

# SINC LINK VOL.8 NO.3

## MAY - JUNE '90

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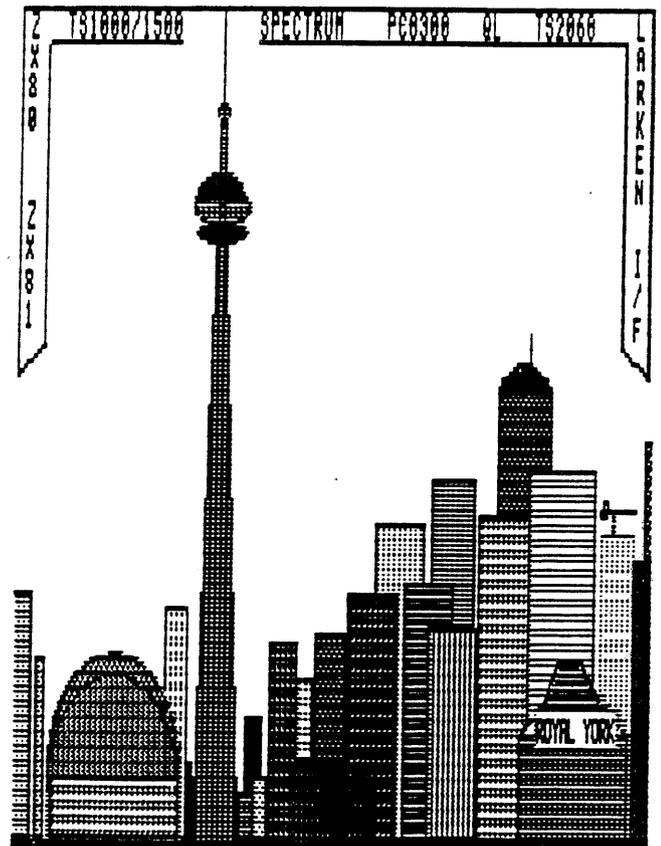
THE CLUB MEETS ON THE FIRST WEDNESDAY OF EACH MONTH AT FOREST HILLS COLLEGIATE INSTITUTE, 730 EGLINTON AVE. W., TORONTO. START TIME: 7:00 PM.

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TORONTO TIMEX-SINCLAIR  
USERS CLUB

TORONTO TIMEX-SINCLAIR USERS CLUB

## Editorial

What is a *newsletter*? The Merriam-Webster Dictionary defines it like this: "A newspaper containing news or information of interest chiefly to a special group". That sounds pretty much like what Sinc-Link and all the newsletters we get from other user groups are striving to be.

There's just one problem. The newsletters are not getting to all the members of our "special group". I'm referring to those members of exchange clubs that don't get to see the out-of-town newsletters. This is really a shame because there is lots of excellent material out there that people just don't know exists. As the world of Timex-Sinclair shrinks we cannot afford not to make our members aware of all the sources of T-S info still available.

So, what do we do? The Toronto group is arguably the largest and wealthiest T-S club in North America but even we cannot photocopy every exchange newsletter for every one of our members. George Chambers often retypes choice articles gleaned from other newsletters but we can't reprint all the good stuff out there, there is just too much!

The solution? The club paper librarian or the recipient of the exchange newsletters must make the members aware of these newsletters and must make them available. Here in Toronto, newsletters are arranged in booklets which are sorted by the name of the club they were received from. These booklets can be signed out by members or scanned at club meetings. Since we correspond with about a dozen clubs, this part of the paper library is growing fairly rapidly.

Sinc-Link is the source for Larken info and utilities. With programmers like George Chambers, Bob Mitchell, Larry Crawford and a plethora of contributors, no other publication has the depth of knowledge we have on this subject. George has even rewritten some of Larken's manuals to make them easier to understand. Add to this an active group of QL contributors and a new (and fully tested) ZX81 hardware project about every other issue and you've got what we try to produce - a fairly well-rounded T-S publication.

Anyway, to our exchange Timex-Sinclair groups, think of us as members of your group who need and can offer help and we'll do the same. That's why user groups exist - to help their members. To do that we need to communicate with as many members as possible, so distribute those newsletters! 'Nuff said.

## News

A club executive meeting was held at my place Monday, April 30th. The purpose of the meeting was to chart the direction our club is headed. Topics ranged from attempting to increase in-town membership by advertising in local publications, the ever-increasing size of the club bank account, to assenting to purchase a QL for the club for demonstrations. It was agreed that we would continue to meet at the school during the summer months (another permit is required) and that members at the club meeting May 2nd would vote on whether to extend memberships from 12 months to 18 months (which they did). All in all, a productive evening. Thanks to all the exec for making time to attend.

Do you own an English Micro Connection TOS Disc System for your TS2068? Do you have trouble formatting discs? Our ZX81 tape librarian, Lyman Paquette could not get his discs to format - the system would come back with a hardware fault report. I offered to try his discs on my TOS system. Well, they wouldn't format, in fact, none of my discs would either! After fiddling about for over an hour and in pure desperation I discovered that if I moved the power supply off the top of the stack of three units then the system would format. Too much RF coming off the power supply, I guess.

George Chambers is fine-tuning a Larken utility which reads MSDOS discs and then stores the data in MSCRIPT files for easy access. More on this topic this issue.

Try this. Plug a Commodore 1351 mouse into the joystick port of the Larken disc interface. Press the right-hand button when you power up the 2068. Presto! You now have a working mouse for programs like Art Studio and the Artist.

Last issue I talked about a video digitiser hardware project for the TS2068. Well, I'm happy to report that it works just fine. Reviews of the digitiser, it's software and some aftermarket software are contained within this issue.

The newsletter cover is changing again. I am experimenting with Byte Power's "The Print Factory" desktop publisher which I'll review next issue.

Did you know that there is a U.S. west coast club/publication called Sinclink. No hyphen and no relation to us. Just thought you should know.

That's all for now...

J.T.



"You wouldn't want to put any classified material into this model—  
it has a gossiping program built into it."



**BOB's Notebook 1990**  
by Bob Mitchell  
20 Wild Briarway  
Willowdale Ont M2J 2L2

Ever wondered how to go about printing the output from the BASIC compiler Timachine on your wide printer? You know, the listing of Run-times and Variables normally printed on the TS2040. If you have tried, you have found that it doesn't work very well; and why the wide printer? Thermal paper is affected by light, heat and glues so that printing often fades and paper darkens with time. Also, paper of proper width could become hard to find if Radio Shack stops stocking it. Using the wide printer is the alternative.

The main problem is that the Timachine output contains instructions apparently not recognized by the LKDOS printer driver. One of these is code 22 which is the AT control and there are other embedded codes which align the output into columns.

First of all, a way had to be found to SAVE the output to disk and the LKDOS Sequential file commands built into the version 3 EPROM seemed a good bet. This is the procedure I used:

1. LOAD Timachine and the program to be compiled.
2. Open a Sequential file on a suitable disk using the command <RANDOMIZE USR 100: OPEN #3, "name.CT OUT">. The drive will spin indicating this is done. Move on the .CT later.
3. Compile the BASIC program as usual with <REM! LPRINT> included. Only essential instructions will show on screen. When compilation is completed, enter <RANDOMIZE USR 100: CLOSE #3>. The drive spins as the listing is saved.
4. Now LOAD "doctor.B1", the uncompiled version. Use the Directory Analysis option to get track # for the Seq file just saved. Use Exam/Modify option to load the track into the buffer (ie, addr 50000). BREAK into BASIC and enter the following lines and GO TO 10:

```
10 FOR i=50024 TO 55120
20 IF PEEK i=22 THEN POKE i,32
30 NEXT i: STOP
```

5. Return to same trk WITHOUT reloading it: Use GO TO 1650. SAVE it to the SAME track.
6. Restart the 2068 and set the LKDOS to LPRINT: <RANDOMIZE USR 100: OPEN #3, "lp">. Set line length and left margin to suit.
7. Use PRINT USR 100: LPRINT "name.CT"

This routine will produce a readable printout although arrays will not be spaced as they appear on screen or on the TS2040. If you have a copy of Mscript, load "name.CT" into it and do some refining.

With the extension <.CT> it will be straight-forward to load the Seq File into Mscript and do some editing. But first you must take out any zeros in the text since Mscript sees zero as the end of the file. Repeat the earlier loop just changing the 22 to 0. Next, RUN Mscript again and the full file should be in the text. Do the editing and when all is to your liking, you could SAVE it back as a Seq file using this routine or do an MSCRIPT SAVE instead:

```
10 RANDOMIZE USR 100: OPEN #2,
"name OUT"
20 FOR i=46927 to (end): PRINT
CHR$ PEEK i;: NEXT i
30 RANDOMIZE USR 100: CLOSE #2
Get (end) from Mscript Menu.
```

You can easily make an ASCII copy of a BASIC listing using the Seq filing commands. Such a listing is useful if you want to append it to a column in a newsletter such as Sinc-Link. Here are the steps I used:

1. LOAD the BASIC program you are going to convert to ASCII.
2. Enter <RANDOMIZE USR 100: OPEN #3, "name.CT OUT">.
3. LLIST the program. It will go to the sequential file.
4. Enter <RANDOMIZE USR 100: CLOSE #3>. (The disk will spin. (If the listing is longer than one track length, the disk will spin each time a track is filled.)
5. LOAD Mscript and LOAD the seq file you have just saved.
6. Remove all zeros using the loop procedure given earlier.
7. EDIT out extraneous ODDS & ENDS (eg, those caused by embedded control characters in strings in the BASIC listing).

You can also use these techniques to SAVE a PROFILE text to a Seq File. This will let you examine the entire file using PRINT USR 100: PRINT "name" or even LPRINT it.

And speaking of PROFILE, this may interest you:

If you use Profile to make address labels, you can set the LKDOS printer driver parameters ahead of time and make the labels in wide (elongated) characters, assuming you're using a dot-matrix printer. I also make my disk labels this way on ordinary printer paper and then glue them onto the disks using Tack a Note so that they are removable. These adhesive sticks are made by Dennison.

One final bit of flotsam and jetsam re TOOLKIT (tstk.C1): When using "LIST VARIABLES" in this collection of utilities you may get a corruption at the end of the list. If so, this may mean that the value in E LINE-1 is not 128 as it should be. Try this: Locate E LINE (PEEK 23641+256\*PEEK 23642); then POKE E LINE-1,128 and try again. If all is well, reSAVE the program concerned. Dated 900411.

LARKEN NMI-F AUTOSTART MENU  
by G. Chambers/Bob Mitchell

In the last issue of our newsletter Les Cottrell had a m/c routine to restore an AUTOSTART menu by pressing the NMI and F keys. This month we have an improvement to that routine.

What we have done is "bury" the m/c in small cranny in the AUTOSTART program, and provide it with a m/c LDIR routine to "boot" it into the LKDOS RAM. This arrangement saves both space in the Basic program area, and loading time.

We said the code was buried. There is a block of addresses starting at 24311 up to 24989 or so, which are not in use. We have "parked" the m/c routine in this area starting at address 24495.

Figure 1 shows a short Basic program which can be merged into the AUTOSTART Basic program. By running this program, you will have placed the code at address 24495. After doing this, delete the lines 2 to 7. Leave line 8 in place. You could move it somewhere else, but it should be placed early in the program in order for the routine to become effective.

If you now do an AUTOSTART save the m/c routine will have been saved with the Program.

Figure 2 shows the disassembled code as installed at 24495

```
*****
2 RESTORE 5: FOR a=24495 TO 2
4575
3 READ b: POKE a,b: NEXT a: S
TOP
5 DATA 243,205,98,0,33,195,95
,17,182,63,1,58,0,237,176,58,100
,0,251,201,243,205,98,0,62,128,5
0,3,32
6 DATA 33,230,63,17,34,32,1,1
0,0,237,176,62,11,50,2,32,205,19
8,0,42,124,32,34,51,32,42
7 DATA 134,32,34,49,32,205,20
1,0,62,100,251,201,0,65,85,84,79
,83,84,65,82,84,32,0,0,0
8 RANDOMIZE USR VAL "24495":
PRINT #4: POKE VAL "8214",VAL "1
6310"
```

(Figure 1)

ERROR ERROR ERROR

In the last issue, in the article entitled "Tricks of the Trade" there were two errors. The same error appeared in lines 4120 and 4220. The error was a missing "not equal to" symbol, after 'IF o\$(pos)='.

These errors came about because my printer puts out ¼½ where a<>is called for. They were "snopaked" out, but then not corrected.  
G.F.C.

```
24495 F3          DI
24496 CD6200      CALL 98
24499 21C35F      LD HL,24515
24502 11B63F      LD DE,16310
24505 013A00      LD BC,58
24508 EDB0        LDIR
24510 3A6400      LD A,(100)
24513 FB          EI
24514 C9          RET
24515 F3          DI
24516 CD6200      CALL 98
24519 3E80        LD A,128
24521 320320      LD (8195),A
24524 21E63F      LD HL,16358
24527 112220      LD DE,8226
24530 010A00      LD BC,10
24533 EDB0        LDIR
24535 3E0B        LD A,11
24537 320220      LD (8194),A
24540 CDC600      CALL 198
24543 2A7C20      LD HL,(8316)
24546 223320      LD (8243),HL
24549 2A8620      LD HL,(8326)
24552 223120      LD (8241),HL
24555 CDC900      CALL 201
24558 3E64        LD A,100
24560 FB          EI
24561 C9          RET
24562 00          NOP
24563 41          LD B,C
24564 55          LD D,L
24565 54          LD D,H
24566 4F          LD C,A
24567 53          LD D,E
24568 54          LD D,H
24569 41          LD B,C
24570 52          LD D,D
24571 54          LD D,H
24572 2000        JR NZ,24574
24574 00          NOP
24575 00          NOP
24576 41          LD B,C
```

(Figure 2)

## SCUTTLEBUT

Looks like the SMUG Computer Exposition is a GO for June 1,2,3. It starts with a banquet on Friday night. I hear Canadian accepted at par. (Not definite on that ) The banquet will be buffet style, with three types of food. Room rates \$45 a night.? Bill Heberlein 414-527-2191 P.O.B 101 Butler WI 53007. SNUG meeting on Saturday night.

Sharp's will be there, but not RMG. This is what I hear just now, but it could change.

By the way, if you are thinking of a spare QL, now is the time to get it. Last reports are that there are very few left. When they go.....

Sir Clive is coming out with a new laptop. 3 1/2" disk drive. Expandable to 20 or 30 Mbyte hard drive. Should come in about 3.5 lbs. One inch thick. MS-Dos based. Should be out soon. ( Mid Summer)

The latest I can get on this, is that there will be two versions.

The first will have double 3.5" disk drives, and sell for about \$1200 to \$1500 US.

The second will have one 3.5" disk drive, and a 20 Mbyte hard drive, at a price of around \$3000 US.

Will it be at Milwaukee June 1,2,3 ? perhaps-- not sure.

At the same time as this is heard, it is also announced that Cambridge North America has filed for protection, because New England Sales has filed for bankruptcy. C.N.A., will no longer be a distributor, but only sell by mail direct. This could account for the fact that UPDATE was having trouble getting info from C.N.A.

Rod Gowan of R.M.G. Enterprises says he is not going to support the Z88

any longer. With Cambridge out, and RMG not supporting, this leaves SHARP'S as the only large supporter/importer of Z88 in U.S.A. He sells them for \$450 US.

Talking about RMG, I bought a disk drive from them a short time ago, and when I received it I was surprised that there was no catalogue in with it. Seems to me this was an ideal time to encourage another purchase. How about it Ron ?

From recent reports it would appear that Tim Woods has got his act back together again, and that Time Designs is back on line. Nice work. Should make a lot of folks happy.

January "Toronto Computes" has an article on laptops, and gives a nice review of the Z88. Understand it is available c/o Softsel Computer Products, 317 Bradwick Drive, Concord, Ont. L4K 1K5. 416 738 2102. Price quoted in article, \$799.

Seems a bit steep compared with SHARP'S, but it might be worth while talking to Softsel. Can't do any harm.

Late breaking news is that A+, who were very big in the QL, are no longer in business. At least their phone is 'No longer in service'! Can anyone add to this ? If my memory serves me correct, A+ were in the UK for the announcement of the QL debut way back then.

Thats it, C U later.

Hugh H. Howie.

## QLIPS

Recently I had occasion to order something from EMSOFT, and when I received the package back, I was most surprised to find a little note from Peter Hale.

If you remember, back in the November/December issue of this newsletter, I had discussed the merits of TASKMASTER, and its Multi\_Tasking with SuperBasic. Peter remembered this diatribe, and he added this to his letter, and I quote :\_

*"Saw your article in Sinc-Link (Nov/Dec '89) re the QL not multi-taskink under TASKMASTER. NOT entirely true. Programmes are halted that print to the screen, but programmes that do not print to the scree, do continue. - For example, set up a recursive calculation loop in S'Basic, that does not screen print. Then move to another program. Return to S/Basic at various times to test the value of the variable"*

So I was right, just as much as I was wrong, but it was nice to have such an authority say something. Thanks a lot Peter.

Now the reason I wrote to *EMSOft* was I saw their ad in January "UPDATE" offering to configure your QUILL to your printer for U.S.\$5, so I took advantage of the offer. Money well spent.

If you would like to do something more than what you have been doing, try this. Oh sure, you will have to learn a few more key-presses, but I am convinced that you will be satisfied.

I must admit that I am still trying to get used to it, but I can see how handy it is going to be in the future. I have used it a little here, and any fault is the fault of the operator and not the fault of the configuration. Try it, send a copy of your QUILL and a photo copy

of your Printer Codes, \$5 U.S., a nice letter, and I am sure you will be delighted with what you get back. \$5 U.S. might buy you a coffee and a couple of dough-nuts. So go on a diet for a day !!

When I got my reply from Peter Hale, he enclosed his catalogue, although my purchase was under \$10. Result is I was on the phone immediately and asked him to send me something in his catalogue...I seem to remember saying something about this recently about another supplier. Goes to prove it pays to advertise. EMSOFT have some interesting stuff.

Incidentally he (Peter) was kind enough to give me some tips on another matter altogether. Remarks which were very welcome.

So if you use QUILL and would like it set up nicely, just drop him a line, with a copy of your Printer Codes, a disc or cartridge with your Quill or whatever on it, and a few bucks. Ten days later (near enough ) you should have it back.

For three or four dollars more he will configure your Psion four to disk.

*EMSOft*

P.O. Box 8763  
BOSTON, MA 02114

Hugh H Howie.

## UPDATE MAGAZINE

1317 Stratford Ave.  
Panama City, FL 32404  
904 871 3556

**TRANSFERRING MSDOS FILES TO THE TS2068**  
by George Chambers

Recently I was given an MSDOS disk by Bill Harmer, of Ottawa, to see what I could do with it. This article describes my experience with transferring this and subsequent MSDOS files to the TS2068 using the Larken LKDOS.

When I first received the disk I found that the Larken disk system, as I expected, would not touch it; instead it reported CRC errors. I then went at it with the "doctor.B1" utility (to be found on our club library disk #1.) I found, to my delight, that although the LKDOS reported a CRC error, the selected track had in fact been loaded into the computer. A good start.

I inspected the data and found that it was a text file and that it continued, without a break, for 4608 bytes. Where the Larken holds 5090 bytes of data per track the MSDOS disk held 4608 (256\*18=4608) bytes. It also appeared that on this disk the data was not broken up into separate sectors. Or if there were sectors, the sectors were contiguous and the text files uninterrupted.

Since it seemed likely that the only useful data on an MSDOS disk would be text files, the thought was to create a file suitable for a word-processing program. Two WP programs came to mind, Tasword and Mscript. After some experimentation Mscript was selected. This was primarily because Mscript appeared to be more amenable to editing of the raw material.

The "track-loading" function of "doctor.B1" was extracted to become the "heart" of a new program called "MSDOS.Bx". Mscript can handle files of 16300 bytes. To make optimum use of Mscript it seemed appropriate that the new files be designed to hold the data from three tracks (3 \* 4608 = 13824).

The new program was arranged to load three successive tracks. After loading the first track the 4608 bytes of data, initially loaded at starting address 45000, were transferred via a m/c LDIR routine to starting address 51200. When the second track was loaded, it's data was transferred so it was above, and contiguous to the initial block of data. Same for the third track. We now had a continuous block of 13824 bytes of data starting at address 51200.

This block of data was then saved by a simple LKDOS SAVE routine to a disk in a second drive on the system. Then the cycle was repeated, with the next three tracks of the MSDOS disk being saved in the same manner. This process would continue automatically and without interruption until the whole disk had been copied out.

Now, there were complications of course. First, it was found that these files, though of ASCII text, often contained "nulls", that is to say zero (0) values. Mscript, when it encounters a null, takes this to mean "end-of-data", and for all intents and purposes that's it; Mscript says that's all the data in that file. Initially, a Basic FOR/NEXT routine was used to go through the text file, replacing all the nulls with a value of 32 (a space character). This was successful, but it took what seemed like forever to work through 13824 bytes of an Mscript file.

A m/c routine was then developed to do this task while the data was still in the computer, before it had been saved as a Mscript file. The Basic part of the program was modified to allow the user to designate the value to be searched for, and it's replacement. The program was later expanded to allow as many such changes to be made as desired. This "search and replace" routine, being in m/c, took probably less than a second to complete.

It was found useful to remove all values of 10 (Carriage Return) as well; this made editing the Mscript file easier. In practice these seem to be the only two values that are usefully removed.

Another complication was encountered. The first disk was double-sided, so the program was written to read all 79 tracks (Track 0 was not looked at, it being presumed to have no text on it). However the next disk turned out to be single-sided. The effect on the files was a repetition of data. Where an attempt to load an odd-numbered track was made, no fresh data was loaded into the computer; the data from the previous track being captured a second time. The program was modified to cope with this, by having the user indicate disk type.

Now, each Mscript file that was being saved needed a unique name. This was handled by fixing the 6th character of the Larken file name as "A" for the first file, and incrementing it to the next letter of the alphabet with each successive SAVE. This gave 26 files before one ran into "odd" characters such as "J", etc., and was adequate to handle all the tracks on a DSDD disk (3\*26=78).

Sometimes it would not be known whether a DS or SS disk was being worked on. Also, in many cases only a small number of the tracks on a disk had any data on them. It was desirable to provide a means of inspecting individual tracks on the disk to obtain this information. A routine was incorporated in the Basic program which would load a selected track, and display the contents onscreen in ASCII character form. Where non-ASCII data was encountered an asterisk (\*) would be printed. This gave some indication of the extent of non-text material the tracks contained.

It should be kept in mind that although the material has been transferred successfully into an Mscript file, it still needs considerable effort to edit it. Probably the majority of text files in MSDOS disks are 80-characters-per-line, with a CR (Carriage Return) character at the end of each line, which must be edited out to make the text useful. Nevertheless, this effort would be considerably less than that required to retype such material from a printout.

As a matter of interest a QL disk was also checked, using this program. It was found that while the QL disk could be loaded in the same manner, that the data on a track was present in blocks (sectors?) which were not contiguous. That is to say the individual blocks of data (maybe 256 bytes per block) had not been saved consecutively along the track. Thus it seemed hardly worthwhile pursuing this aspect.

\*\*\*\*\*

CT

```

100 REM  A utility to move
        MSDOS text files
        to the
        Larken LKDOS(TS2068)
110 REM  Written and placed in
        the public domain by
120 REM  G. Chambers
        14 Richome Court
        Scarborough, Ont.
        CANADA M1K 2Y1
130 REM  For version 3 LKDOS
140 REM  For use with Larken and
        MSDOS SS and DS disks
150 RANDOMIZE USR 100: OPEN #4,
"dd"
160 LET oo=0: LET oa=1: LET ob=
2: LET oc=3: LET od=4: LET oe=5:
LET of=6: LET og=7: LET oh=8
170 BORDER oa: PAPER oa: CLS
180 ON ERR RESET : CLS : GO SU
B 1000
210 PRINT AT 12,3;"Wait a momen
t...."
220 RESTORE 250
230 FOR n=44000 TO 44160: READ
a: POKE n,a: NEXT n
240 PRINT AT 12,3;"
"
250 DATA 195,249,171,195,7,172,
195,27,172,195
260 DATA 56,172,195,75,172,243,
205,98,0,201
270 DATA 58,100,0,251,201,205,2
39,171,58,124
280 DATA 171,50,29,32,205,126,0
,24,237,205
290 DATA 239,171,58,124,171,50,
29,32,205,129
300 DATA 0,58,29,32,50,124,171,
24,217,205
310 DATA 239,171,175,50,32,32,2
05,123,0,58
320 DATA 32,32,79,6,0,33,112,32
,17,200
330 DATA 175,1,0,20,237,176,24,
188,205,239
340 DATA 171,33,200,175,17,112,
32,1,0,20
350 DATA 237,176,205,120,0,24,1
69,205,239,171
360 DATA 42,144,171,78,35,70,24
,158,0,0
370 DATA 33,200,175,17,0,200,1,
0,18,237,176,201,0,0,0
380 DATA 22,0,30,0,33,254,199,3
5,126,1,0,254
390 DATA 167,237,66,9,208,186,3
2,243,115,24,240,0,0,0,0
410 LET settrack=VAL "44000"
420 LET nexttrack=VAL "44003"

```

```

430 LET load=VAL "44006"
440 LET save=VAL "44009"
450 LET track=VAL "43900"
460 LET drive=VAL "43301"
470 REM LET buffer=VAL "50000"
: LET bufflength=VAL "5120": LET
lastcell=VAL "3571": LET disknam
e=4483
480 POKE drive,ob
490 LET treg=VAL "18"
500 INPUT "Orig. Drive (MSDOS)
";orig
505 INPUT "1)Side or 2)Sides to
Disk";q:
507 ON ERR RESET : POKE 23658,
8: INPUT "Inspect MSDOS disk? ";
y$: IF y$<>"Y" AND y$<>"N" THEN
GO TO 507
508 IF y$="Y" THEN GO SUB 860
510 INPUT "Dest. Drive (Larken)
";dest
520 INPUT "Name for Mscript Fil
e(max 5) ";a$: IF LEN a$>5 THEN
LET a$=a$( TO 5)
530 LET a=64: LET m$=""
550 LET count=oa: INPUT "Start
transfer at track No.? ";count
560 INPUT "Ending at which trac
k #? ";end
570 INPUT "Modify File? ";y$: I
F y$="N" OR y$="n" THEN GO TO 5
90
580 GO SUB 910
590 PRINT AT VAL "21",og;"(Pres
s M to stop program)": PRINT AT
oc,oo
595 LET step=3: IF q=1 THEN LE
T step=6
600 FOR t=count TO end STEP ste
p
610 RANDOMIZE USR 100: GO TO or
ig
620 POKE track,t: RANDOMIZE USR
settrack
630 LET move=200
640 CLS : PRINT AT 3,1;"MSDOS t
o Larken File Converter"
650 FOR w=1 TO 3
660 IF INKEY$<>" " THEN LET m$=
INKEY$
670 RANDOMIZE USR load
680 RANDOMIZE USR nexttrack
685 IF q=1 THEN PAUSE 6: RANDO
MIZE USR nexttrack
690 POKE 44125,move: LET move=m
ove+18: REM Relocating data
700 RANDOMIZE USR 44120
710 NEXT w
720 RANDOMIZE USR 100: GO TO de
st
730 FOR n=1 TO change
740 POKE 44136,d(n): POKE 44138
,e(n)
750 RANDOMIZE USR 44135: REM
Modify selected numbers in the
textfile: i.e. nulls and/or CR's
760 NEXT n

```

```

770 IF m$="m" THEN STOP
780 LET a=a+1: LET b$=CHR$ a: L
ET c$=a$b$b$+"CM"
790 PRINT AT 19,3;"Saving... ";
c$
800 RANDOMIZE USR 100: SAVE c$C
ODE 51200,13824
810 NEXT t
820 PRINT AT 21,oo;" Last track
-Press key to stop": PAUSE oo
830 STOP
860 INPUT "Inspect which track?
";count
865 PRINT #4: GO TO orig
870 POKE track, count: PAUSE 6:
PRINT USR settrack: PAUSE 6: PR
INT USR load
880 ON ERR GO TO 507: FOR N=45
000 TO 49608: IF PEEK n>31 AND P
EEK n<126 THEN PRINT CHR$ PEEK
n;: GO TO 890
882 PRINT "*";
890 NEXT n
900 RETURN
910 INPUT "Number of changes to
be made ";change
920 DIM d(change): DIM e(change
)
930 FOR n=1 TO change
940 INPUT "Remove which No.? ";
d(n)
950 INPUT "Replace with No.? ";
e(n)
960 NEXT n
970 RETURN
1000 PRINT AT ob,oc; INK ob; PAP
ER og;" LARKEN DISK UTILITY v1.3
";AT od,oc; INK og; PAPER ob;"
MSDOS to LKDOS Converter ";AT of
,od;" 1990 George Chambers "
1010 INK og: PLOT oo,VAL "108":
DRAW oo,VAL "62": DRAW VAL "255"
,oo: DRAW oo,VAL "-62": DRAW VAL
"-255",oo
1020 INK og: PLOT oh,VAL "114":
DRAW oo,VAL "50": DRAW VAL "238"
,oo: DRAW oo,VAL "-50": DRAW VAL
"-238",oo
1030 RETURN
8000 INK O: PAPER 7: BORDER 7: C
LS : LIST : STOP
8999 STOP
9000 CLEAR : LET od=4: POKE 2365
8,0: PRINT AT 13,9;"SAVE ROUTINE
"" Press ""D"" key to save to
disk, ""I"" or ""T"" key to sa
ve to tape": PAUSE 0: IF INKEY$=
"d" THEN INPUT "Drive #? ";dr:
PRINT #od: GO TO dr
9010 IF INKEY$="t" THEN LET od=
2
9020 PRINT #od: SAVE "MSDOS.Bx"
LINE 150: RUN

```

46  
C 67  
M 77

## TS2068 Hardware Project Review

by Jeff Taylor

### The SMUG VIDEO DIGITISER

The Sinclair Milwaukee Users Group (SMUG) has produced a utility that any 2068 user who owns a tv camera, camcorder or vcr should find hard to resist. It's called a video digitiser and what it does is take still pictures from the sources mentioned above and runs them through the computer to be viewed on-screen, printed on the TS2040 and/or to be screen saved for later viewing. These files can then be modified using your favourite art program or sent to your full-size printer.

SMUG has taken a design which appeared in Sinc-Link three years ago and laid out a very neat printed circuit board which, when assembled, can then be attached to the 2068 with an edge connector or plugged directly into a motherboard. After checking to ensure that the board is installed correctly you then load in the supplied software.

Now you are ready to apply your video signal. In my case, I use a Toshiba two head vcr to produce the pictures. When I run tapes on extended play I can get a very good paused picture. I run the normal "cable out" line to a tv to view the paused picture and a source line from the "video out" dubbing jack to the RCA female jack on the digitiser board. I view the digitised picture on the monitor attached to the computer. For those of you with just one tv, SMUG supplies a schematic and parts list for a simple switch box which will allow you view the video source picture then switch over to the computer output picture. Note that you must use a source with enough power. The RF video from the "cable out" or from a ZX81 is not enough.

Once you have either a well-lit paused vcr picture or a well-lit motionless subject for your camera you are ready to use the software. The first option instructs you to synchronize the board by adjusting one of the three variable resistors until a bouncing ball stabilizes on the screen window. Then use the multiple scan option. After three or four scans a recognizable picture should have formed. Adjusting the other pots will change brightness and width. Now you can save or print.

The digitiser is available as a bare board and software, as a board with parts and software or as a complete and fully tested board with software. Contact SMUG at 5052 N. 91st St., Milwaukee, WI 53225 for more info.

The pictures below are from "Earth Girls Are Easy" in a scene that is a shameless (and very funny) ripoff of "The Fly".



## A Letter From Cameron Hayne

Several years ago Cameron Hayne was a member of our club. Recently, I wrote to ask him what he was up to these days. Here is his reply.

Cameron Hayne is the author of the well-known program, TIMACHINE, which many of us are familiar with. I thought there was sufficient interest in the letter to carry it in our newsletter.

Cameron also sent me several pages of annotated assembly code of TIMACHINE pertaining to the problem mentioned by Bob Mitchell in his article. Maybe a club member can take a crack at modifying it. Ask me for a copy. GFC

April 4/90

Dear George,

I very much enjoyed receiving and reading your letter. Sorry to be so long in responding - I just never seem to have any spare time, and I was hoping to be able to do more to answer your question about Timachine's output on large printers.

Of course I remember you; in fact I recognised the address on the envelope. Glad to hear that the club is still alive and well, and I'm not at all surprised to find you still playing such a vital role in keeping it a going concern. Thanks for the news about Ariel and the Club. I was pleased to receive the newsletter too - very good quality. As I said, I wanted to find out more about what might be causing the Timachine problem but I can't seem to find my power supply for the 2068 and hence can't examine the Timachine code to try to suggest a solution.

We moved into this, our 1st house, in September, and somehow the computer equipment hasn't all surfaced yet! I periodically give another look, but haven't found the power supply yet so am temporarily a frustrated non-user of the 2068. I'd really like to try out a few programs on our 1 2/3-year-old son, Alexander, as well as many other things. I was looking over some of my notes on Timachine and found some correspondence with HiSoft, who took over the maintenance of the Spectrum version of Timachine ("HiSoft Basic Compiler") after I ported it to the 128 machine. Apparently some users there had problems that sound similar to what you describe when they were sending Timachine printouts to their large printers.

The tentative conclusion that we reached was that some printer driver routines (as used with these printers) were not supporting the PRINT AT command and that my use of this command via the RST #10 instruction in the Timachine code is causing the problem. One example printout that I was sent by HiSoft seemed to indicate that the printer driver did not accept the use of the "AT" control code and instead did a carriage return, corrupting the contents of the machine register HL in doing so. As indicated above, without my machine running, I can't give a solution but maybe if I give you some relevant sections of the Timachine assembly code, you or someone else in the club could figure out a fix. So here's what the code for the LIST command in Timachine looks like.  
(Some Timachine code follows...GFC)

Anyway, I thought perhaps you and others might find the above assembly code fragments of interest just to see how it's done.

What am I doing now? Well, I seem to spend most of my time at my job, where there's always more to do than time or people to do it. I've been 3 years at this company now. It's called Visual Edge Software, and has about 15 employees. There were only 4 when I started, so it's been growing rapidly. I must say that my experience in writing Timachine, and the reading I did then, was instrumental in helping me to get this job.

The company produces software for the scientific and engineering market. The machines that the software works on are work-stations, which is a class of computer one step up from a personal computer. These machines typically cost from \$10K to \$50K, and have memory of 8 or 16 megabytes, and disk space (hard disks) of 100 to 300 megabytes. The company has around 15 machines of various makes (Sun, Hewlett Packard, Silicon Graphics, AT&T,...) all networked together so that each machine can access the disk drives of the other machines. They all use the UNIX operating system.

My work the first two years was on a program called VISEEDGE, which allows scientists to visualise their data (the results of a calculation or an experiment) by reading it in, displaying it on screen with the use of colour-coding, and then rotating the image to get a better view, zoom in on one small section, etc. I'm talking about images in 3-dimensional space; for example the values of the temperature and pressure in a volume of gas inside a turbine. The user turns a knob and the image turns in real time. Quite fun.

The last year has been spent on a different project which is a tool for programmers that helps them create iconic user-interfaces for their programs. By iconic user-interfaces I mean something like the Macintosh user interface. It seems that most manufacturers have decided to standardize on a windowing system/graphical user-interface called X Windows. This has become a near standard for work-station class machines, and is likely to trickle down to PC-class machines eventually.

Anyway, our program is called UIMX (User Interface Management for X Windows), and what it does is allow the user (i.e. the programmer) to sketch his user interface on screen by choosing various components (buttons, windows, scrollers, etc.), and then our program generates the source code (in C language) that will create the desired user-interface.

I forgot to mention that all the programming at Visual Edge is done in the C language.

Anyway, I've got to go to bed so I can wake up to take care of Alexander when he wakes up tomorrow morning (about 6AM!)

Hope this letter wasn't too hard to read - I figured it would wait even longer if I waited for a good time to type it at work. Please feel free to publish any part of this letter in Sinc Link or to edit the information into an article.

Cameron Hayne.

## The C Page

By Timothy Swenson

Now that Duane Parker has broadened our horizons with the Pascal Page, I thought I would try my luck with the C language.

C was first developed by Dennis Ritchie at Bell Labs in the early 1970's. C was based upon BCPL and B. It was used to implement the UNIX operating system. This is why C and UNIX are so inter-related.

The C compiler that I use is the Small C implementation for the QL. This can be found in the Quanta Libraries (at least it used to be). Small C was originally written up in the magazine "Dr. Dobb's Journal" and has been implemented on a number of computers.

Small C for the QL comes with a compiler, linker, and library generator. The compiler is easy to use, but the manual is a bit cryptic. It is very short on explanations. I use the editor that came with my Metacomco Pascal (Yes, I have that too). Small C supports only a portion of the full C language. Some of the advanced features are not allowed. I found that Small C was large enough for me to learn with.

The two best books that I have found on C are: "The C Programming Language" by Kernighan and Ritchie (K&R), and "The Dr. Dobb's Cookbook of C". K&R is the definitive book on C. It explains the language simply. It is not recommended for beginning programmers. The Cookbook of C describes Small C as it was printed in Dr. Dobb's. It also has some programs that should run under Small C though I have not tried them.

The advantages of C are small concise programs and fast executing code. C compiles as close to assembly as any other language.

Next month I'll start into the details of the language.

From the QL Library.....Astuce2\_bas

I don't know the author of this, but he is welcome to credit if wishes to contact me. This is really a wonderful demo of colour and design.

H.H.H.

```
1 MODE 4:WINDOW 512,236,0,10:PAPER 0:INK 7
2 OPEN #3,scr_512x10a0x246:PAPER #3,2:INK #3,0
3 WINDOW #0,512,10,0,0:PAPER #0,2:INK #0,0
4 CLS:CLS#0:CLS#3:CSIZE #0,0,0:CSIZE #3,0,0
7 BORDER 1,7
10 FOR s=1 TO 7
20 FOR x=3 TO 300 STEP 5
30 y=SIN(x)*x/8+50
40 INK INT((x+y)/10)
50 FILL 1:CIRCLE x/2,y,x/25
60 FILL 0
70 INK 7:CIRCLE x/2,y,x/25
80 NEXT x
90 PAUSE 100:CLS
100 NEXT s
```

From the QL Library.....TV MON  
Here is a neat little gem originally from ZX Computing.  
This allows you to switch from TV mode to Monitor mode  
and back by the use of 'TV' or 'MON'. Very handy if  
you do not wish to reset.

```
100 DEFine PROCedure TV
110 MODE 8: WINDOW 512,256,0,0
120 PAPER 0: CLS
130 WINDOW 448,200,32,16
140 WINDOW #2,448,200,32,16
150 WINDOW #0,448,40,32,16
160 PAPER 2: PAPER #2,1: PAPER #0,0
170 INK 7: INK #2,7: INK#0,7
180 CLS: CLS #0
190 END DEFine TV
200 DEFine PROCedure MON
210 MODE 4: WINDOW 512,256,0,0
220 PAPER 0:CLS
230 WINDOW 256,202,256,0
240 WINDOW #2,256,202,0,0
250 WINDOW #0,512,50,0,200
260 PAPER 2: PAPER #2,6: PAPER #0,0
270 INK 6: INK #2,2: INK #0,4
280 BORDER 1,255: BORDER #2,1,255
290 CLS: CLS #2: CLS #0
300 END DEFine MON
```

FAMILY HISTORY AND THE ZX81  
by  
Philip Hudsmith

taken from the Hearth Tax Assessments for 1662 from Hurstpierpoint in the Hundred of Buttinghill South in Sussex.

| Name                       | No. of Hearths. |
|----------------------------|-----------------|
| Peter Courthopp Esqr.      | 31              |
| Capt. Thomas Luxford gent. | 10              |
| Leonard Letchford cleric   | 3               |
| James Mathew yeoman        | 5               |
| (note: in prison 1664/5)   |                 |
| William Morley             | 1               |
| James Mugglewicke          | 2               |

Recording one's family history can be a lot of fun for some people, but a pain in the butt for others. "Huh! What ya wanna do that fer?" is the usual response a keen Family Historian gets from his relatives if he tries to find out who married who, when and where and who gave birth to who, when and where. Some folks just aren't interested. But the chances are that dear Grandmama might not want you to find out that she was not married to Grandpapa at the time that your Uncle Egbert came into this world. "Stuff and nonsense!" she'll snap. "Wastin people's time. Ain't ya got nuttin better ter do." If you persist, she'll likely toss you a red herring or two and shut up like a clam.

List of Assessment for the Hearth Tax can be found in the Public Record Office Exchequer records. Interestingly enough they prove that 80% of of the Brits at that time lived in houses that had only one fireplace.

If the lady protesteth too much the true family historian will get very excited, realizing that he is on the trail of a family skeleton. Skeletons in the closet are one of the family historian's perks. It's fun to find out that your 2nd Great Grand Uncle was tried at Old Bailey for smuggling. It's even more fun discovering that he actually got away with it because your 3rd Great Grandmother had the smarts to take him across to Belgium to be born. Sure he was baptised in England 'cause that's where his mother normally resided. But when the chips were down he could claim Belgian nationality. Expert witnesses for the defence would swear that the ship he was sailing in had been built in Belgium and was owned by a Belgian firm. And a French Customs agent would be there to swear blind that The British revenue cutter had fired first, and within a league of the French coast, while the Captian of the English revenue cutter had just sworn that the alleged smugglers had fired the first round, and within 2 leagues of the British coast. Naturally, 2nd Great Grand Uncle gets off scot free because the heavy duty on French brandy is not appreciated by your average Brit, and they are only too glad to let him off in the hopes that he'll go and smuggle some more interesting merchandise into Blighty. Does it sound far fetched? True Brits don't do such things? Nark it. You bet they do. As you have recently seen, they're not too fond of Poll Taxes either.

Wills can be fun too. All the early Kings of England left wills, except for Richard III who, for reasons explained by Will Shakespeare, died intestate. If you dig far enough back a knowledge of Latin will help you to understand them.

"Wot?" you say. "Dig back that far?" Yes sirree! If you happen to have the right connections you may have to dig back even farther than English Kings and Queens. 'S no joke. I'm deadly serious. There is a gentleman living in the States whose father was born on the shores of Lake Ontario. That he got to Lake Ontario at all is due to a quirk of fate no doubt. But that he and his son can trace their descent back to about 200 B.C. is due to the fact that the Duke of Lennox decided to spread a few wild oats around. (See Postscript.)

The late Gloria Grahame who starred in "The Big Heat" (1959) and appeared in the movie version of Rodgers and Hammerstein's "Oklahoma" - she played the girl who couldn't say no - also had a long and very illustrious descent. All the way back to Wodin, in fact. She was also 19th in descent from Edward III (1312-77) and his wife Philippa of Hainault. She was 18th in descent from Edward III's fourth son John of Gaunt (d1399) and his wife Catherine Swynford (d1403) who was formerly his mistress. John of Gaunt's 6th son John Beaufort, Marquess of Dorset and Somerset, was legitimized in 1397 for all purposes except succession to the throne. And Miss Grahame, of course, was 17th in descent from John Beaufort.

In their time the Brits have put up with a lot of interesting taxes. The Hearth Tax was one. It was imposed shortly after Charles the 11nd was welcomed back to Blighty by a bunch of shamefaced citizens who still felt rather guilty about having lopped his Dad's head off. The Hearth Tax was even more disliked in it's time than the present Poll Tax. Taxing heads is one thing. But entering into a Brit's home - no matter how humble it might be - to count the number of hearths in it was definitely frowned upon. Lord knows what else the Commissioners might discover in the course of their duties. The Hearth Tax came in 1662 and vanished - like the dinosaur - in 1689. The first thing William of Orange did after his invasion of England in 1688 was to promise that he would get rid of the unpopular tax, and he did.

"Wot," I can hear you say, "has this got to do with the ZX81?" Well, I was just coming to that. For those that are interested in compiling a history of their own family who own Commodores, Amigas, and IBM's there is a lot of Shareware about that can help a Family Historian keep a track of all his lines of descent. Some of it is good. And some of it is very dangerous. Some of it can be very complicated. In a way, it has to be. For, as you go delving back into the Archives of Ontario, and the various Catholic or Anglican Parish registers that are preserved in Church archives, you can quickly rack up an alarming number of ancestors. 2 Parents, 4 grandparents, 8 great grandparents, 16 great great grandparents, 32 great great great grandparents, 64 great great great great grandparents, and 128 great great great great great grandparents. At this rate it doesn't take long to reach 1001, 1002, 1003, and so on. Keeping track of this many ancestors could be a formidable task, you might say. And you'd be right. I couldn't possibly do it on a ZX81, you might also say. And you'd be wrong.

The Hearth tax returns are interesting to the Family Historian because they give him a clue as to just how much wealth his ancestors actually possessed. Here are some examples

The reason I decided to get a ZX81 in the first place was because I wanted to compile a simple series of index cards that would keep track of all my various relatives and ancestors. I checked out several programs and found that the one best suited to my purpose was VU FILE. It has just the right number of fields to record a person's baptism or birth, his date of marriage, date and place of burial, the name of his wife, the name of one of his children, date of his will (if he left one), the date of probate, and the name of his executor or executrix. As an example let's look at the above named John Beaufort.

```

NAME      BEAUFORT JOHN D. SOMERSET.
C:        1397 LEGIT
M:        ?
B:        21 AP 1410 (B CANTERBURY)
WILL:     16 MR 1409 PR.5 AP 1410
EXEC:     MARGARET BEAUFORT. RELICT.
OCC:     DUKE
WIFE:     MARGARET D. EARL OF KENT.
S/D:     JOAN BEAUFORT

```

FIG 1.

In this particular instance I have recorded the name of his daughter Joan Beaufort instead of continuing with Gloria Grahame's pedigree. Why? Because John Beaufort's daughter Joan married James I, King of Scotland. And they had issue, a son, who became James II, King of Scotland. Here is their story, as recorded on a ZX81 computer hooked up to a regular B/W TV with the aid of VU FILE.

```

NAME:     BEAUFORT JOHN
C:        ?
M:        2 FE 1424 LONDON. ENG.
B:        1445/6 PERTH. SCOTLAND
WILL:     -----
EXEC:     -----
OCC:     QUEEN OF SCOTLAND
WIFE:     JAMES I. K. OF SCOTLAND.
S/D:     JAMES II K. OF SCOTLAND.

```

FIG 2.

As you can see from the example given in Fig 1. John Beaufort was legitimized in 1397. He married Margaret daughter of the Earl of Kent. He was buried in 1410 at Canterbury in Kent. He wrote a will in 1409 which was probated in 1410. His occupation was Duke. And his executor was his widow and relict, Margaret Beaufort.

In Fig 2 you can see that we do not have a baptismal date for the Duke's daughter Joan, but we do know that she was married in London in 1424. She was buried in 1445/6 (Gregorian calendar) at Perth in Scotland. She left no will because I have not yet located same. (On my next trip to Bonnie Scotland, perhaps). Also, it was not usual for a woman to leave wills in those days. Her son, as mentioned before is recorded as James who became James II of Scotland on the death of his father.

I haven't done it for John Beaufort, Duke of Somerset, but if there is more than one child then a separate file must be made up for each additional child. And on each such file that particular child's birth, marriage, death or burial, will, son/daughter etc., must be recorded. And each of the child's children will also need a separate file. Keep at it long enough and you'll have a pretty large card index of all your ancestors.

"So", you say, "you've got me interested. But where do I start, old chap. With my ninth great grandfather?" Uh - huh. You have to work backwards from what you know to what you don't know. You know the name of your mother and father, let's say. Where are their birth, marriage and, if they are deceased, death certificates. And what about your grandfather's certificates. You don't know? You can't find them? Well first you'll have to check around and see if any one else in the family has them. If not you'll need to search for them, either in Ontario, if they were born here, or in London, if they were born in England. For Ontario try the following:

The Registrar General, MacDonald Block, Wellesley and Bay, for births, marriages, and deaths recorded in Ontario. From 1842 onwards, clergymen were obliged to send a return of all marriages they had performed to the local authorities. Copies of these earlier marriages have been deposited at the Archives of Ontario by the Registrar General's Office.

The Archives of Ontario on Grenville Street have a full and complete list of all parish records that are available in their collection. They also have a list of the gravestones that were compiled for the Ontario Genealogical Society as well as invaluable information for family historians searching for Loyalist Ancestors. Copies of most Ontario Census records are held at the Archives of Ontario and in some cases date back to 1803.

The Reference Library on Yonge Street, just north of Bloor Street, has an excellent genealogical collection including copies of the International Genealogical Index published by the Church of the Latter Day Saints in Salt Lake City, Utah. The History Department also lists among its holdings the "Index Library" published by the British Record Society. These invaluable volumes contain indexes to British wills; in particular wills proved in the Consistory Courts of various English counties as well as many of the wills probated in the Prerogative Court of Canterbury.

The Church of the Latter Day Saints has its own genealogical Library in Etobicoke. It's just west of the Renforth Mall on Rathbone. The Anglesey 2 bus from Royal York Subway station will get you there. The Genealogical Library has microfilms of British wills as well as microfilms of English Civil Registrations of births, marriages, and deaths from 1837 (when they began) to about 1906. They have Irish Civil Registrations as well. Their friendly librarian, Ed Lansitie and his volunteer staff can answer most of your questions, and will also send to Salt Lake City to obtain British and American Census records for you. Census records are always a useful way of finding out just how many kids great granddad had way back when.

"Yes, that's all very well," you say, "but what about me. I've got a ZX81 alright, but it's hooked up to a microdrive crossed by a stringy floppy sired by a Hacksel interface hitched up to a Larken Disk Drive. What should I do?"

Sorry chum. That's out of my league. Over to George Chambers. He's our resident Larken Wiz Kid.

*P.S. A little more digging with the facts given in this article will elicit the information that James Vth of Scotland/James I of England was the father of Charles the 1st who in turn sired Charles the 11nd. Needless to say, the Duke of Lennox is also descended from James I of England, Joan Beaufort, John of Gaunt, Edward III and, way back in time, Wodin. To follow their stories and other facts mentioned in this article you may find the following references useful.*

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\*\*\*\*\*

*RGB Monitors and the TS2068  
by G. Chambers*

*I have been asked several times over the past year questions about RGB monitors. Would this one work on the TS2068, or is that one suitable.*

*To answer that question I spoke to one of our members, Rene Bruneau. The way Rene described it, it is quite simple, and it goes like this.*

*If the RGB monitor under consideration will work on an IBM PC (or PC clone) equipped with a Colour Graphics Adapter (CGA) card, then it can be used with the TS2068. Now, keep in mind that I said a CGA card; not a VGA card, nor an EGA card.*

*Of course, in addition that that you will need an RGB interface circuit built and installed in the TS2068 to be able to adapt the 2068 to the monitor. In addition you will have to get a connecting cable of several leads to connect the monitor and the RGB interface together. Usually the cable will have to be custom made.*

*What does an RGB i/f cost. Well, in '85 I bought one from E.A. Brown, and it cost me \$20 US. Then the cable cost me another \$17 Can.*

*If you are up to it you can construct your own RGB i/f board. It is fairly simple, and the parts are inexpensive. We have plans for several versions. If not, I suggest that one of our members could make one up for you for a reasonable cost. I'm speaking of Renato Zannese, our resident TS2068 expert. He could also probably make up the cable assembly; but don't quote me on that!*

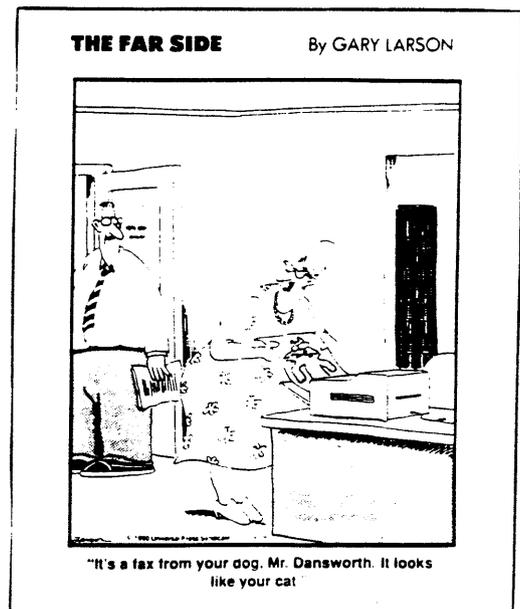
**IN 127**

A few months ago I typed in a new program from the Sinc-Link by Bob Mitchell called Planning Calendar. One of the lines called for IN 127=239 of course Bob had suggested to verify the value of IN 127 using the now famous formula

```
100 FOR i=1 TO 200
110 PRINT IN 127
120 NEXT i
```

Naturally I got 229 so I had to correct the values in this and other programs. Later on when I tried to get another copy of the Planning Calendar it would not work. After some head scratching I tried the old and true formula and found that the magic figure was now 101 ??????. So I re-entered that number but I was bothered by the fact that the number had changed. For what reason ?. I then proceeded to substitute another Smith-Corona FASTEXT 80 . At the new position the number was back to 229 ? . The new FASTEXT 80 also read 101 . More puzzles !!! Finally I tried removing some of the peripherals, e.g. TIMEX-SINCLAIR printer 2040 and the problem cleared up. We are now back to 229. So I have decided to leave the 2040 off for the time being. I don't know why the numbers changed . Do you?

Louis Laferriere



A letter from Larry Kenny

The following is a letter I received recently from Larry Kenny. Since 41 members (about half our membership) have Larken systems, I thought this missive would be of sufficient interest to publish in our newsletter. I hope you agree. G.F.C.

Dear George

March 26, 1990

Thanks for the card at New Year. You sure are a loyal gang. I can see that your club is still doing well, by the newsletter.

The CamTool is my latest creation. I've been working on it since last spring. I've now got a lathe and milling machine, and I also melt and pour my own castings.

I was going to use a Z80 to control the machine, but with time running out I decided to forget the controller CPU and just connect it directly to a PC's parallel port. I did however, develop it on a 2068, and had written all the s/w in HiSoft Pascal and Assembly Language. It worked great on the 2068. I have transferred it to the PC, and work with Turbo Pascal now. Eventually, it may have a Z80 (Z-180) controller.

But I haven't forgotten the 2068! It's still a much easier to use computer than a PC. However, I can't give it much time now until I get this machine's s/w done.

The Spell Checker is actually almost finished, except for putting the package together. I extracted the dictionary from a PC wordprocessor, and transferred it by RS232 to the 2068.

My Desk Top Publisher is about 1/2 done. It's going to be pretty big. (some day, hopefully)

I had some ideas for programs for your newsletter and UPDATE.

- The RAND USR 100: DRAW O,b,c command could make a good bar chart generator program. That command (rarely used) is actually handy for clearing partial screens, and making backgrounds for desk top type utilities.

I also use that :DRAW command for a paintbrush in my DTP. By setting it's size small and controlling it's position with the joystick, it can erase and paint.

- Something like Larry Crawford's ideas, you could compile a bunch of Basic program modules with Timachine to run at 32768; and load each module into different banks of the RAMdisk. A Basic menu program could be from 26710 to 32767 to control which bank gets selected. This is the way a lot of PC programs run, since the PC can only run 64K at a time.

I would sometime like to write a real CAD program for the 2068 with HiSoft Pascal. It would be in modules loaded from disk. (I've been working with PC CAD programs, and the 2068 could do most of the same. (this is just an idea).

- The Commodore 1351 mouse (for 64) works fine in the Kempston port of the DSK-400. Great with Art Studio, and my DTP. You need to press the 'right' button on power up to initialize it.

I plan on making one more hardware item for the 2068 before fall. It will be a small RS232 I/F that has all available baud rates, s/w selectable. The 6551 chip has all this built-in.

My CamTool is great for PCB work and I will use it to make the PCB's for the RS232 to keep costs down. It can plot directly on the PCB, and then drill the holes.

Anyway, I just thought I would let you know what I've been up to.

Larry Kenny

SINC-LINK

QL\_DOC

For some time we have been fortunate in having access to some most interesting material and software from QL\_DOC. I know that I have personally learned a lot from QL\_DOC as well as profited from the software. I have been informed that Real Gagnon will be suspending publication till further notice. That is usually fatal. I will be sorry to lose another newsletter after all the trials and tribulations of the TIMEX-SINCLAIR and SINCLA machines.

I understand that UPDATE will cease publishing after two more issues. Just as I subscribed to the magazine. I must be jinxed; after I started purchasing the TIMEX-SINCLAIR USERS magazine from Buffalo it went belly up. Then I entered my subscription for the ZX Computing just before it packed it in. Then I finally also joined the QL\_DOC list of clients. ? Anybody looking for another subscriber????

However, the last disk that I received from Real contained a revised version of his ARCHIVE program for software (LOGICIEL) adapted for listing your (or my) video cassettes. This program is written in English and will be available from Hugh Howie, our QL librarian, as per the usual conditions. The software consists of three programs, namely:

1-video\_db\_prg  
2-video\_dbf  
3-video\_scn

I'll not give the listing of the programs as it would be too long.

In addition, Real informs me that he has available the new ROM Minerva for the QL. If you are interested you could contact him in Montreal at Area Code 514 381-6462

or  
8286 St Hubert Street  
Montreal, Quebec CANADA H2P 1Z3  
Louis Laferriere

(UPDATE will continue with a new editor - Ed.)

THE OTHER SHOE DROPS-----

Now how this came about was I because I was trying to Network between two QL's, one with 640K the other with 128K (Unexpanded)

I understand that to Network you must have TK2 in each machine, and I wanted to use Quill in both and transfer from #1 the 640K one, to #2 the 128K one, and found I could not load Quill into #2. Remove TK2 from #2, and I should be able to load Quill, but without TK2 I cannot Network, ergo - You MUST have expansion to Network.

Page 38 Keywords Section of manual mentions NET.

Page 38 of Concepts Sections goes a little farther, but is not too specific. But one would gather Networking is possible with an as-is QL. Nothing more required.

And if you use TK2 as is well suggested by other folks, you can't use QUILL. Somehow I get the idea this is where I came in. Do you get the picture ? I don't, I just got here.

Or have I been asleep, and missed the funnies?

Conclusion:-

You can not Network unless you have EXPANDED MEMORY.

Any arguments from out there ?

Lets have them.

Hugh Howie

QLIPS

*The other day I had a letter from a member in Texas who has just joined our illustrious Club, containing some facts from his life, and his philosophy must be, 'Do what you can when you can'. He has just about done that, - everything-. From delivering papers by pony to repairing TV.*

*He has just bought himself a QL and is making good use of it from some samples he has let me see.*

*This youngster is a long way from Toronto, so I can not give him the help I would like to from this distance, I therefore ask some of you folks nearer to him, to get in touch with him, give him what help you can. Make his motto your own, 'Do what you can when you can'*

*This kiddo is:-*

Mac H. Pace,  
Rt 2 Box 349  
SPICEWOOD, TX  
78669.

Born 1911 ----  
and he buys a QL.

What spunk !!!

H. H. H.

From the QL Library.....CIRCLES

Here is a sweet little thing which draws circles in an expanding circle, (or cone). It is very short so type it in and try it. If you have colour try it in mode 8 for greater effect.

```
100 FOR loop=1 TO 500 STEP 2.99
110 INK loop/2
120 FILL 1
130 CIRCLE 50+COS(loop)*(loop/6),50+SIN(loop)*(loop/6)
,loop/24
140 INK 0
150 FILL 0
160 CIRCLE 50+COS(loop)*(loop/6),50+SIN(loop)*(loop/6)
,loop/24
170 NEXT loop
```

BOB'S NOTEBOOK  
BANK SWITCHING NOTES FOR A BEGINNER (LIKE ME)

This column will be of interest to those with a RAMDISK added to their TS2068s but will hopefully inspire others to do the same. If you have been using your RAMDISK mainly to store a few pet programs which you use regularly, say this one (Mscript) or 'Tasword', then you should know that your RAMDISK can be used for much more than this. One of the other uses for RAMDISK is that of BANK Switching. The use of BANK switching will add greatly to the amount of data that can be stored and used with the TS2068. It will virtually add up to 256K more data storage memory. It does not allow you to have longer BASIC programs; more on this later.

First: Some definitions for use with this article:  
HOME BANK: The TS2068 ROM and 48K RAM; in this article, it means 'the upper 32K from addresses 32768 to 65535'.  
DOCK BANK: The upper 32K of the DOCK or cartridge bank as used by the RAMDISK.  
CHUNK: 8K of a BANK; there are four CHUNKS in one BANK.

BANK switching might be described as changing (in a split second) the RAM contents in the HOME BANK. The version 3 LKDOS EPROM contains the support routines to perform BANK switching. RAMDISK operates in the 32-64K area and uses port 244 to select any of the ramchips that are mounted. The command OUT 244,240 will switch in (turn ON) the 32K-64K area of the Dock or cartridge BANK; that's four chunks of 8K each.

OUT 244,0 will turn it OFF (switch if out). Port 7 on the RAMDISK board is used to select the wanted chip.

OUT 7,x is used where x is the port address plus a value to turn write protect OFF or ON (64 or 0 respectively). In effect, the lower three bits of x hold the port address and bit 6 holds the value that turns the write protect ON or OFF when LKDOS is not in command. A value of 64 sets BIT 6 which means no write protect while a 0 resets BIT 6 and restores the write protect.

The eight chips are: A, B, C, D, E, F, G, H  
with port addresses: 7, 3, 5, 1 6, 2, 4, 0  
The HOME BANK uses port address 8.

To switch in the contents of chip A, I would use:  
OUT 244,240 :all four CHUNKS are switched (see below).  
OUT 7,71 :71= 7 (chip A) + 64 (turn write prot OFF)

To switch in the contents of the HOME BANK,  
OUT 244,0. :turn off the Dock BANK.  
OUT 7,8 :8 for HOME BANK

It is not necessary to switch a whole BANK; one or more of the chunks may be selected. To select chunks the values used with OUT 244 are as follows:

First chunk 32K-40K=====> 16  
Second chunk 40K-48K=====> 32  
Third chunk 48K-56K=====> 64  
Fourth chunk 56K-64K=====> 128  
These may be combined, eg,  
First two chunks=====> 48  
Last two chunks=====> 192  
and so on.  
Combining all four chunks  
adds up to=====> 240

But if you're thinking of switching chunks you must know that a chunk cannot be relocated to another memory location. Chunk 1 for example must always go into the same address area (32K-40K). Larry Kenny advised me that relocating to other memory areas would take a lot of extra hardware.

One of the problems in switching BANKS is that the supporting BASIC program must not go higher than 32767, that is, its length cannot exceed about 6000 bytes including space needed for any machine code routines.

I am indebted to Larry Crawford for shedding a great deal of light on this subject when he donated his InterBANK Data Storage Sorting Utility to the public domain. This is available to club members through our library. With it, for example, one may store up to 7936 records of 32 characters each, then search for them by inputting a character string; or sort the list fairly quickly on any of the 32 columns. The record length for any one file can be set for up to 127 characters.

This is a fantastic increase in capacity for long lists and will enable me to enter my complete collection of several thousand 35mm colour slides, a task I have always put off because I would not have been able to search or sort such a long list adequately. Mind you, it has not made the job of entering all the data any easier but at least now, I have a program that will let me do it.

In Larry's utility the following sequence of events takes place:

When data is loaded from disk, the first 32K is put into the HOME BANK, the next 32K goes into the first RAMDISK BANK, the next 32K into the second RAMDISK BANK and so on. When searching for records, the program looks first at the HOME BANK, then switches in RAMDISK BANKS one by one until all have been checked. When sorting the records (on any column), the BANKS are switched like lightning as record pairs are compared and transposed.

Bob Mitchell 20 Wild Briarway Willowdale Ont M2J 2L2

323 1/2 N. Church Street  
Bowling Green, OH 43402  
March 26, 1990

Dear George,

I just returned home yesterday, and sure enough, the March Sinc-Link had arrived while I was in Windsor.

I have done some previous work on justifying text, and besides the quick function in last month's letter, I have one other routine you might be interested in. Did you know that it is not difficult to write a single routine which will center, left-justify, or right-justify, depending on one variable? Yes, it is something I did in another computer last year. Let me tell you about it.

I suppose I should try to keep this routine in line with the one by Mike Felerski in the current issue. So presume we have a string of characters, t\$. Now, the string is (max) characters long, as it was dimensioned that way, but the actual text in it starts at (i) and has a length of (t). All these values are relatively easy to determine.

Let me write the routine, then worry about the details. The entire program would look like this:

```
10 REM Justify It Two
20 REM by Steven V. Gunhouse
30 LET max=32
35 LET L=0: LET C=1: LET R=2
40 DIM t$(max)
50 DIM o$(max)
100 PRINT "Enter String (";max;" chars max.)"
110 INPUT t$
120 CLS: PRINT "Original String:"
121 PRINT AT 5,0;t$
130 PRINT AT 12,0;"Select either:"
131 PRINT AT 14,5;"(L)eft"
132 PRINT AT 15,5;"(C)enter"
133 PPINT AT 16,5;"(R)ight"
140 INPUT "Your Choice? ";al
150 FOR i=1 TO max: IF t$(i)=" " THEN NEXT i
155 LET o$=t$(i TO)
157 LET t$=""
160 FOR t=max-i+1 TO 1 STEP -1: IF o$(t)=" " THEN NEXT t
165 LET t$(al*(max-t)/2+1 TO)=o$
200 PRINT AT 8,0;"54321 98765432100123456789 12345"
210 PRINT AT 10,0;t$
220 GOTO 140
```

Lines 150-155 remove any spaces from the beginning. Then lines 160-165 actually do the justifying, based on the value of the variable (al). Since (max-t) is the number of spaces that must be added, simply putting either none, half, or all of those spaces at the beginning will left, center, or right justify, respectively.

Since DIM'd strings are procrustean, we need not worry

about the spaces at the end. It is necessary to make sure t\$ will be cleared, which is done in line 157.

Oh, there was something left out of the program in the current Sinc-Link. In Listing B, line 4120, there should be a "<>" that was somehow left out. Note that since he used loops to do his character moves, the program in the article is relatively slow. To make my routine a little faster still, I reduced the loop in line 160 - I knew that the last (i-1) characters were spaces, so I didn't bother to check them again. It would function perfectly if that line read "FOR l=max TO ..." instead.

A more difficult proposition would be right and left justified text. This is commonly referred to simply as justified text. There are about 5 common ways to do that, though some are not available to us. Two of the methods involve something called "micro-justification", a process which divides the excess space up evenly by printing fractional spaces. Unfortunately, that is beyond any small project such as I might do here.

If there are a large number of spaces to be added, one method adds spaces between characters as well as words. This could still be quite useful, but might look strange. Then again, if a line is that short, it might be better than the alternatives.

The fourth method is used by Tasword. It adds spaces beginning at the start of the line until it has added enough. I always find this looks strange, since it means the spacing at the start of a line is always longer than the spacing at the end. A better approach is to try and divide up the spacing evenly, as much as possible.

Here is a program which combines method 3 and 5.

```
10 REM Left and Right Justify
20 REM by Steven V. Gunhouse
30 LET max=32
40 DIM t$(max)
50 DIM o$(max)
100 PRINT "Enter String (";max;" chars max)"
110 INPUT t$
120 FOR i=1 TO max: IF t$(i)=" " THEN NEXT i
125 LET o$=t$(i TO)
127 LET t$=""
130 FOR t=max-i+1 TO 1 STEP -1: IF o$(t)=" " THEN NEXT t
140 LET s=0
145 FOR i=1 TO t: IF o$(i)=" " THEN LET s=s+1
146 NEXT i
150 LET sl=max
151 IF 1 THEN LET sl=INT ((max-1)/(t-1-.5*s))
160 LET j=1
161 FOR i=1 TO t: LET t$(j)=o$(i)
162 IF o$(i)=" " THEN LET j=j+(max-1-(t-1)*sl)/s
163 LET j=j+sl
165 NEXT i
200 PRINT AT 10,0;t$
```

The number ".5" in line 151 was chosen somewhat arbitrarily to allow the spaces to adjust if the text was short. Naturally, the routine may not be able to justify the line if it has no breaks - that is, is one long word. The value (sl) is the number of positions each non-space character will take. Thus, if (sl)=2, each character will have an extra blank space inserted between it and the next.

This routine is still relatively "quick and dirty", in that a truly professional-looking result would require consideration of where the spaces actually occurred. This particular routine makes only a partial attempt at balance.

Let me give an example to clarify. Suppose that the text had several short words followed by a relatively few longer words. Ideally, the spacing should be more on average between the longer words than the shorter words. This routine doesn't consider that aspect. Otherwise, and in typical use, it should be just fine.

As a matter of comparison, the Aerco/Larken comes with a slightly non-standard RAMDISK. The Aerco board comes with a full bank of RAM, of which the Larken ROM uses 6 banks as the RAMDISK. So relative to Larry Crawford's article, I only have 1 bank, but could conceivably do any of the things he mentions. Note that the Aerco RAMDISK has no battery, however.

One thing Larry Crawford neglected to mention. If you plan to use the RAMDISK for both its usual purpose and bank-switching you should do something to convince it the bank-switching parts can't be used for program storage. Use a utility of some kind - I presume your "Doctor" program would do nicely - to set the directory and tell it whichever tracks would be in that bank are full. Not having a standard RAMDISK, I can't tell you any more than that.

An addendum to the "DID YOU KNOW..." article. The OPEN #4,"dd" command is not the only one that could cause someone trouble. Actually, the OPEN #4,"dd" command doesn't cause trouble, since it doesn't open an actual channel, but any other Larken OPEN # command would. This includes the printer, windows, or sequential files.

At least on my machine, and I presume on every Larken system, the OPEN #4,"dd" does not create a new channel, it modifies the "p" channel. Check it out. An INPUT#3,p should give you a Command not understood error if channel 4 is open. Otherwise, it gives an Invalid stream or I/O device error - I forget which. All the other Larken OPEN # commands do create a new channel, and thus move the start of BASIC. Note that if the OPEN # commands are done before the address of the m/c in line 0 is computed, everything should work fine. The same applies to m/c in any line. If the address is re-computed before each USR call, there will be no noticeable problems.

Here is a quicky for you. Ever want to know where a string is stored in memory? For instance, you could stick your m/c in a string instead of a REM if you could find the string. Here is a combination m/c and DEF FN that will find the location of a string.

```
1 DEF FN a(a$)=USR 23400
```

```

2 FOR i=23400 TO 23410: READ a: POKE i,a: NEXT i
3 DATA 42,11,92,1,4,0,9,78,35,70,201

```

Then to find the address of the string x\$, simply LET add=FN a(x\$). This will even work for string arrays. Finding the address of a string expression, such as x\$+y\$, is useless, though, as the string will have disappeared before you get to use it. Strings which have not been assigned to variables only exist until the end of the current command - the colon or end of line.

That is enough for this month. Added to what I mailed last week, probably more than enough. See you in 2 months time. Yes, anything you want to is always publishable - maybe I should start writing in half-columns to make it easier to do so. Peace.

Sincerely,  
*Steven V. Gumbrose*

P. S. Here are some examples of Left, Center, Right, and Justify:

```

Original:   This is an example output.
Left:      This is an example output.
Center:    This is an example output.
Right:     This is an example output.
Justify:   This is an example output.
           54321 98765432100123456789 12345
Original:   Try this one out.
Left:      Try this one out.
Center:    Try this one out.
Right:     Try this one out.
Justify:   T r y   t h i s   o n e   o u t .

```

*} examples of program 1*  
*} example of program 2*

P.P.S. Note also the trick in the first program. If the user presses L, the INPUT interprets this as the variable L which is 0, etc.

## I N P U T

The other night at the club meeting, I saw George with a bundle of News Letters from other clubs under his arm, so I snagged a few in the hope I might find something of value there-in. When I got home and started to browse through them, I realised how right I was.

You see, at the meeting, Jeff, our courageous Editor was asking for input from the membership, and this is what I was reading in ALL the newsletters I had. WE NEED MORE INPUT. I am going to give you a few of my gleanings from those letters.

ZX Appeal December 89 issue. From minutes of meeting Oct13/89. "...Rod H., (Humphries) the editor said 'Send articles'....he would be stepping down as N/L Editor if club members did not do more to support the newsletter...."

Rem:- Did you send in that suggestion you had ?

SINCLAIR COMPUTERS USERS SOCIETY "...The New Year will hold many possibilities for us TS users, but only if you make up your mind to contribute time and effort in your local user group, newsletter.... " etc.

Rem:- Have YOU made up your mind ?

QUANTUM LEVELS Gone. A truly great magazine. I must admit I was not a subscriber, but that was only because I was relatively new to the computer world, and at the time I tried to subscribe, the magazine was going into limbo. Perhaps my subscription would have made a difference. Could yours have ? Reason for demise ? .... lack of input.....

Rem:- Could a little 'discovery' from you have made the difference ?

I.S.T.U.G. (Indiana Sinclair-Timex ) From issue Sept/Oct '89. "...I kinda figure the very least some of our less active members can do is get someone else to join. Or better yet, send in an article or review a program...."

Rem:- Did you send in that one\_liner ?

### HARRISBURG AREA TIMEX-SINCLAIR USERS GROUP

In the December 89 issue was an announcement of their next meeting on December 8/89.

The next newsletter is a real heartbreaker, it is headed FINAL ISSUE. Reason ? "...doing the Newsletter was becoming more and more difficult each month. There was no input from members lately...."

Rem:- Think "Where did 'I' fail ?"

THE PLOTTER (Clackamas County Area T/s Users.)

December 89. Rod Gowan announces he is not going to do a column, ".....First, I am in the 'busy' season and do not have time to devote to a decent column, and second, I have had absolutely NO INPUT from you, the readers for whom I am doing this column....."

Rem:- What can I GIVE, for what I GET ?

SMUG Dr Lloyd Dreger who has been secretary for a long time, writes a very informative article on 'Burnout', and the time it takes to get things done, the time has come to catch up with things left undone because of his dedication to the group, and I will quote a small part of his letter. "....If you don't come forward and say 'I can help', you are going to see more and more burnouts drop beside the wayside never to return. We have lost way too many already.....  
you get out what time and effort you put in. Its your turn....."

Rem:- Maybe I COULD help, (with a little bit of assistance)

( I bet they take you up on this one )

I can go on in this fashion for some time, but can you see the recurring theme ? There have been too many 'falls by the wayside' in the past, (I only mention the current ones) It is up to each and every one of us, to contribute what we can.

I am no writer, I only started this very recently, and I find that there are many occasions when an idea can be put on paper with very little effort. This idea can be made into an article which someone will read. After all, you are reading this.

Take for example, you go to a meeting and are talking to Joe, and you say "Hey Joe, I was trying to do 'this' last night and it would not work so I did 'that' and by golly I got it to work" This is conversation, put in on paper and you have an article. Send it in. It is published. You are a writer! Holy Cow! Whoood a thunk it !

After all, an article is only a conversation on paper, conversation is talk, and you know how we computerists like to talk ! If you doubt that statement just listen to the babble at your next meeting. So put that chatter on papper. You even use a Modem to talk !

We have a great Newsletter here, so why not help to make it better. (Jeff will just love you, and so will Rene and George and all the rest of the bunch). We can write as much as we like, but we need innovative ideas, challenges, fresh outlook, encouragement.

Help ? Please ? ? Pretty Please ? ? ?

If I can do it, so can you.

Hugh H. Howie.

# MIKE'S NOTEBOOK

by: Michael J. DiRienzo

Did you ever do alot of repetative keying or wish you had programmable function keys? Here's a clever little utility which will do just that. I found it in an old 'SINC TIMES' newsletter. It was originally written for the Spectrum and uses the interrupt mode 2. I've modified it to run on the TS2068. As written, the code is not relocateable, but if you understand the Interrupt Mode, you can move the code anywhere above 32767. This utility will allow you to assign any alphanumeric key a user defineable function which you write in BASIC. Type in the following listing and run line 9900. If there are no DATA errors, the program will RUN. You may delete line 9900 to the end.

Here are some rules to follow: The functions are set-up in REM statements at the beginning of BASIC. Study the demo examples given below. The key you wish to program should come after the REM keyword, and followed by a colon. The entire function should be on one line unless you use a GOTO line #. If you add a "\$" to the end of your BASIC, it will simulate a carriage return (ENTER), and your function will execute itself. If you omit a "\$" at the end, your function will appear at the input line and wait for you to press ENTER. If you want to use a normal REM statement, just place a "\*" after the rem and no colon. To disable this program, type RANDOMIZE USR 64399. Note that line 3 is a CAT for Larken Disk drive.

Have fun, and write to me if you discover any unique ways to use this utility and I'll pass them along to the readers.

Happy TIMEXing...

## "MACRO"

by: Michael J. Di Rienzo

```
1 REM !: PRINT INK 2; FLASH 1
;AT 10,5;"This is a DEMO...": BE
EP .1,.1: PRINT : PRINT "Hit '0'
For Another DEMO"$
2 REM @: INPUT "Input Number
(@ TO 65535) ";N: RANDOMIZE N: P
RINT "Lo Byte=";PEEK 23670,"Hi b
yte=";PEEK 23671$
3 REM CAT : RANDOMIZE USR 100
: CAT "",
10 PRINT "Press '!' or '0' or
' CAT ' For DEMO"
20 STOP
9900 CLEAR 64249: LET on=64381:
LET off=64399: LET c=0
9910 FOR n=64250 TO 64405: READ
a: POKE n,a: LET c=c+a
9920 NEXT n: IF c<>19476 THEN PR
INT "DATA error!": STOP
9930 RANDOMIZE USR on: RUN
9940 DATA 255,243,229,213,197,24
5,205,9,251,241,193,209,225,251,
201,253,203,1,110,200,33,0,0,57,
235,237,123,61,92,225,1,229,11,1
67,237,66,235,249,192,42,83,92,2
4,2,235,9,35,35,78,35
9950 DATA 70,35,84,93,126,254,23
4,192,35,58,8,92,190,32,235,35,1
26,254,58,32,229,35,126,254,13,4
0,223,11,11,11,11,197,229,42,91,
92,205,187,18,19,237,83,91,92,35
,235,225
9960 DATA 193,237,176,235,43,126
,254,35,40,8,205,131,12,253,203,
1,174,201,1,1,0,205,80,23,62,13,
50,8,92,253,203,1,238,201,33,0,2
54,1,250,0,113,35,16,252,113,62,
254,237,71,237,94,201,62,62,237,
71,237,86,201
```

from the April 1990 issue of

The Plotter

Newsletter of the Clackamas

County Area T/S Users....

TECH DRAW JR. AND THE LARKEN  
by George Chambers

A club member mentioned that he was using the artist program Tech Draw Jr., and asked whether anyone had modified it to allow for saving screen images to disk. This prompted me to look at the program a little more closely.

Tech Draw Jr. has a Basic program plus a block of some 35400 bytes of code, starting at address 30000. It has options in the Basic part of the program to permit saving screens to tape, to an Aerco system, and to the A & J system. The user is expected to choose one of these options and then save a customized version of the program.

In looking at these options I found that each option did a RAND USR to a different address in the program code. I decided that I would look more closely at the address pointed to by the tape option, namely 55291. I had earlier decided that it would be easier to modify the tape option, primarily because I thought I would recognise it's m/c routines more easily.

I was familiar with the Spectrum LOAD and SAVE routines at addresses 1366 and 1218. However, here we were working with the 2068 which had the SAVE/LOAD routines in the EXROM. I was not sure what to expect.

In looking at the m/c at address 55291 with a disassembler I identified two locations worth looking at. One m/c sequence, starting at 53602, showed a typical SAVE routine, while a second sequence starting at 53780 indicated a LOAD routine. See the disassembled code sequences in Figure 1. The CALL 104 is the W\_TAPE (SAVE) routine in the EXROM, while the CALL 252 is the R\_TAPE (LOAD) routine. We are hot!!

I decided that I would use the same method as I had used with the program "Snodgits", written about in an earlier issue of the newsletter. That is to say, I would locate the Larken SAVE/LOAD routines in some spare part of the computer memory. Then I would locate the tape LOAD and SAVE routines in the code part of the program and substitute a CALL to my Larken routines, replacing the EXROM calls 104 and 252.

The code started at 30000 and ran to the top of memory. I decided to locate my Larken SAVE/LOAD code routines at address 29900. This would place it below and adjacent to the existing program code. That way it could be saved as part of the Tech Draw Jr. code. The disassembled code is in figure 2, while the Basic program to install it is in Figure 3.

Having done this it was a simple matter to place a CALL at address 53659 to SAVE and at address 53794 to LOAD. I also deleted some now-unneeded code. See Figure 4 for the details.

There was another thing. In the program when a SAVE or LOAD function was called, you were asked to input the name of the screen to be saved or loaded. I decided that I would determine where these names were stored, and have the Larken routine look to that location for the file name. I loaded the Tech Draw Jr. program, went into the SAVE routine, entering

a name, and then breaking out of the program with an NMI-SAVE to a protected disk. I then searched through the code, looking for the name that had been entered. I did the same thing for a LOAD routine. I found that both the SAVE and the LOAD names were stored at the same location, starting at address 36373. I revised my Larken code, using an LDIR routine to pull the name from that location.

This completed the SAVE/LOAD disk routines. There remained one other minor item to finish up the job. In the program, the save and load screen messages make references to tape. Again, using the disassembler, I located text sequences containing the word "tape" at three locations; 53566, 53745, and 53868. I simply POKEd the code values for the word "disk", to replace the tape references.

The program still has some shortcomings. It requires that any name that is input be a valid Larken format. If it is incorrect, not only will the Larken system reject it, but the program will crash and lock up. Also there is a VERIFY routine on the I/O screen which is not easily removed and which, if selected, attempts a Larken LOAD.

Figure 1

|       |          |      |           |
|-------|----------|------|-----------|
| 53647 | 00       | NOP  |           |
| 53648 | 00       | NOP  |           |
| 53649 | 00       | NOP  |           |
| 53650 | CDF9D0   | CALL | 53497     |
| 53653 | CDBFD1   | CALL | 53695     |
| 53656 | CDA0D2   | CALL | 53920     |
| 53659 | 3E00     | LD   | A,0       |
| 53661 | 111100   | LD   | DE,17     |
| 53664 | DD2114BE | LD   | IX,36372  |
| 53668 | CD6800   | CALL | 104       |
| 53671 | 01E8FD   | LD   | BC,65000  |
| 53674 | CD9EC3   | CALL | 50078     |
| 53677 | 3EFF     | LD   | A,255     |
| 53679 | 110018   | LD   | DE,6144   |
| 53682 | DD210040 | LD   | IX,16384  |
| 53686 | CD6800   | CALL | 104       |
| 53689 | CDACD2   | CALL | 53932     |
| 53692 | C304C4   | JP   | 50180     |
| 53695 | 2114BE   | LD   | HL,36372  |
| 53698 | 3603     | LD   | (HL),3    |
| 53700 | 211F8E   | LD   | HL,36383  |
|       |          |      |           |
| 53794 | 37       | SCF  |           |
| 53795 | 3E00     | LD   | A,0       |
| 53797 | 111100   | LD   | DE,17     |
| 53800 | DD21258E | LD   | IX,36389  |
| 53804 | CDFC00   | CALL | 252       |
| 53807 | CD87D2   | CALL | 53895     |
| 53810 | 38EE     | JR   | C,53794   |
| 53812 | 3A268E   | LD   | A,(36390) |
| 53815 | FE40     | CP   | 64        |
| 53817 | 2006     | JR   | NZ,53825  |
| 53819 | 0E40     | LD   | C,64      |
| 53821 | 3E01     | LD   | A,1       |
| 53823 | ED79     | OUT  | (C),A     |
| 53825 | 37       | SCF  |           |
| 53826 | 216BFF   | LD   | HL,49003  |
| 53829 | CB5E     | BIT  | 3,(HL)    |
| 53831 | 2001     | JR   | NZ,53834  |
| 53833 | 3F       | CCF  |           |
| 53834 | 3EFF     | LD   | A,255     |
| 53836 | 110018   | LD   | DE,6144   |
| 53839 | DD210040 | LD   | IX,16384  |
| 53843 | CDFC00   | CALL | 252       |
| 53846 | F5       | PUSH | AF        |
| 53847 | CDACD2   | CALL | 53932     |
| 53850 | F1       |      |           |

Figure 2

```
29900 C362C5 JP 50530
29903 CDD974 CALL 29913
29906 C9 RET
29907 00 NOP
29908 CD0575 CALL 29957
29911 C9 RET
29912 00 NOP
29913 F3 DI
29914 CD6200 CALL 98
29917 21158E LD HL,36373
29920 112220 LD DE,8226
29923 010A00 LD BC,10
29926 EDB0 LDIR
29928 3E0B LD A,11
29930 320220 LD (8194),A
29933 CDC600 CALL 198
29936 210040 LD HL,16384
29939 223320 LD (8243),HL
29942 210018 LD HL,6144
29945 223120 LD (8241),HL
29948 CDC900 CALL 201
29951 3A6400 LD A,(100)
29954 FB EI
29955 C9 RET
29956 00 NOP
29957 F3 DI
29958 00 NOP
29959 CD6200 CALL 98
29962 21158E LD HL,36373
29965 112220 LD DE,8226
29968 010A00 LD BC,10
29971 EDB0 LDIR
29973 3E0B LD A,11
29975 320220 LD (8194),A
29978 CDCC00 CALL 204
29981 210040 LD HL,16384
29984 223320 LD (8243),HL
29987 210018 LD HL,6144
29990 223120 LD (8241),HL
29993 CDCF00 CALL 207
29996 3A6400 LD A,(100)
29999 FB EI
30000 C9 RET
```

Figure 3

```
10 RESTORE 100
20 FOR n=29900 TO 30000
30 READ a: POKE n,a
40 NEXT n
50 STOP
100 DATA 195,98,197,205,217,116
,201,0
101 DATA 205,5,117,201,0
102 DATA 243,205,98,0,33,21,142
,17,34,32,1,10,0,237
103 DATA 176,62,11,50,2,32,205,
198,0,33,0,64,34,51,32
104 DATA 33,0,24,34,49,32,205,2
01,0,58,100,0,251,201,0
105 DATA 243,0,205,98,0,33,21,1
42,17
106 DATA 34,32,1,10,0,237,176,6
2,11,50,2,32,205,204,0
107 DATA 33,0,64,34,51,32,33,0,
24,34,49,32,205,207,0
108 DATA 58,100,0,251,201,0,0,0
1000 SAVE "data"
```

I just couldn't pass up a buy in the April issue of Computer Shopper (I'm addicted, can't quit buying it!). A 9" Sony Trinitron RGB Monitor. It works great with my 2068. It came from:

**SPECTRON SYSTEMS**  
3429 Calico Ave.  
San Jose, CA 95124  
1-800-283-4080 ext. 875

They do not take COD orders and so I sent a M.O. for \$154 (\$139 + \$15 for s/h) and in less than a week I received the monitor. I'm very pleased!

*Richard Hurd*

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Seaside, OR 97138

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QLIPS

128K <-----> TK2 <-----> 640K  
-----NETWORKING-----

Recently I found that I could not load QUILL into my unexpanded QL. I kept getting the message 'Unable to start QUILL'. This to me was very strange, as I had always been able to do so previously, so I started to work on the problem and here is what I found.

TK2 was the problem !!!

Remember this is an unexpanded QL, and after power-up I have 83K Free Mem. Lrun mdv1\_boot, and the QL looks at drive 2, displays 5K Free Mem, plus the three statements:-

'Unable to start Quill'  
'Press space to continue'  
'Press ESC to abandon'

So I press SPACE, and the QL looks at #2 again and repeats the above message.

On the rare occasion when I did manage to load Quill, I had a large percentage of crashes.

Next step was to remove TK2.

Power up, 85K Free Mem. So TK2 uses 2K. Lrun, and Quill is loaded, still with 5K after loading, same as before. But I can use Quill now, and my crashes are reduced to a much more acceptable level. Nil.

Question :- Why does the QL + TK2 look at drive 2 before locking up, but it does NOT look at drive 2 with TK2 removed, and it loads!

Surely the start-up Free Mem can have no bearing on it, as the end or loaded Free Mem is still the same at 5K.

Moral would appear to be if you have no expansion, when useing QUILL forget about TK2.

THE OTHER SHOE DROPS-----

Now how this came about was I because I was trying to Network between two QL's, one with 640K the other with 128K (Unexpanded). I understand that to Network you must have TK2 in each machine, and I wanted to use Quill in both and transfer from #1 the 640K one, to #2 the 128K one, and found I could not load Quill into #2. Remove TK2 from #2, and I should be able to load Quill, but without TK2 I cannot Network.

Page 38 Keywords Section of manual mentions NET. Page 38 of Concepts Sections goes a little farther, but is not too specific. But one would gather Networking is possible with an as-is QL. Nothing more required. No ?

And if you use TK2 as is well suggested by other folks, you can't use QUILL. Somehow I get the idea this is where I came in. Do you get the picture ? I don't, I just got here.

Or have I been asleep, and missed the funnies?

Conclusion:-

You can not Network USING QUILL unless you have EXPANDED MEMORY.

Any arguments from out there ?

Lets have them.

Hugh Howie

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TS2068 Software Review

by Jeff Taylor

VIDEOTEX - DIGITISER SOFTWARE

John McMichael, long known for his development of TS2068 software and hardware for such machines as the 1520 plotter/printer, the Okimate 20 and the Gorilla Banana, has turned his hand to creating new software for the SMUG Video Digitiser.

Videotex (short for video texturizer) is a multi-function program designed to produce a quality digitised picture through multiple scans, brightness adjustments and filtering. Then the picture can be "texturized" by displaying it in any of thirteen shades of greyscale. The beauty of this program is that the picture can "tuned" to get rid of clutter and small dots. The file can then be saved or printed on the TS2040.

An extra feature is the option to produce overlays which, in effect, can merge more than one video picture with some experimentation.

The on-screen menus are easy to understand and, as usual, the documentation covers all the features in detailed yet easy-to-read fashion. In fact, once you try using this program, you probably will not go back to using the software supplied with the digitiser.

Videotex can be used with any video source like a tv camera, a camcorder, a vcr with dubbing output or a computer with a monitor output.

Anyone who has invested in the digitiser simply cannot afford to pass up the features of Videotex and at only \$9.95 US why would you want to?

For more information, contact John McMichael, 1710 Palmer Dr., Laramie, WY 82070.

```
***** VIDEOTEX (V 1.0) *****
**COPYRIGHT '89-John McMichael**
*****
```

```
MAIN MENU
(B)rightness adjust.
(C)apture video image.
(O)verlay menu.
(S)ave master video file.
(L)oad master video file.
(V)iew grey-scaled video.
(M)enu copy to 2040.
(Q)uit to BASIC.
```

```
<S>Lite <-----> Dark<B>
0 1 2 3 4 5 6 7 8 9 a b c
GREYSCALE SETTING
```

```
VIEWING OPTIONS
(Avail. ONLY while viewing.)
<S>Lite <-----> Dark<B>
<I>nvert
<H>oriz. flip <C>opy to 2040
<F>ilter <R>et. to main menu
```



DESCRIPTION OF WORDMASTER  
(USA version 1.08)

Word-Master is a software package written for the Spectrum by Paul Sneesby and Barry Parkinson, of PCG Software in England. The package is sold and supported in the USA by Jack Dohany. The US version is designed to run on the Timex/Sinclair 2068 computer, equipped with any form of Spectrum Emulator. The software is provided in pre-customised form for any 2068 disk system and printer interface. The software can also be used with cassette. Ordering information is on the reverse.

Word-master is a fully-featured "extendable" word processor, written entirely in machine code, with provision for Basic disk access. The program uses a Tasword-like 64-column display...but there the similarity with Tasword ends. I'd like to discuss three main features which distinguish the program: file handling, graphics capability, and extension programs.

File handling is what makes the other two features possible. Word-Master has a sort of integral ram-disk, which permits you to load as many files as there is room in memory for...and there's over 28K of file space! The files may be text, graphics, fonts, extension programs, or "page layouts". You can easily switch from one to the other, and you can link text files. The package includes numerous ready-to-use files.

Graphics capability: You can load a screen and easily "capture" all or part of it, automatically converting it into a "graphic file" suitable for inclusion by name in a text file. When the text file is printed, the named graphic is accessed from memory and printed along with your text. Of course the printer must have graphics capability. You control the position and size of the graphic with commands imbedded in the text. You can include many graphics in the text.

Extension programs are utilities which, when loaded and selected, add powerful capabilities to the core word processor. A bunch of small utilities are included in the package. There are two large utilities which are extra-cost options: HEADLINER (a graphics processor), and TYPELINER (a fantastic desktop publisher). Both include a number of special fonts. The TYPELINER fonts are complex proportional "printer oriented" letter quality fonts. There are two additional TYPELINER font-packs which are extra-cost options.

It's difficult to describe how smoothly and elegantly all of this works together. Try it! You'll like it! And if you don't, you get a refund.

ORDERING WORDMASTER

To order (or pay for) WORD-MASTER, please fill out and return a copy of the attached registration form. When ordering, you need pay ONLY for WM itself (\$18) and the \$3 charge for shipping. You will receive the COMPLETE package with all options, customised for your equipment where possible.

After you receive the package and have a chance to evaluate the options, you can decide which of the options you wish to purchase. You can then fill out and send me a new registration form, omitting the EQUIPMENT

section. You are expected to pay only for those options which you like and use. You need not return or erase unpurchased options. If you initially find you have no use for an option, and later find you DO have a use for it, then you should pay for it at that time.

If you find you hate the whole thing, you can return the entire package and receive a refund of the amount paid.

WORD-MASTER PRICES

The price of the USA version of WORD-MASTER is about 20 percent below the British list price, converted to dollars. The price ranges from \$18 to \$67, depending on which options you choose to purchase.

DEDUCTIONS

If I owe you money, you may deduct the amount owed from what you pay for WM. Just make a note, explaining the deduction on the back of the registration form.

NOTE: If you are already a legal owner of the British version, then you should pay only \$5 for the USA version of WM itself, rather than \$18. You should also pay for any options that were not purchased with your British version, assuming you wish to purchase them now.

LOW ON FUNDS?

The complete WORD-MASTER package is rather expensive. You need not pay for it all at once. You can pay for it as your budget permits.

SUPPORT

When you purchase software from me, you are entitled to one supportive phone-call or letter-reply at no charge. If you require further assistance I'll be happy to provide it, but I'll bill you for my time, at \$5 per hour. However correction of any errors on my part is always free.

Jack Dohany  
435 Woodward Way,  
Athens, GA 30606  
404-543-5309  
January 1990

(From the ZXAPPEAL newsletter.....Retyped by G.F.C.)

Note: the article did not include the registration form, etc. mentioned in the text. You should write to Jack, and ask for a copy of the application/registration form, if interested.

LKDOS "Didja Knows"  
by Bill Jones

LKDOS #1: <RANDOMIZE USR 100: PRINT "fred.AS"> will print the "fred" disk file directly to screen for your viewing. If "fred" is a dimensioned Character array all elements of the text array will print to screen. This is a good feature to use as a pull-down menu choice, as it lets one use the disk files for reference while creating a document.

LKDOS #2: Those using the LKDOS Cartridge with Oliger or Aerco Controller boards are missing the NMI button. But most NMI's can be imulated by programming. <RANDOMIZE USR 100: NEW> will auto load from whichever disk you may have as the active disk.

LKDOS #3: SAVE an AUTO LOAD PROGRAM: An auto load program can be of any size from small to large. The objective should be to use as little disk space for the program as is practical.

To conserve disk space RAM TOP is lowered to "near the top of the vars file". I like a reserve of 400 bytes above. But WHERE IS the top of the vars file? It is necessary to "find where" and do pokes for each AUTO LOAD program that one wants to save. Or is it?

In the following utility lines 10 and 1000 can be a standard for all AUTO LOAD program SAVES. You can save this little program to disk and re-load it each time you need the utility. Actually it is best to MERGE it to your auto load program. When ready to do your SAVE, type <GO TO 1000> and when the tune plays touch the "d" key.

Line 1 restores RAM TOP to its normal place (65367) before your own auto load program operates.

"Sandwich" your Auto Load program lines between line 1 and line 1000 of this-un..

[10] POKE 23731,255: POKE 23730, 87  
20 BORDER-0: PAPER 0: INK 7: CLS: STOP: REM \* set attributes. Remove Stop to let your program operate.

999 STOP: REM \* to prevent next line from operating except by GO TO to SAVE.

[1000] Let a=PEEK 23641+256\*PEEK 23642+400: LET b=INT (a/256): LET c=a-b\*256: POKE 23731,b: POKE 23730,c: RANDOMIZE USR 102: GO TO 10

To SAVE as an Auto Run program, type GO TO 1000. When the music stops, touch "d".

When the program SAVES, it will have only 400 bytes of FREE. (Minimum Disk Space)

Upon Auto Load, line 10 will reset RAM TOP to 65367. If the program has a variable file it will be preserved. BJ

LKDOS #3A: What to Include in a Auto Run Program?

Well, I would think that it would be very nice to Initialize LKDOS and the Printer Driver in the Auto Load program. Then you wouldn't need to spend FREE RAM in your operating program to do these functions.

Update Magazine gives you a neat utility called "Init.B6" that does these two jobs. Key it in as part of your Auto Run program between lines 10 and 1000. Then when your auto load program boots in the main program you are all set up to go with a Printing capability.

Some of Bob Mitchell's programs set up files in the RAM DISK for a program to use. Why not do that in your Auto Run program. Then you dont have to spend FREE Memory in the operating program for that purpose.

Once LKDOS and the Printer driver is set up, and RAM DISK loaded, the Auto Load program can present a MENU to load any other BASIC or CODE program in disk. Lets go through such a shennanagin. Now you're gonna have to use some imagination to follow through:

10 (Set Ram Top)

20 (Initialize LKDOS, plus prompts for type of interface, and other Printer Driver needs: SET PRINTER DRIVER.

30 RANDOMIZE USR 100 LOAD "menu.C1"SCREENS

We will assume that the menu has several choices for your own needs. We will assume that item 4 is to Load a basic program named "fred.b4" and this is your choice.

40 PAUSE 0:LET z=CODE INKEYS-48 assigns number key touched to var z

50 IF z=4 then RANDOMIZE USR 100:LOAD "fred.B4"

60 Other lines having IF THEN programming for other menu electives.

999 STOP

1000 same programming as given in previous listing to AUTO SAVE this Auto Run program.

OR- lets use another example for line #30.

30 CLS: RANDOMIZE USR 100: CAT ".B↑",: INPUT "Key in Whole BASIC program name to load";m\$: RANDOMIZE USR 100: LOAD m\$

In this example line 30, The disk catalog is gotten and a prompt allows you to select a Basic Program to load. Then the program is loaded. NOTE the wild card "↑" used to restrict the catalog to "Just Basic Program Titles". The wild card is great to present a catalog trimmed of non-appropriate files. Such abbreviated catalogs are useful as MENUS. BJ.

Minix on the QL  
by Timothy Swenson

MINIX is a Unix like operating system written by Andy Tanenbaum for teaching operating system classes. Minix has been ported to a number of computer systems, the QL being the the most recent on the list.

Since Minix is like Unix, users can learn about Unix from various levels. Users can become familiar with operating system at the user level or at any deeper level. Users can understand the various parts of Unix, from the filing system to the scheduling system. One can also use UUCP (Unix to Unix Copy Program) to automatically send mail and files to other Unix systems. The only limit is on the memory and speed of the QL.

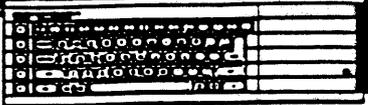
The original port was done by Felix Croes. He ported the Minix code to the QL from an Atari ST (600x0 also). Since his initial effort Felix has passed on the torch to Erwin Dondorp and Jeremy Allison. Erwin is doing most of the porting. Erwin is waiting to receive the most recent version of Minix (1.5.3) before continuing his progress.

Since Minix is copyrighted and distributed by Prentice-Hall (the book people) no one can distribute the QL source or executable code. I sent a message to Andy Tanenbaum and asked him if we (the QL community) could have a special license for distributing Minix. Andy suggested that PH might consider distributing Minix through their UK office. I said that sounded fine, but that US users also need to have a way of getting the program. The last I heard was that Andy faxed my last comment to PH.

So now we sit and wait to see what happens. I will keep a look out for any new news. I originally found out about the port from USENET. USENET is sort of a message board that runs across the Internet (a world wide network with parts being Arpanet, Defence Data Network, etc) and hosts that have mail connections to the network. Here is the e-mail addresses of those persons involved.

|                |                                   |
|----------------|-----------------------------------|
| Felix Croes    | croes@fwi.uva.nl                  |
| Erwin Dondorp  | dondorp@fwi.uva.nl                |
| Jeremy Allison | JRA@GEC2.PHYSICS.MANCHESTER.AC.UK |
| Tim Swenson    | tswenson@dgis.dtic.dla.mil        |

Bye the Way (BTW), there are a few QL users that have Internet access. There is an effort to bring them together via a mailing list. I'll keep everyone posted.



We carry ALL hardware and software lines for the Sinclair QL.  
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| <b>The Sinclair<br/>Desktop<br/>Publishing<br/>Journal</b><br><br>Editor<br><b>M. Felerski</b> 1 |               |   |

## Welcome To The Premier Issue

*By Mike Felerski*

The Sinclair Desktop Publishing Journal is a publication for Sinclair and Timex/Sinclair computer owners who are interested in Desktop Publishing, Graphics (i.e. SCREEN\$) and Word Processing. Since more and more users are getting involved in combined text and graphics for newsletters, invitations, booklets, instruction sheets, and more, there has become a great need for specialized software packages to produce these documents. For instance, this newsletter is being created using the latest Sinclair Desktop Publishing package by Steve Spalding, Customized Pixel Print (see other article).

The purpose of this newsletter is to keep all Sinclair users up to date on the latest programs and versions of programs for producing documents on the Sinclair computers. We also hope to include any helpful hints, bug fixes or ideas to assist our readers in the wonderful world of Sinclair Desktop Publishing.

### Getting Your Copy of TSDPJ.

The Sinclair Desktop Publishing Journal will be published four times in 1990 (January, April, July and October). There are currently enough articles for the 1990 issues, but there is room for more. If there is enough interest, the newsletter will continue into 1991. The cost of each newsletter is 50 cents. This covers the cost of printing, postage and handling.

If you wish to purchase the latest issue and/or any back issues (current issues will be mailed the 15th of every publish month) send 50 cents per issue and a list of the issues you would like to:

**Sinclair Desktop Publishing  
Journal**  
 1284 Brushwood Avenue  
 Cincinnati, OH 45224

## New Customized Pixel Print

Take one of the best desktop publishing programs for the TS2068 by Stan Lemke, place it into the hands of a top notch program enhancer like Steve Spalding, and what do you get... Customized Pixel Print. This new version of the famous Pixel Print Plus program incorporates seven new options:

|               |                  |
|---------------|------------------|
| View          | Greeting Card    |
| Double        | Selectable       |
| Move          | Save/Load        |
| Null Filename | Mark/Unmark Fold |

### View

The view option on the Main Menu lets you view the entire column within a small window on the screen. It also indicates the current screen location within the column. With the Customized Pixel Print Professional, both columns in memory are displayed side by side. This is an extremely useful feature that up until now was only available on high price machines like IBM PCs and Apple MacIntoshs.

### Double

Double is an option in the Graphics sub-menu. It allows the user to double the size of an icon (or any other 4x7 character size section of screen) to 8x14. After the icon has been doubled, the user has the option to accept or reject the doubling.

*(Turn to Customized on page 2)*

## The Print Factory Gains in Popularity

The Print Factory from Kris and Eric Boisvert of Bute Power Magazine is gaining popularity as a complete desktop publishing system for both the TS2068 and Sinclair Spectrum. The Print Factory package comes with eleven programs and utilities to satisfy the hungriest DTP user. The programs and utilities included are:

- |                           |   |
|---------------------------|---|
| <b>First Edition</b>      | 64 column graphic based DTP.                |
| <b>The Press</b>          | 64 column SCREEN\$ based DTP.               |
| <b>Letter Perfect</b>     | NLO proportional printing word processor.   |
| <b>The Labeler</b>        | A graphic based label maker.                |
| <b>The Banner Printer</b> | Makes banners w/ fonts & graphic            |
| <b>The Card Maker</b>     | Makes up to four sided cards fast and easy. |

*(See Factory on page 2)*

**Selectable Save/Load**

The selectable Save and the selectable Load options allow the user to Save and Load portions of a column, say just the first 30 lines or the middle 50 lines. Previously this feature could be added by code changes made by the user, and found in the *Pixel Print Press* Fall 1988 issue.

**Null File Name**

To quote the *Pixel Print Customized Manual*, "Any time you are prompted for a file name, and decide to abort the operation you can simply press ENTER to return to the Main Menu." Need we say more?

**Move**

Two new Move options have been added to the Move Menu in addition to (T)op and (B)ottom, they are 6 (down arrow) and 7 (up arrow). Pressing 6 will take the user to the bottom of a column and 7 to the top of the column instantly. I just wish there was a Page command to move down a screen at a time.

**Greeting Card**

You can now create your own greeting cards with the new *Customized Pixel Print*. Simply, you use the first half of a column to design the front of a card, and the bottom half for the inside of the card. This gives Sinclair users one of the most flexible card makers that is available. The drawback is that it makes it a little more time consuming deciding what to do and where to put it--ah, freedom is wonderful.

**Mark/Unmark Fold**

This feature goes hand in hand with the Greeting Card option. It helps you quickly find the middle four rows to leave blank when designing a greeting card. Pressing M in the Graphics Menu places two small markers in the center of the column. Pressing U removes these "fold" markers.

The new *Customized Pixel Print* contains all of these features plus almost all of the original features of *Pixel Print Plus*. There is also a new Borders package available from *Sting Graphics* (see below). Being as objective as possible, there are very few changes that I would like to see such as centering of text and paging in Move. To obtain your copy of *Customized Pixel Print* send \$5.00 to:

Steve Spalding  
Sting Graphics  
103 McLean Ave  
Royal Oak, MI  
48067

**From the Rumor Mill...**

Stan Lemke may be working on *Pixel Print Version 5* for a release in 1990.

*Byte Power Magazine* may cease software development if sales do not increase this year. Now is really the time to buy-- don't wait.

A truly Dead Computer is one which has no new professional software being developed for it.

A *Tasword Spell Checker* is in the works as well as a *Cross DOS File transfer utility*.

**Factory from front page**

- Quick Screen** Use PF graphic designs to create SCREEN\$.s.
- File Keeper** Mix and match graphic designs to create custom libraries.
- The Translator** Translates Lemke/Zebra Icons to PF graphic format.
- The Creator** Create your own custom graphic designs.
- ZX Driver** Use TS2040 or compatible rath than full size printer.

All of these programs come on two cassette tapes with the most impressive documentation Timex and Sinclair users have seen in a long time. The entire package is available for \$24.95 (US).

Each of the programs uses the TS2068 or Kempston compatible joystick for Point-and-Click operations. Even in Spectrum emulation, users can use the TS2068 Left joystick port (an amazing feature in its self).

In the next issue of TSDPJ we will cover each of the programs from *Byte Power* in depth including tips on printer setups (send me yours), tricks, new releases and uses for the programs. I highly recomend this package from:

Byte Power  
1748 Meadowview Ave.  
Pickering, ONT  
L1U 3G8 Canada

This issue is provided FREE as a supplement to the ISTUG Newsletter. The continued success of these two and all Timex Sinclair publications in North America depends on YOU, the reader...

ce=y  
TORONTO TIMEX-SINCLAIR USERS CLUB  
April 18, 1990

14 Richome Court,  
Scarborough, Ont. M1K 2Y1

Les Cottrell  
108 River Heights Drive  
Cocoa, FL 32922

Dear Les,

Thanks for the return of the four disks and the updated Adventure disk. Also for the \$2 postage (and the bits of coloured paper). I am enclosing quite a number of disks that you have asked for. Let me see; the Assembler, the Languages, the Omnibus, and the PPP disks. also a tape catalogue.

I tried the Icon Designer program, since you mentioned you had problems with it. I had not remembered having any trouble with it, and when I tried it today I found that it worked properly. The joystick moves as it is expected, not as you say yours is working. Maybe you are using the joystick port on the Larken. You must use the jacks on the 2068; left or right both work. I have some instructions on using the program. If you like I can send them out. Maybe you could type them in and I could put them on the disk. I don't have the time to do it myself. I'll tell you what I mean; today I got 11 pieces of club mail, most of them needing work. done ✓

I have heard of Ken Shoenburger, I think, from other newsletters. Maybe he belongs to another group. I wrote to Larry K. a few weeks ago, and he replied recently. I am going to publish his letter in the next newsletter. Since half our members have Larken systems, I think they will find his letter interesting.

Come to think about it; I'll have to check and see whether your NMI-F feature has been placed on the OMNIBUS disk. You will like the latest OMNIBUS disk. Bob has put a lot of new ideas into it. I wound up using it and adding my special programs to it, rather than trying to add his features to my version. It was simpler. You may do the same thing.

I shall have to check with Jeff Taylor about the Larken Disk Editor review. I remember it, but I'm just a bit puzzled by it's non-appearance. I have to watch Jeff, our Editor, a bit. If I send him a lot of material he tends to publish it all at once, rather than rationing it out over several months. So now I just send him what I want published for the current issue!!

When a member asks for back issues I simply charge them 5 cents a page for whatever number of pages are involved, plus the postage of course. That is about what it costs us.

Shall close off now,

Sincerely,

George Chambers

*The PP Prof. may have some bugs in it. I have not really tried it, only worked out the LARKEN routines - The "ARTIST" has a couple of marks on screen - also the TAsword/msscript/PP conversion may not be working. I've sent a copy back to Stan L. with these observations.*

Dear Out-of-Town Members

I'm afraid the first part of this newsletter is about various aspects of the Larken disk system. Sorry about that, but that seems to be where the action has swirled around me the past month.

In my last missive I mentioned a letter by Bill Jones re fishing, etc. Well, as you can see, Bill's letter did not appear in that issue of the newsletter. I asked the Editor what happened. Seems Jeff thought it was too personal. I spoke to Hugh Howie, and we concluded that it was worthy of publication so hopefully it is in this issue. Sorry about that; get out my last letter, to get the fullness of it!! P.S. The Editor missed it this month also; he apologises. But I am including it separately with this letter.

Now onto something else. Printer interfaces for the TS2068, that's what. Rene Bruneau has been in touch with Peter Hacksel. Remember the Hacksel Printer Interface? Well, Peter has maybe 20 printed circuit boards left over, and is interested in selling them off. The club are to make an offer to purchase them from him. Now, some of the boards, we don't know how many, were of the design that plugs into the cartridge dock. There's nothing wrong with that, in fact it is quite an attractive arrangement, unless you have a Larken Disk System. Then, the Larken cartridge occupies the cartridge dock, and the printer interface has to be plugged in at the rear of the computer. The cards can be modified in such a way that they will fit on the rear, though this would take a bit of additional work. What I'm really saying is that if any club members are interested in getting one of these printer interface boards you should let me know, and which type you prefer. They will be bare boards. There would be a set of instructions, but you would have to get the other parts, and assemble the board yourself. Or, maybe Renato Zannese would do it. Well, I'm sure that he would. Anyway, if you are interested, let me know, so I can put you on a list.

Recently I received a disk from Bill Harmer, who lives in Ottawa (TS Bulletin in this issue). It was a disk with about 30 tracks containing downloads from the Timex section of one or more BBS's. The contents of these messages made quite interesting reading.

What is more interesting is that this disk was an MSDOS disk. When I tried to load it with the Larken system, it gave me a CRC error report, as I expected. However, when I used the "doctor.B1" utility, I found that while it still reported a CRC error, the selected track was in fact loaded into the computer.

After doing some experimenting I wrote a utility which would load successive tracks from this disk into the computer, and save the result as an Mscript file. It was ASCII text, after all. I have asked several of our club members to give me other MSDOS disks containing text to experiment with to see if the same thing can be repeated with other computers' disks. Who knows where this may lead. I shall write an article on the experience, for our next newsletter. In the meantime I have prepared a disk which I call MS/DOS CONVERSION, which contains the results to date. If anyone is interested, drop me a line. (I have since tried another MSDOS disk, again

with success)

Bob Mitchell has added another four chips to his RAMdisk, bring it up to a full complement of 8 chips. There's an interesting thing about this, and a caution. Jameco, who supplied him with the chips, substituted the chips he requested (62256-LP) with ones identified with the number 51257/10. Well, he reports that he is encountering the occasional CRC error on these chips (but not on his original 4). So be warned. Do not accept substitutes. From my own experience where I encountered difficulty with chips with the designation 71C256L-85, I would suggest that you insist on receiving the requested chips. I find chips with the designation 43256L or LP work properly on my system.

Incidentally Bob paid a total of \$46.80, including shipping for 4 chips. I think this was in \$US. Shipping to Canada would be an additional \$3. The price of these chips is coming down significantly. A year ago I paid US\$17 each.

Another member, Les Cottrell, has written an interesting routine for the Larken system. It uses the NMI-F key function. A short piece of code is loaded into the Larken RAM when the computer is turned on. Thereafter, whenever you press the NMI button, followed by the F key, the computer returns to an AUTOSTART menu stored in the RAMdisk. I should imagine that it could do an AUTOSTART routine on a disk in the first drive of the system, if you so desired. Anyway some refinements are still in progress, and I expect we shall have full details in either this newsletter or the next one.

We have some additional disk titles in the Larken library. I shall enclose a catalogue sheet with the newsletter, to all Larken owners of record. If you don't get one and are interested, ask for it.

One of our club members has sent me a copy of the RMG Enterprises catalogue on Larken disks. RMG is probably the premier Timex dealer hereabouts. I shall put this disk into the library, also. It came to me on two DS 80tps disks, so I shall put it out as 3 DSDD disks. Each catalogue page is contained on a separate Tasword file. That's why it takes so much space. Well, also because RMG have so many Timex items to sell!!! Do ask for the disk, it's interesting stuff.

Though I'm not really enthused about a catalogue on a disk. I see it as a sort of a novelty, but I find it easier to read printed copy, any time. Of course you can always print the file out onto a large printer, say, print out those pages that interest you.

Today I received the January issue of UPDATE. Bill Jones says in this issue that the July issue, the end of the subscription year, will be the last issue of the magazine. He is "wore out". I'm not surprised. It has been a one man show, and must surely take a lot of doing to put out such a magazine. But I'll be sorry to see it leave the scene. There will just be newsletters from now on. He comments on the demise of two other Timex publications, Quantum Levels, and Syncware News. But I did not come across any mention of Time Designs?!

Bill mentions that he has offered to turn the UPDATE magazine over to SNUG as their vehicle. He has not heard from SNUG on the offer. But in

the SNUG n/l there is a paragraph which reads as follows:

"There is an offer to expand the readership of whatever we end up with as a newsletter by taking over an existing publication. Does the membership feel that we should assume the obligation of a publication with a readership of 400+, and would those folks be willing to join SNUG?"

Back issues of Quantum Levels and Syncware News are still available. The back issues are being offered for \$3 each \$US, and includes handling and shipping. UPDATE has a three-page review/advert in UPDATE, listing the contents off each of the issues. If you are interested I can send you a copy of this advert.

SNUG has issued its first newsletter. We have received our club copy. It contains 9 pages, talks about SNUG aims; canvasses for newsletter material, spelling out the ideal format for contributions. It has a 3-page article on the use of the PRINT/LPRINT commands. Describes the objectives of their tape/paper libraries. Has some T/S news. Ask me if you would like to have a copy.

We exchange newsletters with the Seattle Area T/S group. They put out their newsletter using the Pixel Print utility. It is an interesting newsletter, and it is doubly interesting to see their use of Pixel Print. Anyone like to see a copy? Ask me.

I located Cameron Hayne's address, in Montreal. The name will be familiar to some of you. Those of you who use the TIMACHINE compiler. He wrote it. Well, I have written to Cameron, and I asked him if he would give me a profile of himself, that we could put in our newsletter. With any luck we might have it for the next issue. Should be interesting to hear from Cameron. He used to be a member of our club until he went to England for a spell. At the same time I posed a question to him about TIMACHINE. Seems that when you try to do a printout to a large printer of the RUNTIMES, etc of a compiled code, the printout to the large printer is incomplete, and sometimes corrupted. Have any of you experienced that. Two of our member have mentioned it to me, recently.

While on the subject of TIMACHINE, Bill Harmer mentioned in his #1-1990 newsletter that was included with our last mailing, that a corrective POKE for TIMACHINE was incorrect. He mentions that the POKE address for LINE 106 should be 33880, not 32880. But this puzzles me. When I look at a correction sheet that I received from NOVELSOFT soon after TIMACHINE's issuance, LINE 106 refers to address 33280 (another number altogether). Very confusing. We shall await developments. Where are you Bill, let's get it straight!!

Does anyone have Gary Lessenberry's address. I would like to write to him. In the MSDOS disk that I spoke about earlier, one of the messages made reference to using a Commodore mouse on the TS2068. Said that it was used with the program Art Studio, and referred to Gary as the source of the info. I'm interested in learning more about this possibility. Sounds very interesting. Anyone heard about this possibility? Jeff Taylor tried it without success; it probably needs some "mouse" software.

I think I am just about up to date on my mailings. If anyone is waiting for something from me, better drop me a line; I must have lost sight of it!!

I had a call about a month ago from a firm in Alabama, offering to send me some magazine copies for our club members. I said "Well, yes I could use about 25 copies". So about 10 days later a package came in the mail. It weighed about 25 pounds, and cost \$26.95 in postage. It was the magazines. Vulcan's COMPUTER BUYERS GUIDE. It is a smaller edition of the Computer Shopper, but a direct take-off of it.

Interesting thing about it is a comment in the Editorial which reads:...."We have learned that coverage of this market (meaning the non-PC/Apple equipment...GFC note) has been discontinued in another magazine. It is our intention to add this coverage as early as in the April issue. Your support and input are all that is needed to make this coverage a success."

I notice that the classified ads have the same section number assigned to T/S equipment (125A, B, & C). Michael O'Brien may make an appearance there, yet!! I also notice that this magazine is on sale in my local news-stand. Cost \$1.95 US, \$2.50 Can. I would mail you a copy but it would cost more than that to mail it.

Stan Lemke has sent me a copy of the PIXEL PRINT Professional V5, that has been in the works for some time. The program is what is known as "fairware" or "shareware". This means that the author of a program such as this wants it to be spread far and wide, and hopes to recoup a return from his efforts by users who like the program sending him what they feel it is worth to them. \$15 is suggested as appropriate. The key item is that Stan wants it circulated as much as possible. It has been written for use with the Aerco DOS, and came to me on tape. I am in the midst of converting it to the Larken LKDOS. It will be on a club disk. It seems to have a lot more going for it than even the PP+ that is on the library disk #10. It looks particularly applicable when used with the Larken RAMdisk. Ask for it, the PPP.

Bob Mitchell has sent me his latest version of his OMNIBUS program. It is a menu program designed especially for systems which have a RAMdisk and a Quad drive. I have an earlier version; like the one on library disk #2. But when I looked at Bob's latest creation I just had to install it instead, and work my own programs into it. I think I shall replace the existing library disk with this one. Ask for it.

I managed to pick up a Corporate 10 Printwheel for my L100 Printer. Remember, I mentioned that I was not able to find any. Well, a small print supply store dug one out for me. Bob Mitchell has also found another one of the same type, for me. I would like to get a PICA 10 RED RING printwheel, so if any one finds one pick it up or reserve it for me!! This letter is done with the new wheel, the old Pica was just about hammered flat.

I have about three used DSDD drives that I would like to clear out for \$20 each. I'm afraid I could not resist buying them from a surplus store, to fiddle with them. It got to be a bad habit, and now I daren't pick up any more, unless I can get rid of these!! I've used that with no problems on my system, so they seem perfectly OK.

Well, that's it for now, Shall close off.

Sincerely,

## LETTERS OUT BOUND

Mr. George Chambers  
 Toronto TSUG  
 14 Richome Court  
 Scarborough, Ontario M1K 2Y1

Dear George,

The receipt of Synclink today gives me the excuse to write and wish you and yours Happy Christmas Holiday.

Now for some feedback about Synclink and your regular letter to out-of-towners. Your Synclink newsletter has taken on the size of a magazine and its article content is very well balanced. I enjoy every issue. The Toronto TSUG deserves much praise for producing such an outstanding publication. Also, your letter to us furreners is always interesting. The latest took Update to task for using the wrong name for the Toronto TSUG. That's O.K. and no offence is taken.

Update Magazine apologizes for calling the "Toronto TSUG" by the wrong name of "Ontario TSUG". Despite our using the "Ontario TSUG" name, I hope that Update Magazine's continual mention has helped your membership. Now I'll offer a deal to you. I'll start calling your TSUG "Toronto TSUG": if you'll start calling this magazine "Update Magazine". We dropped "TS" after the first couple of issues because we couldn't see that Timex was contributing much to our goals. Also, some readers get quite aggitated everytime Timex is mentioned, probably because they were abandoned at birth. Also I believe that UPDATE MAGAZINE sounds more dignified. (No, I'll make my corrections unilaterel, whether you change or not.)

Since all of Update's comments about the Toronto TSUG have been extemporaneous, I invite you to send in a 1/8 page boxed column announcement that says "what YOU want said about Sinc Link and the Toronto TSUG". It will be published free.

Please get the word to Hugh Howie, your QL Librarian, that REPRINTS of Update articles are OK. Minor credit mention will be appreciated. Also, most of the key-in programs in Update are given to Public Domain. Also, since Hugh is having problems finding worms for his fishing enterprise, I'm sending Hugh a barrel full of Florida worms. Should be about a million of the critters in thar. At 4 worms per floppy (his barter rate) he will owe me enough floppy disks

that I can compete in the World wide market for flp's.

But, Hugh can return the barrel full of Muskies if he'd rather, as we can use the muskies for trolling bait here in Florida. Walleyes are too small. The ideal size Muskie bait is about 40 inches. Last time I used Muskie fer bait I caught a pretty good un. When I boated it the tide went down two feet, causing some deeper draft boats to be grounded. So, I had to throw it back. You fellows who fish in the small Lake Ontario should come down and bring your muskie bait with you. The muskie are kinda scarce here.

What is the Canadian import duty for worms anyway? We get our worms with a technique called "Snoring". We drive stakes in the ground and then rub a board across, causing the ground to vibrate. The worms are ticklish and they come charging out laughing. The yield in good ground is about 600 worms per rub. But once they come out they stop laughing and get mad. One has to be careful to stop rubbing, else the critters will attack in military division strength. On guy snored too long and he was chased clear to Nova Scotia by an angry division of worms firing mud balls at his back side. They only quit chasing when it began snowing. Last we heard, them worms were dressed in overcoats and taking up politics in your Eastern Province. We also have our share of wormy politicians.

TS-2068 TYD BYTE: Before using DELETE within a long program line, run the cursor to the beginning character to be deleted. Then add a Quote ("). Then you can run the cursor to the last chr to be deleted and delete the whole string of characters without stoppage. This avoids the Bug in the TS-2068 ROM which causes DELETE to be printed on screen when trying to delete a Colon. This works for everything except <THEN>, which still gives the DELETE. To overcome <THEN>, pause slightly to allow DELETE to stay on screen. The next held Delete action will erase <THEN>.

ANOTHER: While editing program lines, and when you have made a mistake and would like to start over- "without having to correct the syntax of the botched up line"-- just Caps Shift the One Key again. The original program line will jump to the bottom to be edited. But where does the botched up line go?

Have a nice Winter! -BJ\_

TORONTO TIMEX--SINCLAIR USERS CLUB  
March 17, 1990

14 Richome Court,  
Scarborough, Ont. M1K 2Y1

Les Cottrell  
108 River Heights Drive  
Cocoa, FL 32922

Dear Les,

Sorry I have not got back to you sooner. It's been so long that I can't find your letter to reply to it.

Not that you have been lost or forgotten! You will see that your newsletter article has been published. Well, actually I see where the editor has published two of them. I guess he does not like to save things for a rainy day or something. I see where two of my articles are in the same issue, and I wish he had kept one of them for the next month. I can't just whip up one of them out of thin air. Can you?

Well, I sent your article to Bob Mitchell shortly after I received it from you. He incorporated it into his OMNIBUS disk, so that when loading the AUTOSTART menu it booted the routine into the DOS. However, Bob went a bit further. He buried the code in the AUTOSTART program at address 24495. That way he does not have to hold it in the BASIC part of the menu program. Just do a POKE routine from BASIC to move it from 24495 to 16100.

I carried the idea a bit further by putting an LDIR routine in front of it at the address 24495. Then in the menu program I just make a USR call to 24495 and it gets booted into the DOS. This whole exercise does two things. It gets the routine into the DOS quickly, and it uses empty space in the AUTOSTART program (24495 & upwards of 80 bytes) rather than in the BASIC program itself. The AUTOSTART program has to have a line to do the USR call to 24495, and also a POKE into the DOS to install the starting address 16100.

Because Bob has some other m/c routines that he POKES into the DOS he moved the routine to address 16310, but that is just a minor point. That sort of consideration resulted in choosing 24495 as the appropriate storage area for the routine. I'm sending a listing so that you can try it out. Do you want to write up an article about this development, or shall I. I see where, if one chose one could point the operation to any drive you chose. That might be useful to members who do not have a RAMdisk.

If, or I should say, when I come across your letter I shall respond to it. Are you waiting for something from me? I'll cast around before I send off the n/l to see.

Sincerely,

George Chambers.

We do appreciate the article. You see how it can prompt a whole new set of activities. That's part of the problem; I've been playing around with it instead of getting at my correspondence!

2 REM by Les Cottrell,  
with mods by Geo Chambers

```
15 RESTORE 30: FOR a=24495 TO
24575
20 READ b: POKE a,b: NEXT a
30 DATA 243,205,98,0
40 DATA 33,195,95,17,228,62,1,
58,0,237,176,58,100,0,251,201
50 DATA 243,205,98,0,62
60 DATA 128,50,3,32,33,20,63,1
7,34,32,1,10,0,237,176,62,11,50,
2,32,205,198,0,42,124,32,34,51,3
2,42,134,32,34,49,32,205,201,0,6
2,100,251,201,0
70 DATA 65,85,84,79,83,84,65,8
2,84,32,0,0,0
80 RANDOMIZE USR 24495
90 RANDOMIZE USR 100: POKE 821
4,16100
100 BEEP .5,.5: PRINT "NMI-F Re
boot activated": PAUSE 0: CLS
8999 STOP
9000 RANDOMIZE USR 100: SAVE "NM
I-F.83"
9010 REM This SAVE puts the code
into DOS at address 16100
```

```
24495 F3 DI
24496 CD6200 CALL 98
24499 21C35F LD HL,24515
24502 11E43E LD DE,16100
24505 013A00 LD BC,58
24508 EDB0 LDIR
24510 3A6400 LD A,(100)
24513 FB EI
24514 C9 RET
24515 F3 DI
24516 CD6200 CALL 98
24519 3E80 LD A,128
24521 320320 LD (8195),A
24524 21143F LD HL,16148
24527 112220 LD DE,8226
24530 010A00 LD BC,10
24533 EDB0 LDIR
24535 3E0B LD A,11
24537 320220 LD (8194),A
24540 CDC600 CALL 198
24543 2A7C20 LD HL,(8316)
24546 223320 LD (8243),HL
24549 2A8620 LD HL,(8326)
24552 223120 LD (8241),HL
24555 CDC900 CALL 201
24558 3E64 LD A,100
24560 FB EI
24561 C9 RET
24562 00 NOP
24563 41 LD B,C
24564 55 LD D,L
24565 54 LD D,H
24566 4F LD C,A
24567 53 LD D,E
24568 54 LD D,H
24569 41 LD B,C
24570 52 LD D,D
24571 54 LD D,H
24572 2000 JR NZ,24574
24574 00 NOP
```



# TS Bulletin

A Hobby Publication  
of:

News Supplement  
#2-1990

BILL HARMER  
97 Ruskin Avenue  
Ottawa, Ontario  
Canada K1Y 4G3

TS BULLETIN NEWS SUPPLEMENT - #2-1990 Pub. By Bill Harmer, Ottawa © Public Domain

The Indiana TSU reports that a new version of the program by Stan Lemke, Pixel Print Plus (ver.4) has been released. It was almost finished when Lemke Software Dev. got out of TS2068 market and Steven Spalding of Sting Graphics has completed it. It no longer supports the TS2040 printer but has substitute a Greeting Card design facility in the space saved. The Indiana n/1 is planning a review of desktop pub. progs. starting with their next issue. The writer recently talked to Larry Kenny of Larken, who is currently working on a TS2068 desk top publ. program with spell-checker, etc. This useful area of use for Sinclair computers happily continues to grow in support. .... The Indiana n/1 also has a 2 p. advert. for the Oliger, TS2068 disk system specifying 395K disks, 5 1/4 inch and they are also selling their system in bare pcb form (no chips, two boards needed) for the hardware hacker to assemble. This system has had a long evolutionary course of upgrades and improvements. It is double-density, uses the WD1770PH-00 f.disk controller chip and is Spectrum ROM & OS64 compatible. John Oliger Co., 11601 Whidbey Dr., Cumberland, IN, USA 46229.... Larken El, RR#2, Navan, Ont., Can. K4B1H9 and Aerco, Texas, sell TS2068 disks, too.... Sincus, 1229 Rhodes Rd., Johnson City, NY, USA 13790 is working to mate the Linger Board (RS232 terminal bd) to TS2068. This makes use of TTL mon. & IBM keybd. possible with TS2068. 80col. TS2068 BASIC ROM mod. coming.

⇒ Magazine News: SyncWare News/Quantum Levels is selling back issues for US\$3 until exhausted (@602 S. Mill St., Louisville, OH, USA 44641) - losses of about \$5000 put them out of circulation a year ago.... Vol 5 No 2 of Time Designs is out, 29722 Hult Rd., Colton, OR, USA 97017 (BBS-503-824-2658, 8/1/n).... Update the disk system magazine is US\$18/yr, 1317 Stratford Ave., Panama City, FL, USA 32404 (904-871-3556). It has 2068, QL & Z-88 material. (4xper yr).... Byte Power, TS2068 mag-on-a-cassette, demo US\$3, 1 issue \$6, 6 issues \$32 - also TS1000 progs. \$10; fast load for TS2068 - \$20; LKDOS util. v. 2.0 - \$30, 'DUS' @1748 Meadowview Ave. Pickering, Ont., Canada L1V 3G8-----

⇒ Mailing List Changes: add to your list the following contacts for Sinc SIG's ----- G. Granger, 812 Hedwick St., New Carlisle, Ohio, USA 45344; Another Sinclair SIG is in Pittsburgh Area Computer Club, Sinclair SIG, R. Vasko, One Virginia Dr., Donora, PA, USA 15033 - Note both of these addresses are contacts reported by SLIX and are not necessarily the contact persons that are officially representing the Sinclair SIG's in these groups, but they are probably leads worth following up.... As yet no address here for Boston TSUG, said to have separated from Boston Comp. Soc. (as SIG)

⇒ Supplier File: TK Computerware (QL Software), Stone St., North Stanord, Ashford, Kent, England CT25 6DF; --- Lloyd Dreger, P.O. Box 101, Butler, WI, USA 53007 (3 books on using machine code with the TS2068); --- Pyramid Electronics, 2174 Gulf Gate Dr., Sarasota, FL, USA 34231 (813-922-9574) (TS1000 & TS2068 software); --- Bottle Cap Software, 1284 Brushwood Ave., Cincinnati, OH, USA 45224 (OS-64 software, TS1000, TS2068, including Checkbook Balancer, Credit Card Payer, Index Card Printer for Cassette Boxes are three examples of their OS-64 programs for US\$36 each); --- TS(1000?) progs. available, 10 for \$15, \$3 each, 36 titles to choose from, \$25 min, order from, AT Software Liquidators, 2640 S. Harbor Blvd., Santa Ana, CA, USA 92704 (714-751-2667) .... Wm. McKelvey, 744 Wall Rd., Spring Lake Heights, NJ, USA 07762 is making heavy duty power supplies for the TS2068....

⇒ Bugs, Fixes & What You Can And Can't Do, (Maybe): Can you interface a Commodore 64 disk drive to a TS2068? Maybe, SLIX reports that a group out of Ohio once worked on a project to do this.... Can you use CASE with LONGINT in TurboPascal ver. 4.0 to 5.5? Probably not due to a bug in the compiler, the fix is to use IF..THEN...ELSE instead.... Can you use MS DOS version 3.0, 3.1, 3.2 happily with all compiled programs (as with the QL The Solution emulator?), maybe the odd bug will appear, since MS DC only fixed a particular bug in its versions 3.3 and later.... Is there a simple program, available preferably in source code, to read CP/M disks with an MS DOS computer? - if there is anything out there in the public domain the publisher of this newsletter would like to know.... Can you read MS DOS disks on a Radio Shack CoCo with OS-9 Level I? If so, Michael Furman, of Calif. GUTS group would like to know and wants to try to write a program to do so. Contact SLIX if you know anything.... Are BASIC programs, written in the dialect of your interpreter, convertible to a compiled program? As often as not no. Most compilers will load in interpreter created programs but only a few will compile them without editing/changes-----

→ \*MAN WHO SAY IT CAN'T BE DONE SHOULD NOT GET IN WAY OF MAN WHO IS DOING IT. - Old Proverb ←



## AMATEUR PROGRAMMERS'

LINE: A Column by Bill Harmer

BASIC is still being used in the real world out there (MS DOS, Atari ST, Apple Mac), by amateur programmers, but not as much as the newer, more in-fashion languages like C language or even the newest entry, Modula-2, by the inventor of Pascal. Probably more amateur programmers have moved up to Pascal than any other language, when casting around for substitutes for BASIC. In the Sinclair world, that usually means HiSoft Pascal on the Spectrum-Rom-equipped TS2068, although the QL has a version of Pascal (or more than one) and even the lowly TS1000/ZX-81 had a version (of partially integer Pascal) called Partial Pascal, on cassette. For the IBM (&CP/M) crowd, Turbo Pascal by Borland still is the standard although some public domain/shareware versions of Pascal do exist, like Mystic Pascal. Trouble with most compiled languages is that you have to go through a tedious set of steps to get your source code program compiled so you can test it to see if it will work. The alternative, not testing until you have added a lot of lines of code, may mean that when the routine bombs, you have a lot of possibilities to look into, as to the bug's cause.

The writer once, rather grandly thought of establishing a BASIC codeworks operation to revive the dying art of distributing the source code for BASIC programs, since once the programs are compiled, you lose the source code and when the user loses the educational value (if any) of tracing how you did this or that function. I still say, that reading others' source code is the only way to improve your own programming quickly, and with compiled programs, that is hardly possible, since they tend to get disseminated, without their otherwise, accompanying source code files (if for no other reason than to save modem time and disk space). A few programs were added to the file of such BASIC source code, but it is amazing how much work there is to writing even a simple program, and getting it running. Time perhaps better spent, on learning another language, or something, was sort of begrudged to the BASIC code writing project. Of course, another source of BASIC code remains, that of Sinclair programs converted over to MS DOS, but then that is another story. Simpler programs for the simpler computers like the Sinclair orphans, do however tend to look a little sick and their graphics rather pale, when uploaded to MS DOS or even uploading TS1000 programs to the capitals and lower case, milieu of the TS2068 and QL. Anyway, treat your store of original BASIC programs as a treasure trove, since there is no way of knowing if you or another might be able to gain by converting them to another computer's format. The best way to do it would be probably to have a building block program in the new computer's BASIC, which provides the sort of essential title page display, menu display, 'Press enter to turn a page' sort of routines already tricked out, in form and elaborateness suitable to the new computer and then upload the old BASIC program (or key it in) to that block, and with a bit of splicing and editing, most of what works in say, ZX-81/TS1000 BASIC, will also work in the more fully-featured BASICs of the bigger computers around. Maybe, the newer computers require you to put variables in brackets (for `SQR X` use `SQR(X)`, square root, for example). Some BASIC's use `LOCATE` or `PRINT @` instead of `PRINT AT`, and often the easiest way to solve the problem is, instead of using `PRINT AT 9,14;"MENU"` to centre the word, just a bunch of `PRINT` statements to get to the middle of the screen, and then `PRINT "MENU"`, with as many spaces in the quotations ahead of the word, 'MENU' as are needed to centre it. Most computers have fancier ways of doing that, but the simpler method will solve the problem until you get into the fancier ways (perhaps, as is often as not, never even mentioned in the users' manual for the new computer).

Theoretically, the amateur can stick with BASIC for ever, as all computers sooner or later have a BASIC made for them. (The exception, IBM AT clones running Windows by Microsoft, offers a chance for the ambitious amateur programming language designer). I would think that anything worth doing on a computer can be done with BASIC programs, perhaps running a little machine language in sub-routines from within the BASIC programs. The BASIC compilers around also offer the choice of going that more sophisticated route without learning a totally different language anyway. The TS2068 has the Timemachine BASIC compiler and even the ZX-81 had at one time MCCDER (an integer BASIC). Of course for those running CP/M on the Sinclair computers, the regular CP/M BASIC compilers are perhaps another option.

There are just too many BASIC programmers and BASIC programs for BASIC to die as a language, at least not in the next ten years, for sure.

## TORONTO TIMEX-SINCLAIR USERS CLUB

March 26, 1990

14 Richome Court,  
Scarborough, Ont. M1K 2Y1Les Cottrell  
108 River Heights Drive  
Cocoa, FL 32922

Dear Les,

I have been remiss in answering your letter of February 5th. Well, I have some reasons, but they are not very satisfying. And they won't do as excuses!

Bob Mitchell and I have been working over your NMI-F routine. Bob has put it into his RAMdisk AUTOSTART program, placing the code at spare addresses 24495 upwards, and booting it from there into the LKDOS RAM. Held in that address it gets SAVED with the AUTOSTART program. I went a bit further and put an LDIR routine in front of it, to do a fast load into the LKDOS RAM. I'll look up the info and send it with this letter.

I am enclosing the additional pages from our TS2068 tape catalogue, that you asked about. You may note there are some revised pages. This came about because I removed the programs dealing with the early version of the Larken system and replaced them with other programs.

You ask which way we like to receive articles. The way you sent it on disk was perfect. I suppose we don't mind how they come. The only thing I sort of care about is that they be legible in the newsletter. With all the cheap printers around on Timex systems, it is often hard to get copy that will reproduce well. That is why I like it on disk; I can put it out onto a daisywheel printer, and get good copy. Also, we can often reproduce it in reduced size to make better use of our newsletter space. We try to get as much stuff as we can in the newsletter; rather than just filling the pages with "fluff"!

I am sending you a copy of the club disk #10; Pixel Print Plus. It consists of three disks; and I think it has all of Steve Spalding's work on it. I am working on another disk from Stan Lemke called Pixel Print Professional. It is a Shareware program, and makes use of the Larken RAMdisk. Well, it will when I get around to "Larkenizing" it. Ask for it next time. It will be in the Library eventually.

Oh yes, and you wanted a copy of Bob's disk index of our newsletters. I'll get it onto another disk.

Shall close off now.

Sincerely,

George Chambers

P.S. I think I never thanked you for the 5 disk copies that you made for me, of the disk library. Thank you very much. I was much appreciated! George

*P.S. Bob M's & my profile program is probably different than yours, & you will have to load the code in at the right spot, also poke in a value of P.*

*didn't get sent*

