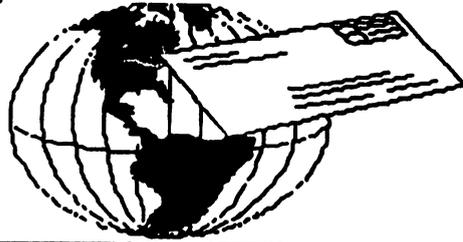# COMMODORE MAILINK

## NEWSLETTER OF — MEETING 64/128 USERS THROUGH THE MAIL

*Francis Redmond, President*

### JANUARY 1996

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## January 1996 Message

### Frank Redmond

A belated holiday greetings from me. Because of scheduling, I had to prepare the November message early in October. With my mind on reminding everyone about the 1996 dues, the weather in the nineties, and me being eager to make a fishing trip, Christmas and New Years were never in my mind during writing up the November message. I hope you all had a nice time and remembered your faithful Commodore. At the last moment I went out and got one of those little miniature vacuum cleaners and gave mine a good cleaning. I hope I didn't spoil it.

Let's all welcome the new members. Their names are listed elsewhere in this issue.

I received a message from Anne Stieduhar that George passed away. George was long time member and we will miss him. We offer our condolences to his family.

In September I requested that you folks give a token of appreciation to Tom, Brian and Joe for their efforts, and I gave them a year's salary as a bonus. However there are other persons in the

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**Dues and donations**
Joseph Y. Powell, treasurer
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**Membership addresses and biographies; corrections and changes**
Brian Vaughan
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Alameda, CA 94501

**Newsletter**
Jean Nance, managing editor
1109 Briarcliff Dr.
Urbana, IL 61801

organization that do their jobs so quietly and efficiently that they seldom get noticed. Included in that list are Jean Nance and Jim Green. They will also receive a nice bonus. Also thanks to Gary Noakes. Sorry Gary, no bonus. I don't think there is any great need to send them flowers, but just recognize their contributions. I also should mention that Walter Johnson will send in the list of new Commodore vendors as they are issued in Loadstar.

I also give thanks to all of you members that contributed over and above the amount of dues to the MaiLink. As you know the Government, the Waterworks, Gas and Electric monopolies, and commercial organizations consistently overrun their estimates. Of course the MaiLink executive officers are so erudite and are seeing that they would do no such thing as exceeding a budget. Still, its nice to know that because of the generoisty of you folk, JUST IN CASE, it gives us a bit of insurance. Of course any savings will be reflected in our 1997 dues.

When I reluctantly took over as president in August of 1994 it was for two years. My term will be up next August and Tom Adams who is now Vice President will take over. Since the functions of the Vice President are rather vague, I thought it was about time he got his feet wet as President. So as of February 1, we will work together in making decisions and he will gradually wean those functions from me. At present, I will continue to respond to people's requests about joining the group and processing new members.

I refer to my title as president with a bit of proudness. However we don't have a consititution. We don't nominate anyone and we don't have any election. I feel my job is more of a coordinator. We need a person to make decisions and act as a focal point for processing new members and various other operational function.

Jean asked me to take over when she resigned and I did the best I could. When Tom takes over I believe he will continue in the same way, even better. Thank all of you for your cooperation. However you are not going to get rid of me so easily. I will continue on as Vice President after Tom takes over. You might just get to read more of my immortal prose.
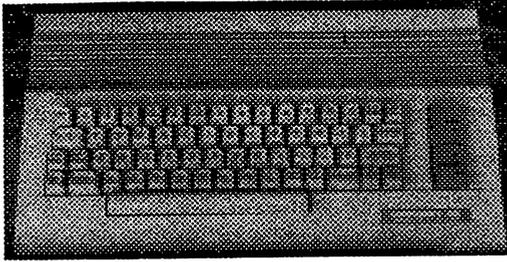
# The Cluttered Editor's Desk

### by Jim Brain

In your hands is the January issue of the Commodore MaiLink. Due to the holidays, the submissions were low, but that's understandable. I am very pleased to edit this issue of the MaiLink. This is my first attempt at publishing on print media, so I hope the result was worth the effort.

Some of you may know me through the historical and technical articles I write for Commodore World and LOADSTAR, while others know me from the Commodore trivia contest I run on the Internet. I do edit and publish the free online Commodore Hacking Electronic magazine, which covers technical articles (not hacker articles...) on using and enhancing your Commodore computer.

I encourage MaiLink readers to contact me for answers on technical questions, which is primarily why I am a member. Sadly, since I help so many CBM people every day (typically 20 or so a day online), I have very little time for simply chatting. But, if you do have a question on your Commodore system, feel free to send it to me.

## Publishing Details

This issue was done on multiple Commodore machines. Print submissions were typed in by my wife on either a C64, C128, or PET computer, depending on what I was not using. Editting was done on my 64, with some work done on my UNIX account from work (no 64 at work). Since I just was not satisfied with my commercial 64 publishing programs, I typeset the issue in Postscript and output it directly to a Postscript HP LaserJet 4M. Since I program, I might fix this to my satisfaction, since Postscript is not a utopian solution. All the graphics in this issue are taken from my collection of Commodore pictures on my Internet World Wide Web site. I didn't have time to finish a redo of the banner graphic, so it was printed on my Okidata 180. All other graphics were printed from the LaserJet.

## Our Next Editor

Jean Nance, 1109 Briarcliff Drive, Urbana, IL 61801-5301, will be the editor of the March MaiLink. Her deadline for material is February 16th. Notice the address, some members are still writing to her St. Joseph address. All material of more than a few lines should be on disk, in TWS or Pet ASCII format. 'Buy/sell" items especially should be on disk if they are more than a couple of lines, it is difficult to copy out details on models, program names, and prices without error. If your list is too long it will be shortened and members will be asked to send you a SASE for details.

As of December 7th, there were no 1996 MaiLink editor volunteers past the January issue. Help! Help! Jean does not want to edit four more issues this year.

# GEOPAINT: THE SEQUEL

If you read Bob and Allie Hunter's article on geoPaint in the September issue of CML, then you should be familiar by now with all the tools and their basic use. What I propose is a more advanced use of those tools. Included are three examples of basic graphics you can do with geoPaint.

One thing that Allie mentioned, was to make a box for the sign and then put the text in it. This is not the best way of doing things, because there are two reasons for not doing it this way: One, your text may be much too large and doesn't fit your box, and, two, moving the text area around may inadvertently wipe out part of your box you want to put it into, and you have to start over again. It is better to write your title and then frame it. You have a much better control over things. Look at the example of the framed text. After the text was written, a box was drawn around the text with even spacing. Then another, larger, box was drawn around the first one, and then a third and fourth one. The last two will be closer together and filled with black. The other two will have the space between them filled with a pattern. Remember that you are not limited to a single pattern in a fill area. You may combine two of them for a different look, although this involves a lot more work.

Another way of doing things is to use the various shapes of brushes in combination with a pattern. Take a look at the bow,  it was drawn with a diagonal line brush using one of the patterns. When you choose the brushtool, the bottom of the screen shows 32 different brushes. If you have selected a pattern, your brush will draw with that pattern. This can lead to some very interesting results.

Another use of geoPaint is making scale drawings. For this, you will have to use the ruler to measure your distances. However, the ruler geoPaint provides, leaves lot to be desired. It is suggested to use a different ruler, one that leaves a dot at either end of the measured line. The ruler in geoPaint doesn't do this and you have to make a mark on the screen. The ruler measures in pixels and inches, whichever you prefer. Choose a standard, such as 1 inch on the screen equals 5 feet in reality. Another use of the ruler is to produce charts. Distances must be accurate, in this case. This is a simple process that involves only lines, easy to draw.
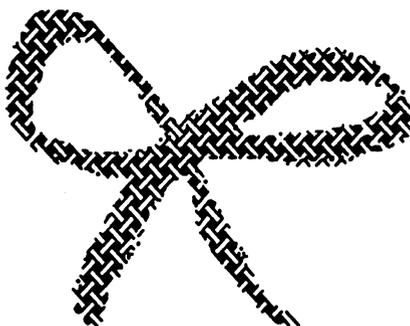


Another tool that may come in very handy is the spray can. After having made a drawing like the head in the illustration, it is very easy to feather the hair, or the fur of an animal, or thin out leaves on a tree using the spray can. When you choose this tool, you will have several options at the bottom of the screen. Click on the small square beside WHITE ONLY and also on the square beside INVERTED. When you move your spray into the drawing area, you will have an eraser in the shape of your spray can. What you will have to do is to make quick swipes with the pattern of the spray can.

The eraser, either in normal drawing, or in pixel editing, leaves you with a fixed shape of an eraser. Custom erasers can be made, simply by choosing a brush from the brush menu, and then selecting a pattern, in this case, the first one: WHITE. On a dark area of the screen, you can now draw clouds, waves, or what have you, by erasing areas. Don't overlook this technique, as it resembles the black canvas technique in painting. Very striking effects may be obtained in this manner by the use of various brushes.

Another technique is perspective. For this you have to set the vanishing point. This is the point where all lines come together on the horizontal axis. Sort of like a long and thin triangle. Draw the major lines from one end of the drawing to the other and start your graphic, say a building seen from a corner. As you move further back from your viewpoint, everything gets smaller. As an example, take a look at a photograph of a building or a road. As it goes into the distance it gets narrower. Take this into account when making a drawing of a building. Use the perspective to your advantage, instead of making a head-on flat drawing. When you are finished, simply erase the guidelines you made.

Three-dimensional drawings may be made by using shading and shadows. Draw a sphere, for example, or a cube. The side away from the light is always darker. In the case of the cube it is simple. Use a pattern-fill for the side away from the light. Then use the line tool to create the shadow area and then fill it with black or a denser pattern. When doing this with a sphere, you will have to use several dot patterns to simulate the shaded side. Closer to the edge use the darkest pattern with a small round brush. Now follow the outline of the sphere on the side away from the light. Remember that the shade gets wider towards the middle. Next use a different, lighter, dot pattern for the shaded area, laying it next to the other one, until you use the lightest dot pattern. This will take some experimenting to get it right, as it is all done free-hand.

Using all of these techniques, you can create anything you may imagine. You may create business cards, invitations, labels, or any other drawing you may conceive. Remember to start with an outline of the subject and work on small areas after the main lines have been completed. Use any of the tools geoPaint has to offer and use them in combination with the patterns. Don't forget to invert a brush pattern for some very interesting results. It takes a lot of patience and experimenting, but the results are well worth the effort. Remember, that with every new step you take, it becomes easier. Don't be discouraged by your first attempts. With this I will close with the following drawing. When you have similar areas, duplicate one of them and then make minor modifications only.



One last piece of advice: Update often, and keep a copy of your drawing on another disk. Use UNDO if you don't like your latest move.          by Roger Detaille - November 7, 1995
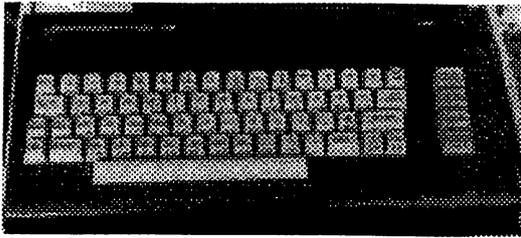
# Marketplace

*For Sale by David Drew:* 2-64C's, $24 each; 1541-II, $35; 1660 modem, $10; Partners 64 cartridge, $12. Will sell all for $75. Prices do not include shipping.

*For Sale by Charlotte Mangum:* 16 ribbons (some carbon correctable, some cloth) for a Brother daisywheel printer/typewriter (Brother $s 7020 and 8020). They may work on other models. I can draw an outline for you if needed. They're yours for the postage.

*For Sale by Dale Steenhoven:*

| | |
|---|---|
| Icon Factory | $10 |
| Computer Aided Drawing | 12 |
| Big Blue Reader 128 or 64 | 15 |
| Bible Search 3.2 | 25 |
| Superbase 128-15; Partner 128(80 col) | 20 |
| 1670 Modem 1200 | 15 |
| 1571 Disk Drive | 75 |
| Fastload Cart. | 15 |
| Wordwriter 6 | 15 |
| Newsroom with 3 clip art | 15 |
| Icon Controller Joystick | 10 |
| non-working C=128 | 10 |
| C=128D (no keyboard) | 50 |
| Geopublish | 20 |
| Create a Calendar | 10 |

Please include $3 S & H. Send SASE for free list of over 200 programs available!

*For Sale by Larry Lucht:* The following "Treasure Trove" of equipment is for sale for $1000 plus the cost of shipping: 128 w/ JiffyDos, 2 SX64s, C64 w/jiffydos, 2 C64s, 2 64Cs, Atari 600XL, VIC 20, 1541 w/JiffyDos, 1541 w/8-9 switch, 3 1541s, 1541 II, 1581, numeric pad w/adapter for 64 and SX64, 2 regulated power supplies, G-Wiz and Super Graphics printer interfaces, M3 mouse, Supra 64K and Practical Peripherals 512K printer buffers, misc. cables and chips, Super Snapshot V4, Explode V3, Final Cartridge III, several joysticks, 21 Second Backup system for two drives, Easy Speech module, 100's of programs on disk and cartridge many in original boxes w/ manuals, dozens and dozens of books and magazines including RUN, INFO, AHOY, GAZETTE, COMMODORE, etc., 902A, 1802, Magnavox 40 column color, Star SL10C, Star NX1000, Commodore 803, two 300 baud Total Communications, 300 baud Commodore, two 2400 baud Aprotek, 2400 baud Multitech (requires external ps).

*Wanted by Ed Hickey:* Pocket Writer 2 and Print Shop software for the C128. Also need a printer parallel interface cable like Xectec Super Graphix.

*For Sale by Estelle (Millard) Heron:* C128, 1571, 1902A, Riteman printer, 1351, many disks including GEOS, Summer Games, Geneology, The Partner, Swiftcalc, etc. Would like to get $200.00 out of 128 and 1571. Call and make offer.

# Announcements

Joe (aka Kilroy) Fenn has been informed by Harv Harris that the tax program will be out about Dec 15, 1995. For those who ordered it, he will get it to you as soon as he receives it.

If there are interested Amateur Radio (ham) readers interested in packet radio, Joe also has the latest V5 version of the famous Digicom software used worldwide. The software is public domain, so Joe can copy the disk and send copies of the C64 and C128 versions in return for a disk (in a mailer) and $1 in postage.

The membership list will be sent with the March issue. If you have any changes you would like in your bio, send the information to BRIAN VAUGHAN as soon as possible. Remember, you can chose to have your home phone, or your EMail address included in your bio. Bio information other than address changes will not be printed again until the September list. Also notify Brian if you would like to volunteer as a 'Friendly Correspondent".

The membership list includes an information section. If you would like to volunteer as a resource person, to help other members with problems on particular topics, please notify TOM ADAMS who edits the section.

John (Zeb) Larry mentions that he can help anyone trying use the CBM as a monitor for making video tapes using his Camcorder Switch, published in LOADSTAR #136. He has complete instructions on how to use the device.

# Questions

Help Me!: I have a question I have been thinking about for a little while now. I would like to know if it is possible to draw lines using The Write Stuff? This was prompted by the C-MUG newsletter that I edit every month. Every month, I print the "in-issue" that appears on the first page of the newsletter under the masthead. I draw the lines with a pen and ruler. If you have a way to draw the lines with TWS, I would like to hear from you. I started looking into this myself which brought up another question. I tried the Commodore key with some letters and the program started to react like I was issuing commands. I checked the manual but could not find any mention of the Commodore key combinations. Can anyone tell me what is going on when I use these Commodore key combinations? Maybe I've discovered something new and undocumented?

Unix: I am looking for a file to complete my Unix 128 v3.10 package. I got the entire package from a member of C-MUG who downloaded it from GEnie a while ago. The package consists of four files named, UNIX310A, B, C & D.arc. When I went to dissolve the files the A, B and D files were fine, but the C file has an error in it, so it would not dissolve. I tried to copy it to another disk but got the same disk error. The member tried his copy and got the same error. This member is no longer a member of GEnie so he can't try to download it again. If anyone has this program or knows where I could get it, I would like to hear from you. I did a review of v3.00 for the C-MUG newsletter a while ago and would

like to do a follow-up review of v3.10 or later, if I can. I wrote to the author of Unix 128, Gregg Riedel, and he told me there was a v3.11, but I haven't found that one. Of course, if you know of a version after 3.10 I would be interested in that also.

If you would like to see my review, let me know and I will submit it to the MaiLink, also.

Bob Burns

Are there public domain programs which can be used to view DOODLE and KOALA graphics files?

Is there a way to find the ENDING address for a machine language program?

Is there a way to change the disk name if there are already files on the disk without affecting the files?

Donald Squire

My vision is impaired (macular degeneration) so I use a large type. A few months ago I purchased a 24-pin Samsung printer from CMD. It prints OK from my SwiftCalc, General Ledger and WordWriter programs. But I connot get it to do what I wish from GEOS or FGM. I have written to both CMD and to Samsung, but have not heard from either yet.

Sometime ago I read an article in MaiLink about 24-pin printers but I cannot now find it so I cannot write to its author.

Another frustrating and unusual event occured to me. Last summer I

subscribed to Loadstar for 3 months. My first issue would not load into my 128D which I use in 64 mode only. I called Loadstar and talked with Vic who sent me a replacement with a request that I return the original issue. The replacement would not load either so I sent them both back. Sometime later I received another issue which would not load. Tom Adams suggested that I contact Jeff Jones, which I did, but he could not offer any reason for my problem. He authorized a refund of my money which I have not yet received.

Possibly some one in the club may read this letter and be able to offer some suggestions. I would write to the member which wrote the article to which I referred but I cannot recall his name.

Very truly yours,
John G. Shaver

# MaiLink Mailbox

I noted in the November Feedback that Bob Richey decided to drop from the club because it publishes nothing but GEOS. To make things balance out, earlier in the year I received a curt letter from a now ex-member who complained he was dropping from the club because we DON'T have enough articles about GEOS. Now I have been using the Commodore for a longer time than I wish to admit and have studiously avoided GEOS. But after these comments, I think I am going to give it a try. Maybe I have been missing something

Frank Redmond

```
**** COMMODORE 64 BASIC V2 ****
64K RAM SYSTEM  38911 BASIC BYTES FREE
READY.
■
```

# GEnie Conference On Novaterm

On Monday 4/24/95, the Commodore RoundTable was pleased to visit with Nick Rossi - author of the famous Novaterm terminal program for the Commodore 64. The conference was hosted by Eddie Bourdon (E.Bourdon1) and recorded by Sherry Freedline (C128- QT.PIE). Read on for information regarding the soon-to-be released Novaterm 9.6 and details on Novaterm 10.

**<Eddie>** Hi Nick

**<QT>** We're glad to see you Nick. Originally this was going to be a formal conference, but it will now be a semi-formal (sport coats and tie) instead. We are about to go to listen only mode. Please hold your questions. If you have any, just type /RAI. Tonight we have Nick Rossi, author of Novaterm.

**<Nick>** I want to take this opportunity to update you all on my progress... Novaterm 10 is taking a long time, and there's still a lot to do, so I've decided to put some of the new features into an intermediate release that will be version 9.6. There are some bugs and issues that have been hanging around for the last year, and I need to address them with a release. There are a number of minor new features, but the main improvements that I'm putting in this version 9.6 will be...

1. Optimization of 80 column mode...it's a little more efficient now,it can keep up with 4800 bps *without* scrolling (so I estimate about 500 cps printing speed).. but scrolling is still slow.

2. A fast 80-column scroll mode that uses a RAM expansion unit for scrolling the screen... in this mode it can definitely keep up with 2400 bps.Throughput for higher bps rates will naturally go up.

3. Using a RAM expansion unit as a big buffer, being able to capture directly to it, and download without the use of RAMDOS. Along with that, the buffer will be preserved when you go over to the text editor, so you'll be able to load in capture files. (If you have one of those BBU's, then the buffer will be preserved even if you lose power...I'm going to experiment with 'buffer recovery.

4. More user-friendly configuration in the form of a first-time configuration program that leads you through the process -- good for new users... Everything else new is minor, such as an on-line timer in 80 column mode, and terminal emulation scripts that you can load from a menu (i.e. when you want to change from ANSI to VT102 or Commodore, pressing C= T and selecting from the menu will load ALL the necessary drivers)

**<Eddie>** Those sound great. When will it be available?

**<Nick>** I'm pushing hard to get this out the door as I need to concentrate on a new job for a while... but it is being beta-tested by several people, so hopefully any little critters will be killed off before releasing it.. I don't know the exact date though. (I never do until it comes...)

**<Eddie>** One thing that I've noticed about Novaterm over any other term I've used (including 128 terms) is that the ANSI translation is very good. Any plans to release a newer 128 version of Novaterm ?

**<Nick>** No, there's too much of a learning curve there for me, and I have my hands in a number of other projects...

**<Anitra>** The only thing I know about Novaterm is that it is highly recommended. With that in mind, then, how easy is it to use? I currently use WIZARD for GEnie, and no other Term programs.

**<Nick>** Well, I try to make it as easy as possible...perhaps someone else can describe their experiences with it when they started out. I've been staring at it for almost 10 years, it's hard to be objective :) I focus a

lot on the user interface, especially these days as I've learned more about user interface design. Any comments?

<Eddie> I started off using Novaterm, and moved up from there. In my opinion, NT is the best 64 term program available.

<Tim.P> This may seem to be a dumb question, but the size of the program wouldn't have anything to do with the transfer rates, would it?

<Nick> No, not exactly... it depends on what you're downloading to. There's no fast-read/write code for 1541/71/81, so the disk drives are the bottleneck... and RAMDOS is very slow accessing the REU... Using the direct DMA code I'm working on, the transfer rates to REU should improve dramatically...

<Eddie> How about using NT on a Ramlink with native partitions? Any problem there?

<Nick> I've heard of none. I believe direct access with RAMlinks is possible, similar to the REU, but I would need a test unit and some specs to implement that. It could be done, though, since the code is modularized as always -- just load a different driver over the top of the existing one.

<Tim.P> I'm not too sure what FD-compatible means but is (or will) NT be FD-compatible? ... Also, there is one FD command I type while using Novaterm that always crashes the program. It's "t-ra" which reads the date and time of the FD.

<Nick> You mean compatible with CMD's FD-series drives? I don't think there's any problem using them with Novaterm... no one has ever said it wouldn't work.

<Tim.P> Yeah, that's what I meant.

<Nick> Oh, that's interesting... I suppose the output of that command isn't in the common error code form (such as 00,ok,00,00).. I bet that's why.. Just another assumption to be changed :)

<Tim.P> One more thing. THe autodial waiting screen doesn't tell when there isn't a dial tone.

<Nick> Novaterm should detect the 'no dialtone' string from the modem. At least it does for me..

<Tim.P> Hm. I wonder if different modem manufacturers define the "no dialtone" (as in putting a space between the dial and tone.)

<Nick> Could be. You can try dialing from terminal mode with ATDT, take your phone off the hook to force the no dialtone message, and see what happens.

<Tim.P> What modem are you using, Nick?

<Nick> It's a Boca 14.4, a poor modem, really...

<Eddie> I have owned my Boca for over 1 year now, with no problems at all with it.

<Nick> Really? Mine won't make a connection with certain other modems part of the time. It spits up at 2400 baud modems on the other end...

<Tim.P> Sometimes I think they sell the poor modems out to the west coast. :) Locally, the Bocas have received nothing but complaints.

<QT> Nick, when did you first start NovaTerm?

<Nick> Oh boy, I think it was 1986.

<Tim.P> But the first "public" release was in 1989, was it?

<Nick> 1989 was the first time I had access to on-line services like GEnie. That same year I went to college and got it on the Internet.

<Anitra>. NovaTerm is for the C-64, isn't it Nick?

<Tim.P> Yes, Anitra.

<GEOS-TIM> Always good to see the great programmers come into conference

<Nick> I encourage you to download Novaterm and try it out.

# Just the FAQ's, Ma'am

### by Jim Brain

Just as Meeting 64/128 Users Through the Mail and the MaiLink strives to help Commodore users expand their horizon by putting them in touch with others who own Commodore computers and share interests, it has an electronic analogy, the Internet USENET newsgroup, comp.sys.cbm. If you ever venture online, be sure and check out this area. This is where internet commodore users go to get help and find others who share interests. MaiLink and the comp.sys.cbm newsgroup are somewhat complementary in content, which is one reason I belong to both. Just as the MaiLink comes packed with information every other month, the newsgroup regularly contains a wealth of information for newcomer and salted user alike.

To help new users of Commodore computers get quick answers to questions and prevent the same questions from being asked repeatedly, new users are directed to the FAQ file. FAQ stands for "Frequently Asked Questions" and is a standard used by all newsgroups. The comp.sys.cbm file is HUGE, and it covers many questions you may encounter while using your Commodore.

The entire file has 18 sections and is over 220 kilobytes in size, so I'll give you a sample of the questions answered in it. If you would like a copy of the FAQ in printed form, please send me a SASE Manilla envelope with $3.00 postage (the FAQ is 100 pages). As I don't normally copy the printed FAQ, please be patient. If you wish an online copy, just mail an Internet email msg

```
To:        brain@mail.msen.com
Subject:   MAILSERV
Body of Msg:
send faq.p*
ls
help
quit
```

## The COMP.SYS.CBM FAQ

### 13. Enhancements

If you like to tinker with your Commodore to get the best possible performance out of it, these suggestions and products may help you in your quest.

### 13.1. How do I increase my disk drive's transfer speed?

Since the introduction of the Commodore VIC-20 and the slow serial bus, Commodore owners have been plagued by slow disk access. There are two ways to allevaiet this problem, fastloaders and ROM replacements.

### 13.1.1. What is a Fastloader?

The Commodore 1541 drive and any drive attached to a VIC-20, C64, Plus 4, C116, or C16 suffer from very slow read and write times. This is caused by Commodore's haste in "economizing" the IEEE-488 bus used in the PET series of

Commodore computers into the serial bus. The IEEE-488 bus transferred 8 bits of data at a time, and performed some synchronization steps, or handshaking, between bytes. Commodore reduced the path to 1 bit but kept most of the original handshaking, most of which is redundant when transferring 1 bit at a time. Early on, some developers noted that, since the 1541 drive was intelligent enough to execute a program loaded into its RAM, and the Commodore operating system calls to do disk I/O could be bypassed, they could write software that sped up the loading process by modifying or completely changing the protocol used on the serial bus. This is the idea behind fastload cartridges like FastLoad, Mach 5, etc...

### 13.1.2. What is a ROM replacement?

As programs became more complex, some programs would not operate with this approach. Thus, the developers then rewrote parts of the Commodore operating system on both the computer and the disk drive, and replaced the parts of them that did disk I/O with new pieces of code. This is the idea behind JiffyDos and others.

The basic idea in speeding up the disk drive is to use more than 1 line to transfer data, effectively doubling the transfer speed. Then, reduce synchronization requirements in the protocol to a bare minimum, as synchronizing time is time not being used to do transfers. The fastload cartridges are handicapped somewhat by the need to transfer the portion of the program that runs in the disk drive to the drive using the slow speed evry time the drive

is used. This can be alleviated somewhat, but the replacement operating system replacement products like JiffyDos win the race since they do not need to load code into the drive, as it is already there.

### 13.1.3. What are the disadvantages to using a drive enhancement?

The products are not 100% compatible, as they sacrifice reliability for speed somewhat. That means that a program that does not load due to an error while using a fastload product will probably load without the fastloading enabled. Also, some programs can not handle the change in loading or reading speed, so these enhancements yield about 90% compatibility.

### 13.1.4. What other things can I do to speed up the drive?

You can also increase the speed of disk drive operation by organizing consecutive parts of a file on disk to fall a certain number of disk sectors apart. This is called the interleave or interleaving factor. Normally, a 1541 disk drive space consecutive parts of a file 10 sectors apart, but you can change that a little to minimize the time needed to find consecutive parts of a file.

Also, the C128 in 128 mode hooked up to a 1571 or 1581 has a built-in fastloading scheme called burst loading. Therefore, if you are in 128 mode and hooked up to a 1581 or a 1571, you already have this feature. However, the 128 in 64 mode reverts back to the old slow serial routines, and the 128 in any mode using a 1541 cannot use the burst load routines.

# A Bit More About Graphics

## by Luke Baars

**C= commodore 64**

In the November 1995 issue of MaiLink, Rick Mosdell had an article introducing us to how graphics work on the C64. I hope to expand on this subject a little bit. This article will focus on how to display any multicolor picture in a BASIC program.

There are many different paint programs out there, for example: Koala, Blazing Paddles, Masterpiece, etc. Unfortunately, each paint program uses a different way to store the pictures, so a little detective work is in order.

Let's try to go step by step:

1) Put the disk with the picture in the drive #8.

2) Enter the following program in direct mode and RUN it.

```
10 OPEN 2,8,2,"PICTURE NAME"
20 GET  #2,  A$,B$:Z$=CHR$(0)
:CLOSE2
30 PRINT ASC(A$+Z$)+256*(B$+Z$)
```

3) Make sure you enter the correct picture file name in line 10. If the error light flashes, you entered the wrong name.

4) The number that you get after you run the little program is the starting address of the picture, jot it down.

5) Enter NEW in direct mode.

6) LOAD picture like:

LOAD"PICTURE NAME",8,1

7) Enter in direct mode:

PRINT PEEK(45)+256*PEEK(46)

8) The number RETURNed is the ending address of the picture file, jot it down.

9) As Rick told us, a multicolor file has the following components.

a) 1K (1024 bytes) Color RAM This color is represented by the "11" bit pair.

b) 1K (1024 bytes) colors '01" and "10"

c) One byte, background color "00"

d) 8K (8192 bytes) bitmap.

10) A picture file may be any combination of the above components. For example:

| | | |
|---|---|---|
| 1K color 11 | 8K | 1K |
| 8K bitmap        or | 1K or | 1K etc. |
| 1K colors 01 & 10 | 1K | 8K |

11) You know the starting address of the picture file. The first number in the picture file evenly divisible by 8192, is likely the location of the bitmap. This information will likely give you an idea of the composition of the picture file.

12) For example, a 'blazing Paddles" picture file lookes like this:

Start   40960 bitmap
        49152 colors "01" and "10"

```
        50176  color "11"  Color RAM
End     51200
```

13) Let's start putting a BASIC routine together.

```
10 REM GET DEVICE
20 DV = PEEK(186)

6000 REM LOAD PICTURE
6010 NM$="PI.PICTURE NAME"
6020 POKE 147,0: SYS 57812 NM$,
DV, 1
6030 SYS 62631
```

14) The computer can only access 16K memory blocks at a time. So we have to switch banks to access the 'blazing Paddles" file.

```
Bank 0 (1      - 16383)
Bank 1 (16384 - 32767)
Bank 2 (32768 - 49151)
Bank 3 (49152 - 65535)
```

15) In the above example, the color RAM is LOADed in at address 50176, it has to be put at address 55296. The other two colors have to be put somewhere in bank 2. The bitmap occupies the second half of bank 2. Furthermore, the colors can not be put between 36864-40959 either because it contains the ROM image of the caracter set when you're using bank 2. (4096-8191 is also unavailable for graphics.) This leaves addresses 32768-36864 to put colors 01 and 10. Also, the colors have to placed on an even offset of 1024 such as 32768, 33792, 34816, or 35840.

```
6040 REM PLACING THE COLORS
IN RIGHT LOCATION.

6050 FORN=0to999
6060 POKE 55296+N,PEEK(50176+N)
```

```
6070 POKE 32768+N, PEEK(49152+N)
6080 NEXTN
```

16) Continuing:

```
6090 REM SWITCH TO BANK 2
6100 BK=2
6110 POKE 56576, (PEEK(56576)
AND 252) OR (3-BK)

6120 REM ENABLE BITMAP MODE
6130 POKE 53265, PEEK(53265) OR
32

6140 REM ENABLE MULTICOLOR
6150 POKE 53270, PEEK(53270) OR
16
```

17) Determine location of bitmap, is it in the first or second half of the bank that it is in. In the above example the bitmap is in the second half.

```
6160 REM BITMAP IN FIRST HALF
6170 BM=0

6160 REM BITMAP IN SECOND
HALF
6170 BM=8
```

18) Now we have to tell the computer that we put the colors 01 and 10 at the 0'th K (right at the beginning) in bank 2, or 0 * 1024 + 32768=32768. This number has to be POKEd into the high nybble of register 53272 so 0 has to be multiplied by 16=0 (LC=0). If we had to place it at 8th K of bank 2 (8 * 1024 + 32768=40960) then we would have to POKE 8*16=128. (LC=128)

```
6180 REM LOCATION COLORS 01
and 10
6190 LC=0
6200 POKE 53272, BM+LC
```

19) Instead of trying to find the background color in the picture file, it might be easier to just POKE it in.

```
6210 REM BACKGROUND COLOR
6220 CO=0: REM SUBSTITUTE
RIGHT COLOR
6230 POKE 53280,CO, POKE
53281,CO
```

20) Finally the routine to get back to your program.

```
7000 GETA$:IFA$=""THEN7000
7010 BK=0:POKE56576,PEEK(56576)
AND252)OR3-BK)
7020 POKE 53265,PEEK(53265)AND
(255-32)
7030 POKE 53270,PEEK(53270)AND
(255-16)
7040 POKE 53272,21
7050 REM SET SCREEN,
BACKGROUND COLOR
7060 POKE 53280,14:POKE53281,6
7070 PRINTCHR$(154)+CHR$(147)
```

This article was intended for medium to advanced programmers of BASIC. There should be enough information here to be able to display any multicolor picture. Anybody can always write me for help. It is also possible to convert pictures from one paint program to another. If I didn't scare off too many readers, then that is a subject for another article.

For further reading: 'Mapping the Commodore 64 & 64c" by Sheldon Leemon. Hopefully still available from Software Support for $12.95.
Notes:

Have you noticed that I always started at zero when I counted? Well get used to it when programming on the C64. There are eight bits in a byte (0-7), four memory banks (0-3) etc.

Some picture files will have 1000 bytes for a color instead of 1024, and 8000 bytes for a bitmap instead of 8192. Getting the starting and ending address should tip you off whether this is the case. Regardless, the bitmap has to start on an even offset of 8192, and colors 01 & 10 have to start on an even offset of 1024.



# Last Minute News

CMD has announced the development of the SuperCPU CBM accelerators. Due in February, the devices will increase the speed of a C64 to 10 MHz ($159.00) or 20 MHz ($199.00). This will increase most programs by a factor of 9 to 18 times the original speed. (413)525-0023)

Daneil Dallmann has successfully implemented TCP/IP on the C64. Forming the major protocol of the Internet, any computer with TCP/IP can connect DIRECTLY to the net, allowing more flexibility. A demo is available for download from the Internet.

# Vendor Watch
### by Walter Johnson

LOADSTAR has been reprinting bits and pieces of Roger Long's Commodore Products Source List. For everyone that worries about finding places to sell and service the Commodore computer, I encourage you to purchase this list, available on disk from Roger for $2.00:

Roger Long
320 NE C Street, Apt. A
College Place, WA 99324-2125

For those on the Internet, Jim Brain has compiled a similar list of vendors and repair facilities in the Commodore Frequently Asked Questions List (FAQ). Send him a note at brain@mail.msen.com if you would like the list. In addition to this information, it contains answers on a number of basic (and not so basic) problems encountered by Commodore users.

John (Zeb) Larry has noted that he has hundreds of GEOS aids that are available for the the cost of a SASE, disk, mailer, and postage.
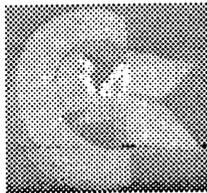
Some additional items of interest:

Horse Feather Graphics
North 27319 Short Road
Deer Park, WA 99006
Print shop graphics "western" style.

Commodore Gazette
c/o Christopher Ryan
5296 Devonshire
Detroit, MI 48224
Subscriptions to the magazine on disk, monthly on 1 5.25" floppy.

Charlotte Mangum learned from new member Wayne Worlie that Xetec's remaining inventory was bought by Ron Fick, whom she was able to reach by phone. Not only does he offer their remaining stock, he will also do repairs.

Ron Fick:
12246 Monroe Place
Denver CO 80241
(303) 452-2456

**Disclaimer:** As always, this column is meant merely to alert readers to new possible sources of support. The Commodore MaiLink makes no statements as to the vendors' reputation and business practices by listing it here. Please check out all vendors before dealing with them.

# Errata

In a previous issue of the MailLink, The Gatekeeper disk was described as a utility disk. Gatekeeper is actually a disk-based Commodore magazine filled with readable text and graphics. For more information contact Bryan Pease.

# Membership Information

by Brian Vaughan

**New Members:**

*ROGER APONTE*, St. 10, L-14, Punto Oro, Ponce, PR 00731 Roger is a school teacher. Hobbies: Chess, model railroads, and history. System: C-64, 1541 disk drive, C=801 & MPS-1000 printers, and an SR-3000 monitor. Interests: Educational programs, and word processing with Spanish characters.

*GEORGE ASSOS*, Kalvou 121-123, 114 75, Athens, Greece George listed no occupation or other status. Hobbies: Motorcycles of the seventies. System: C-128D, 1541 disk drive, CMD-20 hard drive, datasette, MPS-1200 & MPS-803 printers, C=1702 & 80 column monitors, and an Aprotek MiniModem. Interests: None given.

*AL EMRICH*, 309 Alder Rd., Dover, DE 19904 Al is a retired USAF jet technician. Hobbies: Stamp collecting, woodworking, and photography. System: C-64, three C-128s, Amiga & IBM, 1541, and four 1571 & 1581 disk drives, MPS-1200, Okidata 120 & 82, and Panasonic KX-P1524 & KX-P1591 printers, C=2002, 1902A & 1084 monitors, and a 1670 modem. Interests: Correspondence, desktop publishing, and scanning new material. He is the librarian of the 1st State C= Club.

*JEFFREY D. HAAGER*, 117 Oakbrook, Plant City, FL 33550-1751 Jeff is a truck driver. Hobbies: Mountain biking, painting miniatures, playing miniature role playing games, and tinkering. He built the "Custom 64" into a tower.

System: C-128D, C-64 & home-built 64 tower, 1581, Indus-GT & two 1541 disk drives, REU, Okimate 10 & C=1526 printers, two C=1902A monitors, and 1670 & Hayes 2500 modems. Interests: GEOS, BBS, and games.

*HOWARD HERMAN*, 229 E. 280th St., New York, NY 10016-8507 Howard is self-employed doing financial work on the computer. Hobbies: Genealogy, finance, banking, and economics. System: C-128 and a 486 DX100, 1571 & 1581 disk drives, RAMLink, 1750 REU, Epson LQ-570 printer, 1084S monitor, and a modem. Interests: Telecommunications.

*ROBERT E. LOUGHRIN*, 828 Farrar St., Cadillac, MI 49601 Bob is retired. Hobbies: Genealogy, sports, sky diving, and contacting WW-II buddies. System: C-64, 1541 disk drive, Star NX-1000 printer, 13" Zenith monitor, and an Aprotek Mini-Modem. Interests: None given.

*ARVID NELSON*, 141 Mango Ct., Middleburg, FL 32068 Arvid is retired from the U. S. Navy and being a researcher. Hobbies: Genealogy. System: C-128, 1571 & 1581 disk drives, Panasonic KX-P1092 & MPS-1250 printers, C=1084 monitor, and an Aprotek 1200 baud modem. Interests: Word processing, genealogy, databases, and games.

*CHRISTOPHER RYAN*, 5296 Devonshire, Detroit, MI 48224-3233 Chris is a cashier. Hobbies: None given.

System: C-128, C-64, C-64C, VIC-20, C-16 & Plus/4, four 1541 disk drives with Jiffy-DOS, MPS-803 & Panasonic KX-P1180 printers, Xetec Super Graphix interface, C=1702 monitor, and a CMD micro transactor. Interests: Entering program listings, create Companion disks, collecting computer magazines, running "Commodore Gazette" business, telecommunications, and learning to program in ML, including sprites.

*JOSEPH SKIDMORE*, 114 W. Loookerman St., Dover, DE 19904 Joe is a salesman. Hobbies: Unbuilt models, and collecting military items. System: C-64, two 1541 disk drives, Seikosha SP-1000VC & Okimate 10 printers, and a CM-141 monitor. Interests: Games, and learning TWS.

*FRED WASKI, JR.*, 915 Doverkenton Rd., Dover, DE 19904 Fred is disabled. Hobbies: None given. System: Currently using borrowed equipment. Interests: Learning how to use the computer.

**Address Changes:**

Michael Beverage, Box 92166, Henderson, NV 89009

Anthony Weiner, Change street address to: 190 Lakeview Cir.

**Other Changes:**

Don Walker - Place the square "mark" to the left of his name in the Sept. bios.

## Novaterm continued...

Novaterm v9.6 will be commercially available on cartridge only and will be sold through Performance Peripherals, Inc.

5 Upper Loudon Road
Loudonville, NY 12211
(518) 436-0485
Peter Fiset (Contact)
fiset@global1.net (Internet Email)

## The Marketplace continued...

*For Sale or Trade by John Casey:* Okidata 120 printer with NLQ, cable, manual, and 5 extra new ribbons. Good condition. $55.00

*To Give Away from Walter Johnson:* Three MPS 801 printers and one MPS 803 never opened to nice home for cost of shipping. Please get these old timers out of my way!! Cables included.

*Wanted by Wayne Rosario:* a 1581 disk drive and an RS-232 interface. (email address: z70cc@cunyvm.cuny.edu)

*Wanted by Jean Nance:* Jean is looking for a copy of VizaWrite for a friend. It is badly needed by someone with all their Geneology in VizaWrite format.

*Wanted by George Assos:* Stunt Car Racer game.