

# Read Me First

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Version 8.1 RAM Charger is a minor update to version 8.0.1 RAM Charger. This release is required for users running MacOS 8.1 with virtual memory enabled, and those using Office 98.

IMPORTANT: By using the software, you are agreeing to be bound by the terms of the license and guarantee, found at the end of this document. Please read them carefully before installing the software.

Remember, if the installer does not work right for any reason, please follow our advice and restart the computer with extensions disabled, before installing.

If you're wondering about all those versions of RAM Charger leading up to number 8 — you didn't miss them, we skipped them. Check the Change Log below for more about what's new.

More About This Mac™ is installed along with RAM Charger.™ A lite version is now included free. The Pro version is available as a separate product and offers additional information viewing options and application launching/switching controls. Select Custom (in the Easy Install pop-up menu) to install More About This Mac Pro, if you received a separate serial ID for it, or if you'd like a free two-week trial.

This Read Me document contains any late-breaking information and a minimum of what's needed to install and get started using RAM Charger. There are some things here which are not found in the reference manuals. This document will be copied to your hard disk along with the RAM Charger Reference and More About This Mac Pro Manual. The rest of this file is organized into the following sections:

## C O N T E N T S

QUICK START GUIDE—hints for installing and using RAM Charger.

CHANGE LOG—notable changes made in this update of RAM Charger.

COMPATIBILITY NOTES—use of RAM Charger with specific software and configurations.

DEVELOPER NOTES—using RAM Charger with software development tools and programming tips for application developers.

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To Contact Jump Development Group

Please visit our Web site at <http://www.JumpDev.com> for immediate help. The page contains extensive documents and frequently asked questions, updates, and pricing and order forms.

Technical Support: follow the support link at the Jump Web site.

Sales and Product Information: follow the sales link at the Jump Web site.

Alternatively, you may mailto: [info@JumpDev.com](mailto:info@JumpDev.com) (with no message) for an immediate automated response with instructions. Or, call 412-681-2692 during regular business hours 9-5 M-F Eastern time.

## Q U I C K   S T A R T   G U I D E

Hints for Installing and Using RAM Charger

Compatibility with System Enhancements

RAM Charger has been proven to work well with all manner of other system enhancements. However, if you use one of the following extensions with RAM Charger there is a potential conflict. In most cases the solution involves making sure you have a recent version of the product, or checking its settings to verify a compatible configuration. The RAM Charger Installer will look for possible conflicts in your System and alert you if found. Please read the notes regarding any that you use, in the Compatibility Notes section of this document, in order to avoid any problems.

Products to check: “CPU Doubler,” “Greg’s Buttons,” “Launch Pad,” “Mercutio”, “Power To Go,” “Professional Color Toolkit,” “Quad Control,” “SoundMaster,” “TSM Fix,” “PopupFolder” (when used with “AutoDoubler”), “NowMenus,” “BeHierarchic,” “VirusScannerPPC,” or “Virex.”

## Installation

Simply double click on the Installer icon and follow the instructions. If installation does not complete successfully, try again. But first, restart your computer with all extensions disabled by holding down the Shift key as it restarts. This is a recommended preventative measure, but be sure to follow this recommendation if you have any trouble with the installer.

If you don’t have a Serial ID, you can still install for a free trial period. To purchase a license (or upgrade your old copy) and get a permanent Serial ID, see the contact information above (just after the Contents).

## Files Installed on Startup Disk

Installation does not make any hidden changes to your disk or alter your system files in any way. It creates eight or nine new files on your startup disk: RAM Charger and MercutioHUnlockPatch in your Extensions folder, RAM Charger General Settings and More About This Mac in your Control Panels folder, and the RAM Charger Settings application, RAM Charger Active (created during operation), More About This Mac Preferences, and RAM Charger Preferences in the Preferences folder (with a possible copy called RAM Charger Preference Backup ). The RAM Charger Documentation folder will also be copied to the disk selected for installation.

## More About This Mac Pro

Our enhanced About This Macintosh window, More About This Mac, is included free with RAM Charger in a simpler version than the stand-alone product, More About This Mac Pro. The standard (or lite) version is installed with the RAM Charger Easy installation, but a trial copy of the Pro version may also be chosen from Custom install. When installing RAM Charger for the free trial period, you are asked to choose between Lite or Pro, for More About This Mac.

In response to feedback from users, the lite version included with RAM Charger is more basic and simple to use and should not add any complication to the operation of RAM Charger. The Pro version provides additional application management and view options.

If both More About This Mac, and More About This Mac Pro are installed, the Pro version will dominate and will open, when selected from the Finder's Apple menu and RAM Charger menus, unless you open More About This Mac directly from the Control Panels folder. In such a case, you may optionally de-install More About This Mac, as it is providing no service (but also doing no harm), though leaving it in place will allow it to assume control if the More About This Mac Pro demo expires.

### Quiet and Unobtrusive Operation

The current RAM Charger defaults are set to be quiet and unobtrusive.

Should you prefer more interaction with RAM Charger :

1.

Select RAM Charger Preferences from the RAM Charger menu, or open RAM Charger Settings from your Control Panels folder and select Edit/Preferences.

2

In the Preferences window, select the "Applications" tab panel, click (to check and enable) the option labeled: "notify when first charging an application."

### System Requirements

RAM Charger works on any Macintosh computer running System 7—even the Mac Plus, SE, and Classic. (Tell your friends using older Macs. Now they can upgrade to System 7 and use current versions of many popular applications.) It is compatible with all the latest, too: Power Macs, PowerBooks, and MacOS 8. It works with any size of memory, the more you have the more it can RAM Charge. And if you use RAM Doubler™ or Apple's built-in virtual memory to expand your RAM with software, RAM Charger will RAM Charge that expanded memory, too.

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Software License and Limited Warranty found at the end of this document. Please read them carefully before using the software. To keep the price as low as possible, each license allows the software to be used on one computer at a time. If you would like to use the software on more computers, please purchase additional licenses.

## C H A N G E   L O G

### Notable Changes in the Updates to RAM Charger

If you are wondering about all those versions of RAM Charger leading up to number 8 — you didn't miss them, we skipped them. The skip to 8 is to show compatibility with Mac OS 8 and also indicate the substantial changes to the RAM Charger 8 PowerPC mode and the greatly modified/simplified user interface. Detailed changes from previous versions of RAM Charger (called OptiMem, before that) are too many to be listed. The new on-disk manual installed onto the destination disk gives all the details about this new version. And the similar More About This Mac Pro Manual is also copied to your disk so you can understand all the options in that product, as well.

The version 8.1 update to RAM Charger 8 provides a few small enhancements:

- 1) Enhancements have been made to RAM Charger to support new virtual memory services in Mac OS 8.1. This avoids some intermittent crashing after quitting some applications on PowerMacs.
- 2) RAM Charger has been enhanced to accomodate Word 98 (a product from The Dominant Software Vendor).
- 3) An addition to the General Settings, in the Application tab panel, now allows you to choose the “starting size” for new applications (smaller, or normal).
- 4) Better effort is made to maintain the Safety reserve for applications — moving relocatable memory to Expanded space if an application's starting partition becomes too full.

- 5) New Export and Import in the File menu within RAM Charger Application Settings allows users to exchange/distribute settings for individual applications. For experts, the export file may be edited in Resorcerer allowing examination & modification of subtle settings for which no interface is provided.
- 6) Enhancements to the Wizard which attempt to inform you if you have reduced the application starting size too far, or if the application uses an excessive number of Expansion memory blocks which might slow it down and make it a candidate for setting the application to run un-RAM Charged.
- 7) Fix up the desktop database when RAM Charger Settings is opened so that RAM Charger General Settings in the Control Panels folder works more reliably.
- 8) Fix bug that could cause a crash when launching an application from a RAM Charged application (like when using our Wizard).
- 9) When installing a trial copy of RAM Charger 8, the installer first saves the Serial ID of any old version of RAM Charger found installed, to a file on the desktop, so you can go back to the old one if you choose.
- 10) Doesn't turn off Auto-adjust reserves prematurely.
- 11) Handle "GMT" relative dates for HFS+ files. This avoids having unique settings for the same file on HFS+ vs. non-HFS+ volumes.
- 12) Improved RAM Charger pull-down menu: items only disabled now during modal-dialogs, "memory info..." for apps that don't show memory in the "Get Info" window now goes directly to RAM Charger Settings, and new "Locate" item.
- 13) RAM Charger settings scan for checkmarks speeded up, and scrolling works better while scanning.
- 14) Improved "desktop picture" refresh after launching applications in OS 8.

15) New technique for creating automatic “starting size” settings for new version of an application. RAM Charger now compares the “suggested minimum” sizes of the files to determine if the new version is substantially different, in which case the old “custom size” will not be used, instead using the minimum ( if larger than the “custom size”).

16) Fixed bug that may cause PowerMac apps to crash if all memory on your machine is used up.

17) Enhancements for MATM Pro 1.1 listed in “More About This Mac Pro Read Me” installed on your startup disk.

## COMPATIBILITY NOTES

### The Use of RAM Charger with Specific Software and Configurations

These notes are compiled from testing done at Jump and reports from other sites using RAM Charger. These notes are provided in good faith but cannot guarantee exactly the same results on your computer (given the infinite combination of configurations possible). In other words, your mileage may vary.

### SYSTEM CONFIGURATION, EXTENSIONS, AND CONTROL PANELS

Note: Control Panels and Extensions are loaded in alphabetical order (within each folder) so by simply changing their names you can change the order of loading. You might also use a third party startup/extension manager product to control the loading order.

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“BeHierarchic” See the entry below for “NowMenus.”

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“CPU Doubler” Old versions (prior to v1.0.3a) can cause a crash when applications are quit, if RAM Charger is loaded. This problem was fixed in CPU Doubler v1.0.3a. With previous versions, you must disable CPU Doubler to avoid the problem.

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“Greg’s Buttons” was reported, by a very small number of users some time ago, to cause a general slow down, when used along with RAM Charger. This has not been reproduced in testing at Jump so it must depend upon an additional aspect of the system configuration and/or particular combination of feature settings within Greg’s Buttons.

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“LaunchPad” can cause a crash when applications are quit if RAM Charger is loaded. Currently, you must disable LaunchPad to avoid the problem. The problem has been reported to Berkeley Systems.

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“Mercutio Bug/Guard/GND Patch” (any extension containing the name Mercutio). These work fine with RAM Charger. However, RAM Charger installs “MercutioHUnlockPatch”, which is redundant. You may wish to disable all but one of these.

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“NowMenus” (a component of Now Utilities) & “BeHierarchic” (another Apple Menu enhancement) will stop folder selections in the “Apple Menu” from opening the folder if RAM Charger’s option to show its menu in the “Apple Menu” is enabled. Submenus, and other items in the “Apple Menu” will still work properly. Avoid any problem by leaving this option disabled in the RAM Charger Settings (as it is by default).

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“PopupFolder” when used along with “AutoDoubler” may result in intermittent freezes. Use of RAM Charger’s menu in the Menu Bar can aggravate this problem. To use PopupFolder and AutoDoubler together, without this problem, you must disable PopupFolder’s Menu in the Menu Bar. This conflict may be demonstrated by starting with only PopupFolders (with its “Menu Bar” “PopupFolder Menu” enabled) and AutoDoubler installed (RAM Charger is not required for the problem to occur). Just select the “Help Menu” item “About Help Balloons” and the computer should freeze.



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“Power To Go” control panel from Claris must load before RAM Charger in order to avoid problems.

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“Professional Color Toolkit 1.1”, a control panel installed with Canvas 3.5, has a bug that can crash Canvas more frequently when Canvas is RAM Charged. Most Canvas users do not use the features of this optional extension, so simply removing Professional Color Toolkit from your control panels folder (and restarting) avoids the problem. Pantone (the author of this extension) has acknowledged the problem and expects to fix it in a subsequent release.

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“Quad Control” by DayStar Digital: Use v2.3 or later which eliminates a problem where opening any application fails and instead restarts the Finder. (Previous versions may be used but you must arrange for Quad Control to load before RAM Charger, instead of after.) There has been one report that the Quad Control option “Write-protect ROM,” available in some configurations, must be disabled in order to work correctly.

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Rebuilding the Desktop: If you make the special request to rebuild your Desktop database when restarting your computer (or when mounting a disk) this process can be disrupted if a control panel (such as RAM Charger) is opened at just the wrong time. RAM Charger has been designed to delay its auto-opening to avoid any such problem. However, if you do find any difficulty when rebuilding your Desktop, try disabling RAM Charger before rebuilding (or change your preferences so that the control panel does not auto-open when the computer restarts).

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“SoundMaster”: A problem with SoundMaster is now avoided by RAM Charger’s new Anti-Conflict Technology on all tested configurations. If the problem is suspected to still exist for some (the computer becomes inoperable as soon as it starts, often with bizarre display artifacts) the workaround that

was previously effective is to have SoundMaster load before RAM Charger, instead of after.

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“Startup Items Folder”—general: Applications that are automatically opened when you start your computer (by using the Startup Items folder) are launched in a different way than they would be otherwise. If you suspect something is not working correctly after installing RAM Charger, there may be a problem with a particular application being in the Startup Items. You might test with any Startup Items removed to see if one is the cause (just move the items out of the Startup Items folder temporarily by dragging them to the Desktop or another folder). If a problem is found with a Startup Item, try running it once after startup in order to set up RAM Charger parameters correctly. Then try it in the Startup Items again.

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“TSM Fix”: (Some versions are named “Text Services Manager Fix.”) A problem in older versions of this freeware system patch (distributed with several shareware products) can cause crashing if used with RAM Charger. The problem is fixed in version 1.03.

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“VirusScannerPPC”: RAM Charger is incompatible with McAfee VirusScannerPPC. As best as we can determine, VirusScannerPPC modifies memory allocation services in a way that is incompatible with RAM Charger.

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“Virex”: Datawatch recommends using version 4.02 or later of Virex to avoid constant system crashing when used with a variety of other products.

## APPLICATION PROGRAMS AND OTHER SOFTWARE

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“Adobe Photoshop™”: Starting with v2.5, Adobe has taken special measures to cater to image processing work requiring very large amounts of memory. In order to deal with dozens (and even hundreds) of megabytes efficiently,

they have found it necessary to depart from much of the normal Mac application methodology of memory management. This can circumvent some of the dynamic memory access which RAM Charger offers an application. (Photoshop v2.0, however, seems to be very Mac-normal in its memory management and use when RAM Charged.)

In particular, with v2.5 and later, memory which is no longer used after closing a document is not released until later, after other operations are performed. So, when Photoshop is RAM Charged, it does start out in a small partition and it grows dynamically as you open documents. But it doesn't give the memory back right away, to use in other applications, when you close a document. Now available in RAM Charger 8, is a mechanism that allows you to initiate a special request for Photoshop to release unused memory being held. Selecting the Squeeze item, available in the RAM Charger Pull-Down Menu, makes this request to the active application to release additional unused memory if possible (for example, right after you have closed a big document in Photoshop). So, you can still get big benefits from using RAM Charger with Photoshop.

By default, when RAM Charger is installed, it does not RAM Charge Photoshop, due to the limitation described and an additional complication on Macs with more than 24MB of RAM: on these Macs, Photoshop gets "greedy" with memory and you need to install Adobe's optional "Piggy Plugins Patch" if you want to run it RAM Charged. (Look in the notes for Photoshop in the RAM Charger Settings window for more information.)

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"Canvas™" by Deneba: Version 3.5.2 has eliminated memory related problems identified in previous versions. Also, see the note in the control panels section above regarding use of the Professional Color Toolkit.

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Communications Programs: We have found that some communications programs are very particular about where their memory is located and don't take to being RAM Charged. However, recent versions of several popular programs now seem to work well when RAM Charged (as long as they can get as much memory as they need). In any case, some communications programs might not benefit much anyway if they are designed to have fairly fixed memory requirements.

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Database Applications: Since some of the database applications are essentially specialized programming systems, which can be setup to do most anything that a computer is capable of, their memory management and consequent benefits when RAM Charged can be highly variable. Your mileage will vary depending on which database system you use and upon the specifics of your database implementation.

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“MacLinkPlus™” translator modules from DataViz: The MacLinkPlus, and accompanying DataViz FileView applications, offer big savings when RAM Charged. However, there are two caveats to using the accompanying translator modules that plug into other applications:

1)

There are bugs, in plug-in modules for Microsoft Word, that can cause a crash when opening a document. (Crashes can occur without being RAM Charged, but can be more frequent with the efficient memory use that RAM Charger encourages.) To avoid these crashes, remove any of the translators which are found to have such problems from the “Word Commands” folder (which is in the folder with your Word application file). In v8.0 this includes: “AutoCAD DXF.ml”, “Harvard Graphics CGM.ml”, and “Lotus Freelance CGM.ml”. In v7.51 there was also a problem with “MultiMate.ml” which was fixed in the 8.0 version.

2)

If the application uses XTND translators, but they are not accessible when the application is RAM Charged, see the following note on XTND. Also, a good alternative is to use the MacLinkPlus translator application instead, since it is very efficient with memory when RAM Charged itself.

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“Panorama”: There have been unconfirmed reports that later versions of Panorama do benefit from being RAM Charged. Previously, Panorama had to be left uncharged. It would allocate most of the memory which was available to it when it was first opened (instead of only what it needed at the moment). When RAM Charged, it would have access to all free memory in the machine and would take a lot and not give it back for anything else until Panorama

was quit.

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“QuarkXPress™”: The Power Macintosh native version 3.32 has an incorrect Minimum Size of 1100K (with or without the use of RAM Charger) but only when Virtual Memory (or RAM Doubler) is turned on. Our tests indicate it requires a Minimum of at least 1200K. Since the default RAM Charger parameters use this Minimum for the starting memory size, it will not launch when RAM Charged without increasing this size. The easiest fix is to increase the Minimum Size for QuarkXPress to 1200K.

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“XTND”: [Later versions, such as that shipped with ClarisWorks 3.0, do not seem to have the problem described here for older versions.] The XTND document format translators, used in Claris products and others, might not load into some applications when RAM Charged because they use a non-standard way to test for available memory and don’t recognize the Total Unused Memory. There are two possible ways to overcome this [other than using a newer version that fixes it] by adjusting the application’s RAM Charger parameters in the RAM Charger Application Settings window: 1) use the “Exaggerate size” setting, or 2) increase the Starting Memory Size to the point where the translators load.

## DEVELOPER NOTES

Using RAM Charger with Software Development Tools  
Programming tips for Best RAM Charging

### RAM CHARGING SOFTWARE DEVELOPMENT TOOLS

At Jump Development Group we enjoy running RAM Charger on our development machines because we always need to stretch them as far as we can. However, since many of the tools we use aren’t as robust as most mass-market products, we check each one carefully to make sure RAM Charger doesn’t tickle any of their problems/bugs. Look for the notes for the tools we

have tested with in the RAM Charger Application Settings window.

## PROGRAMMING SUGGESTIONS FOR IMPROVED RAM CHARGING

Following are a few suggestions for programmers who want to make their applications work as effectively as possible when RAM Charged. In general, just follow the Inside Macintosh® and other Apple® guidelines and everything should work well. In particular:

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Test with heap scrambling. Any code written for the Macintosh must be exercised with a debugger that causes memory to be moved around whenever it is allowed to do so. There are some very subtle ways that your code might be tricked into using a pointer to memory that could have moved. Sometimes the symptoms of these bugs only occur randomly, but with RAM Charger putting the squeeze on memory, they may occur more often.

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Only allocate the amount of memory you really need and wait until you really need it. Then dispose of it as soon as you are done with it.

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Use Handles whenever possible (instead of Ptrs) and only lock the Handles when necessary (unlocking them again as soon as possible). This helps minimize fragmentation of memory and lets your users get full use of all their memory. Whenever possible make Handles purgable, also.

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Make use of all available memory that is useful, but don't be greedy. Your application should take advantage of available memory to operate as quickly as possible. However, always leave memory unlocked AND purgable when possible. The desirability of using purgable Handles in an RAM Charged system cannot be over emphasized. Using this method, you can take advantage of all available memory to operate efficiently but then let other applications use the memory when yours is in the background.

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Check for the availability of memory required right when you are ready to do the operation which needs it. And don't check for some minimum amount of available memory before you will even launch the program: the user can free up more memory when they find there is not enough to do what they want.

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When you do check for available memory, always use the standard memory manager traps rather than accessing the system's private globals or heap data structures directly.

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Always check for errors after allocating memory. Don't assume that any request will succeed. Whenever there isn't enough memory to continue an operation, back out gracefully, letting the user know that more memory is required. Let the user continue with other things or let them retry the operation over again without forcing them to quit. (Since the user will probably be able to free up some more memory by closing windows or other programs, if they need to.)

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Don't take any chances with dereferenced Handle pointers going stale across calls to toolbox traps that can move memory, even if testing leads you to believe it won't move in your case: if the book says the trap might move memory, assume that it will. Dereferencing stale pointers is the most frequent type of bug we come across in Mac software we test.

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### Thirty-day guarantee

If you are unhappy with RAM Charger during the first 30 days you own it, you may return it for a refund. Return the complete RAM Charger package and proof of purchase to the place of purchase. Please include a description of the problem, with your name, address, and phone number. Of course, you must erase any backup copies of RAM Charger. This guarantee is good through participating dealers in the USA and is only offered for the individual copy retail package. (It does not apply to license-ID-only purchases, multi-packs, site licenses, educational use, or other special offers.)

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