the Underground

For Commodore 64/128 Users - September 1994, Issue #4 - $2

An interview with Busy Bee's Eric Lee!

A new Geos utility disk from Nate Fiedler!

Build your own geoCable Interface!

Sample sounds with your Commodore 128!

...and much more!

the Underground

The 8-bit, Commodore Mini-Mag!

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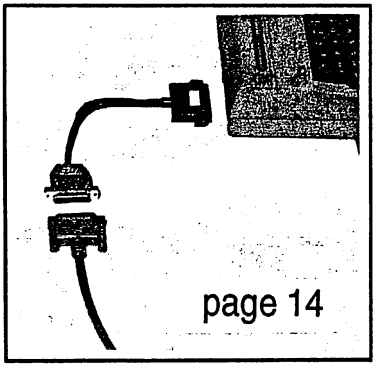


From the Editor

Time again for another episode, er, issue of the Underground. I am happy (but not content) with the way the magazine is progressing, and I hope you are too.

As you may have noticed (or may not, if this is your first issue of the Underground), this is our first laser printed issue! This is big news for us, as it really helps the mag to look a lot more professional--not to mention easier on the ol' eyeballs!

My wife's boss had heard (from her, of course) what I was doing, and wanted to see a copy. He was impressed enough to allow me to use his laser printer and copy machine! I hope everything works out well, as this could be a great opportunity for me to start producing back issues.

Starting with this issue, I am now paying for articles published within our pages. Oh sure, we can't pay as much as dieHard or Commodore World, but if they think your work is too radical or something, give the Underground a shot. We like radical, and don't even mind weird or obtuse, but just want interesting, creative, and useful articles. The Underground will normally pay about $5 per article (along with a complimentary issue), and you can even send your article to me directly over the Internet (S.Eggleston@genie.geis.com), or GEnie (S.Eggleston). Articles generally run about 1,000 words, but I'm flexible.

We have also begun to advertise more (a definite key to success), and currently have an ad running in LOADSTAR, with an upcoming classified mention in Commodore World. I have also attempted to make our presence known to over 100 user groups via snail mail, in an effort to gain more writers (thus expanding our size) and subscriptions. As we build momentum, our ads will be bigger, and our pages more plentiful.

For those of you who have been taking advantage of the "free" Underware, the rules have recently changed a bit. From now on, I ask that you send a formatted disk instead of a blank one. I have received some bad disks that could not be formatted, and figure if you can't format the disk, you probably won't send it to me. Also, if you do not send a label for your disk, I won't put one on. I just don't have that many spares laying around!

There is a lot of great stuff packed into this issue, and I hope you enjoy it. The cover pretty much hits the high points of issue #4, so stop wasting time reading my rantings, and prepare to execute text absorption mode. Engage!

un-der-ground *adj.* **1.** Below the earth's surface. **2.** Acting or conducted in secret. **3.** Of or relating to an avant-garde movement or its films, publications, etc. *--n.* **1.** A secret political organization, esp. one seeking to overthrow a government. **2.** *esp. Brit.* An underground railway : subway. **3.** An avant-garde nonestablishment movement or group.

Webster's II, New Riverside Dictionary

In your review of geoCanvas in the July issue, you mentioned how much you enjoyed the ability to scroll through the list of all desk accessories on the disk.

For the C64 only, there is Roger Lawhorn's Superbox, available from Dale Sidebottom, 1001 Estate Circle, Georgetown, IN 47122. The price is $20, which also includes geoPrint and geoLabel. This works like the file dialog box in Jim Collette's Font Editor and a few other GEOS programs. You can scroll through the list, scroll down a page at a time, or jump to the bottom of the list.

DBGetFile from Jean F. Major offers only the scrolling capability, but is available for the 64 and 128. It's an autoexec file that goes on your boot disk. The latest information I have on the price of this program is $9.95 for a disk that contains a number of utilities (DBGetFile alone is worth the $9.95). Jean F. Major, 119 Terrasse Eardley, Aylmer, Quebec, Canada J9H 6B5.

--Dick Estel
Fresno, CA

Thanks Dick, I had never heard of Superbox. Too bad there is no 128 version, as I use Geos 128. I have DBGetFile 3.0, which not only scrolls, but will jump to the top or bottom of your file list when you double-click on the appropriate arrow. You can also open a file by double-clicking on its name.

Do you know where I could get any copies of geoVision International (disks or magazines)? I realize they are no longer in business, but any info would be helpful.

--Jim Chance
Smithfield, UT

I really liked geoVision International, and was saddend when nothing ever showed up after issue #3. It was a nice looking publication with good information, and inspired much of the layout for the Underground. Unfortunately, I doubt former editor Grady Brown will be showing his face in the Commodore community for quite awhile, as he owes many people (including me) money.

Anyway, I have all three issues of both the magazine and the disks, but don't want to part with them. If you're on GEnie, you can try asking there for some in the 'For Sale & Wanted' area, or keep your eye on the Underground, and I'll see about featuring some of the best Geos PD (which would then be available on the UnderWare disk) on those disks.

WANTED

V.G. Data Shack File Copier and Utilities v1.0
1986 Quebec, Canada - Author: Charles Le Borgne
Send to: James R. Cottrill
3119 Pioneer Ave
Pgh. PA 15226-1740
(412) 563-2379

Buzzwords

An Interview with Busy Bee's Eric Lee

by Scott Eggleston

The Underground is located in Santa Maria, just a bit north of Lompoc, home of Busy Bee Software. I thought it unwise to pass up such an opportunity to pay them a visit, and inquire about their origins and future Commodore developments. Here is the resulting transaction between myself and Eric Lee, Busy Bee Software's founder and programmer.

Scott: How did you first get into Commodore computing?

Eric: After graduating from Cal Poly in '83 with degrees in soil and crop science, I didn't get a job immediately. A friend of the family had a Commodore 64, so I ended up getting one, too. It had no software, so you had to type it in from magazines. I wasn't entirely happy with everything I typed in, so I'd sit around and start improving them. I think that's where I got into it, just taking a program and gradually improving it.

Scott: What was the first program that you wrote yourself?

Eric: One of my first "ambitious" programs was a disk cataloger that interfaced with Superbase. It generated data Superbase could read, and I wrote programs within Superbase to use it.

Scott: What are the origins of Busy Bee Software?

Eric: I had worked a year as a teacher's aide. I brought my SX-64 to the classroom, and started writing software for the kids. I went to a seminar about the use of computers in the classroom, which was Apple dominated.

Scott: Boo, hiss.

Eric: Yeah, boo, hiss. They were demonstrating a talking word processor--for only $300! I knew that for the Commodore there was the S.A.M. (Software Automatic Mouth), and it could be accessed from BASIC or Machine Language, to make the Commodore talk easily. I started with that idea, and soon realized that I was getting into designing a word processor. The original idea was to write a talking word processor, but then I got into writing a [real] word processor. Then, as an aside, I made it talk. Once I got into the design considerations, looking at existing word processors, I spent months just designing it. After that job, I had the plan, and the time. That was when I realized that, to do this, I would have to learn machine language. I had never really learned it at that time, because I had managed to get by with compiled BASIC. Once I got into it, I found that it was easier than BASIC.

Scott: So you taught yourself machine language?

Eric: Yes. It was easier, and far more powerful. Once I got over the hump and actually started learning it, it was not nearly as hard as I thought it would be. The difficulty is that, in addition to knowing the instructions, you have to know the machine internally. By then, I was an advanced enough BASIC programmer, that I'd already learned that. The instruction sets are easy, like tinkertoys. After that, I spent about a year [working on the program].

Scott: And that's what became The Write Stuff?

Eric: Yes.

Scott: So where does the name 'Busy Bee Software' come from?

Eric: I was over at a friend's house (the one who originally had the Commodore, and got me interested), showing him what I was doing. He said, "My, haven't you been a busy little bee!" So I called it Busy Bee Software.

Scott: What was something requested by your users that you added in your upgrades?

Eric: The major upgrade that I added was the BB Speller, a spellchecker for both [64 and 128] versions. After that it's been minor. Current versions are for the 1581, RamLink, CMD Hard Drive. I did a lot of different versions for the Quick Brown Box. Lately, the new versions have been by Hugh McMenamin, a retired physician back east. He came out with The Illustrator.

Scott: That allows you to stick pictures in with the text, right?

Eric: Right.

(Eric then showed me how someone used the Illustrator to merge color pictures into a document, printed with an NX-1000 color printer. The pictures used an eight-pass driver, and the whole thing looked great.)

Scott: I've heard that the next thing you've been working on is a desktop publisher. How's that going?

Eric: It might be too ambitious. In confronting the limits of the computer, I may be trying to do something that can't be done practically--real desktop publishing with 64k. You can create the semblence of desktop publishing by going through all the motions of creating the document, but then print it out at the very low resolution that you see on the screen. That's not acceptable.

Scott: So it's still in the figuring-out stage?

Eric: I have to solve a problem before I begin coding--conceptually. And I mean really solve it. I think it is solvable, and I have a fairly good idea how to do it. But I don't have as much time as I used to, now that I'm married with children.

(Eric showed me some sample output of scaleable fonts. The quality was excellent, and the resolution was just as good for two inch letters as it was for very small ones. I've never seen type look this good coming from a 9-pin printer! He had another example of clip art being scaled down, and again, the quality was great. The image did not distort, and only lost minimal detail when it became very small.)

Scott: This is pretty impressive. Hopefully it won't be too long before you overcome whatever hurdles you have to. Are you working on anything else?

Eric: My wife's working on finishing a project I started. What we've done is collected just about every [Print Shop graphic] we could find and sorted, categorized, and cataloged them by subject. Unless they are really cataloged, you don't know how to find anything. So the idea was to come up with a catalog, or index, for the 10,000 or so public domain Print Shop graphics.

Scott: Any other projects in the works?

Eric: I'd like to come out with The Write Stuff 3, which would replace v1 and v2, and

work with the hi-res publisher.

Scott: With almost everyone else jumping ship, what made you stick with the Commodore?

Eric: Business is good. Actually, sales are up this year. I've been waiting for it to all end for a couple of years, so that's one reason.

Scott: Do you have any advice for other programmers?

Eric: Put most of your effort into designing, thinking it through. Have a vision of what you want to end up with. Coding, what most people think of as programming, is a secondary problem of how you achieve your vision. Then you have to design within the capabilities of the machine. You cannot fix [with programming] a design flaw. People think that programming is coding--it's designing and coding.

Scott: So it's more of an art form than most people think.

Eric: Before I ever got into computers, I was always designing things. As far as building things, I was always frustrated by not having the tools, the equipment, the space, to build some big "thing." Once I got the computer, there were no limitations anymore--it's all there. Then I could do anything I wanted.

Scott: There are a lot of people who are glad you found the computer, because every time I read something about word processors, The Write Stuff is always mentioned.

Eric: One thing that's not been mentioned, that I'm proud of, was the way that I marketed the software.

Scott: How did you do that?

Eric: Mainly through user groups. I call the concept 'userware,' and basically it's wholesale to user groups. They get a master disk, which they are allowed to copy, as well as manuals and all the documentation [for the number of copies they have paid for]. They get a big discount, 40-60%. I got a lot of orders. Over the years, I've had [orders] from about 225 groups. I just got a new group yesterday. They've kept me going in business, as far as being financially successful. They did most of the promotion and user support.

Scott: It's a good idea.

Eric: It's not shareware, it's prepay. I've had probably ten groups sell over a hundred. They would pay for the copies they made, up front. When they actually made the copies, they would charge a copy fee, so the clubs made a little money off of it.

Scott: This is something anybody developing software could try, and would probably work better now, because there are so few authors left. Thanks Eric, and good luck with continued success from Busy Bee Software!

To contact Eric about Busy Bee products, contact him at:

Busy Bee Software
P.O. Box 2959
Lompoc, CA 93438
(805) 736-8184

Editors Note: After our interview Eric gave me a copy of The Write Stuff 128 to check out for myself, and was I impressed! I can understand why Commodore users everywhere have given this program a ton of praise--it's excellent. TWS now has its own RamLink partition, and is an integral part of the Underground's production tools.

Nate Fiedler's Geos Utilities

A Diverse Collection of Useful Programs

by Scott Eggleston

Nathan Fiedler has struck again. Last issue we reviewed his geoCanvas 3.0, an alternative paint program for Geos. This issue we review his lesser-known Geos Utilities disk, which measures up quite well to his previous Geos outing.

The disk is a single-sided floppy, but don't let that fool you. There is enough good stuff here that more than justifies the $13 price tag. Since the programs on the disk are many and varied, I'll jump right in and give you a brief blurb about them all. All programs run in both 40 and 80 columns.

Following the disclaimer at the top of the directory comes **AutoAlarm**, and interesting auto-exec file for those of you who need the Geos alarm clock to go off at a consistent time. To set the alarm time, click on the file and select the info option. When the info box comes up, you will notice a time in the upper left hand corner of the dialogue box. Click on it to change it. Upon every following boot, the alarm will be set for that time. Nate comments that he uses this to alert him that Star Trek is about to begin.

Next up is **BlackOut**, a must-have for any Geos user. This is your basic screen-blanker, which saves your monitor from burn in. This program has existed before, and Nate has combined and updated previous versions. Now you can set the time which the program waits to blank the screen, from one to eighteen minutes. Pressing a key or button will restore the screen.

Chaos is a small program that draws an interesting triangle on the screen using random numbers from the chaos theory (remember Jurassic Park?). While it serves no real utilitarian purpose, it's an interesting extra.

The next file is **DeleteHFP**, which allows you to delete the headers, footers, or any range of pages from a geoWrite document. Nate says it's especially useful to geoProgrammers who try to edit footers in geoWrite but get a system crash instead.

DirPrint is just that, a directory printer. It will print out the directory of any disk, along with the disk name, type, and file numbers and sizes. Worked great.

DisBAM will display any disk's Block Allocation Map in graphical form. A box draws on the screen (the size determined by disk space), and fills up with solid characters for those disk blocks used. Again, no real application here, but kind of neat to watch.

DiskProtect allows you to change the status of your disk, making it more difficult to delete files from it, very much like the disks from Geoworks. Files can still be deleted by the "drag to the border, then trash" method. An option is also available to unprotect your disks, and check to see if the disk is currently protected or not.

EggTimer is another self-explanatory one, a basic countdown timer in a desk-accessory. Simply set the time you want elapsed, and forget about it. Great for writing your article for the Underground while your dinner bakes!

FancyStart gives you a colorful introductory screen upon booting Geos. No practical application, just a nice beginning. Requires 64k video ram for the 128 version, otherwise it's pretty garbled.

FileLock is a security program (one of several on the disk), that allows the "locking" of any Geos file. After clicking, FileLock will ask you for a four character code. Once locked, it will not be listed on the

application's directory its used for. If you try to click on it to open it directly, FileLock will run instead. To unlock the file, retype in your code. Ideal for CIA guys using Geos.

FindFile is a very good file search program. After clicking, type in the file you are looking for (or part of the filename with a wildcard character), and FindFile will list all available files on the current disk. "Drive" and "Disk" are active here, if you want to change to another source for your search. Great idea for mass storage devices with a ton of stuff on them.

HeaderEditor is a programming tool that allows you to manipulate the information typically found in the info box of any Geos file. It's pretty easy to operate with a simplified command structure which allows the entry of english words instead of numbers. I managed to change Dualtop to an auto-exec, but ended up screwing up something else in the process--so I changed it back. For programmers only.

LockScreen is the second of security-type programs on the disk. It allows you to lock out prying eyes when you step away from your computer for any length of time. As in FileLock, a four character code is asked for to engage lockout. When you return, simply type in your code and your screen returns to normal. Interestingly, the last ten attempts to crack your code (if any) are listed.

The final security program is **Login**, which asks your for your name and a password before booting Geos. Click on the file to set your name and password, and place it on your boot disk. Now anyone who boots your disk will have to know the proper code words. In case you forget your password, there is a way to still boot Geos, but you'll have to buy the disk to find out how (heh heh). After all, I don't want any readers breaking into my computer to read next issue's articles!

Another must-have for Geos 128 owners is **NewPointer**, which changes the appearance of your Geos pointer. Gone is that unchangeable mutation, replaced with a sleek pointer even a Mac could love. The 40 column pointer is changed as well with NewPointer so they both look similar. If you had the original version of this auto-exec, you may have edited the 40 column pointer already, as I have.

NewSysErr is another reason in itself to buy this disk. This is a 'soft boot' program which runs instead of giving that dreaded "System Error near $xxx" which preceeds a crash. Now your system simply reboots from the REU, restoring you to the Desktop. If no REU is present, you are sent back to BASIC to reboot Geos for yourself. This is one of my favorites on the disk, and has saved me a lot of time and frustration (and my computer a lot of abuse).

NoPictures will strip a geoWrite file of photo scraps, split a file in two, or combine a file. This program can be very useful, if just for the purpose of merging files. Like the other programs, it's easy to use and lets you pick the page number where you wish to split a file.

Particle is a partition switcher for CMD hard drives. Since I don't have a hard drive, I wasn't able to test this one. Nate says he'll write a RamLink version if people want one. Nate, I want one!

PatchConvert is kind of a mixed blessing. It patches Convert 2.5, and does away with the extra dialogue boxes ("Are you sure?") which repeatedly pop up during conversion. If you have a lot of files to convert, these can be quite annoying, but PatchConvert will also remove the box which tells you when a file did not convert at all. If you do use this one, you may save time, but lose some peace of mind.

Need to print out a photo album? **PhotoPrint** does the job, allowing form feeds or a continuous column of photos. I would like to see this application print the

pictures across the page instead of down, which would be better for reference.

RAMTest will set up a continuous test of your REU and alert you of any problems detected. I have a RamLink, with a pseudo-REU in memory. When I ran RAMTest I let it run for a couple of minutes (per instructions), and then pressed a key to stop it. It said that the REU was tested 3 times, and 928 errors were found. I don't think my "REU" is really that buggy, but the program may work better on a real one.

Redirect is a program that is designed to reconstruct a messed up directory on a Geos disk. Since I've never been in this situation (knock on wood), I wasn't able to test this one. I hope I never have to, but ReDirect is here if I need it.

SaveWiz is an auto-exec that copies geoWizard's activator code to the REU. This is supposed to keep geoWizard active by remembering the key clicks that activate it, even after reboot. Alas, no matter how many different ways I tried it, it wouldn't work on my system. I had better luck just clicking again on geoWizard to reenable it. Again, this may be due to the fact I am using an memory-resident REU, and not an actual one.

ScreenGrab is a desk accessory that dumps the current screen into a photo scrap. This is a good one if you don't own geoWizard, although you are limited to those screens that let you access DAs. You can't, for example, dump a screen that has a menu pulled down, or a dialogue box in the middle of the screen. To paste these big scraps, you'll need geoPublish, or Nate's ScrapCan, found on his geoCanvas disk.

SysInfo is a box which describes your Geos system in its entirety, listing all disk drives, nationality ("english" was on mine), time, date etc. Pretty straitforward.

UnMakeGEOS moves all files from the border to the directory page, and removes the Geos-specific formatting. Nate says he's not even sure if this is useful, but here it is anyway.

Finally, **geoDump** will display the computer's memory in hexidecimal code. Another one for programmers.

As with all of Nate's work, each program comes with great documentation, many times going beyond basic instructions. After explaining how to use the program, he delves into why the program was created, and how it was programmed. This adds a nice dimension to the disk, making it an even more worthwhile product.

I recommend this Geos Utilities disk. Programs such as BlackOut, NewSysErr, and NewPointer are worth the price alone. Others may enjoy the disk for the security programs, and programmers are given several nice tools here as well. Whatever your Geos tastes, there is enough diversity here for just about anybody. Thanks Nate, I look forward to your next Geos creation.

Geos Utility Disk, $13
(PA residents add 6% sales tax)

Nathan Fiedler
5711 Mt. Pleasant Road
Bernville, PA 19506

Production Equipment

The Underground is produced on a "flat" Commodore 128, a four megabyte CMD RamLink, one 1581 disk drive, and one 1541 drive. A Panasonic KX-P2180 is used for pre-proofing pages, and a Texas Instruments MicroWriter PS23 is used for creating masters. Reproduction services have been provided by Accu-Dent Research and Development, located in Buellton, California. All text is created and/or edited using The Write Stuff 128, then converted into geoPublish v1.0b for layout. The Laser fonts used in this issue are Roma and Cal.

HandBook of Commodore Disks

by Scott Eggleston

In issue #2 of the Underground, we examined three of Jane Jones' Commodore HandBooks, which were all Geos related. This issue, we look at another of her easy-to-follow reference guides, The HandBook of Commodore Disks.

As with the last three, this HandBook is nicely put together. The pages are regular magazine size, have been nicely laid out (using geoPublish), and printed on a dot-matrix printer with Geos. They have then been reproduced on white paper, the total number coming to twenty-two pages of text. Illustrations are aplenty (mostly track and sector maps), as well as advertisements for Jane's other products.

What is a HandBook? Well, from previous exposure, I have learned that a HandBook is a compilation of information from diverse sources on a particular Commodore product. These compilations are not intricately detailed (you should go to the source for that anyway), but provide basic information for the beginner to intermediate user. This definition holds true for The HandBook of Commodore Disks.

Being a CBM-DOS dummy, I found the information in this HandBook very interesting and useful. I also liked the little tips found throughout the book, such as how to print a disk directory without the disk name in reverse, and a direct mode mini-program that tells you how many disk blocks are required to save your program to disk.

So what exactly is contained in the HandBook? All three of the traditional Commodore drives (1541/71/81) are covered. They each have a section devoted to examining the sectors of each type of disk, and what is contained in them. The track and sector maps helped as well, and they have little reference marks on each one, so you can tell exactly where Jane is referring to.

In issue #2, one of my complaints about the World of Geos HandBooks was that the 1581 drive wasn't mentioned. Well, it's mentioned here at great length, and I apologize to Jane that I missed this, as I received all four HandBooks at the same time.

Next, disk commands are covered, with instructions for executing the command in BASIC 2.0, 7.0, or the DOS 5.1 wedge found on the test/demo disk that came with every drive.

Another nice touch is the four pages devoted specifically to Geos. Again, more track and sector maps are present, as well as the information about the specific way Geos handles things.

Finally, the HandBook is rounded out by pages devoted to 1571 CP/M format, and 1571 MS-DOS format. Again, well presented, useful information.

I should note that there is no mention of any CMD products (such as the FD drives and JiffyDos), but I know that Jane doesn't have any of these. With what she does have, she writes very well about.

This is not a reference guide for hardware hackers, but a general information guide, for general information users. On that level it succeeds very well.

$15 + $5 for shipping
JMV Graphix
P.O. Box 635
Blair Athol 5084
South Australia

Generally Speaking

by Ken Peindl

It is important to note that whatever the outcome of Commodore's liquidation, life for us 8 bitters will go on. In fact, it possibly may be to our benefit that Commodore International LTD. did go belly up. Imagine a company like CMD acquiring some of the rights to the 8 bit technology that Commodore has developed over the years. The possibilities would be endless with such things as a production run of the C-65 or a redesigned C-64 clone with built in goodies such as a RamLink, Jiffy Dos and SID stereo. Dreaming, you say? Well, if it were not for dreamers, then there would be no 64 or 128 to be writing about; or products such as RamLink and Jiffy DOS. Yes, dreams are what keep this 8 bit wonder alive 12 years after its debut. So as long as users like yourself continue to support the Commodore 8 bit line of computers the dreams will remain alive for years to come.

And speaking of support it always a pleasure to see the kind that one will find on the CBM FidoNet echos. I recently got acquainted with the QWK off line read and reply programs that are available to the 64 and 128 users. At present I am using an unregistered version of QWKRR for the 128 written by Rod Gasson from the land down under. Rods QWKRR has been greatly improved since its inception with his latest version 4.3 being spectacular to say the least. And yes, there is a version for the 64 written by Arthur Moore which offers such things as header browsing to 80 column viewing--compliments of Nick Rossi and Novaterm.

Now, until you experience the power and convenience of using a QWK program, you can't truly understand the excitement this has caused among Commodore users. QWK not only saves your online time for other things, like downloading files, but makes reading the various message areas a lot easier knowing your not under the gun. There is so much information that passes though the FidoNet that many publishers use it as one of there sources for news and information. One thing I must mention is that depending on what messages areas you plan on packing, you will need to have plenty of disk space to download and unpack your QWK packet. At lease two disk drives, or better yet, a 3.5 drive would be able to handle just about any average size packet. Now I must warn you that QWK can become somewhat addicting, causing restlessness and irritability for the days when you have no mail to read. But you need not worry, for I hear that support groups are popping up to help users cope with this new form of addiction.

Loadstar recently celebrated 10 years of producing one of the best disk magazines for the Commodore 8 bit user. Always an excellent source for the latest in news, information and quality programs, Loadstar has resisted the temptation to abandon a system for which they strongly believe in. Issue #120, dubbed their anniversary issue, was packed full of interesting articles and excellent programs. One article of interest, Soapbox, by Jeff Jones, was on the future of the 5 1/4 disk medium and why the 8 bit users should consider moving up to a 3.5 disk drive. I agree very much with Jeff, that in time production of the 5 1/4 disk will be discontinued, and that upgrading to the 3.5 disk medium is inevitable. In anticipation of such comings, Loadstar has begun to produce L.S. monthly as well as L.S. 128 Quarterly

on the 3.5 disk medium. Now that's reason in itself to invest your money into a 3.5 drive.

Earlier this year I bought a Commodore 1581 and found it to be so useful, that it has become one of my primary drives. I enjoy the 3.5 disk medium for its speed and storage capacity so much that I got my eye set on a CMD-FD series disk drive. You know that the FD 2000, utilizing a high density disk, can hold up to 1.6 meg which is double that of a 1581. With the FD 4000 you will get a whopping 3.2 megs of storage. With that in mind, imagine a C-64 equipped with Jiffy DOS and a FD 4000 drive, and you got one fast moving high storage 8 bit system. The FD series disk drives are available from Creative Micro Designs along with other fine products which they produce. The Commodore 1581 can be found at Software Hut and Commodore Country, who also carries the FD series disk drives. As of this writing, all locations mentioned above have drives in stock for immediate shipment.

Its refreshing to know that we Commodore users can enjoy the benefits of new software without having to add any additional hardware. For example, when a new program comes out for the IBM, it most always means additional upgrading of ether the ram or increasing storage. But for the Commodore user you only need to invest in the program itself which means enjoyment and productivity from the start. Now being the 8 bit SIG leader for our local Commodore group, I have the pleasure of reading news letters of other user groups that we receive through the newsletter exchange. These are some of the best sources of information, as they come from users who are at the heart of the Commodore movement. One topic that is common in many newsletters is Geos, given its ease of use and power of productivity, is still seeing some of its best upgrades.

Now these new upgrades are not coming from the folks at GeoWorks, but from independent programmers, who keep pushing Geos to its limits. One such programmer is Nate Fiedler, creator of geoCanvas. Nate has release version 3.0, which among its many improvements, now supports the 128 in 80 column mode. There has been a lot written about geoCanvas, which is a excellent addition to that of geoPaint. Picking up were geoPaint left off, geoCanvas provides the avid Geos user with a variety of new tools for more enhanced graphic manipulation. The cost is $28 for ether 64 or 128 version or $43 for both.

In answer to the window crazy, Quincy Softworks out of Hughson, CA. has been distributing a German product called TopDesk. Topdesk, a desktop replacement, is truly windows for the 64 and 128 Geos users, offering the ability to open and size various desktop windows which allows for easy file manipulation. It has gotten high ratings from user groups around the country and at the modest price of only $19.95, which includes both the 64 and 128 version, is well worth the investment.

But the one program I am waiting for is geoPublish for the 128 which is said to be near completion. This version not only supports 80 columns but will also utilizes the 128's fast mode. Running at 2 mhz, geoPublish 128 should help speed up those grueling screen redraws which is the number one complaint among present geoPublish users. As of this writing no date has be set, but I know of a couple of editors who are patiently waiting for its release. For myself any product that supports the C=128 in 80 column is always a welcome addition to the Commodore family.

In conclusion, let me remind you that the fate of the 64 and 128 relies not on what happens to Commodore International, but on what we the users do in terms of support for our 8 bit buddies. We have managed to keep this dream going for 12 years and I see no

reason why it can't go another 12 more. Call it an obsession if you like, but dollar for dollar, the Commodore computer is a sound economical investment. Besides, where else can you find such a comraderie of users who are willing to go to any extreme in supporting such a computer system? So until next time, remember to always support your local BBS and continue supporting one of the best 8 bit computers ever made--the Commodore. Bye!

Creative Micro Designs, Inc.
P.O. Box 646
E. Longmeadow, MA. 01028-0646
(800) 638-3263 (orders)
(413) 525-0023 (info)

Commodore Country
1420 Country Road 614
Burleson. TX. 76028
(800) 676-6447 (orders)
(817) 295-7658 (info)

Software Hut
313 Henderson Dr.
Sharon Hill, PA. 19079
(800) 932-6442 (orders)
(215) 586-5701 (info)

Quincy Softworks
9479 E. Whitmore Ave
Hughson, CA. 95326-9745

Nate Fiedler
5711 Mt Pleasant Rd.
Bernville, PA. 19506

8-bit Update

LOADSTAR Deals

Loadstar has recently announced two great offers, the Blockbuster Combo Package, and The Compleat Walt Harned.

In the combo package you get a CMD FD-2000 3.5" disk drive, a full year subscription to LOADSTAR (on 3.5" disk, of course), and two of LOADSTAR's most popular disks, CARDSTAR 1, and GAMESTAR 1. All of the above for only $250. This is a good chance to get LOADSTAR on one disk, and a great excuse to upgrade to one of CMD's excellent products.

The Compleat Walt Harned is a LOADSTAR art collection from artist Walt Harned. Walt has created art and title screens for LOADSTAR for years now, and he's very talented. You get 25 slide shows on seven 5.25" or three 3.5" disks. The Underground has been given a sneak peek at this art collection, and it's pretty impressive to say the least. Look for a "compleat" review in the next issue. The Compleat Walt retails for $20.

If you would like to order, or receive more information on the above products, call LOADSTAR at 1-800-594-3370.

GEnie Contest and Offer

Between August 1, and September 30, the online network GEnie will be sponsoring an uploading contest in the Commodore 64/128 Roundtable.

The rules are simple: whomever uploads the most public domain or shareware (junk or duplicate uploads will not be counted), will win their choice of CMD's RamLink or FD-2000. Other prizes of books, software, and free hours online will also be awarded.

If you've been waiting for a good time to join GEnie, now is the time. GEnie is currently running a deal that gives you 10 free hours on your first month online, and will even waive the $8.95 monthly charge!

Here's how you get this special offer:

(continued on page 21)

Building a geoCable Interface

A Low-Cost Alternative to the Real Thing

by Scott Eggleston

Until recently, I had no desire whatsoever to obtain a geoCable. I was quite happy with my PPI (Parallel Printer Interface) setup, and never gave a second thought to it. When my wife's boss said I could use his laser printer, however, my opinions began to change.

At first I tried dumping my geoPublish contents into a PostScript file, copying it to an IBM disk via my 1571 and a PD program, and giving the disk to my wife to take to work and print for me. Well, as those of you laser-heads out there know, your results can be tweaked, and you have no way to adjust them (remember Laser Direct?). Making corrections and repeating the whole time consuming process just isn't practical.

So, I mused, I need to get a portable setup, take it to my wife's office (getting permission from her boss, of course), and use the laser printer directly. I could take my PPI with me, but that would mean trying to figure out a usable DIP switch setting, which might not even be available for this printer. No, I need a geoCable. They are faster, and have no switches to set--just plug in and rock and roll! Plus, I already had CMD's Collette Utilities which contains (among other goodies) geoCable laser printer drivers.

I then turned to CMD's most current ad in the LOADSTAR Letter, the most recent publication I had received. Much to my wallet's dismay, I found a geoCable alright, but for $29! Hmmm...wasn't there another company that used to make them as well? That very same day, I received a copy of the Fremont, Union City, Newark & Haward Users' Group (FUNHUG) newsletter. In it, was an ad from Skyles Electric Works, listing geoCables for $15.95. Sounds good to me!

I called the number in the ad, and a courteous gentlemen answered. He informed me that they no longer made geoCables, and turned all of the manufacturing rights over to CMD. Rats!

Weren't there instructions somewhere on how to make your own geoCable? I'm no engineer, but I'll try anything to save a few bucks.

That night, I logged on to GEnie, and searched the Commodore software libraries using the word "geocable" as a parameter. Several files emerged from the search, including one entitled GEOCABLE2.DOC, uploaded by Jim Collette (always a good sign).

I downloaded the small file, and found something better than expected! The file, written by Ken Wallace, gave bare-bones instructions about making an interface that would connect between the user port and a standard parallel printer cable used by the majority of Computerdom. This way, you don't have to worry about making an entire cable, but just a small connector extending from your 8-bit!

It sounded great, and by the next day, I had me a geoCable interface! Here is a list of things you will need for this project:

soldering iron
solder
user port connector
D-Subminiature 25 pin female connector
  (Radio Shack 276-1548b)
D-Subminiature 25 connector hood
  (Radio Shack 276-1549c)
wire
electrical tape (optional)

All this stuff is readily available with the exception of the user port connector. I got one from desoldering an old modem cable. It worked great, because the connector also had a hood which is a must since you'll be pushing and pulling it out of your computer, and should NEVER pull on the wires.

Another good source is old Commodore

modems. You should be able to cheaply obtain an old 1650, 1660 or VICMODEM, which have the proper connector. Simply desolder the connector, but keep the modem case which makes a great hood itself.

If you have none of the above supplies, or just don't feel confident in your skills with a hot iron (ouch!), then bag the project and get the cable from CMD. Buying everything on the list just isn't practical. If you have most of the stuff already (all I had to buy was the D-sub connector, its hood, and electrical tape), then keep reading. Remember, when you have built the interface you'll still need a standard Centronics printer cable (with a 25 pin male end) to hook up to your printer.

In his original file, Ken's interface consists of both connectors glued to small piece of circuit board, with the wires running between them. I wanted a little more flexibility, so I ditched the gluing idea, and made the wires 10.5" long, but they can be as long or short as you please.

The following is the soldering table for connecting the appropriate pins on both connectors:

User Port	D-Sub 25
M -connect-	1
C	2
D	3
E	4
F	5
H	6
J	7
K	8
L	9
B	11
1,12,A,N	18-25

The last connectors are for grounding, and don't require specific connections. Pin 1 on the user port, for example, can be connected to any of pins 18-25, 12 to what's not used in 18-25, etc.

The DB-25 connector should be numbered (I know the one from Radio Shack is), but the user port connector may not be. Consult the appendix in your Commodore 64/128 Users Guide for assitance and diagrams.

Once done soldering, you may want to wrap the wires with electrical tape to make things look nicer. If you're really smooth, and are using an old modem housing for this project, you could feasibly mount the D-Sub 25 connector to the back of the modem, connecting the cable right into it! If you use this method, you won't need the D-Sub 25 hood, or the electrical tape.

Don't forget, you construct this project at your own risk. The Underground cannot be held responsible if something goes horribly wrong, resulting in computer damage. If you're squeamish, call CMD.

After I had finished my geoCable interface, I wanted to test it on my Panasonic 9-pin printer (I didn't want to accidentally blow up someone else's laser printer). I tried it out, but got a "Printer Inaccessible" error message. Common sense should have told me that I needed a special driver, but it took a call to CMD to let me in on the secret.

They offer a driver disk (which normally comes with their geoCable) for $10. There are a few on GEnie as well, which I downloaded and successfully tested with my printer. If you want to use geoCable with a laser printer, you'll need Collete Utilites. If you want multiple pass smoothing on your dot-matrix (the Epson 8pin3pass won't work), Perfect Print is geoCable compatible. Both are available from CMD.

Building the geoCable interface can be a rewarding experience. Not only on the speed of your printouts, but also with the sense of accomplishment. It's cool to build stuff from scratch that actually works on your Commodore!

I have included Ken's file on this issue's Underware disk. It contains a little more information than presented in this article, such as the signal names for each pin, and the corresponding pins on the Centronics port. These may come in handy if you would prefer to build a geoCable in its entirety, and not just an interface. An Epson FX-80 driver (compatible with most printers) is also included.

Zound Zampling

Sampling Hardware/Software for the C128

by E. Donald Scott

There are some really neat computer gizmos out there that we all want to exist on our Commodore computers. Many of them have evolved (or devolved) into Commodore versions that give us a pretty close facsimile to the real thing, limited only by the computer itself.

Personally, I have always wanted a sound sampler. I always thought it was great to hear some digitized speech coming from a computer. Especially if those sounds were from famous sources, like a movie.

Several digital sound players (mostly using the .RAW format) have popped up in the past for the Commodore 8-bits, but their strength of playback was also their weakness--you couldn't sample your own sounds.

Several of these players did have schematics included so you could build your own sampling hardware, but what if you didn't have the know-how? The only commercial sampler I ever heard of was the one from Datel, but I wasn't about to risk $90 on a product I never heard anyone in any magazine mention.

About a year ago, I downloaded a Shareware sampler/player for the C128 called Zounds! It was pretty neat, and came with some cool samples, and, again, a schematic to build your own sampler. I fiddled with it, and filed it on a disk somewhere.

Sometime later, I happened to communicate with the author over the Internet. He responded that he was indeed the author of the Zounds! shareware. I crossed my fingers and asked him if he would build me a sampler that worked with his program. He said he would, after I registered Zounds! ($10), and paid for parts ($20). I was elated to hear this, and a short time later, I finally had a Commodore sampling system.

The complete Zounds! package included not only the sampler, but a printed manual, and three double-sided floppy disks containing the latest version of Zounds!, and about twenty sound samples. The samples included are a hoot, coming such famous origins as Star Trek, Looney Toons, and Airplane ("What's the air vector, Victor?").

The sampler is about the size of a game cartridge, but is just a plug board with no cover (I imagine you couldn't find them if you wanted to). It has an RCA jack for input, and a knob to adjust input volume. Simply plug the board into the expansion port, hook up a source, and you're ready to go!

The software end of things is simple and straightforward. After the title screen (with a greeting from HAL 9000), two boxes appear on the screen. One contains your menu functions, with the other housing the disk directory when called.

Menu functions will let you monitor your input to see how the sample will sound, change the sampling rate (higher quality means shorter samples--lower quality allows for longer ones), record your sound, and even convert your old .RAW files!

Standard disk functions are also included such as load sample, save sample, disk directory, new device (very handy), and DOS command.

But how does the dang thing perform? Pretty darn good, I must admit. The sounds come out pretty clear, depending on the clarity of your source, and sampling rate. On longer samples you may notice a slight "pop" in the audio, but don't worry, it's just your

computer changing banks to accommodate the length.

I've had a lot of fun with this thing, and the neat thing is, the author, Mike Neus, is making more of them to sell to people.

The sampler does have a quirk or two which should be mentioned. As I have said, there is an RCA jack which allows input from any source. This worked fine on my CD and tape player, as they both had special cords that went from the machine right into the sampler, via RCA. When I tried using a mixer with phone plug outputs (like the microphone inputs on most home stereos), using a cord with an RCA on one end, and phone plug on the other, no sounds could be monitored or recorded through the sampler. Ony when I sent the mixer through a reverb box which had RCA outputs could I get sound to play. This is also the only way I could use a microphone with Zounds! as an RCA adapter on the end of the microphone cable would not work.

Why was I using a mixer? Well, you cannot sample stereo output without one. Zounds, like your Commodore, is mono, and if you want to sample anything in stereo, you need to mix the signal. This was Mike's suggestion in the manual. He says if you try to use a Y-cable, you'll just overload the sampler, and I don't want to find out if he's right. I noticed no loss of sound quality when going through a mixer compared to a direct hook up, so I'm leaving the mixer where it is!

The manual supplied with the package is complete, and covers just about everything. All the basic functions are explained, as well as extra stuff for programmers and hardware hackers.

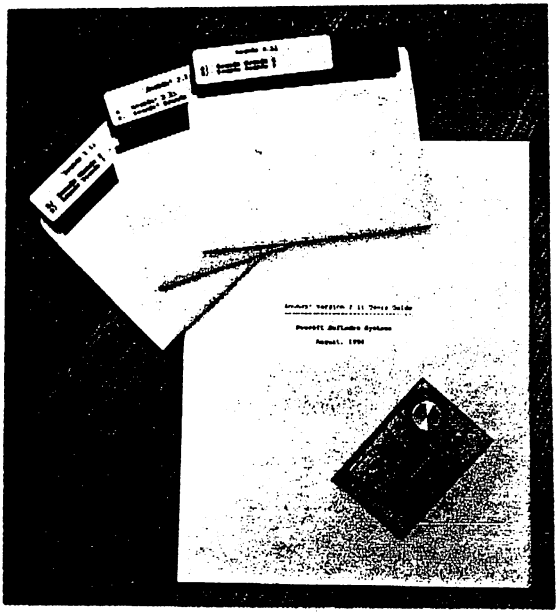
There are some things I would like to see in future versions of Zounds! Sampling is great, but we all want a way to integrate these sounds into our own programs. I have been pestering Mike about this, and he says that it's pretty easy to do from both 64 and 128 modes, and that he'd write some loaders. A sound wave display with effects editing would be a great addition as well. All of these could be a part of future upgrades, but only if we support Mike with our shareware contributions. In this case, you have to if you want a sampler!

Zounds! is just another great example of what our Commodore computers are capable of. It's also a tribute to designers such as Mike who put their all into their work, turning out a high-quality product for a low price.

Zounds! v2.11 Shareware registration: $10
Zounds! Sampler (for registered users): $20

Neusoft Software Systems
3773 Timberglen #2414
Dallas, Texas 75287

Internet: neus@timsg.csc.ti.com



Phony Pointer

by Ross Capdeville

Most operating systems today employ a different method of getting input from its users than a traditional command line interface (CLI). These sophisticated operating systems use a graphical user interface (GUI) in which a pointer on the screen is controlled by a joystick or mouse. But, how do they make that pointer that is so common in GUIS? I wondered about that and wrote a program for the C64 that would create a pointer-like sprite image and allow me to move it around using the joystick. That was simple enough, but then I realized that on my Amiga <tm> Workbench <r> the pointer accelerates if you give it a constant directional input. This speeds up things to an extent, so I decided to program that into my example as well. Then, another problem arose. In order to get input from the sprite, I must know two things. It must be known where the pointer is at any given time, and it must also be known if it collided with an object on the screen, in which some action would be taken. I decided to stay as simple as possible, though, so I only wrote a routine for a 'stop' object, which, when touched with the pointer, will end the program.

In line 0, the screen is set to my favorite colors, white characters on a solid light-blue background. In line 10, the sprite data is read into memory from the data statements in lines 60000-60010. This gives the computer the information to create our pointer image. In line 15, two variables are set that dictate the starting position on the screen of the sprite, and in line 20, the variable V is set to the base of the VIC'S (video interface chip's) address.

There are a number of things that must be done to make a sprite appear on the screen, and it does not really matter what order they are done in. First of all, we must set the sprite enable registers. I will be using sprite number three, so we must set 'bit' 3. This is done in line 30. Note that I put the number '4' in the sprite enable register, but this is setting bit 3. Look at the following table:

Bit Position: 8 7 6 5 4 3 2 1
Binary Value: 128 64 32 16 8 4 2 1
Bit Value : 0 0 0 0 0 1 0 0
(what we need to enable sprite 3)

Notice that bit 3 has a binary value of 4, so that is what we need to put in the register. If we wanted to turn on sprite 7, for example, we would need to use 64, and if we wanted to turn on sprites 3 and 4, we would use the value 12 (which is the combined values of the bits 3 and 4).

After we set that, we set the sprite's color from its own color register. Then, we position it on the screen using the variables we defined earlier. Next, we set the 64-byte block of memory in which our sprite data resides. Since we put it (line 10) at a base address of 832, we will put 13 in this register because 13*64=832. After that, we will clear the most significant bit of the X register. This will be explained in detail later.

The variable 'i' is then initialized to one. This will control the speed at which the pointer moves. It is, actually, the value that will be added to the register that indicates the direction in which the pointer is moving, thus making the pointer jump in that direction 'i' spaces. In line 91, the text is printed that will allow an exit from the program using the pointer, and the screen is cleared so nothing else will get in the way.

Line 120 reads the joystick port number two. The actual instruction reads the contents of memory location 56320 (CIA#1 dataport A) strips the last four bits and inverts the remaining ones. I will not explain this any more, as it is not necessary to understand how it works when programming in basic, we just have to know that it works. It will be explained in the ML version of the program elsewhere in this issue, however. Anyway, the values that will come from this location will tell us in which direction the joystick is pointing. Take the following chart:

```
 5 1 9
4 0 8
 6 2 10
```

The numbers show what will be the result of the expression in line 120 for each possible direction of the joystick. 0=nothing pressed, 1=up, 2=down, 4=left, 5=up left, 6=down left, 8=right, 9=up right, 10=down right. Notice that 3 and 7 are not listed - This is because these numbers represent impossible combinations such as down-up or left-right and the like.

In line 122, we assign a variable to the contents of 53279. This register is the sprite to foreground register, and it will tell us if our pointer sprite collided with the foreground (the text that we printed at the top left of the screen). There is one bit for each sprite in this register, and if that bit is one, then the sprite has collided with the foreground. Each time we read the location, it clears itself, so we do not have to worry about repeats. This is the reason for reading it into a variable before we start any other operations. Anyway, we would know that sprite three collided with the foreground if bit 3 was set. To check for this, we do a boolean test on the expression (peek(53279)and4) which will return TRUE if the sprite has collided. This is checked in line 220.

In lines 130-200, the joystick value is used to change the position of the sprite accordingly. Note that in these lines, we are not changing the location of the sprite, we are just changing the variables. This is very important because we cannot POKE a value more than 255 into a register, and if the value of the X register is greater than 255 or less than 0, then we must fiddle with the most significant bit of x register (53264). Also note that we are increasing the variables by the value i.

Now we get into the actual acceleration routine. In line 202, a variable P is introduced. This variable will hold how many movements the pointer has made, so that we can increase the speed by increasing the variable i. In line 202, we check if the pointer has made 15 consecutive movements. We cannot just say something like IF p=15 THEN i=i+1 because we want to be able to accelerate the pointer continuously, not just once. Another method is introduced, and this is a very simple but often needed concept.

IF (x/y) = int(x/y) THEN x is evenly divisible by y.

This concept is used so we can increase i every time P will be divisible by 15, which will be not just at 15, but 30, 45, and so on. See how if we substituted 45 into the above expression for x and 15 for y, we would get (45/15) ?=? int(45/15), which simplifies to 3 ?=? int(3) and then to 3 ?=? 3 which is an identity and is therefore true. If we substitute 23 into the expression, which is not evenly divisible by 15, we would get the following: (23/15) ?=? int(23/15) which is 1.53 ?=? int(1.53) which is 1.53 ?=? 1 which is NOT true.

The way we keep track of P is by using the statement in line 203. We say IF j THEN p=p+1, which will increment p every time j is nonzero. In line 201, when j is zero, the variables p and i are reset so that the pointer will resume its original speed.

In line 210, we check to make sure the X register is in the set 0,255 which are the only values we can poke into the register. There are, however, more than 255 X-positions on the screen, so we must have a way of going beyond the 255th position. It is the invisible seam that most programmers would like to ignore. I have even seen some games for the C64 that use the points (255<x<320,y) for there text display such as scores and information. They would not dare allow sprites into that area. But it is not that difficult to overcome. The most significant bit of X (MSBX) register works just like most of the others that handle the sprites. This is the ninth bit of the X location which will allow the sprites to cross the seam. By setting this register, it is like we are adding 256 to the X position. The expression in line 210 falls through if X is not in proper range. There are two possible things that we have to keep in mind. It could be going across the seam to (255,y) or to (256,y), and we have to account for both positions. We check in line 211 to see if the register is TRUE, and if it is, we then make it FALSE and reset X back to 255, then jump to 220. Otherwise, we turn the MSBX on for sprite three in line 210 and reset X to zero. After all of this, we finally update the position of the sprite on the screen and go back to line 120 to do it all over again.

(numbers in **outline** are checksums to insure proper entry--see back of issue)

```
4     0 printchr$(5):poke53280,6:poke53281,6
58    10 forx=832to832+63:ready:pokex,y:nextx
6     15 x=255:y=200
32    20 v=53248      :rem set 'v' to vic adr
221   30 pokev+21,4   :rem enable spr 3
58    40 pokev+41,1   :rem color spr 3 white
252   50 pokev+4,x    :rem position spr 3 x
0     60 pokev+5,y    :rem position spr 3 y
193   70 poke2042,13 :rem data block for spr3
44    80 poke53264,0 :rem 0 msb of x
37    90 i=1
49    91 printchr$(147)"**stop**          "
65    100 rem move sprite by joystick in
18    110 rem port 2 subroutine
210   120 j=not peek(56320)and15
163   121 if((peek(56320)and16)/16)=0thenend
163   122 a=peek(53279)
128   130 ifj=1theny=y-i
128   140 ifj=2theny=y+i
131   150 ifj=4thenx=x-i
134   160 ifj=8thenx=x+i
43    170 ifj=5thenx=x-i:y=y-i
46    180 ifj=9theny=y-i:x=x+i
```

```
86   190 ifj=10thenx=x+i:y=y+i
36   200 ifj=6thenx=x-i:y=y+i
202  201 ifj=0thenp=1:i=1
47   202 if(p/15)=int(p/15)theni=i+1
229  203 ifjthenp=p+1
218  204 ifi>5theni=5
155  210 if(x<256)and(x>-1)then220
88   211 if(peek(53264)and4)thenpoke53264,0:
         x=255:goto220
97   212 poke53264,peek(53264)or4:x=0
30   220 if(peek(53279)and4)thenend
197  230 pokev+4,x:pokev+5,y:goto120
105  60000 data 255, 128, 0, 255, 0, 0
249  60001 data 254, 0, 0, 252, 0, 0
250  60002 data 252, 0, 0, 254, 0, 0
105  60003 data 231, 0, 0, 195, 128, 0
106  60004 data 129, 192, 0, 0, 224, 0
200  60005 data 0, 112, 0, 0, 48, 0
38   60006 data 0, 0, 0, 0, 0, 0
39   60007 data 0, 0, 0, 0, 0, 0
40   60008 data 0, 0, 0, 0, 0, 0
41   60009 data 0, 0, 0, 0, 0, 0
33   60010 data 0, 0, 0, 0, 0, 0
```

continued from page 13

1. Set your modem (up to 2400 baud) for half-duplex (local echo), 8 bits, no parity, and 1 stop bit.

2. Dial toll free in the U.S. 1-800-638-8369, and in Canada 1-800-387-8330.

3. Upon connection type 'HHH' (the H's must be capitalized)

4. At the U#= prompt type JOINGENIE and press RETURN.

5. At the offer code prompt enter DHE524 to get the special offer.

6. Have your credit card ready. In the U.S. you may also use your checking account number (this incurs an extra $2 monthly charge). In Canada, only VISA and MasterCard are accepted.

7. After instant verification, type COMMODORE at any menu to take you to the Commodore 64/128 RoundTable.

For more information, call GEnie Client Servies at 1-800-638-9636.

The Voice are your Friendz

Due to an attempted hostile takeover of the "Friendz & Contax" Commodore magazine, the organization was forced to dissolve and reorganize under the name of "Commodore Voice." All past subscriptions will be honored and converted to the new title.

Anyone solicited for funds by a Peter Thompson in the name of "Friendz & Contax" or "Commodore Voice" should use caution as this party is no longer associated

(continued on page 27)

Perfect Pointer

by Ross Capdeville

This is a Machine Language translation of the program Phony Pointer in this issue. The machine language routine is so much faster that the need for an acceleration routine vanishes and ML also allows us to do some neat things with the pointer (like have it flash colors) very easily. Other than this, and the fact that this program is much faster, the ML version is essentially the same as the BASIC one. Now, let us analyze the source code.

```
EQUATE     V*cp108
EQUATE PRINT $ffd2
EQUATE STROUT $ab1e
*=    $c000

     lda #5              ;
     jsr print           ;change the color of the text
     lda #6              ;
      sta 53280          ;change background and border
     sta 53281           ;
     ldx #64             ;set up to put sprite data in memory
LOOP      lda data,x     ;get the Xth byte of data
     sta 832,x           ;store it in memory location 832+x
     dex                 ;
     bne loop            ;
     lda #255            ;initialize the variable X
     sta x               ;
     lda #200            ;initialize the variable Y
     sta y               ;
     lda #4              ;initialize vic registers
     sta v+21            ;note that we are following the same
     lda #1              ;pattern as in the basic program
     sta v+41            ;
     lda x               ;we are going to position the sprite now
     sta v+4             ;
     lda y               ;
     sta v+5             ;
     lda #13             ;set data block 13 for sprite 3
     sta 2042            ;
      lda #0             ;initialize the MSBX register
     sta 53264           ;
     lda #1              ;initialize the variable i
     sta i               ;
```

```
        lda #<txt       ;print the text and clear the screen
        ldy #>txt       ;
        jsr strout      ;
RJ      lda 56320       ;get the joystick value
        and #15         ;
        sta j           ;store it in variable j
        lda 56320       ;check to see if it is fire
        and #16         ;
        bne ctu1        ;if not, then continue
        rts             ;if so, exit program
CTU1    lda 53279       ;reset the collision sprite-foreground register
        lda j           ;get all the variables back
        ldy y           ;
        ldx x           ;
        lda j           ;
        cmp #14         ;now we test the values for the possible
        bne ctu2        ;joystick movements and alter the registers
        dey             ;accordingly
        jmp chadr       ;subroutine to change the position of sprite
CTU2    cmp #13         ;notice that the test numbers are different
        bne ctu3        ;that is because there is no NOT instruction
        iny             ;in machine language
        jmp chadr       ;
CTU3    cmp #11         ;
        bne ctu4        ;
        dex             ;
        bne chadr       ;
        jmp dmsb        ;check the msb because we altered X position
CTU4    cmp #7          ;notice that this structure in machine language
        bne ctu5        ;is equivalent to the IF THEN ELSE structure
        inx             ;in most other languages
        bne chadr       ;
        jmp imsb        ;check to see if we need to increase the msb
CTU5    cmp #10         ;
        bne ctu6        ;
        dey             ;
        dex             ;
        bne chadr       ;
        jmp dmsb        ;
CTU6    cmp #6          ;
        bne ctu7        ;
        dey             ;
        inx             ;
        bne chadr       ;
        jmp dmsb        ;
CTU7    cmp #5          ;
```

```
        bne ctu8            ;
        iny                 ;
        inx                 ;
        bne chadr           ;
        jmp imsb            ;
CTU8    cmp #9              ;almost finished
        bne ctu9            ;
        iny                 ;
        dex                 ;
        bne chadr           ;
        jmp dmsb            ;
CTU9    jmp chadr           ;still go to CHADR even if there was no match
CHADR   jsr delay           ;slow it down so we can actually see it move
        jmp ruda            ;check if there was a collision
        lda 53264           ;if the MSBX is FALSE then go to NL
        and #4              ;
        beq nl              ;
        lda #0              ;ELSE reset X to 255 and clear MSBX for
        sta 53264           ;sprite 3
        ldx #255            ;
NL      jmp ruda            ;check to see if there was a collision
        lda 53264           ;now we reset X to zero and set MSBX to 1
        ora #4              ;
        sta 53264           ;
        ldx #0              ;
RUDA    lda 53279           ;get contents of collision register
        and #4              ;we only want bit 3
        beq rdt             ;if its FALSE then save the values and update
        rts                 ;ELSE end the program
RDT     stx x               ;store the variables
        sty y               ;
        stx v+4             ;
        sty v+5             ;
        jmp rj              ;start over again
DELAY   sty y               ;save y reg - we are using the reg for delay
        pha                 ;push a on the stack
        tya                 ;
        pha                 ;push y on the stack
        ldy #0              ;
LOP1    dey                 ;regular delay loop
        sty v+41            ;flash the colors on the sprite
        bne lop1            ;
        pla                 ;restore a and y
        tay                 ;
        pla                 ;
        ldy #1              ;
```

```
        sta v+41            ;restore the color
        ldy y               ;restore y from memory
        rts                 ;
IMSB    lda $d010           ;don't know why I switched to hex here
        eor #$04            ;we are inverting the MSBX
        sta $d010           ;
        jmp chadr           ;update the address
DMSB    lda $d010           ;now invert it again, we could have used the
        eor #$04            ;same routine at IMSB
        sta $d010           ;
        jmp chadr           ;
        rts                 ;I always put RTS at the end
I       BYTE 1              ;set up variable table
X       BYTE 0              ;
Y       BYTE 0              ;
J       BYTE 0              ;
TXT     BYTE 147            ;
        BYTE "**STOP**"     ;
        BYTE 0              ;
DATA    <sprite data>       ;sprite data table
```

That should explain the code adequately enough. Also follow the BASIC program which will guide you through the things that have to be done in order to aid in the understanding of the ML program. It is basically the same thing, and it should be quite easy to follow. Below is the basic loader, just type it in using Check Please and run it. If you have any questions, e-mail me at Jiadar@delphi.com.

(numbers in **outline** are checksums to insure proper entry--see back of issue)

```
123 10 forx=49152to49552:ready:pokex,y:
       c=c+y:nextx
87  20 ifc<>42738thenprint"error in data.":end
71  30 print"sys49152 to activate"
18  60000 data 169, 5, 32, 210, 255, 169
208 60001 data 6, 141, 32, 208, 141, 33
83  60002 data 208, 162, 64, 189, 56, 193
17  60003 data 157, 64, 3, 202, 208, 247
133 60004 data 169, 255, 141, 43, 193, 169
15  60005 data 200, 141, 44, 193, 169, 4
9   60006 data 141, 21, 208, 169, 1, 141
69  60007 data 41, 208, 173, 43, 193, 141
21  60008 data 4, 208, 173, 44, 193, 141
18  60009 data 5, 208, 169, 13, 141, 250
```

```
166 60010 data 7, 169, 0, 141, 16, 208
21  60011 data 169, 1, 141, 42, 193, 169
11  60012 data 46, 160, 193, 32, 30, 171
204 60013 data 173, 0, 220, 41, 15, 141
215 60014 data 45, 193, 173, 0, 220, 41
173 60015 data 16, 208, 1, 96, 173, 31
78  60016 data 208, 173, 45, 193, 172, 44
83  60017 data 193, 174, 43, 193, 173, 45
15  60018 data 193, 201, 14, 208, 4, 136
74  60019 data 76, 192, 192, 201, 13, 208
9   60020 data 4, 200, 76, 192, 192, 201
209 60021 data 11, 208, 6, 202, 208, 60
221 60022 data 76, 30, 193, 201, 7, 208
175 60023 data 6, 232, 208, 50, 76, 19
11  60024 data 193, 201, 10, 208, 7, 136
23  60025 data 202, 208, 39, 76, 30, 193
219 60026 data 201, 6, 208, 7, 136, 232
29  60027 data 208, 28, 76, 19, 193, 201
219 60028 data 5, 208, 7, 200, 232, 208
186 60029 data 17, 76, 19, 193, 201, 9
210 60030 data 208, 7, 200, 202, 208, 6
21  60031 data 76, 30, 193, 76, 192, 192
81  60032 data 32, 249, 192, 76, 225, 192
217 60033 data 173, 16, 208, 41, 4, 240
215 60034 data 10, 169, 0, 141, 16, 208
133 60035 data 162, 255, 76, 225, 192, 173
122 60036 data 16, 208, 9, 4, 141, 16
15  60037 data 208, 162, 0, 173, 31, 208
19  60038 data 41, 4, 240, 1, 96, 142
75  60039 data 43, 193, 140, 44, 193, 142
170 60040 data 4, 208, 140, 5, 208, 76
34  60041 data 78, 192, 96, 140, 44, 193
217 60042 data 72, 152, 72, 160, 0, 136
108 60043 data 140, 41, 208, 208, 250, 104
8   60044 data 168, 104, 160, 1, 141, 41
86  60045 data 208, 172, 44, 193, 96, 173
173 60046 data 16, 208, 73, 4, 141, 16
86  60047 data 208, 76, 192, 192, 173, 16
227 60048 data 208, 73, 4, 141, 16, 208
```

```
197 60049 data 76, 192, 192, 96, 1, 66
173 60050 data 54, 14, 147, 42, 42, 83
75  60051 data 84, 79, 80, 42, 42, 0
112 60052 data 255, 128, 0, 255, 0, 0
0   60053 data 254, 0, 0, 252, 0, 0
1   60054 data 252, 0, 0, 254, 0, 0
112 60055 data 231, 0, 0, 195, 128, 0
113 60056 data 129, 192, 0, 0, 224, 0
207 60057 data 0, 112, 0, 0, 48, 0
45  60058 data 0, 0, 0, 0, 0, 0
46  60059 data 0, 0, 0, 0, 0, 0
38  60060 data 0, 0, 0, 0, 0, 0
39  60061 data 0, 0, 0, 0, 0, 0
40  60062 data 0, 0, 0, 0, 0, 0
171 60063 data 153, 153, 153, 153, 153, 153
136 60064 data 102, 102, 102, 102, 102, 102
137 60065 data 102, 102, 102, 102, 102, 102
138 60066 data 102, 102, 102, 102, 102, 102
```

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with this newsletter. For additional information, send a SASE to one of the authorized names below.

Australia: Steve Hedges, 11 Dunsford St. Whyalla Stuart, South Australia, Australia 5608

USA: Andrew Schwartz, 818 East Main Street, Olney IL 62450-2620

Tenex Bargains

I recently received the latest catalog from Tenex, and it seemed to scream: "Egad! Commodore is gone--we're having a sale!" Gone is the glossy cover and photos of Tenex gift certificate winners. The "Everything Book for Commodore and Amiga," doesn't seem to want anything to do with them anymore. Oh well, it was only a matter of time.

Like the Tenex of the past, some things are still ridiculously overpriced (it's supposed to be a blowout sale), but there are some good deals. Commodore 1670 (1200 baud) modems are now only $9.99, but an even better deal is Aprotek's 2400 baud modems for $29.95. I have never seen these sold below $60 before, and they are a fine product.

Other finds include Commodore computer, disk drive, and monitor covers for $2.99 each. C128 montitor cables are also available for $9.99, and there are several good buys for the Amiga as well.

Call Tenex at 1-800-776-6781 for more information, or to request a free catalog.

Q-Link Sinks

Q-Link, the Commodore-only network, will shut its doors this fall. This is long overdue, as Q-Link has been very lax in the last couple of years, with the greatest gaffes being upload stoppage, and lack of access to the Geos software libraries. The prices are still horrendous, and customer serivce is nonexistent.

If you want to be connected to the Commodore information loop, log onto GEnie, where Commodore support thrives.

Interground: Sweden

by Stefan Sandinge

Hello over there !!

My name is Stefan Sandinge, and I have been asked to put down some words on paper for you to read.

I live in Sweden and, for a living, I run a Bowling Center in Halmstad, that is placed on the west coast (also called the 'bestcoast'). I bought my first C64 about 5 years ago, and 6 months later I upgraded to a C128. I now have two C128 systems running, one at home and one in the Bowling Center. The two systems are configured like this: 1. C128D, CMD FD-4000, C1571, C1764 2Mb, C1901, STAR LC-24-200 Color. 2. C128D Portable, CMD RAMLink 9Mb, C1764 512Kb, C1541-II, C1581, C1084, Panasonic KX-P1081. The most used software on both systems are GEOS 128 and VizaWrite 128 Classic.

Five years ago when I bought my computers, I discovered one terrible thing: there were no, and I mean NO, software or hardware to buy for my C128 in Sweden. After some thinking I decided to do something about it, because I liked my computer but you must have something more than just the computer if you want to do something with it. It was at this point I started my second company, "Sandinge's Import & Data" as a small company just to be able to get all the stuff I wanted to my C128. It's still a small company, I will not deal with other computers, so I can keep my hobby (C64/128) and still have time for my Bowling Center that feeds me and my family.

When I started "Sandinge's" I got many contacts in Sweden who had the same problems as I, getting what they wanted, and today I have approximately 800 C64/128-users that I have more or less contact with. I feel that if you have another computer, you can never get so close with other users as you can if you have a 64/128. This gives me the feeling that I have a users club more than a company.

In Sweden it has been sold about 100,000 C64/128 computers, but today, the only one you can get is a used one. It seems that Commodore has decided that if you live in Sweden, you should buy an Amiga. It's hard to say how many 64/128-users are still going strong, but there are a lot of them out there.

About a year ago, two real 64/128 fans started Swedens only 64/128-magazine, "Atta Bitar" (Eight Bits), and today they have at least 350 subscribers. I don't know if you think that's much, but it is in Sweden. They also have what we think is the worlds biggest PD-library for GEOS. I don't know how many GEOS-users there are in Sweden, but it has to be, at least, 300-400 and growing.

At last I will say to everyone who is thinking of buying another computer, DON'T! The C64/128 is about the best "every man's" computer you can get. Think about it. Who buys a 500 dollar Amiga or an even more expensive PC, and uses it for advanced programming and at the same time lets their children learn computering on it. Not many. It's only our computers that are professional and easy at the same time. Let the children play with your computer, someday it's his.

Underware!

Any programs in the Underground catch your fancy? Well step right up and cach in on "free" Underware! Send us a **formatted** 1541 or 1581 disk in a disk mailer, indicating the issue number you would like--don't forget return postage! The Underground will put all featured public domain, shareware, and BASIC listings on your disk, returning it to you, in your mailer! This month's files:

geoCable2.doc, Epson FX-80-GC,
Zounds211.sda, Phony Pointer,
Perfect Pointer, Check Please!

Send disk to: Underware Request, 4574 Via Santa Maria, Santa Maria, CA 93455 USA

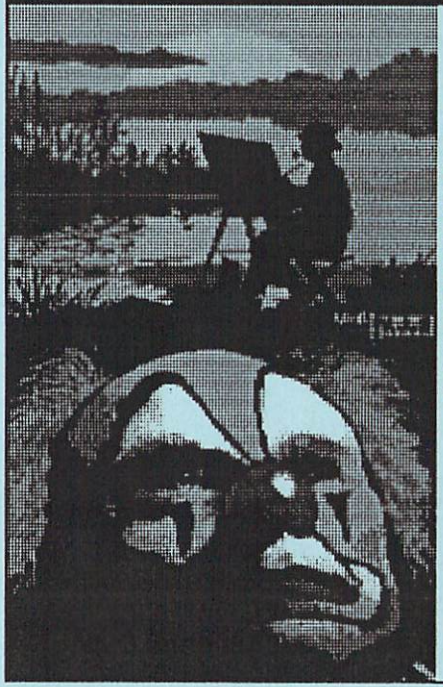
Check Please!

Checksum Utility for Programs found in the Underground

To help with program entry, type in Check Please! and save it. After running CP!, a poke will be displayed which disables the program. To use CP!, type in a line and press RETURN. A number will be displayed in the upper left corner of the screen. If this number matches the number in the listing, you have typed the line correctly. If having trouble getting the number to be displayed, disable CP! (use the poke), and type RUN again.

```
0 REM C-64 CHECK PLEASE! BY ROSS CAPDEVILLE
1 REM VERSION 1.0 RELEASED 21 JAN 94
2 REM ALL RIGHTS RESERVED
10 CK=0:FORX=828TO828+124:READY:
   CK=CK+Y:POKEX,Y:NEXTX
20 IFCK<>14198THENPRINT"ERROR!":END
30 IFPEEK(773)=165THENSYS828
40 PRINT"CHECK PLEASE! INSTALLED."
50 PRINT"TO TURN IT OFF:"
60 PRINT"POKE772,PEEK(943):POKE773,PEEK(944)"
70 END
60000 DATA 120, 173, 4, 3, 141, 175, 3
60001 DATA 173, 5, 3, 141, 176, 3
60002 DATA 169, 85, 141, 4, 3, 169
60003 DATA 3, 141, 5, 3, 88, 96
60004 DATA 160, 0, 140, 177, 3, 162
60005 DATA 0, 189, 0, 2, 240, 16
60006 DATA 201, 32, 208, 3, 232, 208
60007 DATA 244, 109, 177, 3, 141, 177
60008 DATA 3, 232, 208, 235, 56, 32
60009 DATA 240, 255, 142, 178, 3, 140
60010 DATA 179, 3, 169, 19, 32, 210
60011 DATA 255, 169, 18, 32, 210, 255
60012 DATA 169, 32, 32, 210, 255, 32
60013 DATA 210, 255, 32, 210, 255, 169
60014 DATA 19, 32, 210, 255, 169, 0
60015 DATA 174, 177, 3, 32, 205, 189
60016 DATA 169, 146, 32, 210, 255, 174
60017 DATA 178, 3, 172, 179, 3, 24
60018 DATA 32, 240, 255, 108, 175, 3
60019 DATA 124, 165, 93, 6, 0, 0
60020 DATA 0, 0, 0, 0, 0, 0
```

The Compleat* Walt Harned!



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