HotSync Backup

MemoryJack allows more files to be installed on a device than will fit into RAM. If a device using MemoryJack needs to be restored from a HotSync backup (for example if the expansion card housing the Expansion Memory cannot be read for any reason), special care needs to be taken to make sure all files are restored.

1. Hard Reset the device
2. Install MemoryJack
    a. From an expansion card, or
    b. HotSync the device with a different HotSync name, and install MemoryJack
3. Run MemoryJack
4. Select the Expansion Memory size
5. Select **Restore From HotSync**
6. Tap **Start**
7. After the device resets, HotSync the device with the original HotSync name

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Contact Info

We look forward to hearing from you. Please visit our web page:

Internet: http://www.brayder.com/

Warranty

MemoryJack is provided without warranty. Support for MemoryJack can be obtained via the Brayder Technologies Internet site at www.brayder.com.