FROM OUT OF 'THE ASHES' RISES

>>>> 𝕫𝕏𝕚𝕣 𝕼𝕃𝕚𝕧𝕖 𝕬𝕝𝕚𝕧𝕖! <<<<

The
Timex/Sinclair NorthAmerican User Groups
Newsletter

T/SNUG CHAIRMEN

Here is the list of 1993 T/SNUG Chairmen and how to contact them. We wish to support the following SIGS: ZX80/ZX81, Z88, SPECTRUM/TS2068/TC2068 and QL. If you have questions about any of these fine machines contact the Chairman.

POSITION	NAME	PHONE	PRIMARY FUNCTION
Chairman	Don Lambert	219-925-1372	Chief Motivator
Vice-Chairman	Dave Bennett	717-774-7531	CATS/Z88
Vice-Chairman	D.G. Smith	814-535-6998	TAPE & JLO Library
Vice-Chairman	Ed Snow	407-380-5124	ZX81 TAPE Library
Vice-Chairman	Rod Gowen	503-655-7484	CCATS
Vice-Chairman	Rod Humphreys	604-931-5509	VSUG/TS2068
Vice-Chairman	Bob Swoger	708-837-7957	Newsletter/BBS Sysop
Treasurer	Abed Kahale	708-885-4337	CATUG/Cash Tracker

T/SNUG Information

ZXir QLive Alive! is the newsletter of T/SNUG, the TIMEX/SINCLAIR NorthAmerican User Groups, providing news and software support to the T/S community in at least four newsletters per year.

It is our goal to build a Public Domain software library and develop a list of available software for all T/S machines showing the source.

Vendors have free space in this newsletter which they receive free of charge so they may see we are still out here. If you feel T/SNUG should perform other tasks, let us know your feelings.

T/SNUG wishes to have one chairman from every T/S user group who will take charge of sending us their groups newsletter and other correspondence for inclusion in this newsletter.

We encourage your group to copy this newsletter and distribute it at regular meetings to all of your members. If you can't copy this newsletter, perhaps we can provide a disk with the articles on it for use in your newsletter.

Articles appearing in this newsletter can be obtained by downloading this newsletter from our BBS.

Have you solved a problem in one of your softwares or hardwares? Please share it with the rest of us.

You can keep T/SNUG alive for an annual contribution of $10.00 made payable to Abed Kahale. Send questions, articles or check to:

ABED KAHALE
ZXir QLive Alive! Newsletter
335 W NEWPORT RD
HOFFMAN ESTATES IL 60195-3106

Tele: H708-885-4337

ZXir QLive Alive! Article Contributions

If you would like to contribute an article to the newsletter, upload a file to our BBS called TSNUG.ART . If you have an AD for the newsletter UPLOAD a file called TSNUG.ADS. If you have NEWS to POST about your group. UPLOAD a file called TSNUG.NWS.

If you need help contact the SYSOP by E-MAIL on the T/SNUG BBS, mail or by phone:

BOB SWOGER
613 PARKSIDE CIRCLE
STREAMWOOD IL 60107-1647

It is preferred you call: H708/837-7957 or W708/576-8068

If you can only contribute hard copy, tape or disk format, send your inputs to:

DON LAMBERT
ZXir QLive Alive! Newsletter
1301 KIBLINGER PL
AUBURN IN 46706

Tele. 219/925-1372, it is not necessary to call when submitting material.

CONTRIBUTORS TO THIS ISSUE

DON BERRY
BILL HARMER
DON LAMBERT
THOMAS SIMON

FROM THE CHAIRMANS DISK

Who is Ms. Olive Alive?

I am blessed with a wife that is not extremely jealous. Or else I would be really in trouble. Amongst the mail I receive are the advertisings mailed to various corruptions of ZXir QLive Alive! The latest is the most humorous of the many I have received addressed to "Ms. Olive Alive; Don Lambert; 1301 Kiblinger Pl.; Auburn, IN 47706-3010." They were offering a spiral pocket personal organizer. One for

each month at the price of just over $2.00 a month. I don't know what I will do with the sample they sent. I sure would hate to take all the excitement out of my life by getting organized.

In talking to a person that had dabbled in the field of T/S computers in the years gone by it suddenly dawned on me why there was such a difference in what each T/S'er knows and has done. Call the T/S computers a T/S jungle and then it becomes easier to understand that each person has entered the T/S jungle by a different trail or had forged a different trial so therefore each and every person has had different observations and experiences. Those that had the fortune to be near others and could share experiences traveled a different trail than those that were all alone.

I bought a TS1000 and had started to learn about computers and computing when all at once I started to work a lot of overtime and then the TV that I was using was loaned out (over my objects to a fellow countryman of my wife's while he was in a Community College. I was having trouble with my computer and it took me quite a while to find out that the problem was the neighbor's car since their driveway was just above the basement room that I had the computer in. Every time they started their old car it would cause the TS1000 to go berserk. Between overtime, house upkeep and a rental house I was kept busy until I retired. I really got going with the T/S computers after December of 1987. The trouble was, I had all this stuff I'd bought and not explored. In some cases it still has not been explored!

As I write this (Jan. 25) there is a ZX81 LarKen Disk interface complete with two half height 5.25 disk drives in a case being acclimatized that was delivered from the West Coast. I mailed the check on the 19th and already it is here on the

26th. Is that a record with the U.S. Mail and UPS? I don't know if the unit was really that cold, so I will give it time to warm up. With outside temperatures in the upper teens I don't want to have troubles with sluggish mechanisms or moisture.

But on testing the ZX81 there is a problem. For a reason that I do not understand the new (to me) disk drives will not read my disks. And drive 1 will FORMAT. Also, the unit failed after a while but that could be caused by an 7805 regulator running with no heatsink.

I told a person recently that every time I get involved in hardware or programming, I feel like I have taken an extended automobile trip with pieces and parts of out dated road maps, eventually getting there but not by the way I had planned.

Working with the ZX81 and LarKen disk interface, I LOADed a program and the screen went blank. After waiting I switched off the ZX81 and LOADed the program again. On about the third or fourth try I was called away from the computer for a few minutes and I came back to see the program running. Of course the ZX81 can not be doing things and maintain a screen image but if the program had flashed on the screen "wait a couple of minutes" then went blank then it would have been different.

I did not do much with the ZX81 with either the LarKen or the AERCO disk interfaces because I was having so much RAM pack wobble problems. I did receive a TS1000 with 64K memory on board last March but because I had to do some hardware work to get it to function and my eyesight was marginal, I waited to get new glasses. But the lenses I have are the best prescription that I can have, the loss of vision is not caused by eye changes so much as by the start of cataracts developing. So with that I had no excuse to delay, and I

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started to move the ZX81 board from the original case to a Suntronics keyboard case. I have no TV in my computer room so I needed a monitor circuit.

I tinkered with the 1/2 height drives used on the TS2068 and while they will work just fine with the TS2068 they do not work with other drive I have is on the ribbon cable. Add any other drive (all are full height Tandon drives) and all lights come on and the drive motors run. The only thing that I notice is that with the drives is that the two 1/2 height drives do not require or have sockets for a terminator resistor while all the other drives do. Same thing with or without terminating resistors on any of the Tandon drives. The half height drives are 5.25 TEAC FD 54B-02-U 40 track drives.

Working with the LarKen ZX81 disk interface I discovered that if both of the full height drives do not have terminating resistors they do not work. Sometimes when I learn something I find out it isn't necessarily so in all cases.

BEHIND THE SCENES

ZXir QLive Alive! publishes articles, comments and such that touch on topics related to the T/S computers. So in that vein I offer the following:

As Paul Harvey said, "..here is the rest of the story!"

In UPDATE MAGAZINE for October 1992 Frank Davis wrote: "We had intended to give you Jim Bretz PAYROLL PROGRAM. This has been delayed till the next issue. The error was mine and the two kittens, who carried off the package (and hid it) that contained the disk with the program. Yes, I had a backup of the disk... but (and here I get to tear out my last remaining hair) it was in the same package. I have found it, but too late to print in this issue."

Frank has two large dogs and two cats. The two cats are 16 years old Burmese tomcats. I have seen the two dogs but not the two cats. Frank and Carol also have a - A. country estate, B. cabin, C. retreat, D. hideaway, the scene of the ISTUG picnic out yonder where its less noisy than the big ex-circus city of Peru. He was checking the country estate and found a snake that was in the process of "eating" a kitten. After tossing the snake over the fence, he found two more 2.5 week old kittens. Since the mother cat had been killed on the country road he brought the kittens back to the city residence and took care of them. All old stories about tomcats killing kittens aside, the two tomcats provided the "motherly" care such as the mandatory bathing of the kittens and even worrying about where the kittens were if not in sight. And those were the kittens that Frank referred to. That is one of the unexpected incidents that make delays in publication.

Carol added this information, "And to let you know, the kittens are alive and well. The Vet's wife where we bought the kitten formula now teases us that they know who to call when there are any orphans. Actually, we are fairly experienced - the two tomcats were part of a litter that we raised on bottle feeding 16 years ago when the mother died. A female cat from that litter went with good friends in Colorado and we hear that she's still doing well."

Don Lambert, Chairman
TIMEX/Sinclair NorthAmerican
User Groups

TREASURY NOTES

As of April 30, 1993, we have a balance of $505.18 from 7 groups and 40 individuals.

Abed Kahale, Treasurer
TIMEX/Sinclair NorthAmerican
User Groups

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LIBRARY

It has come to my attention
that there are those out there
that do not want to use the
telephone to find out about
availability of the software
and/or hardcopy libraries. So
for those I am including the
addresses of the Vice-Chairmen
if not given else where in ZXir
QLive Alive!. Please! When
writing enclose a LSASE:

Dave Bennett (Z88)
329 WALTON ST Rear
Lemoyne PA 17043

D G Smith (2068 TAPE/JLO)
R 415 STONE ST
Johnstown PA 15906

Ed Snow (ZX81 TAPE)
2136 CHURCHILL DOWNS CIR
Orlando FL 32825

Rod Gowan (CCATS)
1419 1/2 7th ST
Oregon City OR 97045

Rod Humphreys (VSUG/2068)
10984 Collins Place
Delta B.C. V4C 7E6 CANADA

INPUT/OUTPUT

Don Berry writes: Thanks for
the long letter. I really
enjoyed hearing from another
"Sinclair Freak". I'll send my
membership application plus the
$10.00 except for one problem.
[Taken care of- Don] You forgot
to tell me the address of your
financial officer. Let me know
so I can start getting some
goodies.

I indeed used to live in
Orlando, FL, but had to move to
find work. (I am a Mechanical
Engineer). The recession really
hit central Florida hard.
Construction really slowed
down.

I first got involved with T/S
computers while living there. I
bought a TS 1000 from a
newspaper ad for $20.00. I then
checked Computer Shopper
magazine and found support
groups and T/S magazines (this
was in early 1986). I found the
machines fascinating and
started accumulating more
equipment and programs. I met
other T/S'ers and swapped
programs also. There was a
WinterFest 1988 in Orlando, and
I really enjoyed that.
Currently, I have the TS1000, a
ZX81, a TS1500, and a couple of
the TS2068's. One of the TS2068
machines does not produce color
on my TV (alas). This letter is
being done on my ZX81 with 64K
INTERNAL RAM. (tall characters)
It was modified by Tim Woods.
He had offered that service
through Time Designs Magazine
(remember them?). I am also
using an extended keyboard from
a TI99 that I rewired myself.
It works fine except for a
peculiarity. When I have the
Alphacom 32 printer attached, I
cannot get capital S or D.
However, without the printer
attached, I can. So, what I
have to do is type the text
without the printer, save it to
tape (I don't have a disk
drive), turn off the computer
attach the printer, reload the
word processor, and then load
the previously saved file.
Then, I can print it out. Whew!

This word processor is called
"Master Scribe", and was
written by Mike Hawks. It is
for the TS1000, TS1500, and
ZX81. I think it is the best
word processor I have ever used
for those machines. You saw
those tall letters, but how
about this? (that was in
inverse). It came in 3 versions
(all for 1 price), and I got it
from E. Arthur Brown Co.
(remember them?) back in 1987.
[I also got Master Scribe from
E. A. Brown and used it for a
while- Don]. This version is
for the TS2040 printer and has
this neat large front. Another
version is for that printer in
regular font. Another version
is for 80 col. printers in
large or regular font. That
version has the AERCO built
into the program. With a
bit-image printer, such as my
Seikosha AP-1000A. it will

print out this large text, and can use the graphic capabilities of the program. The docs even came with instructions on how to make up your own fonts! It can access 64K RAM (internally or by a RAM pack) and hold up to 37,000 or so characters depending on the version and 16K, the file can be up to 5000. If the club members are interested, perhaps I can share copies of it. I have already typed up the doc. file and saved it on tape (64K RAM is necessary to hold the whole thing).

Your description of your room sounds like mine. My wife also gets mad at me for spending so much time at the keyboard. Great minds think alike.

I also have an AT Clone computer, but it has motherboard problems and is out of commission right now. I got out my old reliable Sinclairs and am back computing.

Let me know if your newsletter might be interested in engineering programs. I don't know machine language, just "gutter BASIC".

You mentioned that you can sometimes obtain docs for programs. I have a copy of Mscript for the TS2068, but no docs for it. Where might I obtain them? [*I have the docs and can copy them - Don*].

That's about all for now. Let me know the address of your financial officer. Sincerely,

Don Berry
1009 Locust St.
Benbrook, TX 76126

Thomas Simon writes: Thanks for the letter. I know how it is in misplacing correspondence as I am disorganized and have the same problem sometimes. This year has been terrible for work and I worry about the future quite a bit these days. Lately I haven't had time to do much with the TS2068. It is still my machine of choice for writing programs on and I have 2 or 3

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unfinished programs with large or small errors that need to be corrected. It has been a while since I used the TS2068 for word processing. I use either the Tandy model 200, a superannuated laptop, or a 286 PC clone (which is now a relic too). The PC replaced my QL which I had nothing but bad luck with. One of our members has a Z-88 and it is a very nice machine but a bit dated now. If you consider that HP is introducing these palmtops with the 20, 30, 60 meg hard drives which are about the size of wrist watches and which have small Clive sized wafer cards (at least he got that one right), it becomes apparent that the technology is flying by fast..

Mr. Pedersen had always been something of a mystery to me, sometimes he seemed to be like a genius, other times not. The little program for the disk drive works fine. I'll put it in our newsletter. I changed the display slightly and changed the colors to white on black. I would like a disk of the utilities and will distribute it among our members. I enclose a SASE and a disk formatted for JLO 80 tps.

The Club is receiving ZXir QLive Alive! and should be renewing soon, I think, I don't handle that part of the operation. One of the members just got a Gold Card for Christmas and we want him to bring it in. I picked up a desk top publishing program called Finesse for the PC at the Club auction at our Christmas party. I found out it was discontinued and is now sold as Publish It! I find it works well with my system. I still lack a decent printer, owning, a DAK special, one of the Olivetti PR2300s, which is not supported and the cartridges are getting hard to find now. Actually I can get the cartridges but a minimum order (a case) is almost the price of an inexpensive 24 pin dot matrix printer.

There is probably more I want to say but don't seem to remember now what it was... Could it have been about what kind of machines you were running... or was it asking if you had an OS-64 cartridge... maybe it was to check on the CIS Timex forum.. there is a Brit. on who has a lot of experience with Spectrum.. oh well, I forgot.. later.

Thomas Simon
615 School Ave.
Cuyahoga Falls, Ohio 44221

ASK AND YOU SHALL RECEIVE!
David Lassov called to get copies of Time Designs Magazine articles. Willing to copy so long as expenses are met, the cost per page of $0.05 and the postage to mail them, I also mentioned that I had copies of the Sincus Newsletters, part not all, on disk. While the copies I had were for the Oliger disk system I am converting them to LarKen for Dave. There are six disks of files. Almost all are in MSCRIPT files but a few of the Oliger disks are still in TASWORD. Since I do not have a copy of TASWORD that will LOAD in one disk interface and SAVE to another I cannot convert the TASWORD files to LarKen as I can the MSCRIPT files. So I LOADed the TASWORD into MSCRIPT and the recipient will be able to at least read the files. This is one of the disk files that I have. I try to acquire all Public Domain software in either the LarKen or the Oliger disk systems. I can only supply the disks in the 5.25 size in either 40 track or 80 track.

As far as my hardcopy library goes, I have a lot of material and while my newsletter files go I do not have them all but I try to have a lot. Trouble is that there are so many User Groups that have died and the newsletters are no longer available. I am willing to share what I have on the above basis. 0/0

NEWS ITEMS

The **ISTUG Picnic** will be held on **June 26th 1993** at the cabin of Frank and Carol Davis. Sinclair users from all over are invited. Frank says there is plenty of room for campers and tents. See map on back of this NL & contact Frank Davis, 513 East Main ST, Peru IN 46970 or phone him at 317-473-8031 to let him know you're coming.

MIRACLE IN NEWPORT COMPUTERFEST In a resent conversation with Leo Majewski, he mentioned a fest for T/S folks on June 5, 1993 in Rhode Island. Frank Davis has the details so find out more from him. The new 68040 board on IBM real estate will be shown there along with new QL software.

PLACE:

INVOCATION ARMY BLDG
51 MEMORIAL BLVD
NEWPORT RI

WHEN:

JUNE 5, 1993
9 AM to 6 PM

ComputerFest 1993 sponsored by the Dayton Microcomputer Association, Inc. will be held on Saturday August 28 from 10 AM to 6 PM and Sunday August 29th from 10 AM to 4 PM at the HARA Conference & Exhibition Center, 1001 Shiloh Springs RD, Dayton Ohio. Contact Chairman Don if you are going. Tickets are $5 for both days.

NOTE TO
M E M B E R S

You have a question, an article or a complaint send a note or a Post Card to :>)

ABED KAHALE
335 W NEWPORT RD
HOFFMAN ESTATE IL 60195-3106
Phone:—<) 708 885-4337

Please remember that your subscription has to be renewed every new year.......

ITEMS AVAILABLE FROM T/SNUG

It has come to our attention that some LarKen Users are using something less than Version 3 firmware. T/SNUG will supply updated EPROMs, SYSTEM DISKS, and MANUALS. Call in requests to Bob Swoger at W708-576-8068 H708-837-7957

If you have a mismatch between you LarKen DOS EPROM and your Western Digital Controller chip, we will send you the correct one for free on behalf of our friends Rod Gowen of RMG and Larry Kenny of LarKen. You should be using L3 EPROMs with WD1770 controller chips or L3F EPROMs with WD1772 controller chips. Check it out! Call in requests to Bob Swoger at W708-576-8068 H708-837-7957

SPECIAL DEALS AND BUYS

NAP_Ware (Nazir A. Pashtoon's new endeavor) announces the availability of all Timex or QL PAL (Programmable Array Logic) chips. If interested, call him evenings at 708-439-1679.

If you are a LarKen LK-DOS owner and would like a SPECTRUM V2 kit for your system, we will supply an EPROM, socket and 74HCT32 for $12 which includes shipping and handling. The install instructions are in your LarKen manual. We shall not be responsible for your install job. AERCO owners need only the SPECTRUM EPROM for $10 $10 is forwarded to LarKen. Call in requests to Bob Swoger at W708-576-8068 H708-837-7957

So you like to fly? The 747 Flight Simulator for Spectrum by Derek Ashton of DACC sold over 40K copies in EUROPE. Requires Spectrum Emulator. At this time supplied on LarKen SSDD disk only for $10 which goes to Derek Ashton, now working at MOTOROLA with Bob Swoger. Call in requests to Bob at W708-576-8068 H708-837-7957

ARTICLES

COMPOUND INTEREST & INVESTING
by Donald S. Lambert

Not being a financial guru I can not vouch for the accuracy of this information but you can use it as a guideline when making inquiries. Some of the banking personnel that I questioned could not give me further information since as one said "I just punch the numbers in and the computer does the work, I have no idea of how the program is set up".

The program is useful for figuring comparison data to make that decision if this interest rate compounded at this frequency is better than another rate with different rates and frequencies. This program will work with series EE Savings Bonds only if they are cashed after being held for more than five years. For the bonds with a cash in date of six months to less than five years the rate begins at 4.16% and seems to increase at the rate of .184% for each elapsed six month period to reach the minimum guaranteed rate of 6%. Bonds purchased after October 1992 may have a lower guaranteed rate.

I have set the program with lines to SAVE for cassette, LarKen and Oliger disk interfaces. You will note that the program halts upon LOADing and to get it to autorun remove the STOP command from LINE 7. In the event that you wish to enter the LISTing while running the program enter letters at the PRINCIPAL prompt. This program was extracted from a more complete financial program in the SNUG Oliger disk library.

Originally I wanted to know how long it takes to double money at various interest rates and different compounding times. You will note that in the program it asks for how many times and that refers to how

many compounding are to be
used. For instance with daily
compounding entering 365 will
mean a year, with quarterly
enter 4 for a year. If you have
a different time between
compounding then the way to get
it is in lines 330 to 336.
Using those lines as a cue it
is easy to do, if a non
programmer like me can do it
you can, I added the semi-
annual to try to track the
growth of series EE Savings
Bonds.

If the TS2040 printer is
turned on it will print it all
out as you go along. The
program is not neat and elegant
but it works. And it is not
long to type in.

```
 10 REM "B-9" from Carl Terry
            SINCUS, 1984
 20 FOR F=26714 TO 26714+PEEK 2
6712
 30 IF PEEK F=94 THEN POKE F,6
 40 NEXT F
 50 POKE 23652,10
 60 CLEAR
 70 BORDER 0
 80 PAPER 0
 90 INK 7
100 CLS : REM COMPOUND INTEREST
110 PRINT TAB 7;"COMPOUND INTER
EST"''
120 LPRINT TAB 7;"COMPOUND INTE
REST"''
130 PRINT "ENTER PRINCIPLE?"
140 LPRINT "ENTER PRINCIPLE?"
150 INPUT A
160 PRINT "$";A''
170 LPRINT "$";A''
180 PRINT "ENTER INTEREST(in de
cimal form)"
190 LPRINT "ENTER INTEREST(in d
ecimal form)"
200 INPUT B
210 PRINT B*100;"%"''
220 LPRINT B*100;"%"''
230 PRINT "COMPOUND PERIOD"','"-
1-YEARLY"','"-2-MONTHLEY"','"-3-QU
ARTERLY"','"-4-DAILY"','"-5-SEMI-A
NNUALLY"
240 LPRINT "COMPOUND PERIOD"','"
-1-YEARLY"','"-2-MONTHLEY"','"-3-Q
UARTERLY"','"-4-DAILY"','"-5-SEMI-
ANNUALLY"
250 INPUT C
260 PRINT C'
270 LPRINT C'
280 IF C=1 THEN LET D=B
290 IF C=2 THEN LET D=B/12
300 IF C=3 THEN LET D=B/4
310 IF C=4 THEN LET D=B/365
320 IF C=5 THEN LET D=B/2
330 PRINT "NUMBER OF TIMES IN A
BOVE UNITS ?"
340 LPRINT "NUMBER OF TIMES IN
ABOVE UNITS ?"
350 INPUT F
360 PRINT F''
370 LPRINT F''
380 LET G=A*(1+D)^F
390 LET H=G-A
400 PRINT "NEW BALANCE","INTERE
ST EARNED"'
410 LPRINT "NEW BALANCE","INTER
EST EARNED"'
420 PRINT FLASH 1;"$";INT (100*
G+.5)/100,"$";INT (100*H+.5)/100
430 LPRINT ;"$";INT (100*G+.5)/
100,"$";INT (100*H+.5)/100
440 INPUT "PRESS ENTER FOR MENU
";Z$
450 GO TO 100
460 CLEAR : SAVE /"compound" LI
NE 1: BEEP .01,.77
9992 CLEAR : RANDOMIZE USR 100:
SAVE "compnd.B1" LINE 10: BEEP .
01,.77
9998 RANDOMIZE USR 100: LOAD "L.
B1"
```

STATIC ELECTRICITY!
by Donald S. Lambert

My computer room is carpeted
and walking across the floor
will generate quite a build up
of a static charge. And coming
near a grounded (or a large
conductive ungrounded) object
results in a loud snap and a
jolt. But when I set up my
computer room I made it less of
a danger to my equipment. I ran
a wire from the ground on the
outlet box and to a pair of
copper self adhesive strips on
my main computer table. Between
the copper strips and the
ground is a 1 megohm resistor
of perhaps 1 or 2 watts and
even with that I still feel a
small jolt but don't see and
hear the snap. I got the copper
roll at a HAMFEST from a junk
box. The way I have positioned
the copper tape it is touchable
from either computer table so
both computers are protected so
long as I remember to touch the
strips before touching anything
else. 0/0.

A CHALLENGE TO PROGRAMMERS
by Donald S. Lambert

I will admit that I am not a programmer nor a very good hardware hacker. But I know that some are good in either, and in a few cases, both. This does require knowledge of both and since I am not very good in either, it is possible that what I suggest is not possible.

On the LarKen ZX81 disk interface its possible to load the contents of a track into the interface RAM buffer and then to display that on the screen and to then POKE changes into the buffer and then to SAVE that back to disk. That is the only way with the ZX81 LarKen that I know off to resurrect a corrupt track 0. It does work since I have done it.

After I finished reconstructing a track 0 on the LarKen ZX81 interface I found that there is a program in DOCTOR on disk #1 of the TTSUC library that does the same thing for the TS2068 LarKen and if I had read the instructions it would have been easier for me to do. But while the Oliger interface has a disk interface RAM buffer there is not a program to LOAD the track contents into the buffer and then to be able to examine the track contents and then make changes and SAVE it back to disks. Any Oliger user out there capable of doing this and willing to try it? It is not a program that will get used very often but sure would be handy when needed. The Oliger does not have a very good program to reconstruct a damaged track. 0/0.

CHANGING A REM STATEMENT FROM ZX81 BASIC
by BILL HARMER
TS BULLETIN #3-92

This is an editor in BASIC that works much like the m/c LDOS editor for entering an LDOS command line. If you were to put in your program, GOSUB 4400 this routine would allow you to enter a BASIC line such as an LDOS command, as necessary to

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get it in as a disk command after that RAND USR 1 4336 call for LDOS. GOSUB 4545 would then make this call, although you would want your program also to do some checking as to the correctness of the command before turning it over to LDOS, since any error results in the 'real' LDOS screen being activated. This shows you roughly how the LDOS screen edit for LDOS command line works as well. Lines 4520 - 4530 use a trick useful to learn for other uses.

```
4399 REM FOR ZX81/TS1000 ONLY
4400 REM THIS INITIALIZATION IS
NEEDED IN YOUR PROGRAM
SOMEWHERE (LINES 4400 - 4490)
4410 SLOW
4490 LET Y=0
4500 REM START OF ACTUAL EDIT
ROUTINE TO MODIFY REM LINE 4550
4505 IF Y>19 OR Y<0 THEN LET
Y=0
4510 PRINT AT Y,0;"14spacesxxx
xxx";AT Y+1,0;"*";
4511 REM PRINT * PROMPT
4515 LET X$=""
4517 LET A$="21spacesxxxxxxxxx
xxxx"
4518 REM 19SPC, SEE 4650
4520 LET N=5
4525 REM lines next must NOT ch
ange
4530 LET NA=28+PEEK 16425*PEEK
16426
4540 GOTO VAL"4560"
4545 RAND USR VAL"14336"
4550
REM42spacesxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxx(note a lot of sp
aces here)
4555 REM CHANGE N IN LINE 4520
TO 10 AND ALL OTHER OCCURRENCES
OF 5 TO 10 IN THIS ROUTINE TO S
TART WITH FIRST 5 CHARS. IN REM
AT 4550 SET TO FOR EXAMPLE PERM
ANENTLY TO SOMETHING, LIKE LOAD
" AND ALSO MAY WANT TO CHANGE 1
9 IN LINE 4620 TO 18 IF DO THIS
-NA=address for POKE, of first
char . after REM(4550)
4557 RETURN
4558 REM RETURN FOR RAND USR 14
336 CALL see top
4560 LET X=0
4561 REM NOTHING ELSE MUST GO F
ROM 45 30 TO 4550---
4570 LET X$=INKEY$
4571 REM NOTHING=NOT EVEN ONE B
YTE MORE OR LESS
4580 IF X$="" THEN GOTO 4570
```

```
4590 LET X=CODE X$
4595 IF X=119 AND N>5 THEN PRIN
T AT Y+1,(N+1-1-5);CHR$(128 PEE
K(NA+N))
4596 REM THAT LINE WILL INVERT
ON BACKSPACE LIKE LDOS-- WHICH
IS A BIT CRUDE, BACKSPACE=RUBUT
OR DELETE ON ZX81/TS1000 KEYBOA
RD, remove -1 AFTER N IF YOU DO
NOT USE A PROMPT LIKE THE * USE
D HERE AT BEGINNING CMD LINE FO
R EXAMPLE, ALTHO OTHER CHANGES
NEEDED IN CODE TO DO THAT ALSO
4600 IF X=119 AND N>5 THEN LET
N=N-1
4601 REM BACKSPACE POSITION IN
LINE
4610 IF X=119 THEN GOTO 4560
4611 REM MAKES NOT ENTRY OR CHA
NGE IN INPUT
4620 IF N>19 OR X>63 OR Y>20 TH
EN GOTO 4698
4621 REM IF X>63 catches ENTER-
N/L
4622 REM IF X>63 IS ALSO A CRUD
E ERROR REJECTOR, Y>20 IS NOT G
OOD FOR BOT.SCRN.
4630 PRINT AT Y+1,(N+1-5);X$
4631 REM REMOVE THE 1 IF REV.,
See 4555,PRMPT
4635 REM THIS IS THE PRINT THAT
PUTS THE CHARACTER KEYED -IN ON
SCRN.,(ECHOS IT)
4640 POKE NA+N,X
4645 REM THIS POKES THE CODE
INTO THE REM STATEMENT ON LINE
4550
4650 LET A$(N TO N)=X$
4655 REM THIS MIGHT BE USED TO
PUT THE COMM AND INTO A STRING
A$ SO THAT IT COULD BE ANALYZED
/PARSED-ERROR CHECKED ELSEWHERE
, SEE ALSO LINE 4517 ABOVE
4660 LET N=N+1
4661 REM MOVES POSITION POINTER
, CMD. STRING/LINE FWD.
4670 GOTO 4560
4697 REM INCREMENTS PRINT LINE
LIKE LDOS SCROLLING
4698 LET Y=Y+2
4699 RETURN
4700 REM THIS ENDS EDIT ROUTINE
CALLED AS SUBROUTINE TO EDIT 1
LINE
```

This has been typed from a tested program with some elaboration, mainly extra REM statements to clarify its operation principles. Use of a routine like this will help in putting LDOS commands into a running program and as a bonus LISTing it gives the reader a hint as to the steps that the

LDOS line editor for LDOS (command line) goes through. The LDOS CLINE editor is in m/c though.

A routine like this could be used to build a utility program for use with LDOS or a BASIC or part-BASIC operating system shell, etc. A few lines added to translate from a completely different command language into LDOS command language , POKEd into the REM statement is another approach to this, so that COPY could be translated into two LDOS commands, LOAD"---name of file, and SAVE"---name of file, emulating CP/M or MS DOS style of command language!

HITCHHIKERS SPEED THE JOB
USE SOME HITCHING BITS AS
A FLAGMAN
· by BILL HARMER
T S BULLETIN #3-92

You can speed up the limited processing power of your computer by a method of using a register for more than one 'thing' at a time. We may call this extra use of it, for both the main data item and an extra one, a hitchhiker, so to speak. A little example: To compress a text (of characters), the most frequently occurring character in any English or other natural language is the space. It would be a natural to represent in a smaller code than 8-bits (as in ASCII, etc. alphanumeric character codes). Since in text, you usually don't need the codes 128 - 255, you can use 7 - bit codes for all the letters. To indicate that a space precedes a letter, you simply set the most significant bit, MSbit, of the byte to 1 (reset it to zero if not). Since the average microprocessor uses 8 - bit registers, and so does BASIC character string manipulation, this MSbit can be thought of as a hitchhiker, that rides along with the alphanumeric code, when set indicating a space precedes the letter the code stands for (in ASCII for example). When you are searching text for a word,

nearly always it will begin with a space.

Searching a compressed text for a a byte which has the right 7 - bit code and the MSbit set to indicate a space preceding, means that you can speed up the search process. Normally this would take two steps to get that far, checking for a space, and then branching to a routine to check if the next letter is the one at the beginning of the word you are looking for.

Since a space on average normally occurs each six characters in English, your routine, BASIC or machine code, will save going into this second loop to check the second letter, an average of 1/6 the time or perhaps saving the time of going into this loop unnecessarily about 13 - 16% of the time, reducing the time searching for the word that isn't there, 2 or 3 times, that's 33% plus! A routine that speeds up word search about 33% and saves about 16% of memory through compression of the text data in addition looks like a win - win situation indeed. And it is all based on having that extra MSbit flagging a preceding space or representing a second letter when it is a space, to put it more exactly, hitchhiking on the 8 - bit register operations in machine code and 8 - bit character code handling of BASIC if you write the routine in BASIC. Control codes can also use it.

Of course this hitchhiking is not a new idea. One of the first of the register computers, the IBM 360 with its 32 - bit registers gave some programmers the idea in writing a compiler. If you compile a math routine into a series of m/c calls to do adding, and put the numbers in RAM, get one out again and do some subtraction, put it in RAM, get it out again and add one if flag so-and-so is set, then put the result in RAM, take it out... it all adds up to wasting a lot of time putting the number in RAM and taking it out again to put in a

fast register. You could use a two pass compiling procedure that puts dummy commands in and only decides on the second pass, after the compiler examines the next step, whether the arithmetic operation it is to convert into machine code should end by putting the number into RAM, or if it will be used again, keeping it in the same register. But compiling is awfully slow anyway, so the programmers decided that there was a better way. Only part of the 32 - bit register needed to be used for the object being worked on, but some more of the left over bits could be used to hold a code or system of flags, telling the compiler, on the next step, whether the result left in that register should be put in RAM or left there, and generate the right code to do it. The result would be optimized arithmetic in the compiled program and using other parts of one register would result in little slowing of the compilation routine itself. (For the real, detailed story, p.364 - p.366 Gries, "Compiler Construction for Digital Computers" John Wiley.)

So you can use the extra space you can find or make in a register to make a routine run faster, the extra flag or data items, or code, hitchhiking along in even an 8 - bit register. For 16 - bit or 32 - bit registers, even more is available, so that complicated codes can be used. Clever use of certain flags like carry and zero might also be used, as in the search through a text example, encountering a space before the letter might be flagged by setting a flag not normally set when a space is detected, and clearing it if the next character is not the letter searched for as the second character (first letter after the space) of the word you are searching for. A lot of register operations using 8 - bit registers (or 16) can be treated as having an extra bit or two if you make clever use of the flags of the

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microprocessor as if they were extra 1 - bit registers , when you are machine code programming. Also, BASICs often use 16 - bit integers (no byte arrays available) so when unpacking text into numbers, that should say to you, can the extra bits be used as hitchhiker?

AUTOSTART PROBLEM WITH LogiCall?
by Bob Swoger

In the last issue of ZQA I noted that Chairman Don had trouble with the call LogiCall uses to adds AUTOSTART to LarKen disks when 'A' is pressed followed by <ENTER> at the 'Program?' prompt. This was a problem I had only seen once before at Abed's home and had forgotten about it after I fixed it for him. The problem comes up when LogiCall is used with the Jack Dohany TS2068 EPROM. The fix is very simple really, Jack uses an alternative key stroke sequence for the DELETE BASIC token.

When using Jack Dohany's EPROM, lines 430, 440 and 450 of LogiCall will have question (?) marks where you should see 'DELETE'. Simply edit out the question marks and replace them with the Delete token as described in Jack Dohany's manual page for the 'Corrected EPROM'.

Next, modify the first line of LogiCall to read something like V5.0L3JD, the JD added to denote the Jack Dohany EPROM modification. This will let me know over the phone what version I am dealing with when I handle problems over the phone.

Save this version of LogiCall to your disks and you will be back in business.

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