RAM 4000

RAM
Bank 01

RAM
Bank 02

RAM
Bank 03

RAM
Bank 04

JP2 JP1

'245 RP3 RP2 RP4 '139 'F04 'F04

RAM 4000

by Chinook Technology, Inc.

RAM 4000tm

RAM 4000 design by Chinook Technology

RAM 4000 is trademarked by Chinook Technology, Inc.

Manual (rev. 0) by Chinook Technology, Inc.

Produced by:

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615 Main Street, #635
Longmont, CO 80501

Customer Service & Technical Support

303/678-5007

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Introduction

Thank you for purchasing a Chinook Technology quality product. Chinook has been producing such products for four years, all designed and manufactured at our location in Longmont, Colorado. We are a small but enthusiastic group seeking to provide products to enhance your computing experience. The RAM 4000 is the result of our most recent development efforts.

Although installation of the RAM 4000 is very simple and straightforward, we recommend reading the installation instructions and operating notes.

One last note: Please fill out and return the enclosed registration card. This will protect your warranty and allow us to notify you of future enhancements in a timely fashion.

Package Contents

The first thing you should do is check the shipping package. Your package should include:

1. RAM 4000 memory card in anti-static bag
2. Warranty registration card
3. This manual
4. Return form in case of problems

Do not remove the card from the anti-static bag at this time. Please wait until you have discharged yourself of static electricity by touching the metal case of the IIGS power supply.

One last note: Please save the packing materials, especially the anti-static bag. If there is ever a problem with the card, and it is necessary to return the RAM 4000 to Chinook, using the anti-static bag and good packaging will preserve your warranty.

RAM 4000 Installation

Turn off the computer. You may unplug the AC line cord if it makes you more comfortable, but it is not necessary.

Remove the IIGS top cover by pressing in on the hinges located on both sides of the backplate. Push in on the latches and pull up. The top-cover should hinge up and out.

Touch the power supply case to discharge any static electricity that your body may have accumulated. This is a very important safety feature. Static discharges can involve voltages greater than 10,000 volts. These voltages can easily damage your computer or the RAM 4000.

Remove the RAM 4000 from the anti-static bag. Hold the card by the edges and don't touch the gold fingers. Locate the memory expansion connector which is in the front right hand corner of the IIGS. If you are replacing a memory card, remove the old card at this time.

Insert the RAM 4000 into the memory expansion connector. Make sure the component side faces toward the power supply. Position the card into the slot by rocking it firmly forward and backward until it is firmly seated. Do not wiggle the card sideways.

Replace the Apple IIGS top cover.

To verify that the IIGS recognizes the additional memory, power up the computer and check the RAM disk option in the Control Panel menu. Access the control panel by the key sequence OA-Control-Esc and choose the Control Panel option from the menu. Once at the Control Panel, choose the RAM disk menu item by highlighting it and pressing return. The number next to the Largest Selectable listing tells you the amount of memory available.

ROM 3 IIGS owners, remember to take into account that your IIGS motherboard contains 1.125 MB of memory.
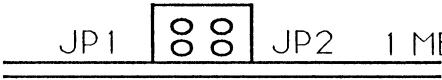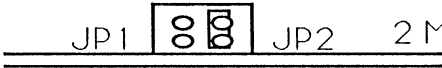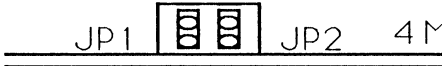
Adding Memory

The RAM 4000 can accommodate 1,2 or 4 megabytes of memory. It uses industry standard 1 MB x 1 dynamic RAM chips with a speed rating of 120 nanoseconds or better. All chips in each bank of memory should manufactured by the same company and of the same speed.

The RAM 4000 supports 1,2 or 4 megabytes of memory. To increase memory, the proper memory chips need to be installed and the jumper settings must be adjusted accordingly. Memory banks are filled in increasing numeric order. That is, a 1 megabyte RAM 4000 has bank 1 filled, a 2 megabyte has Banks 1 and 2 filled, and a 4 megabyte has all four banks filled. A three megabyte configuration is not supported. The layout of the banks is shown below.

Important note: Make sure pin 1 of the RAM chips face towards the **top** of the board (the top is away from the end with gold fingers). Pin 1 is usually denoted by the end of the chip with a half-moon cutout and/or a small indention by pin 1.

Adjusting the jumper setting is a simple matter. Please note the table and the associated diagrams. The jumper must be slid on the pins in a vertical orientation.

Capacity	J1	J2	Jumper Diagram
1 MB	OFF	OFF	JP1 [8 8] JP2 1 MB
2 MB	OFF	ON	JP1 [8 8] JP2 2 MB
4MB	ON	ON	JP1 [8 8] JP2 4 MB

Note: If you received a 1 MB card, the jumpers we're shipped in such a way that no actual contacts are made. Leave the jumpers as they are until you decide to expand your memory.

Warranty

Chinook Technology Inc. warranties this product for a period of 5 years from the date of purchase. This warranty covers defects in materials or workmanship. Chinook Technology Inc. will replace or repair this product at its descretion during the warranty period free of charge, excluding prepaid shipping to a designated repair facility. All warranties are void if Chinook Technology Inc. determines that the product was abused, misused, used in an application inconsistant with its designed purpose or memory components supplied were removed or exchanged.

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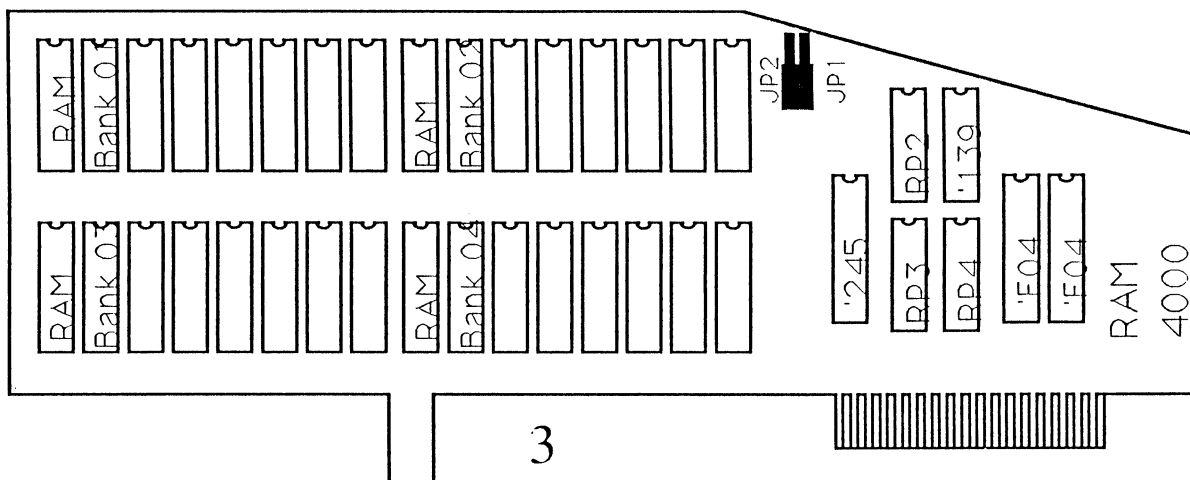
Technical Support

If you require technical support, please contact Chinook Technology between the hours of 9AM - 11:30AM and 1:30PM to 5 PM Mountain time Monday through Friday. The technical support number is 303/678-5007. Please have information pertaining to the configuration of your computer when you call. For example, the following information could be helpful depending upon the problem:

    ROM level of IIGS
    Cards in the IIGS
    External peripherals
    Control Panel RAM disk settings
    RAM Keeper revision level

Remember, the more information you can provide us with, results in technical support being able to help in a faster, more efficient manner.

Appendix 1

RAMKeeper^{tm} Compatibility

The RAM 4000 has been extensively tested with the Applied Engineering RAM Keeper and no problems have been experienced. Since we have documented problems with cards from our competition in similar configurations, we attribute the results of our testing to the use of multi-layer printed circuit board construction. Multi-layer printed circuit boards dramatically reduce electronic noise in comparison to the standard two layer boards used by our competition.

RamKeeper is a trademark of Applied Engineering.

Appendix 2

RAM Disk Operation

Many programs make use of the additional memory provided by the RAM 4000. Examples of such programs are AppleWorks 2.0 or higher and Publish It 2!

For programs that don't take advantage of additional memory, creation of RAM disk may be in order. To create a RAM disk, enter the Control Panel (OA-Ctrl-Esc) and select the RAM disk option. Select the amount of RAM disk you desire, keeping in mind other programs you may run that will require memory.

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We strongly recommend that the minimum and maximum RAM disk selections be equal. Problems may occur if they are not equal, especially with use of GS/OS. Note that ROM 3 GS owners do not have a choice of minimum and maximum RAM disk settings.

For these new setting to take effect, computer power must be cycled.

Appendix 3

Things to Watch Out For

Our goal in this section is to report anomalies that occur when using programs with extended memory. At this time we only have one to report:

1. AppleWorks 2.0 users, please be aware that this version of AppleWorks crashes if you have more than 2 megabytes of expanded memory. The solution is to upgrade to AW v2.1 or even better, 3.0.

If you are aware of other anomolies, please put them on your registration card or call us and let us know about them so we can help others. Thank you.