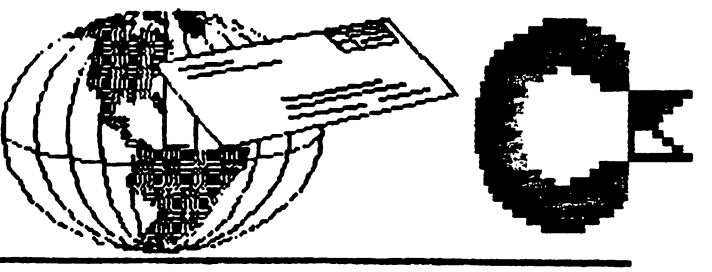
COMMODORE MAILINK

NEWSLETTER OF —
MEETING 64/128 USERS
THROUGH THE MAIL

Jean Nance, President

MAY 1994



MEETING NEWS

WELCOME to the new members listed in this issue, do make them feel welcome in our group.

A NEW PRESIDENT. As of this June, I will have been President of "Meeting 64/128 Users Through the Mail" for 7 years. As the group has become larger and the duties more complicated, I have found the job more and more a burden. I am happy to announce that FRANCIS (FRANK) REDMOND has agreed to become President, starting July 1st. I will continue to be involved. It has been fun, and thanks to everybody who has helped out over the years.

VICE PRESIDENT. We have never had a Vice President, but with the many responsibilities of the President, it seems a good idea. I have agreed to serve under Frank Redmond in that capacity for a year. I will be "Managing Editor" of *The Commodore MaiLink*, and will perform other tasks as required.

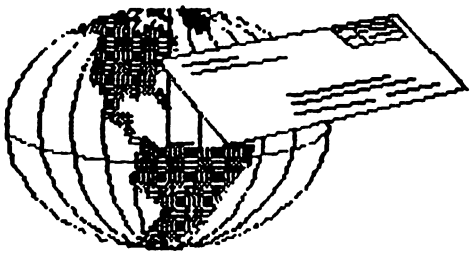
GETTING THE *MAILINK* OUT. JIM DENNING has been in charge of getting our newsletter photocopied and mailed out since May, 1993, and I thank him for his faithful service. TOM ADAMS took over that responsibility, starting with the March, 1994, issue. Tom also maintains files of recent back issues and mails out materials to new members. If you don't get your *MaiLink* by the end of the month of issue, Tom is the person to notify. Thanks Jim and Tom!

The March *MaiLink* was very slow arriving at the homes of many U.S. members. This was not Tom's fault; he mailed the issue on March 11th. A postal clerk made an error that resulted in 200 copies being treated as 3rd class mail. The material, in spite of first class postage, took a very long time to reach many of you. Sorry folks.

VOLUNTEER FOR TWS DISTRIBUTORSHIP. I would like someone to take over the responsibility of distributing "The Write Stuff" word processor, starting in September. This requires some familiarity with TWS, but you don't have to be an expert. You should be willing to have some of your own funds tied up temporarily in "stock". The job is not time-consuming, expect an average of an order or two each month.

VOLUNTEER FOR "INFORMATION" SECTION. We need someone who would be willing to gather material and produce the "Information" section which appears at the back of the membership list. This involves a small amount of correspondence and record keeping throughout the year.You need to spend a few hours in late February and late August to turn out the master copy to be included in the March and September mailing.

Jean Nance



COMMODORE MAILINK

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All manuscripts, or any material for review or publication should be sent to the editor of the next issue (see "Editor's Desk"). *Commodore MaiLink* reserves the right to edit submissions.

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EDITOR'S DESK

The editor of the July *Commodore MaiLink* will be DICK RIGHTER, 1512 Cory Drive, Dayton, Ohio 45406. Items of more than about a paragraph should be on disk. Dick can handle several formats, but include sequential files. His deadline for receiving material is June 15th.

I would like to thank Jean for encouraging me to be Editor-for-an-Issue. I used PaperClip Publisher for this job. Why not volunteer for this job; it teaches you a lot about your machine and the program you use!!! Darin Faber did most of the graphics for this issue and I thank him for his efforts; hope you enjoy them. Today is the first warm day of 1994 in our part of the world, and does it ever make you feel good.

Dan Faber

A BIG HIT!
GEOS in the Classroom

by Allie Hunter

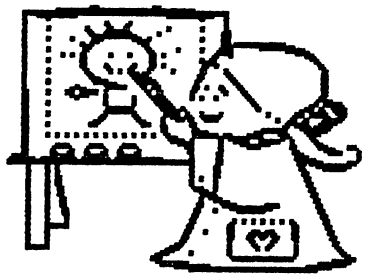
During the last week of April, 1993, I had a chance to work with some new users of GEOS. Every morning two students (different ones each day) in my dad's grade five class, sat with me for about an hour at the computer and learned how to use geoPaint and geoWrite. With the exception of one of them, these students had never used GEOS before. Yet within a week, GEOS (or at least geoPaint) had become one of their favorite software packages.

Explaining to them how to open the applications within GEOS was easy enough: simply click twice on the geoPaint or geoWrite icon, or click on the particular icon once and then go up to File and click on Open. Explaining how to use each application was also easy since every command is either represented by an icon or listed under a menu.

However, it was more difficult to help them get used to pressing the joystick button to start an operation, pulling the joystick to enact the operation, and then once again clicking the joystick button to stop an operation. Some of them were only familiar with programs such as PrintMaster or Where in the World is Carmen Sandiego?, where cursor key movement is all that is necessary.

For this reason, I encouraged them to just "play around" and not worry about making mistakes. That way if they didn't press the button soon enough and so made a square too big or if they pressed it too soon and so didn't highlight a whole sentence, it was no big deal. They could worry about making masterpieces later when they were on the own.

I started with geoPaint where I either told them or else asked them what they thought each icon meant and then let them try each out. The paint brush or pencil and faucet (pattern fill) tools became quick favourites, often being used instead of the hollow and filled rectangle tools. They drew boats, houses, mountains, and doodled, quickly filling



sections of a page with a rainbow of lines, rectangles, and odd shapes. In fact, some of them filled up sections of the page (thereby making their files big) so rapidly that twice in the week we received the warning that the disk was nearly full.

This all took about ten or fifteen minutes, after which I illustrated how some of the menu items worked. All the students thought the editing, brush shape, and pattern commands were "cool, awesome, or wild!" They were impressed that they could blow up a part of their work and make minute changes to it. Here they could make sure their rectangles and other shapes were closed in and wouldn't leak when a fill was applied. They also were excited about the brush shape and pattern selections and changed them as often as they changed colours— which was every few minutes! Their favourite brush shape was the diagonal dotted line and one of the favourite patterns was bricks. Their biggest disappointment was that they couldn't use the brush shapes with the pencil or airbrush tools.

This part too took about fifteen minutes, after which we closed up the art shop and went onto geoWrite where the most difficult part was getting them to figure out something to type. They usually ended up writing something like, "Hello, my name is ... and my favorite subject is...." Fortunately, after playing around with geoPaint, they were now used to pressing the joystick button to start and stop an operation and dragging the joystick to carry out the

→

operation. So none of them experienced any problems with clicking to start highlighting, dragging to highlight desired text, and once again clicking to end highlighting.

Next, because almost everything in geoWrite can be done through menu, I showed them how to change fonts and styles and even how to cut and paste. They then tried these operations themselves and had great fun changing their name to the fancy Dwinelle font or to one of the plainer fonts, such as Roma, in italics or outline style.

About the only thing they weren't impressed with, in either geoPaint or geoWrite, was the preview. They found it much more exciting to enlarge a portion of their work than to shrink all of it to microscopic size.

Learning geoWrite took to the end of the period and, when the bell rang, the students would have to scramble to close off their file and put away the disks. GEOS had been a big hit! From what I heard from my dad, it remained that way for the rest of the school year.

(This was originally written for the New Users Column in the November, 1993, issue of geoVISION International.)

INS AND OUTS. BROWN BOXES INC. Part 3

by Joe Fenn (AKA Kilroy

Let's put the 128 "Dos Shell" in a 128 version of your QBB, and make it run. Observe your 1571 Demo Disk. Note the 2 files called "CBM" (1blk) (USR type) and the main program called "Dos Shell" (67 blks) PRG type. Since you can't load -usr- type files into the QBB, we must use another way of handling the setup.

Do this: first use your 128 QBB manager to load in the main pgm (67 blks). When querried for ID, give it "DS" as the ID. For a name give it "<SHELL". Be sure to put the "<" as the first character. This will prevent the main pgm from running when initially called from the QBB. Now in direct mode, type in the following short basic booter, which when installed in the QBB and called will in turn properly boot the main program.

```
10 A$="BANK12:SYS6656":KEY1,A$+CHR$(13)
20 PRINTA$+"[4 CRSR UPS]":POKE208,1:POKE842,13:*DS
```

TO PUT THIS BOOTER IN THE QBB DO THE FOLLOWING IN DIRECT MODE: HIT (UP ARROW)DL "BT.DS" (RETURN). You now only need to call the booter with *DL and it in turn boots up the SHELL. Tap the space bar to select "ENGLISH" and you are ready to roll. Remember that in the Shell program, the crsr keys are used to point, the space bar to select, and the F7 key to execute your choices. If you use a disk editor and examine the original (USR) type file called "CBM" you will see how a shadow bank call is used to activate the shell. This is why 128 programs can be a little tricky to use because of their MMU bank configuration system. Such problems are not found with 64 mode files.

If for some reason you are not successful after following the above, use your QBB 128 manager to examine the shell setup in your box. Just choose "c" (change) from the main menu, and give it the DS for ID. It will show you how it is configured inside the QBB. It should appear as follows:

```
NAME    TYPE   SYSBANK   RAMBANK   ADDRESS
<SHELL  M/L    15        0         6144
CHANGE DESCRIPTIONS? (Y/N)
```

If your box does not agree with the above, just hit Y for yes, then type in the corrections, otherwise make no corrections.

One final note. When your finished using the SHELL in the QBB, you can exit back to BASIC with the F1 key, but you must then type in direct mode sys57344 (return) to restore some pointers to the QBB itself. Now you can call any other programs you wish to use in the QBB.

(Keep those QBBs running)

(Reprinted with permission from "On-Line", Newsletter of Commodoore Hawaii Users Group (CHUG). May/June, 1993)

The Languages of the C-64

By Dan Faber

Computers are programmed with computer languages to carry out simple or complex tasks. Words, mathematical symbols, and the rules on how these are to be combined make up a computer language. Numerous computer languages are used to run computers. One named COBOL is used to manage large amounts of data; COBOL contains numerous English words and is considered to be a wordy language (see a copy of the program COBOL64). Another, named FORTRAN, contains a series of algebraic formulae and very few English words (see a copy of the program FORTRAN64). And, then there is BASIC (Beginner's All-purpose Symbolic Instruction Code) which was first developed at Dartmouth College in New Hampshire. Don't confuse a computer **language** with a computer **program** which consists of a series of instructions, data, and memory addresses- written in a particular computer language- and causes your computer to perform a particular task.

The C-64 is multilingual, since it normally works with four different computer languages, ranging from high-level to low-level. These languages are: Basic, Assembly, Machine, and Binary. High-level computer languages are written for use by humans, while low-level languages are computer- or machine-oriented. People find low-level languages long, tiresome, confusing, and meaningless. This article has been written for C-64 users who are curious and are interested to know the differences between these four languages. Let's look deep, deep into this marvelous piece of electrical engineering and find out what they look like and where and how they can be seen!

Basic is the most widely used language among C-64 users. Examples of Basic language can be seen in Basic programs published at the back of issues of the now-defunct *Run* and *Compute!*. Fig. 1 illustrates a few elements of Basic in a small Basic program. Basic programs can be recognized by the series of line numbers, not

```
10 X=0
15 X=X+1
20 PRINT X
25 IF X<20 GOTO 15
```

Fig. 1. Basic Language

addresses, along the left side. They can be typed in and viewed on the video screen by LOAD(ing) the program from a disk or cassette and then, LIST(ing). Basic programs are loaded and stored automatically in the Basic RAM memory addresses: decimal 2048-40959 ($0800-$9fff). The high-level language, Basic, is automatically translated into Machine language and Binary by a computer program called a "Compiler". The C-64 has a Compiler built-in to its ROM, known as the "Basic interpreter" or "ROM: BASIC"- depending upon the book you read. Basic is no longer one simple language but rather a series of similar languages, such as Basic 2, Basic 8, QBasic, GeoBasic, etc. Each version is slightly different but still retains the fundamentals of the original programming rules for Basic which were developed at Dartmouth College.

Although Assembly language programs are used less than Basic, Fig. 2 shows what one looks like. This program is not a translation of the Basic program in Fig. 1. The 3-character instructions (known as mnemonics) are arranged along the left side and values and addresses are on the right. Fig. 2 shows dollar signs ($) in front of hexadecimal numbers to distinguish them from decimals. Assembly programs are translated into Machine language by a method known as "assembling", which is simply a one-to-one translation of the instructions, addresses, and values into machine language

```
LDA $0380
LDX $0381
STA $0381
STX $0380
BRK
```

Fig. 2. Assembly Language

numbers. Assembly language instructions are always three characters, such as LDA, STA, etc. Assembly language programs for the C–64 can be written and viewed in RAM with help from a "machine language monitor", like Micromon, 64mon, Supermon64, Supermon+, etc.

In Machine language programs all instructions and numerical values appear in 2–digit hex numbers or codes. The Machine language program in Fig. 3 has been assembled from the Assembly program in Fig. 2 and is arranged by lines, just as in the Assembly program. LDA (load accumulator with memory) is always translated into AD in machine code and, in Fig. 3, is stored in the first address. The number, $0380, is stored in 2 addresses, in order to obtain a 2–digit number, 80 in the 2nd address and 03 in the 3rd

```
AD 80 03
AE 81 03
8D 81 03
8E 80 03
00
```

Fig. 3. Machine Language

address. In the second line LDX (load register X with memory) is always translated to AE and, in Fig. 3, is stored in the 4th address. The 4–digit number, $0381, is also stored in 2 addresses, 80 in the 5th address and 03 in the 6th. Machine language programs can be written and viewed with a "Machine language monitor", like Micromon.

Binary language is the working language of the C–64. The binary program shown in Fig. 4 is a translation of the assembly program in Fig. 2 and the corresponding machine program in Fig. 3. The binary numbers in the Commodore's 8–bit memories can be determined from machine code with either hex or decimal numbers. The first machine code AD, for example, can be translated into binary by two 4–bit numbers, realizing that each 4–bit number is determined by the values: 8,4,2,1. A is determined by adding the values: 8+0+2+0, resulting in 1010; D is determined by the values 8+4+0+1, resulting in

```
10101101
10000000
00000011
10011110
10000001
00000011
10001101
10000001
00000011
10001110
10000000
00000011
00000000
```

Fig. 4. Binary Language

1101. AD is equal to decimal 173 which can then be translated into an 8–bit binary. Each 8–bit binary number is determined by the values: 128,64,32,16,8,4,2,1. Decimal 105 is determined by adding the values: 128+0+32+0+8+4+0+1, resulting in 10101101. Both methods of calculation result in the same binary number: 10101101. These binaries cannot be viewed on the C–64 because they are merely an "electrical impulse" (1) or "no electrical impulse" (0) spots on silicon computer chips.

In summary, the four computer languages used by the C–64 are: Basic, Assembly, Machine, and Binary. C–64 users normally load Basic programs from disks or cassettes into the Basic RAM memory area and the C–64's Basic interpreter translates this Basic program into Machine language and its equivalent Binary. Assembly language programs may be written by C–64 users on Machine language monitors which assemble them into Machine language and their equivalent Binary. Machine language programs may also be written on Machine language monitors afterwhich the C–64 automatically translates them into their equivalent Binary. Binary language programs are unable to be seen, *per se*, on the C–64 computer.

I sincerely hope that you now have a better idea about what language your C–64 speaks!!

PUNCH CARD MACHINES TO PERSONAL COMPUTERS

by Walter L. Johnson

CHAPTER 4. Second Generation to Third Generation

How could a computer possibly run two or more programs simultaneously? How could two computers talk to each other over communication lines? We began to ask questions such as these prior to installation and implementation of third generation computers.

Multi-tasking, the term for running two or more programs at the same time, did not actually mean that multiple programs were running "at the same time". It simply meant that memory had increased in size and speed to the point where memory had begun to wait on input/output devices and time was being wasted. Thus the concept of multi-tasking whereby each program got its share of memory time until some i/o instruction halted execution, then a shift to another part of memory where another program got memory time. In addition, the i/o task was shuffled off to another, smaller computer, and processing could be resumed that much faster. Punch cards were becoming obsolete and keyboard input from remote sites permitted customers to input from their location, thus controlling time and accuracy of input.

Smaller computers between the remote input/output devices serviced the requests thus speeding up the process required by the mainframe memory. Sub-systems controlling the several peripheral devices such as unlimited (ha-ha again) disk storage devices, magnetic tape storage, printers, and remote stations were interconnected.

Former "crashes" now became "aborts" and the programmer had the formidable task of finding his/her program in the many pages of memory printouts and determining why it aborted. With multi-tasking, it was not feasible to let the computer "hang up" as in the past. The operating system detected errors and "aborted" the offending program, letting the remaining ones continue. Programming techniques and languages changed, operating systems now provided much more communication which operators had to interpret correctly. COBOL became the programming language and instructions and techniques from prior experience were applied where possible and changed where necessary. Programs became larger and more complicated as memory limitations were not as restricted and interface among systems was mandated where possible. This resulted in systems generating output which became input to other systems, thus eliminating or at least minimizing errors.

The world of computing was changing, forcing different manufacturers into making equipment that could communicate with each other and establishing some standards.

CHAPTER 5. Personal Computers

In the early 1970's, the components for building computers decreased in size with the development of the printed circuit. Some of the more progressive thinkers (read weirdos) in the computer field began talking about PERSONAL COMPUTERS. Questions and comments began to be commonplace among all computer folk. Can you imagine owning a computer of your very own? Why would you want to? What would it cost? What would you do with it? Where would you get the software for it?

In the mid 1970's a couple of Steve's, Steve Job and Steve Wazniac put action to thoughts and created a Personal Computer which they named the APPLE. What followed was, as THEY say, history. The APPLE became the industry standard for personal computer and in the early 1980's other companies began to produce personal computers. Some of the companies included IBM, Atari, Tandy, Compaq, Timex-Sinclair, Texas Instruments

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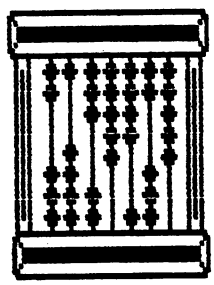
and Commodore. One of the more popular applications for the early PC was for entertainment. Quickly following were education, business and personal finances, and word processing.

To complete and complement the PC, additional peripherals were developed. A disk drive with a removable and highly portable floppy disk enabled PC users to exchange information and programs easily. A programming language called BASIC (Beginners All-purpose Symbolic Instruction Code) was developed. Printers were developed which printed with a series of dots making up the desired characters. The printing was not as clear as the standard typewriter print but was certainly readable. Dot Matrix printers could also print graphic characters, giving variety to printed material.

Now, fast forward to 1993, when a computer system with a capacity larger than early third generation mainframes can be purchased for less than $5000.00 and will set on a desk. Computers are now everywhere. Even kindergarteners are computer literate and the PC is almost as much a home appliance as the television.

None of us who started with computers in the 1960's would have believed that in twenty years, worldwide instant communication would be possible, even routine. While there was a limited remote communication with first generation computers, it was over a telephone line at a distance not over two miles and its use was restricted. The information networks available now through home computers just about blows the mind of some of us CE's. Actual scenes of a war in real time from half way around the world is unreal. And a personal computer of my very own, whose memory is comparable to the second generation computers, and whose components are contained on a desk in the corner of a bedroom along with a 19th century antique bedroom suite, leaves my wife saying, "Here the 19th Century meets the Space Age".



When computer enthusiasts get together and talk shop, one of the subjects sure to be discussed is computer programming languages. On the first generation computers, a great many of the program instructions were accomplished through wires on the plugboard. There were some program instructions but they were limited in scope. As Punch Card Machine Operators, we understood plugboards with wires so when the instructors for second generation computers began to teach "it is all done with a memory", we could not comprehend "memory".

With the installation and conversion to second generation, IBM 1401/1410 computers, our world changed. Some of us were promoted to COMPUTER OPERATORS and began a new phase in our profession. The new generation was faster, the input/output devices now included magnetic tape and a high-speed printer, and the programs were punched into card decks or on the disk storage or magnetic tape. The programming language commonly used for this generation computers was AUTOCODER. This was a shorthand of the English language. To illustrate:

A A,B adds contents of A to B, storing results in B.

MLC A,B moves left, contents of A to B. A remains same, B becomes same as A.

S A,B subtracts contents of A from B, storing results in B.

There were several methods of moving data, depending on the results desired. One of the unique features of these computers was the fact that they were variable length word machines. This meant that each word had to be defined with a "word mark". In addition, records could be blocked, each record terminating in a record mark, a character which, when printed, looked like a telephone pole with one crosspiece. Then the end of the block of records terminated in a group-mark/word-mark (GMWM). It became a legend and a rare but not unknown problem, "A gumwum (GMWM) will stop anything".

Other programming languages supplemented and replaced AUTOCODER as we acquired additional support computers and evolved into third and fourth generation computers. These included:

SAAL- Single Address Assembly Language- for the UNIVAC 1005.

COBOL- COmmon Business Oriented

Language- a language for most business applications.

BASIC- Beginners All-purpose Symbolic Instruction Code- a commonly used language for home computers, especially the early ones.

FORTRAN- FORmula TRANslation- for scientific and mathematical applications.

A common question asked by non-programmers is "Can experience and knowledge of one language be transferred to another language?" It has been my experience that it can. The rules may change slightly but the basic instructions obtain the same results. It usually takes some trial and error to obtain the ultimate results but each program is a new adventure with new problems anyhow.

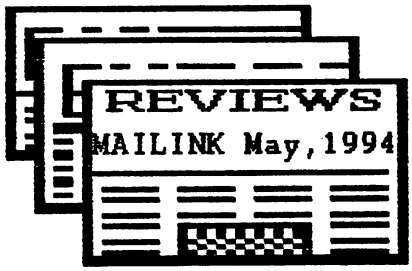
One anomaly which I have not found an answer to resulted when I retired from programming in COBOL on large mainframe computers and began programming in BASIC on home computers. I had learned that, sequentially speaking, the alphabetic characters A-Z were less than the numeric characters 0-9. The nine (9) was the greatest, sequentially speaking, and was commonly used as padding in filling out blocked records. The space was the least, sequentially speaking, of all characters, being, as one programmer assured a customer, "lower than whale dung". As a beginning programmer in BASIC, I began designing my files in the same way, writing an end-of-file record containing all nines so I could use that to determine end-of-file instead of checking ST. All of a sudden, I find that alphabetic characters are greater than the high and mighty nine (9). What is going on? I suppose it has to do with the ASCII values but still do not understand why the rules changed.

A bit of advice and observation from a CE. If you are a would-be programmer but do not know which language you should use, just choose one and learn it as completely as you can. The effort and learning will not be wasted. Best wishes to you.

HINTS & TIPS

From BOB HUNTER: "After the demise of 'GeoVision International,' I think we should all be cautious about recommending sources of Commodore information" is how Jean Nance opens her recommendation of *DieHard* in last November's Commodore *MaiLink*. While seconding our President's warning, I'd like to draw attention to Meeting 64/128 Users Through the Mail members to Scott Eggleston's *The Underground*, which debuted in March. I suggest getting a trial issue ($2.00; $3.75 outside USA) to judge its quality for yourself. Scott is looking for submissions of articles as well as subscriptions for the small, bimonthly magazine. Articles, except for very small items, should be submitted as seq files on disk or through Genie or Internet. The magazine's address is: the Underground, 4574 Via Santa Maria, Santa Maria, CA 93455.

From JEAN NANCE: Creative Micro Designs (CMD) has come out with details on their new magazine, *Commodore World*. The first issue will be out in April. They promise "regular columns featuring noted Commodore experts", including some regular contributors to the defunct *Run* Magazine. Their lead article is "Printers- Our In-Depth Look Into Selecting and Using Printers and Printer Interfaces." I have been promised a trial issue, so I can provide a review in the next *MaiLink*. If you would like to take a chance on a subscription, write: Creative Micro Designs, P.O. Box 646, East LongMeadow, MA 01028, or phone 1-800-638-3263. A one year subscription, 8 issues, is $29.95. Make checks payable to "Creative Micro Designs, Inc".



The World of GEOS Handbooks

Reviewed by Bob Hunter

The World of GEOS Handbooks I, II, and III is a collection of useful handbooks produced "down under" by Mrs. Jane M. Jones. A talented user of GeoPaint, Jane is the owner/operator of JMV Grafix and was the Art Gallery columnist for geoVISION International. She has just joined Meeting 64/128 Users Through the Mail and should be a valuable asset to our group.

The first handbook includes an introductory article explaining what GEOS is, a personal account of Jane's discovery of GEOS and geoPaint, a discussion of GEOS work disks, two articles on fonts (one of which a reviewer in the Australian newsletter,Commodore Network, claimed was almost worth the cost of the handbook), a review of the Handy Scanner 64, a study of the GeoPaint-GeoPublish connection, a "More" article ("More" articles describe third-party programs that help GEOS) on photo scraps, and a step-by-step account of Jane's making of the flyer that won geoMETRIX's 'Design a Flyer' competition. It's accompanied by a disk of public domain/shareware programs. Personally, I think that the handbook's worth the $15 plus $5 postage/handling charge being charged for it, especially for beginning users of GEOS.

The second and third handbooks contain more pages and, because of using a smaller font, also have more material on each page. However, about half of each handbook consists of rewritten manual material and of memory maps, which would be of limited usefulness/interest to most GEOS users. The second also contains articles on configuration, applications and desk accessories, fonts (two, one a "More to..." one), and the LaserMatrix Driver. The third contains five more "More to..." articles (on desktop, painting, writing, and managing photos in GEOS, and on using GEOS) and articles on auto-exec files, mega fonts, icons, and the MPS-1230 printer. Although the two handbooks contain much good material, I think that they're overpriced at $15 + $5 each.

Jane is making the three GEOS handbooks and a handbook on Commodore disks available for 4 @ $15 plus $13 for postage and handling. She (JMV Grafix) also sells card art and clip art. Details can be obtained from her.

CANON BJ-200e Bubble Jet Printer

Reviewed by Brian Vaughan

The "e" model replaces the original BJ-200 and sports increased printing speed and two print reduction modes. This

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is ink jet printer supports both an IBM & Epson mode and will work with C= systems just as with any other 9 or 24 pin printer. Of course, we C= users are limited to addressing the printer's features through the standard ESCape CHR$ decimal codes and cannot expect any greater resolution when using the graphic modes because of our limited memory restrictions and screen resolution. But you can expect excellent letter quality printing in the text modes and the convenience of using single sheets (inexpensive 20# copy paper works fine). I had to call Canon to get the extended codes for the slashed zero & double-high feature in the IBM mode, so if any member requires these codes, just drop me a card.

Beside Draft mode, the Epson mode supports 7 LQ fonts while the IBM mode supports only 2 LQ fonts. The slashed zero feature is only supported in the IBM mode.

The ink cartridges cost around $25 and will last for 400+ pages in LQ mode per the manual. V-Tech & MEI/Micro are two companies who sell ink in a container for refilling these cartridges at a great savings over replacing the cartridges. The printer is quite small and is less than half the size of a 24-pin printer. My Xetec interface feeds an A-B-C-D printer switch which allows my one interface to operate my two 24-pin printers plus the Canon printer just by switching between them. The Canon printer is available now for $280. at mail order houses and other places like Price Club. If you ou are looking for a quiet high quality printer, I would recommend this printer but you should plan on continuing to do labels on your current dot-matrix printer.

BUY/SELL/TRADE

FOR SALE: C-128 system, including: Enhancer 2000 disk drive, 1750 REU, Panasonic 19" monitor, 1660 modem, Animation station (similar to Koala pad), Hearsay 1000 (voice recognition module),1351 mouse, SuperGraphix Jr. interface, GEOS 128 (v2.0), GeoPublish, GeoChart, Writers workshop, extra software and books. All for $450. + shipping. Or will trade for laser printer. Also 1764 REU with power supply, $50. Also lots of Commodore mags. ANDREW SCHWARTZ.

WANTED: Purchase GeoWord disks #10-?. JIM CHANCE.

WANTED: Busicalc (spreadsheet) and Homebase (datamanager). JOHN KILLION

WANTED: A copy of "The Oregon Trail" and "Songwriter" from Mindscape or a PD equivalent. FRED & NANCY WILSON.

WANTED: RAMLink with RAMCard and any amount of RAM on the RAMCard. BRIAN VAUGHAN

FOR SALE: Complete VIC-20 system including an 8K RAM expansion cartridge for $30 plus parcel post charges. BRIAN VAUGHAN

FOR SALE: C-128 with power

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supply, refurbished for $175, 1571 disk drive for $125, 512K REU for $50, Heresay cartridge with disk for $25, manuals and/or documentation included. WILLIS C. PATTEN.

TRADE: Okimate 20 color printer & serial adapter card- For Commodore serial plug-compatible printer or ASCIIprinter with C= interface. JEFF FLEMING.

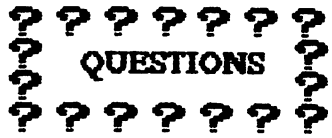
FOR SALE: RIO/DATEL MIDI cartridge with 2 MIDI cables and Advanced Music System software for $50 + shipping. Also, Casio HT-700 MIDI keyboard. JEFF FLEMING.

FOR SALE: C-128 with power supply and Jiffy Dos installed. $100
RamLink with back-up battery and 4 mb Simms installed. $200
NX 10C Star dot matrix printer. $100.
Indus disk drive with power supply. $60.
1541 disk drive with Jiffy Dos installed. $60.
1571 disk drive with Jiffy Dos installed. $100.
1581 disk drive with Jiffy Dos installed. $100.
Suncom Tac 5 joystick. $10.00.
All items are in first class condition. Shipping not included in prices. DON DROEGE

COMMERCIAL

GEORGE FRAINEY has used hardware, peripherals, and display units for sale. Commodore computers, disk drives, and a datasette. Many printers, some Commodore ready with cable, others require interface. UPS shipping and 30 day return. Send a SASE for current list.

(Editor's Note. Addresses for Buy/Sell/Trade ads are available in the Membership List.)



From FRANK GALLER: I was preparing a demo on two-column text with GEOS, using a C-64 in 40 column mode, printing the GeoWrite text using the Overlay printer driver to GeoPaint. I kept getting "Can't proceed. Disk near full. Please delete some files." Getting rid of everything on the disk except GeoPaint, GeoWrite, the GeoWrite text icon, and the Overlay driver, I was able to complete the demo and get the text into a GeoPaint document (Overlay).

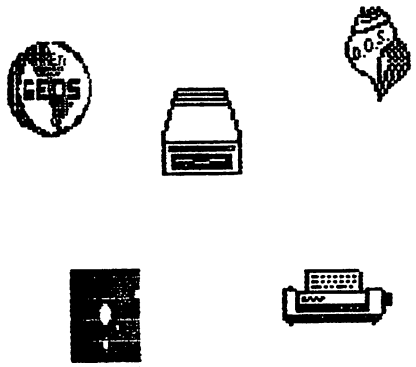
My question is: Before I started I took note of the number of kilobytes left on the top line of the desk top, that tells the number of files, kilobytes used, and kilobytes left. It indicated 60 kilobytes left. When I overlayed the GeoWrite text to GeoPaint, the Overlay document (file) reduced the number of kilobytes left to 31, indicating that the file had used up 29 kilobytes. Since there are approximately 4 blocks in a kilobyte, 4 times 29 equals 116 blocks. Wow!

When I deleted the Overlay file, it restored the used kilobytes and the desk top again read "60 K bytes left". When I looked at the directory of the work disk I was using, in Basic "$", the Overlay file only read 17 blocks. Can anyone explain the discrepancy? We discussed it at our user group, and no-one had a satisfactory answer.

From DAN HANEY: I have a Simon's Basic cartridge, I can power it up, but that's all. Could someone be of help to me?

From SAMUEL JIMENEZ (new member): Would like advice on using a Juki printer with his C-64. Anyone with experience?

From THOMAS POWELL: "I would like to find out the advantages and disadvantages of both ink-jet and laser printers. Also what connections are needed to get a handshake from the computer to the printer.(Editor: Thomas is putting together a collection of his deceased wife's letters, and a family history, and wants absolute best possible print for these projects).



MISCELLANY

WANTED: *Diehard* Magazine Subscriptions
Mailink Users Group has an opportunity to get 20% off the regular rate for subscriptions or renewals to *DieHard*; at least ten subscriptions are needed to obtain this reduced rate. Bruce Kurson has agreed to accept subscriptions for us. Send your name and address to Bruce Kurson, 2833 Providence Rd., Raleigh, NC (e-mail wl-zotar-tcs@society.com) and a check, made out to: DieHard. One year, #13.58; 2 years, $23.98; 1 year with "Spinner" disk, $39.98; 2 years with "Spinner" disk, $75.98. If there are not enough subscriptions, checks will be returned.

Printing in Color with Illustrator II and Fun Graphics Machine

By Emil Kalar

You will need a printer that will reverse (back up) linefeeds. You should have FGM "draw" mode program available. Fast Load versions of the programs will help you keep your frustrations down.

Choose "coloring book" type graphics to start with. These are just outline drawings. Save the graphic as a work screen and to print in black. Erase everything except the portion to be colored and save it as Clip Art to disk with a unique title. Do this for each color to be used. Put a registration mark in the upper left corner of each screen so that it's position can be maintained for printing. Erase them when finished. Print lightest colors first. Print black last to avoid contaminating light colored ribbons. Black will prevail if printed over other colors.

Thanks to Hugh McMenamin for the following sample commands for Illustrator II to print out the graphics. Characters inside brackets denote reversed characters.

[n]@:-test demo. Install your own title for this and save when done.
[tm1lm10rm10] Set your own margins
[1]=27,106,36
[mo]+ Tells printer to reverse after graphic.
[mo]_graphic title
[lw] Pauses printer to change ribbons.
[mo]_graphic title
[lw] Pauses printer
[mo]- Stops reverse of printer after next graphic
[mo]_ graphic title
[lw]
Instructions are for the Panasonic KX-P1180. Should work for Epson type printers.

If you need more help, write me and I will do what I can. The best advice I can give is: THINK! and preview before printing.
(Editor's note: We wish we could have shown a sample of Emil's graphics here. They are truly artistic.)

DONATIONS WANTED!!
Educational sofware needed for Commodore-based program in a school in Penjamillo, Michoacan, Mexico. JEFF FLEMING.

PROGRAM AVAILABLE: Enables user to access NX-1000C multiple fonts in combinations in simplified key stroke(s), either C-64 or C-128. Will send free program on-disk. WILLIS C. PATTEN

OMNIREADER
by Kilroy (Joe Fenn)

I wrote this text file reader a couple of years ago and never submitted it, so I decided maybe some of the 64/128 Users might find good use for it. It reads any type text file seq-prg-usr and either prints to the screen or printer (your choice). It will even read non-text type files (binary files), but what you see is a lot of jibberish except for an occasional splash of ASCII in strings. It automatically detects mode 64 or 128, file type, and works with 40 or 80 col screen modes. It is written for QBB, so when resetting, it goes back to the QBB menu rather than to BASIC. If you dont have a QBB yet, (shame) it will just revert back to basic.

The secret to the whole thing is in line 20. Instead of opening a seq, or prg File to read, the -M- acts sorta like a wildcard in dos to read any file regardless of type.
IN 64 MODE ANY KEY PAUSES LISTING. IN 128 MODE USE NO/SCROLL KEY.

```
            OMNIREADER
5 IFPEEK(65534)=72 THEN POKE808,239:A=646:GOSUB100
7 IFPEEK(65534)=23 THEN POKE808,112:A=841:DIRECTORY
8 POKE53281,0:POKE53280,0:POKEA,1
9 PRINT:PRINT:PRINT
10 INPUT"FILENAME";F$:INPUT"PRINTY/N";R$:D=3:IFR$="Y"THEN D=4:S=7
20 OPEN1,8,2,F$+",M,R":OPEN4,D,S: PRINTCHR$(14)
30 GET#1,A$:IFST=0THENPRINT#4,A$;:WAIT 198,1,1:POKE198,0:GOTO30
40 PRINT#4:CLOSE1:CLOSE4:INPUT"ANOTHER Y/N";Q$:IFQ$="Y"THEN 5
50 IFPEEK(65534)=72 THEN SYS64738
65 IFPEEK(65534)=23 THEN SYS57344
100 D=8:GOTO110
110 SYS57812"$",D:POKE43,1:POKE44,192: POKE768,174:POKE769,167:SYS47003,1
120 POKE782,192:SYS65493:SYS42291:LIST: POKE44,8:POKE768,139:POKE769,227:RETURN
```

(Kilroy adds that this program won't do binary files such as prg files saved from word processors. If you save them as seq files, then it will work. Or you can read true prg text files prg/or/seq such as Loadstar files. It lacks wordwrap.)

(note: above pgm is also on the Mailink disk)

NEW PROGRAMS FOR C-128: Three new programs for the C-128D & 128C are available for $29.97. They are: Spectrum 128, Sketch Pad 128 and News Maker 128. Your monitor must be RGB in the 80 column mode and your printer must produce 640 dots horizontally. These programs were written by Free Spirit Software and are available from George Frainey in Foresthill, California.

HELPFUL TIP FOR FAST HACKEM USERS - Brian Vaughan

If you have many new disks to format, I recommend you use Fast Hackem since it is not only the fastest formatter (about 8 seconds), but the drive head will not knock during formatting. Just load the single drive menu and then select the File Copier menu. Then use the "I" (Initialize-Format) command. As for copying disks, users are aware that the first disk copy will knock the drive head but that subsequent copies will not. To avoid the first head knock on a single drive, hit "D" to list the Directory first before copying. On a two drive system, you will have to first hit "F1" to swap the two drive positions before using the "D" command to list your Device #9 Directory. But when you return to the main menu, don't forget to hit "F1" again to reswap the origin & destination drives or you will wipe out your origin disk when copying unless it is write protected.

FEEDBACK

Complaint: I sent $10 to Mike Craig, Richmond, Virginia, for a GEOS disk that was advertised in the December, 1993, Compute's Gazette Disk. Still no disk after 3 months. I sent a letter of complaint to Tom Netzel, Editor of "Compute", Gazette edition, (the Gazette disks that were provided with the magazine), and now editor of the disk version of "Compute's Gazette". No reply. Possibly Mike is having problems with providing what he promised, but perhaps he never intended to provide what he promised. O. B. HARVEY

Plaudits: I had an experience similar to Bruce Kurson. My 1571 diskdrive was making a horrible noise when reading, as if the disk was not spinning freely. I sent it to Earl Harvey, 1409 Mill St., Laramie WY 82070. When Earl received it, whatever was causing it to stick apparently freed itself up. Earl could find nothing wrong and returned it. I've been using it successfully for a month now. Earl charged me nothing but I payed him something for his time and return shipping costs. I've found him very capable and recommend him. Charlotte Mangum

Program Available for NX-1000C Printer: Enables user to access NX-1000C multiple fonts in combinations in simplified key stroke(s), either C-64 or C-128. Will send free program on-disk. Willis C. Patten

To Walter Johnson: In regards to the difference between his manual and the 1541 Printed Circuit Board. I have three 1541s and the PCB for each is different. In particular, the area concerning the tabs for cutting the "Jumpers" are the same in two of them while the third is in a different location. There was an article in Compute's Gazette concerning the different versions of the 1541 with different inners, which might explain the situation. One more item concerning the 1541 manuals. There are different manuals for the 1541 and in the manual that I use, there are several obvious errors. Harold Elig

BASIC programming questions: I would like to hear from C=128 BASIC Programmers concerning a particular situation with the BREAK error message. The program that I'm working on has about 500 instructions. My object is to make a check book program using the screen as though it looks like a typical check book. Hence, the program uses the CHAR command to construct the screen. I use the GETKEY command to insert user data, and the cursor keys to move to my allowed areas on the screen. I use subroutines to load the position data and Alpha/Numeric data direct to the video memory. STOP Breaks are OK. My problem is that unrequested BREAKs may occur. When they occur they are not intermittant. The illegal BREAK may or may not be removed by inserting or removing an instruction or the illegal BREAK may show up at a different location. The BREAK At Address may not have any relationship to the part of the program that is being used for the current section. A close examination has assured me that there are no wrong jumps, reserved variables or words. The problem showed up long before I called for the video memory routines. In fact when I first started to use the GET or GETKEY commands, problems in that the "GETKEY M$" on a line by itself would not be acknowledged. Some other command or REMark had to be placed on the same line to get it to work. Now that additional instructions are installed, the GETKEY problem doesn't exist but the BREAK problem still exists. Can anyone help? Harold Elig

Eight Years of MEETING 64/128 USERS THROUGH THE MAIL- The May 1986 "Compute's Gazette" had "The 64 User Group of America" on their list of user groups. The President was Kirby Herazy. Members corresponded with Kirby and he encouraged them to write to other members. There were no regular mailings, no newsletter, and no dues. The following year the name was changed to "Meeting 64/128 Users Through the Mail."

In the summer of 1987 Kirby asked me to take over as President. I began to put out a membership list with "bios", and in September 1987 the first small newsletter was sent out with donations covering costs. Dues of $5 were instituted for 1988. Elly Carey became Treasurer; Brian Vaughan took over Membership Records; and Bill Robinson became Editor of the Commodore MaiLink, and he also produced a disk version of the newsletter. Since March, 1990, we have had guest editors for the MaiLink. At present Joe Powell is Treasurer; Brian Vaughan is in charge of Membership Records; and Jim Green edits and distributes MaiLink on Disk. There is a roster of "Resource People" to advise on computing problems, and an Advisory Council to advise the President. Membership goes up and down through each year but the present membership of 259 gives members a good choice of correspondents and provides plenty of submissions for the MaiLink. New members are always welcome. We could attract more members if we promised more, but our policy is to promise only what we can do well, and to provide everything we promise. **Jean Nance**

ADDRESS CHANGES

Jim Chance – Change house number to "175"

Judy Kerns, 371 Valley View Rd., Claysville, PA 15323-9418

Jim Caldwell, 1064 N. Tamiami Trail Lot #43-E, N. Ft. Meyers, FL 33903-5301

CONTINUING MEMBERSHIP– Andre & Sylvia Cardinal have been members since 1991. We regret that due to a posting error, they were omitted from the March list.

ANDRE & SYLVIA CARDINAL, 9451 Gormond Rd., Richmond, BC, V7E 1N7 Canada. Andre is an automotive damage estimator. Hobbies: N-scale model railroading, photography, reading, stamp collecting, shortwave radio, music, and the organ. System: C-128, 1571 & 1581 disk drives, 1750 REU, datasette, Panasonic KX-P1180i & Roland DG PR-2017 printers, C-1084 & Citizen monochrome monitors, and a 1200 baud modem. Interests: Data collection, productivity, weather & model railroad programs, BASIC programming, and word processing. Sylvia is a homemaker. Hobbies: Gardening, reading, astronomy, sewing, and crafts. System: C-128, 1571 disk drive, MPS-1000 printer, and C-1702 & Zenith monochrome monitors. Interests: Data collection, productivity programs, Sky Travel & Astroview, and solitaire & mind-teaser games.

LATE 1993 RENEWALS

MIKE HARRISON, 4815 Airway Dr. #169, Moses Lake, WA 98837. Mike is a custodian in a hospital. Hobbies: Photography, reading science fiction, hunting, and fishing. System: C-64C, 1581 & FSD-2 Excellerator disk drives, Okidata 180 printer, Super Graphix Gold interface, 1802 monitor, 512K REU, Aprospand minimodem-C, and Super Snapshot V5. Interests: The 1581 version of TWS, the Busy Bee User Group, and working with GEOS with the 1581 & REU. He would like to hear about applications for Superbase 64.

DIANA JONES, Rt 3 Box 498, Seguin, TX 78155. Diana is a special education teacher teaching the emotionally disturbed, and a part-time campus coordinator for a drop-out prevention program. Hobbies: Outdoor education, "back-to-the-land" living, sewing, crafts, and animals. System: C-64, C-128 & C-128D, 1541 & 1581 disk drives, C=801, Okidata & Star printers, color monitor, 1200 baud modem, and a Koala pad. Interests: Educational programs, graphics, games for children, music, trivia, and telecommunication. She uses computers in her classroom, and is publicity chair for the San Antonio Users Group (CUSAT).

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ANDREW SCHWARTZ, 818 E. Main St., Olney, IL 62450-2620. Andrew is a student. Hobbies: Woodworking, intarsia, camping, Star Trek, and science fiction & fantasy. System: C-128, two C-64s & an Amiga 500, 1541-II & Enhancer disk drives, 1764 REU, datasette, Panasonic KX-P1123 printer, Xetec Super Graphix Jr. interface, 1520 plotter, 1084S monitor, Omnitronix RS-232 adapter, 1670, 1600, Samsung Sensor SP-Mod 2400 & Packard Bell 2400+ modems, Hearsay 1000, FastLoad cartridge, VIC-1001A, and a Briwall 80 column adapter. Interests: Print Shop & Newsroom graphics, role-playing & Infocom games, GEOS, telecommunication, and C-64 emulation on the Amiga.

NEW MEMBERS

DONALD AYERS, 75 State Rd. 270 W., Sturgis, KY 42459. Donald is a writer, editor, teacher, and social worker. Hobbies: Writing, reading, correspondence, electronic projects, and C-Span. System: C-64, C-128, & an SX-64, 1541, 1541-II, 1571, 1581 & MSD-2 disk drives, 1764 REU modified to 512K, datasette, Okidata 120, Epson Action, Star 15, & Silver Reed 89SP printers, Supra & Aprotek 1200 modems, Turbomaster, Koala Pad, and a Super Snapshot cartridge. Interests: Magazine collecting.

JIM CHANCE, 176 E. 600 S., Smithfield, UT 84335. Jim is a laboratory technologist at Thiokel Corp. Hobbies: Playing the guitar. System: C-128D, FD-2000 disk drive, CMD RAMDrive with 1 Meg., Star NX-1000C printer, and a 1200 baud modem. Interests: GEOS for the C-128.

CHRIS C. CITTY, 222 Terrace Shores Dr., Indialantic, FL 32903. Chris lists no occupation. Hobbies: He enjoys reading, movies, and sports. System: C-64 & Amiga 1200, 1541 disk drive, and a C=1084S monitor. Interests: Telecommunication, programming, and entertainment software.

CHARLIE COLWELL, 117 Paseo Marguarita, Vista, CA 92084. Charlie is an auto mechanic. Hobbies: Camping, and early rock & roll music. System: Four C-64s, two C-64Cs, and a C-128D & Amiga 500, 1581, three 1571 & six 1541 disk drives, and Epson FX-80, Okidata 180 & two Star 1020 Rainbow printers. Interests: Newsletter & desktop publishing, and graphics.

ROBERT DALLMAN, 1095 100th St., Niagara Falls, NY 14304. Bob is a chemical technologist. Hobbies: Bible study & church activities, Bushidoko Kai (a martial art), and painting & drawing. System: C-128 & two C-64s, three 1541 disk drives, RAMLink with RAMCard + 4 Megs., Star NX-1000C & MPS-801 printers, and two C=1670 modems. Interests: Programming, writing puzzles, and desktop publishing with PaperClip Publisher.

L. FRANK DEQUTIS, 135 Tulip Box 887, Westville, IN 46391-0887. Frank is a truck driver. Hobbies: Nascar racing, and sharing with his sons: collecting stamps, coins & sports cards, fishing, and sports. System: C-64 & C-128, 1541 & two 1571 disk drives, Star NX-1000C Rainbow & C= printers, and a Thompson 40/80 column monitor. Interests: Learning ML so he can adapt games to his preferences.

BOYD W. HINDS, 903 Ottawa Dr., Claremont, CA 91711. Boyd is a retired aircraft engineer. Hobbies: Photography, reading, and backpacking. System: C-64, C-128 & C-128D, 1541, 1571 & 1581 disk drives, Star printer, and 1902, 1084 & 1802 monitors. Interests: Boyd is a beginner who is interested in learning everything except games.

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SAMUEL JIMINEZ, 403-B Akers, Wilmore, KY 40390. Samuel is a student. Hobbies: Card & stamp collecting. System: C-64, 1541-II disk drive, Juki 6000 Daisywheel printer, and a C= CM-141 monitor. Interests: General.

DONNA MAQLIN, 17 Thorndike St., Concord, NH 03301. Donna is a secretary. Hobbies: Raising rats, guinea pigs, and other small animals, knitting, shortwave radio, and serving as president of the local chapter of Nat'l. Federation For The Blind. System: Several C-64s, several 1541 disk drives, printer, and a modem. Interests: Most applications but not graphics. It would be helpful if members could put correspondence for Donna on disk where she can read it with the help of a voice program.

REUBEN NEAZER, 5 Pinetree Ct., Jamesburg, NJ 08831. Reuben is a computer operator. Hobbies: RC model boats. System: C-64 & C-128, 1541C disk drive, Star NX-1000-II printer, Sears LXI, 1802 monitor, Cardinal modem, Aprotek interface, and a Swiftlink cartridge. Interests: Word processing, and Genie.

ESTHER OLSON, 1851 W. Berenice, Chicago, IL 60613. Esther is retired from bookkeeping, miniature craft dealer, and teacher. Hobbies: Crafts & needlework in the past, but her hands are now crippled with arthritis. System: C-64 & C-128, 1541, 1571 & 1581 disk drives, Star NX-1000C printer, 1084 monitor, 1200 baud modem, and a SID stereo cartridge. Interests: SID music, 6-voice editor, FGM, and dissecting programs and changing them to meet her needs.

CATHY PEHLKE, 56843 Butternut Rd., South Bend, IN 46619. Cathy is a homemaker. Hobbies: Needlework: knitting, crochet, quilting & sewing. System: C-64 & C-64C, 1541, 1541-II & Blue Chip disk drives, Panasonic KX-P2123 & Comrex 220 printers, and an Xetec Super Graphix interface. Interests: Desktop publishing, exploring disks, programming, and games for her children.

ERNIE PETRU, 3602 Harrison, Bellmead, TX 76705. Ernie is a scene shop foreman for a university theater. Hobbies: Woodworking, gardening, and raising cacti & succulents in a greenhouse. System: C-64, C-128, SX-64 & CBM-8032, 1541, 1541-II, 1571 & 1581 disk drives, C=801, 803, Okimate-10, Okimate-20 & DPS-1101 printers, 1702, 1084 & Magnavox RGB monitors, and a 1200 baud modem. Interests: Using Superbase & TWS, learning C= computer & disk drive repair, archiving & compressing, and collecting & trading hardware & software.

STEPHEN SHABANOWITZ, 329 River Rd. #4C, Jewett City, CT 06351-3244. Stephen is an assembly worker and also an army reservist. Hobbies: Collecting baseball cards & stamps, writing poetry, reading mystery, horror & science fiction, traveling, and dining out. System: C-64, 1541-II disk drive, and a Star NX-1001 printer. Interests: Printing greeting cards, banners & posters with Print Shop, word processing, and some games.

CURT STALDER, 1304 N. Ferncreek Ave., Orlando, FL 32803. Curt is a retired sales manager. Hobbies: Electronics. System: C-128, two C-64s & a Sinclair ZX-80, 1571 & three 1541 disk drives, Citizen 120-D & Seikosha SP-1000VC printers, Thomoson & Zenith color & Magnavox green screen monitors, and a 1670 modem. Interests: All aspects, especially programming utilities & conversion programs.

JERRY W. WOMACK, Rt. 2 Box 312 B, Wanette, OK 74778-3802. Jerry is a retired restaurant owner/manager. Hobbies: Fishing, raising dairy goats, and collecting antique toys & glassware. System: C-64, 1541 disk drive, Okidata 120 printer, and a C=1702 monitor. Interests: Learning about graphic arts and labels.