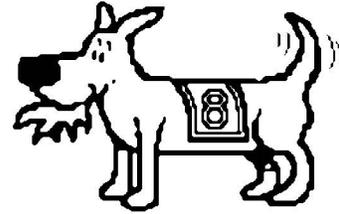


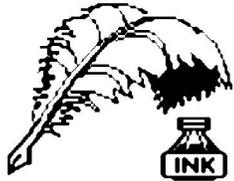
# The Zero Page

The newsletter of the Commodore Users of Wichita  
For the sharing, learning, and love of Commodore computers"



Eight-bit keeps takin' a byte  
out of Commodore computing

Number 26, December 1995



## Don's Digest

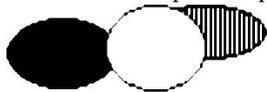
by Don McManamey

Here we are nearing the end of another year. The other day as I was leaving the house, I opened the door and who do you think I saw getting ready to come in? It

was me! I just don't know if I'm coming or going anymore.

Among the many things I'm doing these days is building clocks. They resemble an old automobile. After some discussion with

some friends, I decided to put an oval rear window in them. Have you ever tried to make an oval? I puzzled over it for a while and then it dawned on me. The computer could make an oval quite nicely. I fired up the old 128 and entered a few graphic commands and there it was! A beautiful oval. Using the screen dump from the first issue of the Disk O'Quarter, I soon held a hard copy in my hot little hands. After measuring it and then making a few minor adjustments, I soon had an oval just the size I needed. All that was left was to transfer it to the wood and cut it out. I guess all that playing around with BASIC 7 pictures paid off.



Speaking of the Disk O'Quarter, this is a Disk O'Quarter month. With the holidays and overtime it would be nice to not have to put one together, but by the time you read this, it will be done. It is coming along nicely though thanks to several who helped out with submissions and ideas. It does have some seasonal stuff in it so check it out!

Remember to come to the December meeting on the *first* Saturday of the month so you can get your DOQ and some cake! Yes cake! We will be having a party this month so even if you're busy you can still drop by for a minute and join the festivities.

Now for my list to Santa Claus. I have been thinking for quite some time about some memory expansion. But it really needs to be battery backed so I can use it like a hard drive. On the other hand I've noticed that expansion has some drawbacks. Now I'm thinking hard drive. Will the hard drive really be the answer to my prayers? Loading a single program is not so bad. Even using a spell checker should be pretty good. What I'd really like to see is a demo of a hard drive loading and running some of that sophisticated software which is on several disks. If only I knew someone with a hard drive. I hear that you can get 40 megs for about \$250. That sure beats buying one of those other machines. Gee, I wonder

who... oh yeah! Robert Bales has a hard drive! How about it Robert? Do you think you could show us the pros and cons of the hard drive early next year? I look forward to it.

I really do hope each of you has a very happy holiday and that the new year holds for you all the good you can imagine and more :)

**Next CUW Meeting:**  
**\*\* December 2 \*\***  
**1:00 - 5:00 pm**  
**1411 South Oliver**

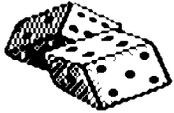
Once again, our meeting has moved  
up to the first Saturday of the month.

Join us for our year-end celebration!

*Happy Holidays  
from the CUW*

## Your CUW Steering Committee members are:

Arlen Gould	Chair
Marie Both	Vice-Chair
Robert Bales	BBS Representative
Francis Catudal	Public Domain Librarian
Nate Dannenberg	BBS Representative
Shaun Halstead	Internet Representative
Dwayne Howard	geoSIG Chairman
Dale Lutes	Newsletter Editor
Don McManamey	Disk Editor



## Random Access

by Dale Lutes

Last month I tried to explain, in very simple terms, some of the concepts behind disks and disk drives. I talked a little about the mechanics of the drive. I explained the concepts of formatting and density. I also discussed the differences between hard and floppy disks.

This month, I want to cover how to perform some common disk operations in detail. I will try to keep the material simple, but its very nature makes it more complex than last month's topics. If you find that you are still confused, visit with me at a club meeting.

As we work through the commands, you will see that 128 users have quite an advantage in the Ease-of-Use department. As a rule, the C-128's BASIC 7.0 commands are much easier to work with than the C-64's BASIC 2.0.

For some disk commands, there is no corresponding BASIC keyword (especially in BASIC 2.0). What you must do is use several BASIC commands to talk directly to the disk drive's command channel. You'll see a specific example when we format a disk, below. For now, let us just introduce the general format of such a sequence of commands:

```
OPEN 2,8,15
PRINT #2,"the command goes here"
CLOSE 2
```

I'll explain the numbers in the OPEN statement in reverse order. The last number, 15, is the command channel. It's always 15. Case closed. The middle number is the device unit number. If you have two disk drives, you probably have them numbered 8 and 9. In this example, and all of those that follow, we are going to be using unit 8. The first number is a file number which you assign yourself. It can be anything from 0 to 255. The Commodore manuals like to use 15. I like to make it the same as my device number (e.g. 8,8,15 or 9,9,15). This time, however, I used a 2 to make it clear that this is the same number used later in the PRINT and CLOSE statements.

### Formatting a disk:

As I mentioned last month, the first thing that we must do with any disk is to format it. This is like adding lines to blank paper so we can write legibly.

```
REM BASIC 2.0
OPEN 2,8,15
PRINT #2,"N0:disk name,id"
CLOSE 2
```

In the format command, the N is short for NEW. The 0 is the drive number and, unless you have a dual drive (like the MSD SD-2), this will always be zero. The disk name is any name that you want to give the disk. It can be up to 16 characters long, so go ahead and make it descriptive. The id can be any 2 characters that don't form a BASIC keyword (such as IF or ON).

Now, here is the BASIC 7.0 equivalent:

```
REM BASIC 7.0
HEADER "disk name",id,D0,U8
```

The disk name, id, and drive number (0) are the same as in the BASIC 2.0 command. The U8 corresponds to our disk unit 8 in the BASIC 2.0 OPEN statement. Here are a couple of examples for both the C-64 & C-128:

```
PRINT #2,"N0:LETTERS & MEMOS,LM"
HEADER "GRAPHICS 1",IG1,D0,U8
```

### Getting a directory of files on disk:

Once you've amassed a collection of software, you will find it hard to remember the names of every file on every disk. You need a way to get a directory of the files on disk. Here's how:

```
REM BASIC 2.0
LOAD "$",8
LIST
```

```
REM BASIC 7.0
DIRECTORY
```

Note that the BASIC 2.0 commands destroy any program in BASIC memory. The BASIC 7.0 command does not.

### Loading a program file:

Now that you know what files are on the disk, you can load and run a program that is stored there. In both BASIC 2.0 and BASIC 7.0, the commands are:

```
LOAD "program name",8
RUN
```

The program name must be typed exactly as it appears in the directory listing. Once again, the 8 is our device unit number. Some programs require a load statement like this:

```
LOAD "program name",8,1
```

Check the documentation that came with the software. If you are unsure, try it both ways.

### Scratching (deleting) a file:

Let's say you've been doing a lot of word processing and you've amassed so many documents that you've run out of disk space. You have two options. You can format a new disk, or you can delete old documents that you don't need any more. This process is called scratching. Here's how:

```
REM BASIC 2.0
OPEN 2,8,15
PRINT #2,"S0:file name"
CLOSE 2
```

Looks something like the format command, doesn't it? In this case, the S stands for (you guessed it) SCRATCH, and the file name matches a file that you might find in a directory listing.

---

## Random Access (continued from page 2)

The scratch command looks like this in BASIC 7.0:

```
REM BASIC 7.0
SCRATCH "file name", U8
```

### Copying a file:

When you are making a revision to an important file, it's a good idea to make a copy of it first. This way, if your less-than-nimble fingers or an act of God conspire to make the revision unusable, you can always go back to the original. These commands create the copy on the same disk, so you will have to choose a new name. Before you begin, get a directory so you can make sure the size of the file doesn't exceed the amount of free space left on the disk.

```
REM BASIC 2.0
OPEN 2,8,15
PRINT #2,"C0:new name=old name"
CLOSE 2
```

```
REM BASIC 7.0
COPY "old file" TO "new file", U8
```

### Renaming a file:

Occasionally, you'll want to change the name of a file on disk without necessarily making a copy of it. The rename commands look very much like the copy commands that we just learned:

```
REM BASIC 2.0
OPEN 2,8,15
PRINT #2,"R0:new name=old name"
CLOSE 2
```

```
REM BASIC 7.0
RENAME "old name" TO "new name", U8
```

### Validating a disk:

One final command and we'll call it quits. For various reasons, a disk command may not finish completely, leaving a file that is not properly closed. It could happen if the power fails, or if you eject a disk while some operation is in progress. A sure sign that something is wrong is a directory listing that shows an asterisk (\*) next to a file name. Another symptom is when the total number of blocks allocated to files, plus the number of free blocks adds up to less than the total disk space. When these things happen, it is time to validate the disk. Here are the commands:

```
REM BASIC 2.0
OPEN 2,8,15
PRINT #2,"V0"
CLOSE 2
```

```
REM BASIC 7.0
COLLECT, U8
```

An important note to GEOS users: *Never validate a GEOS disk in this fashion. You must use the validate option from the DeskTop's file menu instead.*

That will be all for now. Next month, we'll take a look at several disk utilities which are available on the December Disk O'Quarter. I'll close this month's column with a list of disk care tips.

### Dale's top 10 disk care tips:

1. Always back up your disks.
2. Always store your disks in a sturdy box.
3. Always store your 5-1/4" disks in their paper jackets.
4. Never bend or fold floppy disks.
5. When labeling 5-1/4" disks, make out the label first, then apply it to the disk. If you must write on the disk, write lightly with a felt-tip marker.
6. Do not touch the exposed surface of 5-1/4" disks or the surface under the protective metal slide on a 3-1/2" disk.
7. Don't place heavy objects on top of disks or squash disks tightly together in an overcrowded storage box.
8. Keep disks away from anything with a magnetic field: Monitors, vacuum cleaners, stereo speakers, phones with old-style bell ringers (really!).
9. Make sure your disk drives have adequate ventilation for cooling.
10. Clean your disk drives heads periodically with approved cleaners.

## Charter Members



Time is running out!  
Don't forget to renew  
your membership  
in the CUW.

### Coming up at the CUW

by Dale Lutes

1995 has been another great year for the Commodore Users of Wichita. Let's work to make the coming year even better! Here's a look at the topics for the meetings scheduled in early 1996:

**January** Dale Lutes demos the disk utilities featured on the December Disk O'Quarter

**February** Device selector switch installation day for those of you with 1541 drives

**March** Don McManamey will feature a Write Stuff tutorial

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## Creative Micro Designs:

### A Brief History

Copyright (c) 1995 by Creative Micro Designs, Inc.

Creative Micro Designs, Inc. (CMD) was founded in the fall of 1987 on the strength of JiffyDOS, a new DOS speed enhancement product for the Commodore 64 and 128. Company President and co-founder



Mark Fellows developed JiffyDOS during 1985 and 1986, and began marketing JiffyDOS nationally through his own company, Fellows, Inc., in the fall of 1986 via classified ads in 'Computer Shopper' and 'Keyboard' magazines. Mr. Fellows continued marketing JiffyDOS alone until fall of 1987, when he was joined by Charles A. Christianson, a relative and recent college graduate majoring in business and marketing.

Mr. Christianson began helping out part-time with the marketing, sales, and business aspects, and helped to formally incorporate CMD at the end of 1987. Sales of JiffyDOS continued to rise steadily, and a partnership was soon formed with Charles R. Christianson, father of Charles A., who operated an export business of his own at that time. The senior Mr. Christianson brought years of business experience to the company and helped to transform it from a basement operation into a full business.

In April of 1988, Creative Micro Designs, Inc. became a full-time business, and tripled its annual sales in dollars each year in the first three years of operation. The company made its first jaunt to the annual World of Commodore show in Philadelphia in November of 1988. Work continued on improving JiffyDOS, and CMD rolled out the present version 6 of the product in mid-1989.

Amidst the rise in popularity of JiffyDOS, CMD began work on a SCSI-based hard drive system that featured a highly-compatible DOS coupled with partitioning options that helped it to emulate other Commodore disk drives. CMD began development of this product in 1989. Special attention was paid to assuring compatibility with important software products such as GEOS, CP/M, and Superbase. The level of compatibility of this new series of hard drives, along with its expandability and versatility, made it an instant hit when the product began shipping in 1990.

With the development of the CMD HD Series hard drive and DOS completed, CMD turned its hardware development capabilities toward developing a RAM-based disk device. This effort resulted in RAMLink, an expandable RAM drive with a capacity of up to 16 Megabytes. RAMLink was also capable of maintaining its contents indefinitely through its own power source, or for several hours of actual power loss through use of a battery backup system. Many other features were employed into RAMLink, such as a parallel interface to the normally serially-operated CMD HD Series hard drive, a slot for using memory from other third party RAM expanders, and a pass-through port for other types of utility and I/O cartridges. The HD Series hard drive DOS was ported to this new device, along with some changes and improvements, and again

compatibility with important software was kept in mind.

Initially, RAMLink could not be used directly with GEOS. However, gateWay, a new GEOS 'front-end' provided GEOS compatibility, and was offered with RAMLink units that shipped in 1991. While gateWay provided some capabilities that GEOS itself could not, it also presented some trade-offs and added to the learning curve of using RAMLink. A new GEOS CONFIGURE file was replaced gateWay in RAMLink shipments beginning in 1992, while gateWay was further revised as an independent product.

Two other products joined the CMD family in 1991: SwiftLink and SID Symphony. These products were initially developed and sold by Dr. Evil Labs, a partnership formed by college classmates as an experiment in designing, manufacturing, and marketing products. SID Symphony provided additional sound voices to Commodore computers, and helped lead to the development of hundreds perhaps thousands of 'stereo' music files. SwiftLink, a high-speed RS-232 interface for the 64 and 128, has grown constantly more popular as faster modems have been developed and dropped in price.

CMD added several more GEOS-related software products to its product line in 1992. The first of these was geoMakeBoot, a utility program that operates in the GEOS environment to create GEOS boot disks on any device currently supported by the GEOS Configure system in use. This made it easy to create boot partitions on CMD HD Series hard drives and RAMLink.

The next product added to the CMD line was also a GEOS-related product, originally marketed in Germany as "GEOS LQ." To avoid any possible problems with trademark infringement, CMD released the English language version of this program under the name "Perfect Print LQ." This product was well-received by the market, as it helped to patch over one of the weaker points of GEOS itself -- printer output quality. It could easily be said that this product is the GEOS equivalent of the much heralded Adobe Type Manager for the Apple Macintosh. Perfect Print was further refined later in 1992, incorporating better quality output drivers and the ability to use borders within geoWrite documents.

Two more GEOS-related software products joined the CMD line in 1992. The first was geoCanvas, a new 'paint' program for GEOS in 40 column mode. Sales of geoCanvas weren't up to expectation, however, and CMD's distribution contract was not renewed when it expired. The second release was a collection of various utilities written by one of the best known programmers in the GEOS community, Jim Collette. This latter release was aptly titled, "Collette Utilities" and included several popular applications and Desk Accessories such as Jim's Font Editor, PSProcessor (Postscript pre-processor), MiniDesk, and Wizard.

While the list of software releases from CMD grew in 1992, hardware development was still underway creating a replacement for the Commodore 1581 disk drive. CMD's FD Series floppy drives maintained backward compatibility with Commodore's 800K 1581, but also had the ability to format and use high density disks storing 1.6 Megabytes. The FD-4000, CMD's top-of-the-line model, provided further capacity with the ability to format and use



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## GEOS and Postscript Fonts

by Dale Lutes

I recently found myself picking through the Postscript output from geoPubLaser, and I believe I've figured out the relationship between the GEOS LW fonts and those supported by most Postscript printers. Now I realize that few of our members use GEOS, fewer have access to a laser printer, and fewer still even care about this stuff. After all, the hardware and software do a good job of hiding all of these details from the average user (and for good reason). Still, having worked this out, I feel duty-bound to record it somewhere before I forget it. And you never know. As Tom Lehrer said before singing *The Elements*, "This may prove useful to some of you someday, perhaps, in a somewhat bizarre set of circumstances."

The GEOS system comes with four LW, or LaserWriter fonts: LW\_Barrows, LW\_Cal, LW\_Greek, and LW\_Roma. A number of public domain fonts complete the set: LW\_Bacon, LW\_Cowell, LW\_Giannini, LW\_Haviland, LW\_Piedmont, LW\_Shattuck, and LW\_Zapf (the last is identical to LW\_Galey). Each corresponds to a Postscript font built into the Apple LaserWriters. Here's how they work out:

	<i>GEOS</i>	<i>Postscript</i>		<i>GEOS</i>	<i>Postscript</i>
0	Roma	Times-Roman	6	Haviland	Helvetica-Narrow
1	Cal	Helvetica	7	Piedmont	New Century Schoolbook
2	Greek	Symbol	8	Cowell	Palatino
3	Barrows	Courier	9	Zapf	Zapf-Chancery
4	Giannini	Avant Garde	10	Shattuck	Zapf-Dingbats
5	Bacon	Bookman			

Note that I've dropped the LW\_ prefix. I began numbering at zero for a reason which I will explain shortly. These are set up in this particular order during geoLaser's (and geoPubLaser's) initialization phase. If you looked at the output to the printer during this phase, you would see:

```
/fonts[/Times-Roman/Times-Bold/Times-Italic/Times-BoldItalic  
/Helvetica/Helvetica-Bold/Helvetica-Oblique/Helvetica-BoldOblique
```

...and running through...

```
/ZapfDingbats/ZapfDingbats/ZapfDingbats/ZapfDingbats]def
```

These correspond to the entries in the table I have given, above. What does this mean? Well, if you captured this output on disk, you could edit the file with a text editor. By swapping the Times-Roman entries with the Helvetica entries, you would alter the order of the table. Then, when it came time to print your document, your Roma text would print as Cal and vice-versa. In fact, this is exactly the experiment which led me to write this column: I wanted to see how *The Zero Page* would look formatted mostly in Cal instead of Roma. (For what it's worth, I didn't like the results.)

Every time geoLaser spits out a line of text, it is prefixed by three numbers. Here is an example from *The Zero Page*:

```
9216 14 0 (The newsletter of the Commodore Users of Wichita) 1 0 265 25 72 PS
```

The first number identifies the font (and certain attributes as we shall see). This particular line appears on the front page of the newsletter in the Zapf font, number 9 in the table above. The font number, 9216, equals 9 times 1024. If we were using the Barrows font, we would expect this number to be  $3 \times 1024 = 3072$ , and for Roma it would be  $0 \times 1024 = 0$ .

The second number is the character size. In the above example, it's 14 points.

The third number controls the height above or below the normal character baseline (in points, I believe). Superscripted text has a negative number here, subscripted has a positive number.

What about the text styles like **bold**, *italic*, or **outline**? This is accomplished by adding one or more of these key numbers to the font code:

```
64   outline  
128  underline  
256  bold  
512  italic
```

(continued on page 7)

**Geos and Postscript Fonts** (continued from page 6)

So, when the meeting notice changes from 12 point plain Cal to 14 point bold Cal, geoPublaser sends the following to the printer:

1024 12 0 (Join Eight-Bit and Tidbit for the next) 1 0 192 384 223 PS  
 1024 12 0 (meeting of the GEOS Special Interest Group) 1 0 240 360 237 PS  
 1280 14 0 (Friday, July 21, 7:00 PM) 1 0 172 394 356 PS  
 1280 14 0 (Senior Services Center) 1 0 166 397 372 PS

Plain Cal = 1 x 1024 = 1024  
**Bold Cal** = 1 x 1024 + 256 = 1280

Here's another example:

512 9 0 (The Zero Page ) 0 9 0 (is a monthly publication) 2 3 270 345 420 PS  
 0 9 0 (of the Commodore Users of Wichita.) 1 3 270 345 431 PS

Plain Roma = 0 x 1024 = 0  
*Italic Roma* = 0 x 1024 + 512 = 512

OK, pop quiz! Can you figure out the codes for plain Barrows? How about bold, italic Piedmont? I'll leave you with that and one final example with superscripted and subscripted characters:

256 12 0 (Special Club Price on 5-) 256 9 -4 (1) 256 12 0 (/) 256 9 2 (4)  
 256 12 0 (" Disks) 9 0 259 345 118 PS

*Postscript* is a registered trademark of Adobe Systems, Inc.  
*Apple LaserWriter* is a trademark of Apple Computers, Inc.

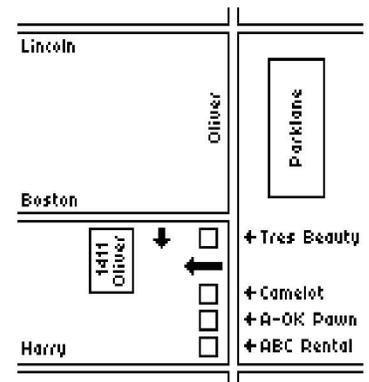
*The Zero Page* is a monthly publication of the Commodore Users of Wichita. The opinions expressed here are those of the authors and do not necessarily reflect the views of the CUW. Unless otherwise stated, articles in this newsletter may be reprinted without permission provided that the author and the CUW are given proper credit.

Meetings of the CUW are scheduled for the second Saturday of each month. The deadline for articles is 14 days prior to the meeting day. Submissions are accepted on 1541, 1571, or 1581 formatted floppy disks. geoWrite, ASCII, or PETASCII files are preferred. In a pinch, paper hard copy will work. Call Dale at 721-0835 or mail your articles to:

Commodore Users of Wichita  
 c/o Dale Lutes  
 11102 W. 17th Street  
 Wichita, KS 67212-1187

In case you are interested, *The Zero Page* is produced using a Commodore 128 and geoPublish. geoPubLaser is used to print the final copy on a PostScript laser printer.

The Commodore Users of Wichita is a club dedicated to "the sharing, learning, and love of Commodore computers." Meetings are held on the second Saturday of each month from 1-5pm. Anyone who owns or uses a Commodore computer system is welcome to attend. Family memberships cost \$15 per year. Members receive a monthly newsletter, a quarterly disk publication, access to an extensive library of public-domain software, and the right to vote on matters of club policy. A newsletter-only membership is available for \$5 per year. Contact any of the officers (listed elsewhere in this newsletter) for more information. We are looking forward to seeing **you** at our next meeting!



You may join or renew your membership by mail.  
 Complete this form and mail with a check payable to:

Marie Both  
 Commodore Users of Wichita  
 351 E Marion CT, #2  
 Wichita, KS 67216

What Commodore systems do you use? (please check all that apply)  
 VIC-20  C-64  C-128  C-16  Plus/4  Other

Type of membership:  Family (\$15)  Newsletter-only (\$5)

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_

List additional family members who are interested in participating:  
 \_\_\_\_\_  
 \_\_\_\_\_