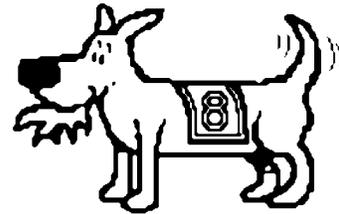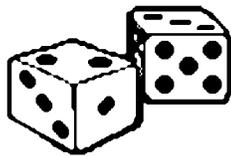# The Zero Page

The newsletter of the Commodore Users of Wichita

"For the sharing, learning, and love of Commodore computers"

Number 59, September 1998

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

Random Access
by Dale Lutes

Year 200 Bug is Not a Bug

It is difficult these days, to open a computer related magazine and **not** find some reference to the Year 2000 "Bug." Well, folks, there is no such thing. A bug is an unintentional flaw in a program that exists due to an accidental programming or design error. The Year 2000 "Bug" is not really a bug at all. It is an intentional design decision that saved expensive memory back in the 1950s and 60s. But, like the human appendix, this design has long outgrown its usefulness. Software designers have been unwilling to change their habits or unwilling to stand up to users too lazy to key in the extra two digits. I've heard of a programmer who worked at General Dynamics in the 1970s. He tried to warn his management and wrote software with 4-digit year fields. As a reward for his efforts, he was told to find employment elsewhere.

Machine Language or Assembly Language

As long as I am on my soapbox discussing the misapplication of computer terms, let me try to clarify the difference between machine and assembly language. These two terms are frequently interchanged by Commodore users.

Computers understand nothing about words, sounds, or images. The only thing computers can do is to perform some basic operations (add, subtract, compare) on numbers. Within a program, real-world objects or ideas (such as the letter "A" or the color red) are represented by numbers. An expression like

```
FOR I = 1 TO 10; PRINT I; NEXT
```

must be reduced to some numeric representation that can be executed by our computers. This is the job of the BASIC

interpreter. But the BASIC interpreter is just another program, another sequence of numeric computer instructions.

The earliest computers had no BASIC interpreter, no keyboard, no screen.[*] The numeric instructions, the "machine language" had to be entered by flipping switches or rotating dials on the front panel. For instance, to enter the instruction "load the accumulator with a zero" the programmer might have to toggle in the code A9, press an enter button, then toggle in 00, and press enter again. This method of programming was error-prone and difficult to learn.

The next step was to devise a system of short mnemonic codes that corresponded directly to a machine language instruction, but were easier to remember. In this system, "load the accumulator with a zero" becomes LDA #0 and is converted directly into the A9 00 machine language code by a special program called an assembler. Hence, assembly language. There is a close correspondence between assembly language and machine language, so it is easy to understand why the two are often confused.

Assembly language was a simple, but significant step forward in computer programming languages. The next was the development of structured, English-like computer languages. The earliest of these was COBOL, which is still widely used today.

[*] If you think this sounds far-fetched, look up the article on the Altair 8800, the first home computer, in the January 1975 issue of *Popular Electronics.*

The programmer, like the poet, works only slightly removed from pure thought-stuff. He builds his castles in the air, from air, creating by exertion of the imagination.

Frederick P. Brooks, Jr., "The Mythical Man-Month"
Copyright (c) 1975 by Addison-Wesley Publishing Company, Inc.
Copyright (c) 1972 by Frederick P. Brooks, Jr.

Next CUW Meeting:
Saturday, September 12
1:00pm
Silver Dollar Cafe

The Silver Dollar Cafe is located on highway K-15, just south of the Wal-Mart in Derby.

Moe's Soap Box
by Moe Shouse

My Super-CPU 128 came to my house on April 10. Well, it works good most of the time, but I did have some trouble. It would sometimes lock up or put funny stuff on the screen, or just not come on at all. At first I thought it was the connecters so I got very good at cleaning them. But then it got to where the S-CPU would fail 80 to 90% of the time. I could not live with this. The book that came with the S-CPU said that it needed a minimum of 4.85 volts to work right. The first time I read that I thought it was strange that they would carry the decimal to two places. I would think one would be enough.

This made me think that they know a lot more than they put in the book. So I soldered wires on the power in and the ground. Yes I soldered the wires right to the $250 SuperCPU-128! I figured the worst that could happen was to have to send it in to CMD and have them fix it. I had just bought a new multitester a Radio Shack 22-215. When I hooked it up and turned on the computer, the volts just barely made it to 4.9 but the screen was fine. Then I made it do some work, and the volts dropped it 4.8. As soon as it hit 4.8 the screen went crazy. I played with it some more, some times it went crazy at 4.9 sometimes at 4.8. This told me that the Radio Shack volt meter must be a very good one.

An electronics engineer I know says that 4.85 seems it be a common voltage for things to go bad for a lot of electronics chips. I thought it might be hard it get the volts up, knowing how Commodore likes to build things. Heaven knows it could not be done on C=64 power supply. I thought about adding a brand XXX power supply next to the stock C=128 with a small frame and fans. That rig would be almost as big as the C=128 computer. Then I thought that I might open up the stock power supply and see what is in it. Well what a suprise! I found a deal labeled VR1 that can be adjusted. So very carefully I turned it. The volts dropped to 4.5. Oops! The screen really went crazy. So I turned it the other way up to 5.00. The screen was fine now.

Then I turned it to 5.1 because sometimes the volts buonces around as much as .2 volts. Now it never gives me the "SUPERCPU INITIALIZATION ERROR #06". #06 is not in the book that came with the S-CPU, it stops at #05. I talked to Doug Cotton at CMD about #06 one time he said that any number above 05 is for the S-CPU 128 only and that Mark didn't give him the ones above 05. I think that if I buy a S-CPU-128 the book should have the error codes for the 128 verson. Come on now, CMD, you can do better than that!

After all that I found that the data in my RAMLink was scrambled! So bad that it gave back an error code of device not ready. Well that error does show up on Commodores a lot, like when you don't really know which device numbers are on the bus. Well, the RAMLink thought it was device 74. That will never work! So I changed the device number and the default partition using RAMTools utility. Then I reformatted the RAM and I was back in business.

What I think caused this problem is the fact that the main power for the RAMLink comes from its own power supply, but the control lines for the RAM come from the computer. The 5.0 volts that I adjusted supplies the computer and the S-CPU. When the volts dropped down too low it didn't have the strobe line and the address lines that run the RAM in the RAMLink, so it scrambled the RAMLink.

So here is a warning: If you adjust the volts, be ready to reformat the RAMLink. Better yet, don't have the RAMLink online while making voltage adjustments. Please note that I am NOT an electronics engineer so my description of how the strobe and address lines to the RAM work may be off. But I think that is sort of what happens. I think what I'll do is not run the S-CPU and see if the RAMLink does OK. If it does, then I'll run just the S-CPU and see how it does. I still think the connectors are a weak link in the system. After all, Commodore only made this connector for cartridges. I'll keep you up to date on how it goes. Keep the volts up and the errors down!

Looking at GEOS
by Mark McGuinnis

[This article was first published in September 1993. It comes to us courtesy of Peter Hunt, geoClub OZ]
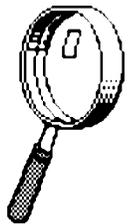
Let's do some file management. There are seven main categories of GEOS and Non-GEOS files.

The main reason for getting into these file catagories is so that you can sound like you are computer literate when you are talking to other computerphiles.

The main categories of GEOS files are as follows:

1. System files which include the GEOS desktop file management program and system data files such as the photoscrap and text scrap.

2. Application files which include geowrite and geopaint.

3. Desk accessory files which consist of utility programs such as the calculator, notepad, photo manager and text manager.

4. Assembly language and basic files which are user programs and data files in either assembly language or basic format.

5. Data files which include documents created by GEOS applications, font files (typefaces) and documents created by non GEOS programs.

6. Interface drivers which include driver files for a mouse, joystick, koala pad or inkwell light pens and printer drivers.

7. Non-GEOS files which are program and data files that have not been converted to the GEOS format.

(Continued on page 3)

Looking at GEOS (continued from page 2)

Are you tired of looking at the same old GEOS desktop defaults? You can view the items on the desktop in either text or icon mode. In the text mode you can view a list of all the files on a disk without having to page through the disk note pad pages. Plus you can get certain information about each file such as its category type and how much memory it uses.

When viewing files in the icon mode the files appear as icons. In the text mode files can be viewed by size (largest first), type, date (most recent first) and by name (alphabetically).

A few other functions that you can perform on files while on the desktop are selecting a file or group of files, move and copy files, open a file, gain access to and change a files' write-protect status, rename files, duplicate files, rearrange files on a disk note pad page delete files , make a file the default file and print a file.

Let's do a quick review. To select a file using the mouse, just click on the file icon. Using the keyboard you can use the C= (commodore key) and the icon number. Icons are numbered 1-8 starting with the top left icon as number one. To select files on the desk top border using the keyboard, press the commodore key, the shift key and the icon number. Press these keys at the same time and hold.

To select a group of files using the input device, hold down the commodore key and click on the file icon so that it is highlighted. When using the keyboard to select a group of files, hold down the commodore key and press the file icon numbers that you want to select. Border files can be group selected by holding down the commodore key, shift key and press each icon's number.

A neat little trick you can do is selecting files across disk note pad pages. This can be a real time saver. More details later.

Your CUW Steering Committee members are:

Morris Shouse	Chairman
Robert Bales	Vice Chair
Bob Frisbie	Member at-large
Dale Lutes	Newsletter Editor
Don McManamey	Disk Editor
Jerry Shook	Member at-large
Mike Shook	Member at-large

Newsletter Briefs
by Dale Lutes

I thought that I would open this month's

News Briefs column by letting everyone know that I have just finished re-organizing our newsletter binders. It was long overdue. I had newsletters as old as January that I hadn't filed. The three user groups with whom we have been exchanging newsletters on a regular basis (geoClub, Western Colorado, and GEOS Publication) now each have their own 3-ring binder. We've only recently begun trading with the Treasure Valley/Boise User Group and, for the time being, they are borrowing a little space in the Western Colorado binder. Other groups that have disbanded or fallen out of touch with us take up a fourth binder. I will make it a point to bring these along to future hardware meetings.

Before getting into the summaries for this month, I want to call your attention to the geoClub newsletters. These come to us courtesy of Dave Elliott in England and Peter Hunt in Australia. Thanks to Dave we also have reprints of the very first geoClub newsletters, issues 1-14 which date back as far as September 1991.

geoNews
geoClub, United Kingdom/Australia
The August *geoNews* features an article about SCSI drives (including how to add another device to your CMD hard drive) by Dave Elliott. There is a comprehensive article on the GEOS clock by Jane Yoskamp-Jones, "The Australian Genie." You will recognize a few reprints from *The Zero Page* and an excellent sample of graphics from Peter McGuinn and Gordon Turrall round out this issue.

The Infinite Loop
Western Colorado Commodore User Group, Mack, CO
The August issue reprints a number of computer-related cartoons from various sources. Jake Smith compares the costs of buying a PC with those of setting up a state-of-the-art C128 system.

GEOS Publication
Rev. Willis Patten, Louisville, KY
This fine newsletter is looking better than ever now that Rev. Patten has added a laser printer to his system. There is a summary of a number of GEOS books available from JMV Grafix. Maurice Randall gives us advice on recovering from a system crash. Another letter discusses the year 2000 problem.

BUG Bytes
Treasure Valley/Boise User Group, Boise, ID
The September issue includes an excellent article by Mike Riccobono on using The Write Stuff with 1581 data disks. Another article on The Write Stuff, this one by Mike Powell, tells how to set up TWS to use a GEOCABLE printer interface. Jan Rosenstreich gives us some tips on designing a database. Last, but far from least, Bryan Pease tells how to upgrade the video RAM in the Commodore 128.

The Helping Hand

This column lists those users willing to share their experiences and knowledge with other club members.

Robert Bales   831-0008
trebor@southwind.net
Telecommunications, Internet, CMD HD and FD drives

Dale Lutes   721-0835
lutes@feist.com
GEOS, Programming, Word Processing, Desktop Publishing, CMD FD drives and RAMLink

Don McManamey   265-2560
dmcmanamey@geocities.com
Word Processing, Print Shop, Printing

Jerry Shook   776-2683
jls695@gte.net
Databases, Label Making, Word Processing, Printing

Let us know if we may include your name in future Helping Hand listings. If we don't have a category for you already, we'll add one!

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 at 1411 S. Oliver, one block north of the corner of Harry & Oliver. 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. Other membership options are also available. Contact any of the officers (listed elsewhere in this newsletter) for more information. We are looking forward to seeing **you** at our next meeting!
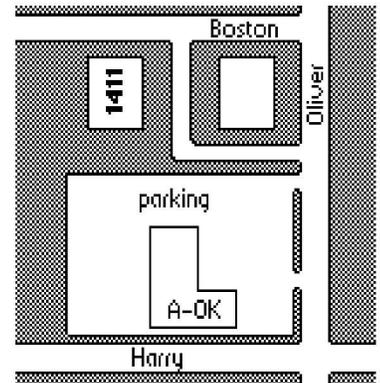
You may join or renew your membership by mail.
Complete this form and mail with a check payable to:

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

Type of membership:
❏ Family - includes Newsletter & Disk O'Quarter ($15 per year)
❏ Newsletter-only ($5 for 12 issues)
❏ Disk O'Quarter by mail ($12 for 4 issues)
❏ Disk O'Quarter by mail plus Newsletter ($15)

Name: _____
Address: _____
_____
City: _____ State: _____ Zip: _____
Phone: _____

List additional family members who are interested in participating:
_____
_____

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