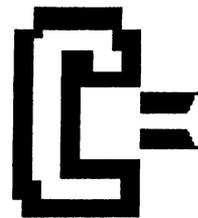
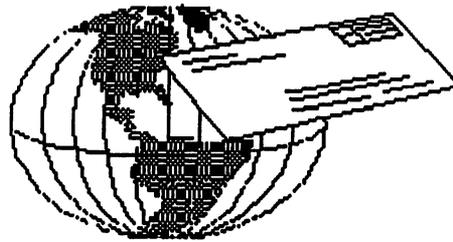


COMMODORE MAILINK

NEWSLETTER OF MEETING 64/128 USERS THROUGH THE MAIL



MEETING NEWS

JULY 2004

This July issue comes on the heels of the May 29-30 Commodore EXPO, sponsored by the LUCKI Club. To say it was good was an understatement, in spite of the fact that I arrived late and needed to leave early. Todd Elliott showed off his new geoPublish upgrade, V1.1, which allows the use of JPEG and EPS files! You read it right. Users of geoPublish can now place more than 100 JPEG or EPS files on one page. Plus more! There was Roger Lawhorn demonstrating his Commodore Linux Server 64, vastly upgraded from the previous EXPO. Canadian Greg Nacu wowed the crowd with his C64 enhanced with the upgraded IDE64 interface + Flash ROM card, which incidentally works sort of like a non-spinning disk drive that's roughly the size of a credit card! Maurice Randall talked about his new HD DOS+, Dave Moorman showed us a little about Visual BASIC, Leif Bloomquist demo'ed novel BBS/internet access, Bruce Thomas previewed the GEOS PD Software CD and introduced Todd Elliot's new geoPublish V1.1, Jim Butterfield tickled the group with some quirky and humorous programming challenges, and Jeri Ellsworth did a slide show of the C-1's latest inner circuitry and she discussed it with anyone who could understand it. Not being able to stay for Greg Nacu's "Programming for WINGS" tutorial Saturday evening, or Seth Sternberger's "8-Bit Weapon" Commodore music show Saturday night was a major disappointment, but as always, there never seems enough time. But the upshot is that I did meet one more member of "Meeting 64/128 Users Through the Mail" for the first time. Oh, so many name tags, so little time.....

We received notice of the death of new member Hazel Kathryn Giroux, of Kirkland lake, Ontario, whose name was listed (but misspelled) on the front page of our May issue. Our group extends our condolences to Hazel's family and friends.

Our latest new members are Nigel Parker, 2 Willis Road, Feniscliffe, Blackburn, Lancashire, BB2 2UA, England/UK, and Barbara Douglas, 5770 Heights Ravenna Rd., Fruitport, MI 49415. Their

BIO's, not available as of this writing, will appear in our September BIO listings. OK, everyone, let's give Nigel and Barbara a big welcome.

To all members who are yearning to edit an issue of Commodore Mailink (CML), don't feel shy. If you have never edited a newsletter, it is only scary the first time. But remember it is not a whole lot different from writing a well-organized letter that happens to have "headers" or "titles" for various topics contained in that letter. If you are interested, contact me by mail or email (see BIO).

This issue was actually fun to create, and hopefully will be fun to read. Enjoy.

-Linda Tanner, President

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Members may place free Commodore BUY/SELL/TRADE ads in the Mailink. Send diskfile of ad to next editor.

EDITOR GUIDELINES: (abbreviated version))

Editing a newsletter involves collecting articles, programs, and other items, then placing these items in printed newsletter form. An editor may opt for the "cut and paste" approach, where articles, once printed, are literally cut and pasted onto each "master page". Or, publishing software may be used.

Editor should where possible use the two-column per page format for better readability. Also, all page margins should be no less than 3/4 " on each right and left margins. Text, regardless of which font, should, with rare exception, be 12 point or larger. The number of different fonts on a page is not written in stone, but no more than two is a good rule of thumb, or three if you include footers and/or headers.

Requirements for the Editor include, if submitted, BUY/SELL/TRADE ads, Treasurer's Report, Obituaries, Announcements, Address Changes, and New Member BIO's. Also the Editor must detail the computer system, including software and hardware and printer used in the production of the current newsletter, as well as name, requirements, and deadlines of next editor. This could be in two separate columns: "The Editor's Desk" and "The Next Editor". If as Editor, you receive more than enough to fill pages 3-18, you will publish all "requirements" and some of the "options", and forward to next editor only whatever "options" would not fit in newsletter.

The Editor should edit each item as it arrives, creating a diskfile and a backup diskfile, making certain a TWS version of all disk files is (also) created. A good, clean "master copy" on single, unfolded sheets, printed on one side only and protected by cardboard should be sent along with the TWS disk files to our Mailer, Richard Savoy, by the first day of the month you are editing. **NOTE:** to include a color page, send 130 completed sheets of that page, printed on both sides (ready for insertion into CML), along with the "masters" and TWS disk. A second copy of CML (copied on the back of junk mail is OK) should also be sent to the President for proofreading purposes.

Always keep your backup disk in a secure place until the Mailink is in the hands of members. If you suddenly realize it is near the first of the month, and you are not nearing completion of the newsletter, notify the President. It is much easier to deal with a problem if it is made known.

Editing can be fun. It can be mentioned in your resume', so what are you waiting for? Contact us now.

NOTE: pages 1-10 and 17-20 of this newsletter were created with a C128, SCPU, CMD HD, RamLink, Lexmark Optra 40 PS II printer, geoWrite, geoPublish, Wheels, and PostPrint 3, by editor Linda Tanner. Pages 11-16 were created with C 128, FD2000, 1571, KX-P2135 Panasonic printer and Illustrator II, by Richard Savoy.

July Editor: Linda Tanner

FROM THE EDITOR'S DESK:

This month you will find a color picture of Rolf Miller (our third officer brave enough to send his pic). The color cartridge died during printing, so Brian Vaughan's picture will be in a future issue, and my apologies to Brian. Getting the JPEG's from Windows to Commodore is usually easy.. Ordinarily the procedure at this desk involves downloading a JPEG from a PC onto a 3.5" floppy, then putting that floppy into the C128 and using geoDOS to copy it from Windows to CBM format. It usually works. This time no amount of tweaking or coaxing would get Commodore to even recognize the JPEG's, including every possible permutation in geoDOS, plus I tried WCOPY. I finally gave up, leaving it a mystery FOR NOW.

Another serious glitch while producing this newsletter involved the Lexmark Optra 40 printer. It was a nice little workhorse of a printer, albeit a "lightweight" of sorts, according to some. One day a few weeks into the printing of draft copies of the CML it began to make strange, metallic, scratching/clanking noises whenever it printed. I inspected carefully, finally noticing one of the three metal "spring pins" that appear to work with some "guide rollers", to help propel the paper through, was askew, and in fact lying loose inside the printer. I removed the errant pin and all was well for about a week till a second guide pin and plastic piece broke, causing the printing of uneven and misaligned text. The makeshift, "for-now" solution involved scotch taping a trailing page to each sheet to be printed. After each page was partly printed and being ejected, the attached sheet guided the desired page the rest of the way.. Then I remembered fanfold paper! To create this issue, I used Wheels, geoWrite, geoPublish, PostPrint3, SCPU, CMD HD, RL, Lexmark Optra 40 printer, and scotch tape, plus PC to print JPEG's -ed. **Linda Tanner.**

THE NEXT EDITOR:

Richard Savoy will be the September editor. Richard prefers **The Write Stuff (TWS)** in either PRG or SEQ format, on 3.5" or 5.25" disks. You can send material via email to RSavoy5578@aol.com, or hardcopy via snailmail at 250 West St., #9, Ware, MA 01082-9783. If you like to add graphics or clipart, just remember pages are photocopied without color usually. If you do have an article that you do like in color, talk to me; as long as the material is Commodore related, I may be able to do it. Deadline is August 15.

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To Join MEETING 64/128 USERS

THROUGH THE MAIL:

Obtain an application from Linda Tanner or Richard Savoy, complete it and return it to BIO Editor, Brian Vaughan, 2101 Shoreline Dr, #352, Alameda, CA94501-6207. Next send dues to Treasurer, Emil Volcheck, Jr., 1046 General Allen Ln, West Chester, PA 19382-8030. (\$15 in continental US, \$17 in Mexico/Canada, \$25 USD everywhere else.

NEW MEMBER BIO

Stephen Haire, a new member listed in our May issue, is interested in studying languages.

He uses a C-64, 1541, and color TV, and he also has an IBM. PC. Stephen's special interests are programming in BASIC for the C-64.

TEN DAYS WITHOUT THE COMMODORE

by Rolf L. Miller

There are three reasons PC's found their way into this house. First is the wife's want of using AOL, which isn't Commodore friendly. This is sort of ironic since AOL evolved from Quantum Link, an on-line service built on the backs of Commodore users.

Next is the desire to utilize some internet services which require a PC to access. And wisdom suggests a separate machine rather than fighting with the wife over whose turn it is.

Then there is the need to transport data between the Windows and Commodore platforms. There are methods of accomplishing this outside the presence of a PC, but having one is more convenient.

Now, when it is necessary to be away from the office for more than a day or two, the preference is to pack the portable SX-64 with the luggage.

This machine, with its built-in 5" display and 1541 drive, serves well when on the go. On a recent occasion, though, expediency instead advised taking a PC notebook. So began ten days without access to Commodore. The experience reinforced why the Commodore is preferred.

For instance is some word processing material produced on the PC. To make PC generated documents usable on the Commodore, it is important to create them in plain ASCII text. Unfortunately, and without any indication whatsoever, the Windows application utilized for the work embedded HTML coding throughout the material. Within its environment, HyperText Markup Language controls how material displays and is otherwise invisible to the user. But in the plain text environment, HTML coding displays along with the material, rendering it useless without a whole lot of editing.

Doing things unbeknownst to the user seems to be an inherent characteristic of Windows. While performing another task, for example, an application popped up which finished the work and saved it, but to where has not been discovered to this day. Nor has the application which appeared out of nowhere ever again been found.

Encounters with the penchant of Windows to invoke action unilaterally spawned other difficulties. No doubt, some of this frustration can be accounted for by unfamiliarity with the system. And it is only fair to acknowledge that PC's are able to perform tasks not easily accomplished, if possible at all, with Commodore.

On the other hand are things which are easily done with a Commodore that Windows lacks. Consider, for instance, the simple task of printing out a directory listing. This isn't to overlook that a patch or program can be downloaded to enable Windows to do it, but lacking this, it's a matter of pen in hand on paper.

Now for some poetic justice.

Upon return to the office and the joy of working with Commodore, a PC user came by while the aforementioned text documents were being fixed up with the 64. And as is usual, he made some comment about the Commodore not being a "real" computer. Recounting the misadventures of the past ten days didn't impress him because, as he put it, the notebook used is "out of date." In other words, by "real," he means "new," because that "out-of-date" notebook is barely two-years old.

Anyway, he stopped by to relate his latest internet trouble. As he told it, his ISP cancelled his DSL account without notice, accusing him of being a spammer. He denied it, of course, but the evidence showed his PC as responsible for sending literally thousands of unsolicited emails. Ensuing investigation discovered that his computer contained a worm/virus which allowed others on the internet, including spammers, to access and use his machine without his knowledge.

Naturally, the only reason PC users reveal difficulties to Commodore folks is to elicit sympathy. And it is supposed that the high-road approach would be to give these poor souls a great big hug. But the arms of compassion are a bit short for those who mock Commodore use when their "real" computers bring them real trouble.

ERROR...EROR
EROR...ERER
AIROR...HEIROR

A minor mistake has been noted in Bruce Thomas' geoPublish tutorial last month (not Bruce's error.). Richard Savoy has created pre-printed labels for your convenience in correcting the title of the May geoPublish tutorial on page 11, which should read "**Master Pages Mode**". A correction label is enclosed with each July issue of Commodore MaiLink.

Find label at bottom of Page 15

BASICALLY SPEAKING

by Linda Tanner

This month we continue the theme of arrays and have a little routine that demonstrates three-dimensional arrays. In our case, our array is "PX", short for pixel. I dimensioned the array to be 40 by 25 by 8, that is, the first dimension has 40 elements, zero through 39, and each of those 40 elements has 25 elements, 0 through 24, giving us our second dimension. And, in turn, each element in our second dimension has 8 elements from zero to 7, comprising our third dimension. Think of it like this: Pretend you are looking at a cardboard box and it is 40 inches wide, 25 inches high, and 8 inches deep. You can see that for each inch of width, there is an entire column of vertical height, i.e., each inch of width has an entire array of vertical elements of height. And since we aren't living in Flatland, our box also has eight elements of depth for each element of width or height. Like the box above, our array, PX(39,24,7), is also three-dimensional.

This little program can be separated into seven routines, the first of which does not use arrays at all. Initially, we place 2001 dots (in the FORA=OTTO2000 loop) in random locations throughout our screen. BASIC 7.0 has the DRAW command for the 40 column screen, making it very easy to situate dots on the screen (in other words, map the screen, bit by bit). Its format is simple: DRAW Color Source, X,Y.

First, a little background for beginning programmers: the 40-column screen consists of 64,000 dots or pixels (picture elements), each of which can be identified by a specific "X" (horizontal) and "Y" (vertical) co-ordinate in standard bit-map mode. Each dot must have both both "X" and "Y" co-ordinates to pinpoint its location. After we have told BASIC 7.0 we're going into standard bit-map mode on the 40-column screen, via the command GRAPHIC1,1, and we've set our colors via the COLOR command(s), we can begin drawing dots, either in a pattern we call a picture, or in a manner whose purpose is to teach beginners how this process works. The latter is what we are doing in all six routines.

Our first routine draws points or dots in random screen locations, each of which has a color assigned, also randomly. In our "DRAW Color Source, X,Y", Color Source becomes "1" for 40 column foreground, X becomes INT(RND(0)*319+1), and "Y" becomes INT(RND(0)*199+1), giving us DRAW1,INT(RND(0)*319+1),INT(RND(0)*199+1). It is good to remember that when working with random numbers, we need to make our result an integer via the INT function..And before we draw our point, we assign a color to the foreground where that dot is to be, with COLOR1,INT(RND(1)*16+1). Now we have shown exactly what line 12 is doing, after which it waits 3 seconds (SLEEP3) before clearing the screen.

Our second routine (line 16) uses our three-dimensional array for the first time, but only to fill each slot in our array with a random number between 1 and 16, the purpose being to produce a supply of pre-randomized numbers for our later routines. It is this routine that is VERY time-consuming if you do not have SCPU. I clocked it at approximately three minutes that it took to calculate 8,000 different random numbers, and store each of them in the 8,000 slots of PX(39,24,7), during which time your screen and you are blankly staring at each other.

Our third routine is nearly identical to our first, with random placement of "X" and "Y". One difference is that here we are assigning colors by retrieving the numbers that were placed in our array locations in line 16--numbers that correspond to colors, for example 1 for black, 2 for white, and so on. In other words, as we move through each of the 8,000 elements of our three-dimensional array in three nested FOR/NEXT loops, we retrieve a color number, then assign it to a randomly drawn dot.

In line 22, our fourth routine in line 22, our use of the array subscripts changes slightly. Not only are we retrieving one by one those color numbers we stored earlier, but we are also using the array subscripts to denote screen dot locations. Remember that we are not talking about a 40-column text screen with 40 individual locations spread horizontally across the screen. Rather, we are now looking at a screen that has 320 dots across, by 200 dots down. So, when we use array subscripts of zero through 39, we will not access the 40 text locations with which we are familiar. You know the old adage, "a picture is worth a thousand words", and it becomes obvious when you see the dots being filled on the screen in the locations represented by X and Y, when X can be anywhere from zero through 39, and Y can be a value between zero and twentyfour.

Our fifth, sixth, and seventh routines in statements 24, 26, and 28 demonstrate variations of the DRAW command. Look at the values of each "X" and "Y" to see where the dots are printed, and in which order.

This beginning in three-dimensional arrays should get you started learning multi-dimensional arrays. Practice changing the values of "X" and/or "Y" within the DRAW commands. This is the best way to learn. (continued on page 6)

BASICALLY SPEAKING, continued from page 5

```
10 DIMPX(39,24,7):COLOR1,7:COLOR4,2:COLOR0,2:GRAPHIC1,1
12 FORA=.TO2000:COLOR1,INT(RND(1)*16+1):DRAW1,INT(RND(0)*319+1),
INT(RND(1)*199+1):NEXT:SLEEP3:SCNCLR
16 FORX=.TO39:FORY=.TO24:FORZ=.TO7:C=INT(RND(1)*16+1):PX(X,Y,Z)=C:
NEXT:NEXT:NEXT
18 FORX=.TO39:FORY=.TO24:FORZ=.TO7:COLOR1,PX(X,Y,Z)
20 DRAW1,(INT(RND(0)*319)),(INT(RND(1)*199+1)):NEXT:NEXT:NEXT:SLEEP2:SCNCLR
22 FORX=.TO39:FORY=.TO24:FORZ=.TO7:COLOR1,PX(X,Y,Z):DRAW1,X,Y:DRAW1,39-X,Y:
NEXT:NEXT:NEXT:SLEEP2:SCNCLR
24 FORX=.TO39:FORY=.TO24:FORZ=.TO7:COLOR1,PX(X,Y,Z):DRAW1,7*X,Y:
DRAW1,319-8*X,Y:DRAW1,5*X,Y:NEXT:NEXT:NEXT:SLEEP2:SCNCLR
26 FORX=.TO39:FORY=.TO24:FORZ=.TO7:COLOR1,PX(X,Y,Z):DRAW1,8*X,8*Y:
DRAW1,8*X+7,8*Y:NEXT:NEXT:NEXT:SLEEP2:SCNCLR
28 FORX=.TO39:FORY=.TO24:FORZ=.TO7:COLOR1,PX(X,Y,Z):DRAW1,7*X,8*Y-1:
DRAW1,8*X,8*Y:NEXT:NEXT:NEXT:SLEEP2:SCNCLR
99 GRAPHIC.:LIST:COLOR4,1:COLOR0,1
100 REM-"3DIM-ARRAY-704A"-128 IN 40 COL-RANDOM PIXELS PLUS MORE-L.TANNER
103 STOP
```

The above program is for the 128 in 40 columns. Similar routines can be written for the C64, although BASIC 2.0 is slightly less intuitive, i.e., that in order to turn on a bit (place a dot or pixel on the screen) in standard bit-map mode, one cannot merely command the computer to DRAW1,X,Y as is possible in BASIC 7.0. In BASIC 2.0, there are several steps that must be taken before bits may be turned on or off. The first thing we must do is tell our C64 we want to go into standard high-resolution bit-map mode, and to do so, we issue the POKE statement, **POKE53265,PEEK(53265)OR32**. A few more steps are necessary, such as finding a location for the bit-map (Commodore 64 Programmer's Reference Guide places the bit-map at 8192). Also, the bitmap must be cleared before use, and color must be chosen. All of this is in the above book on pages 122-127, and included on pages 123-127 are programs that plot a sinewave and a semicircle.

Since we are still on the topic of three-dimensional arrays, we can study the little program below for the C64, which does not involve bit-mapping, but does place characters on our 40 column screen.

```
10 DIMPC(9,5,6):Z=58:SC=1024
12 FORA=0TO9:FORB=0TO5:FORC=0TO6:PC(A,B,C)=Z:Z=Z+1:IF(Z>=127)THENZ=58
18 NEXT:NEXT:NEXT:PRINTCHR$(147)
20 FORX=0TO9:FORY=0TO5:FORZ=0TO6:POKESC,PC(X,Y,Z):SC=SC+2:IFSC>2023THENSC=1025
21 NEXT:NEXT:NEXT
22 GETQ$:IFQ$=""THEN22
23 PRINT"[17DOWN]"
24 REM-"3DIMARRAY64JULY"-PRACTICE # DIM ARRAYS ON C&$-L.TANNER
```

One good use in my opinion of three-dimensional arrays would be in plotting points on/in a hologram. Or imagine having a given cubic volume, and being able to map out, using all three dimensions of that volume, where a given point would lie, that might represent, for example, a given atom. This is the type of three-dimensional mapping one could envision that would be necessary to pinpoint the co-ordinates of a position in the "transporter" in Star Trek. There are many uses for multi-dimensional arrays, some as yet undiscovered. Hopefully this introduction into array-handling has been helpful.

Stay tuned in September for sprites.

QUESTION & ANSWER DESK

Rolf Miller, Q & A editor,
rolfmiller@aol.com

Questions may be submitted by regular or e-mail. Answers will be returned as soon as obtained, then published in coming issues, though the identity of those asking questions will not appear because duplicate, similar, and associated items will be compiled.

1541 ALIGNMENT SYMPTOMS

Q. I have two 1541's giving me problems. One is a newer drive with the lever that flips up and down. When I try to use it, the red light blinks on and off like it's trying to read the disk, but doesn't. The other drive is an older push-down latch model. Sometimes it reads the disk and other times it doesn't. I've checked the head in both. Also I sometimes have trouble getting the disk to go in on the older drive.

A. Trouble getting the disk to go in on the older push-down latch model drives is common because they have slotted tracks to guide the disk into place which newer drives do not have. These tracks tends to warp slightly with age, which explains the difficulty with inserting disks. Any irregularity in the disk encasement will also cause this.

As for the reading problems, the described symptoms sound like alignment is the culprit. This is indicated when a drive "tries" to read but fails or sometimes reads, and a dirty head has otherwise been eliminated as the problem. Aside from rough handling, alignment problems usually arise over time when, during the course of use, the head mechanism is moved to its stop position. This occurs during formatting, for instance, and some programs overly cause it as part of their protection schemes. It is heard as a "banging" sound.

Unfortunately, curing misalignment is a technical procedure not easily accomplished, if at all, as a do-it-yourself project. But that it is in fact misalignment can usually be established by attempting to format a disk, then saving a program to it, then loading it. This should work because a misaligned drive will read disks formatted on it, but not on any other drive.

If the drive will not format, it is almost certainly another problem, and while one of several faulty chips or other circuitry could explain the difficulty, it could also be that the drive motor (which turns the disk) is not running at the correct speed, or the stepper motor (which positions the head) might be misbehaving (it could be motor itself or one of several chips or circuitry which control it).

If luck prevails and only one of the two drives pass the format test, it might be worth swapping socketed chips from the drive that passes with chips that are likewise socketed in the drive which failed, on the chance that faulty chips explain its failure.

Another solution is to acquire and substitute a working motherboard or drive assembly as indicated. *

(EDITOR'S NOTE: Rolf Miller will ship a working used 1541 motherboard or drive assembly (specify flip lever or push latch) to a U.S. address priority mail for a total of \$9.95. (Overseas inquire.))

FIND REPEATING SEQUENCES OF NUMBERS

Q. Do you know of any program that I can input 3 numbers and have it look for repeating sequences of numbers?

A. Without knowing how the numbers are stored in memory, the precise means of accomplishing this cannot be addressed. If, for instance, the numbers are stored as numeric values like N=456, that sequence could be searched for as four hundred fifty six. And text numbers like N\$="456" can be evaluated numerically as N=VAL(N\$).

However, if the three-digit sequence is contained within a larger value like N=123456789, it would first need converting to text, then the resulting string of digits searched to evaluate each three-number combination. The following routine illustrates this.

```
10 N=123456789
20 N$=STR$(N)
30 V=456:L=LEN(N$):FOR X=1 TO L
40 T$=MID$(N$,X,3)
50 IF VAL(T$)=V THEN PRINT T$
60 NEXT
```

Line 20 converts the numeric value assigned to N in line 10 to a string of digits using the STR\$(N) function and assigns them to N\$. V in line 30 is assigned the three-digit search value, L is made to equal the LENGTH of the resulting N\$ using the LEN(N\$) function, and the FOR loop increments X from 1 TO the value of L. Then

--continued on page 10--

1541/1571 WRITE-PROTECT MODIFICATION

latest updates and corrections 5-30-2004

There is a way to safely disable the write-protect circuit in the 1541 and 1571 disk drives. This modification would enable writing to or formatting a disk that was write protected, or one that was never punched to begin with, such as the backside of a standard 5.25" floppy (sometimes called a "floppy"). Although it's unnecessary to punch the other side of a 1571 disk used in 1571 mode with a C128, many users run 1571 drives in 1541 emulation mode with a C64, so disk "flips" are sometimes used to access the reverse side.

An unmodified drive senses whether a disk is write protected by shining an invisible (infrared or IR) light from an LED through the left (notched) side of the disk to a sensor facing the LED. With no disk in the drive or if a notched disk is inserted, the write protect sensor (WPS) "sees" the light from the LED. When an unnotched disk (or one with a write protect tab) is inserted, the light to the sensor is blocked. This represents the two logic states of the sensor; on and off. No disk or a notched disk produces a logic low or zero volts out of the sensor and an unpunched disk or one with the write-protect notch covered generates a logic high. The sensor is a phototransistor with its output (in most 1541 drives) tied to connector P6 pin 12 (orange wire) and ground on pin 13 (green wire or, in some older drives, violet). P6-12 goes to the input of an inverter IC UA1-5, a 74LS14. That buffer IC outputs an inverted logic level on pin 6, and that is used to "drive" the input of controller IC UC1-6 and VIA IC UC2-14 in most versions of the 1541. Since it isn't the same in all drives, it's important to know how to tap into the correct circuit for the drive you have. The explanation given here will be for the

most common versions of 1541, and the following text will use that as a basis for instruction. Specific install information will also be provided for different models such as the SX drive, the 1541C, 1541-II, etc.

The most obvious way to disable the write protect circuitry is to short out the two wires going to the WP sensor (P6-12 shorted to P6-13 in a 1541) inside the drive. That method will work, but has the disadvantage of also disabling the disk change sense used by the drive to update the BAM when another disk is inserted. If the disk change update is disabled along with the write protect, the possibility exists of corrupting a disk when writing to it. The drive, thinking it is still looking at the first disk, may not update the BAM information before writing new information. At best, you will get a "disk ID mismatch" error, assuming the disks ID numbers (the two digit alpha-numeric information just after the diskname in the header) are different. If they are the same, you can potentially corrupt a disk. There are a few workarounds for that problem. One is to initialize the drive each time you change disks. JiffyDOS makes that easy: @I and <RETURN>. Another is a drive reset via a hacked reset switch to preserve the program in computer memory. With either of these methods, you must remember to do it each time a disk is swapped.

Note what happens when you insert a disk into a 1541C or 1571...the drive spindle motor runs. that "trigger" comes from the WPS circuit. Ideally, any modification to a drive write protect circuit should still allow disk change updating. With the cutting of one PC board trace and the addition of three components (diode, resistor, and capacitor), a 1541 can be modified to allow writing to a protected

Write Protect, continued from page 8

disk without sacrificing disk change sensing.

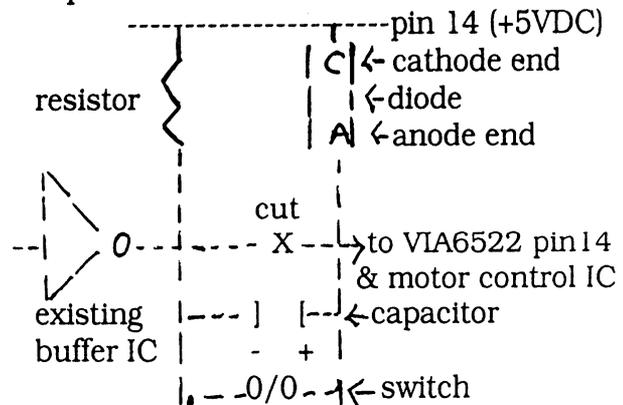
The buffer IC output line (UA1-6 in most 1541 drives) is opened by cutting a trace (conductive PC foil) on the PC board. A 10 uF 16 volt electrolytic capacitor is installed across the cut trace with the negative capacitor terminal going to UA1-6 and the positive lead to the out trace (actually to the next solder point on the board). Next, a 10K ohm 1/4 watt resistor is connected between IC UA1-6 and the 5+ volt source (UA1-14). Lastly, a diode is connected between the positive terminal of the installed capacitor and the 5+ volt supply, with the cathode lead (indicated with a line or bar at one end) of the diode going to the 5+ v (UA1-14).

To easily disable the modification and return the drive to a normal write protect mode, a SPST (single pole single throw) switch can be wired across the capacitor and installed somewhere on the drive case. With the switch closed, drive operation is returned to normal. When the switch is open, the write protect only is defeated. These added components do not upset normal circuit functioning.

How it works:

With the modification installed, the logic low signal out of the WPS circuit becomes a logic low pulse...just long enough to trigger a re-read of the BAM during the next drive access. The WPS line goes logic high again as the capacitor charges up, allowing the drive to write with the sensor blocked. The 10K resistor functions as a "pull up", necessary because TTL outputs don't normally go above about 3.3 VDC on their output lines. The diode is a protection device for the downstream chips. It keeps the DC level from the capacitor to

the controller and interface chips from going above 5 volts. The resistor, by the way, can be any value from 2.2K ohms to 10K...the value and wattage is not critical. The diode can be any standard silicon type. I used a 1N914 for my drives, but a 1N2004 or equivalent power supply diode will work as well. The capacitor is a small electrolytic, 10uF at 16 volts. The added circuit looks like this for all drives. The disable switch is connected across the capacitor.



Installing the modification:

Most versions of the 1541 use a standard TTL 74LS14 hex inverter at board location UA1 for the WPS buffer. Pin 6 of that chip is opened for the modification. Newer drives include board numbers 1540049-1, 1540050, 251748, 251777, and 251830 (see NOTE 1).

The WPS buffer IC is UC1 in the very early 1541 long board (includes number 154008-02), and pin 8 is opened for the mod (see NOTE 2).

The later 1541C short board 251854 (sometimes called a 1542) uses UB1 as the WPS buffer and pin 8 is opened for the mod (see NOTE 3).

A 1541-II uses a 74LS04 (same IC pinout as 74LS14) for the buffer at board location U9 and pin 8 of the chip is opened for the mod (see NOTE 4).

continued on page 18

Question & Answer Desk, continued...

line 40 uses the MID\$(N\$,X,3) function to take 3 characters from N\$ beginning with the character determined by X (1 to start) and assigns them to T\$. Line 50 then uses the VAL(T\$) function to determine the numeric value of T\$ and compares it to the search value assigned to V, and if it is equal, prints T\$. The line 60 NEXT increments the FOR loop until the value of L is exceeded.

As written though, this routine will not work with numeric values represented by more than nine digits because the Commodore expresses them using scientific notation. So, N=1234567890 : N\$=STR\$(N) gives a text string consisting of 1.23456789E+09, and while the 456 would be found in this instance, it would not be found if it occurred at the front or end. On the other hand, the routine would work well with a long text string of digits. This will see the repeating sequence of 456 printed seven times. To search for any other sequence, just change the value assigned V in line 30.

```
20 N$="456456456145623456928456739456"  
30 V=456:L=LEN(N$):FOR X=1 TO L  
40 T$=MID$(N$,X,3)  
50 IF VAL(T$)=V THEN PRINT T$  
60 NEXT
```

SALE ITEMS

CCCC, the Cincinnati Commodore Computer Club, has 1,000's of used commercial items for sale at reasonable prices. The lists include software, hardware, accessories, books, magazines, and manuals. Because of our low prices, we ask that buyers pay postage. For a 5 1.4" disk of the lists, send a floppy mailer to Roger Hoyer, 31 Potowatomie Trail, Milford, OH 45150. Or to receive the lists by email, contact Roger at thunderbird@iglou.com or the computer club at cbmusers@yahoo.com. A third alternative is to view them and download them from our website: www.geocities.com/c64-128-amiga. The club also sells the following printer tractor feed items: 3.5" X 15/16" address labels in pastel shades of blue, green, pink and yellow, plus white; \$1/100; 2.75"X1 15/16" labels for 3.5" disks: \$1.50/100; 3.5" X 6" postcards - \$1.50/100. Prices include postage.

LETTERS FROM THE PEOPLE

(Editor's note: the following letter was received via email.)

From: chugs@hawaii.rr.com
Subject: Surplus C= Stuff
Wednesday, April 14, 2004

Hi all you nice folks. Well, I'm back online after some very tiring problems. I'm not giving up on Commodore.

I have three (3) independent 128 setups, and intend to keep them up and running, 1541's, (15)71's, (15)81's and CMD FD's. So I'm good shape, plus, I still have all my repair tools, and chips to last me till I leave for upstairs, or, ugh, downstairs. Hmmm!!!

I have many many surplus magazines sets, and all sorts of 64 power supplies, 1541 drives, a few 1571's, cables, a few monitors, books and a whole bunch of software I no longer need, and need the room.

For free!!! What's the catch? OK, the catch is, I cannot financially afford to ship the stuff to any of the 48 mainland states, or Alaska, from Hawaii.

So, if anyone is looking for something, I'll ship it, as is, but: must have USPS Postal money order in advance to pay for the packing and shipping. I'll ship via USPS receipt return.

That's it. Would appreciate if you would let all other Commodore folks know about this email. Many Thanks, **Myron (Daniels)**
P.S. if you know of any sites I can post this msg on, please let me know.
Hawaii-On-Line

ARE YOU PLOTTING?

Now is your chance to be the first kid on the block to have a Commodore 1520 Plotter in original box with manual, plotter cover, 41 rolls of paper, four NEW pen sets, and eight disks of public domain programs--all for \$40 including shipping. Call or email Roger Hoyer at 513-248-0025 or email him at thunderbird@iglou.com.

GEOSPUBLISH # 5
PAGE LAYOUT MODE
By: Bruce Thomas

In this column we are going to start to 'pour' our geoWrite files into columns in our geoPublish document. To start with, however, we have to make a correction to the manual.

On Pages 3-10 and 3-11 of the geoPublish Manual we are introduced to the Page Layout Toolbox as part of the Tutorial chapter. Two of the tools are mislabelled.

On Page 3-10 the tool identified as the "Delete Region Tool" is actually the "Clear Region Tool". On Page 3-11 the tool identified as the "Clear Region Tool" is actually the "Delete Region Tool". I think you can see how this would be an important difference to know.

[Article preparers Note:Page 3-10 & 3-11 are at the end of this article for your convenience. Richard Savoy]

Start up geoPublish and OPEN the TutorialPart1 file that we created last time. Select the Mode Menu and then Page Layout mode (C= L). This mode is where we create Regions to pour our text into. We need to do a little preparation before making our regions though.

Gutterball

Remember how I said that I didn't like the Sample Master Pages that come with geoPublish because of the column sizing and use of Gutters? We're going to learn about gutters now.

If you have ever gone bowling you know what a gutter is. It is the

trough down the sides of the lane where the ball goes if you don't throw it straight. The gutters stop your ball from encroaching on the lane beside you. In geoPublish a Gutter does the same thing - it prevents text from one column from running into text in the column beside it.

One nice thing about geoPublish is that we can set the gutters for each individual text region. We will take advantage of this later on. For now we want to check the Default Gutter values that will be used for each and every Region that we create.

Select the 'options' menu in Page Layout Mode and then choose the 'set gutters' option. When the dialog box appears you will see that the default value is 5 for the left, right, top and bottom gutters. Remember that our screen resolution in GEOS is 80 Dots Per Inch (DPI) in the horizontal direction and 72 DPI in the vertical direction. We are going to have two columns beside each other. So, with a gutter value of 5 for the right gutter of the column on the left side of the page and a gutter value of 5 for the left gutter of the column on the right side of the page (draw a picture if you have to, I won't start with screenshots for a while yet) you can see that we will have 10 points between our left and right column text. At 80 DPI this means we have 1/8th of an inch between our columns of text, which isn't a lot.

Generally, I like to set the default left and right gutter values at 10. This gives a total of 20 points (or 1/4 of an inch) between the text columns. The largest gutters we can create are 1 inch meaning a value of 80 for the left and right gutters and a

Continue on next page

value of 72 for the top and bottom gutters. We will do more gutter manipulation throughout this project. For now we will leave the default values alone so just press the OK button.

Our Master Page was laid out so we have choices of single column pages, 2-column pages or three column pages. We will start by using a 2-column layout for the first article. Since this is the first page for a new article we will also need to define a large title region.

In the options menu turn on SNAP. Select the 'Open Region Tool' [gP Page 3-11] and move your pointer onto the Page Work Area [gP Page 3-5] where it will take the shape of a crosshair. Move to the top left hand corner of the page and your crosshair should SNAP to the guideline junction. We want to create a region across the page from the 1" guideline to the 8" guideline and down the page from the 1/2" guideline to the 1 1/2" guideline. Click your mouse button to set the start point and then move your mouse over to the lower right corner of this area. Your crosshair should SNAP into place so just click your button to set the region. If you place the region incorrectly select the Pointer tool, click anywhere within the new region and then use the Move and Size buttons to fix the placement of the region.

We will now create two regions to hold our article. These will go from the 1 1/2" guideline down to the 10 1/4" guideline and will use the center guideline as the divider. Make sure the Open Region Tool is selected and position your crosshair at the 1" and 1 1/2" junction, click your button and then drag the region to the 4 1/2" and 10 1/4"

junction and click your button. Place your crosshair at the 4 1/2" and 1 1/2" junction and click to set the top corner for the right column region. Drag this region down to the 8" and 10 1/4" junction and click to create our second region. We are now ready to import our geowrite file.

There are two different methods to import the geowrite file. Click the 'Text Placement Tool' [gP Page 3-11], locate the 'geoPub1' file in the file list box and then click the OPEN button. You will be returned to Page Layout Mode with a Pointer. Move the Pointer to the region where you want your text to be imported (the right column in this case) and click your mouse button. The text region will fill with a bunch of dashed lines.

The dashed lines indicate that a geowrite file has been imported to this region but is not available to be worked on yet. To ripple the text and complete the import phase press the 'SHOW' button in the Layout Toolbox [gP Page 3-10]. The region will now fill with solid lines.

Once the text has been rippled you can enter Editor mode and work on the text file (we'll get to this later). You can also change pages in your geoPublish document after the text is rippled. If you try to change pages before the text is rippled geoPublish will automatically ripple the text.

So we have imported our file into the right column on our page. Ooops! We actually want to start the file in the left column. Make sure that the Pointer tool is selected and click on the right column which should be full of

Continue on next page

solid lines. The Move and Size buttons will appear to indicate the region is active. Now click on the Clear Region Tool so we can fix our mistake. The ripple lines will disappear. Click on the shaded left side of the geoPublish screen to deselect the region, click the Show button and then click on the left column region.

With the left column selected click on the Text Placement Tool and choose our geoPub1 file again. When you click the OPEN button this time the text is automatically placed into the selected left region. Click the Show button to Ripple the text.

So now you have seen the two methods to import a geowrite file. The first method is the one I prefer to use since, after selecting the text file, you can then select multiple regions to place the file into. To see how this works Clear the left region where our file is rippled (highlight the region, use the Clear Region Tool and then deselect the region by clicking your button on the grey shaded area on the left side of the geoPublish screen).

Now select the Text Placement Tool and choose our geoPub1 file again. After you press OPEN you will be back at the Page Layout Mode so move your pointer into the left column region and press your mouse button. The region will fill with dashed lines. Now move your mouse into the right region and click your button again. This region will also fill with dashed lines. When you press the SHOW button both columns will be rippled.

When you import geowrite files you may get a surprise sometimes.

If your regions are not level (you didn't use Guidelines and one is closer to the top of the page) the geowrite file will begin in the region closer to the top of the page no matter which region you pour the text into first.

After rippling our text the solid lines not only show that the text is ready to be worked on but give an indication of the amount of space taken up in our regions. Both columns that we filled have dashed lines going all the way to the bottom of the regions. Since we previously printed off our geowrite files we knew that this file was going to require more than one full page. To import the rest of the file we need to create another page in our geoPublish file.

Go to the options menu and select next page. A dialog box will pop up saying the program can't go to the given page and asking if you want to create the next page. Click on the OK button. The screen will be redrawn and you will see by the info in the Document ID Box [gP Page 3-5] that we are now on Page 2 of our file. Since this is a new page it has no regions defined. You should also notice that this page is based on our Left Master Page.

Since this is Page 2 for our file we don't need to create the large title region. We will create a space for our titles in another manner. I have also formatted the text file already so it will print in Full Justification mode so you can see the difference from the previous page.

We will now create our text regions. Select the Open Region Tool, place your crosshair at the

Continue on next page

1/2" and 1/2" junction in the top left corner and click your mouse button. We are still going to use 2 columns so drag the region box down to the 4" and 10 1/4" junction. Click your button to set the region and then create the second region from the 1/2" and 4" junction to the 7 1/2" and 10 1/4 " junction.

We should now have two regions created. Select the Text Placement Tool and again choose our geoPub1 file in the list box. After pressing the Open button click your mouse button in first the left and then the right regions to create the dashed lines. Complete the text import by pressing the Show button.

Once the text is rippled you should see that the left column is completely filled and the right column does not have a lot of space used up. This is OK and we will fill that space later.

Now, we need to make room for our Article Title. With the Pointer Tool selected click on the left column, select the options menu and then choose 'set gutters'. The box is different than before. There is a Default button. This can be used to return a regions' gutters to the default values in effect when that region was created. Since we haven't made any changes yet what you see are the default values for this region.

In our third article in this series we defined our font usage. We said we would use a 30 Point size for the main article title and then a 24 point size for titles on subsequent pages. We will need to leave enough room for our 24 point text plus some extra space between it and the article so we can underline the

title or put a box around it. Press the Return button twice to get the cursor into the Top Gutter Value field. Press the Delete key and then enter a value of 36 for our top gutter. Press Return and then press OK.

Our text has gone back to un-rippled as we have made some changes to the region. We could ripple the text again but the best thing is to wait and ripple both columns at the same time. Click the right column, go to the options menu and choose set gutters. Again, press the return key twice, delete the value of 5 and enter a value of 36, press Return and then click OK.

Click anywhere on the grey shaded area on the left of the geoPublish page to deselect the right column and then press the Show button to ripple the text.

When the text is rippled you will see that the solid lines still go all the way to the top of the regions but that the right column looks a little fuller than it previously did. We are going to leave the rest of this page empty as a playground for Page Graphics Mode but we want to even out the text columns to give our page a more balanced look.

With the Pointer tool selected click on the left text region. Grab the Size button in the lower right corner of the region and move the bottom of the region up to the 8" mark on the page. Click your button to set the region and then ripple the text with the Show button. I used the Zoom view in Page Graphics Mode to make sure the columns were lined up after adjusting the region.

At this point we are done with our first article as far as

Continue on next page

setting the regions and importing the text. We will come back to these 2 pages later on as we work with Page Graphics Mode.

Next time we will look at Document Conversion methods in case you aren't a fan of GeoWrite.

Until then, enGEOy your Commodore!
Bruce



THE WRITE STUFF WORD PROCESSOR

COLUMN BY: RICHARD SAVOY

ARTICLE NO. 7

To SAVE your current defaults, tap the CONTROL key once, then "x." Select "SAVE Defaults" and press RETURN.

The boot file "BB" is in BASIC so you can customize it. Load and list it.

COMMAND MODE Lets you do more things and do them faster. Press CONTROL once to enter command mode--do not hold the key down. Press RETURN, the backarrow, or CONTROL again to return to edit mode

In command mode the cursors work, but cursors right or left now move from word to word, and cursors up or down move from sentence to sentence.

When you are presented with a menu choice such as "Yes or No?" you can also select by pressing the first letter of the word. If the choice is between word, sentence, or paragraph, you can also indicate your choice by pressing F1, F3, or F5 instead of w, s, or p.

ASCII_CODE and screen code are just two different ways of coding characters.

For example, in CBM ASCII the letters a-z are represented by the numbers 65-90. In screen code, a-z are assigned the numbers 1-26. The ASCII toggle allows you to convert from one to the other.

BB files are normally screen code stored in program files. But if you wanted to, you could convert the text to ASCII and SAVE it as a sequential file, or you could READ an ASCII/SEQ file by toggling ASCII mode on, loading "file name,s", then switching back to screen code.

For TRUE ASCII<-->Screen Code conversions, press and hold the 'a' key down.

Autoboot If you turn on the autoboot feature and "SAVE Defaults," then the next time you boot up, the file "bb format" will be automatically loaded for you. Delete the first line and you're ready to start typing a new document. (This file should first be loaded and customized to your own preferences, then resaved.)

If you hold down the SHIFT key (or use the SHIFT LOCK) just before BB Writer finishes loading, the file "-rough draft" will be loaded instead. Until you finish a document, call it "-rough draft." Then, if you don't finish it in one sitting, it can be autobooted the next time. When you finish the document, give it a good name and SAVE it on a data disk for safe keeping.

GEOPUBLISH # 4
MASTER PAGE MODE
By: Bruce Thomas

AUTOCAPS Tap CTRL and press SHIFT and the up arrow key to toggle autocaps on. The first letter of each sentence will now be automatically capitalized for you as you type.

Be sure to put two spaces between sentences.

CALCULATOR This is a BASIC calculator. You can enter any numeric expression the BASIC language can interpret (see your owner's manual). This allows you to compute any expression from a simple arithmetic one (19+6) to an inverse hyperbolic cosine [log(1.4+sqrt(1.4^2-1))].

Possible expressions: 2+2, 6/8, 7^3, 7*(67-38), asc("?"), peek(53280)and15.

Enter an expression and press RETURN. If you get a syntax error, type RUN to re-enter the program; otherwise the answer will be displayed. Now press RETURN to return to edit mode, press the up arrow key to do another calculation, or (best of all) press @ and the answer will be inserted into your text at the current cursor location.

CAPITALIZING Tap CTRL and press c to toggle capitals mode on and off. In capitals mode the letters a-z are capitalized. All other keys are unaffected. This mode can be very useful at times. It is not the same as pushing SHIFT LOCK.

If you press SHIFT-C and hold the key down, lower-case letters are changed to capitals and capitals are changed to lower-case. This is useful for changing text you've already typed.

DISK COMMANDS Tap CTRL and press 4 or \$ for a disk directory. Hold the SHIFT key down to pause. Tap CTRL and press v to VERIFY a SAVE.

If you enter command mode, press up arrow key and then RETURN, the error channel will be read. Otherwise you may enter any of the following DOS commands after the @.

i0	Initialize drive
0	
v0	Validate disk
s0:name	Scratch "name"
n0:diskname,id	Format a blank diskette
n0:diskname	Clear disk directory
r0:new=0:old	Rename file
c0:new=0:old	Copy a file

The "0" may be omitted if you are not using dual drives. (e.g. r:new=old)

DISK DRIVES (?) The Write Stuff works with one 1541 (and equivalents), two 1541s, or dual drives. You can even change the device number of one drive from 8 to 9. If you are using two drives, the program disk should be in drive 8 or 0, and your work/data disk in drive 9 or 1.

The default is for one 1541 drive. Tap CTRL, SHIFT-D to change the default.

I guess we will wrap it up for this issue. Next time we will take up Dvorak Keyboard, just in case somebody would prefer that keyboard. We will get into Editing, Encryption and RVS Format Commands. "KEEPING COMMODORE ALIVE"

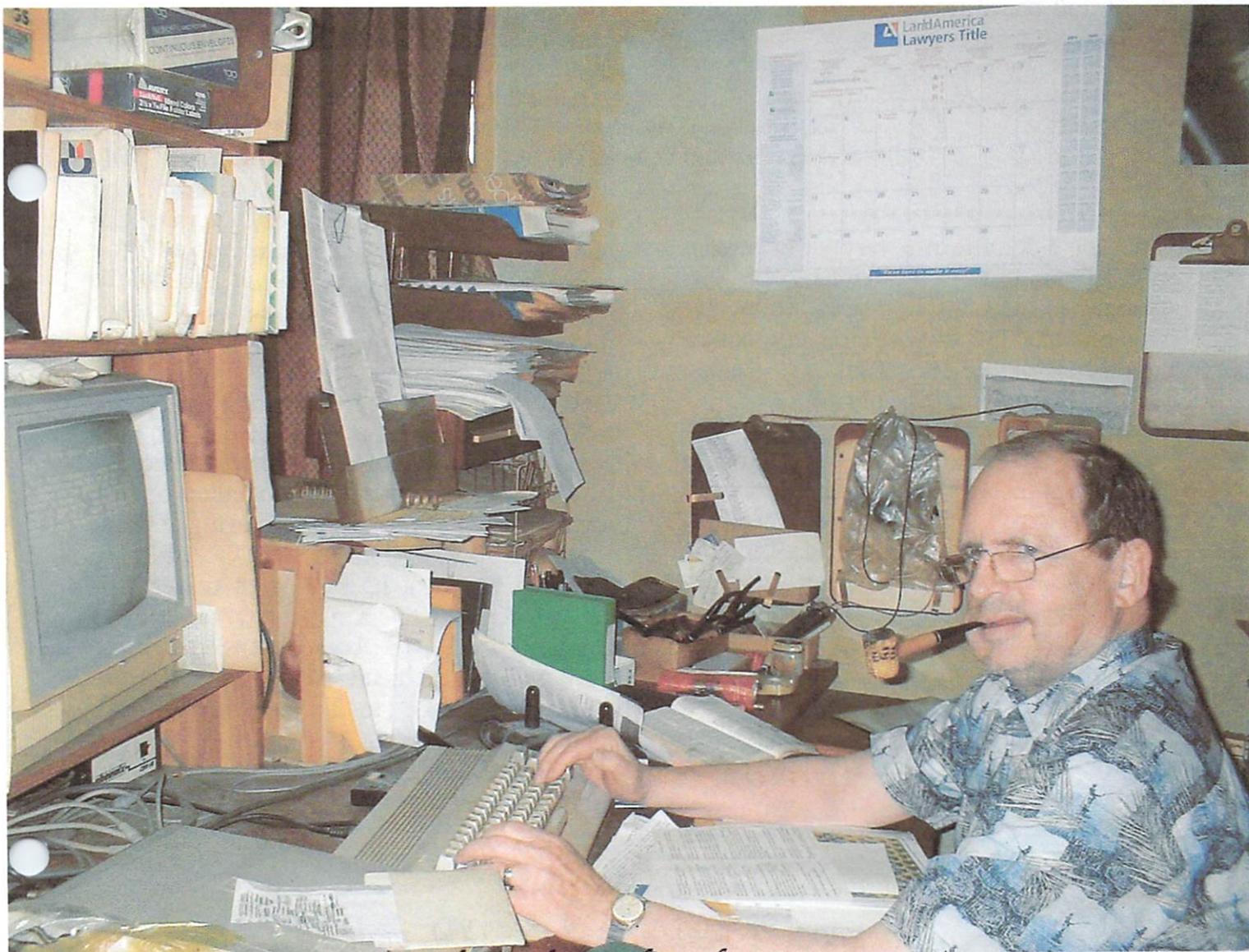
PICTURE TIME -Rolf Miller

Rolf is 66, married 44 years, with two grown children. He is beginning his 35th year as the preacher for the Church of Christ at Ventura, California. He also speculates in real estate and the stock market.

He began his computer experience in 1980, learning BASIC programming on a Sinclair ZX-80. He produced some commercial programs and articles which appeared in Sinclair specific magazines. His biggest project, though, involved design of a data base to accommodate a statistical crime analysis system he developed for use by the local police department.

The Commodore 64 came to his desk in 1983. With it he revised the statistical analysis program and wrote another data base for use in his church work. Further programming experience came on a Data General main frame updating inventory programs, and he wrote some special education applications for use on Apple II machines. Articles by him appeared in Commodore and RUN magazines.

While necessity today requires some PC use, the 64 continues as his primary computer system for accomplishing the needed word processing and record keeping required by his activities. The 20-year old church data base is still in use, as is the statistical analysis method he developed, though that technique is now applied to stock market speculation. And a "basement full" of Commodore equipment stems any concern about the 64's future use..



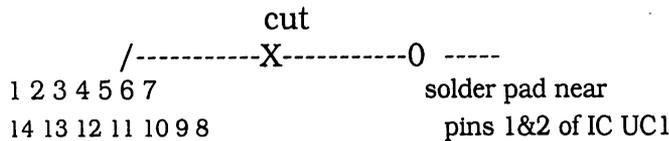
Write Protect, continued from page 9

The drive in the SX uses chip UE2 on the FDD board for the buffer and pin 2 is opened for the mod (see NOTE 5).

Lastly, the 1571 drive WPS buffer is U17 and pin 6 is cut for the mod (see NOTE 6).

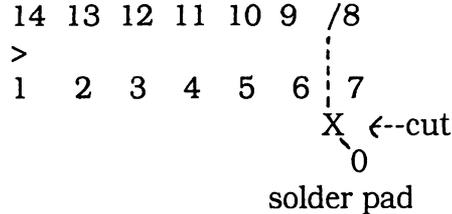
Obviously a 1581 drive needs no modification since the write protect tab on the disks can be easily opened and closed by the user.

NOTE 1: For these newer drives, the buffer IC is located at the left rear of the PC board nearest the serial port connectors. The trace off pin 6 is cut and the added components are soldered to the bottom of the board. The chip pinout and board trace appears as follows when viewed from below:



NOTE 2: I don't own a very early version of the 1541, but the buffer IC 74LS14 is at board location UC1 (nearest connector P6), and the PC trace to be cut comes from pin 8 of the IC. That line goes to UF5 pin 12 and to UCD4 pin 14.

NOTE 3: This late version short board 1541 has a metal shield on the bottom of the PC board. There is no need to remove the board since all of the modifications can be done on the top. Board trace (conductive foil) from UB1 pin 8 runs under the IC, comes out between pins 6 and 7, and goes to a solder pad. Cut the trace near that pad and solder the components to the IC legs and the foil pad as indicated. The view from above is as follows:



NOTE 4: The 1541-II mod requires removing the mechanical deck from the drive. The trace (conductive foil) to cut goes from a solder pad under IC U11 to another pad under IC U10 on the bottom of the board. The exposed trace is cut (no chips need to be removed but the board does to access that trace) and the added components are soldered on the top of the board directly to the chip pins. The components need to be mounted close to the board so they don't touch the underside of the mechanical drive when it is reinstalled.

NOTE 5: The SX drive controller FDD board will have to be removed from the case to access the buffer chip UE2. Cut the line from IC pin 2 and install the components on the top side of the board. Make sure they don't contact any other parts or wires when the board is reinstalled.

NOTE 7: A 1571 WPS mod requires removal of the mechanical drive to access IC U17. The mod can be installed on the top of the board without removing it from the case. Note that the PC board trace starts at pin 6 of IC U17, goes under (but doesn't connect to) transistor Q7 and on to a solder pad on the board between resistor R18 and ferrite bead FB6. Viewed from above, the trace to be cut appears as follows:

(continued on page 20)

OUR TRIP TO THE 2004 SPRING C= EXPO

[NOTE: the following is reprinted from the June 25 RYTE BYTES, the official newsletter of the Commodore Users Group of Kansas City]

"All right, let's get down to the nitty gritty. Yes, the Roach family did go to the Spring Commodore EXPO in New Albany, IN., but due to fatigue, illnesses, and all around confusion, we didn't get to see much, let alone sit in on all of what was presented. We also didn't factor in the fact that New Albany was one hour ahead of us, so our 8:30 AM was their 9:30AM, so we lost out on some of the morning stuff. We had to leave the EXPO for a good part of the day so we could check into our hotel in Corydon, eat breakfast, and SLEEP! We drove all night just to get there on time.

The worst part of the trip going was navigating St Louis at night, especially since we have never been to St. Louis before. Boy you all think that navigating downtown KC is bad. Downtown KC is a cakewalk compared to St. Louis.

Notwithstanding, we did get some stills and some video on what transpired at the EXPO during our "short" stay. Be glad none of you "donated" to our quest. You would have gained nothing. I will try and compile a larger report for future articles after we review the footage we did get. Please take time to thank Alana and Gabe for getting the footage for me while I was in the men's room getting sick.

One thing I will mention--these guys and gals have taken Commodore to the next level. The advancements they have made ever since the introduction of the Super CPU by CMD has truly done what was predicted on websites like Homestead. When I sat in on my first

demo, I instantly knew these folks were talking way over my head. All I could do was sit and stare at the video projector images of what they have done, for all I could hear was, "blah, blah, blah." Gabe did get to see a C64 get onto the internet using The Wave and AOL during the 8:00-9:00 PM break. He thought that was interesting.

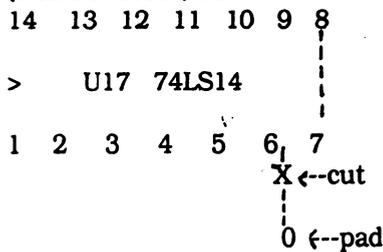
Ladies and gentlemen of the CUGKC, we got a lot of catching up to do. It's going to take time, and especially money, to get back into the league wherein the rest of our fellow Commodore users are playing. Only one demo I was there for was still using a stock unit; the rest have gone on. I am already investigating the idea of getting a Super CPU and The Wave for my unit, but you all know our position. We're so broke we can't even pay attention. We've tried passing off Monopoly money at the grocery store to get stuff, but the cashiers know General Grant from G. Ima Rich. I fear, though, that we need to make the push or we are going to be left in the wake of what others are doing with this awesome computer. What is cool is that all these minds, who love Commodore as much as we do, have taken the reins and have truly made the Commodore an even more viable machine than what it already is, and have made it well capable of "barking with the big dogs". We Commodore users are few; this is true--but hallelujah we few are making a BIG dent in this computing world that is dominated by IBM and Macintosh. From what I've seen, I think that Commodore might be mainstream again by the end of this decade."

-by Lenard R. Roach
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SEPTEMBER 2004 EXPO

According to Randy Harris of S.W.R.A.P., September 4 is the date of the next Chicago, IL area C= EXPO. Details later.

(Write Protect, continued from page 18)



I mounted the bypass switch on the front panel of all the drives I modified. I prefer to use the lower half of the case to keep the switch wires from interfering with removal of the case top during cleaning. However, if other drive mods have already been done such as installing a drive reset switch, you may not have that option. Switch locations really depend on how you use your equipment, desktop space, etc. A reset switch on the rear of a drive makes it harder to accidentally "bump" it, but is not easily accessible if your drives are recessed in an enclosed space or are on a shelf away from the workspace. I believe a switch to select normal or bypassed write protection should always be clearly visible on the front of the drive so you always know the WP status when you insert a disk.

PLEASE let me know if you find any errors or omissions here. If I can get a digital camera, I'll take some shots of the boards I've modified. Anything is better than ASCII. If there is any interest in modifying the Oceanics/Excellerator or Amtech/Bluechip drives, email me and I'll see what I can do. I have no schematics for those drives but I should be able to "reverse engineer" the circuit in my drives. It's a bit of work, but if someone needs that information, I'll give it a go. -- **Ray Carlsen, CET,**
Carlsen Electronics, a leader in trailing-edge technology.

CMD UTILITIES, 2004

For those who aren't "in the know", the latest version of CMD Utilities, sold by Click Here Software, has a lot to offer.

On disk side A are: WCOPY+, FCOPY+, MCOPY, MCOMPARE, BCOPY+, FIND, SUBPARTITION AID, DIR SORT, CONVERT 41 <> 71, FOLLOW LINKS, ZAP REU, ZAP DACC, FOREIGN CREATOR, HD POWER TOOLS, REBUILD PDIR, CMD MOVE, and CMD TIME.

On disk side B are: MENUETTE &\$, and shareware DEDIT.64 V'.1, and shareware DEDIT.128 V7.1.

WCOPY+ is billed as the fastest and easiest to use program for copying files between Commodore disks and IBM-formatted disks. The only IBM filecopier ever created for a Commodore that supports Windows long-filenames.

FCOPY+ is a two-drive file copier which copies SEQ, PRG, USR, and REL files, and even works with REU, RAMDOS, and others, besides the usual CMD drives; compare files, delete C128 boot sectors, and much much more..

FIND, as name implies, searches all drives on your computer and in all partitions and subdirectories on CMD devices for files that match a user defined filename pattern. Outputs to screen or printer.

ZAP REU and **ZAP DACC** clear memory respectively, from Commodore's REU, and from RAMLink Direct Access partitions.

FOREIGN CREATOR is a new utility for CMD HD to help create foreign partitions larger than 16 MB; this is useful for some backups with BCOPY.

MENUETTE 64 is an all-new locate-and-launch utility with a graphic interface. Works well with 1541 and most compatibles, 1571, 1581, and CMD drives. There's more. Buy the disk!