

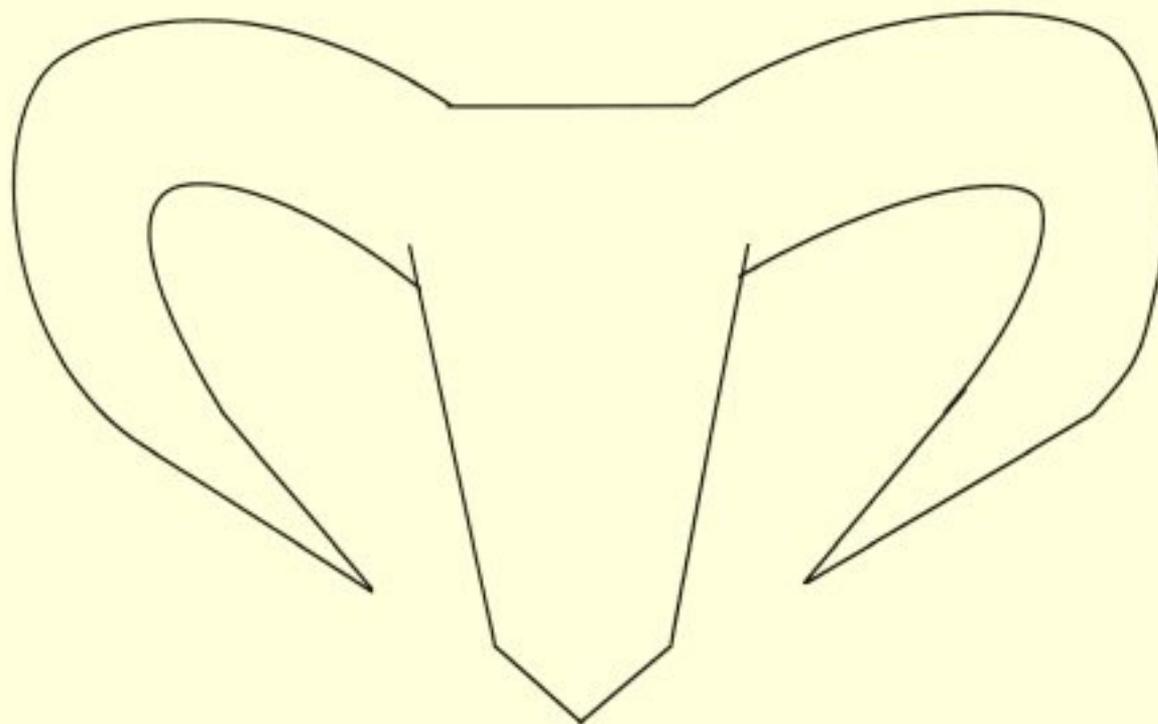
geoVISION
INTERNATIONAL™



Volume 1, Number 3
\$4.00 U.S.

BRINGING THE WORLD TOGETHER WITH GEOS

May 1993
ISSN 1066-9876



EXPANSION^{AS}

BBG RAM

REU

RAMLink

Now Available

geoSHELL

THE MOST VERSATILE COMMAND LINE INTERFACE FOR ANY COMPUTER, AND IT'S MADE JUST FOR GEOS ON YOUR 64 OR 128

- * More than just your usual text-based interface, geoSHELL has many features not normally found in a CLI
- * geoSHELL contains many easy to use and easy to learn features
- * Very functional keyboard controls and screen editing features
- * Even the mouse may be used for selecting a command or a filename
- * Designed to work with any hardware setup that is currently available for use in GEOS
- * geoSHELL makes a nice addition to the DeskTop or any of your favorite icon-based interfaces, or it may be used entirely by itself
- * Additional commands will continue to be developed - simply copy new ones to your disk and they are ready to use

ONLY \$24.95

Price includes shipping to anywhere in the U.S.A. and Canada. For shipping to other countries, please add \$5.00 (U.S. funds only)

**Please send a check or money order to:
Maurice Randall
P.O. Box 606
Charlotte MI 48813**

Requires GEOS 64 V2.0 or GEOS 128 V2.0

PUBLISHER/MANAGING EDITOR
Grady E. Brown

THE ART GALLERY EDITOR
Mrs. Jane M. Voskamp - Jones

NEW USERS EDITOR
Robert Hunter

CONTRIBUTING AUTHORS
Rich La Bonte
Ken Nakatsu

COVER ARTIST
Angela Schmidt

geoVISION International is an independent bi-monthly publication serving GEOS users and programmers with the best and latest information available.

SUBSCRIPTIONS
(One Year/Six Issues - In U.S. Funds)
United States \$21. Canada and Mexico \$27.
Int'l Air Mail \$33.

The views expressed in geoVISION International are those of the individual writers and do not necessarily reflect the views of geoVISION International, its staff, or advertisers. The acceptance of an ad does not necessarily constitute an endorsement of a product. geoVISION International reserves the right to determine the acceptability of any articles or advertising submitted.

geoVISION International is a Trademark of Grady E. Brown and is no way affiliated with Commodore Business Machines, Berkeley Softworks, or GeoWorks. CBM, Commodore and associated logos are Registered Trademarks of Commodore Business Machines, Inc., GEOS, GeoPaint, GeoWrite, GeoPublish, GeoCalc, GeoDex, GeoFile, GeoChart, DeskTop, GeoRAM, BSW and associated logos are Registered Trademarks of GeoWorks.

No part of this publication may be reprinted or reproduced in any form without written permission from the publisher. Printed in the U.S.A. ISSN 1066-9876.

geoVISION International
816 S.E. Polk Street
Camas, Washington 98607-2240

Copyright 1993, geoVISION International

geoVISION™
INTERNATIONAL
BRINGING THE WORLD TOGETHER WITH GEOS

Inside This Issue

Features

- 6 Collette's Links - New Life For RAMLink!
by Rich La Bonte
- 14 Commodore 17XX REU's by Ken Nakatsu
- 19 RAM Peripherals - BBG RAM In Review
by Grady E. Brown

Columns

- 8 THE ART GALLERY - GeoPaint Revealed - Part Two - The Toolkit by Jane M. Voskamp-Jones
- 10 NEW USERS - Making It Easy - Aids in Becoming a Power User of GEOS by Bob Hunter
- 12 INSIDE CMD - Inside Information: CMD RAM Devices and GEOS by Doug Cotton
- 18 TELECOMMUNICATIONS - Network News - FidoNet EchoMail Conferences by Grady E. Brown
- 20 PROGRAMMING - Programming Tidbits - From Various Sources by Grady E. Brown
- 22 REVIEWS - AlbumCopy & ScrapGrab and Spike Dethman GEOS Utilities by Grady E. Brown

Departments

- 4 EDITORIAL
- 5 LETTERS
- 24 NEWS
- 25 USER GROUPS - BBS's - PUBLICATIONS
- 26 CLASSIFIEDS

CORRESPONDENCE & ARTICLES FOR CONSIDERATION

We always welcome and encourage your contributions. Please ask for our Writer's Packet. Submissions for publication should be sent on disk with hardcopy. By submitting material, you grant gVI First Serial Rights and Second Reprint Rights, and agree not to submit this material to other publications for a period of six months. Advertising information can be found elsewhere in this issue. □

RAM Expansion

by Grady E. Brown

It seems that just when I think nothing new can come along, I'm proven wrong. In this instance I love being wrong.

This issue we bring you quite a bit of information on expanding the size, and thus the power of our systems. RAM expansion not only enlarges our work space, it speeds everything up, making us much more productive.

We have also added a new column, *INSIDE CMD*, direct from CMD's Director of Technical Services. And we'll begin listing the gVI disk contents with this issue. The UGBP department has grown so large that we have had to allot them only two pages. With this issue so full of information and short on space, we had to cut it down to only one. We will now print the User Groups, BBS's and Publications that we have received since the last issue, and at the end of the year, put out a full listing of them all.

Our advertisers rely on your support, and are always looking to know where you as customers read of them. So, when you order from them, remember to tell them you saw their ad in *geoVISION International*. Also, if an ad contains a coupon, don't cut it out of your issue. Photocopy the page with the ad and send that one in. That way you will be able to go back to your issues many times in the future and reread everything.

We have had many requests for the LW fonts that are used for laser printing this issue, as well as many of the patches to fix various bugs, and upgrade many of the GEOS applications. We have thrown in a humorous one too. RAW files, a RAW player, and a RAW to GEOS converter. RAW files are digitized sound files that used with AutoRAW will play while

GEOS is booting. There are many sound files that you can choose from.

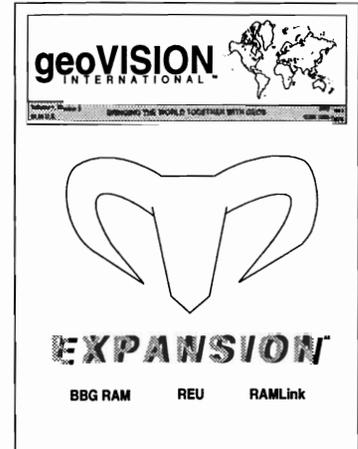
There has been another change made in our search to streamline and make the behind the scenes administration and production of gVI, more productive. Some of you may have noticed your account numbers have changed somewhat. Also updated, is our way of figuring what issues you're due. Let me try and describe some of our policies.

Of course, subscribers get the issues and disks they have ordered. But what you may not know is that if you send us an article or a disk of your own personally written software, you'll receive one free issue. At the time of the article or a review of your software, you can receive another free issue of the issue your material is published in. Advertisers receive the issues their ads are run in. If you are already a subscriber, the free issue will be added on to your subscription. If you're not, you will get that free issue.

I hope this clears up a few things, and makes it clear what we give you in return for your help. We always appreciate your help.

Coming up next month we'll try to help you get the most out of your printer. No matter what printer you may have. From daisy wheel, to dot matrix, to laser printer.

We'd like to thank all you subscribers, for your recent comments, suggestions, and criticisms that have brought about new ideas and the few changes you may have noticed. Special thanks go to our advertisers, who trust our support, to assist them with support. Thanks.



Thank you to all those that wrote in and requested we print a list of the last disks contents. Please understand, we cannot print the upcoming disks contents, as it is prepared after each issue has been completed and we prefer to wait until the last moment to find the most up-to-date files for each one. Space is limited, so we won't be able to give you any definitions here, but we may at a later date review many of them in the *REVIEWS* column. To order this and other disks, see the order form attached in this issue. □

geoVISION International Disk Volume 01, Number 02

Side One

Mirror, Mirror
MirrorMirror.doc
BootMaker128
BootMaker128Doc
GeoNim
GeoNim.Doc
CTRL->Tab
CTRL->Tab docs
ICONDIR2
IconDir2.doc
Font Dump III
Font Dump 3.doc
ROT4S
ROT4S.about
ROTADJ
ROTADJ.about
maketurbo
maketurbo.doc
DirMaster
dirmasterdoc
UNGEOS
Ungeos Info+
Directory Label
Dir. Label.doc
AUTO Runner
AUTO Runner.doc
AnalogClock

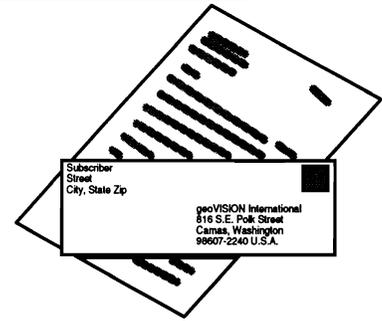
Side Two

RETRIEVER 2.0
ScrapIt!
Grafix Formats
fromBlazing
fromPrintSho
toBlazing
toPrintShop
ScrapIt! Manual
MacAttack II+
MacAttackII+.doc
BigClipper3
BIG CLIPPER.doc+
BigClipperAid

Your Words & Thoughts

Questions, Answers, Suggestions & Ideas

by YOU



Border Graphics

Do you or anyone have a program for converting the border graphics, not the other graphics in PRINTSHOP or PRINTSHOP COMPANION, so that they can be used with GEOS? I know that PS to GEOS works for the regular PS graphics only.

-Roy Hammerstedt/Duluth, MN U.S.A.

[EDITOR] This has been a recurring question on Q-Link and GENie with no real answer, other than, "there is no program yet". How about it programmers? Would this be something easy to write? There are border fonts used with Perfect Print, is this somewhat the same?

gVI Disks

I have a question about the library disks. Are these the same as offered by geoMETRIX in the past or will this be all new material?

-Ed Rohan/Anaheim, CA U.S.A.

[EDITOR] No, the geoVISION International disks are not the same. These are different files, found on Q-Link, GENie, and from various programmers themselves. It is software that is new, and some that is not so new, but very useful. Beginning this issue, we will begin listing the contents of the disk that was shipped the month before. And, we've added a few other 'Special Interest' disks that are described elsewhere in this issue.

Paint Drivers and the gateWay

Is there any way to use the Paint Drivers from Gateway? Do you know anything about this?

-Mary E. Wilson/Clearwater, FL U.S.A.

[EDITOR] We have heard this from a few others too. I tried this out and find no problem using them. I'm using the

gateWay 128 v2.5. Could it be you're using an older version that doesn't allow for this. Place your application (GeoPaint or GeoWrite) and the specific document (application data) along with the appropriate Paint Driver (that has already been installed to work with your chosen printer) on the same disk. Within the gateWay, select **Control Panel** from the **geos** pull down menu and click on **Chooser** to pull up the **Select Printer/Input Driver** panel. You'll see the current printer and input drivers. Click, on the down arrow of the printer driver menu until you find **Paint Pages** or **Paint Overlay**, then click on the disk icon to the left of the driver name. This'll make the Paint Driver current for this session. Click, on the close icon at the bottom right of the Control Panel and you're all set. Continue as you would using the GEOS DeskTop to print (paint) your pages to disk. To upgrade your version of the gateWay, contact CMD at the address or telephone number listed in their advertisement found in this issue. The new version is highly recommended for those still using an older version. It has been thoroughly updated.

GEOS Upgrades

How can I get possible upgrades for my GEOS programs? I have called Berkeley but they only have a machine and will not return calls.

-Felix A. Rogers/Randallstown, MD
U.S.A.

[EDITOR] Yes it is true that GeoWorks (formerly Berkeley SoftWorks) has a message machine, but it is only on during the hours they are closed. GeoWorks currently provides technical support for the Commodore version of GEOS on Tuesdays and Thursdays from 9:30 am to

12:30 pm Pacific time. The telephone number is 510 644-0926. All other times, you'll receive a recording and can leave a message. Steve Main of GeoWorks, tells me that geoRAM, geoChart, and geoProgrammer have been discontinued. New sales, that is. They will still support these products for registered users. The Hitchhiker's Guide to GEOS is still available for \$25.00. If you have access to Q-Link, contact 'GEOS STEVE' for quick E-mail response. He can be found in the GEOS ARENA quite often. For upgrades or new orders you can write to: GeoWorks Order Processing Center; P.O. Box 1760; Carmel Valley, CA 93924-9970 U.S.A. □

DON'T LEAVE US BEHIND...

Make sure you send us your change of address as soon as you know it, so geoVISION International will arrive at your new home without delay.

Just send us your old and new address, as well as the account number that is printed above your name on your mailing label, and we'll update our files.

Don't miss a single issue.

Collette's Links

New Life For RAMLink!

by geoWolfman (Rich La Bonte, FLATRiCh, etc.)

It's amazing, really. Just when you think you've seen everything and done everything in GEOS, along comes another Jim Collette improvement to change the world. This is the same guy who invented the perfect way to load programs into Berkeley's **geoRAM**, namely the little 9K program called Batch Copier that comes on RUN Magazine's GEOS Companion disk. Jim also invented the ultimate font editor for GEOS, **Font Editor 2.5**, and a suite of utility programs that are coordinated with his masterpiece **geoWIZARD**. Now Jim's turned out a system of "links" for CMD which allow geopurists to dump the gateWay shell and use RAMLink with deskTop 2.0, (the way a true GEOS user should).

Not that GateWay doesn't have it's good points, but it looks a bit too much like DOS Shell (the latest MS-DOS graphic compromise), and lacks the soul of the one and only 2.0. Let's face it, after spending hours (days, weeks maybe) color coordinating yer Pads and Preferences and deftly inventing your own personal icons, it was a shame to throw it all away for a colorless, text-oriented graphic shell like gateWay, which practically requires the use of file extensions just to tell what application file to click on!

True, gateWay has the advantage of programable function keys, unique disk icons, and other stuff, but it sure crashes the hell out of geoBASIC on a 64 and hates to run geoFile on a 128. And there's that damned date bug too!

So what are these Collette links, Uncle Wolfman, and how do they work?

Well, I'm real glad you asked me that, pal, 'cause I'm here to tell yuh all about

it. (And for those who have been hesitating about investing in RAMLink or RAMDrive, you can quit howlin' at the moon: now's the time, 'cause it ain't gonna get any better than this, Louise!).

I won't bore you much with the installation part. The installation instructions are all presented in a clear, doc file (which I think that Jim wrote, 'cause most of CMD's docs are only semi-understandable). It's easy enough for a geIdiot to do (hi, T.W.!).

Depending how much RAM you have in yer CMD device (up to 16MB in RAMLink!) you can partition your heart out and Jim's links will connect all those mysterious sectors of cyberspace as virtual 1581, 1571, or 1541 drives - or whatever combination of the above that your memory can hold.

You can run both GEOS and non-GEOS programs using the Collette link setup. Unlike under GateWay, however, you will also have some uneven amount of RAM left over that GEOS can't use, but you can get to that for non-GEOS storage using RAMLink's somewhat confusing, built-in Jiffy-DOS command line options. (If you have experience using MS-DOS, you won't have any trouble understanding the Jiffy-DOS commands, but what is it with these CMD guys and IBM emulation, anyway?)

My **fLAtDiSk** RAMLink currently has 2MB, partitioned to 2 (count 'em!) 1581s and a non-GEOS 1541. I don't miss the extra RAM I got from GateWay at all. There's plenty of room in the two 1581 partitions for all my GEOS applications - and my non-GEOS Stereo SID Editor and Stereo Player. I never use the 1541 partition at all.

Here's an honest breakdown of possible set up combinations, depending on what expansion you've got, good points and bad, quoted right outta the docs:

"(1) 256K DACC (RAM 41 ONLY) - This option will allow your RAM device to emulate a 1764 REU under GEOS. This is the only option available to RAMDrive 512K owners. All leftover RAM will be placed into a CMD Native Mode partition which may be used for other (non-GEOS) purposes.

"(2) 512K DACC (RAM 71 ONLY) - This option allows your RAM device to emulate a 1750 REU under GEOS. This option is only available if your RAM device has at least 1 Megabyte of RAM. All leftover RAM will be placed into a CMD Native Mode partition which may be used for other (non-GEOS) purposes.

"(3) 64K DACC + 1581 PART. - This option creates the minimum size direct access area required for GEOS, and also creates a 1581 Emulation partition. This partition may be used both from GEOS and from the native operating modes of your computer. Some GEOS applications (such as GEOWizard) will not work properly with this configuration, though most will. This option requires at least 1 Megabyte of RAM.

"(4) 128K DACC + 1581 PART. - This option creates a larger direct access area to allow the use of programs which require an extra bank of RAM expansion memory (such as GEOWizard). It also creates a 1581 Emulation partition which may be used both with GEOS and from the native operating modes of your computer. This option requires at least 1 Megabyte of RAM.

"(5) 256K DACC (RAM 41) + 1581 PART. - This option creates a direct access area large enough to emulate a 1764 REU under GEOS, and also creates a 1581 Emulation partition which may be used both with GEOS and from the native operating modes of your computer. Because this option gives you the ability to have two separate RAM 'disks' under GEOS, it has

some advantages. However, since GEOS is limited to three devices at any time, it can also be confusing and awkward if you use more than one floppy drive. For those using a single floppy drive, this configuration is a good choice. This option requires more than 1 Megabyte of RAM, and will not work with applications which require an extra RAM bank (such as GEOWizard).

"(6) 512K DACC (RAM 71) + 1581 PART. - This option creates a direct access area large enough to emulate a 1750 REU under GEOS, and also creates a 1581 Emulation partition which may be used both with GEOS and from the native operating modes of your computer. Because this option gives you the ability to have two separate RAM 'disks' under GEOS, it has some advantages. However, since GEOS is limited to three devices at any time, it can also be confusing and awkward if you use more than one floppy drive. For those using a single floppy drive, this configuration is a good choice. This option requires at least 1.5 Megabyte of RAM, and will work with applications which require an extra RAM bank (such as GEOWizard).

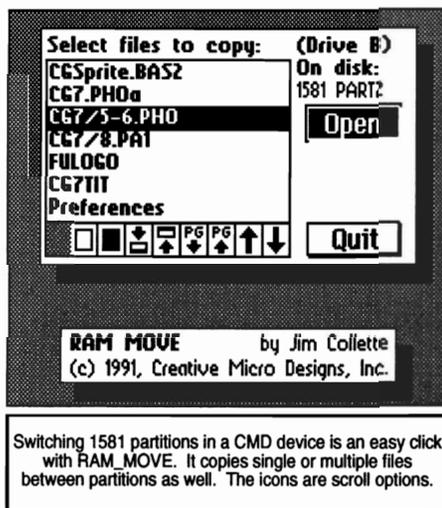
"If you have sufficient RAM, you can create additional 1581 Emulation partitions for use with GEOS by using RAM-TOOLS (each 1581 Emulation partition requires 3200 blocks or 800K of RAM). A special application (RAM MOVE) has been provided to allow you to switch between partitions from the deskTop, and it may also be used to copy files from one partition to another"

RAM MOVE

The good part (no pun) is that all you have to do is click on Jim's RAM MOVE icon and you can transport yerself from one RAM drive to another, or copy files from one to another, and you come right back to the 2.0 deskTop when you're through. (Or QwikTop if you use it as an alternate. I can't vouch for other alternative tops.)

Like other Collette utilities, Jim covers all bases on the RAM MOVE db, allowing a two-direction scroll through available

partitions, single files, pages of files, and even a jump from first page to last page. Here's some pictures of it to help convince you of its ultimate coolness, along with more quotes from the RL/RD Links docs:



"Using RAM_MOVE

RAM_MOVE is the pivot of the RAM environment for those with enough RAM to use multiple 1581 partitions. In addition to allowing easy access to other 1581 partitions, RAM_MOVE enables multiple file coping between partitions.

"Starting RAM_MOVE is as simple as double clicking on its icon. After a moment the application screen will open and display a list of partitions available. (Note: RAM_MOVE will only display 1581 partitions)

"Partition Switching

After the application has been started, you can easily move to another partition by simply clicking on the name of the partition in the list, and then clicking once on the Open button. To return to the deskTop, click once on the Quit button.

"Copying Files Between Partitions

To copy a file or multiple files from one partition to another, use the same procedure given above in 'Partition Switching' to select the source partition. After clicking on the Open button, the partition list will be replaced by a list of files contained within the source

partition. You will also see a number of option icons appear near the bottom of the requestor box. These options are (from left to right): De-select All, Select All, Move to Bottom of List, Move to Top of List, Scroll Down one Page, Scroll Up One Page, Scroll Up one File, Scroll Down one File.

"You may select any single file by clicking once on its name. Selected files are shown in reverse print. You may de-select a selected file by clicking on its name once again. You may also select or de-select a group of files by dragging the pointer over the filenames while the button is depressed.

"After you have selected all the files you wish to copy from the source partition, click once on the Open button. The file list will be replaced by the list of available partitions. Select from this list the target or destination partition, and click the Open button. The files will be copied, and when done, the program will end automatically."

That should give you a good idea of what the Collette links are all about, but don't stop here! If you've got his geoWizard utilities, you'll be able to take GEOS to even greater heights of productivity! For more info about the RL/RD links, contact CMD directly. For info about geoWizard and the other great inventions that Jim has to offer, see yer local GEOS BBS/Network or write to one of the addresses below.

R. LaB. □

**Collette Utilities
w/ geoWizard
Creative Micro Designs
15 Benton Drive
P.O. Box 646
East Longmeadow MA 01028
1-800-638-3263**

**geoWizard
Jim Collette
Comm-Plex Software
6782 Junction Road
Pavilion NY 14525**

GeoPaint Revealed

Part Two - The Toolkit

by Jane M. Voskamp-Jones

For the purposes of this discussion geoPaint v2.0 C128 will be referred to unless otherwise specified. There are not that many differences between C64 and C128 geoPaint. The Data files they produce are interchangeable. At this point, we will start by assuming you have organized your Work Disks for geoPaint, and Data Disks if you have a second Disk Drive. To get started, double-click on your data file and geoPaint will position you in the top left corner of your document, displaying the geoPaint Command Menu. You are now ready to continue with the Toolkit.

The Spanner when clicked upon will display the Toolkit, as seen in this diagram. To remove the Toolkit, click on the Spanner again. The C64 geoPaint v2.0 does not have a Spanner, and the Toolkit is constantly displayed on the left side of the screen.



The Toolkit is arranged in two columns at the left side of the screen window. To select a tool, move the pointer to the Toolkit and click. Every access of a tool will cause geoPaint to read in an overlay into memory from disk for the use of the particular tool. The tool you clicked upon is subsequently shown in reverse, until you select another tool. Starting at the top, from left to right, the Toolkit is examined.

Scroll Arrows. Selecting Scroll will automatically update the current document prior to placing the Scroll tool in the center of the Drawing Window. Move the window around the document by moving the joystick or mouse in the desired direction. Moving up moves the window up relative to the virtual page. Clicking

on the Scroll Arrows while in Pixel Edit mode allows you to move the Edit Frame around within the current Drawing Window. Another way to move the page is to click in the Page Map of the Status Box at the bottom of the screen and drag the rectangle which represents the Drawing Window to a new position. Click again to release the rectangle. This is a quick and effective way to move a long distance across a document.

Edit Box. The Edit Box is used to select a region to set a range of graphic data for manipulation. The pointer becomes a crosshair in the Drawing Window. Click once to open the Edit region, and draw out the dotted box down and to the left until the area is defined, then click again to fix the region, as seen in the diagram. Used in conjunction with the Photo Manager and the Edit Menu, graphics can be imported to and exported from geoPaint via Photo Scraps {more on this later}. Otherwise the Status Box displays the other commands provided with the Edit tool. The commands available are move, copy, clear, mirror x, mirror y, invert and rotate, as seen in the diagram.



Edit mode:	<input checked="" type="checkbox"/> move	<input type="checkbox"/> copy
<input type="checkbox"/> mirror x	<input type="checkbox"/> invert	<input type="checkbox"/> clear
<input type="checkbox"/> mirror y	<input type="checkbox"/> rotate	

The Move option is the default on accessing the Edit Tool. Move and Copy operate in a similar fashion. Copy only duplicates what is in the region, whereas Move physically moves the enclosed region to a different location.

Mirror x and y let you flip an image either horizontally or vertically. The Invert option is used to reverse a pattern or color, of a selected region. The Rotate option will revolve a region 90 degrees. Each additional click will rotate the image another 90 degrees. However, if you cause the image to flip off the edge of the Drawing Window, it will be lost. Rotated images may appear slightly elongated on the screen, but when printed, its proportions will be correct. The Clear option will clear the contents of a region to the canvas color.

To resize the Edit region, click on the lower right corner {resize box} of the region to attach it to the pointer. Now move your pointer to a new location down and to the right and click to define a new region. To reposition an Edit region, click on the upper right corner {reposition box}, to attach it to the pointer. The corners of the dotted region become solid brackets. Now when you move the pointer, the solid brackets follow the movement. Click once to position the region in a the new area. To select the entire Drawing Window, double-click on the Edit box tool.

Faucet {Tap}. This is a pattern fill tool which will fill an area with the currently selected paint pattern. The pointer has become a crosshair. Click to begin filling an area. The area will be filled with the Current Pattern selected using the Change Pattern options. The crosshair will return only when the fill has been completed. Fill patterns are always properly aligned with themselves. The Status Box displays the same as the Pencil.

Airbrush {Spray Hose}. This tool will spray using certain parts of the selected fill pattern. The pointer has become a pattern of dots. Click to begin spraying. Again, the Current Pattern that is displayed is used during the spray. Click again to stop. The Status Box displays the same as for the Paint Brush. The Airbrush is not random or even pseudo-random. The area you are going over with the spray will eventually show the selected fill pattern, if you continue to go over it.

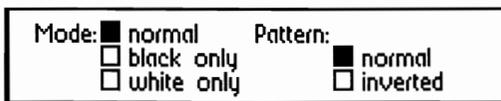
Ruler. The Ruler lets you measure your graphic and determine dimensions and positions. The pointer has become a crosshair. The ruler defaults to measuring in pixels as seen in the diagram. Position



the crosshair at the point to begin measuring and click once. Move the crosshair to the other end and hold to get the measure as displayed in the Status Box. The x, y and distance units are displayed. Clicking a second time will clear the Ruler from the display, leaving no mark on the document.

Line. The line tool functions like the Ruler, except that the Line drawn will remain in the Drawing Window. The Status Box is the same as for the Ruler and Rectangles.

Paint Brush. The function of the Paint Brush is similar to the Air Brush, except that the Brush used will be that selected by Change Brush from the options' Menu. The default Brush is a small square. a total of 32 Brushes are available from Change Brush in the Options Menu. The Brush chosen will replace the pointer in the Drawing Window. You choose the pattern of dots that will be used to compare against the current fill pattern. Again, the area that you are going over will eventually show the selected fill pattern, if you continue to go over it. The fill pattern is controlled by the Current Pattern selected using the Change Pattern options. The Status Box displays a range of options available to vary the appearance of the Current Pattern being used. The options are displayed in the diagram. You can create overlaying and



transparent effects, white or black only, even reversing the Current Pattern. The default settings are normal Mode, and normal Pattern.

Pencil. This is the default tool of geoPaint. The pointer appears as a small arrow. Click once to activate the Pencil. Click again to de-activate it. Double-clicking the Pencil activates Pixel Edit mode. The Status Box displays a Page Map rectangle representing your current Drawing Window position within the document, as seen in the diagram. In



80 Columns note that the full width is shown by the Page Map, in 40 Columns only a portion of the Drawing Window is displayed at a time, as located by the position of the Page map.

Eraser. Use this tool to erase or blank areas of the screen to the background color. The pointer appears as a small rectangle in the Drawing Window. The Status Box is the same as for the Pencil tool. To erase the entire Drawing Window, double-click twice in a row, on the Eraser icon. This may or may not work every time you try it.

Text. The Text tool functions in a similar way to the Edit tool. The pointer becomes a crosshair in the Drawing Window. Click once to open the Text region, and draw out the dotted box down and to the left until the area is defined, then click again to fix the region showing the text entry I-beam cursor flashing in the top left corner, as seen in the diagram. Used in conjunction



with the Edit Menu, text can be imported to and exported from geoPaint via Text Scraps, much the same as the Edit tool with

Photo Scraps. The Status Box displays the other commands, or characteristics of the text, provided with the Text tool. The characteristics available are plain

text, bold, italics, underline, outline and reverse, as seen in the diagram. These characteristics can be used ingularly or in



combination. You can select your Font after having typed some text by moving the pointer up to the Font Menu, or you can enter Text mode by first selecting your Font and point size. Once you have done that the crosshair pointer will be waiting in the Drawing Window for you to define

a region for text entry. The next time you select the Text tool, the last Font you used will be the one text will be entered in until you change it. Unlike geoWrite, you can only have one Font active within any text region. The same applies to the characteristics chosen from the Status Box.

When you have a Text region defined, to resize the region, click on the lower right corner {resize box} of the region to attach it to the pointer. Now move your pointer to a new location down and to the right and click to define a new region. To edit the text in the region, just click where you want the I-beam cursor to be and then edit away. To reposition a Text region, click on the upper left corner {reposition box}, to attach it to the pointer. The corners of the dotted region become solid brackets. Now when you move the pointer, the solid brackets follow the movement. Click once to position the region in the new area. When you are happy with your text, Font and all, click on another tool from the Toolkit and the text region will vanish and the text will remain where you positioned it, becoming graphic data or part of the document. If it is not right you will need to start over, as the text can no longer be edited as before. The Toolkit will be completed next Issue, with a look at the Rectangle, Circle, Color, Undo, and the Pattern Box.

Jane M. Voskamp-Jones **JMV Grafix**
P.O. Box 635 Blair Athol 5084 South Australia. □

Making It Easy

Aids in Becoming a Power User of GEOS

by Bob Hunter

The Commodore 64 is a great family computer and GEOS is a great software package. However, making full use of their capabilities requires adding some optional equipment and keeping up-to-date on developments by joining a user group and reading computer magazines.

Adding Optional Equipment

The GEOS 2.0 User's Manual lists the following hardware and software as necessary in order to use GEOS:

- * a Commodore 64 or 128 computer
- * a compatible monitor or television
- * a suitable input device
- * a 1541 or 1571 disk drive
- * a GEOS package
- * blank 5 1/4 inch diskettes

It goes on to recommend the following optional equipment:

- * a RAM Expansion Unit
- * additional 1541, 1571, or 1581 disk drives
- * a GEOS-supported printer

RAM Expansion Units were not yet on the scene when I began adding optional items to my Commodore 64 computer system. My first extras were a second 1541 disk drive and a printer-interface combination. The former makes GEOS and other programs that support two disk drives easier and faster to use, and the latter makes it possible for the user to share his/her computer productions with others. Anybody using productivity software, including GEOS, should find them worthwhile investments.

My next extras were a 1581 disk drive and a 1764 RAM Expansion Unit. The former provides much more data storage space than the older disk drives do, and the latter greatly increases the speed of program operation. Unfortunately, most

good Commodore 64/128 software not only lacks support for them but also is copy-protected thus preventing the user from copying programs onto them. A notable exception is GEOS, which makes good use of the storage capacity of the 1581 and of the speed of the 1764. Thus, anybody using GEOS a lot should find both worthwhile investments.

My current Commodore system, the core of which is a 128D with its built-in 1571 disk drive, includes the following optional equipment: a populated (4 megabyte) RAMLink with a 1750 RAM Expansion Unit clone inserted in it, a second 1571 disk drive (for programs that work optimally with two 1541 or 1571 disk drives), a 1581 disk drive, and a printer. Before I acquired RAMLink last year, I used to use the built-in 1571, the 1581, and the 1750 clone with GEOS; but now I use the built-in 1571, RAMLink, and the 1750 clone with it. Either setup rings circles around using GEOS with a single 1541 disk drive.

In RAMLink, I have two 1581 partitions devoted to GEOS, one for my GEOS 128 applications, accessories, etc., and the other for geoPublish and relevant GEOS 64 applications, etc. My other RAMLink partitions are RAMLink Utilities, Fun Graphics Machine, Label Wizard, RUNPaint, The Write Stuff (The Illustrator and BB Dictionary), a 1541 partition for temporary use of a game or other program, and a 1581 partition for temporary storage of data files. The last-named partition, which can be accessed by GEOS, currently contains my files for this column. I would be glad to try to answer any questions on RAMLink that new users of GEOS might have.

Joining BBS's and User Groups

When my computer friends tell me of the help that they get and the programs that they obtain from a bulletin board or from their local computer user group, I'm tempted to be envious even though I obtain similar service from the mail user group that I belong to, Meeting 64/128 Users Through the Mail. For example, I couldn't convert a multiple-page geoPublish document, such as my first New Users column, into a PostScript format so that it could be printed by a PostScript laser printer from an IBM-compatible computer. Another member of the group found out what was the problem and sent me a patched version of geoPubLaser so that I would be able to do so in the future. I would encourage all users of GEOS to join a bulletin board, local user group, or mail user group.

Reading Computer Magazines

You wouldn't be reading this column unless you already realize that computer magazines contain useful material, such as news, reviews, articles, program listings, and ads. Unfortunately, few magazines are now being produced for Commodore, let alone GEOS, users. My two favorites, COMPUTE's Gazette and RUN, no longer exist; the former has become a section in COMPUTE (which I get), and the latter has been buried. Hopefully, geoVISION is getting a favorable response and will meet the need for a GEOS-specific magazine. However, the only way that it and other Commodore magazines, such as the Gazette section of COMPUTE, will survive--and they're worth keeping alive--is if you support them.

Looking Ahead

Printing being the theme of the next issue of geoVISION International, I plan to offer some basic tips on printing in the next New Users column. However, I would gladly replace some of them with your accounts of personal experiences, tips for new users, and questions. Send such to me at 1 Brown's Heights, Grand Falls-Windsor, NF, Canada A2B 1E1. □

The Landmark Series

The Landmark Series is a set of ground breaking applications for GEOS. Experience the power of Dual Top's four drive support, the full color excitement of Tet, Solitaire, Checkerboard and the incredible picture displays made possible only by Lace II.

Dual Top V3.0

The Premier Desk Top Replacement for GEOS!

Realize the full potential of your GEOS system with this powerful Desk Top replacement. Dual Top breaks the two drive barrier by giving you full access to all four drives. Never again will you have to swap drives just to use the files located in drive C. To take full advantage of your REU, Dual Top utilizes a RAM Drive Priority System that insures that you will get the maximum benefit from your RAM drives. Have you ever validated a disk that is full of files only to find out that there was an error? What do you do now? The error description was anything but helpful in locating the file that contained the error. With Dual Top, you get a full error report in plain English that will allow you to immediately take care of the problem file. Dual Top compliments its power with high speed disk and file functions that are activated by an intuitive user interface. Dual Top is compatible with the BSW Desk Top and with GateWay. Dual Top can be run from both the BSW Desk Top and GateWay. You can also run the BSW Desk Top and GateWay from Dual Top by double clicking on its file name just like any other application. 40 and 80 column versions are included.

Tet

Need a break? Relax with a game of Tet and enjoy this full color game of logic and skill. Be careful - you may not be able to play just one game! 40 and 80 column versions are included.

Solitaire

Choose your deck and try your hand at this full color version of America's favorite card game! 40 and 80 column versions are included.

Checkerboard

Play an old fashioned game of checkers with a friend. Checkerboard is as close to the real thing as you can get - without the lost checkers. 40 column mode only.

Lace II

GeoPaint pictures the way Mother Nature intended!

Display your GeoPaint pictures in resolutions up to 640x598 in full color! Lace II can also display IPaint and Basic8 picture formats. Whether you are creating GeoPaint pictures or you just enjoy looking at computer graphics, this application is a must for you. 80 column mode only.

System Requirements: The Landmark Series requires GEOS V2.0 (128 or 64). 64 Dual Top requires an REU for multiple drive types. 64 and 128 Dual Top require an REU for four drive support. Lace II and the 80 column versions of Tet and Solitaire require 64K of VDC RAM.

To order, mail this form or call 1 (417) 863-6709 for COD orders.

Yes! Send me The Landmark Series right away!

I have enclosed a check or money order for \$24.95 + \$3.00 S/H.

Please send The Landmark Series to the address below.

Name _____

Address _____

City, State, Zip _____

Mail your order to:

The Landmark Series
New Horizon Software
2253 N Kansas Ave
Springfield, MO 65803

COD orders and orders outside of the USA please add \$4.00 per order.

Inside Information:

CMD RAM Devices and GEOS

by Doug Cotton, Director of Technical Services, CMD

While our products have been available for quite some time, we still find users who are unfamiliar with how they operate. Through this series of articles (thanks to gVI), we hope to lead GEOS users to a clearer understanding of CMD products. With this first installment, we'll take a look at CMD RAM devices in comparison with using other RAM devices under GEOS.

The System Area

RAM expander memory is split into areas called banks. Each bank is a 64K segment of the RAM located in the RAM expander, and all banks are identified by a number. The bank which contains the RAM with the lowest memory addressing is referred to as bank 0 (zero), and this bank of RAM is used as a system area by GEOS.

What exactly does GEOS do with the system area? It stores some of the system variables and disk driver code there. One of the nice advantages of having RAM expansion is that you won't have to keep a copy of CONFIGURE on each of the disks you use. You can also reboot GEOS from RAM using RBOOT, provided you have not turned off your computer.

These same features and options are available to you when using a CMD RAM device such as RAMLink or RAMDrive, so in this sense the CMD devices operate much the same under GEOS as other forms of RAM expansion.

The GEOS RAM Disks

Much of the remaining memory in a RAM expander is usually set aside as a RAM disk in GEOS. Depending on how much RAM you actually have available, the standard GEOS CONFIGURE file allows

you to have either a RAM 1541 or a RAM 1571. Users who have had their RAM expanders modified to hold more RAM can use CONFIGURE 2.1 by Jim Collette to create a RAM 1581.

All of these various RAM disks are the same in layout and storage capacity as the disk drives for which they are named. They also share one common problem - unless you RBOOT GEOS, these RAM disks will be formatted automatically when booting GEOS, erasing their contents.

All of the various types of RAM disks which we have discussed up to this point are also supported by CMD RAM devices as well. But RAMLink and RAMDrive

also allow for a better, more stable type of RAM disk.

Partitions

All CMD devices, including RAMLink and RAMDrive, are partitionable. Partitioning is a method of splitting the RAM up into usable areas. Each partition is seen as a separate "disk". CMD devices are capable of creating several types of partitions, but for GEOS use you need only be concerned with Direct Access and 1581 Emulation partitions.

To use GEOS with a CMD RAM device, the device will require creating a Direct Access partition. The RAM set aside for this partition is used by GEOS for the System Area, and could also be used for any of the GEOS types of RAM disks.

The CONFIGURE file provided with CMD RAM devices will also allow you to use one or more 1581 partitions. The advantages of using 1581 partitions instead of standard GEOS RAM disks is that partitions are never formatted by

PRODUCTION TOOLS

geoVISION International is proudly produced on a Commodore 128 with upgraded ROMS and 64K Video Display Memory, a 4-Meg CMD RAMLink with a Commodore 1764 (512K) REU, two Commodore 1581 (3 1/2") drives, one Commodore 1541 (5 1/4") drive, and a CMD HD-200 hard drive. A Panasonic KX-P1091i printer is used for pre-proofing pages. Final proofing is done on an Apple LaserWriter laser printer.

TEXT EDITING

All text is submitted either on disk or via modem and converted to GeoWrite 128 v2.1. Text is then proofed and imported into GeoPublish v1.0b for further editing.

LAYOUT & DESIGN

geoVISION International's design and layout is done using GeoPublish v1.0b.

TYPOGRAPHY

Every issue uses LW Cal (Helvetica), LW Cowell (Palatino-Roman), LW Zapf (Zapf-Chancery), and LW Shattuck (Zapf-Dingbats), from GeoWorks, Inc.

OUTPUT

Except for certain ad material, finished pages are printed to disk using a patched version of GeoPubLaser v1.8 and copied to an MS-DOS formatted disk using Big Blue Reader 128 v4.01. The pages are then printed on an Apple Laserwriter through an Macintosh IICI (at 600dpi) for masters. Plates of the masters are then created and offset printed by LAZERQUICK #22, 1410 Main Street Vancouver, WA 98663. □

GEOS during booting. Since RAMLink and RAMDrive retain their contents even when your computer is turned off, you won't have to spend time copying applications and data back into them each time you boot GEOS.

CMD RAM devices come with a handy application called RAM_Move, which allows you to switch between partitions, and can also be used to copy files from one partition to another. When you switch from one partition to another, it is just as if you had inserted a different disk into a "real" disk drive.

While all this talk of partitions may have you wondering how hard it will be to set up a CMD RAM device, you need not worry. A simple menu-driven setup program is included to automatically configure the partitions you need for use with GEOS.

Although the average GEOS user will usually find one or two megabytes to be sufficient, the more intense user may be more comfortable with a four megabyte system. A fully expanded RAMLink (16MB) can hold up to twenty 1581 disks!

Automatic Time and Date

Another obvious advantage over other RAM systems is the optional real-time clock module available for RAMLink. If you have this option installed, you can use the supplied RLTime autoexec on your GEOS boot disk to have RAMLink set the time and date in GEOS automatically.

Direct Booting from RAM

While RAM rebooting has its advantages at times, CMD RAM devices go one step further. Through the use of

geoMakeBoot (a utility sold separately by CMD), you can boot GEOS from scratch directly from a RAMLink or RAMDrive. Not only that, but by using other utilities supplied with these devices, you can actually make GEOS boot from RAM the instant you turn on your computer. Forget the long booting time you've grown accustomed to; with a CMD RAM device and geoMakeBoot you can be using GEOS ten to fifteen seconds after turning on your computer!

Conclusion

While RAMLink and RAMDrive are more expensive than other RAM devices, clearly this is because they provide far more usefulness. And while this article has been targeted mainly at the use of these products with GEOS, many users find them equally useful outside of that environment. □

**Print original banners, poster, and greeting cards in GEOS. Make mail labels like a pro!
Get a disk with GeoPRINT on the front side and GEOLABEL (and SUPERBOX) on the back,
All for just \$20.00!**

(If you already have purchased one, the other will only cost \$12.00.)

GEOPRINT

C-64/128 40 column only.

Side 1

You control your printout down to the last pixel of resolution. Check out these features...

- ☆Print banners up to 12 pages in length.
- ☆Print posters, vertical AND HORIZONTAL!
- ☆Print greeting cards with up to four sides.
- ☆Convert a geoPaint document (part or whole) into a GIANT (8X) or Mini (4X) poster!
- ☆Compatible with GEOS 2.0 Paint Drivers.

GEOLABEL

Please specify 64/128 40 column or 128 80 column only version.

Side 2

A professional label making program. "...with the look and feel of a true Berkeley SoftWorks product." geoJournal magazine. Check out these features...

- ☆Glean label data from geoFile or create your own data using geoWrite.
- ☆Edit, load, and save label designs in a 4" x 2" or smaller area (8" x 2" on the 128).
- ☆Up to 18 fields of information per label, positioned anywhere with the click of a mouse.
- ☆Append and/or prefix data to any field.
- ☆Use up to nine fonts and any style (including reverse) all at once...6K buffer for larger fonts.

Make checks or money orders payable to Dale Sidebottom. Mail to:

SoftSide Supply
P. O. Box 0972
New Albany IN 47151-0972

Commodore 17XX REU's

by Ken Nakatsu

Anyone considering the purchase of a Ram Expansion Unit for the first time has a healthy variety to choose from. For some the choice can be difficult, but chances are you'll find one that's right for your needs, at a price your willing to afford. The better known competing brands that work with GEOS are, Creative Micro Design's RAMLink and RAMDrive, Performance Peripheral Inc.'s BBG RAM, Software Support International's Super 1750 Clone, and GeoWorks (Berkley Softwork's) geoRAM. It is my hope that this review will help you decide if a Commodore 1750 is right for you.

Commodore produced three REUs in all. These were the 1700, the 1750 and the 1764. The 1700 and 1750 came out in the first half of 1986. Both of these units were designed to be used with the 128. The 1700 had 128k of RAM and the 1750 had 512k of RAM. Commodore didn't introduce the 1764 until a little over a year later. The 1764 had 256k of RAM and was developed to enable 64 users to enjoy the same advantages the 1700 and 1750 had brought to 128 users. The 1764 come with a heavy duty power supply able to handle the extra load that would otherwise be put on the standard 64 power supply. Overloading the standard power supply will cause it to burn out prematurely and put the 64 at risk. As it turns out, it seems that the heavy duty power supply is the key to using any of the Commodore Ram Expanders with the 64. In other words, all of them work on a 128 and all of them can be used on the 64 as long as you have a heavy duty power supply.

GEOS uses the Ram Expander by configuring it to clone an existing Commodore disk drive such as a 1541, 1571 or an 1581. For GEOS users the 1700 has no use unless one intends to expand its memory

because it's 128k isn't enough memory to clone any Commodore Disk Drive. The 1764 can be used to configure a 1541 RAM Drive, and the 1750 and 1750 clone (1764 or 1700 upgraded to 512k) can be used to configure a 1571 RAM Drive or two 1541 RAM Drives.

**The Commodore 1750
and 1750 Clone make
a great deal of sense
for those on a budget.**

Expansion

Over the years it has been learned that a 1764 can be upgraded to 512k with relative ease. Inside the 1764 shell you'll find a 1750 circuit board. This is because the 1764 is simply a 1750 with a bank of memory chips missing. It has been my experience that all one need do is fill the empty bank with the proper chips (41256 D-rams that are 150 nanoseconds or faster) to upgrade it to a 1750 clone with 512k.

Upgrading a 1700 is not as practical because it uses different memory chips. Thus, to upgrade a 1700 you need to desolder the memory chips already in it before replacing them with completely new ones. If you've never done an upgrade before I would recommend staying away from the idea of upgrading a 1700 unless you have access to someone that has, at the very least, a file explaining what procedures to follow. Such procedures can be found in the transfer areas of many bulletin boards. Since the D-rams for upgrading the REU are no longer in production finding a source for them may be a task so if you're

considering doing an upgrade yourself make sure you have a reliable source for the proper D-rams.

About 3 years ago a talented hardware technoid calling himself "Recursion" developed a way to expand the memory capacity of Commodore's Ram Expanders beyond the 512k of a 1750 or 1750 clone. This is the limit of upgrades that have preceded it. This was exciting because now even 1750 Ram Expanders were no longer exempt from upgrades. With Recursion's modifications Commodore Ram Expanders could be expanded beyond 512k by 256k increments, through half meg increments (1 meg, 1.5 meg) up to 2 megs are generally the rule. It is generally thought that a properly expanded 17XX Ram Expander can be expanded to 1 meg without any problems, but some users with expansions of up to 2 megs have experienced difficulties due to things like over heating, having to remove the shielding to make room for all 2 megs of memory and the fact that the REU is apparently stretched to its limit at 2 megs.

Recursion's modifications are one I would recommend only for a hardcore upgrade do it yourself or anyone willing to sacrifice their REU for the sake of a good challenge. Plans for the upgrade are available on many Bulletin Boards with Commodore support. If after examining them you have doubts about being able to do the upgrade there are experienced people (such as Raymond Day) that will do the upgrade for you at a reasonable fee. (Info on Raymond can be found at the end of this article).

In order to make use of this new found RAM Jim Collette created Configure 2.1 for GEOS. This configure file allows you to configure a 1581 RAM Drive for Commodore REUs expanded to 1 meg and it allows you to configure two 1581 RAM Drives for those expanded to 2 megs.

Why a 17XX REU?

So why should one choose a Commodore Ram Expander over any of the competing Ram Expanders? Well, each REU

mentioned in this article has certain advantages over each other. Here are some advantages that Commodore's Ram Expanders have over it's competition.

To my knowledge there are five major desktops that exist for GEOS today. These are GeoWork's DeskTop, a German release called "TopDesk", Paul Murdaugh's "Dual Top", CMD's "the gateWay" and Maurice Randall's "geoSHELL". All of Commodore's 17XX REUs (256k and above) are compatible with each of the five alternative desktops. As far as I know RAMLink, and RAMDrive are not because neither Dual Top or TopDesk were written to support them. If you use either Dual Top or TopDesk this should be taken into consideration.

What about uses outside of GEOS? We all love GEOS, but lets face facts, there is a world outside of the Kindom of GEOS, so for those that venture beyond the GEOS environment consider this. Both geoRAM and the BBG RAM units are GEOS specific REUs and unless you intend to remain in the World of GEOS by choice, you will be held prisoner of the GEOS Kingdom by these GEOS specific REUs. There are numerous programs outside of GEOS such as DesTerm for the 128, Novaterm for the 64, Maverick, 1581 Toolkit, Pocket Writer, PaperClip III for the 128, etc, etc., that also use the REU. Since Commodore's REUs are not GEOS specific it will work with non-GEOS programs that make use of Ram Expanders.

Software Support Internationals 1750 Clone, no bigger than a standard game cartridge, is the only competing Ram Expander on the market that seems to be completely compatible with Commodore's own REUs. An advantage it has for 64 users is that it doesn't require an external power supply. However, it along with geoRAM, is not expandable beyond 512k. This means that you will not be able to configure a 1581 RAM Drive. For me the extra memory of a 1581 RAM Drive has been a blessing.

Buying advice for a Commodore REU

Well, if you've read this far you must still be interested in a Commodore REU because it can't be my fabulous writing skills (I have none) that are keeping you reading. Assuming you make a decision to get a Commodore REU, which one and where?

For the GEOS user, the most widely used Commodore REU is the 1750 or 1750 clone. The 256k of the 1764 is a little small to be practical. For more ambitious GEOS users, REUs expanded to 1 meg is not uncommon. Since GEOS is the only program that conveniently uses expanded REUs, however, buying an expanded REU for non-geos applications is of little practical use beyond the programs mentioned previously. This should be considered if you spend most of your time in applications outside of GEOS. Really ambitious GEOS types that go for 2 megs can make use of two 1581 RAM Drives. Those that go for 1 or 2 megs might want to consider getting Performance Peripheral Inc's BBU. This is a battery backed unit that will accept an REU and retain the memory in RAM when the computer is shut off. Restoring 1 or 2 megs of RAM may be a task you'll wish to do without.

Commodore no longer produces it's REUs and most Commodore REUs still in existance have been upgraded to 512k or more. Sometimes 1750s or 1750 clones pop up at reasonable prices in mail order houses that handle Commodore equipment, but these days the usual way to get one is from a private seller. Watch for ads on Commodore sections of Bulletin Boards and computer ads in classified sections of newspapers. On occassion I've seen 1750 and 1750 clones for as little as \$50, but in my opinion paying more than \$100 for one is stretching their street value.

Summary of my opinion

For GEOS users on a budget the Commodore 1750 and 1750 clone makes a great deal of sense. They can be found relatively cheap, and when it gets out

grown, it can be expanded up to 2 megs. It's also the most compatible REU, both inside and outside of GEOS there is for the 64 and 128.

[EDITOR] For more information on REU upgrades, con tact Raymond at the following address. The prices listed were current as of March 1993 and you'll need to talk with Raymond to work out the detail of REU shipping. On Q-Link you can leave E-Mail for him under the name 'RaymondD2'. □

+ REU UPGRADES +

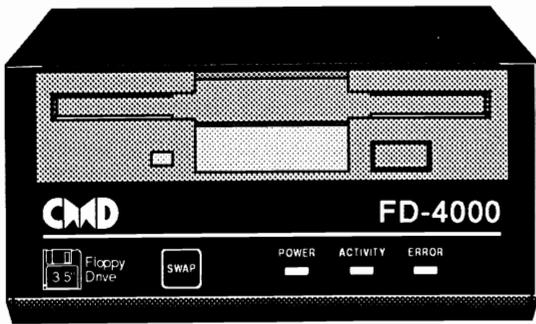
128K to 512K \$40
 256K to 512K \$25
 256K to 1 meg \$75
 256K to 2 meg \$145
 512K to 1 meg \$60
 512K to 2 meg \$130

Raymond J. Day
 9601 Morton Taylor Road
 Belleville MI 48111-1328
 U.S.A.
 Telephone: 313 699-6727

*We Love To Hear
From You!*

**Send us your
questions & answers,
suggestions
& complaints,
software & hardware
for review,
article submissions,
or just say Hi!**

**Mail to:
geoVISION International
816 S.E. Polk Street
Camas, WA 98607-2240
U.S.A.**



Faster than any other floppy, more powerful than a 1581, and able to store 3.2 Megabytes on a single disk. Its new, its exciting, its the ...

CMD FD Series™ Disk Drives

The Highest Capacity Floppy Available for ANY Computer Platform

While MS-DOS users boast of 2.88 MB, Mac users struggle with 1.44 MB, and AMIGA users are frustrated by a wimpy 880K, Commodore 64/128 users soar to new heights with CMD's new FD Series 3.5" floppy disk drives. CMD's FD-4000 provides an amazing 3.2 MB of storage while its little brother, the FD-2000, offers a 1.6 MB alternative at an attractive price.

Both drives are 1581 compatible and use Double Density (800K) and High Density (1.6 MB) disks while the FD-4000 can also use Enhanced Density (3.2 MB) disks. Imagine, putting up to twenty 1541 disks or four 1581 disks onto a single 3.5" floppy!

FD Series drives are faster, quieter, and more reliable than a 1581 and are just as easy to use as your other drives. Why settle for an outdated 1581 scavenged from the dark corners of a dusty old warehouse, when you can have an FD Series drive helping your C-64/128 to once again set new standards in technology.

- **Fast** - The fastest floppy ever made for the C-64/128. Up to 20% faster than a 1581. Built-in JiffyDOS makes it up to 1200% faster on JiffyDOS-equipped systems
- **Compatible** - Emulate 1541/71/81 drives for greater software compatibility; Use Native Mode with MS-DOS style sub-directories for additional flexibility and power. Perfect for GEOS, BBS, Productivity, CP/M and more
- **Easy-to-use** - FD Utilities create and delete partitions without complicated commands or procedures. Disk and File copiers make it easy to transfer software
- **Special Features** - Set to any device number from 8-15. SWAP button allows instant device 8 or 9 selection
- **Compact** - Smaller than a 1581, with sturdy metal case, wall mount power supply and sleek black paint

RTC Option

FD Series Drives may be equipped with an optional Real-Time-Clock for time and date stamping of files and automatic setting of the GEOS Clock.

BCOPY

CMD's all new backup utility allows RAMLink, RAMDrive, HD and FD owners to backup single partitions or entire contents to multiple 1541/71/81 or FD disks.

KAO® 3.5" DISKS

High Density

for FD-2000 and FD-4000

Box of 10 \$14.95

Enhanced Density

for FD-4000 only

Each \$9.95

Box of 5 \$44.95

Box of 10 \$79.95

CMD See Special Anniversary Offer Below CMD

FD-2000 \$239.95 • FD-4000 \$319.95 • RTC Module \$20.00 add'l

Shipping: (Continental U.S.) UPS \$8.50, 2nd Day Air \$16.00, C.O.D. add \$5.00 (PR, AK, HI) \$16.00 (Canada) \$18.00 (Foreign) \$50.00

See adjoining ad for ordering terms and info. Prices subject to change without notice.

CMD's Fifth Anniversary Sale-a-bration

Save Over \$60.00 on RAMLink Combos

Up to 16 MB's of non-volatile storage with instant access to files. Sound good? At these prices, it should sound great! Package includes: RAMLink, RAMCard, Optional RTC, Battery Back-up, SIMM Module and FREE JiffyDOS drive ROM. RAMLink offers the power of the HD's operating system and the speed of RAM storage. Why waste another minute waiting to load a program.

RL-1 MB Pkg \$275.00 RL-4 MB Pkg \$375.00

(Please specify drive model when ordering)

Price includes shipping and handling charges to continental U.S. AK, HI, PR, Canada add \$15.00. Foreign Call

Save Up to \$200.00 on CMD Hard Drives

Special pricing from our drive supplier has made it possible to offer lower prices on our entire line of hard drives and a special edition HD-40 with an 85 MB Quantum drive mechanism. These drives are available for a limited time so contact CMD now!

40 MB	\$475.00	85 MB	\$550.00
100MB	\$615.00	200 MB	\$715.00

Price includes shipping and handling charges to continental U.S. AK, HI, PR, Canada add \$20.00. Foreign Call

Save Over \$50.00 on RAMDrive Combo

Not only do you get RAMDrive at a great price but now we speed up your disk drive for free. Purchase a 1 MB or 2 MB RAMDrive and get a free JiffyDOS drive ROM worth \$29.95. By combining the speed and versatility of RAMDrive and JiffyDOS, your system's productivity will soar to new levels. Great for fast access to your Loadstar library, GEOS applications, productivity software, etc.

RD-1MB Pkg. \$225.00 RD-2 MB \$275.00

(Please specify drive model when ordering)

Price includes shipping and handling charges to continental U.S. AK, HI, PR, Canada add \$10.00. Foreign Call

Save up to \$70.00 on FD Series Floppy Drives

Unlike any other 3.5" floppy, CMD's FD Series disk drives offer unparalleled speed, compatibility and flexibility with up to an amazing 3.2 MB of storage. Equipped with CMD's proprietary operating system, Commodore users now have access to today's latest floppy disk technology at a special low price!

FD-2000 1.6MB	\$179.95	FD-4000 3.2MB	\$229.95
----------------------	-----------------	----------------------	-----------------

(Add \$20.00 for optional Real Time Clock)

Shipping/Handling: U.S. \$8.50, AK, HI, PR, Canada \$18.00 Foreign Call



Eliminates jagged output • Laser-like output • GEOCABLE compatible
 Unattended printing of multiple copies • Text and Graphics drivers
**NEW Enhancements: Improved 9 Pin HQ Drivers, Improved output formatting,
 and Border Font support for geoWrite. New Font collections now available!**

Perfect Print LQ is a complete print enhancement package for GEOS that delivers the highest quality dot matrix output possible. Includes a unique print utility and font set for enhancing GEOWRITE documents, utilities for creating fonts, and high quality drivers for other GEOS applications. Improves text and graphic output on virtually all 9 & 24 pin dot matrix printers and supports font attributes such as italics, outline, underline, bold, etc.

Main system (All drivers, utilities, and 7 fonts) **\$34.95** • Complete System (Main System w/Font Pkgs. 1 & 2) **\$49.95**
 Font Packages 1 & 2 (42 LQ fonts) **\$29.95** • Font Package 3 (17 LQ/ 5 Border fonts) **\$19.95** • Border Font Collection 1 **\$19.95**
 Shipping/Handling **\$5.00** Canada add **\$4.50**

Perfect Print LQ operates with most Epson and IBM compatible 9 and 24 pin printers, but does not work with laser, ink jet, bubble jet, RS-232 or strictly Commodore compatible printers. Contact CMD for info on specific models.

Collette Utilities

A Collection of Jim's Best GEOS Programs

Jim Collette has long been one of the premier programmers in the GEOS community, and with Jim heading off to college this year, we have been given a golden opportunity to offer you this fine collection containing some of his best known work. Includes GEOWIZARD (gateWay compatible), MiniDesk, Font Editor, Font Changer, SelectPrinter, AddAlbumAuto, DOS Wedge, and Jim's Laser Landscape utilities for postscript laser printers.

Available now for \$34.95 plus \$5.00 shipping

Note: Most utilities on this disk require GEOS v2.0 (64 or 128). Some applications may require 512K RAM expansion.



Streamlined File Management • Task Switching
 Three drive support • Accesses full capacity of
 CMD Storage Devices, REU's & GEORAM

gateWay/64 **\$34.95** gateWay/128 **\$34.95**
 gateWay 64/128 combo **\$49.95**

Current gateWay User's should contact CMD for upgrade information.
 CMD recommends a minimum of 512K RAM Expansion for best results



The Alternative Paint Program for GEOS

While there are a lot of things we could say about this all-new paint program for GEOS, perhaps the features say it best. If you use geoPaint, you NEED geoCanvas!

Available now for \$34.95 plus \$5.00 shipping

geoCanvas operates in 40 column mode and requires GEOS 64 V2.0 or GEOS 128 v2.0, one 5.25" drive and a minimum of 512K RAM expansion.

Powerful New Tools & Utilities

- Draw polygons, connected lines and rays, Ruler display 100ths of an inch, re-definable grid lines, larger font buffer, Pattern and Brush Editor with standard patterns, full window color changer
- ScrapCan allows copying and pasting of large color scraps while PaintCan changes ownership from geoPaint doc's to geoCanvas
- **User Interface and Window Controls**
- Open up to three documents at a time, movable tool box, fast updating scroll bars and controls, re-sizable windows, keyboard shortcuts for all menu items, close button on windows, threshold control for better previews, modes for viewing entire screen, file requestor to access fonts and DA's, screen blanking, Menu option to display time and date



Hi-performance ROM upgrade • Performs all disk accesses up to 15 times faster
Guaranteed 100% compatible • Easy to install on most systems • Built-in DOS Wedge & file copier
 (Please specify computer & drive model and serial#.)
 JiffyDOS 64 or SX-64 **\$59.95**
 JiffyDOS 128 or 128D **\$69.95** • Add'l Drive ROMs **\$29.95**



geoMakeBoot makes booting GEOS from nearly all devices and making back-up copies of the GEOS boot disk easy and convenient. Besides being compatible with virtually all CBM compatible devices including CMD Hard Drives, RAMLink and RAMDrive. Most importantly, geoMakeBoot is simple, inexpensive and easy to use.

geoMakeBoot \$12.95 + \$2.00 shipping



Provides an industry-standard IBM style serial port that communicates at speeds from 300-38,400 baud and provides reliable communication using Hayes-compatible RS-232 modems. Plugs into the expansion port and includes terminal programs and software for transferring files to other computers.

SwiftLink (Cart) **\$39.95** • SWIFTLink Cable **\$9.95**
 Shipping: US: **\$6.00** (Cart), **\$5.00** (Cable), **\$7.50** (Both)



SID Symphony adds a second complete SID chip to your 64 or 128 and can be attached to your home stereo or amplified speaker systems to provide a whole new dimension in sound. Enjoy hundreds of public domain stereo songs, import MIDI files, or use Computer's Music: System book and SID editor to create original stereo music.

SID Cartridge **\$39.95** • Computer's Music Book **\$22.95**
 Shipping: US: **\$6.00** (Cart), **\$5.00** (Book), **\$7.50** (Both)



High-Speed Self-Contained Battery-Backed RAM Cartridge

- **Compact** - All the features you've ever wanted from RAM expansion in a compact unit. Three capacities: 512K, 1 and 2 megabytes. Dimensions: 6"1 x 3" w x 1" h.
 - **Portable** - The relatively small size of RAMDrive, coupled with its built-in battery pack make it ideal for porting data from one computer to another.
 - **Compatible** - Use RAMDrive with GEOS, CP/M, Q-Link, BBS programs, productivity software and more.
 - **Non-Volatile** - External power supply eliminates drain on computer power supply and retains data indefinitely. Internal rechargeable batteries retain data up to 7 days.
 - **FAST** - Up to 400x faster than a 1541; 20x faster than RAMDOS; Built-in JiffyDOS speeds access to CMD Hard Drives and JiffyDOS-equipped floppy drives.
 - **Easy to Use** - Plugs into the cartridge port. Operates like a standard disk drive. File and disk copiers included along with partitioning, support utilities, and new GEOS configure.
 - **RD-DOS** - Organize RAM into as many as 30 manageable partitions that emulate 1541, 1571, & 1581 drives or expand to the full RAM capacity with MS-DOS style subdirectories. Autoboot 64 and 128 mode programs. Configurable as any device number from 8 through 30.
- RD-512 **\$199.95** RD-1 **\$249.95** RD-2 **\$299.95**



The Ultimate in Mass Storage for the 64/128

- **Capacity** - 40 Mb to 200 Mb capacities enable you to store the equivalent of up to 1250 1541 (170K) disks.
- **Speed** - The fastest Commodore compatible hard drives. Speeds up to 50x faster than a 1541.
- **Compatibility** - Ideal for use with GEOS, CP/M, Q-Link, BBS programs, productivity software and much more.
- **Compact Size** - 3 1/2" SCSI technology allows for a compact case about the same size as a 1581.
- **Expandability** - Chain up to six SCSI devices or connect to Macintosh, IBM-Compatible & Amiga computers.
- **Built-in Real Time Clock** - Automatically time and date stamps files and sets the GEOS clock.
- **HD-DOS** - Organize storage into as many as 254 partitions that emulate 1541, 1571, & 1581 drives or expand to 16Mb with MS-DOS style subdirectories.
- **Easy to use** - Connects like a standard drive and easy to read manual explains all facets of drive operation. Comes complete with copiers and maintenance utilities.
- **Packed with convenient features** - The CMD HD Series hard drives come with features like our SWAP buttons, Front Panel Partition Selection, and more.

HD-20 CALL HD-40 \$599.95
HD-100 \$799.95 HD-200 \$999.95



Power Backed REU Interface and Expandable RAM Disk

- **Non-Volatile Storage** - Operates on its own external power supply. Optional rechargeable battery back-up retains data even during power outages.
- **Compatible** - Use GEOS, CP/M, Q-Link, BBS programs, productivity software and more. RAM port for connection of REU or GEORAM of any capacity. Pass-thru port supports most cartridges.
- **User Expandable** - Internal RAMCard allows expansion up to 16 Mb by using standard SIMM's.
- **FAST** - Up to 400x faster than a 1541; 20x faster than RAMDOS; Built-in JiffyDOS plus parallel interface to speed access to CMD Hard Drives.
- **Easy to Use** - Plugs into the Cartridge Port. Operates like a standard disk drive. File and disk copiers included along with partitioning and GEOS support utilities.
- **RL-DOS** - Organize RAM into manageable partitions that emulate 1541, 1571, & 1581 drives or expand to the full RAM capacity with MS-DOS style subdirectories.

RAMLink (no RAMCard)	\$179.95	Battery w/cable	\$24.95
RAMLink (w/RAMCard)	\$219.95	HD Parallel Cable	\$14.95
RAMLink (RAMCard/RTC)	\$239.95	RTC add-on Kit	\$29.95
RAMCard II (with RTC)	\$79.95	1Mb SIMM	\$42.00
RAMCard II (without RTC)	\$59.95	4Mb SIMM	\$145.00

Ordering Information and Shipping Charges

CMD Hard Drives: Continental US: \$25.00 per drive (UPS ground), \$35.00 (2nd-Day), \$45.00 (Next-Day), Canada: \$50.00 (Airmail). COD to U.S. only \$5.00 add'l charge. Foreign prices: Add \$100.00 to U.S. Retail Price
JiffyDOS: Add \$5.50 per order (UPS ground), \$10.00 (2nd-Day Air), plus \$5.00 for APO, FPO, AK, HI, and Canada, or \$15.00 for overseas orders. No add'l shipping if ordered with any hard drive. COD's add'l \$5.00
RAMLink: US: \$12.00 (UPS), \$20.00 (2nd day), COD add \$5.00, Canada: \$23.00, Foreign: CALL
RAMDrive: US: \$8.50 (UPS), \$16.00 (2nd day), COD add \$5.00, Canada \$18.00, Foreign: CALL
Payment: MA residents add 5% sales tax. We accept VISA, MasterCard, Money Orders, C.O.D., and personal checks (allow 3 weeks for personal checks to clear). Credit card orders provide the following: Card holders name, billing address, home/work phone, card number, expiration date and issuing bank name.

PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE • WE VERIFY ALL CREDIT CARD INFORMATION AND PROSECUTE INDIVIDUALS ATTEMPTING TO PERPETRATE FRAUD



Creative Micro Designs, Inc.
 15 Benton Drive, P.O. Box 646
 East Longmeadow, MA 01028

ORDERS ONLY: 1-800-638-3263

Questions and Support: 1-413-525-0023 • FAX: 1-413-525-0147
 • Office Hours: 10 AM - 5 PM Eastern Monday thru Friday •

CompuServe	C= C
GEnie	C= G
Q-Link	C= Q
Delphi	C= D
Other	C= O

Network News

FidoNet EchoMail Conferences

by Grady E. Brown

To continue on with our discussion of various networks and what they have to offer us as GEOS users, I wish to tell you a bit about an international network that is free and is probably on many of your local bulletin boards already.

What I am talking about is something called FidoNet. It has EchoMail conferences containing public messages that are routed to hundreds of BBS systems around the world. The cost of these messages is handled by the individual system operators, and in some instances may be passed on to the users.

I know of at least 360 different conferences supported by FidoNet at this time. Two of them, CBM and CBM-128, will be discussed here. I'll tell you how my on-line session goes with these conferences, so if you don't already call a BBS with FidoNet access, you'll better understand how to access them and use them.

With local BBS's, you may use any term program (telecommunications software) that you feel most at ease with. Of course, geoTERM 64 and geoTERM 128 will do just fine. I dial up my favorite local BBS (Electronic Educator), log-on, and am asked if I want to check for any E-Mail I might have waiting for me since yesterdays call. I open my buffer and say yes. The board then searches all the available Echo's (conferences) for any message addressed to me. For that reason, most BBS's that carry FidoNet Echo's require their users to log on and use their real names. No handles are allowed in FidoNet messages. If any E-Mail (messages) are found addressed to 'Grady Brown' it will open them one by one for me to read. After each one, I'm given the opportunity to do many things with them. Help, Reply, Kill, Nonstop, and

ENTER=next. I'll press return until I've received all my E-Mail, then close the buffer and save it to the REU choosing a filename with the current date. Then I'll go back to the conferences and choose the CBM echo. Open the buffer and Select [R]ead and [N]ew to read all the new messages since my last call. When all the messages in the conference have been read into the buffer and saved, I reply to specific ones that I may have info for. My local board does not carry the CBM-128 echo so I must call another board to access it. This is my normal procedure every morning. It is so simple and these messages come from and go to, almost everywhere in the world.

The topics that are discussed in the echo varies quite a bit. There may be many messages with questions & answers about specific software, programming, or hardware. There are scores of regular, very experienced users that send and receive messages via the CBM and CBM-128 echo every day. Many of them are very knowledgeable GEOS users too.

Now, for more background information on the FidoNet itself. Taken from 'CBM Commodore Computer Conference Guidelines and Code of Conduct - Revised: 6 Oct 92' "WHAT IS THE CBM CONFERENCE: This conference is devoted to promoting serious technical discussions of Commodore Business Machines (tm) hardware and software, including the PET, VIC-20, C-64, C-128, C-16, Plus/4, and other Commodore 8-bit CPU computers. This conference does NOT support the Amiga or PC lines."

Each conference (echo) has a moderator that is quite knowledgeable in their echos field. They are elected by the FidoNet sysops carrying that echo.

Another echo is CBM-128. Here the main topic (of course) is anything that has to do with the Commodore 128 and Commodore 128-D computers. It is more focused than that of the CBM echo.

An echo that is not yet a part of the FidoNet is the new CBM-GEOS echo. This is picked up individually by various SYSOP's around the nation for their users. Once its message totals reach a higher amount it can become an official FidoNet conference.

The nice thing about these three echos (or any FidoNet echo for that matter) is, you can post a message to someone specific or ALL and you may get an answer to your questions from that one specific person or many others that read your message. I have never had a question to unanswered and have found most people that frequent these echos to be very helpful and really love their computers.

There is a way to send private E-mail via FidoNet, and that is with NetMail access. This usually costs your SYSOP money and most pass this expense on to the users that are given this access. Usually this is in the form of an account you set up with your SYSOP.

You can even send and receive files via the FidoNet. To do this you **FREQ** the file. That is [F]ile [REQ]uest. This is another procedure that costs extra so must be set up with your SYSOP in advance.

These echos are very easy to use and understand, and can be accessed by any computer system and terminal software that you would prefer to use. I would like to list BBS's that have the CBM-GEOS conference, so if your board carries it, please let us know. □

RAM Peripherals

BBG RAM In Review

by Grady E. Brown

For years now we've been hearing how well, and how fast users have been able to do things with GEOS using a RAM Expander. I don't know what I'd do out my 512K REU. This is almost a required piece of hardware for anyone that uses GEOS regularly. 256K or 512K REU's were alright but it was GREAT when we learned they could be upgraded to one and even two megs in size. This allowed for so much utility value with it's speed and now lots of space. The cost involved in buying the initial REU and power supply as well as having the upgrade done has kept many from experiencing this height of GEOS ecstasy.

As with everything else in the GEOS world, we had someone come to our rescue. Peter Fiset (maker of the RAMDrive, sold by CMD) formed Performance Peripherals, Inc. His products are two very welcome hardware units. A battery backup cartridge for REU's and three RAM Expansion cartridges of varying sizes.

BBU stands for Battery Back Up, and will do just that. It plugs into the cartridge (REU) port and has AC and DC power to keep any 17XX or geoRAM powered up even when the power to the computer is turned off. How long have we all wanted something like this? Thanks to PPI, we no longer waste time reloading our REU's at the start of each GEOS session.

BBG RAM (Battery Backed GEOS RAM) comes in 512K, one meg, and two meg units at half the price of the original Commodore 17XX units. And, they don't have need of the larger power supply since they use the new lower power chip technology. What's even better, is that this unit comes with an AC wall transformer, and a battery pack to retain

the contents while the computer power is off. The cartridge itself is just a bit bigger in depth, than a game or utility cartridge. It has two LED's, Red for a Battery Low indication and Green for an Activity light. There is also an Enable/Disable switch. The battery pack is an open battery holder that takes four 'D' cells.

Care should be taken if you plan on removing the cartridge and taking it to another location. The battery and power connectors don't fit real tight, and can experience a loss of contact, thus losing your data in the BBG RAM. If you're careful, this can be done without mishap.

With all units, you receive a disk of GEOS utilities for using the hardware. Among them is a new Configure file that takes advantage of the extra RAM,

MountMRam1571 that gives GEOS the ability to support up to 5 RAM1571 partitions in a 2-meg BBG RAM or 2 in a 1-meg version., BBG RBOOT for rebooting after you've powered down the computer without losing the contents of the BBG RAM. With a 2-meg BBG RAM I currently have 2 RAM1581 RAMdrives configured on a one drive C-64 system used as an auxiliary computer. It's great.

BBG RAM works well with the TurboMaster and Master Adapter (configured for geoRAM), the gateWay v2.5

I believe this is the best way to add RAM expansion to your system. If you already have an REU of the 17XX series or geoRAM then I recommend the BBU. These are the least expensiveway to go, and the most compact of all the REU's on the market, as well as the fact that all your RAM is protected from data loss with the AC wall transformer and battery pack in times of a power outage beyond that of your turning the computer off.

The manual is so well done, and the setup procedure really isn't to hard to handle, you'll be up and running with your your new BBG RAM in no time at all. □

Display Page Advertising

Get more for your advertising dollars by advertising in geoVISION International. Our readers are looking for that one specific application or desk accessory to make their life just a little bit easier. Or, that special font or piece of clip art to spruce up their project. YOU can be that source. Advertising is available at the following rates per issue, and must be paid for in advance. Please submit your ad in one of the following formats: 1) Camera Ready copy, or 2) On 5 1/4" (1541 format) or 3 1/2" disk, in geoWrite, geoPaint, geoCanvas, or geoPublish format, with all the needed fonts included. geoPublish and LW (Laser Writer) fonts are recommended for the very best results.

Full Page	7 1/2" x 9 3/4"	\$30.00
Half Page	7 1/2" x 4 7/8"	\$15.00
Third Page	7 1/2" x 3 1/4"	\$10.00
Quarter Page	3 3/4" x 4 7/8"	\$7.50
Sixth Page	3 3/4" x 3 1/4"	\$5.00

programming that you should know about.

COMPUTE Publications:

Machine Language for Beginners by Richard Mansfield
 Programming the Commodore 64 - The Definitive Guide by Raeto Collin West
 Mapping the Commodore 64 & 64C by Sheldon Leemon

TAB Books:

Serious Programming for the Commodore 64 by Henry Simpson
 Lou Sander's Tips and Tricks for Commodore Computers by Lou Sanders

Osborne McGraw-Hill:

Commodore 128 programming Secrets by William M. Wiese, Jr.

Abacus Software:

The Machine Language Book of the Commodore 64 by Lothar Englisch
 GEOS Inside and Out - An introduction to GEOS, its applications and internals by Manfred Tornsdorf and Rudiger Kerkloh

The Advanced Machine Language Book for the Commodore 64 by Lothar Englisch Brady - Prentice Hall Press:

Machine Language for the Commodore 64, 128, and Other Commodore Computers by Jim Butterfield

Many of these books are still available. There may even be 128 versions of the books listed as 64 above. These are only the ones that I am aware of and have.

Another good source of GEOS programming is the Hitchhiker's Guide to GEOS (HGG). It is still sold by GeoWorks. It never went to press so be forewarned it is still in single page manuscript form, and is photocopied before being sent to you. It IS however full of great information, and should be a part of your programming library.

Both the OGPRG and HGG are older and only cover v1.0 through 1.3 at the latest, but they are still too indispensible to be without.

Contact the following companies for more information, product & book orders, and product support. The addresses and numbers were accurate at last contact. □

TechMedia Special Products

P.O. Box 2151

Salisbury, MD 21802 U.S.A.

Telephone: 410 546-0180

GeoBasic & GeoProgrammer

Software Support International

2700 N.E. Andresen Rd., #A-10

Vancouver, WA 98661 U.S.A.

Orders: 1-800-356-1179

Int'l Orders: 206 695-1393

Most ALL GEOS programs

GeoWorks

Order Processing Center

P.O. Box 1760

Carmel Valley, CA

93924-9970 U.S.A.

Telephone: 510 644-0926

Tu & Th 9:30-12:30 PST

Hitchhiker's Guide to GEOS

*You Can Contact
 geoVISION
 International
 On-Line Too!*

**Q-Link & GENie:
 GeoVISION
 FidoNet
 CBM Echo:
 Grady Brown**

See You On Line.

The World of GEOS



**HandBook {c}
 and Disk**

This Publication is to help you to get the most from working with, and using, GEOS. With topics from :-

- 'What is GEOS'
- 'Application Work Disks'
- Preparing 'GEOS Work Disks'
- 'Fonts that Don't Fit'
- 'Font ID Numbers'
- 'HandyScanner 64'

'geoPaint-geoPublish Connection'
 'Photo Scraps' and much more.
 The Disk contains Public Domain GEOS programs.

The HandBook is available folded and saddle bound to A4 size, for **A\$10.00** plus **A\$5.00** P&H, from:

JMV Grafix P.O. Box 635
 Blair Athol 5084 South Australia
 Cheques Payable to **Jane M. Jones**
 Foreign Orders add \$5.00

**geoVISION International
 Special Interest Disks**

5 1/4" DS/DD GEOS Disks

LW, Fonts

(Laser Writer Fonts)

Program Patches

(Various GEOS Software Patches)

RAW Player & Files

(Digitized Sound Files for GEOS)

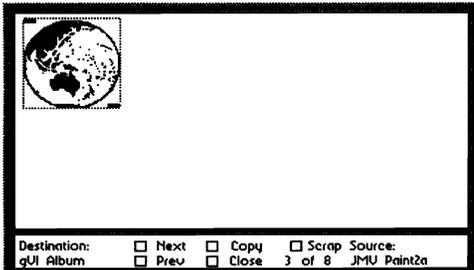
\$5.50 U.S., \$6.50 Canada,
 and \$7.50 International.

Check or Money Order in U.S. Funds.

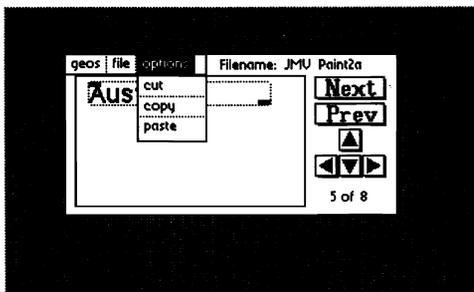
WA residents add local Sales Tax.

**geoVISION International
 816 S.E. Polk Street
 Camas, WA 98607-2240
 U.S.A.**

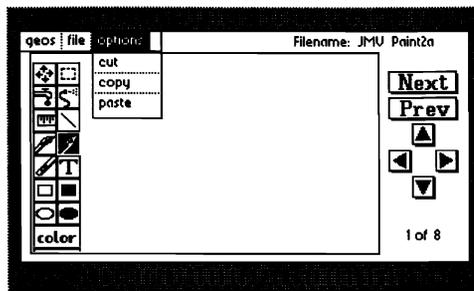
AlbumCopy & ScrapGrab
GEOS Applications & Accessories
 by Michael Myer



AlbumCopy 2.2 - Select destination and source albums then move forwards or backwards through the source album and transfer all the photo scraps you wish. AlbumCopy works from drive to drive or on the same drive. It will also paste a photo scrap from the source albums drive into the destination album.

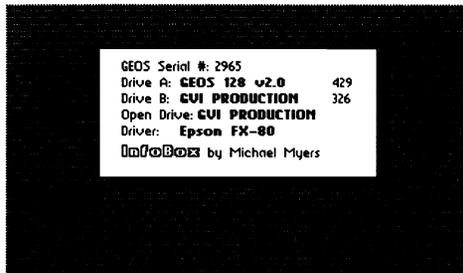


ScrapGrab 2.5 - Reach out from an application and grab a photo scrap from an album on the same drive or on a different drive. Two added features in this version allow you to **[Create]** new photo albums, and scroll the viewing window to better view scraps larger than the viewing window. This desk accessory will handle scraps up to 8K in size. ScrapGrab 2.1 is enclosed for your comparison.

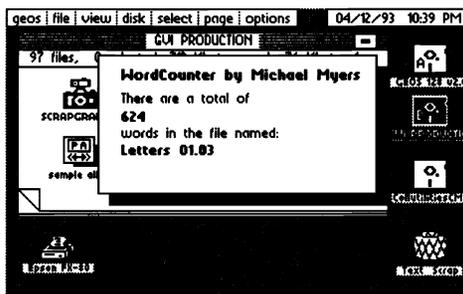


PhotoGrab 2.5 - This application version of ScrapGrab handles scraps up to

16K in size. It closely resembles the DA.



InfoBox - This desk accessory gives a variety of information. Your GEOS ID number, the free space in blocks (as opposed to K's) on drives A and B, the currently selected printer driver and the name of the disk in the currently open drive.



WordCounter - This desk Accessory will count the number of words in a geoWrite document. It counts groups of characters separated by spaces and cursor returns. Words separated by tabs but no spaces may result in inaccurate counts.

[EDITOR] Using WordCounter on the Information file included with these programs counted 353 words. I counted them by hand and came up with the same count. It works real well.

Each of the above programs will run from GEOS 64 and GEOS 128 but in 40 column only. They are all shareware if received from another source other than through Michaels offer here in REVIEWS or in the CLASSIFIEDS section.

There are also seven fonts included on this disk. Wilson, Kennedy - a scriptive font, McKinley, Harrison, Adams - All capital letters are in boxes, IconFont - allows you to box words like icons are in dialogue boxes, and Reverse.

These five programs and the seven fonts are available directly, on one disk for \$10.00 US postpaid from:

Michael Myers
 414 East 3rd Street
 Beardstown, IL 62618-1208
 (217) 323-5167

Spike Dethman
GEOS Utilities

Spike Dethman of Atlanta, GA is another Commodore user that has heard the call to continue his support and programming experience, passing on his inovative ideas in new GEOS programs to us. We may be hearing more of him in the future.

I paid my shareware contribution registering my use of geoPack v2.1 and Spike sent me in return, the following six GEOS utilities. Here they are.



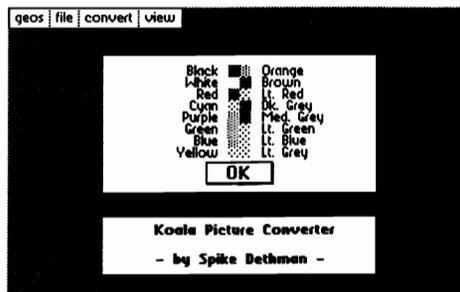
geoPack v2.1 - We finally have a utility that not only allows us to pack multiple files into one, for uploading or downloading by modem, it will also handle the converting too. This is all done automatically after you have selected the target files from the dialog box. geoPack does not compress the files as .ARC does, it converts them and packs them into a single .LNX file, making it much easier to handle when transferring multiple files. No more hoping that you've gotten all the files needed to make a program run. geoPack also makes for a much faster CONVERT session, which is what I mostly use it for. Especially from a RAM device. You can barely see the file names go by as it's unpacking and converting each file after a download. Don't worry about LYNX if you've heard all the bad things

it has been known to do to GEOS files. geoPack was written for GEOS, in GEOS, so it understands how to handle the file headers and all. And, it will run under GEOS 64 and GEOS 128 in 40 and 80 columns.

RAMBoot v1.1 - With this AUTO_EEXEC you can now reboot your GEOS system after a crash with your RAM Expansion intact, even if your drives were swapped. RAMBoot will reset your drives to their proper GEOS devices. No more missing drives after rebooting. An REU is required and this will work with 1541, 1571, and 1581 drives, as well as running from GEOS 64 and GEOS 128 40 and 80 columns (v2.0 only). Spike says that it can access drives 8 through 11, and will temporarily renumber them to 12 through 15, so watch out if you have devices in this area. RAMBoot takes the place of REBOOT on your system (boot) disk.



A K A - This one is really a great utility but is hard to describe, so let me quote Spike from the docs. "A K A is a utility that allows you to create 'aliases' for GEOS applications. These 'aliases' can be very useful to you if you have a RAM drive (or 2!) or have physical disk drives of different types. The 'alias' that is created will re-route the DeskTop to access the quickest copy of the application available, allowing you to run it at the fastest possible speed!" It will look for the parent application in RAM, then on a 1581, 1571, and then a 1541, thus trying to speed up your work just that much more. Although this may be hard to describe, the documentation does do a good job of explaining its use. As Spike says in the docs "A K A is released as freeware... It's pretty complicated, so I feel that if you can understand the concept, you've earned the right to use it! :)"



KoalaVert v1.0 - This application allows you to convert Koala Paints into GEOS Photo Scraps and back again. Spike has programmed in keyboard shortcuts that you can see and use in the pull-down menus. You can convert Koala pics that are in black and white or in color into GeoPaint files. KoalaVert will convert each color into one of 32 GEOS patterns you may select. (Color Table is shown above) Spike has included a few error and dialog boxes as well. This runs in 40 columns only, under GEOS 64 and 128.



Paint Rotate v1.2 - IT'S HERE! You can now rotate any GeoPaint document 1/4 turn clockwise or counterclockwise, invert it, or mirror it along the Y-axis or the X-axis. All this is done to the entire GeoPaint page in one easy process. There is one exception with Rotate. Rotating only affects the top 80 card lines of the page, so you'll lose the bottom 10 card lines. There is a thermometer type gauge telling you how far along the process is, and Spike notes that even in a RAM disk this may take a while. This one has a Shareware request of \$2.00. I think it's worth much more. Here comes more \$\$\$ Spike. :-)

Click Pix v1.2 - Click Pix will turn your GeoPaint documents into stand-alone applications. These applications (new Paint files) have a

newicon that says CLICK. Just click on one, and your GeoPaint document will load and display on the screen. GeoPaint is not needed for this. Now you can send Paint files to your friends and they can load them right from disk without having to use GeoPaint. Click Pix supports full color and you can scroll around the full picture with the cursor keys or the mouse. Just click the mouse button and it will exit back to the desktop. Spike says that you can even use a Koala Pad or light pen. This one runs under GEOS 64 and 128 v2.0 in 40 columns and is another Freeware program.

Spike has done a great job in bringing us a few new utilities for use with RAM and Graphics. These aren't just small or weak programs either. They are very powerful, and it surprises me that he has released them as Freeware and Shareware. They warrant commercial prices.

You'll notice a few interesting additions to the programs such as your pointer turning into a small watch while you're waiting for the Click Pix file to be created. And, error and dialog boxes that look familiar. I can't place where I've seen them before but I like them. And for those that like animation, he has incorporated some into a couple shareware boxes and info boxes. Look around and you may find more than I have mentioned here. Let me know if you do find more. I hope we see much more from Spike in the GeoFuture.

For more information (send an SASE) or to send your shareware contributions, if you already have one of his programs and use it, write to:

Spike Dethman
831 Mercer Street
Atlanta, GA 30312

SHAREWARE REMINDER: Shareware gives us all a chance to try a program out before we buy and if we like it pay for it. Shareware programs are still copyrighted, but are released to us under certain stipulations. The fees are required if you use the program beyond trying it out. Don't let our programmers down when they have given us so much. □

This is the latest (and not so latest) news that we have heard regarding software and hardware for GEOS and the Commodore. This information has been gleaned from various networks, BBS's, readers, advertisements, and other publications so the validity of such cannot be fully verified. Please do not base any major decisions on what you read here. If you have heard of something new or would like your product mentioned here, please write in and tell us about it. We will be happy to pass it along to our readers.

Although this doesn't have much to do with new news, I strongly feel something needs to be said about this. Please here me out.

Q-Link, the Commodore specific telecommunications network is still having problems with its system in the uploads area. The problem is that files can be uploaded but cannot be made 'live' so we can download them. This has been going on for quite sometime now. They fixed it in January but it didn't last long. The bug came right back and hasn't been fixed since. There're a lot of grumblings about people threatening lawsuits and the like, all for the reason that they can't get at the new uploaded files. Because of this, most have ceased uploading to Q-Link and many have closed their

accounts, moving to various other networks. That is their decision, but I'd like to bring up the fact that there is more to Q-Link than just new files to download.

Monday through Saturday in the GEOS Arena chat room, there are mini forums with occasional guests. Here's where you can drop in and ask questions of the GeoHosts and GeoReps that are most always available. If they can't help you, they can pass you on to someone that can. The GEOS message boards are still very active giving you another source of information. We still have the ability to download all the older software. I bet if you look through it all, you'll find something of interest you may have missed in the past. And there's E-Mail.

A great way to keep in touch with others that aren't across your back fence.

There are still plenty of people on-line to keep 'Q' going for a long time but, if they keep leaving, those of us that still enjoy and get a lot out of Q-Link, will lose it forever. I for one, see plenty of positive things left in 'Q' to keep my account very active. Please don't succumb to the temptation to jump ship, it's the best GEOS support in the marketplace. Let's make the best of what we have left.

Again, let me ask you for your new programs, press releases, and any information on programs that you may know of or are currently writing. This is the place to announce your new or old software and hardware. □

REU users: Battery Back any 17xx, or GEORAM, with the BBU. Use with GEOS (V1.3 up), RAMDOS or other programs that use REUs. Great for BBS. No heavy power supply needed.

GEOS users: BBGRam, Battery backed RAM expansion for GEOS 2.0, a fast reliable alternative to mechanical disk drives. Supports all drive types, multiple partitions, and alternate DESKTOPs.

PERFORMANCE PERIPHERALS, Inc.

5 Upper Loudon Road, Loudonville, NY 12211.

US orders, literature: 800-925-9774. Tech support, orders, FAX: 518-436-0485.

BBU \$59, BBGRam 512K \$89, BBGRam 1M \$119, BBGRam 2M \$159.

US S&H \$6. US COD \$4. Canada & Mexico S&H \$10. Other countries S&H \$19.
30 day money back guarantee. 90 day warrantee. Master Card / VISA  

User Groups

New Mexico Commodore Users Group

P.O. Box 37127
 Albuquerque, NM 87176
 Meets 1st Mon's, 3rd Thur's, & 3rd Sat's
 Publication: DIMensions
 BBS: Loadrunner
 505 268-4662 300/1200 baud 24 hours

Colorado Commodore Computer Club

1192 S. Nome Suite 'B'
 Aurora, CO 80012
 303 751-3247 (24 hour)

Basic Bits Commodore Group

P.O. Box 447
 North Ridgeville, OH 44039-0447
 Meets 3rd Thursday 6:45pm
 Jerry F. Swartz 216 243-0887.
 Monthly: Commodore Compendium.

Publications

SEMAPHORE

Published by:
 Commodore SIG of the MDC/RCC
 P.O. Box 1171 Carr Station
 Meets 2nd Tuesdays 6:30pm
 Editor: William Diamond

KEYWORDS

Published by:
 Commodore users Group of St. Louis
 P.O. Box 28424
 St. Louis, MO 63146-0984
 Meets 2nd Mondays
 Telephone: 314 837-0413

Commodore NETWORK Magazine

9 Wadeson Street
 Cobram, Victoria 3644 Australia
 Editor: Warren Naismith
 Commercial Publication

geoNEWS

Published by:
 geoCLUB
 55 High Bank Road
 Droylsden, Manchester
 M35 6FS England
 Editor Frank Cassidy
 Telephone: 061-370-6836

The TC-128/64 News

Published by:
 PARSEC, Inc.
 P.O. Box 111
 Salem, MA 01970-0111
 Publisher/Editor: John Brown
 Commercial Publication.

NYCig News (formerly Kids Computer News)

Published by:
 St. Hilda's & St. Hugh's School
 619 West 114th Street
 New York, NY 10025
 Editor: Thomas Trocco

Front Range Commodore Club

Published by:
 Front Range Commodore Club
 P.O. Box 272
 Niwot, CO 80544-0272
 Meets First Thursdays 7:00pm

Commodore User

Published by:
 Commodore Users Association
 P.O. Box 84
 Medford, OR 97501
 Editor: Vanessa Swing

COCUGazette

Published by:
 Central Ohio Commodore Users Group
 P.O. Box 28229
 Columbus, OH 43228-0229
 Meets Third Saturdays 9:30am
 Editor: Harold Stevens, Jr.

B C S COMPUTERS

Published by:
 Boston Computer Society
 One Kendall Square
 Cambridge, MA 02139-1562
 617 252-0600
 Commodore Editor: Larry Schafer

Free U.G.B.P. List Coupon

Group Name: _____

GEOS Meeting Day - Time: _____

Address: _____

City - State: _____

Zip (Postal) Code - Country: _____

Info Contact (Name - Phone): _____

Publication Name: _____

Issues Per Year: _____

BBS Name: _____

BBS Number: _____

Baud Rate(s): _____

Term. Params.: _____

Comments: _____

Please complete ONLY if your User Group, BBS, or Publication contains GEOS support. For Publications, please send a copy.

geoVISION™
 INTERNATIONAL
 BRINGING THE WORLD TOGETHER WITH GEOS

Mail to:
 geoVISION International
 816 S.E. Polk Street
 Camas, Washington
 98607-2240 U.S.A.

CLASSIFIEDS

These are FREE classified ads for the personal & commercial use of subscribers only. You may list software, hardware, books & magazines 'For Sale' or 'Wanted' here. Ads about User Groups, BBS's, and Publications should use the coupon in the column on the previous page. Your ad will run in the next available issue until either you ask for it to be pulled, your subscription runs out, or it's bumped off this listing. For example: The first ad will be placed on top. Each new ad will be placed on top of the previous one and will push the other ads down. When new ads are received and the allotted space is full, the oldest ad(s) will be dropped off the page. This is to give everyone a chance. RULES: All software must be Original with its original manuals (no copies or photocopies). Anything may be advertised as long as it is directly related to GEOS. Please, nothing over \$250.00 and no more than 30 words in length. Remember to list how to contact you in your ad copy. Fill out the coupon below or a photocopy for your FREE ad. Don't delay, do it today.

GEOS v1.3 for sale. Includes original and backup disk, manual, all in original package. Used but still works 100%! ReC64 computer and disk drive (1541). \$10.00 total cost. Mark S. Justick; 6717 Frontier Lane; Tampa, FL 33625 U.S.A.

Tortuous Death! Please sell me your no longer needed GeoCalc and/or GeoFile! Call 907 333-6555 or write Christopher McLeod; P.O. Box 210065; Anchorage, AK 99521-0065 U.S.A.

at once! Two packs available. \$5.50 each + \$1.00 S/H. Send SASE for details. Mary Wilson, 2300 Chaucer Street, Clearwater, FL 34625 U.S.A.

GEOS Software: AlbumCopy, ScrapGrab, PhotoGrab for photo scrap and photo album organization. Plus WordCounter, InfoBox and GEOS fonts. \$10. US postpaid. Michael Myers; 414 East 3rd; Beardstown, IL 62618

GEOS FONTS 10 disks on both sides. 1 disk of Printer files \$15.00 plus \$3.50 shipping. Commodore Authorized Repair. 307-745-7077 Harvey and Associates, 1409 Mill Street, Laramie, WY 82070 U.S.A.

Wanted: Computereyes or HandyScanner 64. Gary Tuenge; Box 58; Erskine, MN 56535 U.S.A.

Multifont Packs let you access 49 fonts

The World of GEOS HandBook and Disk This publication is to help you get the most from working with, and using GEOS. The disk contains Public Domain GEOS programs. The HandBook is folded and saddle bound to A4 size, for A\$10.00 plus A\$5.00 P&H, from JMV Grafex P.O. Box 635 Blair Athol 5084 South Australia. Checks Payable to Jane M. Jones. Foreign orders add A\$5.00.

Free Classified Ad Coupon

Please complete **ONLY** if your ad is for GEOS related merchandise. 30 words maximum. First two words will be **BOLD**.

geoVISION™
INTERNATIONAL
BRINGING THE WORLD TOGETHER WITH GEOS

Mail to:
geoVISION International
816 S.E. Polk Street
Camas, Washington
98607-2240 U.S.A.

Name: _____
Address: _____
City - State: _____
Zip (Postal) Code - Country: _____
Telephone Number: _____

- FOR OUR RECORDS -

Programmers Reference Guide for sale. \$15.00 (US) plus \$3.00 S/H for The Official GEOS Programmer's Reference Guide. Grady Brown; 816 S.E. Polk Street; Camas, WA 98607-2240 U.S.A.

GEOS Files for Aussie users. File Library, 14 D/S disks, 800+ files \$50 GEOS Fonts (some original), 10 D/S disks \$40. Individual disks \$5. each. Stamped envelope/banknote with enquiries. Jeff Carey; Box 146 GPO; adelaide, SA 5001 Australia.

'Toons! Lots of Commodore GEOS clip art cartoons available. Each disk has at least one font and approx. 50 cartoons. Send \$3.50 US (refundable with your first order) to: Cartoon Sampler; 7048 Michigan Street; Elwell, MI 48832 U.S.A. for catalog.

Cut Sheet Feeder for Panasonic 1624 Printer. New in box \$25.00. Gary Koerner 22614 Braken Carter; Katy, TX 77449 U.S.A.

YES, Sign me up for a years Subscription to geoVISION International

U.S. First Class Mail \$21.00

CANADA & MEXICO Air Mail \$27.00

INT'L Air Mail \$33.00

Please just send me a single issue as indicated here. Number: _____

U.S. First Class Mail \$4.00

CANADA & MEXICO Air Mail \$5.00

INT'L Air Mail \$6.00

New

Renewal

Payment must accompany your order.

Washington residents must add State sales tax.

Published

BI-Monthly

Name _____

Address _____

City _____ **State** _____

Zip+4 _____ **Country** _____

geoVISION International 816 S.E. Polk Street Camas, Washington 98607-2240 U.S.A.

YES, Sign me up for a years Disk Subscription to geoVISION International

U.S. First Class Mail \$30.00

CANADA & MEXICO Air Mail \$39.00

INT'L Air Mail \$45.00

Please just send me a single disk as indicated here. Number: _____

U.S. First Class Mail \$5.50

CANADA & MEXICO Air Mail \$6.50

INT'L Air Mail \$7.50

New

Renewal

Payment must accompany your order.

Washington residents must add State sales tax.

Published

Bi-Monthly

Name _____

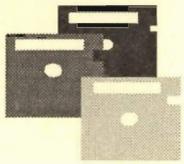
Address _____

City _____ **State** _____

Zip+4 _____ **Country** _____

geoVISION International 816 S.E. Polk Street Camas, Washington 98607-2240 U.S.A.

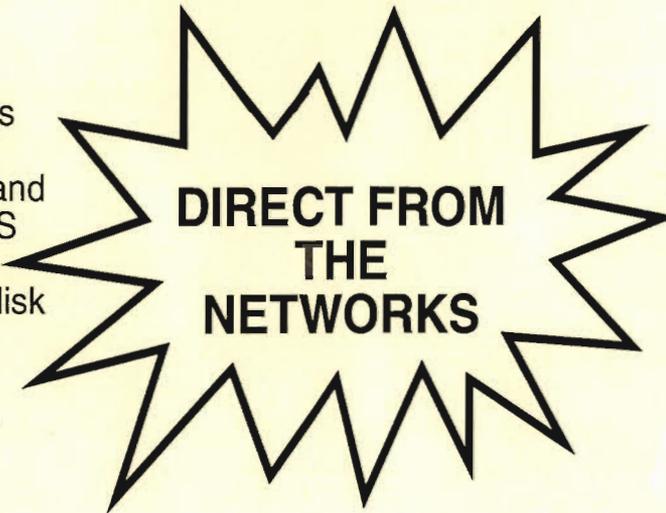
THE DISK



geoVISION _INTERNATIONAL_

THE DISK

So you don't have access to the major networks? Save downloading time and money by ordering GEOS files on 5.25" (1541 formatted) disks. Each disk will be filled, both sides, containing various files from the major networks.



FONTS
APPLICATIONS
DESK ACCESSORIES
DRIVERS
AUTO EXECS
CALC TEMPLATES
CLIP ART
FILE TEMPLATES
& MUCH MORE

SINGLE DISK RATES (U.S. Funds)		DISK SUBSCRIPTION RATES (U.S. Funds)	
U.S.A.	\$5.50	U.S.A.	\$30.00
Canada/Mexico Air	\$6.50	Canada/Mexico Air	\$39.00
International Air	\$7.50	International Air	\$45.00

Payment must accompany filled out subscription coupon.

Washington residents must add your local State sales tax.



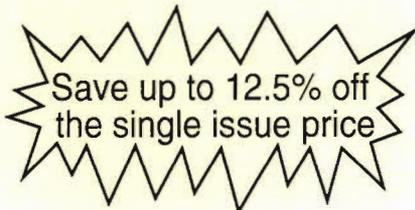
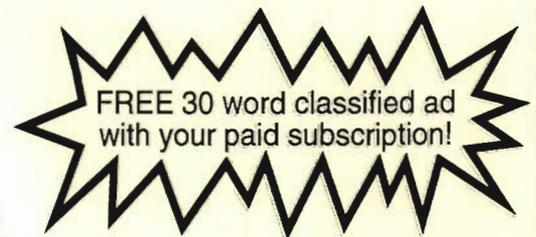
geoVISION _INTERNATIONAL_

THE MAGAZINE

BE A PART OF gVI

SUBSCRIBE NOW
AND GET:

HOW-TO ARTICLES
PRODUCT REVIEWS
PROGRAM SOURCES
TIPS



Keep Up To Date On GEOS Information!

SINGLE ISSUE RATES (U.S. Funds)		SUBSCRIPTION RATES (U.S. Funds)	
U.S.A.	\$4.00	U.S.A.	\$21.00
Canada/Mexico Air	\$5.00	Canada/Mexico Air	\$27.00
International Air	\$6.00	International Air	\$33.00

HERE'S THE SOFTWARE YOU'VE BEEN LOOKING FOR! A Dynamic Duo Just for the Commodore!

TRY A SUBSCRIPTION TO *LOADSTAR* RISK-FREE...
PLUS, GET FREE SOFTWARE!

Thousands of Commodore® owners agree there's no need to look for new software when you have *LOADSTAR*,® the monthly software subscription created especially for the C-64. Now you can get an issue of *LOADSTAR* RISK-FREE so you can judge for yourself.

Each month *LOADSTAR* is packed with 7 to 10 all-new, all-original programs and features. Great games...helpful productivity tools...mind-bending puzzles...terrific graphics...useful utilities—you won't believe the variety and the quality. The price? Even harder to believe—less than \$10 a month—*that's about \$1 a program!*

Call 1-800-831-2694 now for your RISK-FREE issue.* If you like what you see, pay just \$29.95 for a 3-month subscription, which includes your first issue, and then you'll receive a **Special Bonus Disk** of subscribers' favorites—FREE, just for subscribing.

OUR GUARANTEE—If you're not 100% satisfied, write "cancel" on the bill and owe nothing. The first issue is yours to keep, no matter what!

*RISK-FREE offer available ONLY in the U.S.

ADD 22 POWER TOOLS TO YOUR GEOS FOR UNDER \$20!

Life's little computer problems won't be YOUR problems when you order *GEOPower Tools*. This collection of 22 powerful GEOS® utilities will help you:

- Resurrect a file that's been trash-canned from the DeskTop with Phoenix.
- Play any SID song with a ".mus" suffix with GeoSid.
- Grab a portion of any screen and save it as a photocrap with GeoFetch.
- Convert standard 9-block Commodore fonts into GEOS fonts with Font Converter.
- Print all Print Shop® or PrintMaster® graphics on a disk in one fell swoop with GeoLibrarian.
- Turn any GeoPaint into a jigsaw puzzle program with Geo Pixel Puzzler.
- **AND MUCH MORE!**

They're so easy to use, you'll find yourself using them EVERY DAY! Plus, all the documentation you need is on disk. Get *GEOPower Tools* now for just \$19.95! Because we ship UPS 2nd Day Air, you could be getting maximum power from your GEOS this week! Your satisfaction guaranteed or return the disk for a full refund. Call 1-800-831-2694 now to get *GEOPower Tools*.

*Plus shipping of \$4.50 to anywhere in the continental U.S.

Call 1-800-831-2694 Now!

If Outside U.S. Or Canada, Call 1-318-221-8718

SOFTDISK PUBLISHING • P.O. Box 30008 • Shreveport, LA 71130-0003 • 1-318-221-8718 • 1-800-831-2694 • Fax: 1-318-221-8870

CODE GEOS3

geoVISION
INTERNATIONAL
BRINGING THE WORLD TOGETHER WITH GEOS

816 S.E. Polk Street
Camas, Washington
98607-2240 U.S.A.

ADDRESS CORECTION REQUESTED



Please Rush
Dated Material