

SINC-LINK

Vol.7 No.6 Nov-Dec '89

SINC-LINK IS A PUBLICATION OF THE TORONTO TIMEX-SINCLAIR USERS CLUB AND IS ISSUED 6 TIMES A YEAR. COPIES OF THE NEWSLETTER ARE \$1.50 EACH FOR NON-MEMBERS. CLUB MEMBERS RECEIVE FREE COPIES AS PART OF THE \$20.00 ANNUAL MEMBERSHIP FEE. A NEWSLETTER SUBSCRIPTION ONLY IS AVAILABLE FOR \$12.00.

NEWSLETTERS ARE EXCHANGED, FREE OF CHARGE, WITH OTHER TIMEX-SINCLAIR USERS GROUPS.

PLEASE CREDIT THIS PUBLICATION AND THE AUTHOR IF YOU COPY MATERIAL.

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

SEND CORRESPONDANCE TO:

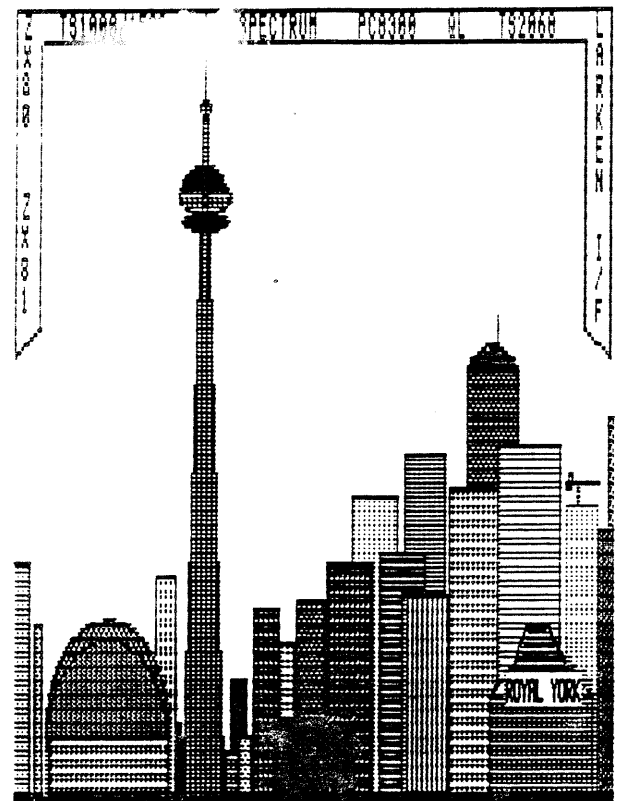
Attention: SINC-LINK
TORONTO TIMEX-SINCLAIR
CLUB, 14 RICHOME
SCARBOROUGH, ONTARIO,
CANADA M1K 2Y1

EDITOR
USERS
COURT,

EXECUTIVE OFFICERS:

PRESIDENT:
TREASURER:
SECRETARY:
ACTIVITIES:
TAPE LIBRARIAN ZX81:
TAPE LIBRARIAN 2068:
TAPE LIBRARIAN QL:
PAPER LIBRARIAN:
NEWSLETTER:
LIAISON OFFICER:
(Out-of-town members)

RENE BRUNEAU (531-9749)
BILL LAWSON (444-8772)
GEORGE CHAMBERS (751-7559)
RENE BRUNEAU (531-9749)
LYMAN PAQUETTE (482-4479)
RENATO ZANNESE (635-6536)
HUGH HOWIE (634-4929)
JEFF TAYLOR (244-8583)
JEFF TAYLOR (244-8583)
GEORGE CHAMBERS, 14 RICHOME COURT,
SCARBOROUGH, ONTARIO, M1K 2Y1
(416-751-7559)



TORONTO TIMEX-SINCLAIR
USERS CLUB

A NEW COVER, A NEW CLUB
EXECUTIVE, A NEW BATCH
OF ADS AND MORE GOOD
READING THAN YOU SHOULD
BE ALLOWED TO HAVE FOR
ONLY \$1.50 OR LESS.

TORONTO TIMEX-SINCLAIR USERS CLUB

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

President's Message

Welcome to another year of Timex-Sinclair computing and a new executive. As the new president of the Toronto Timex-Sinclair Users Group, I would like to thank the Past President, Jeff Taylor, on behalf of the club for his guidance and enthusiasm over the past year in making our club better. Jeff remains as Newsletter Editor so we can expect more of the same this year.

As a general member of TTSUG and later as part of the executive, I have recieved many benefits from belonging to and participating in club activities and I hope to be able to continue in the footsteps of people like George Chambers and Jeff Taylor in fostering group support in the club. In the past year we have seen an increase in membership through distribution of the newsletter and there is growing interest in the club for such diverse things as telecommunications, synthesised music, and hardware projects. Special interest groups are a direct result of this and will ensure that our club remains healthy for as long as we can get together.

PARTICIPATE ! It's the only way that you can ensure that your computer will be supported.

EDITORIAL

We've got a new club executive! It isn't much different from the last one but there have been a few significant changes.

Rene Bruneau takes over from me as club president. Rene has been the activities director as well as the ZX81 tape librarian so you know that he is an avid club booster in addition to being the resident ZX81 hardware expert.

Lyman Paquette replaces Rene as ZX81 tape librarian. Lyman is a relative newcomer to the club so it's good to get some fresh enthusiasm into the executive. Lyman has this one quirk though, he collects old slide rules (remember those dinosaurs?) so he should fit in here quite well. Welcome.

I have inherited the paper library from Greg Robins. Greg has had a bad year healthwise so I have eased him of this load. Greg, thanks for arranging and cataloging all our books and newsletters.

To the rest of the executive, congrats and welcome back. I am looking forward to your new ideas to help improve and expand the club in the coming year.

NEWSLETTER

This issue we have made a few changes. The most visible is the new graphic on the cover. Thanks go to Hugh Howie for his version of the Toronto skyline. Hugh produced this beauty on his QL with the EYE-Q graphic program.

You should also note that we are presenting advertisements of a few reliable and deserving TS vendors. If you know of a supplier that you feel should get more recognition drop us a letter and/or a sample ad.

TIDBITS

I will be hosting a telecommunications seminar (with a little help from my friends) on Wednesday, November 8, with demos for the ZX81, the TS2068 and the QL. Space is limited (my tiny den) so please let me know if you are planning to attend and I'll find more lawn chairs (no kidding).

Hugh Howie is having a QL seminar on Wednesday, November 15, with a demo on networking and a speech by Mike Ferris on QL programming. Again, if you plan to attend, let Hugh know ahead of time.

Has anyone received their digitiser from the SMUG group? I ordered the bare board and software back on March 16, 1989 and have yet to receive anything. Drop me a card to let me know of your success (or not). That's all for now.

BOB'S NOTEBOOK

ANOTHER DISK RENAME ROUTINE

In the last issue of Sinc-Link, you probably saw a way of renaming a Larken disk using the utility "Disk Doctor" which appears on the club's Omnibus disk. Here is my pet version for doing this chore; this appeared first as a utility for the old original LDOS system and I have since adapted it to the LKDOS systems with which most club members are by now very familiar.

Type in the listing and check it carefully. SAVE it by a <GO TO 480>.

This program provides a quick 'n' easy way to give a disk a new name and what is more the name can be quite long, up to around 500 bytes. If you are going to give a disk a complex name, you can set it up by using the word processor Mscript. See the notes below for more details.

Here is the listing and there are some explanatory notes at the end.

```
100 CLEAR : BORDER 7: PAPER 7: INK 9: CLS
110 CLEAR 43400: RANDOMIZE USR 100: OPEN #4,"dd"
120 RESTORE 400: FOR i=0 TO 119: READ val: POKE 44000+i,val: NEXT i
140 LET trac=43900: LET settrk=44000: LET load=44006: LET save=44009
150 INPUT "drive? (0-3) ";dr
160 PRINT #4: GO TO dr
170 CLS : POKE trac,0: RANDOMIZE USR settrk: RANDOMIZE USR load
180 PRINT : PRINT " "; FLASH 1;" Enter Disk Name"
190 PRINT "Press STOP (SS 'A') to end name      ENTER for new line": PRINT
200 PRINT "Disk Name : ";
210 LET m=54500
220 LET a$=INKEY$: IF INKEY$="" THEN GO TO 220
230 IF CODE a$=0 THEN GO TO 220
240 BEEP .02,1
250 IF CODE a$=12 THEN PRINT CHR$ 8;CHR$ 32;CHR$ 8;; LET m=m-1: GO TO 300
260 IF CODE a$=226 THEN POKE m,0: GO TO 320
270 POKE m,CODE a$
280 PRINT PAPER 6;a$;
290 LET m=m+1
300 IF INKEY$<>"" THEN GO TO 300
310 GO TO 220
320 POKE m,0: BEEP .1,20: BEEP .1,20
324 REM GO TO 325 after BREAKing to load Mscript Name
325 GO SUB 370: INPUT "Ok to save to catalog (y) ?"; LINE a$: IF a$="y" OR a$="Y" THEN RANDOMIZE USR settrk: RANDOMIZE
USR save
330 INPUT "i=more 0=menu ";mm
340 IF mm THEN GO TO 150
350 IF NOT mm THEN PRINT #4: GO TO 4: PRINT #4: NEW
360
370 BEEP .05,10: BEEP .05,10: INPUT " Disk must have write protect  removed OK? "; LINE a$: RETURN
380 STOP
400 DATA 195,249,171,195,7,172,195,27
401 DATA 172,195,56,172,195,75,172,243
402 DATA 205,98,0,201,58,100,0,251
403 DATA 201,205,239,171,58,124,171,50
404 DATA 29,32,205,126,0,24,237,205
405 DATA 239,171,58,124,171,50,29,32
406 DATA 205,129,0,58,29,32,50,124
407 DATA 171,24,217,205,239,171,175,50
408 DATA 32,32,205,123,0,58,32,32
409 DATA 79,6,0,33,112,32,17,80
410 DATA 195,1,0,20,237,176,24,188
411 DATA 205,239,171,33,80,195,17,112
412 DATA 32,1,0,20,237,176,205,120
```

413 DATA 0,24,169,205,239,171,42,144
414 DATA 171,78,35,70,24,158,0,0
480 CLEAR : PRINT #4: SAVE "diskna.81" LINE 100

Notes:

Line 120: Pokes into memory, starting at address 44000, the 120 byte machine code routine which loads the directory (catalog) to a buffer area for editing and then saves it back to disk when editing is done. The code is at lines 400-414. This poking will take a few seconds.

Line 150: Prompts for drive number.

Line 170: Pokes the track number zero (ie, the directory track) into address <trac> (43900). Calls the routine at <settrk> (44000) which puts the disk drive head on the indicated track. Calls the load routine at <load> (44006).

Line 180: Prompts for Disk Name. There is room for up to 20 characters on the first line; after that full 32-character lines may be entered. Use ENTER to start a new line at any time. If you are entering CAPITAL letters, do not hold the CAP SHIFT down while pressing the space bar. If you do, you'll get an ERROR message <L BREAK into program>. You could try CONTINUE then ENTER to resume; but I find it best to start over. The characters will be displayed on screen on yellow PAPER and you may back up using the DELETE key. As I indicated at the start, you could enter a complex name by designing it earlier using Mscript and then when you get to this point, BREAK into BASIC and load the Mscript file into address 54500. Use <PRINT #4: LOAD "name.CT" CODE 54500>; then <GO TO 325> will save the buffer to disk. Try it! It's a great way to fancy up your disk names.

Line 250: Does the backing up as you use the DELETE key. Notice that the variable <m> which is an address counter or marker is decreased by one for each DELETE key press.

Line 260: Responds to the use of the STOP key (Symbol Shift and <A>); pokes a zero into the next byte to act as an end-of-name marker (ie <m> mentioned in Line 250).

Line 325: You are reminded to remove the write protect sticker from the disk and then prompted to press <y> to start the save. Code routines at <settrk> (44000) and <save> (44009) are called and the edited directory is transferred from the buffer to the disk drive.

Line 330: You have a chance to do more or quit to menu.

Line 350: This is written to load the Ramdisk Autostart; if you want it to do something else, you must change this line.

Line 480: Here's the place to save the program.

Finally, here is a small sample of a fancy disk name using the technique described above. Start with a line feed to skip the 20 character first line.

```
*****  
**   WXYZ SOFTWARE 1989   **  
**   WORKSPACE NUMBER 4   **  
*****
```

Bob Mitchell Willowdale Ontario 890919

LARKEN NEWS
by GFC

One of our members has sent me an item (below) that will be of interest to all Larken system owners. It is an advert that appeared in the classified section of the October 1989 issue of MODERN ELECTRONICS magazine. Larry is branching out into a new field, as you can see. Good for you, Larry!

CAD-CAM X-Y-Z Drilling/Routing
Machines 24" x 24" x 5" or larger, RS-232
Interface, \$1200 and up. Larken Electronics,
RR #2, Navan, Ontario, Canada K4B 1H9.

NEWSNOTES

The Vol.3 Iss 4 of VISTA, the newsletter of the Vashon Island T/S Association has some interesting information about the TS world, which is worth reprinting. Here are selections from it. gfc

"A catalog from G. Russell Electronics (R.D. #1, Box 539, Centre Hall, PA 16828). Some of you that have been around the T/S world awhile will recognise "G.R.E." as the company that brought out the Winky Board and the Romswitch, just to name a few of their products. I am glad to say they are still in the T/S market, with a catalog full of goods for the 1000, 2068, and QL. Included are Spectrum ROMs and EPROMs (\$10.95, 2/\$19.95, free shipping), all three Hi-res TS-1000 games, Rocketman, Fortyniner, and ZXtricator (\$5.95, 2/\$8.95, 3/\$12.50), ZXLR8 Fastload for \$10.50, Winky boards, and even some parts specials and books. If you can't wait, call them at (814)364-1325 and order something.

"From Electro Associates of Michigan, (P.O. Box 312, Lathrop Village, MI 48076) comes word of 3" MAXELL brand "AMDISK III style" disks, 10/\$40 plus \$2.50 s&h, for those of you needing 3" disks. Send cheque or money order or call (313) 533-8797 for quality discounts.

"DISKWORKS (1-800-456-3889) offers bulk 5.25 and 3.5 inch disks as well as name brands, and they accept VISA, MC, and COD orders. Disks are offered in quantities of 50 and 100 though, so "group buys" would probably be the only way to go there. I don't normally need 100 disks, even if they are only 21 cents apiece!!

"CONSUMERTRONICS (2011 Crescent Drive, P.O. Drawer 537, Alamogordo, NM 88310) sends word that their "Disk Service Manual III" (\$25) and "Disk Drive Tutorial" (\$20) manuals are available and ready for anyone who cares to service their own drives, or just figure out what makes them tick. They also offer a "Printer and Plotter" repair manual for \$15, "Ribbon Re-Inking" (\$8) and many other books on subjects ranging from stealth technology to, high-output wood-burning stoves. If you want a look at these or any other of the "secret agent" style books they offer, call Consumertronics at (505)434-0234, or their order line, 1-800-752-7701.

(Consumertronics also advertise these wares in Computer Shopper...gfc)

"Finally I have about 14 pages of goodies here from RMG Enterprises, 1419 1/2 7th Street, Oregon City, OR 97045, (503)655-7484. Suffice it to say Rod GOWen has a little of everything for the T/S enthusiast, and if you haven't had the chance to order anything from RMG, please do so-- RMG is the largest dealer left in the T/S business that I know of, and we need to support him so that he can support us. Among the goods he has for sale are disk drive power supplies for \$13.50 (plus \$3 shipping), Larken 2068 software package which include the Larken Disk Editor and the MAXCOM BBS package, lots of used printers, Memotech products, disk drives, and LOTS of books and software at low, low prices.

"Rod is now distributing his packed catalog as Tasword II files on 2068/Larken disk, so those of you with LKDOS systems can print out your own catalog and get some public domain software he's including on the disks as part of the deal. Give ROD a call soon-- find out for yourself, because there are bargains in Oregon City.

.....
FOR SALE! FOR SALE! FOR SALE!

- 2 - ZX81 Computers
- 2 - 16K memory modules
- 1 - Goldstar TV (modified to provide a monitor capability)

All for a nominal price.

Contact Tom Bradley
Box 793

Lenox, MA 01240

Note..Tom is not a TTSUC member:GFC.

- 2 - Amdek 3" disk drives in a case w/built-in power supply)
 - 20 - 3-inch disks \$120 or best offer.
- Contact Greg Lloyd
127 Mammoth Hall Road,
Scarborough, Ont. M1B 1P8
phone (416) 292 0348

- 1 - Byteback modem (for the TS1000/ZX81) with software & documentation

Contact Art Johnson
13 Winstanley Cresc.
Toronto, Ont. M1B 1N3
phone (416) 282 8430

Update Magazine

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

NEWS AND NEW PRODUCTS

QL LIBRARY

In a recent issue of SINC_LINK, a list of our QL Library was sent to the QL Interest Members. It is also available to might-be QL'ers on request.

This should be enough to get something going. More will be added as I find time, and as material comes in. As a start it may not be much, but I feel that with the assistance of the members, more will be coming. I still have some material to be added, and this will be notified in the columns as it comes available.

When you take on a job and you don't know what you are doing, it can be frustrating at times, but I have enjoyed it very much. The main problem I came across is finding out which media is most suitable for a given programme. I use Microdrives and Disk. I also use a 14" RGB Monitor, sometimes a TV, as many of us still do. Now this is where the trouble starts. I get along fine with some small item on RGB, then when I try it on a TV, it just don't work all that good. There is just not enough space on a TV to give a full display.

TOOLKIT II is handy for switching TV/MON, but there is also a small item in the library which will do this for you. To compound the problems, I use a 512 Expansion, and then I find that something was made for the unexpanded QL. Take the game SANTA for example. Run it on TV, everything comes up roses, (Fir Trees I should say) but use the expanded QL and what you get is a lot of fancy accented letters. The address is wrong ! By the way, if any one knows where Santa is let me know, I have a lot of goodies to ask him for.

Some of the material I have will just not work on TV. OK in TV mode, but not in Monitor Mode. Makes an interesting exercise.

Sometimes it is fine in Colour, but no good in B & W, the colours come up in close shades of grey. I have tried to use material that works on everything, but that is not always possible. So I try to give an indication of the best method.

Some items will have a little bug, and as I am no programmer, I cannot often find the beast. This is where all you folks out there can help. If you find one of those bugs, let me know, and I will pass the info along to everyone else and also amend the Library accordingly. If you require assistance, ask me, the worst that can happen is that I don't know, (thats the good part) but at least there will now be TWO people working on the problem. Get the idea ?

Another thing I would very strongly recommend to the QL'er who does not have an expanded memory. Get one as soon as possible. The extra cost is more than repaid by the sheer joy of what can be accomplished. So many programmes. So many Games. The whole expanse of the QL is broadened by this one little item. Ask Santa. (I believe " Home Address, Anywhere." is a good place to start.)

Now I don't know whether the Upper Brass in the Club will agree with me or not, but I strongly advise the QL'er to get a hold of UPDATE. This magazine has a lot of good stuff in it for the QL'er. (also for other Sinclair Users) It comes out four times a year, and is full of goodies. I would just love to be able to use their QL MAGAZINE material in Sinc_Link. Are you listening Bill Jones ? You too Bill Cable ? Pity Quantum Levels is down the chute, they were excellent also. What happened ? By the way, don't forget your old pal Daddy Sinc. The guy who got you all started in this. Sinc_Link is one way to keep in touch with all the other Sincers - (skuse me - just got back from a fishing trip - Lost a 4 foot Muskie - Caught a 4 lb walleye - stacks of 4 inch perch. Worms at 15 cents a shot - and you think life is tough ? One worm, one sunfish, one worm----- go buy a computer, its cheaper.) EH ? Uh huh. For the cost of 5 worms you could buy 1 floppy.

You know the old saying? You gotta Sinc or Swim? Well I feel that I am swimming, so lets get some material in here, we need it, and if you have something you can be sure that someone somewhere is in need of that little tid_bit you are keeping to your self. Send it in. We need it. And if you have a problem, lets share it, thats how we survive. Sharing information.

A Library is only as good as the material it contains, and is of no value if no one uses it. A Library must have fresh material coming in, and is only as good as the material sent in. Please help. Use our facilities. Give us your expertise. Can we be of assistance ? Please ?

Hugh H. Howie.
QL Librarian.

P.S.....

George says the above applies to the other Club Libraries also. So git goin folks, an thet means U... By the way, I went up to the cottage last week and caught a 45 inch Muskie, ...I did...I did...I did...

QLIPS

Here is a neat little one_liner to give you a Directory of your Cartridge or Disk.

Open #3,ser1: dir #3, mdv1_

The ports and drives can be altered to suit your setup. Try it.

H. H. H.

SINC-LINK

3 COLUMN PLUS!

by Steve Spalding

In the WINTER 87 issue of the Pixel Print Press was a 4 paragraph item about customizing Pixel Print to make a 3 column printout. Stan suggested making the double size option into a center column. I'd like to suggest the following changes to the 2 column program to give you a 3 column version that still includes the double size option.

We'll set up a new command on the main menu called TOGGLE, or TAB if you prefer. How are we going to squeeze a new command into the machine code? Easy, we don't! We steal one that's on the main menu already. We don't REALLY need the QUIT command, you can break the program by selecting the Graphics command and then using SHIFT+BREAK.

The new command will let us "toggle" between the option of having a Center column or a Right column printout when we go to the Printer menu. Instead of Quit on the main menu you will see T>C or T>R telling you which option is set, Center or Right. Simply set the Toggle before going to the Printer menu. Printing a Left or Double Size column is the same as before.

THE DETAILS:

1. LOAD your customized version of Pixel Print PLUS!

2. Quit to BASIC

3. Make the following POKES:

```
POKE 33463,84 - T
POKE 33464,62 - >
POKE 33465,67 - C
POKE 33466,32 - space
```

POKE 33678,84 - make menu see T

POKE 35721,67 - set Toggle for C

The next three POKES are for the column TAB positions. You will have to experiment with your printer to set these.

POKE 39570,n LEFT column
example: on my printer n=4

POKE 39571,n2 CENTER column
example: on my printer n2=30

POKE 39572,n3 DOUBLE SIZE
example: on my printer n3=5

Look in your Printer manual to get the next number to poke.

POKE 39593,n4 Sets Dot Density to 120 d.p.i.

Also calculate the TAB for the RIGHT column, we'll need it soon.

4. Add these 2 lines of BASIC.

```
3000 IF PEEK 33465=67 THEN POKE
33465,82:POKE 35721,82:POKE 3957
1,n5:POKE 35598,32:POKE 35599,82
:POKE 35600,105:POKE 35601,103:
POKE 35602,104:POKE 35603,116:
GO TO 2000
```

```
3010 POKE 33465,67:POKE 35721,67
:POKE 39571,n2:POKE 35598,67:
POKE 35599,101:POKE 35600,110:
POKE 35601,116:POKE 35602,101:
POKE 35603,114: GO TO 2000
```

Please note that in LINE 3000 the number you are poking into address 39571 (n5), is the TAB value for a RIGHT column. With my program it worked out to be 56. In LINE 3010 you are poking n2 into the same address for the CENTER column TAB position.

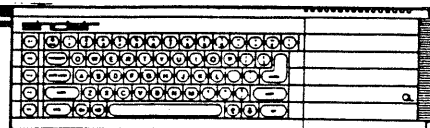
You can now SAVE the customized 3 COLUMN Pixel Print PLUS! using something like:

```
SAVE "PP+3" LINE 9000
SAVE "PP+3code" CODE 29500, 11800
```

Don't forget to change the filename in LINE 9000 of the BASIC to match the new CODE filename.

Getting the best numbers for the LEFT, CENTER, and RIGHT tabs will take some fiddling with. The easiest way to come up with the best values may be to pick out some numbers and print some test columns. You can then go back and change them in the program and reSAVE once you're satisfied with the layout.

The 3 column layout not only gives you a different look but lets you put 50% more on each page than before. Be advised of one small problem, GRAPHICS. Because the vertical height is the same as before but the horizontal has been compressed any SCREEN#, icons, etc. that are in a column will be slightly distorted from normal. Anyway, try it. You might like it!



We carry ALL hardware and software lines for the Sinclair QL.

We also carry the Z88.

WRITE FOR FREE CATALOG

Sharp's, Inc.

Rt. 10, Box 459
Mechanicsville, VA 23111
(804) 746-1664 or 730-9697

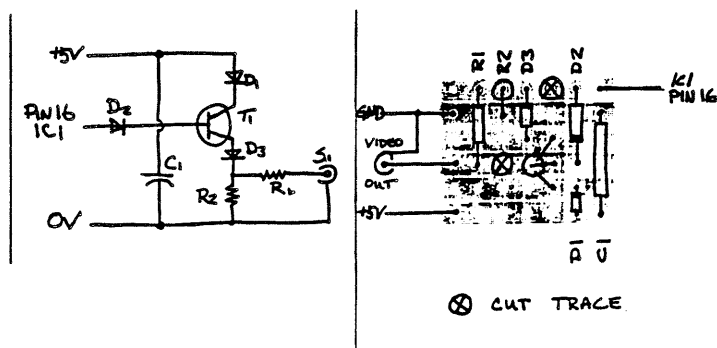
TS1000 Video Driver

Many circuits have been published within these pages and elsewhere for hooking up your TS1000 to a monitor to get rid of the "Crawlies" associated with VHF television. The following circuit was published in the book "Build A Microcomputer-Controlled Robot" by B. C. Taylor of Budget Robotics & Computing and is an improvement on the circuit developed by Mike Lord in his Explorers Guild.

The components are easy to obtain and can be assembled with point-to-point wiring or on a small piece of VERO board. When installed, it allows you to use both a TV and a composite monitor at the same time (ideal for demonstrations).

```
T1      2N2221
D1-D3  1N4148 or 1N914
C1      0.1uF Poly capacitor
R1      33 ohms, 1/4 watt Resistor
R2      100 ohms, 1/4 watt Resistor
S1      RCA phono socket
        Small guage stranded wire
        Coaxial cable (an extra
        monitor cable cut in two
        can substitute for the RCA
        socket and cable)
```

When mounting the circuit inside the computer case, take extra care to prevent electrical shorts from occurring that might damage the computer. Wrap the circuit with tape or mount it so that it does not touch any metallic surfaces.



by Rene Bruneau

INDEX.B1
A Printer Fix
by G. Chambers

On the Club Larken Disk #2 (OMNIBUS) there is a program called "index0.c.m". It is a TIME MACHINE-compiled version of a Basic program. Two places in the program have a call for a printer. The program checks to see if the printer is ON. If the printer is not in place or is not turned on the program flashes a reminder to turn the printer on.

This is a neat feature, however it does cause problems. It presumes the printer will return values of 58 (small printer ON) and 237 (large printer on). My printer does not return these values. Instead the responses from my printers are 56 and 108.

The solution is to POKE new values into eight addresses in the "index0.Cm" code. The POKES in my case were:

```
POKE 32325,56      (old 58) small printer
POKE 32357,108     (old 237) large printer
POKE 32425,56
POKE 32457,108
POKE 34344,56
POKE 34376,108
POKE 34430,56
POKE 34462,108
```

To find out the correct code numbers for your setup run the following lines:

```
10 LET n = IN 251
20 PRINT AT 10,10;"    ";AT 10,10;n
30 GOTO 10
```

Experiment by turning the TS2040 printer on and off. Then change the program: LET n = 127 and do the same thing for the large printer. Verify the addresses have the old numbers shown above; then POKE in the new numbers and re-SAVE the program. This will need to be done with each copy of the program you happen to have.

New Lower Prices and NEW PRODUCTS!

□ SPECTERM-64(TS-4.1)

300/1200 Terminal Software for T/S2088
On 110. AFRCO. Larken disk or tape.
Compatible with 2050 modem or standard
RS-232c modem with Z-S/O (below).
Only \$17.50 + \$2.50 S&H

□ Z-SI/O Bare Boards

RS-232c Serial Interface for T/S2068.
With FREE 2050 card! Easy to assemble.
Only \$24.50 + \$2.50 S&H

MAX-COM Software

300/1200 Terminal/BBS Software for the
T/S 2068 with LARKEN (v.3) Disk System.
Only \$25.00 + \$2.50 S&H

LARKEN Disk Hardware:

1 LARKEN Disk System

includes LARKEN Floppy Disk Interface, LKDOS (v.3) Cartridge, Operating Manual and LKDOS Utilities Disk.
Only \$125.00 + \$5.00 S&H

1 LARKEN "Turnkey" System

Includes everything above plus one disk drive, with case, power supply and drive cable. It's Ready to Run, just connect to the T/S2068.

Only \$225 & up + \$15 S&H

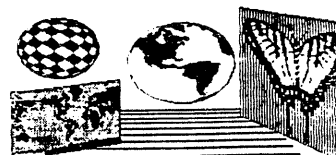
Design YOUR OWN system! CALL

[1] LKDOS Cartridge for OLIGER System

Specially configured LKDOS (v.3) Cartridge that works with your JLO SAFE Disk hardware. Includes Operating Manual and LKDOS Utilities' Disk.

Only \$65.00 + \$3.50 S&H

Announcing: PIX-FX



Now YOU can take a T/S2068 screen\$ and
create all sorts of SPECIAL EFFECTS. Wrap
your SC\$ around a globe, change perspective,
magnify, reduce, and merge SC\$ plus more. P/d
Down Menus, use keyboard or joystick. Disk drive
compatible. Excellent documentation.

On tape: \$25.00 + \$2.50 S&H
On disk: \$30.00 + \$2.50 S&H

Modems, Printers and

[] Avatex 200<E> (300/200) \$69
[] Seikosha 180AI (100/20)..\$159
[] Seikosha SI 80AI (24 pm)..\$335

- [] Wordstar 3.3 (CP/M) \$40 + \$5 S&H
incl. Deluxe MicroPro V3 manual, upgradeable.
- [] PC-Draw (v.3) \$12 + \$2.50 S&H
Circuit Bd design pgm for T/52088
- [] DD Power Supply \$2.50 + \$3 S&H
110/220 AC : DC +12V 2.6A, +5V 1.6A
- [] 5.25" Disksettes 25/\$2.50 + S&H
Used once. PREMIUM QUALITY. guaranteed.

S&H CHARGES MINIMUM \$3.00 ea. modem: \$4.00.
ea. printer: \$11.00. ea. software: \$2.50. (COD add
\$3.50. CA add sales tax. Canada double S&H)

Continued Timex/Sinclair Support is brought to you by:

Ed Grey Enterprises
P.O. Box #2186, Inglewood, CA 90305
Info >> 213-759-7406 << Order

Call The Grey Matter BBS & RCP/M (213-971-6268)

HARDWARE REVIEW
Data-Skip VIDEOFACE
by Dan Pinko

I recently received Data-Skip's VIDEOFACE Interface and Software and was so impressed with this product I wanted the rest of the TIMEX/SINCLAIR world to know of its existence so here is a short review of this product.

VIDEOFACE takes a video signal either from a TV or VCR equipped with a VIDEO OUT jack and transfers this signal into a digitized format that can be used by the SINCLAIR SPECTRUM (2068) Computer as a screen display. The hardware part of the package consists of a unit a little wider than the old ZX81 RAMPACK, with a SPECTRUM through edge connector, a jack located on the left side (for VIDEO IN signal), a small variable control above the jack and approximately in the center of the unit, and two LEDs, one red and one green.

The unit is designed to plug into the back of the SPECTRUM computer, with the through edge connector allowing you to connect the SINCLAIR printer or the 2040 printer. I have one of my TIMEX 2068 Computers connected to the SPECTRUM INTERFACE 1 and MICRODRIVE through one of the "TWISTER" boards that simulates the SPECTRUM bus. The INTERFACE 1 has the standard SPECTRUM bus available at the rear of the unit allowing me to plug the VIDEOFACE directly into the rear of the INTERFACE 1.

The VIDEOFACE requires the standard 1 volt VIDEO signal that is found on all VCRs (the signal from my TOSHIBA VCR works just great). When the unit is powered up the green LED is lit anytime there is a video signal present at the input jack. The one variable control is referred to as the "SLICE" control. This determines the level of the video signal at which the electronics either turns on that specific screen pixel or turns it off. This allows you to control the computer generated screen all the way from a totally white screen to an all black screen. The unit is I/O mapped and the red LED only comes on when the unit has been accessed.

The VIDEOFACE is manufactured in HOLLAND and I was concerned whether the unit would work with the our TV system so before ordering the unit I wrote Data-Skip and asked if it would work with the NTCS TV system. They wrote back saying that it should work and my experience has proven this to be correct. European TV has a higher resolution than ours and the only problem that I have found (not really a problem) is that the screen wraps around if you use the cursor keys and scan the most right and bottom of the TV image.

I was also interested in the electronics inside the unit and wanted to know if the unit could be plugged directly into the 2068. A preliminary inspection shows that the unit uses the following edge connections - D0 to D7, RD, IORQ, A7, A6, A1, A0, GND and +9v. All of these signals except the +9v are located on the same traces of the SPECTRUM and 2068 busses in reference to the SLOT location. The +9v trace on the SPECTRUM is not used on the 2068 and the VIDEOFACE uses the +9v and a 7805 voltage regulator to power the unit.

The SPECTRUM was prone to overheating problems and I assume the designers of the VIDEOFACE decided to add their own +5v so as not to overload the SPECTRUM's 5v supply. The 2068 uses a switching power supply and can handle a greater load on its +5v supply so a simple modification to the unit may make it 2068 compatible. I have NOT tried modifying the VIDEOFACE but plan to in the near future, and will notify the newsletter as to the outcome.

The software that comes with the unit consists of a short BASIC and machine CODE program. The machine code is the work horse portion of the program, controlling the interface and displaying and storing the digitized video signal in memory. The BASIC handles the main introductory screen and all SCREEN\$ saving to Micro-drive, Cassette or Disk drives. It is easily MERGED and changed to handle any Disk drive system you may have. I had no problems converting the software to Micro-drive or to my OLIGER disk drives.

The software works in SPECTRUM mode only and is VERY GOOD. The VIDEO image is scanned 3 times a second, thus a slow moving or still picture is not required and my experience with the unit indicates that a usable image is almost always available from most TV programs. The software stores the last six digitized screens in memory constantly updating them. You can at any time stop the scanning and review the last 6 stored screens, picking out the best one to save or send to the printer or just watch a simple 6 screen animation show. The speed at which the computer switches from one screen to the next can also be controlled over a wide range by using the 'F' and 'S' keys. Since the 2068 has a screen resolution of 256 * 192 pixels the whole TV screen cannot be displayed at one time, but by using the 4 cursor keys (5,6,7 and 8) you can shift the screen around locating the best view.

The unit does not color the picture - the screen is black INK on white PAPER and the actual SCREEN\$ SAVE is a CODE SAVE of 6144 bytes leaving out the Attributes section. This code can be loaded into any ART type program and then modified and coloured to the user's satisfaction. I have noticed that the VIDEOFACE prefers a colour video signal and produces a screen picture with more shading than when feed a black and white picture (this produces a very high contrast picture but can produce some interesting effects).

The unit comes with a very short, poorly written manual, being translated from Dutch into English and although helpful it is hard to understand in some places. The software makes up for this and once you load the program, within a few minutes you will be familiar with all the features.

I recommend that the source of the video signal be a VCR because it allows you to rewind and view the picture over again adjusting the SLICE control until you have the exact picture you want. I originally used the direct signal from the TV but found that while adjusting the SLICE control I would miss the picture I wanted to save. By recording the program and then using the VCR this was no longer a problem. I did run into one very big problem though - I got so enthusiastic about

saving screens that within the first hour I had filled a 60 minute cassette tape with SCREEN\$ dumps. After using it for a while you learn to be more selective with what you save.

Having used this product for the last few weeks I know that it was money well spent and I will be using it for a long time to come (not like some of the software I have purchased and looked at once). If you have any interest in screen displays either for business or just for fun I highly recommend this product. The possibilities are endless.

The price including AIRMAIL from Holland was \$93.00 (US funds) in December but this may have changed because of the constant changing dollar so please check with DATA-SKIP before ordering your VIDEOFACE.

Their address is:
DATA-SKIP,
LANGE WILLEMSTEEG 12,14
2801 WC GOUDA,
HOLLAND

Is the OKIMATE 20 the ULTIMATE TS2068 printer?



USE W/AERCO PRINTER I/F? Yes, if an IBM parallel Plug 'n Print cartridge is used.

OKI 20 FEATURES? The OKI 20 can print in NLB, draft, pica, elite, fine, double width, italics, sub/superscript, & underline. Plain or thermal paper (tractor/friction feed) or acetate transparencies can be used.

COLOR SCREENS HARD-COPY? Yes!!

"COLOR COPY" supports FULL COLOR and b/w SCREENS dumps & "PAINT & COPY" features HI-RES MODE coloring and copying.

CUSTOM CHARACTER SETS? Yes, downline loadable character sets of custom characters and graphics can be designed and transferred to an OKI 20. The utility software "OKI D.L.C.G." allows for easy design of custom char. sets and "OKI D.L.P.G." can transform a portion of a SCREENS picture into a downline loadable character set.

OKIMATE 20 EXPENSIVE? No, the OKI 20 & Plug 'n Print cart. are widely available for about \$180.

For a print sample, info. on 2068 software for the OKI 20, and a list of OKI 20 dealers/prices, send a LSASE to:

John McMichael
1710 Palmer Dr.
Laramie, WY 82070

NEW!
OKIMATE 10
SUPPORT

A COUPLE OF WORKSHOP HINTS

LARRY CRAWFORD 357 REYNOLDS RD LONDON
ONTARIO CANADA N6K 2P8 (519) 657-9119

If you do any work with the innards of your computer, it is prudent to keep yourself grounded so that you won't zap memory chips which are particularly sensitive. A grounding strap is good insurance but the commercial ones are very expensive. You can make a good one for less than \$5.00. Take two 25x60 mm pieces of conducting foam that ICs are shipped in and sandwich a 12cm length of lamp cord wire between them. Strip about 4cm of insulation from one end of the wire and cement that end between the pieces of foam with quick drying cement. Try not to coat the bare wire completely but be sure that the insulated part is well coated. Clamp the sandwich overnight. Tie and solder the protruding end of the wire to a 5-foot coiled telephone cord. Attach the other end of the phone cord to a grounding wire through a 1 Meg resistor. The grounding wire should run to a water pipe. Hang the coiled cord on a hook under your work bench or desk. To use it simply unhook the cord and tuck the foam pad into the top of your sock. The coiled cord will be out of the way on the floor but you can still wander around the room without having to disconnect yourself.

Need a fine soldering iron to deal with those microscopic traces on a PC board? Take a foot or so of 12 gauge copper wire and wrap it tightly around the tip of your soldering iron. Leave about an inch of the wire sticking straight out from the tip and file it to shape. It looks as ugly as sin but is very effective. One source of 12-gauge wire is house wire. Split the casing to get the wires out and strip the insulation from them.

THE FAR SIDE By GARY LARSON



"Freeze! ... OK, now ... Who's the brains of this outfit?"

Is the OKIMATE 20 the ULTIMATE TS2068 printer?



USE W/AERCO PRINTER I/F? Yes, if an IBM parallel Plug 'n Print cartridge is used.

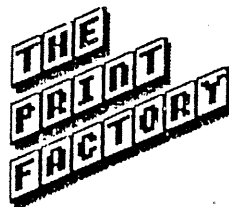
OKI 20 FEATURES? The OKI 20 can print in MLR, draft, pica, elite, fine, double width, italics, sub/superscript, & underline. Plain or thermal paper (tractor/friction feed) or acetate transparencies can be used.

COLOR PRINTING POSSIBLE? Yes!! Color printing is possible and with "COLOR COPY" software, ALL COLOR and black & white SCREENS copies are possible.

CUSTOM CHARACTER SETS? Yes, downline loadable character sets of custom characters and graphics can be designed and transferred to an OKI 20. The utility software "OKI D.L.C.G." allows for easy design of custom char. sets and "OKI D.L.P.G." can transform a portion of a SCREENS picture into a downline loadable character set.

OKIMATE 20 EXPENSIVE? No, the OKI 20 & Plug 'n Print cart. are widely available for about \$180. For a print sample, info. on 2068 software for the OKI 20, and a list of OKI 20 dealers/prices, send a LSAGE to:

♦♦♦ John McMichael ♦♦♦
♦♦♦ 1710 Palmer Dr. ♦♦♦
♦♦♦ Laramie, WY 82070 ♦♦♦



Kris Boisvert
Eric Boisvert

COPYRIGHT
BYTE POWER

A TRUE FAST LOAD OPERATING SYSTEM! CHECK OUT THESE FEATURES...

- ONLY 1536 BYTES LONG AND RELOCATABLE ANYWHERE BETWEEN 31500 AND 64000!
- TS2068 AND SPECTRUM 48K COMPATIBLE!
- HANDLES ALL STANDARD I/O COMMANDS.
- BORDER FLICKER COLORS SELECTABLE. (ANY COLOR AT ALL!)
- NEW COMMANDS SUCH AS NO MESSAGE AND HEADER READER!
- LOAD RATES FROM 1500 UP TO 3300
- USES A PRINT #4: I/O COMMAND

24FAST.....\$22.95 ppd

UNLEASH THE POWER OF YOUR PRINTER WITH THIS SOFTWARE PACKAGE...

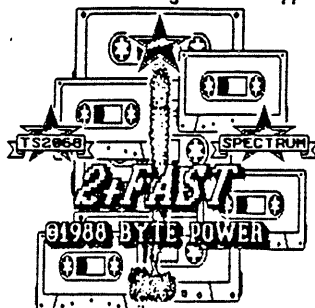
8 PROGRAMS AND OVER 150 GRAPHIC DESIGNS!

THE LABELER, THE CARD MAKER, THE BANNER PRINTER, THE PRESS, THE CALENDAR, THE HEADER, QUICK SCREEN and THE CREATOR ARE JUST WHAT YOU NEED TO MAKE YOUR PRINTER COME TO LIFE!

COMES ON 2 TAPES IN A HIGH QUALITY VINYL ALBUM. INCLUDES SUPERB INSTRUCTION MANUAL.

VERY USER-FRIENDLY!

The Print Factory...\$22.95 ppd



Also available from BYTE POWER

FIRST CLASS FONTS II...\$22.95
THE D.U.S. V2.0 (LKDOS)...\$22.95
THE VOICE...\$22.95
THE PRINT FACTORY...\$22.95
24FAST (FAST LOAD)...\$22.95
ZX81 1ST CLASS PROGRAMS...\$22.95

BYTE POWER MAGAZINE...

1 ISSUE (BACK/CURRENT)...\$5.95
6 ISSUES...\$29.95
12 ISSUES...\$59.95

FIRST CLASS PACK.....\$40.00

BEST OF ARCADE GAMES...\$22.95
BEST OF BUSINESS...\$22.95
BEST OF BOARD GAMES...\$22.95

DEMO TAPE/CATALOG.....\$3.00

U.S. FUNDS ONLY. ALL PRICES INCLUDE SHIPPING/HANDLING CHARGES.



LARKEN ELECTRONICS LKDOS SOFTWARE

- MAXCOM - 300/1200 baud Terminal / BBS
- Complete communications S/W for the LKDOS-2068
- 300 baud with the 2050 or Full 1200 baud with no missed characters. (2000 requires Z-SIO)
- 64 column Terminal Mode with IBM Graphics
- Auto dial, Macros, direct to disk buffer.
- Powerful Remote user BBS with fast response
- Auto answer, Xmodem 128/512,1024, Message bases
- Multi window, Direct access to drives and more.
- Direct 'modem to disk' Xmodem lets you transfer files over 100K in length (eg: NMI saves etc)

Price : \$19.95

Sequential / Random Access Files

- This ram based LKdos extension allows you to create / access large disk based data files
- OPEN# CLOSE# PRINT# INPUT# and INKEYS# basic commands are used.

Price : \$9.95

LARKEN DISK EDITOR

- Edit any byte on a disk, Reformat single tracks
- Read disk headers, Change disk parameters etc.

Price : \$15.00

LKDOS SHARE-WARE DISK (Original programs required)

- MULTI-TASKING Tasword. Lets you be printing one file from disk while working on another. Aerco CPI
- ART-STUDIO patch for LKdos. MC cassette routines converted to disk.
- Spec-term 64 LKdos overlay. Save Basic or Code
- Transfers to disk with no messing about.

Price : \$6.00

(All software requires LKDOS cartridge Price: \$65)
(Prices \$US) (Send cash for values less than \$20)
LARKEN ELECTRONICS, RR#2, NAWAN, ONTARIO, CANADA K4B-1H9

AFR SOFTWARE®

Presents:
Powerful And Inexpensive
Business Software
For Timex-Sinclair®
Computers

WORD PROCESSING	\$19.95
TS-TEXT 2000	\$19.95
ZX-TEXT	\$19.95
SPREADSHEET CALCULATOR	\$19.95
TS-CALC 2000	\$19.95
ZX-CALC	\$19.95
CYCLE ACCOUNTING	\$29.95
TS-ZX Financial Report Generator	\$19.95
Period Of Sale	\$19.95
APPOINTMENT SCHEDULER	\$19.95
TS-CALENDAR 2000	\$19.95
ZX-CALENDAR	\$19.95

Send \$3.95 For Free Catalog
Or Check Or Money Order To:
AFR SOFTWARE
1404 Parkview Ave.
Moundville, AL 36768
Moundville, AL 36768
(205) 331-4444
FLORIDIANUS AND SALES INC.
Credit Inquiries Invited

Time Designs Magazine presents

Mike's QL 'Hot Tips'

An edited compendium of the best of Dr. Mike de Sosa's articles and reviews for Time Designs plus new material by the author of *Taking the Quantum Leap: The Last Word On the Sinclair QL*.

Available on floppy disk or Microdrive cartridges.
Shipped by First Class mail within one week of order.

On one 720K 5.25" floppy disk . . . \$ 19.95 + S & H
On two 360K 5.25" floppy disks . . . \$ 29.95 + S & H
On one 720K 3.5" floppy disk . . . \$ 22.95 + S & H
On six Microdrive cartridges . . . \$ 37.95 + S & H

* Still available from Time Designs at \$ 26 PPD.

** Printout the 'Hot Tips' and then use the Microdrive cartridges for other purposes.

Available only from

Time Designs Magazine
29722 Hull Road
Colton, Oregon 97017
U.S.A.
Telephone: (503) 824-2658

VISA and MASTERCARD orders accepted

ORDER
TODAY!

Now on Disk!
Order Now and
Watch Your Mail!

THAT'S RIGHT!
Now you can get the RHG CATALOG on LKDOS DISK in TASHORD 2 files. This format for the 2068 will be the only format available and at the same old price of only:
\$3.00 PP

AND THERE'S MORE!!
We now offer our monthly mailers on the same format disk! Keep up with what's new, used equipment and SUPER BONUS! AS AN EXTRA BONUS YOU WILL GET AT LEAST 3 PUBLIC DOMAIN S/W ITEMS FOR THE LKDOS SYSTEM PER YEAR! This alone is worth more than the \$12 per year subscription price!
(COUPONS INCLUDED WITH BOTH PACKS)

RHG ENTERPRISES
1419 1/2 7TH STREET
OREGON CITY, OREGON 97045
503/655-7484 • NOON-10 TUE-SAT

Does the QL Multi_Task ? NOT QUITE.

Back to the old tale that the QL is a Multi_tasking machine. A true Multi_Tasking unit, is one which is capable of performing two or more tasks at the same INSTANT. The QL does not do this. No, it does not. What it does do, is perform a number of tasks in a strict routine of importance.

Now, having got that off my chest, I have probably peeked your interest a little, and you are now asking how I came to that conclusion, and the answer is simple, by observation.

I have Task_master, and I use it a lot, it is one of the MUST programmes for the QL'er. The only snag with it is that it requires at least 256K of extra memory. If you have that, and you use the four Psion programmes, then you should have Task_Master. This one little programme is worth the money it costs, and repays itself very quickly, by the time it saves you and the convenience in switching from one programme to another, and not having to reset to do so. This is also plugged as a Multi_Tasking piece of equipment. But once again, it is NOT. No Sir.

What happens is this, both with the QL and with Task_Master, when you run a programme, and switch to another, the first programme is held in limbo, until such time as you return to it. It then starts up again where it left off when you switched programmes.

At a recent meeting of the QL Section, I asked this question, and was able to demonstrate what was actually happening. If anyone would like to see how the demonstration was made, then drop me a line and a Disk/Cartridge, and I will give you the low_down. that is providing you have Task_master of course. (I can give you the Demo, but I cannot give you Task_master).

The demo will show a screen of five windows, each with a little Itsy_Bitsy thing running. Some of you may have seen this demo before. The window across the top of the screen shows a QL blurb extolling its virtues. The top left window displays a scrolling of lines of Decimal numbers.

The top right window gives you a display of filled ellipses being added to the window. The bottom left window has a display of a sine curve being drawn. And the bottom right, a

scrolling display of catch phrases.

Now remember you have Task_master running, and it is only a matter of pressing ALT+1 to go into Quill, and work there for a while. When you press ALT+1 to go to Quill, look at the top left display, and make a note of the line number showing as you switch. Then when you return a few minutes later, observe the line number now showing. Bet you it is the next in sequence from when you left.

This just goes to prove what I said at the beginning. The QL is capable of handling a number of tasks at the one time, taking each task in rotation. But it is NOT capable of performing a number of tasks at the same INSTANT. This also applies to Task_Master.

Each programme is allotted a space in the QL and the QL will switch from one task to another so quickly as to give the impression they are all working at once.

Similarly, if you send something to the printer, and continue working in another programme, the printer spins away merrily while you work, but soon stops although the document may not be complete. What has happened is that the printer buffer has been emptied. It may appear on the surface that the QL is doing two tasks at once, but not quite.

This is what I found, and if anyone has any other ideas, or explanations, I am sure we would all like to hear of them.

One snag to my argument.

There is also a sixth window displayed, which shows the date/time which is set when the Demo is first setup. Now this date/time display goes on while the others stop. WHY ? ? ?

Want to try this? If you have Task_master or some other means of switching from Superbasic to Quill or any other programme, then drop me a line and a formatted disk/cartridge, and I will send you this demo, which really is very good. Menu driven. Very interesting, and I am sure it will give you some ideas of your own.

No... Not you Mama, Sit down ! ! !

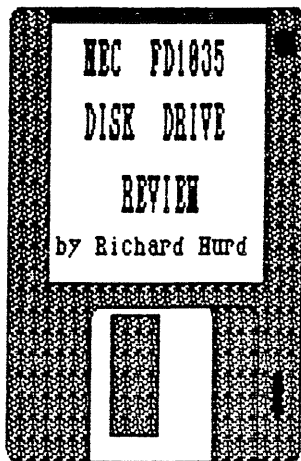
H.H.H.

WOOD AND WIND COMPUTING

Bill Cable : RR 2 Box 92 : Cornish, NH 03745 : 603 675 2218

Business and Educational Software for the QL

DBTutor : An ARCHIVE based learning shell. This program allows users to set up databases to learn any subjects they wish. It works well with any topic that can be typed in. Many interesting drills can be done to help learn the material including : flashcard, type in answer, reverse question and answer, score keeping, print missed questions, selected by subject, keys, or word occurrence. Parents can set up drills for their children. Students can use it to learn languages or any school subject. QL users can use it to help learn computer related topics. The material can also be printed out in test or complete form. Long after the material has been entered it can be quickly reviewed. DBTutor uses the power of ARCHIVE without requiring the user to know anything about ARCHIVE. It is all menu driven. Comes with a detailed 25 page manual and many sample databases. I have a version that works very well on unexpanded QLs also. Order directly or send SASE for a list of other software available. (5 1/4 DSDD disk \$24.95 or 2 MDV \$28.95)



I recently added a NEC FD1035 3.5" floppy disk drive after seeing it mentioned here in the newsletter. Cost: \$60 + s&h from TIMELINE INC. It is a 1 megabyte drive which formats out to 164 tracks with the LARKEN FDD I/F. This is the second 96 tpi drive I've added to the LARKEN FDD I/F. The first was a 5.25" Tandon TM101-4A which formats out to 160 tracks, and which I am also pleased with.

But there are advantages to the 3.5" like a more durable housing and compact size. Sleeves are not required for the 3.5" disks due to the closed design. The NEC is quiet, the Tandon is noisy. There is no noticeable difference in LOADING or SAVEing time between the two. The NEC formats out to 164 tracks (0 - 163), the Tandon formats out to 160 tracks (0 - 159). The built in write protect on the NEC is a definite advantage.

The only disadvantage with the NEC is the higher cost of disks, for which I have found a source @ \$.59 each from MEI in bags of 25. Labels are \$1.50 for 50.

I purchased 25 of these and have had 1 bad block and a little trouble formatting a few of them from tracks 158 thru' 163. I'll be watching for those CRC errors. I also purchased a box of 10, 3M double side 1.0 MB brand diskettes and had no trouble at all in formatting them to 163 tracks.

The connection to the FDD I/F was a bit more complicated than the Tandon.

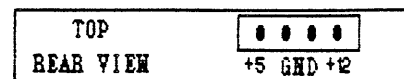
THE CONNECTION

To begin with the fd i/f cable connection to the drive used a different type of connector than the Tandon (or the Amdek 3" which is the same as the Tandon). The NEC uses a 34 position header connector with .1" spacing (IDS 34). The Tandon uses a 34 position edge card connector (IDE 34). The NEC is pin for pin compatible with the Tandon. Radio Shack carries these (#276-1525).

The power connection also uses a different type of connector than the Tandon. It is a single row 4 position MODU type connection with .1" spacing. I just happened to have a 10 position connector which I trimmed down to 4 positions. I do not know the best source for the power connector. The power connections were not defined in the included documentation, but a toll-free call to TIMELINE INC. gave me the power supply connections. The included documentation was sparse but it does show how to configure the drive using jumpers. I spliced the new connector into a

standard floppy disk drive "Y" connector. The +5 volt return and the +12 volt return are tied together shown as ground.

Here is the power connection layout.



ADDENDUM

I spied another highly rated 3.5" floppy drive, a FUJITSU drive. \$59 + sh. from AMAX. Ad in Computer Shopper magazine.

I also purchased a Compower 130 watt power supply from TIMELINE (see current ad in Computer Shopper magazine) which has plenty of power for the drives and +5 volts for peripherals attached to the 2069. \$12 each with a minimum order of two. S&H \$9 including COD.

CONTACTS

TIMELINE, INC.
1490 W. Artesia Blvd.
Gardena, CA 90247
1-800-872-8878
213-217-8912

MEI/Micro Center
1100 Steelwood Road
Columbus, Ohio 43212-3972
1-800-634-3478

AMAX APPLIED TECHNOLOGY, INC.
3001-A W. Mission Rd
Alhambra, CA 91803
818-300-9828

FROM MEMBERS' LETTERS

Continuing with excerpts from Steven Gunhouse's letters to me, (see last newsletter issue) here is a discussion on joystick routines, and mouse-type routines for the TS2068. Let's hear from you if you enjoy these tidbits. I'm sure Steven would appreciate it.

G.F.C.

Oh, I stumbled across a rather strange problem. Anytime I did an AUTOSTART program, I would not be able to read either joystick. The usual SOUND 7,63 had no noticeable effect. It turned out that I also needed to do a SOUND 14,255. I could cause it to act up again by doing a SOUND 14,0. All this is something that I don't see why it should be that way, but it may be of interest.

That forces a slight modification of what I claimed the BASIC equivalent of the STICK function is. This example should demonstrate:

```
1000 OUT 245,7: OUT 246,63: REM Equivalent of SOUND 7,63
1001 OUT 245,14: OUT 246,255: REM SOUND 14,255
1002 LET s=255-IN (256*p+246): REM Complement bits
1003 LET f=(s>127): REM Bit 7 = fire button
1004 LET s=s-128*f: REM Remove bit 7 to leave direction
1005 RETURN
```

For this routine, I have used p to stand for the player (1 = left, 2 = right, 3 = both). It returns with s the direction information and f the status of the fire button.

For those so inclined, the equivalent of the first 3 lines in machine code is:

```
00: 3E 07 D3 F5 3E 3F D3 F6 3E 0E D3 F5 3E FF D3 F6
10: 3E 0D DB F6 2F 4F 06 00 C9
```

Naturally, either of these will work in either 2068 or Spectrum mode. Sorry, writing a routine to give Kempston results from the Timex joystick would take a lot more work, as the direction information would need to be completely rearranged.

A quick word about the simple drawing program I will send on the disk - I have decided to send the disk by July sometime whether or not I have completed my AERCO conversion project, but I actually expect to have done so. But in the drawing program where I pretend the Timex joystick is a mouse, you may recall I was having difficulty with the CIRCLE, since it was too slow. What I finally did was to draw an oval instead (officially, a 4 point ellipse, though not a true ellipse), and use a box to indicate placement. In some ways, this is more elegant anyway, and of course the box is a great deal faster in response than either a circle or ellipse. When you use it, you will just have to remember that when you release the button, it will draw an ellipse inside the box it shows to indicate position.

I should say something about technique. I am sure you have

seen the utility EZ-Edit. It was interrupt driven, and required a modification to the 2068 in order to work. Well, the original author of Specword, though writing on a Spectrum, developed a technique that should not need the modifications when converted to 2068. I think I will describe this briefly; it is a technique I use in my "mouse-emulated" joystick routine.

I presume you know about the different interrupt modes on the Z-80. The 2068 normally runs in IM1, which means that an interrupt causes a CALL to 0038 - if the interrupt is enabled. EZ-Edit and other interrupt-driven software run in IM2, which uses a table that theoretically can occupy any 256-byte "page" in RAM that starts at an even multiple of 256. When an interrupt occurs, the bus is read for a 1 byte pointer to the location in the table that holds the address of the interrupt routine.

If no device is set up to generate this 1-byte pointer, then the bus just "hangs". On the Spectrum, since the bus has pull-up resistors, this is equivalent to reading an FF, so it will look at the last location of the table for the address of the interrupt routine. On the 2068, these resistors were not included, so we have no way to predict for certain what byte will be read.

The way around this problem is to make sure all of the entries in the table point to a valid interrupt routine. The easiest way to do this is to have all of the bytes the same. Let me use Specword as an example. His table was set up to start at 8000 hex (before I had to modify it). What he did was fill the locations 8000 to 8100 (that's 257, sorry about the error earlier) with 81 hex, and made sure his interrupt routine started at 8181. Then, no matter what the data on the bus was, it would still end up in the right place. Incidentally, his interrupt routine was the type-ahead keyboard that I am so fond of about the program. But the technique could be used for anything that you wanted to that had to be interrupt driven, such as my use of it so that the joystick movement is recorded even when you are doing something else.

I should tell you how a mouse operates from the programs point of view on some other computers so you will know what I mean by a "mouse-emulated" joystick. In BASIC on the IBM or the Macintosh, generally the following information is available about a mouse: where it is now, the status of the button, where it was the last time (or several times) the button was pressed, and where it was the last time (or several times) the button was released. And of course boundaries can be set on where the pointer can go, etc. My joystick routine does exactly that, but with the Timex joystick instead of a mouse. Of course, it is not as exact as a mouse, and will always more than 4 seconds to cross the screen, but that is all you can really expect from a joystick. (256 clock-ticks to move 256 positions translates to 256/60 or 4 and 4/15 seconds).

Actually my use so far of it has been pretty trivial, but I think you will still be impressed with it. For a routine in BASIC, the drawing program is almost unbelievable. Of course, I put the LKDOS Extended BASIC commands to good use, but of course that also means the program is dependent upon LKDOS for 2 of its commands - FILL and BOX. I should throw in some window commands for putting text in the drawing, but that turns out to be moderately complicated - a bit more so than BOX was.

I may write a version to avoid the use of LKDOS commands, but it will not be quite as impressive unless I do a lot of work on it. Another project to work on later I guess.

PRINTER

LARKEN LPRINTS GRAPHIC CHRS
AS UNDERLINED ASCII CHRS

C=Code		G=Graphics		A=ASCII			
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
128	129	130	131	132	133	134	135
1	2	3	4	5	6	7	8
49	50	51	52	53	54	55	56
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
136	137	138	139	140	141	142	143
9	:	;	<	=	>	?	@
57	58	59	60	61	62	63	64

Here are two cards from my cardex box. I use the upper one to decode a listing printed on the wide printer via the LKDOS printer code which shows graphic characters as underlined ASCII characters; eg, a solid black square would be listed as @ or in my case on the Fastext 80 with no backspace feature as @_.

The legend with inverted C, G and A draws attention to the rows containing the code values, the graphics characters and the ASCII characters respectively; the code values for G and A are given on separate rows.

The lower card depicts the 2068 keyboard with notes for use with Profile +5. The cryptic notes become apparent to the Profile user, eg, the STOP token closes a record, enters it into memory and returns to main menu; STEP closes but lets you continue with the next record; TO closes and lets you add a new record; AND closes and lets you stay with the current record.

It's hard to remember all these variations unless you are a frequent user of the program.

BOB'S NOTEBOOK

PROFILE + 5

1 Insert over	2 CAPS	3 Line DEL	4 Line Erase	5 PRO-FILE+5	6	7	8	9	0 DEL CHR	<<CS+N
Q	W	E >= CHR Srch AUTO	R	T > CHR Srch CONT	Y AND Close UP- REC & DATE STAY	U NU Close UP- DATE Phrase	I AT Insert EDIT	O	P Tally AD=Block Delete	
A STOP Close	S AS SUM	D STEP Close & CONT	F TO Close ADD	G	H	J	K	L ENTER Name RVS W/ COPY OR AUTO		
C S	Z	X	C	U	B	N	M in DEFP 2 lines in 1	S S	B K	C S

Some other explanations: <<CS+N means Caps Shift plus number on the top row. The back slash \ is used with T for a math tally; with D to do a block delete; with S for a math summation; with U to update a record. AT is used to insert an EDIT phrase previously set up at the main menu (I use this to start every entry with the same info, say, newsletter number and date when updating my Sinc-Link index). >= does a character search and AUTO option while > does one with a CONTINUE option. Pressing ENTER will do a name reversal of the first line when used in the COPY or AUTO mode. Using the period (.) when defining the printer set up will print two lines of a record as one.

R. H. MITCHELL
20 WILD BRIARWAY
WILLOWDALE, ONT.
M2J 2L2

SINC-LINK

ZX81, TS1000 & TS1500 OWNERS!

A GRAPHICS MANUAL JUST FOR YOU



GRAPHICS A to Z

deals with graphic techniques...

- In BASIC
- In Machine Code
- using a compiler
- with Memotech's HRG

The manual contains over 80 listings, some in Basic, some in Machine Code and each with a screen display sample. All are ready to run. Each illustrates innovative methods to polish your programs with fantastic graphics.

Ever want to write programs with line numbers past 9999? ... or design a new alphabet or new graphic symbols? ... or switch complete or parts of the screen instantly? ... It's all here and more in **GRAPHICS A to Z**.

ONLY \$15-

Send orders to: Paul Bingham
PO Box 2034, Mesa, AZ 85214
(please add \$2 shipping)

Software for the QL that really works

MAILBAG An address database you won't believe. Labels, Rotary files, Zip sort, tickler file, many auto features, & more... 256K

TAX-I-QL Spreadsheet for IRS tax returns. 384K

QLANDLORD Manage 99 buildings or units. Do Sched E.. 256K

\$19.95 ea pp on 5 1/4" DSQD
(+\$2.00 on microcartridge)

AND The most comprehensive list of independent North American software for the QL.

Agents for ZX/TS SiriusWare
4K Wordprocessor with
TS 2040 lower case printer driver

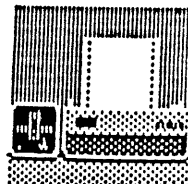
Orders, Catalogues & Dealer info

EMSoft

P.O. Box 3763, Boston, MA 02114
(617) 889-0830

VISA/MC ok

**NEED
A
PRINTER?
WE CAN HELP!**



RMG can supply many top brands at low prices. Names like: CITIZEN-STAR-ALPS
PANASONIC-OKIDATA-EPSON-SEIKOSHA
BROTHER AND MORE!

***** CHECK THESE OUT! *****

PANASONIC KX10801	ONLY \$175.00
PANASONIC KX10911	ONLY \$199.95
STAR NX1000 MULTI-FONT	ONLY \$180.00
STAR NX1000 RAINBOW	ONLY \$239.95
STAR NX2400 24-PIN	ONLY \$339.95
SEIKOSHA SP-180A1	ONLY \$159.95
CITIZEN 1290	ONLY \$159.95
CITIZEN 1800	ONLY \$175.00

Please add \$15 each for sh. & ins.
We also have MANY used printers in stock-write or call!



RMG ENTERPRISES

1419 1/2 7TH STREET
OREGON CITY, OREGON 97045
503/635-7484 • NOON-10 TUE-SAT



PROMISE LAND ELECTRONICS

Dan Elliott, Owner

Servicing COMPUTERIZED
electronic equipment

COMPUTERS / MODULES / PRINTERS / MONITORS

Sinclair QL	TS-2068	TS-1500	TS-1000
16K Ram Pack	ZX-81	Memotech Modules	
Commodore 64	VIC-20	PLUS-4	C-16
Coleco ADAM	TI-99/4A	Commodore 128	

REPAIRS / UPGRADES / ASSEMBLING / TESTING

Write for prices:

Dan Elliott
Route 1, Box 117
Cabool, MO 65689

Ph. (314) 739-1712 evenings, Sunday - Thursday.
Ph. (417) 469-4571 weekends.

**Bottle Cap
Software
Presents
Graphit-1**

First in a series of TS2068
Information Charting Programs

Personal Monthly Sinclair
Gaming Usage Percentage
starting with July 1986.



Graphit-1 features:

- 3 times as many input values as Quadra-Chart.
- 3-Dimensional bar graphing.
- Plot data points with connect points option.
- Copies to TS2040, full size printer w/Merco I/F, or others w/your custom driver.

SAVE SCREENS and/or DATA().

Status Menu Driven Program
requires Joystick or compatible.
Cassette version easily changed
for your disk system. Larten
version is available.

All Bottle Cap Software is \$5.00
plus \$1.00 sh. Send checks to:

Bottle Cap Software
1504 Brushwood Ave
Cincinnati, OH 45224

BACK AGAIN... FROM A-B-C-A SOFT

**Don't File Your 1988 Tax Return
UNTIL YOU HAVE
QUIK-1040-88**
The LARGEST SELLING 1/5 2068 Income Tax Program in America

INCLUDES: Form 1040, 1040A & EZ,
Sch. A & R & Forms 2106, 2441
Automatic Calculation Income Tax
Liability, Child Care Credit Tax-
able Social Security, Earned In-
come Credit, Multiple U-2 & 1099
Entry & 2040 Compatible & More
THIS YEAR SCH C and SE Included!

Only \$29.50 Postpaid
1st class Mail-
For Timex/Sinclair 2068 Computer

QUIK-1040 is an "interview type"
program. It will calculate your
allowable IRAs, Interest and De-
ductions accurately, without the
use of cumbersome input sheets.
CALCULATION OF TAX LIABILITY AND
CREDITS IS AUTOMATIC!!

This program was designed with the taxpayer in mind. It is easy
for you to accurately prepare your own income tax return EVEN IF
YOU HAVE NEVER DONE IT BEFORE! It is also sophisticated enough
to be used to prepare returns for others, with or without expe-
rience. An Ideal teaching tool for tax and accounting students.

**SPECIAL: IF YOU PURCHASED
1987 QUIK-1040 FROM A-B-C-A SOFT
TAKE A FULL \$10 DISCOUNT.**

The 1987 QUIK-1040 is STILL AVAILABLE for just \$12 POSTPAID.

Send CHECK or MONEY ORDER (U.S. Funds)/Mid-January Shipment Date!



HERB BOWERS, Sr
2568 Woodshire Circle
Chesapeake, VA 22033-23
Phone: 804 437-5924

ZEBU (N 12028A OR 7)

Attention Basic Programmers
(Zunks Extra Basic Utilities)

In the EDIT LINE mode ZEBU gives

- * UP/DN arrow keys, lets you
zip to the end of the longest
basic line.
 - * Truncate EDIT line to left or
right of the cursor.
 - * Fast DELETE key corrects bug,
that Timex left in the ROM.
 - * Restore the edit line at any
time.
 - * Delete all between colons
- In the IMMEDIATE or RUN mode**
- * Join two basic lines to form
one long line.
 - * Block move memory (LDIR)
from a basic command.
 - * 16 bit Poke (DOKE)
 - * Print a 16 bit Peek
 - * Let a variable=16 bit peek.
 - * Print basic length (bytes)
 - * Print 3 types of large text.
 - * List line or range of lines.
 - * Search basic lines.
 - * Electric INK auto ink rotate.
- *** 17 new 2068 functions ***
\$20.00

ZUNK CUSTOM ELECTRONICS
4800 East Cedar Lane
Norman, Oklahoma 73071
(405) 366 8595

**NOW! AFFORDABLE
2068/1520
HI-RES PLOTTER**

WHAT IS A 1520? - The 1520 is a HI-RES four
color printer/plotter made for Commodore computers capable
of printing rotatable characters in 4 different sizes and
able to plot lines (solid or dashed) within a 400 by 1,996
step 10.2 m/step plotting area. Replacement pens & paper
are low priced & can be found at most RADIO SHACK stores.

HOW AFFORDABLE? - The 1520 can be found at
some 1015-4-08 stores & I have a few second, units 4-sale.
I/F dealer sells for \$14.95 (bare), \$20.95 (comp. kit),
& \$30.95 (assembled/tested). All orders are shipped ppd.

SOFTWARE? - Currently, there are utilities for
interactive and auto transfer of SCREENS to the 1520, for
making banners & calendars, plotting deos incl. fractals,
& a patch bit allowing CHRCript V3/5.2 files to be printed
and/or plotted on the 1520. The software is priced @ \$8.95
(post paid) each and comes with complete user notes.

USER FRIENDLY? YES! - All print/plot
directives are sent via BASIC "PRINT" statements. PLOT &
BOM commands in existing BASIC programs can easily be
replaced with corresponding "PRINT" plotter equivalents.

See TIME DESIGNS 4/2 & 5.8.8. 3/4 for reviews. (see
Send LSHSE for more info/order form and a sample plot to:
John McMichael
1710 Palmer Drive
Laramie, WY 82070

"PRINT FACTORY" by Byte Power. You may be aware of Byte Power Tape Magazine, started in Canada a few years back by Kris and Eric Boisvert. Or you may not. Anyway they have been producing software, games and utilities for the TS2068 for the last 3 years (and for the last 3 or 4 issues, Spectrum Emulated 2068's).

During this time their programming skills have steadily improved. Even early tapes had good to very good stuff, both games and utilities. I have been using their mailing list program for about two years for our club newsletters (LIST Long Island Sinclair Timex Users Group). Also published were utilities for the Larken disk drive system that I find very useful. Back issues should be available for about \$6 each.

They are now producing utility software sold separately from the magazine format. The latest is PRINT FACTORY. If anyone is interested in desktop publishing on the TS2068 then this set of programs is a must-have item. The set contains 3 tapes of programs to do desktop functions and contains special programs to help with the main task. There are things like "FIRST EDITION" to produce posters, letterheads, newsletters, ads, etc. This includes a graphic design file.

The "PRESS", which is a page maker that handles screens instead of graphic designs, can load and merge screens in the document, and you can use four different fonts and mix them as you wish.

Also, there's "LETTER PERFECT", a proportional printing word processor for printers that do not have NLQ or redefinable fonts. It can also load a cursive character set.

There is a nifty "LABELLER" program that is great for labels for such things as disks or addresses. You can have a "Banner" printed on large or small printers (TS2040).

Also, there is a "Card Maker", one that really works.

These are the main programs. There are also things to help you, such as "Quick Screen" for the "Press"; the "File Keeper", to produce your own custom libraries to be used in "First Edition", etc.; the "Translator", to convert "Lemke" icons to Print Factory format; the "Creator", which lets you manipulate or create files; and 13 super sets of Fonts.

I hope this review is somewhat helpful. The bottom line is: These are super programs for our favorite computer. The only thing I would have to say is, to get the most benefit from these great programs you should really have a disk drive. Then you will have to convert them from tape to disk yourself.

BYTE POWER
1748 MEADOWVALE AVENUE
PICKERING, ONTARIO
CANADA L1V 3G8
PRICE about \$25 (US)

article by
Tom Skapinski
7 Atkinson Lane
Coram, NY 11727

Setting up a printer in Quill is not a very difficult task. Although it can be time consuming. You start by LRUN INSTAL BAS from the Quill media. If using MDV then use that. FLP or any other device you should convert first. After LRUNing, the program will ask for the device location. I am using disk so I used FLP1 and pressed ENTER. Now it asks for type of port. Standard serial (ser1 or ser2) or a parallel or other non-standard port. I use ser1 for my printer port. The program now begins loading the Editor program so you can change the printer driver codes.

After loading, the top portion of the screen contains the Edit control keys and their usage. The rest of the screen contains the current printer loaded and other printer types available. Using the UP/DOWN arrows, move the cursor to the desired printer and press ENTER. If you don't want any of the pre-programmed entries choose OTHER. If you choose OTHER, press F2 to start editing the printer. Change the name to a meaningful one or change the Port, Baud, Parity, Lines/page, Char/line, and/or any of the control code lines. Please note all necessary codes must be placed in one line. For example if the control code requires an escape code before the control code, it must be placed before the line. If a number is to follow, it must be there. Use commas to connect the codes. For example; 27,61,0. The 27 is the escape code, the 61 is a control code, and the 0 is a modifier to the control code. Preamble - This is used to set up the printer prior to the start of printing. Post-amble - What the printer should do after printing is completed. The rest are self-explanatory except for Translate. Translate codes go into effect when the ASCII code is imbedded in the print line where required. Whatever is first in the translate string is the control code. When that code is encountered the Translate will take effect. If you use the ASCII code for the then whenever is encountered that translate series will take effect. You've got 10 of them.

Taken from the July '89 issue of SMUG bytes
No author credit given Retyped by G.F.C.

TIMEX COMPUTER FEST 1990

GOOD NEWS - There will be a T/S festival in 1990, thanks to the efforts of SMUG, the SinclairMilwaukee Users Group (P.O. Box 101, Butler, WI 53007). The 1990 Sinclair Fest will be held on June 1, 2, and 3, 1990, at the Holiday Inn Wakesha in the Milwaukee area. The hotel will charge a flat rate of \$45 per room with 2 double beds, and the hotel has an indoor pool and restaurant facilities. Tentative activities include a banquet dinner, buffet style, displays, seminars, lectures, vendors, and a SNUG meeting--Make your plans now, and if you can possibly make it, GO. You won't regret it.

From the Vashon Island S/T Assoc.(VISTA) n/1

DISK DRIVE REPAIRS

One of our members, Donald Lambert, sent me a three page article on his experiences repairing Tandon disk drives that he then uses on his Larken system. Donald has access to a source of defective drives, and is therefore encouraged to experiment with repairing them. I have selected a segment of his article to put in the newsletter. It follows below. If any members is interested in the complete article ask me for it. G. Chambers.

ce>ce=y
DRIVE REPAIR
by Donald Lambert

The first thing I did was check and reset the speed of the drive motor. For that you will need a flourescent light and a small-bladed screwdriver, to turn the adjustment screw in the potentiometer on the board on the end of the drive. And you will need a jumper, to go between the square pins on the top of the board. A piece of insulated wire with a flea-clip on each end will do.

With the disk drive on the table, with the top side up and the drive insertion door facing you, you will find a square pin located just 5/16th inch to the left of the right-hand board mounting screw, and about 1/16 of an inch closer to you than the screw, and labelled TP10 with the letters upside down. Fasten one end of the jumper wire (with the flea clips) to the square pin. Up at the other end of the board is a row of connectors, and the one labelled 11 will be directly in line with the square pin TP13 which is 5/8th inch this side of the connector. Fasten the other end of the jumper wire, using the flea clip, to that square pin. The purpose of the wire is to cause the disk drive motor to turn on when you turn on the power.

Speed is best set with a disk in the drive. I set the speed before I connected the interface cable to the drive. Now with the drive power cord plugged into the disk drive, turn the disk drive on it's side to expose the flywheel of the disk spindle with the paper and the bars printed on it. With the bars exposed to a flourescent light, watch the outer ring (60 cycle) and if the bars appear to go either clockwise or counterclockwise then turn the screw in the end of the potentiometer on the back board (the motor drive board). The bars may waver but unless there is a definite movement in either direction the drive speed is correct.

One word of caution

** IF THERE IS NO TERMINATOR RESISTOR IN THE SOCKET LOCATED BETWEEN THE TWO IC's IN LINE LEFT TO RIGHT WITH TP13, NOT ONLY WILL IT BE IMPOSSIBLE TO SET SPEED BUT ALSO IMPOSSIBLE TO SET THE TRACKING **

I had a drive that just seemed to want to vary the speed and also would not take a track adjustment until I realized the resistor was missing. A word of caution; it might be safer to wrap masking tape on the screwdriver blade to insulate it. When the speed checks right, remove the jumper between TP10 and TP13.

To reset the drive if the drive will not read track 0 (the directory of files) you will need a larger screwdriver (insulate with tape to the blade and shaft) and an Allen wrench size .109 or 7/64th of an inch. Turn the drive over and you will see down near the disk flywheel a pair of Allen screws which are sealed on the side with green sealing material.

Loosen the two screws and turn the drive back right side up. On the back of the drive above the disk motor board is a metal projection that has a slotted screw head in an oblong opening. With the drive door facing you the slotted screw will be on the right side of the metal projection. To the left and slightly towards you is another Allen headed screw, also with the green goop on the side of the head. Loosen that screw and test with the screwdriver to see if turning the screw moves the metal a trifle. The screw only has about 180 degree adjustment. I had the best luck adjusting by turning the screw to the most counterclockwise position. The reason for insulating the screwdriver is to prevent touching the bare pins that stick out above the adjusting screw.

Now, with the interface cable plugged in and with the drive power supply plugged in, select a disk SAVED on a good drive (be sure to use a copy in case something happens to the disk). First, try to CAT the disk (I was using the TS2068 and the Larken interface). When you get an error, watch the metal slide and just turn the screw enough clockwise so that you just barely see it move. Then retry the CAT, and repeat until suddenly the entire directory is listed as it should.

I usually make one or two more very slight adjustments, and then try to load a file at the start of the directory, then one towards the last of the directory. If both have LOADED on a good drive and they LOAD on this one, then power down and tighten the three Allen screws. Then retry the CAT and the first program and the last program. If they load, then you have it reset. With the Larken and the TS2068, on failure to CAT, you will get a CRC error and then garbage for the directory. Then, as you get close to the track with the adjustments you might see one or two of the first files named, then garbage; then suddenly all files appear.

While the drives are rather mysterious (to me) in how they work, it is rather more a mechanical process to making these adjustments. Of course other defects are handled differently.

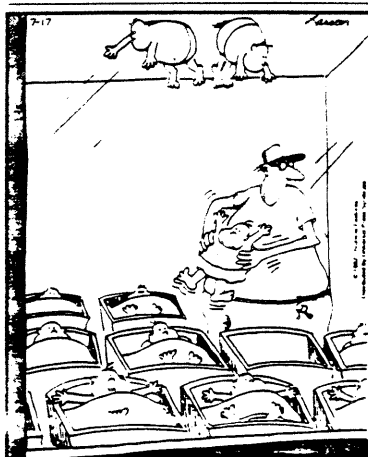
**SINC-LINK WOULD LIKE
TO PUBLISH YOUR OWN
GRAPHICS & DRAWINGS,
SO SEND THEM IN NOW!**

TIME DESIGNS Magazine....the latest.

The following is an Editor's column from the Vol.3, #4 issue (Sept(?) 1989) of the Vashon Island Sinclair Timex Association newsletter, VISTA. Vashon Island is in Washington state.

"EDITOR'S COLUMN-- As you well know, I started off last issue with a strongly worded open letter to 'Time Designs' magazine and it's editor, Tim Woods. Needless to say, it hit home with a lot of T/S users, most notably Tim Woods himself, as I received a two page letter from him shortly after the VISTA newsletter was mailed (late July 1989). In summary, Tim noted his lack of time to devote to the magazine due to business interests; the loss of his wife's help on the magazine altogether; the literal mountain of mail that accumulated during his absence, which is being answered on a date-received basis; the corruption of his subscription database file; having not sent out renewal notices for ten months, subscrip[tions are not coming in; and his general discouragement during which he entertained thoughts of quitting. Tim then assured me that the worst is behind him now, he is working on another issue and plans to continue for "few more years", and that he believes we "will see a bit of improvement from 'Time Designs' by this fall". He also explained he would be in California helping his brother move the week I would be in his area, but I was welcome to drop by any other time at my convenience. The final enclosure was the latest issue of "Time Designs", Vol.5, No. 1. I was disappointed that I would not have the opportunity to talk with Tim Woods and iron some things out, so I took the time to write him, including suggestions and opinions from all of you readers who have written me; I also sent along a list of those of you with missing issues. I have no idea if this worked for any of you or not; I have heard nothing more from Tim Woods, hopefully because he is taking care of all his other correspondence. I have seen the latest issue of "The Plotter", the newsletter from the CCAT/S group of Oregon City, OR, and they had two small articles that may shed some light on the subject. I will recount them verbatim.

THE FAR SIDE By GARY LARSON



Late at night, and without permission, Reuben would often enter the nursery and conduct experiments in static electricity

* "TDM Magazine-- as far as we know has not published since Vol.5, No. 1, which was delivered to some folks in May, both by mail and at the CapitolFest. No one has heard a word out of them since. Most advertisers we have spoken to have given it up as a "lost" cause at this point. We have had dozens of calls and letters concerning what is going on with them and we cannot do much to help. We are always sorry to see one of our supporters go "by the wayside", but we are afraid that this has happened".

* "If you will, consider Tim Woods' letter I received in mid-July, (not included here, and the following before you come to a conclusion over the fate of 'Time Designs'".

* "Recently my wife and I had a nice visit with the Ass't Editor of TD Magazine. Stephanie assured me that the magazine was viable and well. The major problem is that a 1-man business has to be set aside because of trying to make a living, and to devote a lot of time to running 'other family' business to keep from losing the value of his fathers estate. For sure this lapse of issuing current editions of the magazine will hurt renewal of subscriptions, assuming subscribers start receiving the magazine again.""

* Paragraphs from CCAT/S n/1

"There you have it-- the latest news from both sides of the street. Draw your own conclusions and keep in touch....."

GFC's note: The VISTA newsletter also included a postcard from the Tim Woods, received by the VISTA Editor, just as they were going to press, to quote:

Anthony,

I have enjoyed your two most recent letters. Please note that I have just verified all of the names you passed along and have sent their materials accordingly. (one of them has moved twice and another person has not sent in their renewal cheque). I really appreciate your help. The mailing list project has been painfully slow but of course, very necessary to our business. I have also taken the time to complete issue 5-2. It is being printed right now. Enclosed is a copy of a Zebra ad, which you might want to pass on to VISTA members.

Tim Woods..TIME DESIGNS

Retyped by GFC

Is the OKIMATE 20 the ULTIMATE TS2068 printer?



USE W/AERCO PRINTER I/F? Yes, if an IBM parallel Plug 'n Print cartridge is used.

OKI 20 FEATURES? The OKI 20 can print in NLB, draft, pica, elite, fine, double width, italics, sub/superscript, & underline. Plain or thermal paper (tractor/friction feed) or acetate transparencies can be used.

COLOR PRINTING POSSIBLE? Yes!! Color printing is possible and with "COLOR COPY" software, FULL COLOR and black & white SCREENS copies are possible.

CUSTOM CHARACTER SETS? Yes, downline loadable character sets of custom characters and graphics can be designed and transferred to an OKI 20. The utility software "OKI D.L.C.G." allows for easy design of custom char. sets and "OKI D.L.P.G." can transform a portion of a SCREENS picture into a downline loadable character set.

OKIMATE 20 EXPENSIVE? No, the OKI 20 & Plug 'n Print cart. are widely available for about \$180.

For a print sample, info. on 2068 software for the OKI 20, and a list of OKI 20 dealers/prices, send a LSASE to:

♦♦♦ John McMichael ♦♦♦
♦♦♦ 1710 Palmer Dr. ♦♦♦
♦♦♦ Laramie, WY 82070 ♦♦♦

THE PRINT FACTORY

© Kris Boisvert
© Eric Boisvert

COPYRIGHT
BYTE POWER

A TRUE FAST LOAD OPERATING SYSTEM! CHECK OUT THESE FEATURES...

- ONLY 1536 BYTES LONG AND RELOCATABLE ANYWHERE BETWEEN 31800 AND 64000!
- TS2068 AND SPECTRUM 48K COMPATIBLE!
- HANDLES ALL STANDARD I/O COMMANDS.
- BORDER FLICKER COLORS SELECTABLE. (ANY COLOR AT ALL!)
- NEW COMMANDS SUCH AS NO MESSAGE AND HEADER READER!
- DAUD RATES FROM 1500 UP TO 3300
- USES A PRINT #4: I/O COMMAND

2+FAST.....\$22.95 ppd

UNLEASH THE POWER OF YOUR PRINTER WITH THIS SOFTWARE PACKAGE...

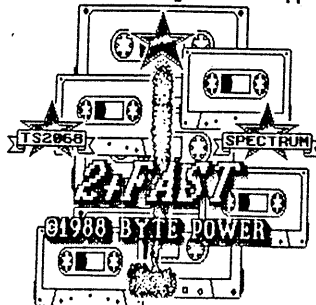
8 PROGRAMS AND OVER 150 GRAPHIC DESIGNS!

THE LABELER, THE CARD MAKER, THE BANNER PRINTER, THE PRESS, THE CALENDAR, THE HEADER, QUICK SCREEN AND THE CREATOR ARE JUST WHAT YOU NEED TO MAKE YOUR PRINTER COME TO LIFE!

COMES ON 2 TAPES IN A HIGH QUALITY VINYL ALBUM. INCLUDES SUPERB INSTRUCTION MANUAL.

VERY USER-FRIENDLY!

The Print Factory...\$22.95 ppd



Also available from BYTE POWER

FIRST CLASS FONTS II...\$22.95
THE D.U.S. V2.0 (LKDOS)...\$22.95
THE VOICE...\$22.95
THE PRINT FACTORY...\$22.95
2+FAST (FAST LOAD)...\$22.95
ZX81 1ST CLASS PROGRAMS...\$12.95

BYTE POWER MAGAZINE...

1 Issue (BACK/CURRENT)...\$5.99
6 Issues...\$36.00
12 Issues...\$55.00

FIRST CLASS PACK.....\$40.00

BEST OF ARCADE GAMES...\$22.95
BEST OF BUSINESS...\$22.95
BEST OF BOARD GAMES...\$22.95

DEMO TAPE/CATALOG.....\$3.00

U.S. FUNDS ONLY. ALL PRICES INCLUDE SHIPPING/HANDLING CHARGES.

BYTE POWER
MAGAZINE
1748 Meadowview Avenue
Pickering, Ontario, Canada
L4V 3G8

LARKEN ELECTRONICS LKDOS SOFTWARE

- MAXCOM -- 300/1200 baud Terminal / BBS
- Complete communications S/W for the LKDOS-2068
- 300 baud with the 2050 or Full 1200 baud with no missed characters. (1200 requires Z-SIO)
- 64 column Terminal Mode with IBM Graphics
- Auto dial, Macros, direct to disk buffer.
- Powerful Remote user BBS with fast response
- Auto answer, Xmodem 128/512,1024, Message bases
- Multi window, Direct access to drives and more.
- Direct 'modem to disk' Xmodem lets you transfer files over 100K in length (eg: NMI saves etc)

Price : \$19.95

Sequential / Random Access Files

- This ram based LKdos extension allows you to create / access large disk based data files
- OPEN# CLOSE# PRINT# INPUT# and INKEYS# basic commands are used.

Price : \$9.95

LARKEN DISK EDITOR

- Edit any byte on a disk, Reformat single tracks
- Read disk headers, Change disk parameters etc.

Price : \$15.00

- LKDOS SHARE-WARE DISK (Original programs required)
- MULTI-TASKING Tasword. Lets you be printing one file from disk while working on another. Aerco CPI
- ART-STUDIO patch for LKdos. MC cassette routines converted to disk.
- Spec-term 64 LKdos overlay. Save Basic or Code
- Transfers to disk with no messing about.

Price : \$6.00

(All software requires LKDOS cartridge Price: \$65)
(Prices \$US) (Send cash for values less than \$20)
LARKEN ELECTRONICS, RR#2, NAVAM, ONTARIO, CANADA K4B-1H9

AFR SOFTWARE®

Presents:
Powerful And Inexpensive
Business Software
For "Times-Sinclair"
Computers

WORD PROCESSING	\$19.95
TS-TEXT 2000	\$19.95
ZK-TEXT	\$19.95
SHEET-SHEET CALCULATOR	\$19.95
TS-CALC 2000	\$19.95
ZK-CALC	\$19.95
CYCLE ACCOUNTING	\$29.95
TS-ZK Financial Report Generator	\$13.00
Printout Of Same	
APPOINTMENT SCHEDULER	\$19.95
TS-CALENDAR 2000	\$19.95
ZK-CALENDAR	\$19.95

Send \$ASE For Free Catalog
Or Check Or Money Order To:
AFR SOFTWARE
1605 Pennsylvania Ave.
No. 204
Merrillville, IN 46541
Tel: 317-331-4441
TELEPHONE SALES "AFR"
Outside Indiana, Limited

Time Designs Magazine presents

Mike's QL 'Hot Tips'

An edited compendium of the best of Dr. Mike de Sosa's articles and reviews for Time Designs plus new material by the author of *Taking the Quantum Leap: The Last Word On the Sinclair QL*. *

Available on floppy disk or Microdrive cartridges.
Shipped by First Class mail within one week of order.

On one 720K 5.25" floppy disk . . . \$ 19.95 + S & H
On two 360K 5.25" floppy disks . . . \$ 28.95 + S & H
On one 720K 3.5" floppy disk . . . \$ 22.95 + S & H
On six Microdrive cartridges . . . \$ 37.95 + S & H **

* Still available from Time Designs at \$ 26 PPD.

** Printout the 'Hot Tips' and then use the Microdrive cartridges for other purposes.

Available only from

Time Designs Magazine
29722 Hull Road
Collon, Oregon 97017
U.S.A.
Telephone: (503) 824-2658

ORDER TODAY!

VISA and MASTERCARD orders accepted

Now on Disk!
Order Now and
Watch Your Mail!

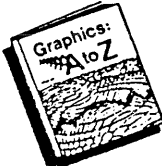
THAT'S RIGHT!
Now you can get the RMG CATALOG on LKDOS DISK in TASMORD 2 files. This format for the 2068 will be the only format available and at the same old price of only:
\$3.00 PP

AND THERE'S MORE!!!
We now offer our monthly mailers on the same format disk! Keep up with what's new, used equipment, and SUPER BUYS! AS AN EXTRA BONUS YOU WILL GET AT LEAST 3 PUBLIC DOMAIN S/W ITEMS FOR THE LKDOS SYSTEM PER YEAR! This alone is worth more than the \$12 per year subscription price!
(COUPONS INCLUDED WITH BOTH PACKS)

RMG ENTERPRISES
1419 1/2 7TH STREET
OREGON CITY, OREGON 97045
503/655-7484 * NOON-10 TUE-SAT

ZX81, TS1000 & TS1500 OWNERS!

A GRAPHICS MANUAL JUST FOR YOU



GRAPHICS A to Z

deals with graphic techniques...

- In BASIC
- In Machine Code
- using a compiler
- with Memotech's HRG

The manual contains over 80 listings, some in Basic, some in Machine Code and each with a screen display sample. All are ready to run. Each illustrates innovative methods to polish your programs with fantastic graphics.



Ever want to write programs with line numbers past 9999? ... or design a new alphabet or new graphic symbols? ... or switch complete or parts of the screen instantly? ... It's all here and more in **GRAPHICS A to Z**.

ONLY \$15-

Send orders to: Paul Bingham
PO Box 2034, Mesa, AZ 85214
(please add \$2 shipping)

Software for the QL that really works

- MAILBAG** An address database you won't believe. Labels, Rotary files, Zip sort, tickler file, many auto features, & more...256K
- TAX-I-QL** Spreadsheet for IRS tax returns.....384K
- QLANDLORD** Manage 99 buildings or units. Do Sched E...256K

\$19.95 ea pp on 5 1/4" DSQD
(+\$2.00 on microcartridge)

AND The most comprehensive list of independent North American software for the QL.

Agents for ZX/TS SiriusWare
4K Wordprocessor with
TS 2040 lower case printer driver

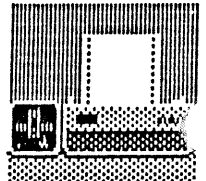
Orders, Catalogues & Dealer info

EMSoft

P.O. Box 8763, Boston, MA 02114
(617) 889-0830

VISA/MC ok

**NEED
A
PRINTER?**



WE CAN HELP!

RMG can supply many top brands at low prices. Names like: CITIZEN-STAR-ALPS
PANASONIC-OKIDATA-EPSON-SEIKOSHA
BROTHER AND MORE!

***** CHECK THESE OUT! *****

PANASONIC KX10801	ONLY \$175.00
PANASONIC KX10911	ONLY \$199.95
STAR NX1000 MULTI-FONT	ONLY \$180.00
STAR NX1000 RAINBOW	ONLY \$239.95
STAR NX2400 24-PIN	ONLY \$339.95
SEIKOSHA SP-180A1	ONLY \$159.95
CITIZEN 120D	ONLY \$159.95
CITIZEN 180D	ONLY \$175.00

Please add \$15 each for sh. & ins.
We also have MANY used printers in stock-write or call!



RMG ENTERPRISES

1419 1/2 7TH STREET
OREGON CITY, OREGON 97045
503/655-7484 * NOON-10 TUE-SAT

PROMISE LAND ELECTRONICS

Dan Elliott, Owner

Servicing COMPUTERIZED
electronic equipment

COMPUTERS / MODULES / PRINTERS / MONITORS

Sinclair QL TS-2068 TS-1500 TS-1000

16K Ram Pack ZX-81 Memotech Modules

Commodore 64 VIC-20 PLUS-4 C-16

Coleco ADAM TI-99/4A Commodore 128

REPAIRS / UPGRADES / ASSEMBLING / TESTING

Write for prices:

Dan Elliott

Route 1, Box 117

Cabool, MO 65689

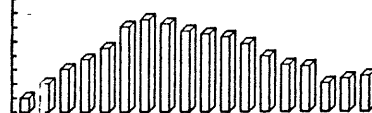
Ph. (314) 739-1712 evenings, Sunday - Thursday.
Ph. (417) 469-4571 weekends.



**Bottle Cap
Software
Presents
Graphit-1**

First in a series of TS2068
Information Charting Programs

Personal Monthly Sinclair
Gaming Usage per month
starting with July 1986.



Graphit-1 features:

- 3 times as many input values as Quadra-Chart.
- 3-Dimensional bar graphing.
- Plot data points with connect points option.

Copies to TS2040, full size printer w/Perco I/F, or others w/your custom driver.

SAVE SCREENS and/or DATA().

Status Menu Driven Program
requires joystick or compatible.
Cassette version easily changed
for your disk system. Larken
version is available.

All Bottle Cap Software is \$5.00
plus \$1.00 s&h. Send checks to:

Bottle Cap Software
1284 Brushwood Ave.
Cincinnati, OH 45224

BACK AGAIN... FROM A*B*B*A SOFT

**Don't File Your 1988 Tax Return
UNTIL YOU HAVE**

QUIK-1040-88

The LARGEST SELLING 7/5 2068 Income Tax Program in America

INCLUDES: Form 1040, 1040A & EZ
Sch. A, B & R * Forms 2106, 2441
Automatic Calculation Income Tax
Liability, Child Care Credit Tax-
able Social Security, Earned In-
come Credit * Multiple W-2 & 1099
Entry * 2040 Compatible * More
THIS YEAR SCH C and SE Included!

Only \$29.50 Postpaid
1st Class Mail-
For Timex/Sinclair 2068 Computer

QUIK-1040 is an "interview type"
program. It will calculate your
allowable IRAs, Interest and De-
ductions accurately, without the
use of cumbersome input sheets.
CALCULATION OF TAX LIABILITY AND
CREDITS IS AUTOMATIC!!!

This program was designed with the taxpayer in mind. It is easy
for you to accurately prepare your own income tax return EVEN IF
YOU HAVE NEVER DONE IT BEFORE! It is also sophisticated enough
to be used to prepare returns for others, with or without exper-
ience. An ideal teaching tool for tax and accounting students.

**SPECIAL: IF YOU PURCHASED
1987 QUIK-1040 FROM A*B*B*A SOFT
TAKE A FULL \$10 DISCOUNT.**

The 1987 QUIK-1040 is STILL AVAILABLE for Just \$12 POSTPAID.

Send CHECK or MONEY ORDER (U.S. Funds)/Mid-January Shipment Date



HERB BOWERS, Sr.
2538 Woodshire Circle
Chesapeake, VA 23323
Phone: 804 487-5924

ZEBU (A TIME-TO-DO ?)

Attention Basic Programmers
(Zunks Extra Basic Utilities)

In the EDIT LINE mode ZEBU gives

- * Up/Cn arrow keys, lets you zip to the end of the longest basic line.
- * Truncate EDIT line to left or right of the cursor.
- * Fast DELETE key corrects bug, that Timex left in the ROM.
- * Restore the edit line at any time.
- * Delete all between colons

In the IMMEDIATE or RUN mode

- * Join two basic lines to form one long line.
- * Block move memory (LDIR) from a basic command.
- * 16 bit Poke (DOKE)
- * Print a 16 bit Peek
- * Let a variable as 16 bit peek.
- * Print basic length (bytes)
- * Print 3 types of large text.
- * List line or range of lines.
- * Search basic lines.
- * Electric INK auto ink rotate.

*** 17 new 2068 functions ***

\$20.00

ZUNK CUSTOM ELECTRONICS
4800 East Cedar Lane
Norman, Oklahoma 73071
(405) 366 8595

SEPT/OCT 1989

Dear Out-of-town members

Sept 8th

We had our September meeting last night. I was somewhat pleased at having about 15 members turn up. I had rather thought it would be a small night. We had two ZX81's set up and a 2068 with a Larken system. And our September newsletter was there for members to pick up.

We presented a slate of officers for the following year. Essentially the same persons are candidates for the following year.

We managed to get a 22-page newsletter out this time. We have to thank our several contributors for that. Do keep up the good work. It is very satisfying to be able to send out good newsletters! How about those of you who have not contributed. Take a crack at it. We appreciate it.

Some of you may have noticed the mention of our club in Michael O'Brien's "MORE TIMEX" column in the September issue of the COMPUTER SHOPPER. This came about because I sent a copy of our newsletter to him, to soften comments I made about his column. One of our members likened his column as "taking on a Flat Earth quality at times". Rather apt, I thought, and it paralleled my comments somewhat.

However, if nobody sends him any information about the Timex scene how does he find out. (Well, he could become our club secretary, and he'd find out plenty!)

Dan Pinko has sent in a review of a Video Digitizer unit that he bought from a place in Holland. Paid about \$93 US, and is mighty pleased with it. He uses a "twistor" board to interface it with his 2068. If any of you who can't wait for the next issue of the newsletter, I can send you a copy of his review.

In the newsletter there is an advert for an AMDEK disk drive unit, by a former club member, Greg Lloyd, who has switched to the Atari. I used to have one of these units until I sold it to our treasurer. Recently I have tried this one out, and it is working well. I was using it on my Larken system. However several of our members are using one like it on their QL systems. The drawback to it is that it uses 3 inch disks. These cost \$4 to \$5 each. It's single-sided also, though you can turn the disks over. If you are interested, you might drop him a line, and make a deal.

On the topic of 3-inch disks I see an advert in TS UPDATE by someone offering 3-inch disks for about \$4 each. I'll get that advert out and put it in the newsletter.

I plan to put together a sheet of Timex adverts much like we had the last newsletter, and include it with this issue. I hope that it proves useful and worthwhile. We do not take paid adverts in our newsletter. Long ago we decided that we did not need the hassle of advert monies (aren't we pure!), so we never went after it. We still have that philosophy, but to me it does seem like a service to our members to put out as many adverts from Timex dealers as I can come across. Being the secretary I come across many items like this but I'm sure that many members have no way of knowing what is out there. How else are you to find out.

At least that's my thoughts. What do you think? Is it a good idea?

In this current issue there is an excerpt from a letter to me by one of our members, Steven Gunhouse. Steven writes all this good stuff to me, and I must confess that I put it to one side, saying to myself, "I'll look at that when I have time to concentrate on it". The time never seems to come! I also put off replying to Steven for the same reason, till I'm ashamed. Anyway, I have enough stuff of Steven's to go into the next one or two issues. This month it is a little bit heavy, with Larken DOS calls. There is some lighter stuff coming, not too light, mind you. Steven presents challenging material in his letter to me. Anyone care to correspond with him?

I mentioned in my last missive that I had a hard time finding a HCT-type chip to use on a Larken cartridge with a Spectrum ROM. One of our members, John Austin, drove over to BG Electronics and picked up ten of them for me. He says they are a gift to the club for all the help we have been to him. So if any of you are looking for 74HCT32P chips, drop me a line. You can have one or two for the asking. Thanks John.

Let me see. Hugh Howie, our QL section leader, has provided me with a copy of the club's QL library. I am sending a copy out to every QL owner that I know of in the club. If you do not get a copy, and want one, ask me for a copy. Some of you may have a QL, that I have forgotten about. I mentioned to Hugh, and he concurs, that so far as costs go we should operate in the same fashion as we do for the other sections. That is, members should reimburse us for our postage costs. There is one important difference in the QL section though. Take note of it. Seems that the QL, a fine computer no doubt (would I dare say otherwise?), nevertheless seems to be finicky in it's use of disks/cartridges. Therefore we ask QL owners to send in their formatted medium, and Hugh will transfer program copies to it and return them to you. Clear?

I mentioned in a previous n/l that it would be best if you sent your requests for QL stuff directly to Hugh. Much quicker, because I do not have the facilities or familiarity to be much help. Nevertheless I am still concerned with the QL owners, and you should feel free to write to me (also). I sort of hate to lose touch with any of our out-of-town members.

Hugh also gave me some more material to go out with the QL catalogue, but I thought it was so good that it should go into the newsletter, so that we could all see it. So it should be in the next issue.

We have made up a catalogue of the 2068 Larken disk library also. I am sending a copy of it to every Larken owner with this issue of the newsletter. Again, if you do not get a copy, my apologies, and ask me for a copy if you want one. There are 15 disks listed in the catalogue currently. I am working on a couple more disk ideas. One on various calendars programs; another on banner programs. Takes a bit of time to do these up though. First one has to cull through the tape library to find them, save them to disk, then see just what

they are, eliminate duplicates. Then write a bit of information about each of them for a HELP section, and get them into the menu loading routine.

I have another idea for a disk. That is to collect all the articles that have been published in our newsletter pertaining to the Larken system and place them on a disk.

One of the disks (actually a suite of three disks) is the PIXEL PRINT PLUS program that was donated to PD. Stan Lemke sent us a complimentary copy on tape, and Steve Spalding sent us a copy of his Icon and Masthead files. I have combined them and modified them for use on the Larken system. It is Disk #15 in the 2068 Larken library. An interesting program. I see where Bob Mitchell has a column in our newsletter, which gives a good idea of what it is about.

After one or two false starts I have decided to handle the disks on the same basis as tapes. That is, I will send out a copy that you request and you are to make a copy and return the disk to me. Along with our postage costs, same as with tapes. It turned out that making up disks was going to be somewhat of a chore, and I certainly have other more interesting things to do. How many at a time. Well, I'm a little bit relaxed about that. But don't ask for all of them at one go, I don't want to have to make up too many copies!!

Did you see the review of the Z88 in a current issue of the (US) CONSUMER REPORTS magazine. They treat the Z88 in a rather cavalier way, I must say. But, if Sinclair insists on walking his own path can anyone complain if no one takes his products seriously?

Richard Hurd, in SINCUS NEWS, reports on a "Linger Board" from Jack Dohany. It is said to be a RS232 video terminal board that emulates quite a few popular terminals. It allows the use of an IBM keyboard and composite of TTL monitors for a 80 x 25 line display. There is more but I shall have to get Richard to give us more details. Hey, howcum you haven't mentioned it to us yet, Richard?

Have any of our members ordered the program THE PRINT FACTORY from BytePower? It has been a long time coming since they started advertising it. I wrote to them on behalf of one of our members asking what was the holdup. They replied promptly that they had had programming difficulties in the Printer routines, but that it was about ready to ship. That was in March, '89.

LO and Behold, a week ago one of our members reported receiving his copy after many long months of waiting. I hope that we can get a review of it for the next issue. It is a DTP type of program. First reports are that it is quite remarkable, though the documentation is pretty sketchy.

Gossip has it that Jack Dohany is going to take on the British DTP program WORD MASTER, and adapt it to the American taste. Much the same way as he worked over MSCRIPT to improve it's operation. I imagine that would include Larkenising it. WORD MASTER is primarily a word processor, with companion software to give it DTP capabilities. It is an impressive program with solid documentation. How about a 6 x 8 inch, 100 page manual.

Bob Mitchell and I both have FASTEXT 80 printers so I fear that you are going to get many of the programs on the Larken library disks set up for the SCM Fastext 80. Well, you will certainly be able to modify them for your printer. An example of this is the PIXEL PRINT disks.

I recently received a document from Bill Harmer. It is one that he has written called "Tips, Tricks, and Techniques Of The User Group Masters". It deals with the ZX81/TS1000.

It is about 26 pages in length, and as it's title suggests, it is a compendium of information about the use of the ZX81.

If any of you ZX81 enthusiasts out there are interested, I can get some copies made and send them to you. The cost would be for xeroxing and mailing, I would say about \$2.50. Now, I must warn you that all of Bill Harmer's material suffers from severe wordiness, however you may very well glean worthwhile ideas from his writing. In particular, persons new to the ZX81 could well find it interesting.

Bill is still revising his other manual, the one on the ZX81 Larken system, so I have not sent any of them out yet. I think Bill will wind it up shortly (maybe by the next newsletter), and I'll let you know then.

Let me see now. One of our members, Louis Laferriere, has a cartridge which plugs into the 2068 cartridge dock, for sale. It has the markings "ENTER LENGUA" on it, and has an EPROM (I think) mounted on it along with another small chip and a small multi-switch. I suspect that it is a Spectrum converter for the 2068.

Also he has a small black box to plug unto the rear of the 2068. I suspect that this is a "twister" board, a gadget that was designed to allow Spectrum accessories to be plugged into the 2068. Anyone that's interested, make an offer.

I'm just collecting my thoughts together now. I think that I am up-to-date with all my mailings. If I'm not, or if you are waiting for something from me, do let me know.

We have had a number of new members join recently as a consequence of the TS UPDATE mention of us, so I may have overlooked some of you in the rush. As a matter of interest I did a membership tally, and found that we have 75 members in the club currently, and 58 of you are out-of-town members. So you can see that you are a significant part of the club.

I have written to Tim Wood with the names of four club members who have not received their newsletters, so if a copy appears in your letterbox someday, let me know. Truth to say, I suspect that Tim Woods lost his subscriber list and doesn't know who to send the magazine to. That's what can happen when you use a Sinclair product, don't you know it!!

On that note I shall close off this missive.

Sincerely, George Chambers

TORONTO TIMEX-SINCLAIR USERS CLUB
September 23, 1989

14 Richome Court
Scarborough, Ont.
M1K 2Y1

Les Cottrell
108 River Heights Drive
Cocoa, FL 32922

Dear Les,

Glad to hear that you have your version 3 EPROM, finally! Thanks for the return on the loaner EPROM. Also thanks for the \$10 for a xerox copy of Dr Logan's Spectrum ROM disassembly.

I am sending it separately, since the postage is less that way. There is a printed matter rate that is cheaper than sending it as a letter rate.

The copying was \$5.80, plus \$2.90 postage = \$8.70 That leaves you with a credit of about \$1.50.

I'm enclosing a copy of the library disk #9. It may not be completed to my complete satisfaction, but it is not too bad, anyway. I may be able to get some more documentation for it, later on. If you are into graphics, ask me for another disk which is not in the library; one that contains Artist II and Art Studio. And a bit more. I have documentation for these but it is not on disk. These are Spectrum programs but they have been adapted for the Larken system. No. I'll include it with this package; the postage will be the same.

Regarding Pixel Print, I have recently obtained a program which is designed to help you to create your own icons. it was constructed by Stan Lemke to be used with the Icon Library manager, etc. I shall tack it onto one of the disks that I am sending you. It is called *ICON-L.BL* *ICON-L.CI*

It is very similar to the icon-maker in the Greeting Card Maker that, was it Zebra?, used to sell.

Shall close now, Sincerely,

George Chambers

5.80
101
20 x 6d = 1.20
1.76
2.96
1.50
120 mins for copying
for postage
Just over \$1.50