

# THE TORPET

BULLETIN OF THE TORONTO PET USERS GROUP ISSUE No. 5 APRIL 1981

## U.S. GUEST TO SPEAK AT WESTSIDE

Jim Strasma, better known to the assembler people for his co-ordination work with the ASSEM/TED Users Group (ATUG) is coming to Toronto during the week of May 18-24 and has agreed to speak to the West-End meeting on May 20th.

Jim is an associate minister with the Grace Methodist Church in Decatur, Illinois. His interest in computers stems from the time he had an idea that perhaps a microcomputer might be useful in keeping track of the church's congregation!!! At that time, the Altair at over \$3000 was a little much, but the PET, at about \$800 seemed to fill the bill, so Jim went to work to make the PET work for him. With forays into Basic in '78 and then into Assembler in '79, Jim has wrestled with the best of them, and he has published many of his findings. Jim's interest is infectious and he's very likely going to touch on his efforts to sort the 3000 names in his congregation when he speaks on May 20.

We are looking forward to having Jim with us then.

## OVER 400 MEMBERS

Only two months ago in the March issue of the TORPET, we announced that the membership had surpassed 300. It has now gone pass 400 (403 at last count) and is still climbing. The move to Toronto brought us a great deal of new members while the group at Sheridan College is doing very well with 70 to 80 people attending. The Club's monthly release disk incorporates programs from both meetings in April and I hope will continue to do so in the future.

Chris Bennett  
Membership Chairman

## TORPET GOES WEB

With this edition of the TORPET we have finally achieved what the editor hopes will be the permanent format. There are of course still many improvements to come. With our next issue we hope to include, for the first time, half-tone photos. So, if you own a camera bring it to the meetings and try to get a good candid shot. Other good photo subjects are PET installations that you know about and any other computer clubs or conventions that you attend.

In the next issue, hopefully, we will also include output combined from Dave Goff's goffproofing program and Gord Campbell's prettyprint. If this succeeds we should have listing quality unexcelled anywhere.

Either starting in the next issue, or more likely in the summer issue, we hope to have a complete annotated directory of the club library. A massive undertaking depending

WEB cont. on p.16

## CALENDAR

### MAY

13	Central
20	West Side
22	M.L. Group

### JUNE

10	Central
17	West Side
19	M.L. Group

West Side chapter meets at  
Sheridan College

Central chapter meets at Lea-  
side Highschool

M.L. group meets at George  
Brown College

the TORPET

published by the -  
TORONTO PET USERS GROUP

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## BULLETIN BOARDS

by Gord Campbell

Yes, that's right. Bulletin Boards. Plural!

You now have your choice of three PET bulletin board systems in Toronto. The 'club' system has been operating for about a month. It operates out of Marketron during hours when the store is closed. That means from about 6:30 most evenings, an hour later on Thursday and Friday. The system should be up from Saturday evenings until Monday morning. The phone number is 923-1917. If the phone rings several times, that may mean the system is in use and you have been bounced up to the next number. It may also mean the system is 'down'. Try again in a half hour.

The system has had well over 100 calls, and currently has about 30 messages.

The other system which I have tried is Steve Punter's. This is available from about 6:30 to 11:30 evenings and all day Sunday. Steve has done some very clever engineering to have the phone automatically answered using the Commodore Modem. This is an acoustic coupler, and normally requires someone to manually pick up the phone handset and place it in the modem.

Please don't call Steve's number after hours, since this may result in the phone being answered by an angry Punter. The number is 624-5431.

Steve's system is the first one in Toronto to support program up-load and down-load. He is distributing the terminal software without charge. It requires a disk to store a file received from the modem as a program. Versions are available for the Commodore modem (8010) and the Neeco connection. It should also allow transmitting of Wordpro files, since they look kind of like programs.

The third system is expected to be operational about the first of May. It is operated out of Sheridan College. The number to call is 274-2952, which is a Mississauga number. This system is also expected to have program up-load/ down-load capability. The method planned is simpler but slower than Steve's. It should be possible to install the method into existing terminal programs. Hopefully we will have more details by the next club meeting.

messages, and retrieve same. There are index functions which let you look at a summary of messages without dumping out the whole works. Security is not a hot item - anybody can look at anything, just like a real bulletin board with notices posted on it.

The big function is of course program swapping. This is working, as Steve has demonstrated. Hopefully, someone will take on the programming for this function without the need for a disk

And what do you need to access a bulletin board? A time-sharing terminal such as a Decwriter, Silent 700, or Vucom will work. But we aren't the terminal club. So, if you have a PET and modem, and a program which lets you run as an ASCII terminal, you are in business. The Commodore modem is one simple answer. Another is the Neeco connection. The Modem-80 hopefully will be yet another. The cheapest potential solution is the Electronic Systems modem, but this has yet to be proven working on a PET.

Try them out. This may be the easy way to get that question answered, or sell that printer which has just been upgraded.

## APRIL DISK

tpug disk apr/81

universal wedge  
copy all  
easy edit/tape  
easy edit/disk  
easy edit/c  
page1 eze edit  
page2 eze edit  
tax 80 ont v3.0  
page3 eze edit  
page4 eze edit  
page5 eze edit  
page6 eze edit  
atari ii  
cannata  
journal  
fast skip 2022  
mail list 4.1  
memo calendar  
bar graph 2.4

## BARB BENNETT NEW ASSISTANT TORPET EDITOR

We are most happy to announce the acceptance of the assistant editor's position by Barb Bennett. Barb is a fulltime systems analyst and a group leader for a programming group at one of the major banks. She also teaches ballroom dancing on a night that conflicts with our club meetings, which is why we do not see her there so often as before. And she is also the wife of Chris Bennett. Need we say more?

We are most gratified that Barb is going to take over the arduous task of collecting articles from contributors. The foremost improvement we would like to see is a greater range of contributors. Many of the old standbys, Chris Bennett, Dave Hook, Michael Bonnycastle, Gord Campbell, (and hopefully your's truly) have done an admirable job in keeping the paper filled with interesting and pertinent information. But, there are lots more of you out there with all sorts of interesting insights, and novel projects. Write us a note telling us your idea, or describing your project.

At the last westend meeting I suggested that it would be interesting if people would

just propose projects. Even if you feel that you do not have the time or the capability of carrying out the project yourself, there may be someone else who would be willing to take it up. If you would perhaps like to join effort with someone else the TORPET is certainly a good place to find that person because we will be glad to run an article describing your desired project.

To submit an article or comment to the TORPET you may just write it out in any old fashion that pleases you on any medium that you can find. Child's crayon on the white shirt off your back will be accepted. However, if you happen to have access to a WORDPRO or FINAL WORD (most preferably the latter) wordprocessor, then please submit a diskette containing your story file. We will return the diskette.

Stories, articles, programs or what have you may be any length but please break it up into 25 sector lengths. If you use Wordpro please skip five blank lines at the beginning and it is not necessary to use any formatting commands.

# The SWARM

The SWARM (SWap a RoM) module allows all 40 column Pets (but not the original 8K Pets) to run both BASIC 4 and BASIC 2. The Pet on Power-up is set to BASIC 4 but can be converted to BASIC 2 in two ways. The first is the use of a short machine language program put into the second cassette buffer. When a SYS 826 is issued the BASIC is changed. Doing another SYS 826 puts it back into BASIC 4.

The second way of switching to BASIC 2 is to POKE a value into location 59448 (Any value will do) and quickly resetting the machine with a hardware reset switch. To set the machine back to BASIC 4 which is considered the normal mode, a POKE to location 59452 must be done.

Since the SWARM board consists of two rows of 7 ROM sockets, there are three sockets free on the BASIC 2 side and two sockets free on the BASIC 4 side. Four of these sockets can be changed under software control. The fifth which is location \$A000 on the BASIC 2 side is considered part of the system ROMS. By POKEING a

value into location 59444 the two sockets on the BASIC 4 side are switched with the two sockets on the BASIC 2 side. This means that if you have the Command-O and Visicalc ROMs both of which go into location \$9000, you can switch them without switching the version of basic.

The installation of the SWARM board consists of removing all the Basic Roms from the machine and installing them into the SWARM board. At the time you can also install the other Basic Rom set while the board is outside the Pet. Next comes the difficult part. It is best to remove the entire Pet printed circuit board and then insert the SWARM board in place of the original Rom locations. Even better, get the dealer to do it for you.

I have had the SWARM board in my pet for about 3 weeks now and find it to be easy to use and very handy. Now I can have BASIC 4 in my machine while still keeping the capability of switching back to BASIC 2 for certain machine language programs.

The SWARM board is available for \$150 from Batteries Included, 71 McCaul Street (F6), Toronto. At last report there was still a plentiful supply.

Chris Bennett

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# MEETING NEWS

## CENTRAL CHAPTER

The March 18 meeting was well attended despite the shift to the third Wednesday of the month. The meeting started off with Gord Campbell, who commented on the Bulletin Board, and released the number, 923-1917. It can be called anytime after normal commercial hours, as it is resident in a retail store.

Then Bill Twyman continued his discussion of Data Base Management, describing indices and how to construct an index for relative files. Paul Higgenbottom responded, and added to Bill's discussion, going over the binary search technique of finding a key in a sorted list of keys.

After the break, John Stovekin of BMB discussed the development and future release of the Super PET by Commodore. BMB will be making the first forty or so units in Canada, largely for Waterloo to work on, and the machines will be equipped with four or five resident languages - Waterloo Basic, Pascal, Fortran, APL, and Assembler. The machine will be an ideal development tool for large computers, having interpretive operation. All the variables are saved when changes to the programmes take place, so if the programme under development crashes, you can change the line at fault, and then continue to run the programme.

George Piasecki discussed a data base management system which he has found useful and illustrated it in action.

Finally, Jim Butterfield talked a bit about his most recent Income Tax programme, and finished off with a short snappy accounting programme which was distributed at the following copy session.

## KEITH FALKNER

Word has come to us that Keith Falkner is leaving his position at Data Crown and is moving to Florida where he will be working fulltime with a company developing 6502 software, mainly for a fruit type of computer.

We will miss Keith and his creative mind. He has passed many novel suggestions our way. One of the latest was this little one line program. Try it and you will see what a smarty your PET really is.

## WESTSIDE CHAPTER

The West End chapter of TPUG met in the lecture hall at Sheridan College on Wednesday April 15. There were about 70 to 80 people present.

The evening was started off by Hal Mueller who showed us a voice recognition and synthesis unit called the COGNIVOX. This device is capable of recognizing a vocabulary of 32 entries chosen by the user as well as replying with these words. The voice recognition was not perfect but showed us the possibility of things for the future. This device is \$249 in U.S. funds.

The next speaker was John Easton who demonstrated a Calendar and Bar Graph program (See the April TPUG disk). The Calendar program allows you to write down all the events that are going on during a month and then printing the month calendar with all these events shown on the listing.

The meeting then broke for coffee. This was a minor disaster since we had the coffee set up inside the hall with no room to move. Eventually everything sorted itself out and we all got out coffee.

The second half of the meeting was kicked off by Bruce Beach who gave a lecture on the basic components of a computer plus a description of some of the new flat screens coming out on the market. This, Bruce said, should allow us to put a full sized micro-computer in a briefcase. He then showed us a micro-computer which he has been developing which will fit into a briefcase.

Finally Chris Bennett showed a subroutine in BASIC which allows the Commodore 2022 printer to fast eject to the top of the next page. The paging rate was about 6 lines per second. This was followed by an update of the mail list program and a description of his new relative record version of the mail list which allows 1000 names on a 2040 drive and 2400 names on an 8050 drive.

The meeting then broke up for the copy session.

IF  $E=MC^2$  THEN

PRINT "EINSTEIN WAS RIGHT"

# MAIL LIST PROGRAM

In the February TPUG meeting I gave out my mail list program which consisted of 6 programs. MAIL LIST 4.0 is the startup program for the 8032 and 40 column Pets with BASIC 4.0. MAIL LIST 2.0 is the startup program for 40 column Pets with BASIC 2.0. These programs load an assembler routine in upper memory and seal it off from Basic. They both then call the MENU program in which one of the three main programs are called. This mail list holds 600 names per diskette although garbage collection in BASIC 2.0 machines starts becoming a problem after 300 or 400 names are on file. Since that time I have had a great deal of positive feedback from many people and have decided to continue to support further developments in my mail list.

The first thing I have done is produce an update to MAIL LIST 4.0 because of a possible problem I have found. The new program is called MAIL LIST 4.1 and just replaces MAIL LIST 4.0. This was released at the West end meeting in April and will be released at the Central Meeting in May. I will also be releasing to club members a Relative Record version for those people with BASIC 4.0 Computers and DOS 2.0 Disk Drives. This version will hold up to 1000 Name on the 4040 (2040) disk and 2400 Names on the 8050 Disk. An alternate index Based on the Code field is also included as an optional feature.

Although the mail list is fairly easy to run, I will be including a few pointers over the next 2 or 3 issues of the TORPET on some features that are not obvious at first glance. The first point is do NOT run the mail list with DOS support since the will cause the program to crash. It is best to reset the computer and then LOAD and RUN the MAIL LIST 2.0(4.0).

In the UPDATE program, there is a way of scanning through all the names on disk without re-typing the sort key. First select option 2 (CHANGE) and type in the key where you want to start looking. When the name has been found, Press the Up Arrow key to scan forward and the Arrow Left key to scan backwards. If you don't know the

exact name you want to look for, type in the first 2 or 3 characters that seem close and hit return. The program will then find the name that is closest to that key. For example, if you want to see all the SMITH SMITH's, Type SMITH and the program says NOT FOUND followed by the next highest key which may be SMITH D. Then by scanning forward you will be able to find the actual name and address you need.

A suggestion for coding up the key fields is as follows. Use the Last name field for the last name of the people on the list and the initial field for a single initial. If a duplicate name is found on let's say SMITH J , then add the next J Smith as SMITH J1 followed by SMITH J2.

In the next issue of the TORPET, I will describe how to use the code field to enable you to print the names in different sequences as well as a description of how to select names on the code field.

Chris Bennett

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## MEMOREX

# THE BASIC BOX

by Chris Bennett

The **BASIC BOX** has been set up to answer the many questions that have come up about certain features of Commodore BASIC. In this column we will answer questions that have been sent in to the TORPET. If you have a problem send your question to:

## BASIC BOX

c/o Toronto Pet Users Group  
381 Lawrence Avenue West  
Toronto, Ont. M5M 1B9

This month's question has been asked by several people and is as follows:

"How do you link basic programs together?"

There are two methods of linking basic programs together. One method preserves the basic variables, the other does not. Let us assume there are three programs that we want to link together. They are MENU, UPDATE and PRINT. The program MENU is only used to call the other two programs depending on which option the user selects. The following code in the MENU program will call in the appropriate module:

```
IF OP equals 1 THEN LOAD0:UPDATE,8  
IF OP equals 2 THEN LOAD0:PRINT,8
```

The first set of statements in all three of these program must be:

```
POKE 42,PEEK(201)  
POKE 43,PEEK(202)  
CLR: RESTORE
```

When the UPDATE and PRINT programs have finished they call back the menu program with (LOAD0:MENU,8)

These statements reset the end of basic pointers (42,43) to the end of current program just loaded (201,202). This is done automatically for us when we load a program from disk and then type RUN in the direct mode. However when a program is loaded from within another program, these pointers are not set. This causes no problem if the program just loaded is smaller than the program that loaded it since the end of basic will point to a location above the new program. However if the new program is bigger than the previous one, the end of basic will point to a location within the new program. Since the end of basic pointer is also the start of your variables, this will cause the basic code at this point to be overwritten by these variables. Using this technique, you cannot pass variables between programs unless you save them to disk and then load them back when the new program has been loaded.

If you wish to pass your variables between all programs, then the first program (MENU) must be the largest program. To call other programs just issue the LOAD to the next module and do not set the end of basic pointers. Also do not issue a CLR or RESTORE. To make the MENU program the largest, either fill with REM statements or use the machine language monitor save command to make it larger than it is.

One more important consideration is strings within basic. If you define a string in a program as follows: (A\$ (equal sign) THIS IS DATA). The string data is located within the basic program. If a new program is called in and A\$ is referenced, then THIS IS DATA will no longer be found. To fix this problem, The string data must be forced into upper memory. This is done by setting all strings in the following way: (A\$ (equal sign) "THIS IS DATA" (plus sign) ).

# HARDWARE RESET / BREAK SWITCH

The Hardware Reset/Break Switch is made by BMB Compuscience Canada and sells for \$29.95. RESET will force a cold start to BASIC and all programs and data will be cleared from memory. BREAK will break into the machine language monitor with the memory preserved. In order to recover the memory, both the BASIC and stack pointers must be restored. This is a simple procedure that is described in the documentation supplied with the switch.

The Reset/Break Switch consists of a 40 pin socket adapter connected by a three strand wire to the two way switch. This device, unlike other reset switches, does not connect to the Pets User port but is attached inside the machine. The 6520 PIA I.C. chip on the main circuit board is removed and inserted into the 40 pin socket adapter. The socket adapter with the PIA is then inserted into the the main circuit board at the same place the 6520 was removed. The Reset/Break Switch is then mounted on the outside of the Pet using the adhesive strip supplied.

The switch when pulled towards you causes a break to the monitor while pushing away from you cause a hard reset (cold start).

I found this device very easy to install (2 Minutes) and much more convenient than the externally mounted Reset/Break switches. It co-exists very nicely with the SWARM device that I also have installed in my machine. for the moment, this reset switch is only available for new ROM 40 column machines and should be available for 8032 machines in the near future. The device works properly with either BASIC 4 or BASIC 2 inside the Pet. I have found only one device that this reset switch does not work with and that is the A.B. Computer's EPROM burner. This is not much of a problem since I rarely burn EPROMs.

It seems that more and more devices are being made in Canada for the Pet. I hope this is a trend that will continue.

Chris Bennett  
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# The TRANSACTOR

The TRANSACTOR is Commodore Canada's Technical/News Periodical. I have found this to be one of the best sources of information you can subscribe to. Also the price is right, only \$10 (CANADIAN!). This price is for six issues of Volume 3 mailed to you over the next year. Unlike Commodore USA, Commodore Canada has done a good job in producing their newsletter. (I paid for a subscription to the U.S. newsletter 6 months ago and still have not receive any copies).

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The Best of the TRANSACTOR Vol 1, which will be discontinued soon, can still be obtained for \$10 in Canada/U.S.A. or \$12 Foreign. The Best of the TRANSACTOR Volume 2 can be ordered for \$15 Canada, \$17 U.S.A. and \$19 Foreign.

The Subscription for Volume 3 of the TRANSACTOR is \$10 Canada, \$11 U.S.A. and \$13 Foreign. To obtain your subscription, send a cheque or money order in Canadian funds to:

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Chris Bennett  
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## CLASSIFIED

The TORPET will be accepting Classified Ads for anyone who wishes to sell or buy equipment, software Etc. The cost of an Ad will be 5 cents per word with a \$1.00 minimum.

## MEMBERSHIP DUES

For the balance of the present season adult \$10 (otherwise \$5 per time at the door): students and spouses \$5 (otherwise \$2 per time at the door). Membership includes TORPET subscription and library privileges.

## COMMODORE INPUT EDITOR

For the January meeting of the Toronto Pet Users Group Paul Higginbottom of Commodore Canada gave us a demonstration of his input editor. He also gave out Source, Object and Binary files for the 40 column and 80 column versions of this editor. The files on our January release disk are as follows:

### SOURCE

-----  
V40.2.S - 40 COL, BASIC 2 SOURCE  
V40.4.S - 40 COL, BASIC 4 SOURCE  
V80.4.S - 8032 SOURCE

### OBJECT

-----  
V40.2.O - 40 COL, BASIC 2 OBJECT  
V40.4.O - 40 COL, BASIC 4 OBJECT  
V80.4.O - 8032 OBJECT

### BINARY

-----  
V40.2.B - 40 COL, BASIC 2 BINARY  
V40.4.B - 40 COL, BASIC 4 BINARY  
V80.4.B - 8032 BINARY

### STARTUP SOURCE FILES

-----  
SC1.S - OLD  
SC1.S I/O FIX

The above files were all created using the Commodore Assembler Development Package. This is needed if any changes to the source are going to be made. However the binary files can be used directly if you wish to execute the program.

The following document from Commodore U.K. outlines some software standards imposed by CBM U.K. for their approved products scheme. The ideas presented may prove helpful when designing software for resale. Following this are some instructions on the use of the screen input editor designed by Paul Higginbottom of Commodore U.K.

Software Standards  
By Paul Higginbottom

The standards were set up not by Commodore alone, but in cooperation with some key software houses. They were designed to invoke a consistent method of operation throughout software packages. The main problem was a method of data entry. Mike Whitehead (Commodore Software Manager UK), and I, discussed the design of a utility that would be a data entry editor, that could be used by both machine code and BASIC programmers. If a programmer feels that he/she could not incorporate a utility into a

package, then Commodore would like to see that the standards were put in that package. Obviously, it may not always be possible to have all of the standards put into a package, or quite simply, the package was either i) designed before you received this note on standards, or ii) your package would not benefit by having all of the standards imposed. For a product to be approved, Commodore would assess whether the program complies to the standards to a high enough extent.

The Standards  
-----

01) Every Screen Display should be titled, or indicated as to its purpose. We suggest that the top one or more lines are used.

02) A status line should exist on the screen. This informs the user what he/she has to do next (e.g 'PRESS 'C' TO CONTINUE'), any errors that occur (e.g 'ILLEGAL STOCK CODE'), what the computer is doing (e.g 'SORT IN PROGRESS').

03) A shifted return should be used, in a data entry editor, to accept a screenfull of information.

04) The 'c' key should be used to proceed off one display onto the next.

The rest of the standards will be on the data entry method. This is assuming that more than one field of information has to be entered at once on a screen display.

05) The editor should allow full editing of each field (insert, delete, cursor left, cursor right)

06) The editor should let the HOME key put the cursor at position one in field one.

07) The CLR HOME key should either i) empty the fields, ii) reset the fields to their default responses (default values), or iii) reset the fields to their contents when the 'record' was displayed. We would recommend option iii) because if the record was blank when the editor was entered, the fields will be cleared, but if for example a CHANGE was being done to a record, and the user has made a complete mess of the changes, then the record can be put back to how it was.

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08) The RETURN key will either cause a field to be validated immediately, or move onto the next field on the screen. I will explain a little further on what happens if the user is on the last field on the screen.

09) The CRSR UP, CRSR DOWN keys will allow movement back to the previous, and on to the next field, respectively.

10) The RUN/STOP key should provide an abort/help facility. This could either return the user to a menu/command mode, or provide 'help text'.

11) A shifted RETURN should provide immediate exit from the editor, to a screen accept/reject option.

12) If RETURN or CRSR DOWN were struck when in the last field down the screen, or a SHIFT RETURN had been pressed, then the 'SCREEN ACCEPT MODE' would be entered. This is an ACCEPT/REJECT point for the user, rejection may return the user to a menu or allow them to re-edit the data. We would suggest that the user is allowed to re-edit the data if a rejection is made, because if they decide to not enter any data, then the RUN/STOP key would be pressed. The former idea doesn't allow them to re-edit the data if they accidentally drop into the screen accept mode. When in the screen accept mode, a SHIFTED RETURN should be used to accept the data, or any of CRSR UP, HOME, or CLR HOME should be allowed, to let them re-enter the editor. RUN/STOP may also be allowed as a help/abort function.

Our data entry editor

I designed this utility around the rules that I was told should be allowed when in a data entry environment. This routine is all in machine code, and resides at \$7B00 (changes to the editor will be discussed in a moment). The editor uses one byte (\$00) to communicate with BASIC as an error code when the editor returns to BASIC. It also uses one array (SC\$( ) - screen). The array is for the editor to return the data entered, back to BASIC. A different array may be used.

What set-up does it require?

It requires that delimiters are put on the screen (in any way you like), that show where the fields are. The delimiters the editor currently uses, are less than (<'), and greater than (>') symbols. The space between these delimiters is assumed by the editor to be where the field is. The editor requires that BASIC sets up each array element length to the corresponding field length on the screen. This is so that the editor doesn't have to create strings, but merely replace the current contents of each array element with the data read off the screen. The editor gets the length of each array element and reads that many characters from the start of the corresponding field on the screen (1st field is SC\$(0), 2nd field is SC\$(1) etc.). The editor will keep reading fields off the screen, until either i) there are no more elements in the array, or ii) the end of the screen has been reached.

What does the error code do?

Byte \$00 contains an error code which can be 0,1, or 2. The meaning is as follows:-

PEEK(0) is 0 : The data was accepted. An attempt was made to fill the array.

PEEK(0) is 1 : A CLR HOME had been pressed. No attempt was made to fill the array.

PEEK(0) is 2 : The RUN/STOP key was pressed. No attempt was made to fill the array. We would suggest in this case, that an 'ARE YOU SURE ?' message appears in this case.

The editor was designed to always give the user a second chance, but at the same time give the user flexibility without hinderance.

Modifying the editor

On the disk supplied are all of the assembler source files (Commodore Assembler) necessary to make an editor for any version of PET (BASIC2.0, 40 column - BASIC4.0, 40 or 80 column). These may be modified at your own risk.

The disk has one main source file SC1.S which is called by all of the small starter files, depending which PET you have. The nomenclature is as follows:-

'V' (SCREEN SIZE) '.' (BASIC VERSION)  
'.' ('S', 'O', or 'B')

This means - 'V'ERSION for a '40'/'80' column machine with BASIC '2' or '4', and it is either the 'S'OURCE, 'O'BJECT, or 'B'INARY file.

The editor enables repeat functions on 40 column machines.

The RUN/STOP key should be disabled before entering the editor, because if it is pressed, during the editors operation, then the return to basic is so fast, that it is picked up by basic, and BREAK IN LINE XXX occurs. Disabling in BASIC 2.0 can be done with the statement POKE144, 49 and then re-enabled with POKE144,46. BASIC 4.0; disable with POKE144, 88, enable with POKE144, 85.

The memory location of the editor is \$7B00, but this may be changed by altering the origin of the assembler source file. The ' (equal sign) \$7B00 is the statement to change. If you only know the decimal equiv-

alent, then the Assembler will understand that too (e.g ' (equal sign) 32000).

The source listings are fully commented for easy changes.

To use the editor,

- 1) load correct version of editor (v40.2.b, v40.4.b or v80.4.b)
- 2) load program for use with editor

See the EXAMPLE SET-UP80 program for development ideas. This only works on 8032's, but it shows important fundamentals.

Good luck with the work, and I look forward to seeing the results.

Regards,

Paul Higginbottom  
Software Advisor  
U.K. Software Department

(Ed. note: Paul Higginbottom is now an employee of Commodore Canada.)



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The preceding is the promised directory. Organizational names have been generally excluded. We have not shown addresses so the list cannot be taken by someone for 'garbage mail' purposes.

Use of area codes and telephone prefixes may be useful in helping to determine which members are close to you. There look to be enough 705 and northern 519 area codes to almost start a northern chapter.

How many would be in favor, next year, of publishing individuals equipment and interests? This might make the directory even more useful.

## WEB (cont. from pg 1)

upon a lot of good work being done by the library committee. An additional list of several hundred programs was made available to us at the last meeting by the Ottawa club. This of course includes duplicates of many programs we have already. But it still remains a formidable task for Dave Hook and his assistants to sort out.

We shall continue to accept more advertising but we have established a policy that it will not exceed more than twenty-five percent of the space. With that quantity the TORPET will be self supporting.

Having now gone to a web offset press the size of the TORPET is now predetermined. It must be exactly either eight or sixteen pages every issue. Neither more nor less. It is the nature of the technology. If the printer we are using enlarges his paper storage area we may later be able to return to bond paper rather than the present newsprint.

Anyway, give us some feedback as to whether or not you like the new format.

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