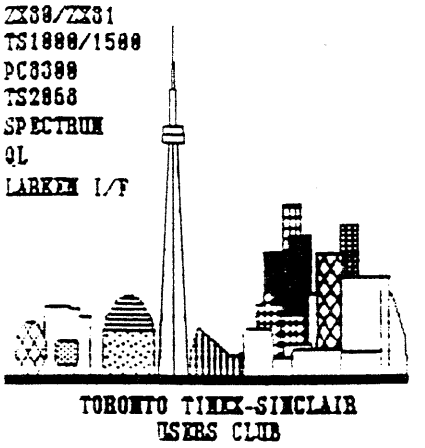
SINC-LINK

Vol.7 No.3 May-June '89



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THE CLUB MEETS ON THE FIRST WEDNESDAY OF EACH MONTH AT FOREST HILLS COLLEGIATE INSTITUTE, 730 EGLINTON AVE. W., TORONTO.

SEND CORRESPONDANCE TO:

Attention: SINC-LINK EDITOR
TORONTO TIMEX-SINCLAIR USERS CLUB, 14 RICHOME COURT, SCARBOROUGH, ONTARIO, CANADA M1K 2Y1

SUPER SPRING ISSUE

index to LP MSCRIPT SORT

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Editorial

I was going to start off by apologizing for getting this issue out a little late. Then I thought, "Why am I apologizing? I haven't done anything wrong." So here isn't an apology.

The reason this issue is a couple of weeks late is because several of the club members, myself included, went to the Capital Area Timex Sinclair (CATS) Users Group Computer Fest in Washington, D.C. Since the fest occurred after the May 5th TTSUC meeting and normal Sinc-Link release date, the Exec felt it better to delay the May-June issue and to include members' comments about the fest in this issue rather than reporting on it in the July -August issue. Just trying to stay current.

CATS Fest

The big news is that six of our members made our respective ways down to Washington for an enjoyable if rushed May 5th, 6th & 7th weekend. I would have to say that the fest was a success for the organizers with visitors and exhibitors from as far away as British Columbia, Oregon and California.

The fest was a success for us too. Each of us spent more than we planned on, but not one of us regretted doing so. I am now the owner of a used QL, a graphics tablet with software, a fabulous RGB monitor, ZX81 hardware plus assorted software, magazines and books. A financial disaster but I'm still grinning so it can't be that bad.

Sad to see the departure of a vendor such as Zebra Systems, thanks for years of great hard-and-software support.

On a lighter note, Hugh Howie is particularly happy about this fest. He now has four new QL members!

See George's comments for more CATS Fest info.

Well done, CATS!

Newsletter

In case you haven't noticed, we are presenting another large issue. I am really pleased with the response from our writers. In fact the only reason why this issue isn't larger is because its weight would cost us more in postage prices. So to those writers whose articles don't appear in this issue, don't worry, your names will appear in print in the July-August newsletter.

I'm also happy to announce that this edition was assembled by Renato Zannese and Greg Robins. This makes my job of producing the newsletter much easier. I welcome any aid or suggestions which will improve the quality of our publication. Just let us know with a card or a letter.

QLers Note

Last issue we ran a questionnaire asking QLers to comment. One of the questions may have been misleading. Allow me to point out that our QL program library (as well as the ZX81 and TS2068 library) contains only public domain programs. If Quanta members wish to exchange cartridges they do so privately. The Toronto Timex-Sinclair Users Club will not knowingly distribute copywritten programs without prior permission from the authors.

Non-Canadian Readers Take Note!

We have been receiving a lot of cheques written out to non-Canadian banks. These are usually for about $2.00 for issues of Sinc-Link. Since our bank charges us more to process the cheque than they are worth I would ask that readers use a POSTAL MONEY ORDER instead of a cheque. Also, please do not send postage stamps. We cannot use foreign stamps. Thanks for your cooperation.

38540
37825

37540 - 18492 = 56739

listing verified 11/13/89

BOB'S NOTEBOOK

At the club meeting in April, I promised a utility which would allow the data in my disk indexer (see Sinc-Link Nov-Dec 87 p.6) to be printed on the wide printer with eight entries per line in condensed font. Listings 1 and 2 below will do the job. But here are some explanatory notes.

Listing 1 is straight-forward and should present no problems.

Listing 2: Variable <ff> means form feed and controls the ejection of the paper after 55 lines are printed. You may wish to alter this parameter to some other number of lines. Variable <lf> means line feed and is used to insert a line feed after eight records are printed.

In line 3001, the address 37825 equals 37799 + 26 so as to skip over the first two d$ items which contain the <SEARCH IS COMPLETED> message. The address 37799 is contingent upon your compilation coming up with 37797 as the start of the data area for d$ in the compilation. If it is any other value, you will have to adjust the 37825 & 56024 addresses accordingly.

Line 3007 inserts a space after each file name to separate it from the disk number; similarly, line 3017 inserts two spaces between records. Line 3010 skips over the asterisks in the d$ array; line 3012 stops action and returns to the loader at line 1100 when it encounters a space in the second place in the file name.

In the Jan-Feb 1989 issue, I provided a utility which would allow the sorting of lists (of information) entered into the Taswords. As I explained before, such lists can be birthdays and anniversaries, things to do, disk names & numbers, anything you like as long as the entries do not exceed 64 characters in length.

In listing 3 and 4 below, you will find a similar utility for doing the same thing with MSCRIPT. Listing 3 is the loader and remains in BASIC, while listing 4 is best compiled using Timachine. Here are some notes on these two programs.

If you don't have the taswide utility, you should leave out line 98 in listing 3 and make line 240 in listing 4 read: 'CLS: BEEP oa, VAL "10": FOR i=n TO s-1: PRINT d$(i): NEXT i.

In line 510 in listing 3, the PEEKs get the value of variable <b> in the compiled code <mssort.Cc>; <b> is the length of code to be saved. If you get a different location for variable <b> when you do your compilation, you should change these PEEK addresses accordingly. In line 100, I put the words <MSCRIPT SORT> in inverse characters and followed these with 24 spaces. I also put the words <BLOCK SAVE> in inverse characters in line 120 of listing 4.

Lines 94 and 530 are set up to return action to my Ramdisk; you may change these to go back to the current menu in your disk drive by changing <GO TO 4> to the drive number of your choice.

LISTING 1 indxLP.Bb

```
1000 CLEAR 29000: RANDOMIZE USR 100: LOAD
"indxLP.Cc"CODE 63000
1010 RANDOMIZE USR VAL "100": OPEN #VAL "4","dd"
1012 PRINT #VAL "4": OPEN #VAL "3","lp"
1015 PRINT #VAL "4": POKE VAL "16090",VAL "135":
PRINT #VAL "4": POKE VAL "16094",VAL "8": LPRINT
1017 OUT 127,15          SET CONDENSED PRINT MODE
1018 GO SUB 1200
1020 RANDOMIZE USR 63000
1100 STOP
1200 INPUT "what index file? enter full name of
file..." LINE l$
1210 RANDOMIZE USR 100: LOAD l$CODE
1220 RETURN
1900 STOP
2000 RANDOMIZE USR VAL "100": SAVE "indxLP.Bb" LINE
VAL "1000"
```

LISTING 2 indxLP.Cc (INDXLP.BB)

```
  60 REM ! LPRINT
  70 REM ! LIST
  80 REM !INT +lf,a,b,c,ff
  90 REM !USR 63000
1000 RANDOMIZE USR 100: OPEN #3,"lp"
1010 RANDOMIZE USR 100: POKE 16090,135
1020 RANDOMIZE USR 100: POKE 16094,8
1030 OUT 127,15: LPRINT (compressed)
2000 REM ! OPEN #
3000 LET lf=NOT PI: LET ff=NOT PI: LPRINT
3001 FOR a=37825 TO 56024 STEP 13
3002 IF lf=8 THEN LPRINT : LET ff=ff+1: LET lf=NOT PI
3003 IF ff=55 THEN OUT 127,12: LET ff=0: LPRINT : GO
TO 3030
3005 FOR b=1 TO 13
3007 IF b=10 THEN  LPRINT " ";
3010 LPRINT CHR$ PEEK (a+b) AND PEEK (a+b)<>42;
3012 IF PEEK (a+1)=32 THEN  LPRINT : STOP
3015 NEXT b
3017 LPRINT "  ";
3018 LET lf=lf+1
3030 NEXT a
1040 OUT 127,27 : OUT 127,65 : OUT 127,9
```

works for me
38540
56739
(formfeed) change to 80

LISTING 3 mssort.Bb

```
  90 CLS : PRINT "MSCRIPT SORT by Bob Mitchell."''
"Prior to using this utility, SAVE the BLOCK to be
sorted, using the Mscript block markers."
  91 PRINT ''"Calculate the length between the block
markers and have this at hand."
  92 PRINT ''"This utility will sort up to 200 lines
with max length of 64 chars. Each line must end with
a line feed (code 13)."
  93 INPUT "1=cont. 0=menu ";cm      ø
  94 IF NOT cm THEN PRINT #4: GO TO 4: PRINT #4: NEW
  97 PRINT #VAL "4": LOAD "mssort.Cc"CODE
  98 PRINT #VAL "4": LOAD "taswi.Cx"CODE
```

Note: 88 lines for 8/72 = 1100 [illegible]

```
 100 PAPER SGN PI: BORDER SGN PI: INK VAL "9": CLS :
INPUT "MSCRIPT SORT (put 24 spaces here) BLOCK SAVE
file name? (max 8) ", LINE n$
 105 INPUT "drive? (0-3) ";drv: PRINT #4: GO TO drv
 110 PRINT #4: LOAD n$+".CT"CODE 47050
 120 RANDOMIZE USR VAL "29000"
 500 CLS : BEEP SGN PI,VAL "10": INPUT "name for
save? max 6 "; LINE s$
 510 PRINT #4: SAVE s$+".CT"CODE 47050,PEEK
30986+256*PEEK 30987
 520 CLS : PRINT "BLOCK saved; now load MSCRIPT and
LOAD relevant file. Delete old BLOCK; use <ADD> to
LOAD new BLOCK.": STOP
 530 PRINT #NOT PI;"Press a key for menu.": PAUSE
NOT PI: PRINT #VAL "4": GO TO VAL "5": PRINT #VAL
"4": NEW
 550 CLEAR : PRINT #4: SAVE "mssort.Bb" LINE VAL
"570"
 560 STOP
 570 RANDOMIZE USR VAL "100": OPEN #VAL "4","dd"
 580 GO TO VAL "90"
```

LISTING 4
mssort.Cc

```
  50 REM ! LIST
  60 REM ! LPRINT
  70 REM !LEN h$<=66
  80 REM !INT +b,oa,ob,sf,a,n,i,j,s,ss,t
  90 REM !USR 29000
 100 REM ! OPEN #
 120 INPUT "length of BLOCK SAVE? <=12800"'b
 130 PRINT "Storing CODE in ARRAY"'' FLASH 1;
'stand-by..."
 140 DIM d$(200,64)
 145 LET oa=1: LET ob=2: LET sf=64: LET a=47050
 150 LET s=oa
 160 LET n=s
 170 FOR i=a+1 TO a+b
 180 FOR j=1 TO 63
 190 LET d$(s,j)=CHR$ PEEK i
 195 IF PEEK i=13 THEN  GO TO 210
 196 IF i=a+b THEN  LET e=s-1: GO TO 240
 197 LET i=i+oa
 200 NEXT j
 210 LET s=s+oa
 220 NEXT i
 240 CLS : BEEP oa,VAL "10": RANDOMIZE USR 64300: FOR
i=n TO s-1 : PRINT CHR$ 3;d$(i): NEXT i
 250 INPUT "1=sort 0=save? ";ss: IF NOT ss THEN GO TO
VAL "440"
 255 INPUT "sort on which col.? (1-63) ";t
 260 CLS : PRINT "sorting on col. ";t'' FLASH 1;"
stand-by...": GO SUB VAL "300": GO TO VAL "240"
 290 REM shell-faulk sort
 300 LET sn=e
 310 LET sn=INT (sn/ob)
 320 IF sn<oa THEN  CLS : RETURN
 330 IF sn/ob=INT (sn/ob) THEN  LET sn=sn+oa
 340 FOR i=n TO e-sn
 350 LET mm=i
 360 IF d$(mm,t TO )<=d$(mm+sn,t TO ) THEN GO TO VAL
"420"
 370 LET h$=d$(mm)
 380 LET d$(mm)=d$(mm+sn)
 390 LET d$(mm+sn)=h$
 400 LET mm=mm-sn
 410 IF mm>0 THEN  GO TO VAL "360"
 420 NEXT i
 430 GO TO VAL "310"
 440 CLS : PRINT "storing sorted file for SAVE..."''
FLASH 1;" stand-by... ": LET s=n: POKE a,14: FOR
i=a+1 TO a+b
 450 FOR j=SGN PI TO VAL "63"
 460 POKE i,CODE d$(s,j)
 465 IF CODE d$(s,j)=13 THEN  GO TO 480
 466 IF i=a+b THEN  STOP
 468 LET i=i+oa
 470 NEXT j
 480 LET s=s+oa
 490 NEXT i
```

This is a little postscript for indxLP above. Use this listing to change the line spacing and when used with condensed font, this will allow up to 1400 records to be printed on one sheet of paper (both sides). The DATA in lines 200 and 300 are for my Fastext 80 printer. Use your printer's manual to get the equivalents for your machine.

setls.B1

```
  10 REM change line spacing
  15 GO TO 100
  20 LET a=IN 127: IF a=237 THEN  RETURN
  22 GO TO 20
 100 CLS : INPUT "1=narrow  0=normal",ls
 110 IF ls THEN GO SUB 20: RESTORE 200: READ j: FOR
i=1 TO j: GO SUB 20: READ k: OUT 127,k: NEXT i
 120 IF NOT ls THEN GO SUB 20: RESTORE 300: READ j:
FOR i=1 TO j: GO SUB 20: READ k: OUT 127,k: NEXT i
 130 PRINT "Line spacing ";("Normal" AND NOT ls)
+("Narrow" AND ls)
 140 PRINT "Press a key for Ramdisk Menu": PAUSE 0:
RANDOMIZE USR 100: GO TO 4: RANDOMIZE USR 100: NEW
 200 DATA 3,27,65,8   8/72 inch paper feed
 300 DATA 2,27,50     1/6 inch paper-feed
 400 STOP
1000 RANDOMIZE USR 100: SAVE "setls.B1" LINE 100
```

```
 Disk Name : V01
 Archives
 Semi-permanent storage of
 programs under development.
 890316.

 indxLP.Cc   001 rcp         001 index.Bx    001
 rcpms.CT    001 rcpIN.B1    001 rcpIN.B2    002
 rcptas.CT   001 rcpdex.CT   001 proseq.B1   001
 index.B2    001 indxLP.Bb   001 wesbrz.C1   001
 sysvar.Bp   001 m85-88.Bm   002 setls       001


 LARKEN LKDOS 1986
 Track/Side  040/002
 Total Files 015
 Free Blocks 062

 DISK V01        DATE 890409
```

A CLOSE-SPACED LABEL

Modifing ARTIST II for the LARKEN DISK SYSTEM

Artist II is a great Spectrum graphic program. It has so many features that, it is the best program availiable.

Below is the basic listing showing the necessary modifications required to be used with the LARKEN DISK SYSTEM. Enter the lines as indicated and delete the other lines in the program.

Find the menu which has the exit to basic function. Edit the lines and then ENTER GOTO 1. Do an NMI of the Program, Rename the program to ARTIST.C2 . That's all.

The program has error proofing in the SAVE, LOAD and ERASE features. The program can send a copy to a large printer, but it has to be EPSON compatable.

Version LKDOS 1.0 04/89

A disk copy (5 1/4 ssdd) is availible for $7.00

Mr. Renato Zannese
615 Roding Street
Downsview, Ontario
Canada
M3M 2A6

```
  1 POKE 23676,1: RANDOMIZE USR
 100: OPEN #3,"LP": RANDOMIZE US
R 100: POKE 16093,32
  2 LET n=VAL "1": BORDER PEEK
VAL "28033": RANDOMIZE USR VAL "
57793": LET D=PEEK VAL "28122":
LET A=PEEK VAL "28120": LET B=VA
L "49152": LET C=VAL "6912": GO
SUB VAL "3": GO TO VAL "2"
  3 IF A=VAL "207" THEN  COPY :
 RETURN
  4 IF A<VAL "207" AND A>VAL "2
02" THEN  IF PEEK VAL "23676"=n
THEN  GO TO 45
  5 CLS : IF A=VAL "215" THEN
PRINT " L O A D ": PRINT : GO SU
B 90
  6 IF A=VAL "214" THEN  PRINT
" S A V E ": PRINT : GO SUB 96
  8 IF A=VAL "212" THEN  RANDOM
IZE USR 100: CAT : PAUSE NOT PI:
 RETURN
  9 LET B=VAL "16384": IF A=VAL
 "1" THEN  GO TO VAL "70"
 10 LET B=VAL "47872": LET C=VA
L "896": IF A=VAL "208" THEN  GO
 TO VAL "70"
 11 IF A=VAL "209" THEN  GO TO
VAL "80"
 12 IF A=VAL "211" THEN  PRINT
" E R A S E ": PRINT : GO SUB VA
L "100"
 13 LET C=VAL "768": IF A=VAL "
2" THEN  GO SUB VAL "42": GO TO
VAL "70"
 14 IF A=VAL "3" THEN  GO SUB V
AL "42": GO TO VAL "80"
 15 IF A=VAL "210" THEN  LET D=
ABS (D-n)
 20 IF A=VAL "202" THEN  STOP
 40 RETURN
 42 INPUT "Which Font ";b: LET
b=PEEK (26071+b+b)+VAL "256"*PEE
K (26072+b+b): RETURN
 45 IF PEEK VAL "23676"=n THEN
 POKE VAL "28120",A-VAL "203": R
ANDOMIZE USR VAL "64800": RETURN

 50 RETURN
 60 RANDOMIZE USR 100: CAT
 65 INPUT "FILENAME (6 CHARS):
";A$
 66 IF LEN A$>6 THEN  GO TO 65
 67 RETURN
 70 PRINT " LOAD ": GO SUB VAL
"60"
 74 RANDOMIZE USR 100: LOAD A$+
".Cx"CODE B: RETURN
 80 PRINT " SAVE ": GO SUB VAL
"60"

 84 RANDOMIZE USR 100: SAVE A$+
".Cx"CODE B,C: RETURN
 90 INPUT "Load File (Y/N)?";a$

 92 IF a$="N" OR a$="n" THEN  R
ETURN
 94 GO SUB 70: RETURN
 96 INPUT "Save File (Y/N)?";a$

 97 IF a$="N" OR a$="n" THEN  R
ETURN
 98 GO SUB 80: RETURN
100 INPUT "Erase a File ?(Y/N)"
;a$
102 IF a$="N" OR a$="n" THEN  R
ETURN
104 GO SUB 60
106 RANDOMIZE USR 100: ERASE A$
+".Cx": RETURN
```

QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL QL

IN OUR LAST ISSUE I WAS TELLING YOU ABOUT PURCHASING AN R. G. B. MONITOR THAT DIDN'T WORK WITH MY QL. I AM HAPPY TO BE ABLE TO TELL YOU THAT AFTER MUCH EFFORT BY MANY MEMBERS IT WORKS GREAT. FROM THE DATE OF PURCHASE TO DATE OF OPERATION WAS FORTY DAYS, I'M NOT SURE WHETHER THATS A SIGN OF SOMETHING OR NOT.
THE PROBLEM WAS MAINLY IN THE CONNECTION OUT OF THE QL. FROM THE LITERATURE IT DEPENDED WHAT MODEL OF QL YOU HAD. MY PERSONAL OPINION IS, !I DON'T KNOW!. AT THE MARCH MEETING OF THE CLUB IT WAS DECIDED TO HOLD A MEETING OF THE QL GROUP AT HUGH HOWIE'S HOME SO THAT THE CLUB MEMBERS IN THE HAMILTON BURLINGTON AREA COULD ATTEND. HUGH HAD ALSO PURCHASED THE SAME MODEL 'RGB' AS I HAD, BUT HIS WAS WORKING GREAT. WE ARE AGREED THAT THE CREDIT FOR THIS GOES TO SCHENNELLY STOUGHTON, CLUB MEMBER FROM LINDSAY, WHO MADE UP HUGH'S CABLE. IN TALKING WITH THE GUYS IT WAS AGREED THAT I WOULD TAKE MY CABLE TO THE MEETING TO SEE IF ANY ONE HAD AN IDEA AS TO WHY I WAS HAVING SO MUCH DIFFICULTY. AFTER THE BUSINESS PART WAS OVER JEFF TAYLOR (CLUB PRES.) SENEN RACKI AND MIKE FERRIS (QLers FROM HAMILTON), SENEN ALSO BOUGHT ONE OF THE SAME MONITORS AND WAS HAVING PROBLEMS USING THE TV MODE. WITH THE USE OF HUGH'S EQUIPMENT THEY WENT TO WORK ON THE CABLE AND AFTER A FEW ATTEMPTS THEY HAD MY CABLE WORKING ON HUGH'S SET. 'THANKS FELLOWS.

JEFF AND I LEFT THE MEETING AROUND 10;30. JEFF WAS SURE I WOULD WANT TO CALL GEORGE CHAMBERS, ON ARRIVAL AT TORONTO, TO GO TO GEORGE'S AND TEST THE CABLE ON MY UNIT. AFTER MUCH DISCUSSION I CONVINCED HIM, NOT REALLY, THAT IT COULD WAIT UNTIL GEORGE WOULD BE FREE TO SPEND SOME TIME AT IT. AS IT TURNED OUT, MUCH TIME WAS NEEDED. THE CABLE DIDN'T WORK ON MY SET. THE SIGNAL WAS COMING THROUGH BUT IT WOULD NOT SETTLE DOWN TO A FIRM PICTURE. I POINTED OUT THAT HUGH HOWIE, ON ONE OF OUR OTHER ATTEMPTS, WONDERED ABOUT THE CONNECTION AT THE MONITOR END OF THE CABLE. GEORGE CHECKED THIS AGAIN BUT IT MADE NO DIFFERENCE. THEN HE DECIDED TO CHECK UNDER THE UNIT. WHEN HE TILTED THE UNIT FORWARD THE DOUBLE WINDOW COLOUR AND ALL APPEARED AS IT SHOULD. GEORGE PUT A CLAMP ON THE CABLE AND IT HAS WORKED EVER SINCE. THANKS GEORGE AND THANKS MARJORIE, (MARJORIE GEORGE'S WIFE). WE SPENT SO MUCH TIME GETTING THE UNIT GOING MARJORIE HAD US STAY FOR SUPPER. SEE WHAT FAITH CAN DO (WITH LOTS OF HELPERS).
IT WAS WORTH THE WAIT. IT IS BEAUTIFUL. THE COLOURS ARE TREMENDOUS. THE TEXT IS VERY SHARP. THE PRICE WAS RIGHT.
P.S. IT IS NOW ENCASED IN A SUIT BOX SPECIALLY CUT AND PASTED. W K (BILL) LAWSON

DO YOU KNOW THAT THE KEYWORD - LIST - CAN GIVE YOU A HARD COPY OF A PROGRAM LISTING? YEP, YA GOTTA HAVE A PRINTER.TRY IT, WITH OR WITHOUT LINE NUMBERS.

```
10 OPEN #4,SER1
20 LIST #4
30 CLOSE 4
```

WRITE AND SHARE YOUR, "TRIALS & TRIUMPHS", WITH US. WKL

A Z88 USERS GROUP
by G. Chambers

One of our members, Phil Hudsmith, tells me there is a Sinclair Z88 computer users group in England, which welcomes overseas members.

They put out a newsletter called the Z88 EPROM. Cost for a year subscription (6 issues) to the newsletter is 14 pounds for overseas subscribers. (For some reason the subscription price to USA is 12 Pounds. Doesn't seem right, does it?)

Anyway, for anyone who is interested, the address is:

Dept S - Z88 USERS CLUB
68 Wellington
Long Eaton,
Nottingham,
United Kingdom NG10 4NG

****

LARKEN-CRACKING SPECTRUM PROGRAMS
BY G. CHAMBERS

In the last issue I described how to crack the program TECHNICIAN TED. It used a quite involved procedure to save the code from disk to tape, then back into the computer. Since then I have written two utilities which simplify the process considerably.

The first programs is called "crackr.Bl". It searches the disk for the named program, then saves it to tape on a track-by-track basis. The first track is saved starting at address 24000 (I use 9-track NMI-saves).

A companion utitity, called "saverl.Bl", loads the tape back into the computer, from whence it can be saved to disk, or tape.

The "saverl.Bl" utility has several interesting features about it. Because the program to be loaded from tape starts at 24000, there is not much room for a BASIC loader program. This was solved by having the Basic program load some m/C into the printer buffer at address 23296. This m/c does two things. Part of the code contains a LINE DELETE function, while the balance of the code is a tape loader utility.

After installing the m/c the Basic program makes a USR call to delete all but one key line of itself, lowers RAMtop to address 23999, then makes a second USR call. The second USR call, to address 23300, loads the programs previously saved to tape, back into the computer.

All that needs to be done now is to locate the starting USR address. The hard part, that is!

****

INTERFACE FOR RAM IN T/S 2068 I/O PORTS

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Expanding memory into the EXROM and DOCK banks is reasonably simple (SWN 2/3, 3/4). However, one must be very cautious when enabling chunks of RAM in these banks to avoid interfering with the operation of the system. For example, if you want to use any of the ROM routines, you will need to be sure that the appropriate chunks of Home bank are enabled before you call them. Some hardware add-ons also use chunks of EXROM and Dock banks and could get in the way. There is also the complication of an Interruption fielder which we needn't go into here.

The simplest way around these problems is to leave chunks 0 to 3 of Home bank enabled at all times and to enable only chunks 4 to 7 of any other banks added. With an appropriate interface, Expansion banks can be added and controlled through the I/O ports. Nineteen ports are used by the 2068 system, 4 by a MODEM, and a few others may be used by other hardware, leaving over 200 ports available for RAM. Even at only 32K per port, that amounts to over 6.5 MEGAbytes which can be implemented without getting in the way of the system's normal operation.

Each Expansion bank enabled in this way acts exactly like a Dock bank. Therefore, its active chunks can be controlled through I/O port 244. For example, OUT 2,0 : OUT 244,16 would enable chunk 4 of Expansion bank 02. OUT 244,0 would disable it. The Dock bank has priority over Home Bank. Thus any chunks enabled in an Expansion bank automatically disable the corresponding chunks in Home bank. OUT 244,240 would enable chunks 4 to 7 of an active Expansion bank.

The circuit given here uses a 74LS138 to decode the I/O port addresses. It can therefore control 7 additional banks of memory (224K at 32K per bank). A 74LS154 decoder would permit 15 Expansion banks for 480K of extra RAM. Additional decoders could be added, of course, to control even more banks.

HOW IT WORKS

When the OUT command is used in BASIC, or the OUT (C),A instruction in M/C, the number of the I/O port is put onto address lines A0 to A7. Then the IORQ and WR lines go LOW simultaneously. When they are both LOW, the first 74138 (U1) decoder is enabled. It decodes address lines A0, A1, & A2 and pulls one of its 8 outputs LOW. This LOW output is used to select one of 7 possible Expansion banks.

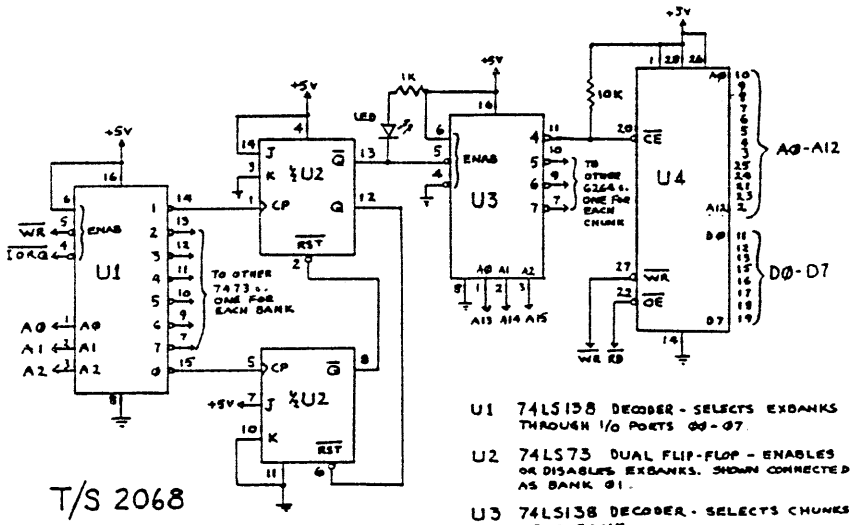
For example, if Expansion bank 01 is to be enabled, OUT 1,0 would cause pin 14 (output 1) of U1 to go LOW. This transition from HIGH to LOW causes the Q NOT output (pin 13) of the flip-flop (U2) to go LOW. This in turn enables the second 74138 (U3). A small LED connected to pin 5 indicates that the bank is active. Its address pins are connected to A13, A14 & A15. Thus it acts as a chunk decoder, i.e. output 4 enables chunk 4, etc. This decoding is for memory locations, not the chunk selection register. In the command OUT 1,0 that was used, the 0 is a dummy parameter needed to satisfy the structure of BASIC. Any value up to 255 could have been used. In M/C, the instructions LD C,01 and OUT (C),A would accomplish the same thing. There is no need to assign a value to register A. It is not decoded.

To disable the Expansion bank, OUT 0,0 causes pin 15 of U1 to go LOW (and incidentally pin 14 to go HIGH) This forces pin 8 (Q NOT) of the second flip-flop of U2 to go LOW. The first flip-flop is RESET, causing pin 13 to go HIGH thus disabling the chunk decoder. All its outputs go HIGH, disabling all the 6264 SRAMs connected to it. An OUT 244,0 will now return the computer to normal Home bank operations.

By connecting pin 27 of the 6264 sockets to the 5v rail instead of the WR NOT line, it is possible to install 27128 EPROMs instead of SRAMs. In this way, all sorts of M/C routines could be called up with a minimum of fuss.

CONSTRUCTION

A 4"x 4.5" board will hold 64K. I used a one-sided board with a 4"x 0.5" strip shaved to half thickness glued into a matching notch in the main board to make the necessary two-sided edge connector. All the tracks possible were laid out including solder pads along the top edge to make it easy to attach a second board behind the first with short jumpers. The second board will not require U1 nor edge connectors. After etching and installing the sockets and bypass capacitors, I made the rest of the connections with wire wrap wire soldered point-to-point. I sprayed the bottom of the board with clear lacquer to hold the numerous little wires in place. It plugs into an Oliger expansion board slot.



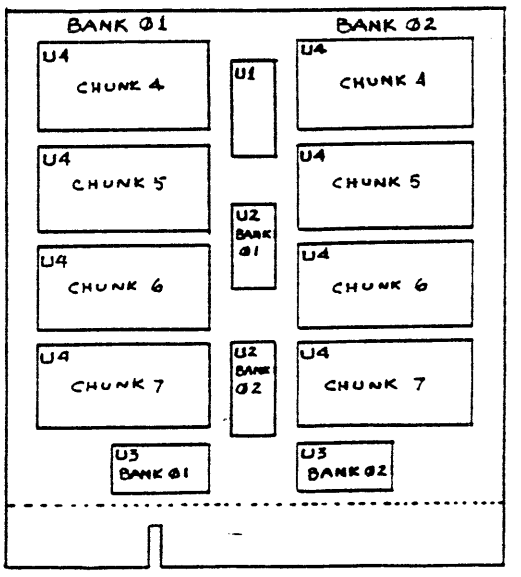
T/S 2068
EXPANSION BANK
INTERFACE

U1 74LS138 DECODER - SELECTS EXBANKS THROUGH I/O PORTS 00-07

U2 74LS73 DUAL FLIP-FLOP - ENABLES OR DISABLES EXBANKS. SHOWN CONNECTED AS BANK 01.

U3 74LS138 DECODER - SELECTS CHUNKS OF EXBANK.

U4 6264 8Kx8 SRAM. SHOWN CONNECTED AS CHUNK 4.



EXPANSION BANK INTERFACE COMPONENT LAYOUT

LD CRAWFORD
SINCLAIR

ALL YOU EVER WANTED TO KNOW ON THE CARE AND FEEDING OF YOUR DISK DRIVE(S)

A review of two manuals - DISK SERVICE MANUAL III and THE DISK DRIVE TUTORIAL both written by John J. Williams,M3EE, published by CONSUMERTRONICS CO., 2011 Crescent Dr., P.O. Drawer 537, Alamogordo, New Mexico 88310 USA

When I first entered the wonder world of the disk drive; I felt as though I had entered a whole new world that spoke a foreign tongue. Having a curious mind, I learned about TT/SUG and joined hoping to be enlightened in the use of this wonderful addition to my 2068. The more I learned, the more interested I became in just how this equipment worked. I asked George Chambers if he or someone in the Club knew of any books or manuals concerning the disk drive units. By return mail he sent me an advertisement from CONSUMERTRONICS and I sent for 2 of their publications.

DISK DRIVE TUTORIAL (2nd Edit.) is a 23 page manual that starts out in very general terms and tells about different drives and disk sizes and adds some advice on what you can do and what you shouldn't do yourself regarding servicing your disk drive.

Chapter 2 gives a short history of disk drives and the companies that make them. The various type of drives from the old 8 inch to the newer 3 inch disk drives are explained as well as the number of tracks that have evolved.

Mixing and matching of drives is dealt with and what can happen if you try to format a disk to more tracks than a disk can read or write and the damage it can do to your drive unit head. The stepper and spindle motors are explained in detail as is the cone lever assembly. Each of the chapters is well covered with diagrams and picture of the item being discussed. These are very readable diagrams, unlike so many "How To" manuals.

Chapter 3 gets into detail of the disk itself - how the tracks are set and how the sector on a disk is arranged. Even a tip on how to modify a disk if you have a SS drive and want to use the other side of a DS disk to save 50% of your disk price!

Chapter 4 goes into some of the technicalities of interfacing. A sequence of Controller operation is gone through step by step and diagrams of several brands of interfaces are decribed.

Chapter 5 describes the format process and explains the anatomy of a disk with blow up diagrams. IBM, APPLE and COMMODORE format families are discussed with the differences described. Clock and data timing charts are clearly illustrated along with density charts for single and double density and 1 or 2 sided disks.

Chapter 6 gets into compatability or the incompatabilty of one system to another. The uploading and downloading using the modem for data files. Protection types such as passwords or access code and the use of bogus sectors and the problem of preventing honest backup for the user are brought out in this chapter. A section called COPY-BY-FILE vs. BACKUP describes the differences in the two methods of copying from an original disk.

Chapter 7 covers recommendations in 19 instances with names and addresses of suppliers of disk drives and disks as well as the names and addresses of repair or maintenace firms.

CONSUMERTRONICS CO. repairs disk drives FREE! They diagnose the problem and repair the unit and if it can be fixed it will be and then is shipped back. If it is not repairable they will send it back to you. They do this to improve their expertise in this area. They do NOT sell drives or parts. They also accept broken drives, parts or manuals so they can further educate THEMSELVES!

All in all - this is a very good tutorial and well worth the cost involved.

****

DISK SERVICE MANUAL III is a 38 page manual plus an 8 page DISK DRIVE MANUAL plus an 8 page DISK ADDENDUM.

A list of the table of contents pretty well covers this superb manual:

Chap.	I	General
	II	Operation advice
	III	Error messages
	IV	Diagnostics and Troubleshhoting
	V	Maintenance
	VI	Speed Adjustment
	VII	R-W Head alignment
	VIII	Electronics & Repair
	IX	Miscellaneous repair
	X	Drive test station
	XI	Repair techniques
	XII	Drive analysis software critique
	XIII	Drive modifications
	APPENDIX A -- GLOSSARY	

This is a real nuts and bolts manual for those that are really interested in what takes place inside the disk drive and what to do when something goes wrong. AND not just when something does go wrong but how to prevent some of those things from going wrong by preventative maintenance.

Again there are good diagrams as well as photos of drive units. A number of charts and exploded views of the drive help identify the parts under discussion. The ADDENDUM is an update and the DISK DRIVE MANUAL has a listing of manufacturers addresses and a terminology list. A section is devoted to the cleaning of the drive and the adjustment of the drive speed. Lubrication and a paragraph on the Track 00 sensor and End Stop fill out this fine set of manuals.

Send for their catalog!

Review by: George G. Cary
P.O. Box 336
Coloma, CA 95613

QLips

by H. Howie

Don't know if you have ever noticed it, but the QL actually gives you warning some time before it runs out of memory.

If you are ever working on an Unexpanded QL, as you get near to the point of running out of memory, the QL starts to SLOW DOWN, not very noticeable at first, but eventually it is very obvious. The cursor just seems to chug along the line as if it were running out of steam, as it really is. Makes you want to give it a hand and move it physically.

The first time I came across this phenomena I was working QUILL, and in the process of editting the document, I became annoyed at the speed at which the cursor was moving along the line, it was painfully slow, so much so that I gave up and went to bed.

Next day I loaded the document in, and I thought it was not loading, thought I was going to get one of those wonderful messages 'Bad or changed medium', but eventually it was loaded and I continued working. A short time later it was dead slow and stop, then 'Out of Memory'.

Have you ever had one of those old spring loaded hand cranked record players? The spring is just about wound down, and the record goes slower and slower, and it goes out with a groooooaaan. That's how it is. Don't mean to make you show your age! Wind up the old spring and listen to that 'Speedup' (We did not call it acceleration, in those days)

Luckily I had purchased the 512 Expanderam. So I saved the document, switched off, installed the 512, loaded up, and in seconds flat I was tearing around all over the place. Just like stepping out of an old clunker into a Jag and putting your foot to the floor. Whoosh...you're gone...

Which is one thing you should remember, if you are installing or removing anything in that expansion slot at the left of the QL. SWITCH IT OFF. There are so many pins and ports in that small area, it is very easy to make a slight error, (apart from the voltage surge) and bang goes a few more dollars.

Maybe that's what's wrong with me, I'm running out of memory, at least I am gooing a lot slower than I used to.

You know those fancy little doo-hickey things which you have, to carry all the info in your QL? Those gadgety little things you ALWAYS take out of their cases the wrong way up? Then You have to switch them around to insert them? Why not try this?

The end cap of your cartridge will probably, or should have, something on it to indicate what is the general idea of the contents. The case does not always have anything on it, as the cartridge does not always go into the case from which it came.

What happens? You put the cartridge in a case, put it on the shelf or whatever, and the next time you have to use it, to be sure you will pull out the cartridge upside down up or whatever, then you try to insert it in the drive, won't go, turn it around in your fingers, and start all over again.

Which reminds me of the chap up at the Trailer Camp where I spend a lot of time. Last year he was putting up his gazebo, and when it was finished he said he only made one mistake, he put the roof on inside out. It is one of those portable jobs made of plasticised fabric. My reply to him was that he had not put the roof on inside out, but UPSIDE DOWN. Now.....

With a toothpick or a very fine brush, (I prefer a toothpick), place a dot of white paint on the top of the cartridge case. A little dab'l do ya. The when you put the cartridge in the case with the dot on top, you know which way is UP to remove it. Pull it out and you are ready to place it right way up, straight into the drive.

No more fiddling, you can get on with the job of computing.

The QLer with a fairly large collection of cartridges, can have a bit of a problem storeing them. One solution I came up with, was to make up a little shelf with spaces wide enough to hold the cartridges, but I still had the problem of finding that which I wanted at any given moment, they tended to drift away from where I last left them. I have examined them very carefully, and I don't see any legs, but they must have them the way they drift around.

Anyway, I thought it would be a good idea to make them up in bundles of three or four, in groups according to the class of material in them , this way there might not be so much tendancy for them to get lost in the wrong pile.

I could glue them to-gether, in which case I would be stuck with ('scuse the pun) the stack I had originally made, but I would not be able to reduce the size of the stack without some breakage of cases occurrin- Then my mind drifted to something I had onc seen in an office, used for sticking notes and notices on the walls. So I went out and found this stuff, and by taking a very small piece of it and sticking it on one case, placeing the second case on top, with a very little pressure and a little twist, I was able to get a very firm bond, allowing enough space for any cartridge to be removed and replaced without any interferance from its neighbour. A little piece about the size of a pea is sufficient to stick four or five cases together.

Each stack makes up an ALBUM of any given subject, making it easier to locate any given cartridge.

Easy to stack
Easy to transport
And no more wandering
We really do hope.

A little twist help settle the cases to-gether, and a little twist helps them come apart easily. Simple to use. No fuss. No muss. You can make an album as large or small as you desire.

The material is similar to playdo or plasticine, and is called "FUN-TAK" made by LePage, at least that is the material I used. Also very handy for sticking notes on the fridge or walls around your work station.

2068

A NOVELTY PROGRAM

This listing provides a novel title display, which can be incorporated into another program. It was supplied to the club by David Solly; though it's origional source is not apparent.

The program fires a program title onscreen in machine-gun fashion. The title can be up to 16 characters long. The title is placed in the first line of the program, and in this listing it is "BANG! YER DEAD!"

Line 60 places the title in the top left corner of the screen. It cannot be seen normally because the INK has been made the same colour as the PAPER. However the computer scans the area of the screen (the two FOR/NEXT loops, X and Y) for the presence of pixels operated by the wording, and if, in LINE 90, it detects an operated pixel the routine in LINES 100-140 comes into play to spell the wording out in the mid-section of the screen.

G.F.C.

```
 60 INK 7: PAPER 1: BORDER 1: C
LS : PRINT  INK 1;AT 0,0;"BANG!
YER DEAD!"
 70 FOR x=0 TO 127
 80 FOR y=0 TO 7
 90 IF  NOT POINT (x,y+168) THE
N  GO TO 150
100 PLOT 2*x,3*y+80
110 PLOT 0,0: DRAW  OVER 1;2*x,
3*y+79
120 PLOT 0,0: DRAW  OVER 1;2*x,
3*y+79
130 BEEP .001,30
140 PLOT 2*x,3*y+81
150 NEXT y
160 NEXT x
170 CLS : RUN
9000 REM Disc Save
9010 PRINT USR 100: SAVE "Gun.B1
" LINE 1
```

ZX81

PREDICTING LUNAR ECLIPSES

Mel Richardson

Throughout mankind's history, its' societies have placed great importance on the motions of the moon around our earth. From two to four times a year, the moon passes partly or wholly through the earth's shadow. Predicting this event was in times past, a feat of great power or at least thought really hard.

Nowadays, anyone with a microcomputer can do it. This must be significant but I will leave the reader to ponder or ignore the point and present a program that does all the magic.

The routine was assembled by Herbert Raab of Traun, Austria from various bits published in "SKY & TELESCOPE" magazine and converted to Sinclair Basic by me.

The program asks for a year then outputs a list of eclipses with the following details: the date and time of maximum eclipse, the magnitude into the penumbra and umbra if that occurs, the semiduration times and length of totality if that occurs. Magnitudes are in lunar diameters into the shadow zones and Semiduration times are the times from first contact with the shadow zone to maximum or from max to last contact. The time of maximum eclipse is given in Universal Time (UT) and subtracting your locations' hours West of Greenwich gives the local time. For instance 2300 hours UT minus 5 hours is 1800 hours EST.

Those who have a previous program from these pages called "NEW & FULL MOONS" can save slogging through all those numbers by starting with that and adding the lines shown here. The program here is "bare bones". It may be neccessary to enter (CONT) for some years and the reader can add any displays that seem interesting. My own version uses "SRAM-HR" for a neat title page. I will submit this to the club library and anyone with SRAM-V3 can easily merge it. Those with V2 can do the same with direction from the documentation.

The results are accurate to a few minutes and I have included one for you to check your results against.

```
  1 REM :LUNAR ECLIPSES
 10 LET R1=PI/180
 20 LET U=0
 30 PRINT "ENTER YEAR:"
 40 INPUT Y
 50 LET G=1
 60 REM N.F. MOONS S/R
 70 IF Y<1583 THEN LET G=0
 80 LET K0=INT ((Y-1900)*12.368
5)
 90 LET T=(Y-1899.5)/100
100 LET T2=T*T
110 LET T3=T*T*T
120 LET J0=2415020+29*K0
130 LET F0=.0001178*T2-.0000001
55*T3
140 LET F0=F0+.75933+.53058868*
K0
150 LET F0=F0-.000837*T-.000335
*T2
160 LET J0=J0+INT (F0)
170 LET F0=F0-INT (F0)
180 LET M0=K0*.08084821133
190 LET M0=360*(M0-INT (M0))+35
9.2242
200 LET M0=M0-.0000333*T2
210 LET M0=M0-.00000347*T3
220 LET M1=K0*.07171366128
230 LET M1=360*(M1-INT (M1))+30
6.0253
240 LET M1=M1+.0107306*T2
250 LET M1=M1+.00001236*T3
260 LET B1=K0*.08519585128
270 LET B1=360*(B1-INT (B1))+21
.2964
280 LET B1=B1-.0016528*T2
290 LET B1=B1-.00000239*T3
300 FOR X=1 TO 27 STEP 2
310 LET J=J0+14*X
320 LET F=F0+.765294*X
330 LET K=X/2
340 LET M5=(M0+K*29.10535606)*R
1
350 LET M6=(M1+K*385.81691806)*
R1
360 LET B6=(B1+K*390.67050646)*
R1
370 LET F=F-.4068*SIN M6
380 LET F=F+(.1734-.000393*T)*S
IN M5
390 LET F=F+.0161*SIN (2*M6)
400 LET F=F-.0104*SIN (2*B6)
410 LET F=F-.0074*SIN (M5-M6)
420 LET F=F-.0051*SIN (M5+M6)
430 LET F=F+.0021*SIN (2*M5)
440 LET F=F+.5/1440
450 LET J=J+INT F
460 LET F=F-INT F
470 GOSUB 510
480 NEXT X
490 STOP
500 REM LUNAR ECLIP S/R
510 LET D=7
520 IF ABS (SIN B6)>.36 THEN GO
TO 1010
530 LET S=5.19595-.0048*COS M5
540 LET S=S+.002*COS (2*M5)
550 LET S=S-.3283*COS M6
560 LET S=S-.006*COS (M5+M6)
570 LET S=S+.0041*COS (M5-M6)
580 LET C1=.207*SIN M5
590 LET C1=C1+.0024*SIN (2*M5)
600 LET C1=C1-.039*SIN M6
610 LET C1=C1+.0115*SIN (2*M6)
620 LET C1=C1-.0073*SIN (M5+M6)
630 LET C1=C1-.0067*SIN (M5-M6)
640 LET C1=C1+.0117*SIN (2*B6)
650 LET D9=ABS (S*SIN (B6)+C1*C
OS (B6))
660 LET U=.0059+.0046*COS M5
670 LET U=U-.0182*COS M6
680 LET U=U+.0004*COS (2*M6)
690 LET U=U-.0005*COS (M5+M6)
700 LET AP=1.2847+U
710 LET AU=.7404-U
720 LET MP=(1.5572+U-D9)/.545
730 IF MP<0 THEN GOTO 1010
740 LET MU=(1.0129-U-D9)/.545
750 LET D5=1.5572+U
760 LET D6=1.0129-U
770 LET D7=.4679-U
780 LET N=(.5458+.04*COS M6)/60
790 LET D5=SQR (D5*D5-D9*D9)/N
800 IF MU<=0 THEN GOTO 840
810 LET D6=SQR (D6*D6-D9*D9)/N
820 IF MU<=1 THEN GOTO 840
830 LET D7=SQR (D7*D7-D9*D9)/N
840 GOSUB 1030
850 PRINT
860 PRINT "ECLIPSE DATE:  ";D1;
"/";M;"/";Y
870 PRINT "MAXIMUM PHASE: ";H1;
"H ";M9;"M UT"
880 LET MP=INT (1000*MP+.5)/100
0
890 PRINT " PENUMBRAL MAG:  ";M
P
900 IF MU<=0 THEN GOTO 930
910 LET MU=INT (1000*MU+.5)/100
0
920 PRINT  " UMBRAL MAG:    ";M
U
930 PRINT " SEMIDURATIONS --"
940 LET D5=INT (D5+.5)
950 PRINT "  PENUMBRA:       ";
D5;"M"
960 IF MU<0 THEN GOTO 1010
970 LET D6=INT (D6+.5)
980 LET D7=INT (D7+.5)
990 PRINT "  UMBRA:          ";
D6;"M"
1000 PRINT "  TOTALITY:       ";
D7;"M"
1010 RETURN
1020 REM JD-GREG S/R
1030 LET F=F+.5
1040 IF F<1 THEN GOTO 1070
1050 LET F=F-1
1060 LET J=J+1
1070 IF G=1 THEN GOTO 1100
1080 LET A=J
1090 GOTO 1120
1100 LET A1=INT ((J/36524.25)-51
.12264)
1110 LET A=J+1+A1-INT (A1/4)
1120 LET B=A+1524
1130 LET C=INT ((B/365.25)-.3343
)
1140 LET D=INT (365.25*C)
1150 LET E=INT ((B-D)/30.61)
1160 LET D=B-D-INT (30.61*E)+F
1170 LET M=E-1
1180 LET Y=C-4716
1190 IF E>13.5 THEN LET M=M-12
1200 IF M<2.5 THEN LET Y=Y+1
1210 LET D1=INT D
1220 LET H=24*(D-D1)
1230 LET H1=INT H
1240 LET M9=INT (60*(H-H1))
1250 RETURN
```

```
ECLIPSE DATE:  20/2/1989
MAXIMUM PHASE: 15H 37M UT
 PENUMBRAL MAG:   2.383
 UMBRAL MAG:      1.271
 SEMIDURATIONS --
  PENUMBRA:          182M
  UMBRA:             111M
  TOTALITY:           39M
```

DIGITAL ALARM CLOCK FOR QLERS

The following is a program from the SIN newsletter to provide a gigantic digital alarm clock. When it is running the time can be set by pressing and holding the F1 function key. The alarm time can be set using the F2 function key. The alarm will buzz as long as the time is displayed, or it can be shut off by CTRL and SPACE BAR. Then you would have to RUN the clock again. If you have a real time clock with your QL you should edit line 1210 which sets the time and date. The present date is the 12 March 1989. The program will also be in the club library very shortly.
See H. Howie.

DIGITAL CLOCK

```
100 REMark >>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<
110 REMark >>>> from S I N   newsletter <<<<<
115 REMark <>     Issue #18 October 1987     <>
116 REMark <>    by Yves Gagnon 24/01/87     <>
117 REMark <> translation Louis Laferriere <>
118 REMark <>  time and alarm can be set    <>
119 REMark <>     by pressing F1 or F2       <>
120 REMark <<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>
130 :
140 :
150 DEFine PROCedure init
160 MODE 4
170 WINDOW 512,256,0,0
180 PAPER 0
190 CLS
200 CSIZE 1,1
210 PRINT\' DIGITAL CLOCK'
220 CSIZE 0,0
230 END DEFine init
240 :
250 DEFine PROCedure E1(x,y)
260 BLOCK 100,100,x,y,0
270 BLOCK 20,100,x+80,y,7
280 END DEFine E1
290 :
300 DEFine PROCedure E2(x,y)
310 BLOCK 100,100,x,y,0
320 BLOCK 100,20,x,y,7
330 BLOCK 20,20,x+80,y+20,7
340 BLOCK 100,20,x,y+40,7
350 BLOCK 20,20,x,y+60,7
360 BLOCK 100,20,x,y+80,7
370 END DEFine E2
380 :
390 DEFine PROCedure E3(x,y)
400 BLOCK 100,100,x,y,0
410 BLOCK 100,20,x,y,7
420 BLOCK 20,60,x+80,y+20,7
430 BLOCK 100,20,x,y+80,7
440 BLOCK 80,20,x,y+40,7
450 END DEFine E3
460 :
470 DEFine PROCedure E4(x,y)
480 BLOCK 100,100,x,y,0
490 BLOCK 20,60,x,y,7
500 BLOCK 20,100,x+80,y,7
510 BLOCK 60,20,x+20,y+40,7
520 END DEFine E4
530 :
540 DEFine PROCedure E5(x,y)
550 BLOCK 100,100,x,y,0
560 BLOCK 100,20,x,y,7
570 BLOCK 20,20,x,y+20,7
580 BLOCK 100,20,x,y+40,7
590 BLOCK 20,20,x+80,y+60,7
600 BLOCK 100,20,x,y+80,7
610 END DEFine E5
620 :
630 DEFine PROCedure E6(x,y)
640 BLOCK 100,100,x,y,0
650 BLOCK 100,20,x,y,7
660 BLOCK 20,80,x,y+20,7
670 BLOCK 80,20,x+20,y+80,7
680 BLOCK 20,40,x+80,y+40,7
690 BLOCK 60,20,x+20,y+40,7
700 END DEFine E6
710 :
720 DEFine PROCedure E7(x,y)
730 BLOCK 100,100,x,y,0
740 BLOCK 100,20,x,y,7
750 BLOCK 20,80,x+80,y+20,7
760 END DEFine E7
770 :
780 DEFine PROCedure E8(x,y)
790 BLOCK 100,100,x,y,0
800 BLOCK 100,20,x,y,7
810 BLOCK 100,20,x,y+40,7
820 BLOCK 100,20,x,y+80,7
830 BLOCK 20,100,x,y,7
840 BLOCK 20,100,x+80,y,7
850 END DEFine E8
860 :
870 DEFine PROCedure E9(x,y)
880 BLOCK 100,100,x,y,0
890 BLOCK 100,20,x,y,7
900 BLOCK 100,20,x,y+40,7
910 BLOCK 100,20,x,y+80,7
920 BLOCK 20,100,x+80,y,7
930 BLOCK 20,60,x,y,7
940 END DEFine E9
950 :
960 DEFine PROCedure E0(x,y)
```

```
970 BLOCK 100,100,x,y,0
980 BLOCK 100,20,x,y,7
990 BLOCK 20,100,x,y,7
1000 BLOCK 20,100,x+80,y,7
1010 BLOCK 100,20,x,y+80,7
1020 END DEFine E0
1030 :
1040 DEFine PROCedure EE(x,y)
1050 BLOCK 20,20,x,y+20,7
1060 BLOCK 20,20,x,y+60,7
1070 x=x-80
1080 END DEFine EE
1090 :
1100 DEFine PROCedure SET_ALARM
1110 CLS:CSIZE 1,1
1120 INPUT\\\"   ENTER THE TIME FOR THE ALARM
HH:MM >";R$
1130 PRINT\\\"   ARE YOU SURE: ";R$;"... OK?
Y/N"
1140 IF NOT INKEY$(-1)INSTR "Y":GO TO 1110:
END IF
1150 CSIZE 0,0
1160 END DEFine SET_ALARM
1170 :
1180 DEFine PROCedure SET_HOUR
1190 CLS:CSIZE 1,1
1200 INPUT\\\"   ENTER EXACT TIME HH:MM >";W$
1210 ORE=W$(1 TO 2):MINUTI=W$(4 TO 5):SDATE
1989,3,12,ORE,MINUTI,0
1220 CSIZE 0,0
1230 END DEFine SET_HOUR
1260 :
1270 R$=""
1280 init
1290 F$=""
1300 REPeat LOOP
1310 x=20:y=80
1320 E$=DATE$
1330 E$=E$(13 TO 17)
1340 IF INKEY$=CHR$(236)
1350 SET_ALARM
1360 GO TO 1280
1370 END IF
1380 IF INKEY$=CHR$(232)
1390 SET_HOUR
1400 GO TO 1280
1410 END IF
1420 IF E$=R$ AND NOT BEEPING
1430 BEEP 32767,13,2,13,2
1440 END IF
1450 IF E$=F$
1460 NEXT LOOP
1470 END IF
1480 FOR I=1 TO LEN(E$)
1490 P=CODE(E$(I))
1500 SELect ON P
1510 =CODE("0"):E0 x,y
1520 =CODE("1"):E1 x,y
1530 =CODE("2"):E2 x,y
1540 =CODE("3"):E3 x,y
1550 =CODE("4"):E4 x,y
1560 =CODE("5"):E5 x,y
1570 =CODE("6"):E6 x,y
1580 =CODE("7"):E7 x,y
1590 =CODE("8"):E8 x,y
1600 =CODE("9"):E9 x,y
1610 =CODE(":"):EE x,y
1620 END SELect
1630 x=x+110
1640 END FOR I
1650 F$=E$
1660 END REPeat LOOP
```

PRODUCT INFORMATION

-Surge Protector Strip 6 Outlet
Part No. SP - 300.....$6.50 US
Availible at:
National Computer Products
1510 McCormack Street
Sacramento, CA 95814
Add $2.50 for S/H costs

-3 1/2" Disk Drive
1/2 height 720K DSQD
NEC MODEL 1035.....$60.00 US
Availible at:
Timeline
1490 W Artesia Blvd
Gardena, CA 90247
Add $6.00 for S/H costs

-5 1/4" Disk Drive
Full Height 720K DSQD
CDC Part # 77686002..$50.00 US
Availible at:
Medelson Electronic Co., Inc.
340 East First Street
Dayton, Ohio 45402
Add $6.00 for S/H costs

From April 89 Computer Shopper
Renato Zannese

FOR SALE! FOR SALE! FOR SALE!

2 - TS2068.....$80 EACH
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TEC-200 PRINTED CIRCUIT TRANFER FILM

Product Review....R. Bruneau

TEC-200 Film is a specialy coated plastic film that can have an image photocopied on to it. The photocopied image can then be transfered to a bare printed circuit board using a common household iron. The plastic is formulated to withstand temperatures up to 320F and therefore poses no danger of melting in the photocopier or under the iron. Instructions on using the film are very clear and cover photocopying, tranfering, and etching.

I have produced several p.c.boards with the Tec-200 film from magazine articles and 2:1 originals and note the following:

1. The artwork has to be reversed (mirror image). Most magazine articles give you a 'right-sided' circuit pattern so it is necessary to make an intermediate transparency with the TEC-200 film. Flip the intermediate over and make your final copy. The temporary copy can then be stripped with a solvent and reused.

2. The iron temperature is important. Too low a temp. and the image will not transfer, Too high a temperature and the line work smears. Too much pressure on the tranfer will have the same effect.

3. If the transfer is not complete after you have removed the film, use a fine tipped permanent marker to touch up the prepared board.

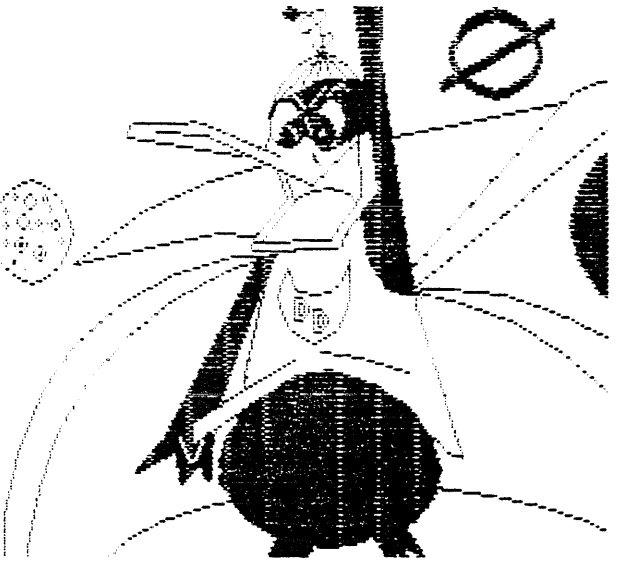
4. Etch the board as quickly as you can. For small boards, a 'Fridge-o-seal' container works very well. Place the prepared board in the container copper side up, add etchant to cover, close the lid and agitate the container in a hot water bath. With this method the etching time can be reduced by almost 50%.

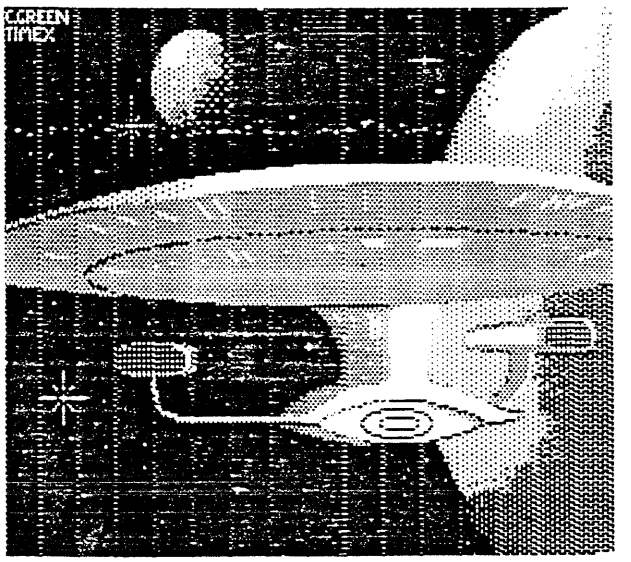
With a program like P.C. DRAW for the 2068 or ZXPAINT for the TS1000, TEC-200 gives you an easy way to make your own printed circuit boards.

Available from: The Meadowlake Corp.
25 Blanchard Drive
Northport, NY. 11768

8.5" x 11" sheets : 5 for $3.95 plus $1.00 postage
10 for $5.95 plus $1.25 postage
25 for $14.50 plus $2.50 postage
Larger quantities available

MORE RLE GRAPHICS





This RLE decoder program is available for T/ZX memcare from the TS2068 Larken Disk Library.

SINC-LINK
WANTS
YOUR
GRAPHICS!

STOP THE PRESS SOFTWARE REVIEW
LARKEN SEQUENTIAL/RANDOM FILES UTILITY

Larry Kenny (Larken Electronics Navan Ontario) has recently provided a new software offering based on the concept of sequential filing previously included in the version 3 LKDOS EPROM. This utility is available on disk and provides users of earlier LKDOS EPROMs with the opportunity to get into the world of random/sequential filing; even for version 3 holders, it provides added capabilities for using this ram-resident extension to the LKDOS system.

The utility allows the LKDOS-2068 to handle large data base files and exploits features of the 2068 hitherto unused. Up to four files may be accessed simultaneously to permit data to be sorted, merged, etc.

Included with the disk is a very thorough seven-page document of explanations and instructions. It is well organized and relatively simple to follow; but it took me several readings along with trying the example file to begin to absorb the complexities of the system and there are still parts that will require much more study and application.

The disk contains the main BASIC program <SRcode.B1> which will in turn load in the operating code <LBASE.BC> as a long REM statement (about 2500 bytes). When the program is RUN, the BASIC memory map is initialized and the BASIC "start of program pointer"(system variable 23635/6) is changed to an address well past the end of the REM statement to make it invisible in the listing and safe from everything except the NEW command.

In the version 3 EPROM, the sequential filing system has two modes: OUT and IN. In the disk version data is handled in two modes: Output (OUT) and Random Access (RND). OUT is used to create a file or to add more data to an existing file.
RND is used to print or get data from existing files; data can be read sequentially from start to end of the file OR can be randomly accessed from anywhere in the file and then read or changed; the latter is accomplished using a new TAB command and it is this feature that is not available in the EPROM. This opens up all sorts of possibilities for handling large amounts of data (up to 800K on a quad disk drive).

The documentation gives examples to show how all this done and this exercises the grey matter slightly more than somewhat. To make it a bit easier to follow, a sample data base is included on the disk: <TIMEDESGN> which is a contents list of Time Designs Magazine articles. The file <LBASE.B1> should be examined carefully to determine how the random filing system works and along with the documentation, things begin the get clearer. It is best to make a copy of the listing for closer study. But take care: If after <TIMEDESGN> has been opened, you wish to study the BASIC or to make some changes, you must first close the file. If you forget to do this and BREAK into BASIC, you will have to use <RAND USR 26800: CLOSE# 7> and then GO TO 1 to set things right again.

Searching for any given string is a feature of the disk version of Sequential/Random Filing; it is very versatile and recognizes any input in either upper or lower case, eg, entering a string <LARKEN> would also turn up records with <larken> or <Larken> or even <LaRkEn>.

The LBASE sample that is included on the disk is not complete as a text editor; neither is it a word processor; rather it is an example of what can be done with the Sequential/Random (S/R) Filing system. The instructions make this point in a section entitled <Adding new features to LBASE>. For example, a sort routine might be added either in machine code or as a compiled BASIC add-on. I found it eas to add a routine to print any given record to either the 2040 or wide printer. Some hints are given on how to accomplish this but this will call for some ingenuity on the part of Larken users.

This review has touched on only a small part of the detail contained in the Larken documentation. It is a utility for the serious programmer and is recommended for those who want to extend the use of the 2068 to very large data bases. Much work would have to be done to merge the S/R filing concept with other features found in data base programs such as Profile.

Bob Mitchell 890509

```
 1 REM Wordwrap by Steven V. Gunhouse
 2 LET x=23408
 3 ON ERR  GO TO 70
 5 LET a=10: LET b=11: LET c=12: LET d=13: LET e=14: LET f=15
10 READ a$
20 FOR n=1 TO 15 STEP 2
30 LET w=16*VAL a$(n)+VAL a$(n+1)
40 POKE x,w: LET x=x+1
50 NEXT n
60 GO TO 10
70 ON ERR  RESET : POKE 26694,91: POKE 26693,128
80 LIST
100 REM A routine to cause screen output to "wordwrap" like a word processor
110 REM NOTE a CLS will require POKEs in line 70 be repeated to turn back on!
120 REM Resides in printer buffer - DO NOT USE WITH 2040 PRINTER
130 REM (Could be modified to work with a printer instead of screen.)
9981 DATA "00000000F5973200"
9982 DATA "5B11805BCD9705F1"
9983 DATA "FE213838FE803034"
9984 DATA "FE7B380ACB47282C"
9985 DATA "FDCB016628262100"
9986 DATA "5B6E23777D32005B"
9987 DATA "FE21C021005B7EA7"
9988 DATA "00C84F0600E5D123"
9989 DATA "EDB02E001B7E73CD"
9990 DATA "000518E7F5CD1A06"
9991 DATA "3A005BB9D46805CD"
9992 DATA "A35BF100320E5CFE"
9993 DATA "10380BFE1830071E"
9994 DATA "EA165BC39705FE20"
9995 DATA "2005CD1A060DC8C3"
9996 DATA "0005320F5C3A0E5C"
9997 DATA "1EF9FE1630E33A0F"
9998 DATA "5C11805BC3A10500"
9999 REM End of data
```

LKDOS SOFT-WARE

MAXCOM 300/1200 baud Terminal/BBS

This full feature modem software lets you effectivly link the modem to the disk, so you can upload or download files larger than 100K.This lets you send NMI saves and large text files as well as Basic or Code files, which other modem programs couldn't send because of memory limitations. Also files can be sent with or without a information header (Spec-term compatible) .

It also has a 64 column display and is the only 2068 modem program that will run at full 1200 baud without missing characters. Other features of the terminal mode are IBM graphic characters, auto-dialer, macro keys, 110K disk buffer for captured text, auto repeat keys.

The BBS is the most elaborate available for the 2068 and allows the remote user full access to the disk drives similar to a CPM BBS. Features of the BBS are - 300/1200 baud, operation with fast reponce even at 1200 baud. Passwords, priority levels, Use time limits, Multiple Message Bases, Uploads and Downloads are not limited by Memory, Dual Window Monitor screen, Interupt driven time out and Hangup protection. Also Keeps a User log of callers Names and Activity on disk so a printer isnt needed and its easily customised and expanded.

MAXCOM can be used with the 2050 modem or with the Z-SIO RS232 interface and a 300/1200 baud modem. (a version for the Aerco RS232 is in the works).

PRICE: $24.95

LARKEN DISK EDITOR

This program lets you examine or change any byte on a LKdos disk. It is useful in repairing damaged or glitched disks, changing the disk Name or head speed etc. You can also examine the track map and disk info headers.

The documentation for the disk editor also includes information on how to access LKdos from Machine Code and information on the structure of the disk catalog and data blocks.

PRICE: $15.00

SEQUENTIAL/RANDOM Access FILES

This utility is a ram resident extension to the LKdos operating system and lets you create, read from, or write to very large data files kept on disk. It uses the commands OPEN#, CLOSE#, PRINT#, INPUT#, and INKEY$# to access the files from BASIC. There is also a high speed search command for finding a text string within the data file. Using the TAB command, you can randomly access directly any record in a file.

The utility is easily used within your basic programs and has a lot of uses, from storing large data files, creating large spell checker dictionarys or even converting you basic programs to an ascii text file .

This utility lets you take the limits off of the data capacity of the 2068 .Files on disk can be huge !

A simple data base program is included on the disk to demonstrate the utility.

PRICE: $ 15.00

Coming Soon from Larken Electronics

** The Larken Desk Top Publisher ** Produce high quality printing (like this page) with an epson compatible printer and LKdos. The entire Hi-res graphic page is kept on the disk and scrolling though the page is as easy as clicking the joystick or mouse on the icon type menu. Text and Graphic editing with multiple sized fonts will also be featured.

** Spell Checker for Tasword and M-Script ** This utility program will let you have your wordprocessor text files be checked by a 350K dictionary.

All Prices $US - Specify type of drive when ordering.

LARKEN ELECTRONICS RR#2 NAVAN, ONTARIO CANADA, K4B-1H9

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C.A.T.S. COMPUTER FEST 1989
Washington D.C.
by G. Chambers

Well the great day/weekend has come and gone. All that remains is memories. And what memories. Was the show a success? Well, we don't know what the show sponsors and dealers thought, but the consensus of the 6 members from our club who attended was that it was a trip very worthwhile.

Rene Bruneau, Renato Zannese, Lou Champagne, Hugh Howie, and myself went down to Washington D.C. in a rented van. Jeff Taylor also attended; he went down by car with his family.

The van left at six o'clock on Friday evening, with Rene driving. Picking up Renato and myself at the Toronto Kipling subway station, we then collected Lou Champagne in Oakville, and Hugh Howie in Burlington. We travelled via Buffalo, Erie, and Pittsburg, to the outskirts of Washington, arriving there at about 6.30 am on Saturday morning. Driving was not good. Rain, fog, and road repairs were the order of the night.

Had breakfast at a nearby restaurant, and then waited for the show to open at 9 am.

A small crowd was waiting to enter the hall where the computer show was to be held. When the doors opened we streamed in. Paid our $10 2-day admission fee and got a name tag.

The hall was ringed with dealers tables. To the right as we entered was ZEBRA SYSTEMS with several tables. They were offering a multitude of books on Timex computers, loads and loads of software for the TS1000; also I saw some Alphacom 32 printers, some defective TS2068's (I bought 2 at $15 each!), lots of bits and pieces relating to the TS1000. 16K RAMpacks in abundance, some TS2050 modems. I saw a Timex Portugal Disk system for the TS2068 being offered for $200.

At the next table was Time Designs magazine Company. Tim Woods was there explaining why he was late with the Time Designs issues. More about that in a separate article elsewhere in this issue.

Tim was offering a number of Timex books, compendiums of early issues of the Time Designs magazines, and subscriptions to the Z88 magazine, PIPELINE. Also he was offering the Sinclair Z88 computer for $400 (if my memory serves me correct).

The next table was held by Jack Dohany. He had a Larken system running and was demonstrating several of his programs; also he was preparing disks to order, of these programs.

Wood and Wind computing was represented, offering business software for the QL. They had a system up, complete with monitor and printer, to demonstrate their software.

Then there was Peter Hale, demonstrating an administrative program. Am I correct in thinking it was SMARTEXT? Anyway, there were about eight persons paying close attention.

John Tasmino(?) was there selling a mixture of ZX81 RAMpacks, and some QL microdrives and chips.

Mike Fink was ensconced under the banner of Domino Cubes. He was touting the merits of the Z88 computer, and the advantages of purchasing one from him.

The CATS club had a booth where they were selling Fest souvenirs, such as hats, T-shirts, issues of their newsletter, etc.

Johnson Computers was offering reconditioned TS2068's for $62, also 2068 SCLD chips for $25, some TS1500's, and several disk drives. They were using a Larken combination to demonstrate their software.

Quantum Levels were offering subscriptions to their magazine in one corner, while nearby Tom Bent had a number of items on his table, mostly relating to the QL.

One of the most popular tables seemed to be that manned by Skip Fisher. Skip was selling reconditioned RGB monitors for $65 to $100. I think he was sold out by the end of the first day, all thirty monitors!

A+ Computer Response was present. They were selling QL computers, on an as is basis. They also seemed to have some ZX81 stuff on sale.

In the centre of the hall was a set of counters manned by Sharp's. They had lots of new QL's for sale at $90, plus a lot of software and peripherals for the QL. They also had a C5 vehicle. This was Clive Sinclair's ill-fated venture into battery-powered personal transportation.

Aside form the host CATS group, several other clubs had tables at the fest. There was the Sinclair Milwaukee Club with a demo of the Digitizer they describe in their newsletter, and which they are selling.

The Greater Cleveland T/S Users Group were there with a camera/TV scanning the crowd.

Also the Sincus TS group had a couple of monitors on their table, being driven by a Larken/Oliger system. They were offering copies of Sincus News, and other items.

At one point I counted the number of persons on the floor. It seemed to me that there were about 100 persons attending and about another 20 persons manning the counters. In addition there were an onknown number attending one of the seminars in progress at the time.

There were seminars in an adjoining conference room. They covered topics such as "Office use of the ZX81", "Making the most of your QL", "Applying the Z88", "The TS2068 and More BBS about Modems", and other subjects.

I attended one seminar, a talk by Nigel Searle. It had an attendance of 50 persons. There were empty seats; I would say just a bit disappointing, the attendance, that is.

Did we buy anything. Did we! Why, we now have four new QL users in the group. To say nothing of several TS2068's, an RGB monitor, some QL programs, and various books, and bits and pieces of hardware.

All in all, a very satisfying experience. Our hats are off to the CATS group for their handling of the event, and for making it possible for so many Timex members to meet each other, and to become personally acquainted with the various Timex dealers. Thanks again to the CATS group.

****

PLAYING WITH SOUND

As all you QLers know, the sound on the QL is kind of limited. The BEEP command does not seem to have any set order to it. By order, I mean that you cannot get, for example, a C# note unless you tirelessly experiment with a trial and error method. Unless some new developments come up in the sound department, that's what we're all stuck with.

To make the job a little easier, I found this program in QL SuperBASIC, THE DEFINITIVE HANDBOOK by Jan Jones. She was the designer and writer of Sinclair QL SuperBASIC along with help form Tony Tebby (a familiar name in the QL league). It's a beep excerciser. Yup. Just type it in and call it by typing 'beep_menu', you'll see what I mean.

About the program: It is generally a menu driven way to experiment with sound interactively. I modified it so that a joystick may be used to control the selection process.

```
100 DEFine PROCedure beep_menu
105 MODE 4
110 REMark                  BEEP EXCERCISER
115 FOR i=0 TO 2: CLS #i
120 PAPER 2: INK 7: WINDOW 448,200,32,16
130 CLS
140 PRINT 'Duration           (0-4)'\'Pitch              (0-255)'\'Pitch 2            (0-255)'\'Time step          (0-235
    )'\'Pitch step          (0-15)'\'Repeats           (0-15)'\'Fuzz              (8-15)'\'Random              (8-15)'
150 AT 10,0: PRINT "Cursor up, cursor down to change menu item "\"Cursor left to decrease the current value"\"Cursor right to
    increase the value"\"ENTER to stop the noise"\"SPACE to stop noise and exit program"
155 PRINT
157 PRINT "For Joystick, the obvious direction control & fire button"\"to terminate."
160 DIM para(7)
170 FOR ipara=0 TO 7: print_para
180 STRIP 0: ipara=0: print_para
190 REPeat in
200   inc = CODE(INKEY(-1)): REMark read keyboard
210   SELect ON inc
220     ON inc=208: IF ipara>0: change_para -1: REMark up
230     ON inc=216: IF ipara<7: change_para  1: REMark down
240     ON inc=192: para(ipara)=para(ipara)-1: rebeep: REMark left
250     ON inc=200: para(ipara)=para(ipara)+1: rebeep: REMark right
260     ON inc=10:  BEEP: REMark enter
270     ON inc=32:  BEEP: EXIT in: REMark space
280   END SELect
290 END REPeat in
300 END DEFine
310 REMark ------------------------------------------------------------------------------------------------------------
320 DEFine PROCedure rebeep
330   print_para
340   BEEP para(0)*500000/72,para(1),para(2),para(3)*10000/72,para(4),para(5),para(6),para(7)
350 END DEFine
360 REMark ------------------------------------------------------------------------------------------------------------
370 DEFine PROCedure change_para(change)
380   STRIP 2: print_para: REMark print old selection on red
390   ipara = ipara + change
400   STRIP 0: print_para: REMark print new selection on black
410 END DEFine
420 REMark ------------------------------------------------------------------------------------------------------------
430 DEFine PROCedure print_para
440   AT ipara,11: PRINT para(ipara) TO 14
450 END DEFine
```

SENEN RACKI
(416) 5496863

Excerpted from members letters:
A response to a letter/article that was in the Mar/April '89 newsletter.

****

Dear George and Company,
Let me begin with a response to the letter by John Vander Stel, which others may be interested in.

A simple way to get a non-flashing prompt in the lower part of the screen is to use a PRINT #1. After a response is found, then an INPUT "" will erase the prompt, so the lower part of the screen can be used again. This has the same problem as does the method John uses if the prompt is over a line long, that it will scroll the screen if it was full. If the prompt is only 2 lines long, this could be avoided by making it PRINT #1; AT 0,0; which will lose the line separating it from the rest of the screen, but this could be okay if the main screen and border are not the same colour (not an option on OS-64, but perhaps INVERSE 1 will work as well for this). Try the following lines:

```
10 PRINT #1;"Edit   Next page   Prior page"
20 PAUSE 0: LET I$=INKEY$: INPUT""
```

An example I have used often is the following as a subroutine:

```
1000 PRINT #1;"Press any key to continue.":
PAUSE 0: INPUT "": RETURN
```

Note also, if you are using INVERSE 1, and want to fill the whole line, (or if you are not using the standard BORDER colour) an easy way to do that is to end your PRINT with a TAB 0; or an appropriate number of commas. Since the prompt is not erased until after a key is pressed, we can even use the PAUSE 0 method John suggested, as was demonstrated in the listings. An example using everything mentioned is:

```
1000 PRINT #1;AT 0,0; INVERSE 1;"PRESS Z to
COPY to printer,","any other key to
continue.",: PAUSE 0: LET I$=INKEYS: INPUT ""
  1001 IF I$="Z" OR I$="z" THEN COPY
  1002 RETURN
```

Steven Gunhouse
28746 Five Mile Road
Livonia, MI 48154-3824
March 16, 1989

Retyped by G.F.C.

LARKEN RAMDISK (Bug Alert)

One of our members, Earl Dunnington, has provided us with a an tip with regard to the Larken RAMdisk. He writes:

"Some Larken RAMDISK memory boards may have a glass diode reversed. The symptoms are that the batteries may wear out in a very short time, causing CRC errors for all of the blocks when using RANDOMIZE USR 100: VERIFY"". The diode upper left component side of the board when attached to the computer. There should be no voltage on the left side of the diode when the computer is off and the batteries have been installed.

The fix is to snip the leads about half way, turn the diode around and solder it back to the stubs of the leads. Be sure the BATTERIES ARE REMOVED AND THE COMPUTER POWER IS OFF before attempting repairs."

G.F.C.

Larken Tip
by G. Chambers

You may have an occasion when a disk catalogue call (CAT "",) comes up with a CRC error. Nothing special about that. However, sometimes you may be puzzled by a CAT listing Which sometimes appears along with the CRC error.
What has happened is this:
The printout you see is that of a disk that was CATalogued immediately prior to this. The Larken system is simply printing out what is being held in the DOS RAM from an earlier CAT function, and which has not yet been erased.

As an aside, I should mention that if you get a CRC error when doing a CAT, it means that your directory has become corrupted. Not to worry; simply use the Larken utility "repair.B1" to recover it.

MODEMS MODEMS MODEMS
by G. Chambers

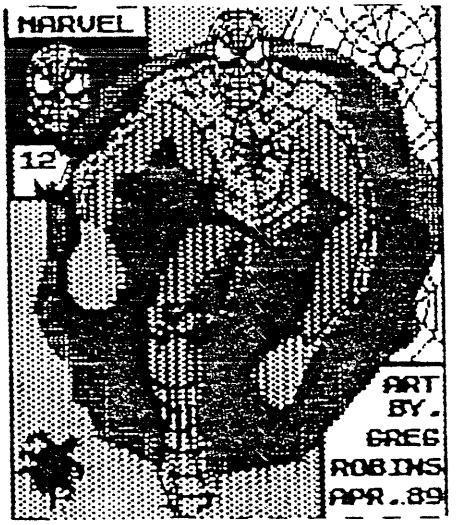
In the Nov/Dec '88 issue of the newsletter I mentioned that the CNIB (Canadian Institute for the Blind) were offering Rixon 212A data sets for $42 each (plus shipping).
Several members have bought them and are using them. I understand that they are still available.

I have since had a letter from this group which could be of interest to some of our members. To quote :

"Your group may be interested in the fact that within the past week, Bell has decided to make Smart Modems available to us. These ha auto-dial and another bunch of good feature and are fully Hayes compatible. The price is $67.50 plus postage and they can be ordered directly from me at this address. The model number is 212A/ED+, made by GDC"

(Croft B. Taylor)
Telecom Canada
Room 570
410 Laurier Ave. W.
Ottawa, Ont K1P 6H5

If you are interested, or have questions, why not drop Mr Taylor a line.



==>BOB'S NOTEBOOK<==

JUMPING BACKWARDS RELATIVELY SPEAKING

The Z80 machine language instruction JR e means Jump Relative by e addresses. JR cc,e does the same thing but only if condition cc is met; cc may be any one of: NZ, NC, Z or C.

The relative jump may be forward or backward and in the latter case, the convention used is that any value greater than 7F hex (or 127 dec) will be taken to be a negative offset, ie, the normal decimal value of the hex code minus 256.

For example, the offset value -10 is F6 (246-256). An instruction JR F6 would cause the routine to jump backwards by ten addresses. Counting starts with the next address after the JR F6 line, deemed to be the zero datum point, be it forward or backward.

Normally an assembler will do all this for you automatically as you put in your mnemonics and labels but later you might want to study the disassembly and follow the jumps etc in any debugging process.

Here is a short program to generate a table of backward jumps with hex numbers from 80 to FF (-128 to -1 dec). Type in the program lines carefully watching the spacing in line 140 and the length of L$ in particular.

LISTING 1

```
 100 PRINT
 110 LET L$="========================================
========================================":REM 81 ='s
 120 PRINT TAB 9;"NEGATIVE SIGN CONVENTION FOR
BACKWARD JUMPS (JR)"
 130 PRINT L$
 140 PRINT "    0    1    2    3    4    5    6    7
  8    9    A    B    C    D    E    F": REM 4 spaces
between characters
 150 PRINT L$
 160 LET v$="89ABCDEF"
 170 LET a=1
 180 FOR i=128 TO 1 STEP -16
 190 DIM n$(3)
 200 PRINT v$(a);
 210 FOR j=0 TO 15
 220 LET n$=STR$ (i-j)
 230 PRINT " -";n$;
 240 NEXT j
 250 LET a=a+1
 260 PRINT
 270 NEXT i
 280 PRINT L$
 290 RANDOMIZE USR 100: CLOSE #2
 300 STOP
 310 RANDOMIZE USR 100: SAVE "jrnegC.B1" LINE 320:
STOP
 320 RANDOMIZE USR 100: OPEN #2,"lp": RANDOMIZE
USR 100: POKE 16
094,8: RANDOMIZE USR 100: POKE 16090,81
 330 OUT 127,15
 340 GO TO 100
```

This program is designed to run with a dot-matrix printer in the condensed mode. It will also run in the Elite mode if you make the following changes:

```
330 GO SUB 350: OUT 127,27: GO SUB 350: OUT 127,77
340 GO TO 100
350 IF IN 127<>237 THEN GO TO 350
360 RETURN
```

Bob Mitchell 890408

TIME DESIGNS Magazine
G. Chambers

For some time the burning question has been 'Where is it'. It was with this in mind that when I saw the TDM booth at ComputerFest, I proceeded directly there to question Tim Woods about the non-appearance of the magazine since the July/Aug '88 issue.

To my surprise I saw copies of the two missing issues there. In fact, I was able to pick up not only the two issues due on my subscription, but I was able to carry off the same two issues for three other Toronto members who have not seen their subscriptions either. This, of course, put me into a more receptive mood for explanations.

Tim was very forthcoming in his explanations, and I found myself with some sympathy for his predicament. As we have read, he has had a new son, and also had to cope with the death of his father. Seems that winding up his father's business took an inordinate amount of time, and the TDM affairs simply went by the boards. Well, I gather he did ask his wife to get out the mailing but she, being more clever than he ever imagined, wriggled off the hook by messing things up even more!!

Have I put my foot in it for you, Tim? With your wife, I mean!

Anyway, all you long-suffering subscribers out there, the word is hang in, the issues are coming. I have been looking at my copies and they are pretty good. Tim says that TDM is still strong, healthy, and a going concern.

To any TTSUC members I suggest that if you are missing issues, drop me a line, and I'll see what I can do. If you write to Tim Woods your letter will probably become part of the enormous pile of mail that has accumulated at the Woods' place and won't be answered for who knows how long!

Sinc-Link wants your comments, letters, hints, questions, ads and articles. Send them to the address shown on the cover.

LARKEN - DISK DRIVE INFORMATION
BY G. CHAMBERS

drives.GT

One of our club members has provided us with an excerpt from a service manual dealing with disk drives used on the IBM computer. Many Larken owners have drives which were originally designed to work with the IBM computer. The information would be of interest to these owners.

The manual states that "... There are two basic drives types used in the PC. Many of the steps for diagnostics and repair are the same it is called Type 1.

"A type 2 drive is made by Control Data Corporation (often called a CDC drive). It's serial number begins with the letter D.

The copy I have comprises 18 pages, and simple test procedures, using a meter, to check drive operation. There are a number of photographs, but these are rather unclear, due to the photocopying process. The text should be adequate, however.

Interested members should drop me a line. I can send you a copy for the cost of copying and postage, $2

LARKEN-DISK LIBRARY
BY G. CHAMBERS

In the last two newsletters I have described the initial two disks on the club library. This time I shall mention what has been added to the disk library.

Disk #4..ASTRONOMY
For this disk I have combed our tape library and assembled a variety of programs pertaining to astronomy. Some are trivial, others are pretty good. This disk is full, so that if any more programs come to light it will mean doing some culling or else starting a new disk. This disk is a DS 40 track size.

Disk #5..MUSIC and SOUND
Simular to disk #4, I have assembled all the programs I could find in our tape library pertaining to music. Some of the files give musical tunes, others provide the tools for creating sound on the TS2068. This disk is a DS 40 track type. There is room on it for a few more programs.

DISK #6..ADVENTURE PROGRAMS
The programs on this disk have been assembled by one of our out-of-town club members, Les Cottrell. The disk contains quite a variety of text and graphics adventure programs suitable for use on the TS2068, i.e. you don't need a Spectrum Rom. Again, this disk is DS 40 track.

Others in the works..Financial Sounds, Graphics,. etc. Any ideas, anyone interested in creating a disk for our disk library?

****

VAL for the QL

The QL has great string manipulation functions that offer a great deal of flexibility. The method of coercion should eliminate the need for the VAL function, however, there are times when you MUST have it.

For example, I was working on a program that would plot any mathematical function on the screen. The function had to be a two variable function (y=SIN(x), y=x^2, etc.). The plotting part of the program was easy to write, but the function had to be embedded in the SuperBASIC lines because it could not be put in a string and then evaluated. A friend of mine had the same sort of problem, so we set out trying to find a solution.

On the 2068, the following would be solution:

```
100 INPUT "y = ";a$
110 INPUT "x goes from? ";x1
120 INPUT "x goes to?   ";x2
130 FOR x=x1 TO x2
140 LET y=VAL a$
160 REM you now have x and y co-ords
170 REM do scaling and plotting
180 NEXT x
190 STOP
```

After hours of thought, we both came to the same conclusion. We have to make full use of the ability to work with channels on the QL. Since we both have the MIRACLE SYSTEMS TRUMP CARD, references to 'ram1_' are used, but these can be changed to any device name. The following program skeleton can achieve the same results as above (in a round-about way).

```
100 DEFine FuNction y(x)
110   z=COS(x)
120   RETurn z
130 END DEFine
140 INPUT "y = "!a$
150 INPUT "x goes from? "!x1
160 INPUT "x goes to?   "!x2
170 OPEN_OVER #3, ram1_temp
180 PRINT #3, "110 z=";a$
190 CLOSE #3
200 MERGE ram1_temp
210 FOR x=x1 TO x2
220     y=y(x)
230     REMark you now have x and y co-ords
240     REMark do scaling & plotting
250 END FOR x
```

Here is a brief explaination. First of all, TK2_EXT calls up the Toolkit II extensions. They really aren't necessary, but make things fast and simple. If you don't have the toolkit or added RAM, then change OPEN_OVER in line 130 to OPEN_NEW. OPEN_OVER just OVERwrites the file if it already exists. Also, change ram1_ to any valid device which you happen to have.

Line 110 just sets up a dummy equation to avoid a null assignment. Since the QL does not have the VAL function, a problem arises when you say

```
a$= "x^2+4*SIN(x)-LN(x)"
x = 2
y = ??
```

How are you going to evaluate 'y' with the value of 'x'? You want to sub the value of x into the equation, then assign that result to y. The way in which the program does it is simple when you look closely. It just changes the line that has the equation in it by merging a one line program. This one line program contains the equation that was input by the user. With RAM disks it behaves like a built in function, but with microdrives it is sure to be a pain.

If you are going to use this routine, be sure to make the appropriate changes to the line that stores the equation in the new program (line 180 in the listing). Also, don't be confused with the DEF FN. It uses x as a parameter, but it is not the same as the x later on in the program.

Any questions or suggestions? Call or write to me.

SENEN RACKI
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Hamilton, Ontario
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(416) 549 6863

SINC-LINK WANTS
YOUR ARTICLES,
RIGHT? WRITE!

LARKEN 2068/SPECTRUM PRODUCTS

LKDOS -EXTENDED BASIC Cartridge

This multi function software cartridge is fully Spectrum compatible and can be used with ALL software for 2068 or spectrum. The cartridge contains the DOS (disk operating system) and is used to control the Larken DSK-400 or other Disk Interfaces. The LKdos cartridge uses none of your program ram as it has its own 8K ram and 8K rom on the cartridge. It is also compatible with OS-64 and other cartridge based Roms.

All commands ,LKDOS or Extended Basic use standard keyboard commands preceeded by PRINT #4: eg; PRINT #4:LOAD "filename" CODE

It will support 1 to 4 floppy diskdrives as well as a 256K Nonvolatile RamDisk. The dos automatically keeps a catalog of all files on disk and takes care of all file space allocation etc. (No need to worry about lengthening existing programs which you cant do with some 2068 Dos's)

Basic,Code and Array files are saved the same way as cassette.

Sequential Files are also supported. Now you can OPEN a file and PRINT to it the same way you would print to the screen or read information from it with INPUT# or INKEYS#. This is very useful for working with text files.

Commands for LKDOS are LOAD ,SAVE ,CODE ,ARRAY,SCREEN$,MERGE, LINE,CAT,FORMAT,ERASE,VERIFY,PRINT,GOTO,OPEN,CLOSE,MOVE.

Also any program can be transfered to disk with the push of a button (Using NMI save push button on disk interface).

As well as LKdos commands, the cartridge has a number of Extended Basic commands. Eg; PRINT #4: CIRCLE x,y,(pattern) -is now a graphic Fill command with 10 different patterns.

Other commands include ; multiple windows , Box clear and fill Channel opening for Disk,Printer and screen, variations of Poke, Paper, ink and Clear.

The command PRINT #4:OPEN #3,"LP" lets you use a Large Printer with Lprint or Llist commands. It can be used with AERCO, TASMAN or A&J printer interfaces and it supports Line length, Margin, Tab, Comma and other parameters.

-This cartridge is also available for the AERCO RAMEX and OLIGER disk systems . When the cartridge is installed , they will emulate a Larken Disk system. Demo disk supplied.

400K 2068/Spectrum Disk Interface (DSK-400)

This disk interface combined with the LKdos cartridge will give you a 2068/Spectrum disk system second to none . This double density disk interface will put 400K on a double sided 40 track drive. It can control up to 4 - 3" ,3.5" or 5.25" single sided,double sided or quad density drives (800K on a Quad) This board is a compact low profile design that connects to the rear buss on the 2068 and has a thru connector. It can load 32K in less than 5 seconds. The NMI (snap shot) pushbutton is on the board and there is also a KEMPSTON compatible joystick port which is the standard for all spectrum software.

256K Nonvolatile Ramdisk Kit

The ramdisk now supplied as a kit which consists of a PC board, main connector and instructions . The other parts are easily obtainable from electronic suppliers. This kit is recomended for experts only. (The ramdisk cant be used with the Aerco FD-68).

This rear mounted memory board also uses the Lkdos cartridge for its operating system. The PRINT #4:GOTO (device) command is used to direct the Dos to Floppy disk or Ram disk .All LKDOS floppy disk commands are treated the same for ramdisk. It can be used with the Floppy disk I-F or without.

It uses the new 32K byte static ram chips (62256-1p) More chips can be added for up to 256K. Two 'AAA' batterys provide battery backup for data retention.

Special circuitry protects the ramdisk from any data loss even if is removed from the 2068 . Very Fast and Reliable.

PRICES ---	LKDOS EXTENDED BASIC cartridge	$65.00
(all prices)	400K System (Cartridge + 400K Interface)	$119.95
(are $US)	Ramdisk PCB and instructions	$20.00
	Disk ribbon Cable (1 drv)	$8.00

Add $5 S/H (Call for info on Disk Drives and complete systems)

LARKEN ELECTRONICS

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All products have a 90 day Guarantee

TORONTO TIMEX-SINCLAIR USERS CLUB
April 3, 1989

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 before now, regarding a couple of disks that you have sent me. I have only just now taken a close look at them.

What I see is that the first one that you sent was a bit of a mixed bag. Then, it looks as though you took heed of my comments about what I thought a club Larken library should look like, And sent me a second disk that incorporated many of those ideas.

I worked over the ADVENTURE disk a bit, adding a number of similar programs that I had, to fill up the disk. I also modified the disk header label, and added to the description file. You might look at the appearance of the description file on the screen. I used a different font in it. A font that I think makes for easier reading. The font is built in to the taswide code. This modified code is labelled "taswid.Cx". I have also used the ON ERROR GOTO routine as well. You might take a look at how it works. If you answer the scroll? message with a "n" the ON ERR routine gets you back to the menu promptly.

I have placed this modified disk into the library as Disk #6. If you have any ideas on revising it, please do so. I would like to think that this was your disk contribution to the library, and under your control. The mods I did are to be considered suggestions only.

I see where the other "SHARE DISK" that you sent me has many programs on it which are also on the other disk, so I am in a bit of a quandary as to what to do with it. The SPECWORD program is very interesting. I'm not sure that I prefer it over Tasword, which I am using, but it is an interesting program. I started to modify the SPECWORD to use the version 3 Larken printer driver routine. But I now think that was a wasted exercise, since probably the graphics control codes will work only with the modified AERCO software.

I tried the Larken version 3 printer routine on TASWORD some time ago, but found that the graphics printer codes needed the Tasword printer software in order to be effective.

The interesting thing about the instruction files "one.CC", "two.CC", etc., is that they are in 32 column format, not, say, 64 or 80 columns. I printed and pasted them up as such, but I would have liked to be able to make the program print them out in 64 column mode. I was unable to do this.

Sincerely,

George Chambers

3/29/89

March/April 1989
March 4, 1989

Dear OUt-Of-town Members

I see where it's that time again!. We have a rather large newsletter this issue. Please don't come to expect that every issue will be like this. Of course we would like it to be so, but that depends on the material that we get from our members. While a lot of the material comes from regular contributors, it has been observed that our newsletter gets contributions from more members than many other newsletters. This is a nice thing. We would like to have each one of you consider a contribution. Please!! Would "Pretty Please" do it!!

Would some of you also drop a line to the Editor and tell him what you think of his efforts with the newsletter. Personally, I don't think I've seen greater effort put into it or a nicer publication since it was first brought out in 1983.

Before I forget it, a query. Am I up-to-date in my answers to member requests. I think I am, but I have a nagging feeling that I owe a couple of disks to some one. I have a few letters to answer, which I will do up with the newsletter. But if anyone is waiting for something from me, do let me know. (I say this in every newsletter!)

I see that in my last missive I mentioned that I had received some 32K SRAM chips for my RAMdisk, and that they were not functioning properly. Well, I phoned JDR Microdevices, in California. They do not have a toll-free number i.e. 800, from CANADA, as they advertise. So, I called after 6pm, which made it about 3pm in California. A woman answered, and said "please hold on". I said,"Wait, this is a LD call from CANADA! Don't take too long". Well, to make a story short, she did come back promptly, listened to my tale of woe, gave me an order number, and told me to send them back, they would replace them. Sure enough, in about three weeks a new set came, and they seem to be working perfectly.

The defective chips had a CSI logo; the replacements an NEC logo (the same as the original 2 chips on my system). So I have my disk menu program on the RAMdisk, plus three menu SCREEN$, TASWORD, doctor.B1, and a couple of Larken utilities. There is still a bit of space left, that I am reserving for the next idea I may have.

Anyway, I have to say that I was happy with the way JDR Microdevices handled things, and I would have to recommend them to anyone who wants to purchase chips.

My remote keyboard project has been placed on the back burner for the moment. I have been doing a bit of work with a modem. A local group was offering 300/1200 baud modems for $42. Three of our members have bought them, and we have been busy getting them up and going. Well, it meant ordering a Z-SI/O (serial port) board from ED Grey, and wiring it up. This is required to interface the modem to the TS2068. I have my modem connecting to another modem OK, but so far I have not been able to communicate. Another member, Renato Zannese, is trouble-shooting it for me at the moment. Whether there is a real problem with the I/O board or whether it is my own incompetence, I'm not sure!! I'll keep you posted.

The modems are a good value. They are a surplus item from the local telephone company, donated to the CNIB Amateur Radio Group as a goodwill exercise, for them to raise money. They come with a 5 year guarantee. It seems to me that the telco is retiring them from service, and doing a good turn at the same time. I am told that they are working with IBM clones, and with Commodore computers. I expect them to work with ours, also. They are built like a tank (and weigh almost as much). Anyone interested? I think they are still available.

I'll tell you a little story. I was in the local electonic surplus store, and there, on the floor, was a whole heap of them for $10 each!! Well, I explained this to the other two who had bought the $42 variety, however there was a feeling that they were still a good buy. Whew! I'm relieved!

The $145 RGB monitore have been a success. I saw one of them in action, and I hate to admit it but it seems to be a better image than the one on my Sears RGB!! It was hooked to a QL, and it gave a dazzling performance of coloured graphics. I guess the QL is faster than the TS2068 in getting things on screen. Fortunately for me, they had sold out when I went next time, so I did not have to decide not to buy one, the decision was made for me!

We had a bit of trouble getting the interfacing cable right. A visit to Schennelly Stoughton got us on the right track. Well, what I really mean to say is that Schennelly got them working pronto!! If you remember, I mentioned Schennelly and computer repairs, in my last missive.

As you will read in the newsletter, Hugh Howie is now looking after the QL section of the club. So I rather expect that there will be some great activity in that department. Maybe it's not moribund; maybe dormant would have been a better term!! OK, OK Hugh, I won't say any more, except "great stuff".

The TS UPDATE magazine made mention of our newsletter being strong on Larken, as a consequence we have had quite a number of requests for a copy of the club newsletter. Also a number of new members with the Larken system have joined. There has also been quite a response to the Larken library. Have I ever been busy, recently. Tell me about it.

We do welcome the new members, and hope that you take advantage of all that our club offers. One of our new members, along with his membership money ,sent us a copy of a QL service manual, and a QL technical manual. Another member sent an article for the newsletter (on a QL topic) along with his application form. That's the kind of new members to recruit! Thanks, Senen Racki and Mike Ferris.

Yes, and Senen has also sent me a xerox copy of the QL schematic. It'll need a bit of work to make it useful (legible) but will be a useful addition to our club resources.

There have been quite a few new members join since I last gave a thumbnail sketch about myself. maybe it's about time to do it again. This way, you out-of-town members will have an idea who you are corresponding with. I like to know who I'm writing to, but I can't put this sort of info into every letter I write.

I have been retired since 1981 from the Bell Telco. I worked there as an engineering

assistant. Married, with 3 adult children, none of whom are interested in computers! Have dabbled over the years with housebuilding, photography, Pottery (throwing and firing), gardening, and lastly T/S computers and computer clubs. Been a Scout Cubmaster for some 18 years.

I mentioned Bill Harmer as having a document on Larken and the ZX81. He has sent me another draft of the document; this time a greatly expanded version. If any one would care to critique it for Bill, I would be happy to send you a copy.

We have an index of exchange club newsletters in our club library. I can send you a copy of it if you wish. We are assembling the newsletters by club. We therefore have files for about 15 clubs. If you are interested we would be delighted to send a file out to you. We would like it back of course, and you would be expected to cover our postage costs. Other than that, there is no hooks to the offer! Let's make use of them. Some club's newsletters are better than others, of course.

Recently we have started exchanging with four new Timex Sinclair groups.
They are: The Cedar Rapids and Greater Iowa Sinclair Timex people, the Seattle Area Timex/Sinclair User Group, the Vashon Island Timex/Sinclair Association and the Boston Computer Society (Sinclair/Timex Section).

I'm not sure whether I mentioned it before, but I have been assembling various musical/sound program onto a Larken disk to include in the club Larken library. I would like to fill up a Double sided disk. I have about 20 programs so far. Maybe some of you have a contribution I can put in it. I have two of Joan Kealy's programs, Perfidia and Evergreen. Joan has written several others and I would like to include them on the disk. Any help?

Any other ideas for topic disks in our Larken library? A graphics disk? One on Astronomy? Printers?

Now maybe we can see what our exchange newsletter have to offer us:

The Vancouver T/S club newsletter, ZXAPPEAL, reports that they have received the Sept/Oct Issue of TIME DESIGNS. Has anyone else received it. I hear TIME DESIGNS have a recorded announcement on their telephone line that says everything is up to date; that the newsletter is on it's way. (Not clear which issue they are talking about) I sure wish there was a little bit more integrity about some of these publishers. I'm really getting fed up to the teeth with all this shilly-shallying!! I have received nary a word since I sent in my renewal back in July '88. I know Bill Jones says, "have some sympathy for newsletter publishers", but enough is enough, surely.

The Feb (89 issue of ZXAPPEAL has an article entitled "The ZX/TS True 64K Internal NVM Upgrade". The copy is from a ZX Printer, but if you would like a copy, ask me. This issue also has an article on QL overheating, and how to solve it once and for all. I see where it is a reprint from the QL newsletter, QUANTA.

The Jan '89 ZXAPPEAL has a good article on how tc protect your computer from transient power line voltages.

THe Harrisburg T/S newsletter (Jan '89) has an article on making up a Z88 to IBM or TS2068 interface cable, showing pin connections. The Feb '89 issue has a full-page advert (sort of), for a software package which is purported to make your QL think it is an IBM PC. There are two versions of it, one called the Vanilla Solution, the other more elaborate version the Chocolate Solution. RMG Enterprises appear to be promoting it. Some cost figures are given, (80 Pounds/Vanilla and 130 Pounds/Chocolate), but just what that translates into RMG figures is not clear. I can supply a copy of this information, if you are interested. Or you could drop a line to RMG Enterprises.I suggest sending a US dollar bill to them, for stamps, etc.

The newsletter TIMELINEZ (Dec '88 issue) has a lengthy article on the John McMichael interface board. This allows hooking a Commodore 1520 four-colour printer-plotter to the TS2068. The newsletter has an original example of the plotter output pasted up on the front page. Very novel.

We have started a newsletter exchange with a T/S group in Cedar Rapids Iowa. The first issue we received has a lengthy article on a battery backup for the TS1000, using a 12V, 2.5 AH gel cell.

SINCUS NEWS (Jan/Feb '89) has a three-part series called "Exploring the TIMEX/SINCLAIR 1000's Sinclair Logic Chip"

The CATS n/l (Jan '89) has a couple of QL articles. One is a lengthy article (which looks impressive) called "LET'S IMPORT". This newsletter also has an article on how to eliminate retrace lines from and RGB monitor when used with a 2068 or QL.

The SMUG newsletter (Jan '89) has an article of interest to Aerco Disk Drive owners. It is a tutorial on a disk utility called SEKTOR. The same issue of SMUG Bytes has an article on a Digitizer for the TS2068. It says their club will sell assembled, tested digitizer boards for $50 US, plus $3 shipping and handling. A feed through connector will cost another $5. There are a couple of cautions. It won't work (yet) with the Aerco Disk interface, and you can't have anything in the dock port. Which eliminates the Larken, also!!

The PLOTTER (Feb '89) has a QL cartridge Back up program listing. Also it has a n article called "2068 Large Printer Screen Dump". It is a m/c program listing.

That seems to just about wind things up for this newsletter. Do drop a line to the Editor: and do sit down and write up something for the newsletter!! Leaving you with that thought, I remain, Yours Sincerely,

George Chambers

A member, Louis Lafreniere has 5 2068 command cartridges to sell. ~~Easy~~ Flight Sim, Casino I, Budgeteer, Androids, Crazybugs. $5 each.

3/29/89

TORONTO TIMEX-SINCLAIR USERS CLUB
February 28, 1989

14 Richome Court
Scarborough, Ont.
M1K 2Y1

Les Cottrell
108 River Heights Drive
Cocoa, FL 32922

Dear Les,

Received you package about a week ago. Thank you for the return of the tapes.

I tried the program "survivor" and I was able to load it OK. It may have something to do with tape recorders. I'll have to check out Mario Bros as well. If I recollect it, I had some difficulty with it as well. That is to say, it would lock up.

Sorry that I did not include the games tape listing the last time. I shall try and remember it this time.

Funny, I hardly ever use the "erase.B1" utiltiy. The ones that I use most are "doctor.B1, "copy12.B1", and "repair.B1". Well, come to think about i, I use them all. I think some of them are pretty clever, even if I do say so myself!!

Re your query on a disk of adventure games for the club library. I like the idea a lot, though I am a little fearful about letting the library get too big. The three disks that are in it already, are proving to keep me busy. Maybe it's the novelty of it, and so many Larken owners are interested in the Larken utilities. Maybe what I want to do is go at it cautiously. Provide a disk where it serves a purpose that tape cannot suffice.

To give you an idea of where it can lead to I include another games list, this one showing programs which are on disk, and/or on tape. Pretty staggering, isn't it!

You ask for some ground rules for club disks. Well, I know Larry Kenny says I should use Single sided disks, because some members have that type of drive. But I find that a bit restrictive. It may be OK for the Larken utilities disk that I have put in the library. But for others, I think that DS 40 tracks per side is most appropriate. Maybe I feel most strongly is this. That there is no point to simply duplicating the tape library. If a disk is to be put into the library, then there should be some valid reason. I have mentioned this before but maybe it bears repeating. That is, on tape, the programs have some natural order in terms of loading. That is to say, the code files are usually loaded by the immediately earlier Basic loader. On disk however, there is no such natural order. For all intents and purposes they are on the disk in random order, with no indication as to their grouping.

I feel that a disk of programs should have a front end menu, preferably of an AUTOSTART type, with a "menu.B1" backup. There should also be a HELP file, accessed from the menu, that describes the contents of the disk. What the programs are; which files go to make up each program; and how to use the programs once loaded. All very time consuming to prepare such a disk. But, given the higgledy-piggledy nature of our club tape library, I am not anxious to perpetuate it in the club disk library! Do these thoughts make sense?

Does that mean that I am interested in your "adventure" tape. Probably I am interested. Maybe you could send it to me, and I could take a look at it. I have an adventure game taken out of ZX COMPUTING, called Jack and the beanstalk. Based on the fairy tale. Do you have it?

Six milliseconds seems to be the standard as far as club members are concerned. I have not come across any other speed. I think Larry built the speeds in his DOS so that his system would be flexible. I've never run across a member who could not use that speed.

I think that either 10 or 9 tracks per NMI-save are both acceptable. If users want to make a 9 track save out of a 10 track, then they can. In my program "crackr.B1" I use the 9 track SAVE. I did that partly because I was initially working with 9-track saves. Then I decided to keep it that way; reasoning that users could make a 9-track save from their 10-track programs, and use that with the "crackr.B1" program.

Well, I shall close now and enclose this letter with our newsletter. We have a rather large newsletter this time. Seems that our members are being more helpful in contributing material for it. Our Editor does not like copying material from other newsletters, so he is lucky to have such cooperative members to send original stuff.

Sincerely,

George Chambers