



EXECUTIVE, DIRECTORS ACCLAIMED

The Commodore Computer Club's first annual general meeting was held on January 17 at King Edward Campus, with about 100 members, or one-sixth the total membership, attending.

The prime item on the agenda, the election of a new executive and 14 directors, went smoothly since all the positions were filled by acclamation. When the dust had settled, the names of the unopposed victors were:

President -- Jim Bauerle
 Vice-Pres. -- Sigmund Steiner
 Secretary -- Marvin Steinway
 Treasurer -- Hu Reijne
 Directors -- Robert de Boer, Guenter Hake, Jim Jorgenson, Terry Juuti, Murray Kopit, Mike Quigley, Elmer Roy, Philip Seligman, Nick Shevchenko, Gerri Sinclair, Tony Smith, Arthur Tamer, Al Townsend and Jim Wilcox.

These are the people who have

volunteered to put in extra time running the club for you during the coming year. They need your support, and also your suggestions on how to make the club run effectively and efficiently.

New president Jim Bauerle, in his first speech to the group, recalled the early days of VPUG, CCC's predecessor and how everyone learned from each other, and he hoped such a spirit of co-operation would continue.

Other highlights of the meeting included a presentation by outgoing president Niels Hansen-Trip to former treasurer Richard Hamilton in appreciation for the work he had done for the club, as well as annual reports by the secretary and treasurer.

Several motions were also voted on by the members, increasing the quorum for general meetings and allowing the executive to bestow honorary memberships on people deserving

of special recognition by the club for exceptional service.

The evening's most contentious issue, a resolution allowing the executive to expel any member caught pirating software at club meetings, passed as well after some sharply divided debate. Some members felt the club had no business getting involved in what was a vague legal issue. Others said that by making such a resolution, the club was at least decreasing its chances of being the object of a lengthy and costly court battle launched by some software company or author.

The meeting closed with remarks from the members as to the direction they would like to club to take. Among the suggestions were specific topics at workshop meetings, resource people to be called on for help in different computing fields, and branch meetings in areas outside Vancouver.

COMMODORE COMPUTER CLUB
 STATEMENT OF INCOME AND EXPENSES
 FOR THE YEAR ENDED DECEMBER 31, 1983

INCOME		
Dues	\$ 11,435.00	
Course fee's	2,760.00	
Vancouver Pet Users Club - (Note 2)	1,874.70	
Sundries	477.48	\$ 16,547.18
EXPENSES		
Rent	\$ 2,943.25	
Speaker	1,008.37	
Printing & materials	1,024.13	
Newsletter	1,923.87	
Utilities	295.60	
Legal	279.60	
Depreciation	277.98	
Course expenses	1,560.00	
Office & sundries	1,199.00	10,511.80
NET INCOME FOR THE YEAR, to		
Members equity		\$ 6,035.38

AUDITORS' REPORT

To the Members of Commodore Computer Club:

We have examined the balance sheet and statement of income and expenses for the year ended December 31, 1983. Our examination was made in accordance with generally accepted auditing standards, and considered necessary in the circumstances.

In our opinion, the accompanying balance sheet and statement of income and expenses of Commodore Computer Club present fairly the financial position for the year ended December 31, 1983 in accordance with generally accepted accounting principles.

David - David
 Chartered Accountants

COMMODORE COMPUTER CLUB
 BALANCE SHEET
 AS AT DECEMBER 31, 1983

ASSETS		
CURRENT ASSETS		
Cash in bank - Richmond	\$ 2,867.11	
Cash in bank - Vancouver	1,275.90	\$ 4,143.01
FIXED ASSETS		
Equipment	\$ 2,170.35	
Less: Accumulated Depreciation	277.98	1,892.37
		\$ 6,035.38
LIABILITIES		
CURRENT LIABILITIES		
		\$ Nil
MEMBERS EQUITY		
Net income for the year, Statement attached		6,035.38
		\$ 6,035.38

This is the balance sheet referred to in the Auditors Report of Marsh & Marsh, Chartered Accountants, dated January 7, 1984.

COMMODORE COMPUTER CLUB
 NOTES TO FINANCIAL STATEMENTS
 AS AT DECEMBER 31, 1983

- NOTE 1** The Club was incorporated on April 22, 1983.
- NOTE 2** Assets of the Vancouver Pet Users Club as at December 31, 1982 were transferred to Commodore Computer Club.
- The assets transferred were:
- | | |
|-----------|-------------|
| Equipment | \$ 159.16 |
| Cash | 1,715.54 |
| | \$ 1,874.70 |
- NOTE 3** All transactions relating to the Vancouver Pet Users Club during 1983 have been combined with transactions of Commodore Computer Club.

← I →
 ← M →
 ← P →
 ← O →
 ← R →
 ← T →
 ← A →
 ← N →
 ← T →
 ← S →
 ← T →
 ← U →
 ← F →
 ← F →
 ← T →
 ← H →
 ← A →
 ← T →
 ← W →
 ← E →
 ← ' →
 ← V →
 ← E →
 ← G →
 ← O →
 ← T →
 ← T →
 ← A →
 ← P →
 ← R →
 ← I →
 ← N →
 ← T →
 ← ! →

A LOOK AT LOGO

By ARTHUR L. ROSS

LOGO for the C-64 is a simple computer language used in elementary and junior high schools. Children, even pre-schoolers, get positive feedback by seeing the machine following the simple instructions. The program uses 137 blocks of memory. I will be reviewing only the Draw Mode as it is the simplest and quickest way for one to get immediately involved with the computer. Type DRAW and you will be in Draw Mode.

A child wanting to draw a line 50 spaces long types FD 50 -- this is an abbreviation for FORWARD 50. A space always has to be left between the command and the number. To make a circle one tells the pointer to go ahead one space, then turn to the right one degree and repeat the cycle 360 times. REPEAT 360 [FD 1 RT 1] draws a circle. Square brackets have to be used.

An arc is part of a circle, so if you want 1/3 of a circle, type REPEAT 360/3 [FD 1 RT 1].

Screen size is 260 spaces in the vertical direction and 320 spaces in the horizontal direction. You can put the pointer anywhere on the screen by using the X and Y axes. By typing SETX 0 and SETY 130 one puts the pointer at the top of the screen and in the middle of the screen. To get a coil design one does as follows: Type REPEAT 360 [FD 1 RT 1] RT 12 (return). By pressing the up arrow key one can repeat the procedure. CONTROL P also causes the program to repeat itself. A list of commands follows this text that shows how to change the color of the pen, background, script, etc.

All of the above is in the immediate mode. To do procedural writing (a series of commands which constitute a procedure) one does as follows to create a box. Types:

```
TO BOX (R)
REPEAT 4 [FD 100 RT 90] (R)
(RUN/STOP)
```

Wait till the computer defines the procedure, then type BOX. To make a fancy design we use the principle of RECURSION. Types:

```
TO BOX
REPEAT 4 [FD 100 RT 90]
RT 12
BOX
```

This program draws a box, rotates the pointer 12 degrees, then calls upon the procedure BOX to draw another box. To draw a box of any variable size types:

```
TO BOX :X (R)
REPEAT 4 [FD :X RT 90] (R)
(RUN/STOP)
```

Wait till the procedure is defined. Then type BOX 30 and a box of 30 space dimension will be formed.

The procedure for drawing a triangle is REPEAT 3 [FD 100 LT 120]. To make a five sided polygon types:

```
TO POLY :A
REPEAT :A [FD 20 RT 360/:A]
(RUN/STOP)
POLY 55 (R)
```

If you want to get exciting, type POLY :A+1 to the end of the program. If one is going to use negative numbers one has to put them in parentheses.

One gets a status report by typing DRAW DRAWSTATE. This prints out a nine numbered coded result:

1. true pen is down
2. true turtle is showing
3. 11 background is #11
4. 1 pencolor is "1"
5. DRAW in draw mode
6. color in single color
7. screen in splitscreen
8. textbackground color #14
9. textcolor color #5

The main advantage of using LOGO is that one gets instant results with learning almost as instant. One does not get frustrated, receiving positive reinforcement. Also, the long programs are just a series of smaller ones calling on each other. This is extremely useful in debugging. It is something like subroutines. One has a routine where the background color flashes on and off, the color being decided by a random number which corresponds to a particular color. What follows is a comprehensive list of commands that can be used in either the immediate or procedural mode. I made the review easy for myself by compiling this list. How you utilize the list is dependent upon your imagination.

```
DRAW -- puts you in immediate draw mode
TD DRAW -- puts you in procedural draw mode
FD -- forward
BK -- backward
ND -- takes you out of draw mode
RT -- right
LT -- left
(UP ARROW) -- repeats last command
CONTROL P -- repeats last command
ST -- show turtle
HT -- hide turtle
PC 3 -- pen colors range from 0-15
BG 7 -- background colors range from 0-15
PENERASE -- equals PENCOLOR-1 -- causes lines to erase
SINGLECOLOR -- gives a thin line
DOUBLECOLOR -- gives a thick line
PC-1 -- erases a line it crosses
PU -- penup; will not leave a line
PD -- pen; will leave a line
HOME -- puts pen into starting position
TEXTCOLOR -- gives the text a color
TEXTBG -- gives the text-background a color
STAMPCHAR "W -- put a W on the screen
```

```
SET X 50, SET Y 100 -- puts the pointer at a designated area along the X and Y axes
```

```
XCOR 40, YCOR 125 -- puts the pointer at the designated X and Y coordinates
```

```
SETHEADING -- sets the pointer any number of degrees
```

```
TO -- tells computer to go to program mode
```

```
RANDOM 16 -- picks a random number from 0-15
```

```
HEADING -- tells number of degrees pointer is rotated
```

```
PR XCOR, PR YCOR -- prints out where turtle is
```

```
SAVE "L, READ "L -- will save Program L and will load Program L onto a disk or back to the computer respectively
```

```
F1 -- gives full textscreen
```

```
F2 -- gives splitscreen
```

```
F3 -- gives full draw screen
```

```
IF XCOR = 150 THEN STOP -- pointer stops when at Xcoordinate of 150
```

```
(RUN/STOP) -- defines a program
```

```
CONTROL C -- defines a program
```

```
POTS -- prints out the titles of defined procedure
```

```
PO BOX -- prints out the commands for the procedure box
```

```
CATALOG -- lists the saved procedures on the disk, use in conjunction with the utilities disk
```

```
GOODBYE -- clears the computer's memory
```

```
ERASEALL -- clears files on disk
```

```
ERASEFILE "W -- clears W from disk
```

```
SAVEPICT "DANCER -- saves a picture of a dancer on disk
```

```
READPICT "DANCER -- loads Dancer to computer
```

```
CONTROL W -- stops scrolling
```

```
:A -- designates A to be a variable
```

```
. -- joins two words to form one title
```

```
WRAP -- allows the picture to continue beyond the border
```

```
NOWRAP -- picture stops when at border
```

```
PAUSE -- stops a procedure
```

```
CO -- continues a procedure
```

```
TRACE -- allows you to watch the execution of a program one step at a time
```

```
NOTRACE -- erases Trace Mode
```

```
PR -- print
```

```
SE -- sentence
```

```
" -- tells the computer you are typing an object and not the name of a procedure.
```

```
Word programs can also be written:
```

```
TYPETO CAPITAL
```

```
PRINT [WHAT IS THE CAPITAL OF CANADA?]
```

```
IF REQUEST =[OTTAWA] PRINT [VERY GOOD] STOP
```

```
PRINT [NO, PLEASE TRY AGAIN] CAPITAL
```

```
Animation is a corollary of LOGO. With the use of the utilities disk one can change the pointer in a dinosaur, kangaroo, bug, horse, dog, butterfly,
```

(Continued on page 11)

PROGRAMMABLE CHARACTERS ON THE EXPANDED VIC-20

When you plug in an 8K or 16K memory cartridge into your VIC-20, several things change, among them the start of screen memory, which moves from location 7680 down to 4096, and the start of BASIC which moves from 4096 to 4608. Since the BASIC user area in the unexpanded VIC runs from 4096 to 7679, and programmable characters are usually placed in the area from 7168 to 7679, a serious problem arises when the VIC is expanded, since the user BASIC area will run smack into the programmable characters.

Various solutions to this problem have been proposed. Probably the most satisfactory is found in an article by Paul Schatz on page 192 of the April 1983 issue of *Compute!*. The start of BASIC is moved to 8189, the screen starts at 4096, and the character set begins, below the beginning of BASIC, at 7168, as it does with most unexpanded VIC programs.

The following short demonstration will hopefully clear up some of the mysteries. Type in the first program and save it under any name. The second program should be saved immediately after it under the name of "DEMO 1". People using tape should change the "8" in line 20 of program one to a "1".

This program is one of four solutions in Schatz's article to the problem of where to put the VIC character set with expanded memory. The other three (and this one) are found in a series of programs in the most recent VIC-20 library releases, DISC A1 and TAPE NO. 14.

The abbreviations in the programs have the following meanings:

CU -- Cursor Up
CD -- Cursor Down
SC -- Clear
HM -- Home
CR -- Cursor Right
CC -- Color Change

PROGRAM NO. 1

```
10 POKE44,32:POKE8192,0:CLR
20 PRINT"LOAD"CHR$(34)"DEMO 1"CHR
$(34)",8(CU){CU}{CU}"
30 POKE631,131:POKE198,1:END
```

PROGRAM NO. 2 "DEMO 1"

```
10 POKE36866,22:POKE36869,192:POK
E648,16
20 FORJ=217T0228:POKEJ,144:NEXT
30 FORJ=229T0250:POKEJ,145:NEXT
40 FORQ=7168T07679:POKEQ,PEEK(Q+2
5600):NEXTQ
50 READX:IFX<0THENB0
60 FORI=XTOX+7:READJ:POKEI,J:NEXT
70 GOTD50
80 PRINT"(SC){HM}{CD}{CC}STAR
T OF BASIC - 8192"
90 PRINT"PRINT FRE(0) - 8189"
100 PRINT"SCREEN STARTS - 4096"
110 PRINT"COLOR RAM AT - 37888"
120 PRINT"CHAR. SET AT - 7168"
```

```
130 PRINT"(CD){CD}TO SEE REGULAR
CHAR. SET, PUSH (CC)'F1'"
```

```
140 PRINT:PRINT"(CC)TO SEE FRENCH
CHARS., PUSH (CC)'F7'"
```

```
150 PRINT:PRINT"(CR){CR}{CD}{
CD}{CC}+##%&+±@*+[J]<>/'"
```

```
160 GETA$:IFA$=""THEN160
```

```
170 IFA$=CHR$(136)THENPOKE36869,2
07
```

```
180 IFA$=CHR$(133)THENPOKE36869,1
92
```

```
190 GOTD160
```

```
200 DATA7168,8,16,126,64,126,64,1
26,0
```

```
210 DATA7384,24,36,0,60,66,66,60,
0
```

```
220 DATA7392,28,34,64,64,34,28,8,
16
```

```
230 DATA7400,8,20,0,62,8,8,62,0
```

```
240 DATA7408,16,8,126,64,126,64,1
26,0
```

```
250 DATA7416,30,40,72,78,72,40,30
,0
```

```
260 DATA7448,16,8,66,66,66,66,60,
0
```

```
270 DATA7456,24,36,0,66,66,66,60,
0
```

```
280 DATA7464,36,0,60,66,66,66,60,
0
```

```
290 DATA7472,30,40,72,126,72,72,7
8,0
```

```
300 DATA7504,16,8,60,66,126,66,66
,0
```

```
310 DATA7512,24,36,0,60,66,126,66
,0
```

```
320 DATA7544,36,0,66,66,66,66,60,
0
```

```
330 DATA7648,36,0,126,64,126,64,1
26,0
```

```
340 DATA7656,24,36,126,64,126,64,
126,0
```

```
350 DATA7664,20,0,62,8,8,8,62,0
```

```
360 DATA-1
```

THE EDITOR'S USUAL BORING PLEA FOR CONTRIBUTIONS

Why should you contribute to the *Commodore Computer Club News*, you are asking? Well, in the hyped words of one highly successful magazine aimed at Commodore users, you will "receive PEER RECOGNITION!" (They also promise "CASH" and "MERCHANDISE," which we can't, but we're working on those angles.) And then there's the thrill of seeing your name -- IN PRINT!

"But why should I give you guys an article when I can sell it to a real magazine for big bucks?" you further inquire. Well, consider the case of one of our members who did sell one of those "big" guys an article. It took him five months to get a letter of acceptance, and two months more to get paid. He's not placing any bets as to when the article will be actually printed. Another member took 6 months just to get a letter of rejection from this same magazine! And yet another member sent one of his better programs off to a different mag, who promptly revised it to such an extent that its original intentions were completely thwarted, and the program made little sense.

Look at us on the other hand -- not only will we not make extensive changes to your material, unless it is extremely deficient in grammar or logic, but we can guarantee it will be published *within 6 weeks!* We haven't turned down any articles yet, aside from one on a particularly touchy subject, a decision with which the author completely agreed.

So how about it, all you aspiring Jim Butterfields -- get on the ball and share your knowledge with the other members through the only medium which is readily available to each and every one of them!

This time around we have a large, 12-page issue thanks to a couple of ads. Yes, we solicit ads, and club members get a beneficial rate over the exorbitant prices we charge to commercial concerns.

We are, by the way, looking for someone to actively obtain ads for the newsletter on a commission basis, subject to the approval of the club's executive. If you're interested, let me know or tell one of the executive or directors.

As usual, thanks to all those who contributed. Dave White got himself a job out of town which is keeping him quite busy, so we were unable to present the second part of his PROGRAMMING TIPS article. Hopefully it will appear in the next issue.

We would really like to publish a few articles on or about the 64 -- after all, you guys with 64s are always telling me how great they are, so how about letting everyone else know as well?

Those of you who think computers are menacing and evil will enjoy a film called *The Demon Seed*, slated for showing February 13 and 14 at the Savoy Theatre on Main near Broadway. The evil protagonist of this flick is a super-brain machine called Proteus which not only imprisons the wife of the scientist who created him, but impregnates her with artificially manufactured spermatozoa and produces an offspring! Aside from its unusual plot, this film boasts above-average photography and music. The voice of Proteus is supplied by Robert Vaughn.

See you there!

-- M.Q.

BEACH HEAD: A REVIEW

By LARRY PHILLIPS

Once in a while a game comes along that causes me to react strongly. The reaction may be positive or negative, but in either case, I tend to want to pass on my opinion. Beach Head is such a game.

In this case I am happy to report that the reaction is favourable, with only a few minor reservations.

First, let me say that this is only the second game I have seen from Academy Software, the first being Neutral Zone. In case you're not familiar with Neutral Zone, it will suffice to say that the game, while not being particularly innovative or challenging, does contain some of the best graphics and sound to be found in an otherwise bleak market. The end result for me is that I often load it in and play for a while just to remind myself what a well done game looks and sounds like.

In Beach Head, the programmers have outdone themselves. The game itself is much more challenging, and for the most part, the graphics and sound are excellent.

The first screen asks the players (1 or 2) to enter a skill level. At this point, you may either enter a skill level, or you have an option to change the border colour, or to set the SID filter cut-off frequency. When the sound of the explosions is satisfactory, you may save the setting to a file on the disk so that on subsequent loads, the filter will default to your preference.

After entering a skill level, a map of a coastline is displayed. You may then move your forces to the area of the coast you wish to attack. At this time you may sneak ships through a passage in the peninsula, avoiding floating mines and automatic torpedoes. I think that this is the weakest part of the game, but even at that, it is quite well done.

Getting as many ships through as possible, you will then engage the enemy fleet. This is undoubtedly the best part of the game in terms of graphics and sound. You are shown the enemy fleet as seen looking down the barrels of your 40 mm. anti-aircraft guns. In the distance, you see aircraft taking off from a carrier and turning to attack you. You must use your cannon judiciously, or the rate of fire decreases due to the ammunition loading time. After destroying a number of aircraft, you must attack the enemy ships with a much larger gun, trying to zero in on the ships before their gunners find your range. The splashes when the enemy shells come in are near-perfect. You are given a bonus for ships left over after you have sunk all ships on

the screen.

The next step is to take the beach itself. This is accomplished using tanks, which must be manoeuvred through a variety of land mines, tank traps, walls, etc. There are also gun towers and other 'active' hazards. Upon successfully negotiating the beach, you will come to a large fortified hill with a gun turret on its summit. As the turret rotates, you must shoot into any cave showing white. It will take even the best players at least three or four tanks to overcome this final obstacle. I will leave the final outcome for you to discover, and say only that it is quite well done. The game has a 'vanity board', and you have the option of entering your initials for posterity.

Earlier I mentioned that I had a few misgivings. The first has to do with the trajectories of the artillery shells. The shells will go farther as the gun is raised, even after the elevation exceeds 45 degrees. Perhaps the programmer felt that calculating a proper parabolic trajectory would slow the action to an unacceptable level. I think it

could have been done quickly enough. This flaw is the worst in the game, and actually makes it a little easier to find the range of the target.

The other problem stems from the excellent graphics during the sea and air battle. They are just too good, and far outshine the other screens. I only wish that I could find the same fault with more game programs. With five separate battles to keep you occupied, (two excellent, two very good, and one good) you will not regret buying this program.

I give it an overall rating of 9 out of ten.

 CCC CLASSIFIEDS

 For sale from former VIC-20 owner: Books -- Programmer's Reference Guide, \$12; Compute!'s First Book of VIC, \$9; Start with Basic, \$6; Getting Acquainted with your VIC-20, \$6; VIC Innovative Computing, \$9. Games: Snakman (T), \$12; Choplifter (C), \$20; Radar Rattrace (C), \$15; Raid on Fort Knox (C), \$20. Kit: Introduction to Basic Programming, Part I. \$20. Call Harry, 594-2135.

THE GEMINI FILE

By MR. MIKE

With all the recent LOTTO 649 hysteria, I decided to revise a short program I'd written previously to print out 6 supposedly lucky numbers between 1 and 49 on my Gemini printer.

I duly did this, and took the results to my friendly LOTTO retailer. A few hours later, I figured that 6 sets of numbers weren't enough, so I fired up the program and ran off a few more, which I added to a couple my kids had thought up. When I got back from getting this second batch of numbers printed up, I got a big surprise -- 4 of the 6 sets of numbers on each ticket were the same!

The reason for this? The numbers were based on RND(1), which creates a random number based on the last number generated by the RND function. If you're starting from scratch each time, powering up the computer, the results will always be the same.

RND(0), on the other hand, causes the computer to use the current value of the jiffy clock, which is updated 60 times every second, so the numbers will always be different.

If you don't believe me, type in the following program (people without a printer should eliminate lines 160-230) and run it twice, turning off your computer between each attempt. Then try it again, replacing the RND(1) in line 40 with RND(0).

As well as sorting the numbers for the printer, it also prints

them out in the Gemini's expanded type, which is quite similar to that used on the LOTTO 649 tickets. Now if only we could get hold of some of that ticket paper...

```

10 PRINT"[CLEAR][RED][REV. ON][2
5 SPACES]PRINT LOTTO 649[25 SPAC
ES][REV. OFF]"
20 DIMF(49),X(49)
30 FORI=1TO6
40 X=INT(RND(1)*49)+1
50 IFF(X)=1THEN40
60 F(X)=1
70 X(I)=X
80 NEXTI
100 L=5;S=0;FORI=1TOL:IFX(I)<=X
(I+1)THEN120
110 AA=X(I):X(I)=X(I+1):X(I+1)=A
A:S=1:L=I
120 NEXT:IFS=1THEN100
130 FORI=1TO6
140 IFLEN(STR*(X(I)))=2THENPRINT
TAB(10)X(I):NEXT
150 PRINTTAB(9)X(I):NEXT
160 OPEN4,4,0:PRINT#4,CHR*(27);"
W";CHR*(1);CHR*(27)CHR*(86)CHR*(
1);
170 IFQ=1THEN180
180 FORI=1TO6
190 IFI=4THENPRINT#4," ";CHR*(27
)CHR*(86)CHR*(1)
200 IFLEN(STR*(X(I)))=2THENPRINT
#4," 0";CHR*(8);CHR*(8);VAL(STR*
(X(I)))::60TO220
210 PRINT#4,CHR*(27);"W";CHR*(1)
;X(I);
220 NEXTI
230 PRINT#4,"":PRINT#4," ":CLOSE
4
240 PRINTTAB(3)"[BLACK][2 DOWN]P
RESS ANY KEY          TO REPEAT..
."
250 GETA#:IFA#=""THEN250
260 RUN

```

VIC LIBRARY BLURBS

After an absence of two months, the VIC library returned at the January workshop meeting and was an immediate success -- virtually all of the tapes and disks were loaned out.

To avoid the difficulties we've had in the past, the VIC library now requires a refundable deposit of \$5 per item borrowed. It is expected that tapes or disks will be returned within a month. If they are kept beyond a two month period, the \$5 deposit is forfeited.

There are some new items for your consideration. The first of these, issued on *tape only*, contains RTTY programs of interest to ham radio operators who use the VIC as an inexpensive adjunct to their systems. The programs on this tape are all self-explanatory to anyone interested in this field, and there is a contact number from the club member who supplied us with them, in case there are any questions. That is VIC TAPE NO. 12.

The second release, on both tape (VIC TAPE NO. 13) and disk (VIC DISK AH), contains several BK items and printer-related programs. They include SPEEDSCRIPT, the word processor from *Compute!'s Gazette* (see review located to the immediate right). *Compute!* says their programs shouldn't be distributed to anyone who doesn't have copies of the magazine in which they appeared, but let's put it this way -- if you don't have the copy of the magazine, the program won't make any sense to you. Ditto for DISK-O-VIC, a nifty utility which allows you to DLOAD, DSAVE and a variety of other functions. This comes from the first issue of *Run* magazine, a new publication for the VIC-20 and C-64.

Among the games included in this second release are MINEFIELD, DEMONS OF OSIRIS, COLORBOT, CANYON CRUISER, HAUNTED HOUSE, HARDHAT CLIMBER, and THINKING. Utilities include UNNEW, designed to rescue your programs after you accidentally type "NEW" and a program to Scratch and Rename Quick Brown Fox files. There are several music programs, including two tunes for the EMI Music Composer (available only on disk). For your Gemini-10 printer there's two versions of WORD HUNT, a Criss-Cross type of puzzle, and a program which prints out random LOTO 649 numbers. Make back your \$20 membership fee if you're lucky! For those of you interested in the educational potential of your VIC, there's the FRENCH TUTORIAL program written by one of our members. One user of this program, we're told, boosted his French marks considerably, so why not give it a try?

The third VIC release, on TAPE NO. 14 and DISK AI, contains a

varied selection, mostly again taken from the pages of *Compute!* (original programmers -- are you out there??). There are two machine language games -- TRENCHFIRE and CUTOFF from the *March Gazette*, which are available on disk only. To transfer them to tape is not possible without a great deal of hassle both for the librarian and for those members who wish to transfer them to their own tapes. Probably the most revealing item on the third release is a series of programs designed to show how you can make programmable characters on the expanded VIC, one of the great mysteries of our time.

As usual, we'd like to point

out the library depends on submissions from members to survive. All donations are gratefully received, and your disk or tape will be returned. Take part in the club and be a participant, not just a member who takes all the software and runs (pardon the pun).

A complete listing of the new programs will be found on page 10 of this issue of the newsletter. For other tape and disk listings, consult the Dec. issue, page 4.

 CCC CLASSIFIEDS

 C-64-LINK interface, \$100.
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SPEEDSCRIPT: WORD PROCESSOR FOR \$3.25 ...

By MIKE QUIGLEY

Speedscript, the machine language word processor for the VIC and 64 found in the January issue of *Compute!'s Gazette*, is pretty nifty, considering that it costs only \$3.25 plus a few hours of your time to type it in with the aid of the MLX program (also in the January issue). Copies of it are available already through the club, and while *Compute!* frowns on giving it to people who may not own copies of the magazine in which it was featured, without the magazine it won't make a whole lot of sense.

For such a "cheap" word processor there are so many features, it's unfortunate that *Compute!* didn't go whole hog and throw in just a few more, which would have had people like Quick Brown Fox and Word Pro biting their fingernails. 64 owners, with access to Paperclip, Easy Script and other advanced word processors will probably turn up their noses at *Compute!'s* effort (unless they don't own any word processor), but VIC-20 owners should take a close look at it.

Speedscript offers word wrap (words which run off the right margin are placed on the next line below, unbroken) and full-screen editing ... of a sort. To me it's logical to use the cursor keys to get to any point on the screen, since that's the way we all do it when we're creating programs. Speedscript, however, moves the cursor in other ways which *Compute!* says "make sense in plain English". Function keys F1 through F6 move the cursor to the next and previous word, sentence and paragraph respectively. Cursor left and right do just that, but cursor up and down behave like F3 and F4, moving up and down to the next and previous sentence. This to my mind is not altogether logical, but one can

get used to it.

I like many of Speedscript's features, especially its Insert Mode, which allows you to type additions into the middle of previously created text by first punching CONTROL-I. This beats Quick Brown Fox's Insert Mode because you can actually see both sides of where you are inserting. Only one gripe: you have to be quick to get into or out of Insert Mode, since the CONTROL-I and several other such CONTROL functions are very sensitive to the touch.

I also liked the non-destructive disk directory, the ability to change the color of the screen or the letters, the Verify command, and the ability to access disk drive functions like Scratch, Initialize, and Validate. Another positive feature of Speedscript is its speed in entering copy, unlike some BASIC word processors where the cursor has trouble keeping up to you, especially if the file being worked on becomes very long.

Text can be erased and deleted in a variety of ways. Manipulation of blocks of copy from one area to another is not so easy on the VIC, since you are limited to about 1K of characters, or about two full screens (the 64 has a whopping 12K). This movement is accomplished by deleting or erasing into a buffer which is then dumped out into another location, similar to Cardco's Write Now! word processor. This also doesn't strike me as a satisfactory way of doing things.

There are couple of unusual functions. One of these, CONTROL-A, converts upper case to lower case, which could be used if you are converting tape files from other word processors which would load in and appear as capital letters where lower case

(Continued on page 11)

A COMPLETE GUIDE TO MACHINE LANGUAGE PROGRAMMING ON THE PET

By HAROLD BROCHMANN
(Continued from last issue)

LIVING WITH MACHINE LANGUAGE.

INTRODUCTION (4-1)

BASIC is stored at locations \$0401 and up (normally!). Where are ML programs stored? The answer to that one is that you can store ML just about any place you want to.

Many people, particularly the early PET buffs, stored their ML programs in the SECOND CASSETTE BUFFER which is located at 826 (\$033A) and up. This was a popular place because these locations were not used for anything else unless one used two cassette recorders. The second cassette buffer was therefore considered to be a very safe place to put ML programs.

When BASIC 4 PETS came out it was discovered that they use part of the second cassette buffer for some of the BASIC 4 disk commands. If one didn't use a disk this didn't matter, but now a lot of people do use disks.

Well, what about the FIRST cassette buffer then? That's OK for people who use disks, but what about the rest of us?

There is no clear cut answer as to where is the best place to put machine language programs. In this book we will start off by using the second cassette buffer, and later on suggest other places. Having ML in the second cassette buffer will not affect your PET in any way as long as you do not use BASIC 4 disk commands (DLOAD, DSAVE etc.). This should be no hardship because all of these commands have alternative commands which work just as well. For example, DLOAD "PRGNAME" and LOAD "PRGNAME",8 are interchangeable, as are DSAVE "PRGNAME" D1 and SAVE"1:PRGNAME",8.

For those with BASIC 3 PETS all of the second cassette buffer is always available.

THE CRASH BUTTON (4-2)

Before we go any further let us point out that ML is fraught with pitfalls. Your PET will inevitably CRASH sooner or later -- probably sooner and probably frequently in the beginning. To illustrate this point, SYS 34000. When your PET crashes there isn't really and awful lot you can do about it except to turn the machine off and start again. There is one partial solution that you should consider ... get your dealer (or a knowledgeable friend) to install a "crash button" on your PET.

The crash button has two positions. One position allows you to recover from "light" crashes with your program intact. The other position (reset) is used when the first one doesn't work. The reset position is only used when you have to because

your program is lost in the process unless it is stored in either the first or second cassette buffers. Actually, only the lower part of the second cassette buffer is safe in BASIC 4 PETS.

OUR FIRST MACHINE LANGUAGE PROGRAM (4-3)

In the first chapter we entered MLM by using the command SYS 4.

SYS is a BASIC command which means GO TO THE FOLLOWING MEMORY LOCATION AND TREAT THE CODE FOUND THERE AS A ML SUBROUTINE. PRINT PEEK(4) tells us that location 4 contains the number zero. POKE 5000,0 and SYS 5000. Eureka! MLM. The machine language instruction 0 (\$00) means TRANSFER CONTROL TO MLM. It is known as the BREAK (BRK) instruction.

POKE 1000,96 and SYS 1000. We are back in BASIC! The machine language instruction 96 (\$60) means RETURN FROM SUBROUTINE (RTS).

The ACCUMULATOR is one of three locations inside the 6502 microprocessor which can be used to temporarily store numbers (from 0 to 255).

The two machine language

instructions \$A9 \$01 may be translated as LOAD THE ACCUMULATOR WITH THE NUMBER ONE (1).

\$BD \$00 \$80 means STORE THE CONTENTS OF THE ACCUMULATOR IN LOCATION \$8000. Note that the destination address is written in "reverse" as were the addresses in the "pointers" we talked about earlier.

We are now ready to assemble a ML program that will do the following:

1. Load accumulator with \$01.
2. Store accumulator contents at \$8000.
3. Return from subroutine (to BASIC).

These steps may also be described using ASSEMBLER MNEMONICS as follows:

1. LDA #\$01
2. STA \$8000
3. RTS

The equivalent HEX machine code is:

1. A9 01
2. BD 00 80
3. 60

This coding should now be placed at locations \$033A and up like this: Enter the MLM and:
-M,\$033A,\$033B

(Continued on page 11)

USER FRIENDLIES

How often have you used a program that does all it's supposed to do, but lacks the small touches that make it easy or fun to operate? These could include such things as easily selected options, clear instructions, and even allowing the user to choose his own colours for the display.

There are those that firmly believe the old adage: 'It's hard to make things easy.'

This may have been true in the early days of the computer industry, but not today. Just look at one feature of your Commodore computer, the full screen editor. This feature alone makes it simple to make changes to your program, allowing you to spend less time fiddling around with complex editing procedures. The easier the editing, the more likely you will be to take the time to put in the little niceties that make your program stand out.

If you are writing a program with the hope of selling it, these considerations are just as important as the need for the program to perform as advertised. It can be frustrating in the extreme for a user to have to wade through complicated syntax, or to have to guess at what input is required.

As an example, if your program requires the user to input a date, tell him what the format is. Better still, ask for each

part of the date, then analyze it to see what format was entered. This may be done fairly simply with the following program. The line numbers are arbitrary and it is assumed that the date has already been entered in variables M\$, D\$, and Y\$.

```
10 M$ = "JANFEBMARAPR MAYJUNJUL
    LAUGSEP OCTNOVDEC"
```

```
.
.
.
100 IF VAL(M$) > 0 THEN
    M=VAL(M$):GOTO 140
110 FOR I = 1 TO 12
120 IF LEFT$(M$,3) =
    MID$(M$,1*3,3) THEN M = I
130 NEXT I
140 ....
```

When you get to line 140, the month will be a numeric value contained in the variable M, a form generally better for computations. If you later have to print the date, just use:

```
PRINT MID$(M$,M*3,3)
```

Every time you sit down to write a program, try to put yourself in the user's position. Remember, you may understand your program perfectly, but the user will probably appreciate all the help you can give him.

In future articles, we will consider more 'USER FRIENDLIES' to liven up your programs.

-- Larry Phillips

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by Mark R. Rubin

by Mark R. Rubin



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BUGABOO
Author: Indescomp
Jump your way out of the caves with Bugaboo the flea.



AQUAPLANE
Designer: John Hollis & Programmer: Steve Hickman
Ski thru Marine maniacs, G & T's, Regattas but beware the Great White Hungry!! AQUAPLANE is an unbelievable original Arcade Game.

PURPLE TURTLES
Authors: Mark & Richard Moore
A fully animated arcade game with Loveable Turtles, Cuddly Graphics and more Cuteness than you'll find in any other Commodore 64 game! A game for the young at heart and people who have tired of alien bashing.

RING OF POWER
Authors: Fred Preston & Bob McClemont
The Colorful King has lost his mind and along with it the Crown Jewels! Now whosoever

can find the Jewels shall be proclaimed King. Can you? RING OF POWER is a sophisticated adventure with a GRAPHICS or TEXT option.



ULTISYNTH
Author: Nalin Sharma
Turn your CBM 64 into a sophisticated synthesiser, a piano, violin, organ, guitar or harpischord. Woodwind, drums or cymbals and play along with your own or any of the preset rhythms.



QUINTIC WARRIOR
Author: T.P. Watts
Part Man, Part Superman the QUINTIC WARRIOR stands alone against the sinister Crabmen and a Domed City gone mad in the distant future. Are you warrior enough to stand by his side in this MEGA-Arcade Game.

STING
Author: Anton Hinxman
Berte Bee needs help defending the hive. Fight off the invading swarms, battle the bees and defend your Queen!

TORNADO
Author: Chartec
...Suddenly attacking Colony Fighters leap over the peak of a small mountain at me. I dive into their midst firing and still bombing the ground installations below... Peace keeping on the Red Planet is tough work, even in a Tornado.

SKYHAWK
Author: Chartec
A quiet European village is attacked, pilot the jet fighter Skyhawk against the attackers. Bugaboo is also available.

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WHAT'S A "USER STUPID"?

By MARK JACQUES

You all know what "user friendly" means. Well, I'd like to start a new category called "user stupid."

"User stupid" could be basically described as "dumb things to do with your computer" -- like using your computer to create a single mailing label for a single envelope, a process which could take several minutes if it involves setting up your printer. The envelope could be addressed by hand in a matter of seconds.

One of my favorite reasons I'm told people buy computers is to "store recipes". I don't know about you, but whenever I cook with a recipe book, I make a hell of a mess in the kitchen (at least that's what my wife tells me). So how are you supposed to cook with the aid of your computer? Lug the whole mess upstairs and put it on the kitchen sink where everything will get covered with flour, butter, salt, baking powder, where the dials and buttons get all covered with dough every time you touch them? Sure.

I'm sure you've all come across examples of "user stupid" in programs. In Cardco's excellent VIC-20 *Write Now!* word processor, for example, you are allowed the use of the joystick to manipulate the cursor instead of cursor keys. This may appeal to people who regard a word processor as sort of a glorified video game, but ergonomically, it doesn't make any sense. Even if your joystick is bolted to the table, is it quicker to move the cursor with the stick? Under normal circumstances, you have to take your hands off the keyboard, grab the stick, manipulate the cursor, put the joystick down, and then look back on the keyboard to find the proper keys before putting your hands back on it. This qualifies as a first-class example of "user stupid".

Another example of such silliness is the short-cut which doesn't save any time at all, like typing R-SHIFT U to abbreviate "RUN". Unless you're trying to tokenize to fit an overlong line into an 80- or 88-character limit, this doesn't make any sense. Instead of hitting three characters -- R, U and N -- you're still making three keystrokes: R, SHIFT, U, and then you have to release the SHIFT key to boot.

Little utilities have appeared from time to time in magazines which supposedly "help" you while creating programs. They're invariably stored in the cassette buffer from memory location 828 on up, where they are SYSed into action. Unfortunately, you are probably going to use the RUN STOP-RESTORE combination at some point in time, which effectively

kills your "aid", so you have to type SYS 828 to re-activate it. Often the kind of help it provides could be done with fewer keystrokes than the continual retyping of SYS 828.

SPEEDSCRIPT, the word processing program in a recent issue of *Compute!'s Gazette* has an peculiar function obtained with CONTROL X which is supposed to transpose letters. If you put the cursor to the left of two wrongly-positioned letters (i.e., between the "l" and "b" in "clbu" -- "club") and then push CONTROL X, the letters will be transposed to read correctly. Wouldn't it be quicker just to type over top of the wrong letters and correct them that way?

Ah yes, dear friends, computing life is full of such little surprises, and I've only touched on a few here. Please feel free to send more examples to the newsletter -- perhaps we can start a column of such silly "aids".

One final note: In a similar vein, I was quite surprised to recently see a machine language program in one major magazine which had the usual line "If you don't want to type it in yourself, send \$3, a tape or disc, self-addressed, stamped, envelope," etc., etc. The program which was going to take an eternity to type in was -- a total of 25 short lines long!

ANSWERS TO YOUR QUESTIONS

The following questions have been directed to the editor and also the club over our answer phone (PET-3311). If you have any you'd like to add, please call or write the club or give your questions to the editor or one of the directors at any meeting.

Q. Can the VIC-20 be converted to a Commodore 64?

A. Although the two computers have a lot of similarities, like in the Kernel and many Page One routines, there are a lot of serious differences, like the 64's SID chip and sprites and the VIC's expansion port which is different than that of the 64. So the answer is no. Of course, five minutes from now some boy genius will bring out such a converter. But even so, the price of conversion plus the VIC would probably exceed that of the 64 considerably.

Q. I've seen these disk drive cleaners advertised in magazines. Are they any good?

A. Assuming you're talking about the kind which you spray liquid on and insert them in your drive, the consensus seems to be no, unless you are unusually paranoid or you are using extremely mediocre quality disks. Most disks have inner liners to catch stray bits of oxide which flake off and other nasty things which could affect heads. If you are experiencing a lot of read/write problems which could be directly attributed to dirty heads, you might try these cleaners, but otherwise don't bother.

Q. When I'm running programs on the VIC which use programmable characters, if there is an error the screen is all full of graphic garbage. How can I tell where the error is?

A. Type POKE 36869,240, which

restores the normal character set, and all the error messages should be revealed in a language you can understand. Make sure that you're doing this with an unexpanded VIC, and make sure that when you type this line on the screen it doesn't combine with any other characters on the same line, which will only compound the error!

Q. How do I expand my VIC-20?

A. There are several ways to go about this, the first being to buy a 64! (sorry about that) Seriously, you can expand it by 8K, 16K, 24K or 27K. 8K expansions are available from Commodore, as are 16K. Cardco's 16K expansion is a better deal, however, since it contains dipswitches which allow you greater control over where various things can be located. There are also expanders available from places like Protecto Enterprises, which go all the way up to 27K which are the most economical, at a price of about \$150 Canadian. If you want to use one of these cartridges in combination with something else like a word processor, you'll have to buy what is known as an expansion interface, which allows you to have from 3 to 6 cartridges of different descriptions connected to your expansion port (look over the top of your computer -- it's in the large hole on the right). The best deal with these expansion interfaces are the ones with switches which allow control over selection, such as made by Cardco (but watch it -- the Cardco 6-slot expander does not work well with some cartridges like Quick Brown Fox). Some of the all-inclusive expansion boards like the one from Protecto allow you to plug in only one additional cartridge, so shop carefully when making such a purchase.

THE WHOLE 64 LIBRARY

Our most recent listing of C-64 Library disks brings forth six new sides -- G1, G2, H1, H2, I1 and I2. Included in these are many items from the Toronto and Ottawa users groups' libraries.

There are also several items which have been typed in and contributed by CCC members, for which many thanks. However, we are still in need of original programs. All contributions are welcomed, no matter how insignificant you may think they are -- share your knowledge and abilities with others!

By the way, if you suspect any programs in our old or new listings are really not public domain, please contact me and I'll take steps to correct the situation.

See the reverse of this page for an alphabetical listing of all programs with corresponding disk IDs.

-- Glenn Hazlewood

"CCC LIBRARY DISK" A1 2A

1 "C-64 WEDGE"	PRG	23 "HANSMAN"	PRG
2 "BLACKJACK"	PRG	24 "SLOTTER"	PRG
14 "GAMES PONS"	PRG	27 "BOMB IN"	PRG
23 "ANDROID NIN 64"	PRG	28 "YAMTSEE"	PRG
38 "ATARI II.C2"	PRG	42 "PERSONALITY TEST"	PRG
50 "ENTERTAINER"	PRG	43 "ARTILLERY.C2"	PRG
7 "KEYBOARD"	PRG	7 "TINE GUESSE"	PRG
13 "KEYBOARD"	PRG	12 "1 SIN"	PRG
24 "DISK DOCTOR"	PRG	12 "AFRICAN ADVENTURE"	PRG
17 "METAL/ROSE"	PRG	11 "AFRICAN ADVENTURE"	PRG
74 "CASTLE ADVENTURE"	PRG	4 "DOB 5.1"	PRG
16 "NAIIT"	PRG		
57 BLOCKS FREE.			

"CCC LIBRARY DISK" D1 2A

33 "ROR 1"	PRG	7 "64 SEARCHER"	PRG
33 "ROR 2"	PRG	4 "ULTRASORT TEST"	PRG
1 "KERNAI BOOT3"	PRG	23 "ULTRASORT"	PRG
1 "TRANS.A66-A"	PRG	1 "C-64 WEDGE"	PRG
1 "KERNAI BOOT1"	PRG	4 "DOB 5.1"	PRG
19 "DISK BACKUP 1541"	PRG	2 "DOB INSTR."	PRG
20 "BIDRHYTHM"	PRG	48 "MOKTANA"	PRG
20 "MURPHRID"	PRG	94 "KANDI"	PRG
21 "DIL TYCOON"	PRG	20 "STAR PILOT"	PRG
42 "MURPH MUNT"	PRG	14 "BK1-44"	PRG
21 "JAPANESE AFD"	PRG	22 "DARK STAR"	PRG
4 "UNEM"	PRG	27 "MARTIAN INVADERS"	PRG
12 "FILECOPPER INSTR"	PRG	56 "FOOTBALL44"	PRG
4 "ALARM CLOCK"	PRG	13 "1 SIN"	PRG
3 "AUTO PROOFREADER"	PRG	5 "ENTERING THING 64"	PRG
14 "DISASSEMBLER 64"	PRG	24 "CONSTRUCTOR.64"	PRG
13 "HOTTEST/MACHINE"	PRG	8 "EXPANDER.4"	PRG
5 "FOUR-SPEED BRACE"	PRG	3 "BLON LISTER"	PRG
11 BLOCKS FREE.			

"CCC LIBRARY" 51 2A

18 "DISK MANAGER"	PRG	4 "CHRISTMAS"	PRG
5 "SPACE 1 BOOT"	PRG	14 "CHRISTMASUBIC"	PRG
5 "SPACE DUEL49152"	PRG	17 "CHRISTMASCODE"	PRG
4 "AUTO PROOF"	PRG	5 "CHRISTMASBOOT"	PRG
12 "MLK"	PRG	2 "DEMO BOOT"	PRG
6 "HERRY CHRISTMAS"	PRG	17 "CHRISTMAS CODE"	PRG
12 "WORD HUNT 10/16"	PRG	4 "SMALL.C64.Boot"	PRG
13 "WORD HUNT 20/30"	PRG	43 "SMALL.C64.INST"	PRG
13 "WORD HUNT 30/40"	PRG	83 "SMALL.C64"	PRG
2 "PRINT LOTO 449"	PRG	1 "MURPH MUNT.DUMP"	PRG
2 "SLOT BOOT"	PRG	11 "HAM CODE"	PRG
6 "SLOT.A"	PRG	2 "CATALOGS INST."	PRG
5 "SLOT.A"	PRG	44 "CATALOGS"	PRG
3 "KEYPRINT.INST"	PRG	86 "SMACKOUT"	PRG
1 "KEYPRINT.SC666"	PRG	2 "SMALL BACKUP"	PRG
7 "KEYPRINT.PAL"	PRG	8 "BINKLE HACKUP 4"	PRG
3 BLOCKS FREE.			

"CCC LIBRARY DISK" A2 2A

1 "C-64 WEDGE"	PRG	11 "DOB IN BASIC"	PRG
4 "DOB 5.1"	PRG	11 "RES RORY"	PRG
4 "HINES VIEW 2.MAC"	PRG	89 "MUSIC MAKER"	PRG
7 "HINES VIEW 2.MAC"	PRG	26 "SUNSHY TOWERS"	PRG
32 "1-DOLLAR"	PRG	88 "SUPERTRK 64"	PRG
32 "2-NAP"	PRG	9 "SUPERDOB207000"	PRG
32 "3-DL BESSLE"	PRG	3 "SPRITE BOOT"	PRG
32 "4-KAREN"	PRG	43 "SPRITE EDITOR"	PRG
14 "BIDIP"	PRG	3 "BIDIP"	PRG
20 "FRENCH 64"	PRG	3 "SAMPLE SPRITES"	PRG
9 "STANDARD.BET"	PRG	33 "SPRITE INSTR."	PRG
26 "SINGLE BACKUP"	PRG	4 "CHAR BOOT"	PRG
5 "HOUSE"	PRG	32 "CHOR EDITOR"	PRG
9 "SPRON.VS81201"	PRG	1 "ROTATE.DATA"	PRG
72 BLOCKS FREE.			

"CCC LIBRARY DISK" D2 2A

13 "C-64 FILE CASE"	PRG	27 "TKKER64"	PRG
9 "LOCKDISK64"	PRG	22 "AFD"	PRG
6 "CROSS-REF64"	PRG	6 "CROSS-REF"	PRG
10 "C-64 WEDGE"	PRG	18 "TELCOM9.4.0.4"	PRG
10 "BACH FUGUE.64"	PRG	12 "LISTER.V64"	PRG
14 "SPRITE MANIP.64"	PRG	3 "COPY-ALL"	PRG
24 "MUSIC MASTER"	PRG	30 "TELCOR232.4.17.4"	PRG
13 "HOTTEST/MACHINE"	PRG	3 "VETERAN C"	PRG
17 "HINES GRAPHICS"	PRG	11 "TELCOM.INST"	PRG
1 "PET SH"	PRG	4 "HERSER"	PRG
6 "SCREEN PLOTTER"	PRG	8 "R3233.INSTR.64"	PRG
98 "MONOPOLE.C"	PRG	4 "FACTORS.VIC64"	PRG
14 "SUBMARINES.C"	PRG	18 "BALAJACK"	PRG
27 "MASTER"	PRG	4 "BIRTHDAY.64"	PRG
4 "COMBOY SHOOTOUT"	PRG	12 "WIN BANGLE"	PRG
11 "HOTTEST/MACHINE"	PRG	14 "BATTLERSHIPS"	PRG
1 "PET SHU BOOT"	PRG	9 "LINCLO.NSHIRE"	PRG
1 "EMULATOR"	PRG	2 "COPY FILE 64"	PRG
4 "500 TIMER DESIGN"	PRG		
11 BLOCKS FREE.			

"CCC LIBRARY" 62 2A

40 "MC.MASTER DAT"	PRG	103 "MU.C64 MUSIC"	PRG
9 "MC.PAGE MASTER"	PRG	20 "MU.MACHINE OBJ"	PRG
8 "COMMANDER 64"	PRG	3 "MUSICMASTER 64"	PRG
30 "COM.TEXT DEMO"	PRG	40 "TH-INSTRUCT 1"	PRG
22 "COM.SORT DEMO"	PRG	40 "TH-INSTRUCT 2"	PRG
4 "COM.HOW FAST"	PRG	9 "TH-INSTRUCT 3"	PRG
58 "MR.GRAPHICS PAL"	PRG	18 "AM.INSTRUCT1GMB"	PRG
24 "MR.GRAPHICS INST"	PRG	33 "AM.ELEKTRONIC"	PRG
9 "MR.GRAPHICS OBJ"	PRG	18 "AM.MIBBLE"	PRG
6 "MR.GRAPHICS DEMO"	PRG	56 "AN.ANIMATION PAL"	PRG
3 "MR.PICTURE LOAD"	PRG	6 "AN.ANIMATION OBJ"	PRG
33 "MR.EARTH.C"	PRG	3 "AN.ANIMATION DEMO"	PRG
2 "MR.HIRES TO 1525"	PRG	10 "64 TEST"	PRG
27 "MU.PLAYER PAL"	PRG		
19 BLOCKS FREE.			

"CCC LIBRARY DISK" B1 2A

28 "AFRICA & ASIA"	PRG	12 "US PRESIDENT QUI"	PRG
12 "SASY ADD & SUBTR"	PRG	12 "WORLD CAPITAL QUI"	PRG
15 "30 QUESTIONS"	PRG	4 "TYPIE DRILL"	PRG
6 "ADDITION GAME"	PRG	18 "VOCAB 1"	PRG
2 "ABK"	PRG	13 "ANIMAL"	PRG
11 "BID NATH 1.1"	PRG	27 "READER"	PRG
9 "CASH RESISTOR"	PRG	15 "MATH.GUIZ"	PRG
5 "CRYPTOSRAM"	PRG	16 "ANIMAL.DATA"	PRG
8 "DOMUTS"	PRG	11 "NOT.SO.EASY"	PRG
24 "ELIZA"	PRG	13 "SPELLING.TEST"	PRG
14 "EUROPE"	PRG	14 "S & Z'S"	PRG
4 "FRACTIONS"	PRG	3 "DIBBY"	PRG
13 "FRENCH VERBE"	PRG	4 "HISTORIAN"	PRG
5 "FRANMAR"	PRG	27 "EDU-TILITIES"	PRG
13 "HAIKU S"	PRG	16 "EUROPEAN CAPITOL"	PRG
11 "HANSMAN"	PRG	13 "FISHING"	PRG
11 "HANSMAN(H3B)"	PRG	8 "FLASH CARDS"	PRG
7 "RATH DICE"	PRG	10 "FRENCH"	PRG
15 "RATH TURBO"	PRG	6 "GLOBAL"	PRG
9 "RATH NUMBER"	PRG	2 "ICE CREAM PAR"	PRG
7 "NO"	PRG	26 "NATH 10"	PRG
15 "PETS"	PRG	27 "HANSMAN 2"	PRG
19 "SPELLING BEE-FIL"	PRG	24 "JURMO JET"	PRG
19 "STATSCAPITALS"	PRG	28 "SINGLE BACKUP"	PRG
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"CCC LIBRARY DISK" E1 2A

5 "CONT.LDR.ML"	PRG	32 "EYES"	PRG
9 "HI RES LOADER"	PRG	32 "FRIENDS"	PRG
1 "BESHEE"	PRG	32 "SINCE2"	PRG
7 "CONT.LDR.PAL"	PRG	2 "BATTLE"	PRG
32 "BUREZZE"	PRG	32 "DONALD.DUCK"	PRG
32 "TEX"	PRG	32 "VN.THINGS"	PRG
32 "HOMALONG"	PRG	32 "WATERBURY BT"	PRG
32 "BUV"	PRG	2 "HUSKIE"	PRG
32 "FIB1"	PRG	32 "VIS.ROSETTE"	PRG
32 "FIB2"	PRG	32 "VIS.81A"	PRG
32 "HARDWARE"	PRG	32 "XMAS.CARD.1"	PRG
32 "HARD2"	PRG	32 "4MILLS"	PRG
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"CCC LIBRARY DISK" H1 2A

0 "HINES FIELD.C"	PRG	2 "REF.PAGE 126.1"	PRG
19 "STAR LANES.P"	PRG	2 "REF.PAGE 127.1"	PRG
17 "WORD-SEARCH."	PRG	2 "REF.PAGE 130.1"	PRG
29 "TV BATELITES.P"	PRG	2 "REF.PAGE 139.1"	PRG
4 "BIRD CIRC."	PRG	1 "REF.PAGE 142.1"	PRG
4 "THE BIRDS.C"	PRG	1 "REF.PAGE 142.2"	PRG
14 "DEMON STAR2.C"	PRG	7 "REF.PAGE 146.1"	PRG
39 "CYLON IAP.C"	PRG	12 "REF.PAGE 147.1"	PRG
73 "KALIDSCOPE.C"	PRG	1 "REF.PAGE 148.1"	PRG
91 "DR. LIVINGSTON.C"	PRG	1 "REF.PAGE 185.1"	PRG
69 "PIRATE ADV.C"	PRG	1 "REF.PAGE 189.1"	PRG
8 "TINY.AID.C"	PRG	1 "REF.PAGE 160.1"	PRG
18 "HINESFIELD.C"	PRG	1 "REF.PAGE 161.1"	PRG
18 "SMOOP.C"	PRG	2 "REF.PAGE 163.1"	PRG
16 "VIPER.C"	PRG	5 "REF.PAGE 167.1"	PRG
1 "FEED BOOT.C"	PRG	4 "REF.PAGE 181.1"	PRG
20 "EARTH.C"	PRG	1 "REF.PAGE 182.1"	PRG
1 "FEED.MC"	PRG	7 "REF.PAGE 187.1"	PRG
16 "DIR.READER.C"	PRG	2 "REF.PAGE 193.1"	PRG
63 "SUPER64.BIC"	PRG	2 "REF.PAGE 197.1"	PRG
4 "CONTENT INDEXER"	PRG	2 "REF.PAGE 198.1"	PRG
4 "LIST-HE (C)E3.L"	PRG	2 "REF.PAGE 283.1"	PRG
3 "REF.PAGE 20.1"	PRG	1 "REF.PAGE 206.1"	PRG
2 "REF.PAGE 49.1"	PRG	1 "REF.PAGE 206.1"	PRG
4 "CONTENT INDEXER"	PRG	1 "REF.PAGE 207.1"	PRG
2 "REF.PAGE 110.1"	PRG	1 "REF.PAGE 208.1"	PRG
1 "REF.PAGE 111.1"	PRG	2 "REF.PAGE 344.1"	PRG
5 "REF.PAGE 114.1"	PRG	4 "REF.PAGE 347.1"	PRG
2 "REF.PAGE 117.1"	PRG	4 "REF.PAGE 356.1"	PRG
6 "REF.PAGE 119.1"	PRG	4 "REF.PAGE 357.1"	PRG
7 "REF.PAGE 119.1"	PRG	4 "REF.PAGE 371.1"	PRG
1 "REF.PAGE 123.1"	PRG	1 "USER.PAGE 43.1"	PRG
1 "REF.PAGE 123.2"	PRG	1 "USER.PAGE 44.1"	PRG
4 BLOCKS FREE.			

"CCC LIBRARY DISK" B2 2A

42 "SPACE PILOT"	PRG	12 "XNON64(BASIC)"	PRG
42 "SNAKES"	PRG	12 "XNON64(C)0135"	PRG
14 "PAL PLOTTING DEM"	PRG	12 "XNON64(29900)"	PRG
10 "SPRITE DEMO"	PRG	12 "XNON64(30003)"	PRG
10 "DEMO"	PRG	16 "XNON64(30004)"	PRG
2 "N/L DRAW DEMO"	PRG	3 "SEGMENTAL FILE"	PRG
60 "STAR TREK IV-A"	PRG	13 "RANDOM FILE"	PRG
38 "SPRITE MAKER"	PRG	19 "DISASSEMBLER DIS"	PRG
3 "ATARI"	PRG	16 "DISK CHECKER"	PRG
2 "PARTITION RIND"	PRG	7 "DISK VIEWER"	PRG
2 "PETSIN"	PRG	9 "DISK LOOPER"	PRG
12 "TRACK & SECTOR"	PRG	4 "SECTOR PRINT"	PRG
8 "RENU"	PRG	7 "DBK VIEW/CHAMBER"	PRG
2 DIRECTORY			
19 BLOCKS FREE.			

"CCC LIBRARY DISK" E2 2A

1 "LIST-HE G81.L"	PRG	32 "DEE.1"	PRG
5 "CONT.LDR.ML"	PRG	32 "7-MILL"	PRG
1 "HI RES LOADER"	PRG	32 "MUSIC"	PRG
1 "BESHEE"	PRG	32 "NAP"	PRG
7 "CONT.LDR.PAL"	PRG	32 "DIANE"	PRG
32 "BUREZZE"	PRG	32 "W3"	PRG
32 "TEX"	PRG	32 "RACCOON"	PRG
32 "HOMALONG"	PRG	32 "BIMCOB1"	PRG
32 "BUV"	PRG	32 "MATCH"	PRG
32 "FIB1"	PRG	32 "MERCY"	PRG
32 "FIB2"	PRG	32 "MICROSTER"	PRG
32 "HARDWARE"	PRG		
32 "HARD2"	PRG		
2 BLOCKS FREE.			

"CCC LIBRARY DISK" H2 2A

2 "USER.PAGE 46.1"	PRG	7 "DIR-LIST.64.C"	PRG
1 "USER.PAGE 47.1"	PRG	14 "DEMON STAR.C"	PRG
1 "USER.PAGE 49.1"	PRG	23 "HANSMAN"	PRG
2 "USER.PAGE 51.1"	PRG	20 "FOSSAK.C"	PRG
2 "USER.PAGE 58.1"	PRG	30 "LINC.INSTR.C"	PRG
1 "USER.PAGE 45.1"	PRG	19 "RELOCATOR 5.2.C"	PRG
2 "USER.PAGE 74.1"	PRG	12 "HANSMAN.C"	PRG
1 "USER.PAGE 78.1"	PRG	17 "WATERWELDON-J.C"	PRG
1 "USER.PAGE 80.1"	PRG	7 "HEADS OR TAILS.C"	PRG
5 "YIE FIGHTER"	PRG	34 "MOON BUGGY.C"	PRG
2 "USER.PAGE 84.1"	PRG	2 "HANSMAN.64.C"	PRG
1 "USER.PAGE 85.1"	PRG	7 "TERN.64.C"	PRG
1 "USER.PAGE 86.1"	PRG	41 "TOLL BRIDGES.P"	PRG
1 "USER.PAGE 87.1"	PRG	24 "HUSKIE"	PRG
5 "USER.PAGE 88.1"	PRG	16 "HANSMAN.C"	PRG
1 "USER.PAGE 90.1"	PRG	19 "BACH DUET.C"	PRG
1 "USER.PAGE 92.2"	PRG	30 "LIGHT CYCLE 641"	PRG
1 "USER.PAGE 99.1"	PRG	35 "NIGHTMARE PARK.C"	PRG
1 "USER.PAGE 110.1"	PRG	34 "WHEEL FORTUNE.C"	PRG
1 "USER.PAGE 111.1"	PRG	14 "SUBMARINES.C"	PRG
7 "USER.PAGE 145.1"	PRG	16 "64 TIREPIECE"	PRG
4 "USER.PAGE 146.1"	PRG	8 "BILLY 64"	PRG
4 "USER.PAGE 147.1"	PRG	4 "OLD ENB.Boot"	PRG
16 "BACKUP 1541"	PRG	7 "OLD ENB.INST(27)"	PRG
9 "SOBLIN2"	PRG	7 "DISK NAME CHANGE"	PRG
13 "DOB-AID.64.C"	PRG	24 "CONCENTRATION"	PRG
1 BLOCKS FREE.			

"CCC LIBRARY DISK" C1 2A

70 "PHONZO TUTOR-1.64"	PRG	4 "SAVE FILE(S) PRG"	PRG
67 "PHONZO TUTOR-2.64"	PRG	4 "SAVE FILE(S) SED"	PRG
74 "PHONZO TUTOR-3.64"	PRG	20 "SINGLE BACKUP"	PRG
64 "PHONZO TUTOR-4.64"	PRG	33 "SPRITE INSTR."	PRG
67 "PHONZO TUTOR-5.64"	PRG	16 "64 PER CHAR.6R"	PRG
61 "PHONZO TUTOR-6.64"	PRG	3 "FISKI HANDCOP"	PRG
60 "PHONZO TUTOR-7.64"	PRG	3 "INDEX HARDCOPY 2"	PRG
12 "LISTER.V64"	PRG	2 "INDEX HARDCOPY 3"	PRG
4 "1925 CHAR.EDIT"	PRG	19 "WORLD CLOCK"	PRG
7 "TINE VEN INST"	PRG	7 "DISK VIEWER"	PRG
7 "TIM VEN SET UP"	PRG	20 "STARTREK"	PRG
8 "TINE ADVENTURE"	PRG		
1 "ADV 29"			
19 BLOCKS FREE.			

"CCC LIBRARY DISK" F1 2A

47 "BITS AND BYTES"	PRG	52 "DISKVIEW-64"	PRG
9 "BYTESPRITES"	PRG	13 "HINIWORDPR.64"	PRG
1 "DOB BOOT.64"	PRG	6 "BUBS 64"	PRG
4 "DOB 5.1.64"	PRG	2 "CAVES & CAVERNS"	PRG
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6 "DISK ADAPTER CHANGE"	PRG	8 "HAKADE"	PRG
11 "COPY/ALL"	PRG	21 "DHELLD"	PRG
9 "HOW PART TWO"	PRG	16 "PI HUNT 64"	PRG
4 "C-64 WEDGE"	PRG	14 "PI HUNT 44.2"	PRG
4 "DOB 5.1"	PRG	24 "YAHITSE"	PRG
9 "PRINTER TEST"	PRG	44 "HANSARAB2"	PRG
4 "VIER BAH"	PRG	59 "DISK CHDR"	PRG
4 "CHECK DISK"	PRG	9 "NUCLEAR DEMO"	PRG
14 "DISPLAY TABS"	PRG	7 "SABBER"	PRG
9 "PERFORMANCE TEST"	PRG		
5 "SEGMENTAL FILE"	PRG		

SPEEDSCRIPT (From page 5)

is normally and reversed capitals for upper case. CONTROL-X transposes two adjacent letters, which seems to have a rather limited use.

Print-out with Speedscript proved reasonably fast unlike BASIC word processors which print one line after careful consideration or unlike Quick Brown Fox which just takes an eternity to print out anything. Speedscript is sort of an "in-house" word processor for *Compute!*'s own use, as can be seen in the fact that the spacing is normally double, good journalistic practice and something all CCC News contributors should note. In fact, they left the spacing format command out of their

reference card and you have to hunt through the text to discover that the CONTROL-ENGLISH POUND SIGN combination followed by "s" and a number is how you change the spacing.

You can control all four margins of the printed page, create headers and footers, underline, center (but only one line at a time), place the copy flush right and access various printer functions with CHR\$(27) -- the famous "Escape Code". It may take a bit of experimentation with all these goodies to figure out which order will make the printer behave best. I also found that ASCII characters above 65 wouldn't work in Escape Codes with the Cardco/Gemini combination unless you added 128 to them. You can't use Speedscript to justify copy with parallel margins, which is no big deal,

unless you want to use it to make a newspaper.

One thing that annoyed me was the fact that you can't stop the printer from zapping up to start the next page 66 lines below the first line of the first page, even if you want to run off a few lines of copy. Even changing the bottom margin doesn't affect this function. And use of the Next Page command doesn't seem to work, either in the VIC or 64 version.

Still, for all its faults, Speedscript is a worthwhile addition to your library and an excellent (pardon the expression) introduction to word processing. Many of the commands are similar to others in Quick Brown Fox, Write Now, Word Pro and other well-known word processors. So get it -- and use it to contribute to the CCC News!

LETTER TO THE EDITOR

Editor, The Commodore Computer Club News

For obvious reasons the club executive has decided to adopt a policy that hardware and software suppliers may not use the club as a forum in which to sell their goods and I agree with that policy. However, is there anything to prevent us from banding together as club members and taking advantage of opportunities to purchase items which might otherwise be too difficult to obtain or expensive to purchase?

In particular, I am thinking of the following:

1. Those of us with Gemini 10X printers can use rolls of paper instead of fanfold paper, if we wish. Wouldn't it be nice to list your programs to something cheaper, like teletype or telex rolls of newsprint, rather than more expensive paper? I don't know where to buy single rolls of teletype paper but a bunch of us could get together and buy a case quite easily.

2. We would also buy fanfold paper by the case and divide the

cost among those who sign in on the deal. It would have to be money up front if we proceeded with such a purchase.

Club members might be interested to know that you do not have to pay the exorbitant amount of \$9.50 for a ribbon for the Gemini 10X printer. I purchased one for \$3.37 at DP Computer Supplies, Burrard and Broadway (\$3.50 less 10% for CCC members!).

Also, I improved the resolution on my television monitor significantly by purchasing a switch box from Radio Shack which has just come onto the market in the 1984 catalog. It allows you to switch between cablevision and the computer. A resistor is included in the kit. The resolution on my screen improved sufficiently that hitherto unreadable programs like Ponzo-Tutor are now quite readable!

Finally, is there anyone out there with a Gemini 10X printer and an MW302 interface who has found a way to list programs to the printer without it getting hung up on the Commodore graphics characters? If so, please call me at 594-2135!

Harry J. VanderMolen

The Editor Replies

Teletype paper IS available locally if you look in stationery stores like Millson's or Williams & Mackie. Their regular price per roll is \$3.95, but they just had a sale where you could buy 10 rolls for \$2.77 each (sorry -- the sale is over now). They also have rolls of bond paper at a somewhat higher price. There aren't any perforations in either of these types of paper, by the way.

Low-priced Gemini ribbons are also available at Key Computer, a block or so west of DP Computer Supplies (1920 West Broadway is their address), and they also offer a 10% discount to CCC members.

- LOOK AT LOGO -

(From page 2)

truck, car, motorcycle, boat, airplane, sailboat, balloon, etc. One can easily make the kangaroo hop to the edge of a cliff and then fall off and disappear. All this is very easily done with FD, RT, LT, ST, and HT commands. Once a person has learned the basics of this language they are prepared to proceed with BASIC or other more sophisticated languages.

After a very short time with this language I was able to draw a three dimensional cube showing three internal planes in different colors parallel to the top, front and side planes. If I can do it -- anybody can.

- MACHINE LANGUAGE -

(From page 6)

Alter the contents of the display to read:

```
.. 033A A9 01 BD 00 B0 60 ...
```

Don't forget to press RETURN. Exit MLM with: ".X". Clear the screen and enter: SYS B26. This should produce a letter A in the top left corner of the screen. Not exactly an exciting program, but it's a start!

It is also possible to assemble the MLM code from BASIC with the following program:

```
10 DATA 169, 1, 141, 0, 128, 96
20 FOR X=B26 TO B31
30 READ P
40 POKE X,P
50 NEXT
```

Using BASIC to enter a ML program in this way may seem cumbersome but it is frequently the most satisfactory way to do it.

As we mentioned earlier, exploring on your own is an essential part of effective learning. For this reason we urge you to undertake the following project before going on to the next section.

ASSIGNMENT 4-3

Write a BASIC program which enters and calls (with SYS B26) a ML program that prints your name at the top of the screen.

(Continued in next issue)

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Club meetings are normally held: *Workshop*: first Tuesday of the month, 7:00 p.m., Thompson Secondary School cafeteria, 1755 E. 55th Ave. (near Victoria Drive); *Business*: third Tuesday of the month -- 7:00 p.m., King Edward Campus, 1155 East Broadway, 2nd floor auditorium. These dates and locations are subject to change. For up-to-date information on any changes, please call the club's 24-hour answer phone:

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