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### **MoreMem(TM) 3.0**

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**A single user license is \$40.**

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**MoreMem(TM) 3.0**

**Fixes "Insufficient Memory to Run" Errors  
When Loading Windows Programs**

MoreMem

Version 3.0

January 31, 1995

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by

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A single user license is \$40.

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MoreMem is a pending trademark of Gamma Research, Inc.

## **MoreMem Distribution**

You are granted a limited license to copy MoreMem only for use during a trial period of thirty (30) days subject to the terms of this software license agreement described herein, provided the conditions described below are met:

MoreMem MUST be copied in an unmodified form and MUST contain the following files:

- File\_id.diz
- MemIcon.exe
- MemOrder.wri
- MemOrder.txt
- MemPopup.exe
- MoreMem3.drv
- MoreMem3.hlp
- MoreMem3.txt
- OEMSetup.inf
- Setup.exe
- Sysop.txt

No fee, charge or other compensation may be accepted or requested by anyone without the express written permission of Gamma Research

Public Domain Disk Vendors may not charge a fee for MoreMem itself. However you may include MoreMem on a diskette for which you charge a nominal distribution fee. The purchaser of said diskette must be informed in advance that the fee paid to acquire the diskette does NOT relieve said purchaser from paying the Registration Fee for MoreMem if said purchaser uses MoreMem.

Operators of electronic bulletin board systems (Sysops) may post MoreMem for downloading by their users without written permission only as long as the above conditions are met. A fee may be charged for access to the bbs as long as no specific fee is charged for downloading MoreMem files without first obtaining express written permission from Gamma Research to charge such a fee.

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The above constitutes the license agreement for MoreMem. It supercedes any and all previous license agreements.

## Shareware Terms

You may try MoreMem for 30 days before you must either register MoreMem or delete it from your computer. **Please be honest, and in the spirit of shareware,** register the program if you use it for longer than 30 days. See the Payment and Registration and Order Form sections.

## **Summary of MoreMem**

MoreMem is a device driver that is designed to fix "Insufficient Memory to Run" errors when loading Windows programs. On startup, each Windows program needs about 800 bytes of conventional DOS memory below 640K. This is because Windows is basically a DOS extender that still needs to communicate with DOS for things like disk and other hardware interrupts. Other programs may also need DOS memory. For example, Windows for Workgroups needs about 8128 bytes to connect to a network drive. MoreMem creates blocks of free DOS memory, so that programs can load. Henceforth, these blocks of DOS memory will be referred to as DOS blocks.

## **New Features Over MoreMem 2.0**

The previous version of MoreMem (2.0) was a normal Windows program. This allowed device drivers to allocate their memory before MoreMem 2.0. Now, MoreMem 3.0 is a device driver. Thus, MoreMem 3.0 can allocate its memory before practically all other programs and drivers.

The size of a MoreMem DOS block is now user-definable.

MoreMem's DOS memory allocation algorithm is much more efficient than the previous version. MoreMem's overhead per reserved DOS block has been reduced to about 32 bytes. Therefore, the planned improvements mentioned in MoreMem 2.0's help file of auto-freeing and auto-growing are no longer necessary.

**NOTE TO MOREMEM 2.0 USERS:** The trick of freeing all of MoreMem's memory to free up some additional DOS blocks no longer applies to MoreMem 3.0 because MoreMem 3.0 only uses about 32 bytes per reserved DOS block.

## **Why MoreMem Works**

On startup, each Windows program needs a small amount of conventional DOS memory below 640K. This is because Windows is basically a DOS extender that still needs to communicate with DOS for things like disk and other hardware interrupts.

Windows allocates moveable memory from the top of memory, but it allocates fixed memory from the bottom. Therefore, if fixed memory allocations fill up the DOS memory below 640K, then no new programs can run, and you get that dreaded "Insufficient Memory to Run" error, no matter how many megabytes of free extended memory your computer has.

Programs should allocate most of their memory as moveable. However, some things like interrupt code and data need to be fixed, and some DLLs are incorrectly designated as fixed. Things like screen savers, drivers, 386 enhanced drivers, sound, multimedia, and modem software are notorious for gobbling up DOS memory. Thus, this trick is to fragment DOS memory into many small DOS blocks so that those fixed memory allocations are prevented from loading into DOS memory, and then, programs can load into the remaining free DOS blocks.

Since MoreMem just allocates and deallocates DOS memory, MoreMem should work with any Windows or DOS program. If any program does not seem to be working with MoreMem, try increasing the size of MoreMem's DOS blocks. Please contact Gamma Research if you find any programs that do not work with MoreMem, so that we can try to create a fix to allow those programs to work with MoreMem.

## Starting MoreMem

Since MoreMem is a device driver, it automatically executes whenever Windows loads. The default number of DOS blocks to reserve is the previous number of requested DOS blocks. You can bring up MoreMem's dialog box by

(1) starting MEMPOPUP.EXE, which pops up the dialog box of MoreMem's device driver.

OR

(1) starting MEMICON.EXE, which places a MoreMem icon on the bottom of the screen.

(2) clicking on the MoreMem icon, which pops up the dialog box of MoreMem's device driver.

OR

(1) starting the Control Panel,

(2) double clicking on the Drivers Icon, and

(3a) double clicking on the "Gamma Research MoreMem Utility" item in the listbox, or

(3b) selecting the "Gamma Research MoreMem Utility" item in the listbox and clicking on the Setup button.



## Passwords

A password is required to start MoreMem. Case and spaces do not effect the password. If you are an unregistered user, you will be given a temporary password in the About dialog box to enter. When you register by paying \$40, you will get a password, a user name, and a company name that will disable the password requirement. See the [Payment and Registration](#) and [Order Form](#) sections.

## Do Not Display Warning Messages checkbox

You can turn off the warning messages by checking the Do Not Display Warning Messages checkbox. These warning messages indicate (1) if the requested number of DOS blocks could not be allocated or (2) if an invalid number of blocks were requested.

## Payment and Registration

When you pay the \$40 shareware registration fee, you will get a password, user name, and company name that will disable the password requirement in the About dialog box. You can order and get the password by

- (1) phone (9am-5pm CST): (205) 533-7103
- (2) 24-hour FAX: (205) 533-7103
- (3) CompuServe e-mail: Daniel N. Woo [73324,3027]
- (4) Internet e-mail: 73324.3027@compuserve.com
- (5) mail

In addition, everyone will receive their password, user name, company name, and sales receipt through the mail.

Orders with the following payment methods are accepted:

- (1) Visa or Mastercard credit card
- (2) US check,
- (3) US currency,
- (4) US money order, or
- (5) International money order. International money orders are preferred in US currency, but International money orders in foreign currency are accepted (though not preferred) if you ensure that all costs of conversion are included in the payment.
- (6) Purchase orders are also accepted. The terms for purchase orders are net 30 days.

See the [Order Form](#) section.

**[See the Discount Pricing For Multiple Licenses Section.](#)**

**Print Order Form**

**MoreMem 3.0 Order Form**

To: Gamma Research, Inc.  
112 Teakwood Drive  
Huntsville, AL 35801

(205) 533-7103 (9am-5pm CST) Voice and (24-hour) FAX

From: Name: \_\_\_\_\_  
Company: \_\_\_\_\_  
Street Address: \_\_\_\_\_  
\_\_\_\_\_  
City, State, Zip: \_\_\_\_\_  
e-mail Address: \_\_\_\_\_  
Work Phone #: \_\_\_\_\_  
Home Phone #: \_\_\_\_\_  
FAX Phone #: \_\_\_\_\_

Units:	0-9	10-99	100-999	1000-
Price/Unit:	\$40	\$35	\$30	\$20

Quantity: \_\_\_\_\_

Total: \_\_\_\_\_

Payment Method  Visa  MC  check  cash  MO  
 PO

Credit Card # \_\_\_\_\_

Expiration Date \_\_\_\_ / \_\_\_\_

Signature \_\_\_\_\_

How did you hear about MoreMem ? \_\_\_\_\_

Where did you get MoreMem ? \_\_\_\_\_

Suggestions:

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Number of DOS Blocks to Reserve edit box

Enter into this edit box the number of DOS blocks that you want MoreMem to reserve. Each reserved DOS block requires an overhead of 32 bytes that cannot be used by other programs.

## MoreMem Dialog Box

The dialog box, titled "MoreMem", displays the following information and controls:

**User Name:** Daniel Woo  
**Company Name:** Gamma Research  
**Free DOS Memory:** 222720 Bytes  
**Free DOS Block Memory (#):** 215040 Bytes (42)  
**# of Reserved DOS Blocks:** 56

**Number of DOS Blocks to Reserve:** 500  
**Size of DOS Blocks to Reserve:** 5120

Reserve DOS Blocks High  
 Do Not Display Warnings

**Buttons:** OK, Reserve, Free, About, Help, Close, Registration Info, Order Form

## OK Button

Pressing this button will cause MoreMem to attempt to allocate the requested number of DOS blocks and, then, the dialog box will close.



Close Button

Pressing this button will cause the dialog box to close.

Help Button

Pressing this button will cause the help file to load.

## Reserve Button

Pressing this button will cause MoreMem to attempt to reserve the requested number of DOS blocks. This button is like the OK button, except it does not close the dialog box.

## About Button

Pressing this button will cause the About dialog box to appear.

Free Button

Pressing this button will cause MoreMem to free all of its DOS memory.

Free DOS Memory text

This text shows the amount of free DOS memory.

## Free DOS Block Memory text

This shows the amount of free DOS block memory and the number of free DOS blocks. A DOS block is a block of conventional DOS memory.

Number of Reserved DOS Blocks text

This text displays the current number of reserved DOS program blocks. Some may be free and some may be used by other programs.



## **Limited Warranty**

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In no case shall Gamma Research's liability exceed the license fees paid for the right to use the licensed software.

## License Agreement

The use of MoreMem is subject to the following terms and conditions:

MoreMem is copyrighted material. It is protected by the copyright laws of the United States. You may not make any changes or modifications to MoreMem. You may not decompile, disassemble, or otherwise reverse-engineer the software in any way. You may use MoreMem on a trial basis provided you do not violate the protection afforded the licensed software by the copyright laws, and you agree to the terms of the license agreement. If you use MoreMem for longer than thirty (30) days, you are obligated to purchase a license for its use.

Send your \$40 registration fee to:

Gamma Research, Inc.  
112 Teakwood Drive  
Huntsville, AL 35801

See the Payment and Registration and Order Form sections.

Title to the licensed software is NOT transferred to the end user. The end user is granted an exclusive license to use the software on one computer or computer work station at any given time.

## Determining MoreMem's Settings

First, you need to enter the size of a MoreMem DOS block into the **Size of DOS blocks to Reserve** edit box. The number should be a multiple of 32 and at least 512. The default size of 800 will allow the DOS memory of a normal Windows program to fit inside of a MoreMem DOS block. A size of 8128 will allow Windows for Workgroup to connect to network drives. Lotus programs may require a size greater than 800. Remember that each MoreMem DOS block uses about 32 extra bytes of DOS memory. If any program does not seem to be working with MoreMem, it may need a larger continuous block of DOS memory. Try increasing the size of MoreMem's DOS blocks.

Second, you need to enter the number of DOS blocks into the **Number of DOS blocks to Reserve** edit box. The valid range of DOS blocks to reserve is 0 to 500. Remember that MoreMem loads before practically all other drivers and programs. If you use a DOS block size of 800, estimate the maximum number of Windows programs and drivers that you will load after MoreMem and then add a bunch more for safety. I would suggest for you to use a number around 100, which is the default. If you use a DOS block size of 8128, I would suggest a number around 15. Use a higher number if you continue to get "Insufficient Memory to Run" errors when loading programs.

Third, you may want to reserve DOS blocks as high as possible in DOS memory by checking the **Reserve DOS Blocks High** checkbox. This feature will only help if there is a significant amount of free DOS memory after you subtract MoreMem's free DOS block memory. Since DOS memory is allocated from the bottom, this feature may help prevent fragmentation of DOS memory, by keeping MoreMem's DOS blocks unused as long as possible.

Fourth, you will probably want to turn off MoreMem's warnings by checking the **Do Not Display Warning Messages** checkbox, since these will just annoy you after you understand how MoreMem works.

## **Installing MoreMem**

You can automatically install MoreMem by

- (1) starting SETUP.EXE,
- (2) entering the number of DOS blocks to reserve into first editbox,
- (3) entering the size of DOS blocks to reserve into second editbox,
- (4) checking or unchecking the Reserve DOS Blocks High checkbox,
- (5) checking or unchecking the Do Not Display Warning Messages checkbox,
- (6) checking or unchecking the Install Group and Icons into Current Shell checkbox,
- (7) clicking on the Install button, and
- (8) clicking on the YES button to restart Windows.

You can manually install MoreMem by:

- (1) starting the Control Panel,
- (2) double clicking on the Drivers Icon,
- (3) clicking on the Add button,
- (4) double clicking on the "Unlisted or Updated Driver" item in the listbox,
- (5) entering the drive and directory of the MoreMem files,
- (6) pressing enter to add the "Gamma Research MoreMem Utility" item in the listbox,
- (7) entering the temporary password,
- (8) entering the number of DOS blocks to reserve into first editbox,
- (9) entering the size of DOS blocks to reserve into second editbox,
- (10) checking or unchecking the Reserve DOS Blocks High checkbox,
- (11) checking or unchecking the Do Not Display Warning Messages checkbox,
- (12) clicking on the OK button,
- (13) clicking on the Restart Windows Now button, and
- (14) adding Program Manager icons for MemPopup.exe and MemIcon.exe which have installed to the Windows system directory.

**YOU MUST RESTART WINDOWS FOR MOREMEM TO WORK.**

## **Removing MoreMem**

You can remove MoreMem by:

- (1) starting the Control Panel,
- (2) double clicking on the Drivers Icon,
- (3) clicking on the "Gamma Research MoreMem Utility" item in the listbox,
- (4) clicking on the Remove button,
- (5) pressing enter to confirm removal, and
- (6) pressing enter to restart Windows.



Registration Info Button

Pressing this button will cause the help file topic on registration information to load.

Order Form Button

Pressing this button will cause the Order Form topic of the help file to load.

## Reserve DOS Blocks High checkbox

You can reserve DOS Blocks as high as possible in DOS memory by checking the Reserve DOS Blocks High checkbox. This feature will only help if there is a significant amount of free DOS memory after you subtract MoreMem's free DOS block memory. Since DOS memory is allocated from the bottom, this feature may help prevent fragmentation of DOS memory, by keeping MoreMem's DOS blocks unused as long as possible.



## Size of Dos Blocks to Reserve edit box

Enter into this edit box the size of the DOS blocks that you want MoreMem to reserve. The number should be a multiple of 32 and at least 512. Each Windows program needs about 800 bytes of conventional DOS memory to run (i.e., memory below 640K). Some Windows programs need large blocks of DOS memory like Window for Workgroups which needs about 5120 bytes to connect to a remote drive. Each reserved DOS block uses an extra 32 bytes of DOS memory.

## Discount Pricing For Multiple Licenses

When multiple units of MoreMem are purchased from Gamma Research, the discount pricing is as follows:

For	1	to	9	licenses, the price is \$40 per license.
For	10	to	99	licenses, the price is \$35 per license.
For	100	to	999	licenses, the price is \$30 per license.
For	1000	or	more	licenses, the price is \$20 per license.



