

# SINC-LINK

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ZX80/ZX81  
TS1000/1500  
PC8300  
TS2068  
SPECTRUM  
QL  
LARKEN I/F



TORONTO TIMEX-SINCLAIR  
USERS CLUB

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## NEW LOOK ISSUE

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## TORONTO TIMEX-SINCLAIR USERS CLUB

14 RICHOME COURT, SCARBOROUGH, ONTARIO, CANADA M1K 2Y1

## Editorial

Welcome to 1989! We're still here after all these years (6+). Not bad for a bunch of computer enthusiasts whose machines have not been supported by the manufacturer for about 5 of those years. In fact, the club is experiencing a modest resurgence. With new ZX81 members, new out-of-town members, QL members doing club demos, new hardware projects, growing tape and disc libraries and a healthy bank balance, I'd say we're doing pretty good. We'll certainly be around for a while.

In the spirit of the New Year, I'm presenting an updated newsletter cover. I'm entirely to blame for this. Last issue I promised a cover with artwork and asked for submissions or at least suggestions... well there were so many (none!) that in order to keep my promise I decided to pick what I thought was the best offering - mine. If you don't like it write and tell me why or send me an alternative. I knocked the Toronto skyline together in about half an hour using Art Studio. Can you do better? C'mon, I know you closet artists are out there. I can hear the brush strokes. By the way, yes I am aware that I missed a line in the Sinc-Link blurb on the cover of the last issue. Did anyone else notice?

On to business: A club executive meeting was held in the middle of December. A question was raised on whether we are serving the members as well as we might, our feelings were that we were doing at least an adequate job. Since we may have a slightly biased view of ourselves, what is your opinion? We would like to know if we can serve you better. (Really).

Remember your modem? That little pc board (cased or not) with the red L.E.D. and the phone jack? A number of users in town have discovered (or rediscovered) that their modems are great tools for conversing with each other, up and downloading text and RLE files and for use as printer interfaces. We'll be covering their uses in the next few issues.

News tidbit: For those of you who subscribe to Syncware News and are wondering if that publication has died, the answer is no! Just prior to the December club meeting, I phoned S.N.'s publisher, Mr. Jeff Moore, and he assured me that S.N. vol.5 no.6 would be in the mail to all subscribers before Dec. 25/88. Citing a number of problems for the delays, Mr. Moore also explained that after the December issue, Syncware News will be merged with his other publication, Quantum Levels. Current subscribers will get this new hybrid magazine until their subscriptions expire or are renewed. Let's hope he can maintain the high quality we've grown accustomed to in Syncware News and wish him luck.

I'm always on the lookout for new material for the newsletter and I'm happy to report that we are getting some articles from people other than mainstays George, Bob, Rene and Renato. These new writers help relieve some of the strain I put on these four to produce new work all the time. I hate being a pain but if these guys slow down or you readers don't send in more articles the consequence will be that you'll have to read more of my brilliant prose! You'd better get writing. Anything TS-computer related will get published.

Remember, send all correspondence to the address on the cover. Do not use the old Post Office box number. 'Nuff said.

J.T.

In October 1982 a short advert appeared in the classified section of the Toronto Star, asking persons who might be interested in forming an interest group for a computer called the ZX81 to contact Pete. It gave a phone number.

The advertisement was placed by Pete Harvey. About a dozen persons responded, and this was the genesis of what was shortly to be called the Toronto Timex Sinclair Users Club.

I was one of those responding to the advert. The very first meeting was held in a bar, and for some reason I was unable to attend. At this meeting it was agreed that there was sufficient interest to warrant further meetings. The next meeting was held at Pete Harvey's place. Initially we may have met every week, though it may have been once every two weeks. Once or twice the meetings were at my place.

However the group was growing to such an extent that a new location was urgently needed. It devolved on Pete to make new arrangements. In the beginning these locations were varied. I recall that we met on a couple of occasions in a sideroom off a bar at Eglinton and Yonge streets (Pete thought this was ideal!); once in a spare room in an apartment basement; in a small room in a public library; in a large hall in the same library.

The group continued to grow, to such an extent that a more permanent location was felt necessary. Pete arranged for a meeting place in the North York Community Hall. Meetings were scheduled on a regular basis on the first and 3rd Wednesday of each month. Rent was \$15 a meeting, if my memory serves me correct.

At one of the earlier meetings it was agreed that the annual membership dues should be \$20. Pete Harvey became the first president and treasurer, while I offered to be club secretary. The club name was agreed on.

At about the same time there was a consensus that the club should publish a newsletter, and that it should be a bi-monthly issue. This was done, with Stan Piotrowski becoming the first editor. There were three issues the first year. Members would pick their copy up at the meeting.

We decided to place a further three-day advert in the Toronto Star newspaper. This brought out more persons interested in the computer. The local Timex dealer, Gladstone Electronics, was given information about our club, to hand out to customers. Small slips of paper containing information about our club were put into Timex books on newsstands and libraries. These produced additional members.

A 'letter to the editor' telling of the club brought further responses, including a number of out of town inquiries.

Those were heady days. The club had grown to about 80 members by the end of the first year, and our meeting place was becoming crowded. Attendance was about 45, and the room had seating for only about 40. Latecomers had to stand. Many members brought their ZX81's and other equipment to show off and talk about. The early ones found a table to put their equipment on; latecomers had to make do as best they could.

One member, Ian Singer, had a sort of dealership of Timex equipment, and used to fill orders for software and hardware.

In the beginning there was no structure to the meetings. Members brought their ZX81 equipment, and showed it off and discussed it. There would be a general discussion, moderated by Pete Harvey.

I can especially recall one member, John Castillos. John was quite a character. He had a heavy Spanish accent, and was by nature an excitable person. When he got onto a topic he would get so carried away that it was almost impossible to make out his conversation! John was our tape librarian. He operated the library on the basis that you would give him a blank tape with a request for a program, and he would bring a copy to the next meeting. If you contributed a program, then you could get a second program from the library.

Then suddenly John was gone, much to our consternation. One of our members got a letter from him some time later, saying that he had had to leave rather suddenly. Still later, a friend of his wrote from South America, asking that we forward any of John's mail to the friend.

There was not much mail to forward. Bills from department stores, and from banks!! And catalogues from antique book dealers, mostly on Egyptology. John was an avid Egyptologist, and one of his original programs which is to be found in the club ZX81 library is an elaborate filing system relating to Egyptian mummies!

I forgot to mention something. John had a P.O. Box, and he had offered it as a club address. After he left, we simply continued using this P.O. box, paying the annual dues on it as they came due.

Meetings continued to be held twice a month through 1983. However, probably due to Pete Harvey's easygoing nature, the meetings had not progressed much beyond being "a bunch of guys chewing the fat about computers". I used this phrase in an open letter to the club membership in October '83. In this letter I suggested the club could and should be offering the membership much more, and requested anyone who shared these sentiments and was willing to serve in an active capacity to contact me.

The upshot was that an interim executive was elected, with a six month mandate to get the club operation onto a sound footing.

Greg Lloyd became president; John Roach, Treasurer; Martin Mauk, librarian; Ian Robertson and Brian Hammond, Activity Directors; Harold Goodwin, meeting chairman; Chris Hart, Out-of-town members; myself as Secretary. Stan Piotrowski continued as newsletter editor.

Pete Harvey's interest had drifted towards the Commodore, and he dropped out of the club.

The new executive put new life into the club. Demonstrations were arranged for each meeting, the club finances were re-ordered, a set of club bylaws were drawn up and accepted by the membership. Application forms and membership cards were prepared. The tape library was reorganised and a paper library was created. We started a newsletter exchange with other Timex clubs. In June of '84 the interim executive was confirmed for a further year.

We had been meeting in the Community hall for about 18 months when we had to move into new premises. It was a cause for macabre hilarity that our new premises were a former funeral home!! It was a distinct improvement over our previous location, what with deep carpeted floors, and a tasteful decor. Never mind that our storage cupboard was in the embalming room, or that the elevator we used to bring our club equipment from the basement up to the second floor, was designed to move coffins. We felt comfortably at home!!

Many members had converted to the TS2068 computer by then, and our meetings used to alternate between ZX81 and 2068 demonstrations. A TS2068 library was established.

Meetings continued to be twice a month, with attendance probably about 25 per meeting. But problems were brewing. The sole Toronto dealer was closing up shop. No one seemed to be selling Timex computers any more, and membership started to decline. Where the club had reached a high of 130 members, it was now falling off rapidly as existing members either looked to other computers, or simply lost interest. Curiously enough, while the local membership was declining quite rapidly, the number of members from out of town was actually increasing.

This was cause for concern, since servicing these members took considerable time and effort. In addition to mailing the newsletter, it involved sending programs tapes from our library, and supporting them in other ways. Nevertheless, we have continued to do this, expanding recently to support for Larken owners. OOT members now outnumber the in-town members by about 2 to 1.

In 1987 we had to vacate our premises once more. The funeral home was actually a temporary location of the Community Centre, until their new building was built. The move to the new Community Centre building involved a hefty rent increase; one that we felt unable to afford. A search for a new meeting place was urgent. Our president found a suitable meeting place in a high school classroom. This was the Forest Hill C.I., where we continue to meet.

A number of members were into QL computers, and some QL demonstrations were held. However the QL section has never been a very active group. A far more vigorous section has been the Larken owners. More precisely, the TS2068 Larken version.

For some reason our club has always had a very enthusiastic Larken following. Probably a dozen members started with the first vintage Larken system. Since then they have upgraded to the current version, and numbers have grown to where there are more Larken systems in the club than all other disk systems combined. At the risk of bragging, I would say that we are the premier Larken club in North America.

In October 1987, when nominations for a new executive were due, there was a familiar ring. No one could be found who was willing to stand for office. It was proposed that in light of this, further meetings be suspended, commencing in January. A letter outlining this proposal was sent out to all local members.

At the following meeting sufficient members came forward to serve as club officers that meetings were able to continue.

This brings us up to the present, at the start of 1989. Club membership stands at about 66 members. Our meeting attendance averages about 15. We have purchased a Larken system for the club and this has stimulated considerable interest at meetings. Our ZX81 section is showing signs of increased activity. Only the QL section seems moribund.

\*\*\*\*\* (let's see an improvement QLers! ED)

#### Magazine Clippings by G. Chambers

Being a long time Timex computer enthusiast and natural pack-rat, I have collected a great many magazine clippings on the Spectrum and TS computers. These cover the hardware and software aspects of both the ZX81, Spectrum, and TS2068 computers. Below is a partial listing of Spectrum programming articles. Most of them are applicable to the TS2068. If any of the articles look interesting, club members may request copies for the cost of copying (6 cents/page) plus postage. Or drop a line for further information on them.

1. Can you Prevent the Program Being Listed
2. Screen Displays can be Moving Experience
3. Journey to the Centre of the ROM.
4. Ghosts in Machine Interrupt Routine
5. Headers Examined
6. Please Explain Arrays to us Woodenheads
7. Adding Commands to Spectrum BASIC.
8. At Your Command...Adds 14 BASIC commands
9. GO-FASTER BASIC...A M/C Utility.
10. DATA Statement Builder.
11. Compactor
12. Infinite Scroll
13. Speakeasy...a M/C synthesizer
14. Speech Synthesis
15. Oscilloscope
16. Telephone...British phone
17. 3-D Letters...and also Mirror characters
18. Contour
19. Picture Slide
20. Night Moves
21. Searching at Routine Speed.
22. Curve Fit
23. Machine Code Colour Graphics
24. Spectrum Trace.
25. Introducing Z80 and 6502 Vectors...2 parts
26. Secrets of Spectrum Streams & Channels
27. Spectrum Streams
28. Toolkit
29. Multi-programming
30. Light Screen Designer...Parts 1 & 2
31. Mastering m/c on your Spectrum (6 Parts).
32. PIKCHACHANJA for your Spectrum.
33. Spectrum ROM Routines
34. In Different Directions...m/c scrolling
35. Gamesmanship...Games programming tips
36. Waves...a program to make you seasick
37. RENUMBER...An article and M/C listing.
38. Function Line Displayed in 3-D Graphics.
39. Thin Characters... M/C routine
40. Spectrum BEEP Command
41. Tape Copiers
42. M/C Indexing
43. ROM Routines
44. Wise Moves...Moving around on the screen
45. What Goes on Behind the SCREENS
46. DATA Handling
47. Searching Techniques
48. Elementary Graphics

Let's get back to some programming for a change. I have two interesting utilities from my notebook.

=====

### 1. RENUMBER TO 10000+

=====

When you are faced with using the MERGE command to join one of your utilities with another program, the first problem is whether there will be a clash of line numbers. Keeping your utilities (the ones written in BASIC) above line 9000 or so is helpful but there is no guarantee that some programs have not gone into this area. What to do? First, if the utility can be written in machine code or compiled via Timachine, that is an obvious way out. But if BASIC is the only way, then here is the solution.

Renumber the utility starting at line 10000. Right, that's what I said: ten thousand! Then there will be no danger of a line number conflict of interest. Type in the program below and SAVE it.

```

1000 REM Renumber to 10000 plus
1005 REM Bob Mitchell 1988
1010 REM Do not leave out lines 1000 and
1005. Change them is OK
1015 CLS : PRINT "This utility allows
renumbering to lines higher than the usual
9999." "The current start line is set
at 10000. Line numbers increment by five."
1020 PRINT "To set a different start line
use <GO TO 10040> now. Now, MERGE the program
to be renumbered."
1025 PRINT "DELETE the lines of this utility
by using <DELETE 10000,10095>."
1030 PRINT "Change all GO TOs etc manually
calculating them carefully in respect to the
new start line." "When ready, use < RANDOMIZE
USR 32000> to renumber."
1035 STOP
1040 INPUT "Start line # ? ",line
1045 LET line=line-5
1050 RANDOMIZE line
1055 LET hi=PEEK 23671: LET lo=PEEK 23670:
POKE 32004,lo: POKE 3 2005,hi
1060 STOP
1065 RESTORE 1070: FOR i=32000 TO 32030: READ
a: POKE i,a: NEXT i: GO TO 1015
1070 DATA 42,83,92,17,11,39,237,75
1075 DATA 75,92,167,237,66,200,9,6
1080 DATA 5,19,16,253,114,35,115,35
1085 DATA 78,35,70,9,35,24,231,0
1090 RANDOMIZE USR 100: SAVE "re#10+.B2" LINE
1065
1095 STOP

```

Try this program on itself. GO TO 1065 then RANDOMIZE USR 32000 and LIST. All the line numbers now start with a colon <:> which is the next character after <9> in the TS2068 character set. Thus it represents <10>. If you choose 11000 as the start line, the first "digit" in the line numbers would be a semicolon (;) and so on.

Now MERGE this program with your favourite short utility. Change all your GO TO and GO SUB numbers to the line numbers they will represent after the renumbering is done, noting that the line numbers increment by five (5) only. I have deliberately chosen a renumber routine that does NOT renumber GO TOs and GO SUBs because those that do will not handle line numbers over 9999.

Once the renumbering is done, it is impossible to edit the lines, hence the need

to change these GO TOs etc manually.

DELETE my utility as indicated in line 1025 above. Then, use <RANDOMIZE USR 32000> now to renumber your utility and SAVE it.

=====

### 2. TASORT- A TASWORD UTILITY TO SORT LISTS

=====

As the title infers, this utility will sort Tasword lists of up to 240 lines or 15360 bytes. Each record in the list must be only one line long, but with 64 characters per line there is room for a lot of material in any list (eg, birthdays and anniversaries, long play records, telephone numbers, things to do, diaries, program descriptions on disk or tape).

You may sort all or part of a list, or just the list in a longer Tasword file. When your list is saved in the usual Tasword manner, ensure you have noted the file text length (variable <a> gives this), list's start and end line numbers and the column number to sort on. The program prompts will walk you through the operation and when finished, the program along with its newly sorted list will have been saved ready for loading into Tasword. Respond to all <scroll ?> prompts with a <y>.

The program is set up for compiling via Timachine and there is a short loader/manager program to go with it. Type in the two listings, compile the main program and save it in the usual way and save the loader. The utility is then ready for use.

Try it on your favourite Tasword list, bearing in mind the limitations explained above. It should only take a few short minutes to get the job done.

One thing more: the display of the lines in the list uses Tasword's companion piece, Taswide, to present it in a 64 cpl format. If you do not have Taswide, change line 230 to read:

```

CLS: FOR i=n TO e: PRINT d$(i): NEXT i
and remove <RANDOMIZE USR 100: LOAD
"taswi.Cx"CODE> from line 8 of listing 2.

```

#### Listing 1. Tasort

```

40 REM !USR 28000
50 REM ! LPRINT
60 REM ! LIST
70 REM !LEN h$=<64
80 REM !INT +oa,ob,sf,a,b,c,e,s,n,i,j,t
90 REM ! OPEN #
100 CLS
110 LET oa=SGN PI: LET ob=2: LET sf=64: LET
a=47615: DIM d$(240 ,64)
120 INPUT "length of text? <=15360""b: IF
b>15360 THEN GO TO 120
130 LET c=INT (b/sf)
150 INPUT "start line? ";s
152 INPUT "end line? (0=last)";e
153 IF e=NOT PI THEN LET e=c
154 LET el=a+((e-1)*sf)
157 CLS : PRINT "loading text from""line
";s;" to line ";e;"..."
160 LET n=s
170 FOR i=a+((s-1)*sf) TO el STEP sf
180 FOR j=NOT PI TO 63
190 LET d$(s,j+oa)=CHR$ PEEK (i+j)
200 NEXT j
210 LET s=s+oa: IF s>e THEN GO TO 230
220 NEXT i: STOP
230 CLS : RANDOMIZE USR 64300:FOR i=n TO e:
PRINT CHR$(d$(i)): NEXT i
240 BEEP oa,10: INPUT "1=sort 0=save? ";ss:
IF NOT ss THEN GO TO 440

```

```

255 INPUT "sort on which col.? (1-63) ";t
260 CLS : PRINT "sorting on col. ";t: GO SUB
300: GO TO 230
290 REM shell-fault 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 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 360
420 NEXT i
430 GO TO 310
440 CLS : PRINT "storing sorted file for
SAVE...": LET s=n: FOR i=a+((s-oa)*sf) TO e1
STEP sf
450 FOR j=NOT PI TO 63
460 POKE (i+j),CODE d$(s,j+oa)
470 NEXT j
480 LET s=s+oa: IF s>e THEN GO TO 492
490 NEXT i
492 STOP
495 REM ! CLOSE #
550 CLEAR : RANDOMIZE USR 100: SAVE
"tasort.Bp" LINE 100

```

#### Listing 2. The loader

```

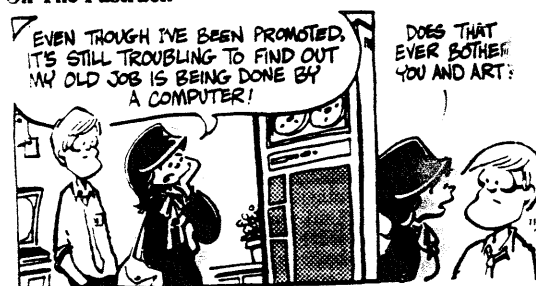
5 CLS : PRINT INVERSE 1;"TASWORD SORT";
INVERSE 0;" by Bob Mitchell."""This utility
will sort Tasword lists of up to 240 lines
(15360 bytes).""
6 PRINT ""Have the following parameters
ready from SAVED list:"""1. text length""2.
start line number""3. end line number if not
last""4. column # to sort on (1-63).""
7 PRINT ""Install disk containing list to
be sorted; then, press a key." : PAUSE 0
8 RANDOMIZE USR 100: LOAD "taswi.Cx"CODE :
RANDOMIZE USR 100:
LOAD "tasrct.Cc"CODE 28000
10 INPUT " TASWORD SORT ""list name? max 6
"; LINE n$: RAND OMIZE USR 100: LOAD n$+"CT"
CODE 47615
20 ON ERR GO TO 25: RANDOMIZE USR 28000: GO
TO 30
25 ON ERR RESET: POKE 23607,60: GO TO 55
30 LET b=PEEK 30078+256*PEEK 30079: REM see
note 1.
40 INPUT "list name? max 6 "; LINE n$:
RANDOMIZE USR 100: SAVE n$+"CT"CODE 47615,b
50 CLS : PRINT "Sorted file has been saved
and is ready for loading into Tasword"
55 INPUT "1=more 0=quit ";m
56 IF m THEN GO TO 5
57 IF NOT m THEN STOP
60 CLEAR : RANDOMIZE USR 100: SAVE
"tasort.Bb" LINE 5

```

NOTE 1. Line 30. This gets the value of <b> in the compiled program. The PEEK addresses may change depending on your compilation list of variables. NOTE 2. The listings above have been entered into Tasword using the Sequential File routine in the Larken Version 3 LKDOS EPROM. This was covered in my article in the Sep-Oct issue of Sinc-Link page 10.

Bob Mitchell Willowdale Ont 881115

#### On The Fastrack



by Bill Lawson

OUR EDITORIAL STAFF HAVE BEEN ASKING FOR PARTICIPATION FROM THE QLers IN THE CLUB. ANY SUBMISSIONS I HAVE MADE ARE FROM MATERIAL FOUND WHILE REVIEWING NEWS LETTERS OF OTHER CLUBS. FOUND THIS ITEM WRITTEN BY JOHN TANNER. I HOPE YOU WILL FIND IT INTERESTING AND THAT IT WILL ENCOURAGE YOU TO SEND IN YOUR QUESTIONS AND TIPS SO THAT WE CAN LEARN WHO OUT THERE CAN HELP THE REST OF US BACK HERE.

FROM EXCHANGES WITH VARIOUS CORRESPONDENTS AND OUR OWN LIBRARY PROGRAMS I SEE QUITE A LOT OF OTHER PEOPLE'S CODE AND ALTHOUGH IT IS EARLY IN THE LEARNING PROCESS FOR superBASIC, ON WHICH AT BEST WE HAVE HAD ONLY A LITTLE MORE THAN A YEARS PRACTICE, I THINK IT MAY BE INSTRUCTIVE TO HIGHLIGHT SOME OF THE MISCONCEPTIONS EVIDENCED IN THE CODE I HAVE SEEN.

IN MOST INSTANCES IT IS NOT THAT THE CODE WILL NOT FUNCTION BUT THAT IT FAILS TO TAKE ADVANTAGE OF THE STRUCTURE OF superBASIC. THE OTHER FACTOR WHICH NEVER FAILS TO SURPRISE ME IS THAT NO MATTER HOW POORLY WRITTEN A PROGRAM MAY BE THERE IS QUITE LIKELY TO BE A USEFUL FEATURE OR TECHNIQUE THAT I WAS NOT AWARE. SO I AM SURE THAT WE ALL HAVE A LOT TO LEARN.

MOST OF THE MISCONCEPTIONS COME FROM COPYING LESS FRIENDLY 'BASICS' e.g.

```
a) 100 A$=INKEY$:IF A$="" THEN GO TO 100
b) 200 IF A$="Y" OR A$="Y" THEN ....
c) 300 FOR I=1 TO A:NAME$(I)=TEMP$(I):NEXT I
d) 400 FOR I=1 TO A:IF I=B THEN ....
    410 NEXT I
e) 500 PRINT " TITLE OF PAGE "
f) 600 PRINT "ANY KEY TO CONTINUE":DUMMY$=INKEY$(-1)
g) 700 INPUT "A FOR ANOTHER Q TO QUIT ";AN$
    710 IF AN$="A" OR AN$="A" THEN RUN
    720 IF AN$="Q" OR AN$="Q" THEN STOP
    730 GO TO 700
h) 800 NUMBER=LIN_COST:NUMFORM NUMBER:PRINT NUM$
```

THE OPTIMUM superBASIC VERSIONS, NOT ALWAYS ADEQUATELY DOCUMENTED IN THE MANUAL, ARE, I SUGGEST:-

```
A) 100 A$=INKEY$(-1)
B) 200 IF A$='Y': ....
C) 300 FOR I=1 TO A:NAME$(I)=TEMP$(I)
D) 400 FOR I=1 TO A:IF I=B: ....
E) 500 PRINT TO 25;"TITLE OF PAGE."
F) 600 PRINT "ANY KEY TO CONTINUE":PAUSE
G) 700 PRINT "A FOR ANOTHER Q TO QUIT":ACC$='AQ'
    710 REPEAT KEY:AN$=INKEY$(-1):A=AN$ INSTR ACC$:IF A:EXIT KEY
    720 IF A=1:RUN:ELSE :LRUN DEV$&'BOOT'
H) 800 NUMFORM(LIN_COST):PRINT NUM$
```

THE BENEFIT OF THE superBASIC VERSION IS, I THINK, SELF EVIDENT. ITEM C) AND D) SHOW A MISUNDERSTANDING OF THE SHORT FORM OF THE 'FOR' LOOP. WHEN ANY STATEMENT FOLLOWS ON THE SAME LINE AS THE 'FOR' STATEMENT THE LINE WILL BE OPERATED UNTIL THE LOOP COUNTER HAS REACHED ITS LIMIT BEFORE OPERATING ANY CODE ON A FOLLOWING LINE. THE 'NEXT' STATEMENT IS THEREFORE REDUNDANT. IT APPEARS THAT HAVING INITIATED A LOOP USING PARTICULAR VARIABLE COUNTER IT IS POSSIBLE TO INSERT ANY NUMBER OF 'NEXT' i'S OR 'END FOR' i'S WITHOUT GENERATING AN ERROR BUT THEY SERVE NO PURPOSE WHEN THE LOOP HAS BEEN COMPLETED. WHEN USING THE LONG FORM OF THE 'FOR' LOOP THE 'END FOR' FORMS SHOULD ALWAYS BE USED TO DENOTE THE END OF A LOOP. 'NEST' SHOULD ONLY BE USED IF THE COUNTER IS CONDITIONALLY INCREMENTED IN THE LOOP. THE USE OF 'THEN' IS ALWAYS UNNECESSARY BUT WITH SOME IT IS A CASE OF 'OLD HABITS DIE HARD' AND SOME CHOOSE TO KEEP IT FOR AESTHETIC REASONS. PERSONALLY, FAVORING 'COMPACT CODE', I OMIT EVERY REDUNDANT FEATURE INCLUDING SPACES FREQUENTLY. I ALSO USE SINGLE QUOTES AS THEY ARE INTERCHANGEABLE WITH DOUBLE (EXCEPT WHEN YOU WISH TO USE SINGLE QUOTES IN A STRING) AND IT IS QUICKER TO TYPE, NEEDING NO SHIFT.

ITEM g) I HAVE USED TO REINFORCE MY RECOMMENDATION THAT IT IS BAD PRACTICE IN VIRTUALLY ALL CASES TO THROW THE USER BACK INTO THE SYSTEM. EVERY ATTEMPT SHOULD BE MADE TO STAY IN PROGRAM MODE SO THAT THE UNINITIATED ARE NEVER LEFT TO HIS/HER OWN DEVICES. IT ALSO SHOWS A VALUABLE SHORT FORM OF THE 'REPEAT' STRUCTURE. REMEMBER THAT ANY CODE FOLLOWING A 'REPEAT' STATEMENT ON THE SAME LINE WILL CAUSE IT TO BE TREATED AS A SHORT FORM, EVEN A 'REMARK', AND THERE MUST THEREFORE BE A 'FUNCTIONAL EXIT' STATEMENT IF THE PROGRAM IS TO PROCEED FURTHER. NOTE ALSO THAT THE 'INSTR' COMPARISON TRAPS UPPER AND LOWER CASE FOR GIVEN CHARACTER DUE TO THE TYPE OF COMPARISON IT USES (MANUAL 12/84 CONCEPTS p52). THIS CAN BE A DISADVANTAGE AT TIMES SO IT IS SOMETIMES NECESSARY TO CHOOSE VALID KEYS CAREFULLY OR MAKE A 'CODE' CHECK INSTEAD.

ITEM h) DEMONSTRATES THAT A PARAMETER TO BE PASSED TO A 'PROCEDURE', IN THIS CASE NUMBER FORMATTING SAY, CAN BE EXPRESSED AS THE ACTUAL CURRENT VARIABLE VALUE, THERE IS NO BENEFIT IN ASSIGNING IT TO THE NAME USED IN THE 'PROCEDURE' DEFINITION, AND PROVIDED IT IS EXPRESSED IN BRACKETS IN THE CALL STATEMENT ITS VALUE WILL NOT CHANGE DUE TO ANY OPERATION IN THE PROCEDURE.

THERE SEEMS TO BE A SHORT FORM OF THE DEFINE FUNCTION.

IF THE 'CODE' FOLLOWS ON THE SAME LINE IT DOES NOT REQUIRE AN 'END DEFINE' THUS:-

```
1000 DEFINE FUNCTION SGN(a):IF a 0:RETURN -1:ELSE :RETURN a 0
```

I HOPE THE ABOVE ON A DIFFERENT TOPIC; I NOTICE A NUMBER OF ITEMS IN QUANTA SUGGESTING UNDOCUMENTED METHODS OF CAUSING QUILL TO SEND CODES TO THE PRINTER BY USING A 'TRANSLATE' TO PRODUCE THE 'ESC' CODE OR USING CHARACTERS WITH A CODE HIGHER THAN 127. THESE METHODS HAVE THEIR MERITS AND ACHIEVE WHAT THE WRITERS WISH, BUT IT SHOULD NOT BE OVERLOOKED THAT THEY ARE CONTRARY TO THE PHILOSOPHY ON WHICH QUILL IS BASED. THE PENALTY IS THAT TEXT PREPARED IN THIS MANNER IS NO LONGER 'PORTABLE', i.e. IT CANNOT BE PASSED ON CARTRIDGE OR DISK TO OTHER QUILL USERS WITHOUT THE RISK OF GETTING A GARBLED PRINTOUT DUE TO THE RECIPIENT USING A DIFFERENT PRINTER AND/OR HAVING HIS INSTALL FILE DIFFERENTLY CONFIGURED. SO DON'T GET CARRIED AWAY WITH YOUR ENTHUSIASM FOR MAKING YOUR PRINTER DOING A JIG.



## POWER SUPPLY AND THE 2068

Larry Crawford London Ont

Those of us who have not "graduated" to a more up-to-date computer probably have a tangle of peripherals hanging out the back of the 2068. Each of these add-ons draws power from the internal power supply. There is a real danger of overloading it with rather nasty results. Bill Jones of UPDATE magazine tells me that his voltage regulator had failed a couple of times, taking some RAM chips with it each time. An obvious and easy solution to this problem is to power the expansion board separately, leaving the 2068's supply to look after it's own innards exclusively.

If none of your peripherals needs 12 volts, a ZX-81 power pack will serve very nicely as a source to feed a 7805 regulator mounted on the expansion board. Cut the +5v supply trace on the board close to the edge connector at the computer end and mount a 7805 in a convenient location along with a jack for the power pack to plug into. Wire it up according to Fig 1 and you're in business. When using this arrangement, it's convenient to plug the computer and power pack into the same switched power bar so that they are both switched on and off together. It's very easy to forget one or the other when you are messing around.

If your expansion equipment needs +12v and -12v for OP-amps, or whatever, you will have to use a 12v ac or higher transformer to feed 7812 and 7912 regulators as well as the 7805. See Fig 2. In that case, you may as well mount the new power supply on a separate board with the regulators on heat sinks and run a cable to connectors on the expansion board.

I mounted a 7805 with 0.1 uF bypass capacitors on my EPROM burner board so that it is completely self-powered and have had a much larger percentage of successful burns since.

About a year ago, I received from George Chambers a reprint from an American newsletter describing the shortcomings of the switching power supply in the 2068. Apparently it generates a lot of noise which interferes with tape saving and loading. The author's solution was to switch in some Zener diodes to decrease the voltage entering the computer to less than 9 or so volts. This lower voltage removed the noise problem but also the colour and sound outputs. I was willing to try it, but had no Zeners lying around so I decided to go whole hog and eliminate the internal supply completely. It takes a lot of guts, but it does improve tape operations considerably and retains the colour and sound functions at the same time. It also has enough power to supply all the peripherals without another separate supply.

First, you need an 18v ac or higher 2 ampere transformer, (Radio Shack 273-1515 is suitable), 7815, 7812, and 7805 regulators, a 5-amp rectifier bridge, and some capacitors. See Fig 3. Mount the regulators on a hefty heat sink and run a 4-conductor cable to the modified computer board. To defeat the switching power supply, remove Q1, the large transistor on the left hand edge, R1, the large resistor near it, and U8 the 12v regulator that looks like a transistor at the left end of C40. Cut the lower trace from the power switch and the board is ready for the new power source.

Solder the +15v wire to the positive end of C24, the +12v wire to the positive end of C41, and the +5v and ground wires to their respective ends of C40. I brought these wires in through a hole drilled in the bottom half of the computer case right next to the RF modulator can. I housed the power supply itself in a ventilated case with a small muffin fan running at low speed so that it is silent. (put a 120v Christmas tree light bulb in series with the fan to slow it down). I've been using the power supply now for about a year and it has given no trouble up to this point.

If the major surgery approach seems a bit drastic, do consider one of the less radical options to take some of the strain off the internal power supply.

## 2068 POWER SUPPLIES

Fig 1: To power +5v peripherals on expansion board

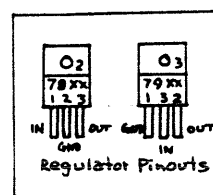
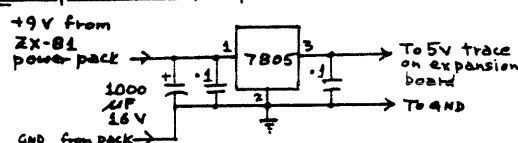
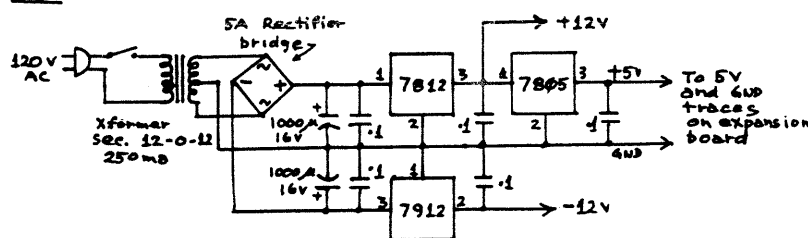
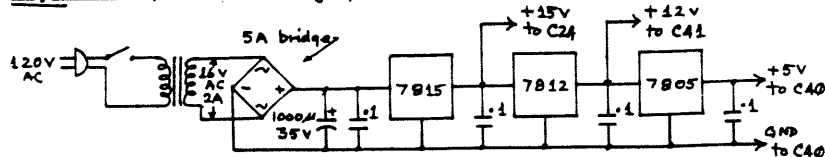


Fig 2: To power +5v and ±12v peripherals on expansion board



Note: Use separate small heat sink for 7912

Fig 3: To replace switching power supply in 2068



Note: mount all regulators on same large heat sink

Modemming  
By: G Nelson Robins

Recently I purchased a 2050 modem . After casing it I then tried my first log-on. I wasn't sure I was ready to log on to a BBS so I decided to start with logging onto another modem. Calling up a friend (voice only, always do this first).

I found out the hard way what it is like to answer the phone only to hear a high pitch whine on the other end. Not very easy on the ears or the nerves. We discussed settings that we could both agree on to use.

We decided to use the following. Duplex: Half, Con:Hex, Word:8, Prty: Even. Once this was set up I then called via the modem using Mterm software. Now our modems were connected and we could communicate using the keyboard. We did this for awhile then he said "Now you're ready for your first log on to a BBS." I was unsure on this for two reasons. Firstly, my computer was not a IBM , Mac, Atari or Commodore. Would I be able to upload or download text files? Secondly there aren't many BBS in Toronto that have sections supporting the Sinclair computers.

Upon logging on with my first board (PHOENIX) all my doubts were proved false. Any problems I had were ironed out with the help of the BBS's sysop who on PHOENIX is Kevin Banks. I found his board easy to use as well, as the board's menu's straight forward. So a novice like myself could become a expert in a very short time. Next was the big problem downloading, following some articles written on the subject in different newsletters.

I found sending a BASIC program using Hex works the best . And to send, say, a file using Tasword or MSCRIPT. Using a short program entitled LOADER IV by Kurt Casby. This allows you to load in any text file straight in to buffer ready for transmitting. Note: I found best results when both computers' CON is set for NONE. I was able to experiment a bit. Successfully uploading a Tasword as well as a MSCRIPT file to a another computer (my friend's Coco) as well as to another 2068. George Chambers as well as Renato Zannese let me use their computers to upload on. Thanks, I appreciate the help.

I also managed to capture a BBS Listing from The Grand Hotel II BBS to my buffer. Using this same method. Also I learned that it is easy to open the the reciever's buffer simply by pressing Cap Shift 7 then R.

Note: This should be done at the same time.

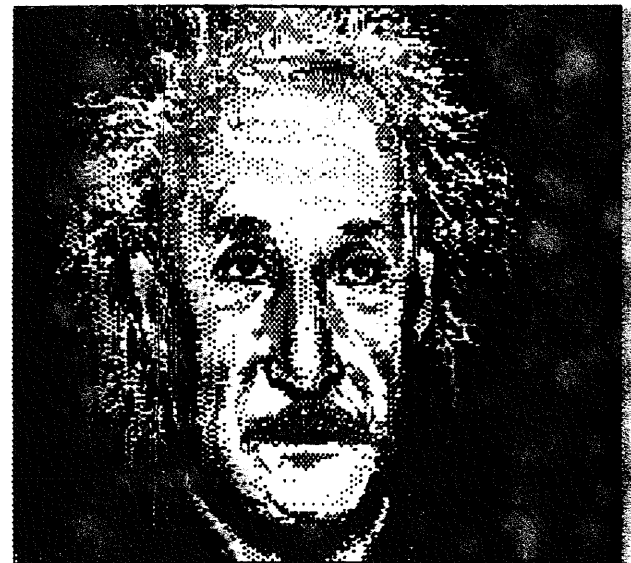
That about does my experience in Telecommunications for this month. As new things methods or boards are discovered I will be letting you know. I should mention that the PHOENIX board has a section especially for Timex users. There are no files to download at the moment. But I hope to change this in the near future. Give the BBS a call. The number is 458-5850 and runs 24hrs. (modem only)

\*\*\*\*\*

This is a RLE ( Run Length Encoded ) picture which was downloaded from an IBM bulletin board into a TS2068 and dumped onto a TS2040 printer. This little feat of magic is done entirely with public domain software. The only hardware requirements are: 1. A TS2050 modem with terminal software. 2. A TS2068. 3. A TS2040 printer. 4. A telephone line.

Next issue we'll show how easy it is to get high-resolution pictures from BBS's.

J.T.



## LARKEN AND THE LARGE PRINTER

by George Chambers

Although the title mentions large printer, this article deals with control of printing to the screen, the TS2040 printer, and to large printers.

To start with basics, we know that if you write a command 'PRINT "Larken"', the output will appear on the screen. And that if one enters the command 'LPRINT "Larken"' the output will be directed to the TS2040 printer.

Some of you may be unaware that you can get the same onscreen output with the instruction PRINT #2;"Larken", and an output to the 2040 with the instruction PRINT #3;"LARKEN". By using the command 'PRINT #2', and 'PRINT #3', we have instructed the computer to output to channel #2 or #3, as the case may be.

Lets explore this a little further. When we used the conventional printer driver software such as Aerco, Hacksel, or Oliger, to operate the large printer, we pointed the computer to the driver software but continued to use the channel #3. In doing this we became accustomed to the use of the commands LPRINT and LLIST to operate the large printer. But be aware that these two commands are unique to the channel #3, and are not available to the channel #5 that we propose to use.

What we are going to introduce here is a new flexibility to the use of the printers, using the Larken printer driver. Now, it's not that the Larken printer driver made this possible; it's just that it makes things easier. No driver code to load, and no need to change the driver software pointer at addresses 26703/04. Though, I hasten to caution you, you must open a channel between the printer and the Larken driver. I will enlarge on that briefly, at the end of the article.

The first thing is to open a channel for the large printer. Lets make it channel #5. Why #5? Well, channel #5 is the first available (unassigned) channel. That is to say, #2 is reserved for the screen, #3 is assigned to the 2040 printer, and #4 is used by the Larken system (channels #0 and #1 are used by the keyboard).

Now, if we make it #5 for the large printer, and already have #2 for the screen, and #3 for the 2040 printer, you can see the principle of the following listing.

Depending on whether we say PRINT #2; PRINT #3; or PRINT #5, we can direct the computer output to any one of the three outputs.

We could simply use the commands PRINT #2, PRINT #3, and PRINT #5 in a program listing, and be done with it. However, if it is desired to offer, within the program, the option of choosing whether to output to the screen, to the small printer, or the large printer, something more is required. We need to create a variable to use with the print option. You will notice that we have created a variable "ch" to handle this print function. Sort of makes sense; 'ch' for channel.

With this modification, all that is required is to assign a value to the variable 'ch' in order to select the output desired; i.e. LET ch=2, LET ch=3, let ch=5. Further, the variable can be changed at any point in the program whenever a different output is desired.

I mentioned earlier in the article the need to open a channel between the Larken and the printer. This is done w with the command PRINT USR 100; OPEN #5,"lp".

Note that in the listing the channel #5 is opened only when it was clear that the large printer output was selected. However, it could have been opened at any time in the program prior to making use of the printer.

```
1000 LET ch=2: INPUT "printout? y/n "; LINE y$
1020 IF y$="y" OR y$="Y" THEN INPUT "1=TS2040
0=WIDE ";pp: LET ch=(3 AND pp)+(5 AND NOT pp)
1030 IF ch=5 THEN PRINT USR 100; OPEN #5,"lp"
1040 PRINT #ch;"Your message"
```

## Casing For the 2050 Modem By G. Nelson Robins

When I first received my modem a couple weeks back it was uncased. I was faced with the problem of finding a way to encase it. (I have a terrible habit of spilling coffee on things.) One way was simply to go over to Active Surplus on Queen St. And purchase a project case to the measurements of the 2050 board. But if you're like me and are on a tight budget (Who isn't these days!) I knew I had to think of something else. Possibly around the apartment.

Searching around, I found an old 8-track player gathering dust on the shelf. I took it down and removed the screws from the bottom. Then I also removed everything from inside it. Until I was left with only a empty shell. I was worried that when I put the 2050 inside, it would be too close to the metal bottom thus possibly causing damage to the board. I solved this problem by taking an old joystick and removing the suction cups from the joystick and fastening the 2050 board to the suction cups with screws.

All that was left to do was to place the board in the 8-track case. Press lightly and the suction cups held it firmly in place. Also the board now had sufficient clearance from the metal bottom. I no longer needed to worry about damaging the 2050 board. I plan on keeping it encased in this manner. I was really glad I decided to keep that 8-track player. Though it is no longer used for music it still has a useful purpose..

## TS USERS

Got anything for sale?

Looking for something to buy?

Advertise free in Sinc-Link

## LARKEN DISK LIBRARY

In the last issue of the newsletter I asked for suggestions re the creation of a Larken disk library, and mentioned several thoughts that I had on the subject. I have received a comment from one member to date. Though this seems to indicate an absence of interest in such a project, I have started by establishing a library with an initial complement of three disks.

Disk #1...Larken Utilities	Geo. Chambers
Disk #2...Larken Omnibus	Bob Mitchell
Disk #3...Larken ODDBALL	Richard Hurd

These programs have been placed on single-sided 42-track disks to provide a medium that can be used by all Larken owners. Disks contain public domain material.

Where we mail program tapes to out-of-town members on a return basis with the member reimbursing us the postage costs, it seems more practical to provide disks on a non-return basis at a cost of \$2 per disk to members, postage paid. For non-members the charge would be \$5.

Following is a description of Disk #1:

### LARKEN UTILITIES

The programs on this disk represent a suite of utilities which will prove useful in the management and repair of disks used in the Larken LKDOS Disk Drive System.

Some of the programs make use of the latest (version 3) LKDOS. In particular the label programs may not work correctly. It is recommended that this v3 LKDOS be installed. It has many improvements and new features.

### DOCTOR

This program is the centerpiece of this suite of programs. Suffice to say that with "doctor.B1" it is possible to load, inspect, modify and re-save any track on a disk. The utility also allows for a number of other disk management functions to be carried out. DOCTOR has been modified for RAMdisk use.

### FORMAT

The format function in the Larken system is disk-based. This program is used to format disks. It has the capability of formatting single-sided & double-sided disks in single-, double- or quad-density formats. It also provides for head speeds of 6, 20, and 35 ms. Insertion of a disk name is possible.

### LABELS

A BASIC program which is based on the use of the Larken CAT command. Prints out to the TS2040 printer, or optionally, to a large printer.

### LABEL2

A disk label program with a greater flexibility. Will print out to a TS2040 printer or to a large printer. Scans the Directory for file names, and prints out in single, double, or triple columns. Also optional SORT capability.

### RENAME

Provides a means of renaming a program. Useful when saving NMI-type programs to disk, where a more identifiable name is desirable. This program changes the name not only on the directory track, but also on each track the program appears.

### REPAIR

On occasion a directory will become corrupted, making the recovery of programs impossible. This utility reads each track on a disk, and from the information gleaned, reconstructs a new directory, which is then saved onto the defective directory track.

### RECOVER

There are times when retrieval of a deliberately erased file is subsequently necessary. This program scans the tracks of a disk, searching for indications of the erased file. It removes the 'erased' marker on the name cell, searches the tracks for the program location, and restores this information to the directory track.

### ERASE

Provides a convenient method of selective erasing when many files require erasure.

### READER

READER provides a complete record of the program files on a disk. It provides this as a screen display, and an optional TS2040 hard copy. The program scans the directory track for file names, then scans the initial track of each file to determine it's starting address, program/file length, initial track location, and starting LINE (if any).

### LOADER

This program provides a convenient way of inspecting multiple programs on a disk. It scans the directory track of the selected disk, storing all the program names in an array. The program will then present each filename in succession, asking if you wish it to be loaded.

The interesting feature about this program is that before loading a requested file, it SAVES itself in the running mode. I arrange my copy to SAVE itself to RAMdisk, where it is readily called up. Then when the LOADER.B1 program is reloaded, it commences at the point where it saved itself, asking if you wish the next program to be loaded.

### TAPE SAVE

This program will save the contents of a disk to tape. It can also do the reverse action, load the "saved" tape back onto a disk.

This utility will be found useful for archival purposes, also in a situation where a drive of one system cannot load the disks of a second system.

## UPCOMING DEMOS

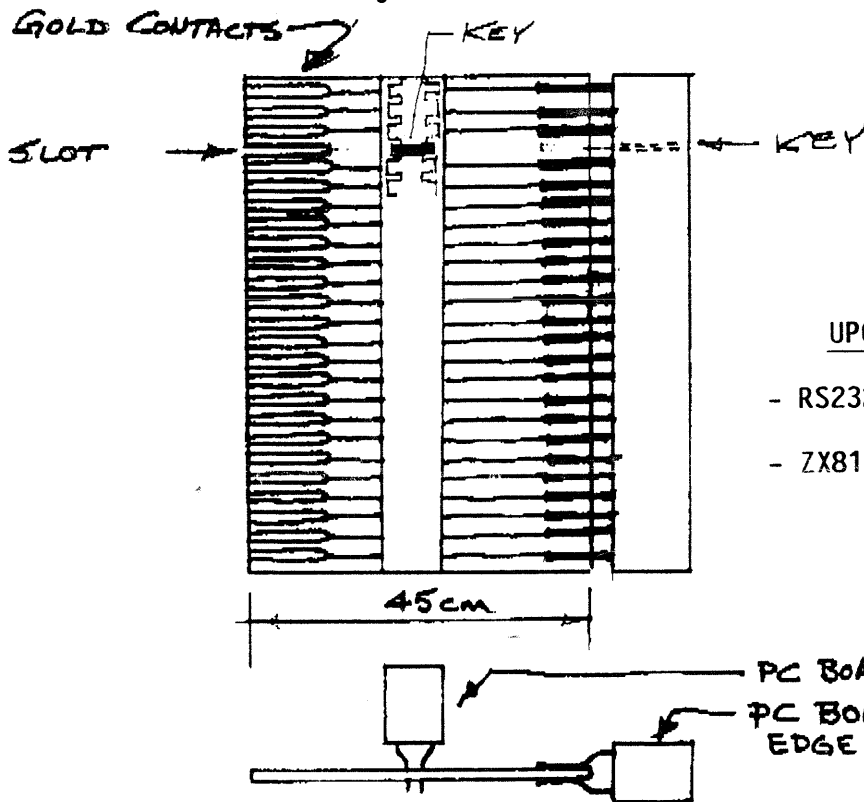
**ZX81 Hi-Res Paint Program**

**2068 RLE Graphics Program**

**ZX81 Sound Generator**

# MINI-MOTHER BOARD continued from last issue

by Rene Bruneau



## UPCOMING HARDWARE PROJECTS

- RS232 Serial Interface using 2050 Modem
- ZX81 Sound Generator

Postmaster, If Undelivered Return To:

Toronto Timex-Sinclair Users Club  
14 Richome Court, Scarborough,  
Ontario, M1K 2Y1, CANADA



November 14, 1988

Dear Out-of-Town Members,

When I looked up the last newsletter that I wrote I couldn't believe that it was Aug 15th. There must have been one since then; but I can't find it. Time must certainly fly.

Something that I have come across that you might find useful, are removable labels. They are similar to the self-adhesive labels put out by Avery, etc., which you are all familiar with. The difference is that these labels are designed to be removable. You can peel them off when you want. Not every store has them. They are identified as AVERY S-2448N Removable labels. There are several sizes. I purchased the 1 1/2 inch by 3 inch labels to stick on my disks, but they come in several smaller sizes. Cost for my size, \$6.75 for 152 labels.

One of our members, Fred Schakel, has decided to move onto other computers, and is offering his TS2068 for sale. Too late to put in the newsletter, I suggested that I would mention it in this sheet.

- 1-TS2068 w/Spectrum ROM, RGB interface, full-size keyboard, cursor joystick.
- 1-TS2040 Printer
- 2-Modems (uncased TS2050)
- 1-TS1000
- 1-TS1500
- 1-Video Terminal
- Various books and programs

Fred is asking \$200 for the works. But I'm not sure that "the works" includes the video terminal; you will have to check into that.

Phone # is (519) 471 7442  
Address: 181 Seawood Ave., London, Ont. N6J 1B8  
That's Canada, of course.

A former member, Charlie Urban, who has also moved on to a PC clone, has some software for sale. There is:

- TIMACHINE (a really good compiler for the TS2068 and the SPECTRUM (\$10)
- DEVPAC, an Assembler/disassembler by HISOFT (probably needs the Spectrum ROM) (\$5)
- HOT Z for the TS2068 by Ray Kingsley (\$5)

These are all originals and come with complete documentation. Charlie has turned it over to me to sell. If interested drop me a line.

Another member, Vlad Trcka, in the same situation of moving to a PC clone, has an original TS2050 modem for sale, with software and documentation. I don't have this material though. If interested, write to:

Vlad Trcka  
9 Beachview Drive,  
St. Catharines, Ont  
CANADA L2N 3W2

This modem may have been sold by the time you get the n/1, you may be wise to phone first; sorry you'll have to call Information for his NO., I do not have it.

Still another member, Luca Martini, has an advert in the newsletter for some TS2068 material. He is asking \$200 for the lot. I have suggested to both Fred and to Luca that it might be easier to sell the individual components separately. You could ask them if they are interested in doing that. Luca Martini's stuff happens to be at my place, at the moment.

I see in the last newsletter I mentioned that I was thinking of getting a Tandon Quad drive for my system. Well, I have done so. In fact, two other in-town members of the club thought this was a great idea, so we're all involved in the programming to take advantage of it. The drive is up and working very well, in position 2 in my system. That is the third drive, i.e. Drive 0, 1, 2.

Now, that's not all...But let's start at the beginning:

If you read the President's column in the newsletter you will find reference to Jeff getting a drive system up and running. Seems that Jeff had bought a couple of defective drives in Florida last spring for \$10 each. Well, they were too much of a bargain to resist even if he knew they were defective. He asked me to look at them. Not that I was any wizard with drives; just that there was no one else around that knew anything from anything! About drives, that is!

I found that one of them scratched the disk up quite severely when it was formatting, and that while the other drive, could write and read it's own disks it could not read any others. Jeff checked around and found that it would cost him some \$80 to have one serviced, and, approaching \$200 to buy a new drive like them. So he asked if I would take a crack at them. What could he lose.

I took the top half of the head assembly off the drive that scratched disks; and found some material stuck to the head. Removed it with alcohol, and it stopped scratching. Because I had removed the head it had to be put back in the proper place. I had no tools or test equipment, so I simply repositioned the head several times, until it would read a disk made by my own drive. Found, of course, that it would now format, read and write OK. So that was that.

Then I started on the the second drive. I felt sure that there was nothing wrong with this drive except a head adjustment. So I figured out how to adjust the head mechanically, and shifted it several times until it also would read my disks, and also the disks made by the first drive. No wonder Jeff is pleased.

The means of making the mechanical adjustment is so primitive that I'm sure there is a an electronic adjustment somewhere. But I was reluctant to fiddle with any of the trimmers on the circuit board.

With this experience under my belt, when I wandered into a surplus electronics store and saw single-sided drives on sale for \$30, you guessed it, I couldn't resist the temptation. I now have a fourth drive on my system. As I hoped, the new drive worked perfectly! It is a TEAC SSDD half-height drive.

Now, I really don't think anyone needs 4 drives on a TS2068. Let alone have a RAMdisk as well! But it surely makes life interesting, programming-wise. Having to keep track of which drive I'm currently pointing at, as an example.

You may well ask, what do you do with four drives. Well, it's like this. I use the RAMdisk to hold three menus. The first menu is an AUTOSTART program, which means that it comes up silently (as do all three for that matter) on AUTOSTART. This menu program points automatically to Drive 2 (the quad drive) where the great bulk of the most-used programs are located. Pressing a menu key loads one of these programs.

The AUTOSTART menu also provides options to point to different drives. For example, I can point to drive 1, the SS drive, where useful Spectrum programs are stored. Pointing to Drive 1 and pressing a key brings up a menu from the disk in that drive. I should mention that the disks remain in these drives more or less permanently. I remove them only when I want to do some copying, or some other unusual reason.

Since the system defaults to Drive 0, that is my workhorse drive, and I use it for all the odd jobs.

I use drive 3 to copy DSDD disks, and to give the drive 0 a break.

Bob Mitchell, who you will recognise from his articles in the newsletter on various subjects, has written a very good menu program for the RAMdisk. It is designed to be modifiable, and would be particularly useful to anyone with a quad drive and/or a RAMdisk. Well, for any Larken system owner, for that matter. Bob does not seem to have written about it in the newsletter yet, so I will mention a couple of interesting features about it. The menu screen is stored as a SCREEN\$ display and is compressed with a m/c routine so that it can be stored on a single track. Important when stored on a RAMdisk; RAMdisk memory is expensive!

Another feature. The program, on start-up, checks both the 2040 and the large printer and indicates their ON/OFF status on screen. It also indicates whether the Larken Printer driver is on, and provides the means for engaging it, and setting it's parameters.

I have asked Bob to write some Larken tips covering these features. These may appear in the January issue, or maybe it will be March.

In a newsletter article I ask for comments re a Larken Disk Library. Bob Mitchell has provided the club with several disks for the library, which contain this menu program, plus related programs. Called the OMNIBUS disk, it comes in QUAD and DS versions. Ask for a copy if interested.

The library also has another disk, provided by Richard Hurd. It is a disk which Richard calls ODDBALL. It has a number of programs which are designed to facilitate copying programs between different drive types. Richard has made use of the Larken WINDCWS function in making up the menu screen. Probably the first use of this facility that I have seen, and interesting for this reason. I would like to see more examples of the WINDOWS utility. Ask for this disk also.

You may notice some different typefaces in the newsletter. In particular I want to draw your attention to the ones on this copy. This is simply pica 10 font. But I have made the column 46 characters wide; pasted the original copy double-column onto a 10 inch by 13 1/2 inch outline; and reduced it by 25% on a copying machine. Object, to get more copy onto a sheet. I found that I had to increase the contrast setting on the copier in order to get a sufficiently heavy Xerox copy.

I had a minor disaster while writing this. I thought it advisable to save the text periodically as I went along. That's fine; except that the SAVE went awry. The computer

locked up. I tried to break out using the NMI button and the A key. No luck. I then decided I'd better do an NMI-SAVE, at the very least. That was successful, though the computer remained locked up! Hopefully I have captured the letter. Hate to have to retype it.

I shut down the computer then, using DOCTOR, took a look at the disk. The directory was messed up. Used REPAIR.B1 to recreate a new directory. Then I found my file within the NMI-SAVE I had made. Thank goodness.

Using DOCTOR again I loaded the track with my file in it, and saved that track with a simple SAVE "lettri" CODE 50024,5090. Did the same with the next three tracks that contained the letter. I have to confess here that I saved to tape! Shame, Shame!

Then loaded Tasword, broke out of it and loaded the first block of "saved" code as LOAD "" CODE 33280. Went into Tasword, cleaned up the file, and saved it to disk. Did the same with the other tracks. Then MERGED them into TASWORD. And we were back into business.

I have gone into detail to give you an idea as to how to go about it, if the need ever arises. Not to frighten you off Drives!!

So far as I can tell, I am just about caught up with my mailings to members. If anyone feels that they are waiting for something, drop a line and let me know.

A couple of members, Steven Gunhouse and George Cary responded to a plea of mine re the Fastext 80 printer. I have been postponing answering them because I have not had time to get to the printer graphics yet.

Then there's David Solly, who is very interested in programming languages like Pascal, Forth, C, and Logo. My, I have a hard enough time coping with Sinclair BASIC!!

I mentioned in a past newsletter, that if you are interested in these languages you should contact David Solly.

Is anyone interested in modems. The CNIB (Can. National Institute for the Blind) Ham Radio Program have been given a quantity of reconditioned and guaranteed Rixon T212A Data Sets (modems) which are now offered for sale. The Rixon was standard in Bell Canada for a number of years but is now surplus to their needs. Bell appear to have donated them to this group and they are selling them to raise money for the group. The modems operate at 300 and 1200 baud. They are warranted for 5 years. This covers repairs and parts replacements. The cost is 42 CAN., plus shipping costs. They come with a 5-page set of instructions.

Mail orders will be shipped express collect after receipt of payment. If you are interested call Fred Roberts, Manager of the CNIB Amateur Radio Program..tel (416) 480 7438  
Address CNIB, 1929 Bayview Avenue, Toronto, M4G 3E8

These modems are probably not for everyone. I think that they probably have a serial input, therefore you would need something like the TS2050 modem board modified for an RS232 output. Ed Grey Enterprises offers the 2050 modem boards plus instructions on how to do this modification.

I've run out of space, Sincerely, G.F.C.



TORONTO TIMEX-SINCLAIR USERS CLUB  
November 10, 1988

14 Richome Court  
Scarborough, Ont.  
M1K 2Y1

Les Cottrell  
108 River Heights Drive  
Cocoa, FL 32922

Dear Les,

Thank you for your letter, and the enclosed disk.  
I am enclosing a disk with one or two programs on it which you should find interesting. I am only going to put one suite on the disk, because I find that when there are a number of unrelated items on it is hard to sort them out.

So, this disk will have a suite of files which are used to index disks. It indexes only in terms of the disk file names, but it will sort, printout, and do searches. Altogether a pretty useful file. I shall resist the temptation to put other things on it!! Instead, I shall send you another disk which contains a number of disk utilities which I have written. *I put "index" as a menu item on the utility disk.*

Talking about a disk file. Bob Mitchell has created a routine which will sort Tasword, and I am using Tasword to maintain a file of Spectrum games programs. A single Tasword line is a record. The Tasword file can be sorted on a line by line basis, using a specified column to sort on. I'll give you an example:

DISK	TAPE	NAME	COMMENTS
010	A	Lord of the Rings	ZX Computing Review
024	C	Platoon	Crash magazine Apr 87

*Col 1* This is two Tasword entries (records). One can then sort on the basis of column 1, column 10 or column 18; i.e. sort by disk No., by tape No., or by program name.

Bob M. is also working on the same procedure for Mscript, but it is a harder task.

You ask about looking for the USR call in an NMI save. I can't tell you that, I just don't know. I have been trying to find this myself without success. I shall send you a M/C listing of a disk to tape save routine (which doesn't work, incidentally) that I got from Larry Kenny which might give you a clue.

My object was to make better tape saves. I have been able to save an NMI program back to tape, and to load it back again, but I seem unable to handle the stack pointer etc., because after the program is loaded back into the computer from tape it crashes.

Due to a lack of success with the above, I have been breaking into Spectrum NMI-saved programs and locating the starting address the hard way. That is, by searching through the Spectrum tape loader, or by disassembling the Spectrum code.

I guess I'm like you, I get a greater challenge out of hacking

The programs than playing them. Though if you are into games have a tremendous collection of them. Just ask about them

Being the out-of-town liaison person I have a complete set of our club 2068 programs on tape. I must say, I never envision putting them onto disk. Just too much trouble, I feel!

Sincerely,

George Chambers

P.S. I shall describe the disk that i am enclosing: The majority of the programs on the disk are accessible through the AUTOSTART menu. They are disk utilities. The next to last two items are

Tasword material which, if you had the version 3 DOS, could displayed on screen or printed out. If you have the version 2 DOS then you will probably have to load them into a Tasword.

One of the programs I added to this disk is a disk index. The instructions are on a Tasword file.

I have also added a couple of games programs. One is PLATOON. When it is loaded, the screen will be black, and there will be a tune. Press the C key, and onscreen you will get a choice of keyboard, Kempston etc. Press the C key until your choice appears, then I think you press the space bar, or else the fire button on the joystick (I just forget.) This game will load and run in either the 2068 or the Spectrum mode. The other program KARATE, will run only on the spectrum mode.

The program, TAPSAVE, will run on the Spectrum mode, and I use it to save a disk to tape, and to play the tape back onto a new disk. I think there is another one called CRACK, which I use to get an NMI program into the computer in a form where I can access it to disassemble it, etc.

*Printer problems about - Something of a conflict between  
Tasword & the LARKER printer driver software. I think I  
have the LARKER engaged inadvertently.  
GFC*

TORONTO TIMEX SINCLAIR USERS CLUB  
14 Richome Court, Scarborough, Ont. M1K 2Y1  
INFORMATION SHEET

Many people inquire about the club, and these notes have been put together to provide, in a convenient form, a little background information about ourselves.

Our club had it's start when a new ZX81 owner, Pete Harvey, placed an advert in the Toronto Star. He asked if there were any persons interested in getting together to talk about their computer. About 12 persons responded. I was one of them. We met in our homes every week, for a month or so, then started meeting in a spare room in a bar, then in a public library. A second advert in the Star produced another 20 or so new members, and it was decided to form a club, get out a newsletter, and institute a \$20 annual membership fee.

From these beginnings the club grew to where, in it's heyday it had about 120 members, and meeting attendance of between 35-40 members. Since then, with the disappearance of the Timex computer from the marketplace, membership has declined to about 65, and meeting attendance to between 10 and 15.

Members range in age from 16 to 65 and older, and represent all walks of life. Most members use the TS2068, the rest the ZX81/TS1000, with a few members having the QL. Of our total membership, about 40 members live out of town, from Halifax to Vancouver, and with several from the USA.

Our club publishes a 12 page (6 sheets) newsletter 6 times a year. We have a sizeable program library on cassette tapes, for both the ZX81 and TS2068. We also have a paper library, consisting of, among other items, some 30 books on the ZX81, 20 odd books on computing in general, and several books on the TS2068. Both the tapes and the books can be borrowed for a nominal 2-week period. There is no charge to this.

Our club maintains a newsletter exchange with other Timex computer clubs in Canada and the USA. Currently we exchange with 15 other clubs. The newsletters are in the club library, and can be borrowed on the same basis as other books.

Out of town members are served by mailing out the newsletter (in-town members must pick their newsletter up at a club meeting). Out of town members are also served by providing them with a catalogue of library program tapes, and mailing out to them, their choices of program tapes. There is no charge for this service, however the members is expected to pay for our postage cost of mailing. Other library items are available on the same basis. We also try to give advice on problems, and to supply information on request.

Meetings are held in Toronto at Forest Hill Collegiate Institute, 730 Eglinton Ave. West (On the north side between Spadina and Bathurst). Meetings are held on the 1st Wednesday of each month. Members start to arrive at the meetingplace soon after 7.00pm, to have conversations with other members, and to return borrowed tapes, papers, etc. The more formal part of the meeting starts at 7.30. Following disposition of the club business, a presentation by one of our members is in order. It may be a demonstration of hardware, or of software that the member has written or is familiar with. Meetings have no formal closing; most members will have departed by 9.30 pm; the diehards remaining till 9.30 and later.

Membership dues remain at their original level of \$20, applicable to all members. There is also a newsletter subscription available, without club membership, for \$12.

Information prepared by G.F. Chambers (Secretary TTSUC) (416) 751-7559.

Thanks for utility & menu

CRACK was missing, listing available

Tapes of interest	③ 48	'HORACE' series
	① 30	'adventure'
	② 26	2 possibilities, 'Chalice' and 'DUTCHMAN'
	④ 23	Toolkit
	⑤ 19	'chambers', 'ZAGORSK'
	⑥ 16	'adventure', 'HAUNTED'
	⑦ 14	'LEOPARD'
	⑧ 13	
	⑨ 18	'Jack'
	⑩ 10	'tracer' that works? ? ?

Your tapes 43, 44 & 45 are vols 1-7 of CATS I also have 8-11  
I have them all on disk (7)

My vote for disk library would be DSDD Larken using the suite of similar programs. Example enclosed -

I have used your menu with one exception - I don't autoload the whole menu. I have imbedded, where possible, the following code at the beginning of Basic programs

```
2 LET menu = 4
3 GOTO 5
4 PRINT #4: LOAD "menu.B1"
5 --- continue with program
```

Then I can break, type GOTO menu, and the menu program is loaded for my next choice

I would be willing to help your library effort by having you send me a list of programs for a suite, the tapes they are on and I will load to disk and return the tapes and a disk

amenu.Bu