

Still Alive With Sir Clive!

ZXir QLive Alive!

The Timex/Sinclair North American User Groups Newsletter

Volume 6 Number 2

Summer '96

Chairman

Donald S. Lambert

Auburn, IN

MEMORY MAP

ROUTINES

ADDRESS

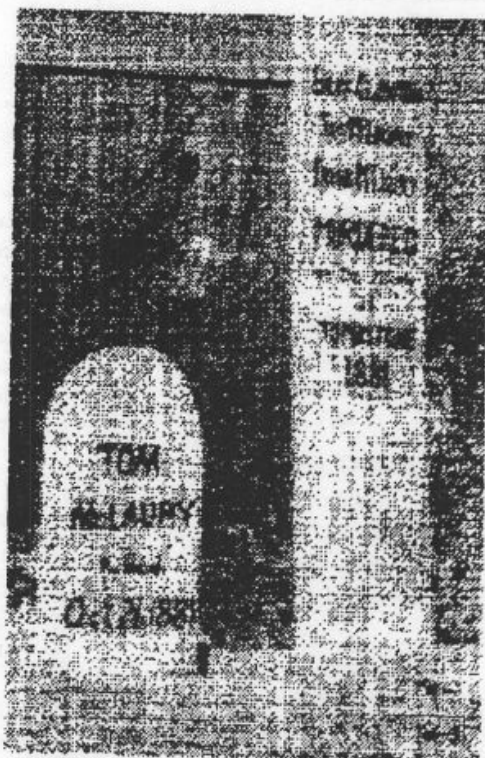
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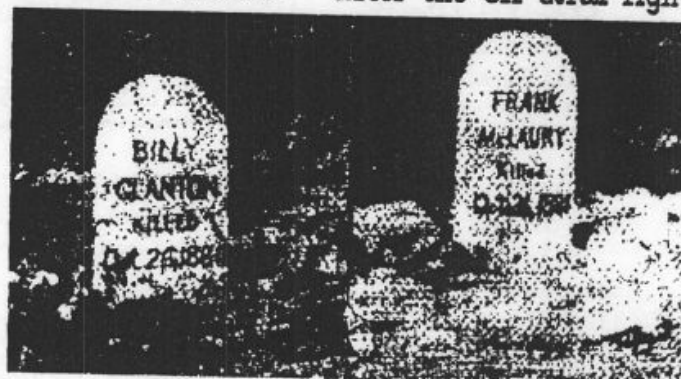
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Tombstone - The town too tough to die
So Is Sinclair

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ESTABLISHED 1991

THE TIMEX/SINCLAIR NORTHAMERICAN USER GROUPS NEWSLETTER

T/SNUG Information

Here is the list of T/SNUG Chairmen and how to contact them. We wish to support the following SIGs:- ZX-80/81, TS-1000, SPECTRUM, TS-2068, TC-2068, Z88 and QL. If you have any questions about any of these fine machines, contact the:

Chairman

Chief Motivator

Donald S. Lambert (ISTUG)

Vice-Chairmen

Tape & JLO PD Library

D. G. Smith

415 Stone St.

Johnstown, PA 15906

814 535-6998

Z88 Library

Dave Bennett (HATSUG)

329 Walton St. Rear

Lemoine, PA 17045

717 774-7531

ZX-81 PD Tape Library

Ed Snow

2136 Churchill Downs Cir.

Orlando, FL 32825

407 380-5124

RMG Enterprises

Rod Gowen (CCATS)

14784 S. Quail Grove Cir.

Oregon City, OR 97045

503 655-7484 FAX 503 655-4116

TS-2068

Rod Humphreys (VSUG)

10984 Collins Pl.

Delta, BC V4C 7E6 Canada

604 583-2819

QL PD Library

John Donaldson (CATUG)

835 Foxwood Cir.

Geneva, IL 60134-1631

708 232-6147

BBS ---GATOR---

Bob Swoger (CATUG)

613 Parkside Cir.

Streamwood, IL 60107-1647

708 837-7957 Work 708 576-8068

Editor/Treasurer

LarKen PD Library

Abed Kahale (CATUG)

3343 S. Flat Rock Ct.

Sierra Vista, AZ 85635-6874

520 378-3424

ZXir QLive Alive!

Is the newsletter of T/SNUG, the Timex/Sinclair North American User Groups, providing news and software support to the T/S community in a VOLUME of four newsletters per year, beginning with the Spring (March) issue.

T/SNUG's main goal is to keep our Magazine, our vendors and our repair service alive for the benefit of T/S users.

These valuable services shall have free advertising space in this user supported Newsletter so that they can see that we are still active out here. We must support their services whenever possible.

Another T/SNUG goal is to unearth titles of all known Public Domain and commercial software available for all Timex/Sinclair machines, building a library and providing lists of that software showing both the source and the availability.

If you have solved a problem or you have a problem in one of your software or hardware, please share it with the rest of us.

Welcome

James P. Curry

Treasury Note\$

As of June 10, 1996, we have a balance of \$1312.76

You can keep T/SNUG alive by an annual contribution of \$12 for one VOLUME made payable to Abed Kahale. Send check to:-

ABED KAHALE
3343 S FLAT ROCK CT
SIERRA VISTA AZ 85635

Back copies are available for \$0.75 each postpaid.

Article Contributions

Send in your articles by tape or disk and your inputs to:-

DONALD LAMBERT

ZXir QLive ALive! Newsletter

1301 KIBLINGER PL

AUBURN IN 46706-3010

Phone 219 925-1372

By hardcopy or modem (300-14.4) to:

Abed Kahale

103457.2440@compuserve.com

GATOR's

TWISTED PAIR

To better inform the Sinclair Community, four 24-hour a day BBSs are now provided to serve you. You are encouraged to exchange mail and use the files sections of these boards. Bulletins and ads are available to all.

Q-Box BBS 810 254-9878

Utica, Michigan

SCC BBS 305 945-8274

Miami, Florida

SOL BBS 520 882-0388

Tucson, Arizona

MMCC BBS 847 632-5558

Arlington Heights, Illinois

If you know the Internet E-Mail address of a Sinclair user, but do not have access to Internet, simply address your E-Mail to GATOR Sinclair on the 24-hour MMCC BBS and include the name and E-Mail address of the user you wish to reach. Then check the MMCC BBS from time to time if you expect a reply.

We encourage you to exchange mail and contribute to the Upload Section. Call and register using your first, last name and phone number along with a password you won't forget. **Write It Down!** Do not try to do anything else this first time.

When you call-in the next time, you will have Level 5 security and be able to enjoy full user privileges. The BBS has smaller sections called conferences. Select "J" for "Join a Conference". Select "TIMEX" to get into the Sinclair Section. The mail you then read will only be from other T/S users. Use extension .ART for articles, .ADS for ads and .NWS for news when Uploading.

For help, contact the SYSOP, Bob Swoger, by leaving a message, mail, E-Mail or phone.

Input/Output

by *Abed Kahale*

Thank you all for your kindness, appreciation and encouragement. And special thanks to our article contributors.

I will have to admit that I did not spend much time computing. I did spend a lot of time and sweat digging and planting trees and bushes in my yard - exercise is good for you —they say— and exercise I did. Faced with a yard covered with red clay, no shade no greens, I had to get it done while I can.

CALECHEE is what it is called. Dig a few inches down and find gray cement like dirt with stones and rocks. The shovel is of no use at all, the pickax is the only way. At my age? No way!. So here is what I did; dig down to the calechee, fill the hole with water and wait overnight for the water to soak into the bonedry ground. Yes, it takes 12 hours or even more. The cement (ka-lee-tchee) then gets soft enough to break with a five-foot breaker bar that I got myself. It is a sort of manual jack hammer.

After digging some 38 holes and planting, I had the yard covered with rocks and I am done. No lawn for me, I took care of one for 32 years and over here it has to be sprinkled daily yet.

Sunny days and stary nights, beautiful but very dry this year— I am told. Haven't rained (sprinkled) for two months, but the monsoons will be coming July/Augut. We had a week up to 94° but in the 50's at night. To my surprise, I found myself working in the sun until it got to 90 when it felt hot and it was time to go inside.

Back to computing.

I completed and mailed two newsletters since my move. I have been sending the masters to GATOR who makes copies and send them to me to mail. We found this arrangement to be the least costly.

Thanks go to ---GATOR---

E - Mail

Can you tell me how I can get my hands on a QXL QL clone?

I have limited funds, and I would love to have a QL again. My old QL died three years ago at Camp LeJeune. I have a lot of software that I wrote for it on 5.25 FDD. Does the QXL have a QL compatible card edge connector?

Thanks for your help.

David Johnson

e-mail:

g_david_johnson@msn.com (home)

george_d.johnson@twva.navy.mil (work)

Ps. Love the ZQA mag. I will be renewing ASAP.

DAVID JOHNSON

3517 DUNEDIN DR 102

CHESAPEAKE VA 23321

Help

Hi Abed,

Thanks for sending me the Winter '95 issue of T/SNUG newsletter. I've read it about 30 times, it never gets old. I really appreciate all the vendors and suppliers listing their stuff, I have contacted a few already.

I have a question. I have an old TRS80 model 4p. the mother board is bad. Is it possible to take out the mother board, replace it with a TS1000, and use the Tandy single sided floppy drives, and the Tandy keyboard, and the monitor? If so, what kind of disk interface would I need and would I need any kind of interface for the keyboard?

pogi@valleynet.com

<http://valleynet.com/~pogi>

Internet Society

HTML Writers Guild

Computer History Association of California

KENNETH R HARBIT

8070 N MAROA AVE 106

FRESNO CA 93711

I am glad that you enjoyed our ZQA! Newsletter. Words like yours keeps me going. As far as the TRS80, I never had one nor had any experience with it. But all is not lost, I am forwarding your e-mail to Bob Swoger who once had a TRS80.

His Internet address is : CENG108@email.mot.com

Dear Abed!

Thank you for your last mail. Please let me know when you receive ZX-TEAM MAGAZIN 1/96 and of course tell me your opinion about it. Please do not hurry with the back issues of ZQA! I have very much time. And please do not send it by air mail to save postage!

I have to copy some back issues of ZX-TEAM MAGAZIN for you, so I will have do to some work too.

I wrote some letters to advertisers in ZQA! and now I'm waiting for their answers, because I would like to buy some hardware.

Yesterday I got a very nice letter from Jack Dohany who wrote about IKI in ZQA! He was in Germany as a student about 35 years ago and he still has a very good knowledge of the German language. What a surprise!

I look forward to hearing from you

yours sinclairly

Peter

PETER LIEBERT-ADEL

LUETZOWSTRASSE 3

D-38102 BRAUNSCHWEIG

GERMANY

I have to say that your MAGAZIN is the best ZX-81 I have seen lately, we don't have anything like it.

I mailed you the ZQA! back issues on 30 May. I just started to work on the next ZQA! I did receive the International ZX81 Magazin and all of the

ZX-TEAM back issues.

Thank you Peter

**Jack Dohany, do I hear someone
volunteering to translate some articles
from the ZX-TEAM MAGAZIN ???**

Please find attached the latest copy of S.J.P.D. SOFTWARE catalogue. The files were compressed using INFOZIP-ZIP and should be uncompressed with INFOZIP-UNZIP. However if you do not have the INFOZIP package, the standard QL UNZIP will uncompress them. << SJPDCAT.ZIP >>

A copy of SPIDCAT.ZIP has been sent to our QL Librarian. See page 2 for address.

Abed has been holding off asking you for a current list of those folks subscribing to UPDATE! So that ZQA! might get a jump on the situation, might you send a list of perhaps the last two years worth of names to Abed? He can then make up a mailing list.

-----GATOR-----

Re: UPDATE! to ZQA!

Hi Bob, I will send him a list as soon as I find the spare time, caught up in the April issue at the moment, plus working on a new FWD COMPUTING catalog, as well as filling orders. But I will make the time in the next couple of weeks. Thanks to you and Abed for all of your support.
Fdavis@walnut.holli.com

A little of this and a little of that

Well this is my first attempt at writing an article of any kind, so please bare with me. First I would like to let you all know that I Run a Sinclair support board in Miami, Florida called the SCC BBS (The Sinclair Computer Connection BBS) the phone # is (305) 945-8274 and is available 24 hours a day all year round.

I am also in the process of creating a SCC BBS version for the Internet. That is to say that you will be able to reach my SCC BBS on the Internet as well, but it will be much bigger version. I would like for any of you to send me any ideas as to what you would like to see included on the Internet version. To send me feedback either call my BBS listed above or call Q-Box USA and leave me feedback there.

One more thing that I would like to say, is that I would like some good Z80 assembly language programmers to contact me because I have a project for the ZX81 that if it succeeds it will put the ZX81 back on the map again.

The following are ways you may contact me:

SCC BBS (305) 945-8274

JOSE R MORENO

1871 N GLADES DR APT3

NORTH MIAMI BEACH FL 33162

or on the Internet at d015163c@dcfreenet.seflin.lib.fl.us

From: GATOR Sinclair

To: Joan Kealy Re: MIDI

Hi, Joan,

Mike Carey gave a very informative, entertaining and pleasant sounding MIDI demonstration Thursday evening at the Glenside meeting. Mike is a collector of vintage music boxes, player pianos and any music on MIDI disk that may have for the source player piano rolls. He can be reached by mail at:

Mike Carey

PO Box 130

Prospect TN 38477

(615) 424-3735

Great newsletter Abed!

In the Spring issue Peter Liebert-Adelt mentioned that he wrote to Harvey Rait at L.I.S.T. but got no answer. They get a lot of mail there and sometimes someone besides Harvey sends an answer. L.I.S.T. is still going. I am also a member and I get the newsletter.

Many years ago in one of the US T/S magazines, there was an article on how to build a color video interface, bank switched 64K memory and expansion chassis for the T/S1000. I think it was SYNC magazine, I'm not sure.

Does anyone have it? **Anyone?**

Does anyone know where I can get a ULA and ROM chip for the TS1000?

Thanks for a great read.

Ken Harbit

8070 N MAROA AVE 106

FRESNO CA 93711

Ken, I think your best bet is buy a TS-1000 and take out the chips you need. They sell at give-away prices.

This is just a quick note to inform you that S.J.P.D. SOFTWARE now has full FAX facilities on the usual number of (+44) 01282 701767. Established customers will be able to fax orders and I will dispatch the disks with a 14 day invoice. This facility is also offered to e-mail orders from established customers.

Good luck

Steve Johnson

S.J.P.D. SOFTWARE.

From Jay Shepard through -----GATOR-----

Message-Id: <"Macintosh"/PRMD=MOT/ADMD= MOT/C=US"/@MHS>

Just got the ZQA. Fine job. I do like your I/O even w/GATORs V's. Thanks for all your effort from the sunny South.

Mail Bag

Enclosed please find, Abed, my entry fee into the world of "Phoenix" computers. Enjoyed reading of your travel to "The Land of AZ"; what a telling comment it is on our lifestyle to read of your packing your computer within reach the same as your tooth brush. I had to have a computer with me, I sold (closed on) the old house by faxes and telephone. Editor

The problem it seems, from my observation, is that it

is nigh on to impossible for a middle income (Read GATOR's Empty Coal Buckets) family to afford more than one platform if one of them is a 486.

Except for John Olinger & Larry Kenny it seems the bulk of the T/S progress has been made by retired folks. At 54 I can't wait till I have that time. Having said that I'm sure I'll miss the kids who now occupy most of my spare time.

My hat's off to you Abed, Keep up your interest - we sure have been the beneficiaries.

John Shepard

Ogden, IA

Dear Abed,

Thank you for the information about T/SNUG. I have a TS-1000, and two emulators for my PC, I also have four Spectrum emulators. I plan to get a 2068 sometime soon. Thank you very much.

Ken Harbit

Fresno, CA

Dear Abed,

Time sure flies! Thanks for the info you passed on obtaining technical info from Nat'l Semiconductor. Since then, most of the semiconductor manufacturers have gone on-line and I've found most of the technical literature I need on the www.

I have built a prototype bankswitching card that can handle up to 8 MB and comes with 128K on board. The memory is divided into 8K chunks as with the three internal banks (HOME, DOCK, EXROM) and operates in much the same way. Each chunk can be programmed to behave as ROM or RAM. I have since redesigned the card in a very ambitious manner. When this is done, I'll submit a project to ZQA!

Keep up the good work!

PS. I have uploaded a few programs to <ftp://ftp.nvg.unit.no/pub/sinclair/utills/ts2068/> on the INTERNET that would be of interest to TS2068 owners. The first is

sna2jlo1.zip that will allow JLO disk owners to LOAD and RUN the thousands of Spectrum games floating around. The other is **splayer.zip** which plays .WAV .AU, etc. Sound files on the 2068's sound chip. You will need access to a PC to UNZIP and transfer the programs and data to disk for use with your JLO disk system.

Alvin Albrecht

305-9930 Bonaventure Dr. SE
Calgary, AB Canada T2J
4L4

Dear Abed,

What are you going to do with that \$1296.24 in treasury? Buy a Macintosh?? (Sure!, but how do you program the thing? *Editor*)

Enclosed is my \$12 But too much about QL in ZXir and not much else. I am not fussy, how about something about Z88 besides an ad. My TS2068 still used nightly along with Mac Performa; CD-ROM esp. Pleasurable but wish I could program Mac like the 2068. My 2068 is the lil ole sportcar with endless gear shifting and not much horsepower - about like a '58 Austin Healy, but Mac's are like being driven along in a limo - if you get tired with the scenery, there's not much to do.

I keep meaning to write article about my Mac attack but too many projects.

Best to you,

Joan Kealy

Brackettville, TX

Wanted:

Z88 articles. Anyone? Please!

I read your letter to Abed on the Internet. Congrats on the Performa. At work I have a Centris 610 with a 23 inch silver screen monitor. It is just one of three machine in my anti productivity pod needed to accomplish the tasks that I am required to do. I can't help wonder why you wound up with a Performa! The last time we conversed you were interested in MIDI and I said you might look into the Tandy Color Computer 3.

Phil Kwitkowski and I went again this year to the Fifth 'Last' Annual Chicago CoCoFEST in nearby Elgin Illinois. We bought more half height DSDD drives for TS2068/LarKen setups. We first set up 16 year old member Bob Muth with a matched pair in a very nice case, and then fixed up Albuquerque member Jeff Decourtney with a pair. Jeff really seemed happy to get his. Phil helped by swapping drives with me to get a good working pair of Tandon/IBM drives for a single box. The result was a pair of

drives that ran at a noise level lower than any I had seen in a long time. As soon as Jeff got the system, I got a call from him. He was disappointed. All he got when he turned it on was a bad picture. A few questions and I discovered that he had the ribbon cable from the drives plugged in backwards and that he was putting the disks in upside down. All was working fine when we said Good Night. Yes, I think he loves LogiCall.
----GATOR----

JLO

**Grant Thomas
CATUG**

FROM THE CHAIRMAN'S DISK

Donald Lambert

Somewhere in my activities around the house I lost track of time and Abed's card suddenly made me aware that I needed to get some material for ZXir QLive Alive! I do need to pull my head up out of the sands once in a while to see what is going on in the world.

Abed mentioned that Rod Gowen of RMG ENTERPRISES was down with a medical problem. He was bedfast with his feet and legs elevated for a while. From the last I heard from Rod he is recovering and on his feet part of the time. I had an order in and it finally got delivered. Knowing about the problem I waited patiently for it to appear.

In the last issue of ZXir QLive Alive! on the bottom of page 28 in an ad by RMG ENTERPRISES is the 2068 EMULATOR by Keith Watson.

Wifely pressure to move to a single computer instead of several is making me consider that option. But not willingly or with any desire to do so. But the prospect does raise some questions.

Anybody out there with the answers? Question 1.) What is the minimum MSDOS computer that is required to run the 2068 EMULATOR? Question 2.) What is the best way to move software from the disks and cassettes to an MSDOS computer? I suppose that a modem would work, but would it? Also, from Les Cottrell is the use of a Radio Shack Audio Amplifier Speaker (RS 277-1008C) to enable a direct computer to computer transfer. But it would be nice to transfer disks directly to the MSDOS computer but that is impossible or is it? (It is)

What are we going to do in the demise of UPDATE MAGAZINE? The first issue was October 1987 and it looks like the last issue is to be July 1996. Nine years for a computer magazine that was for obsolete computers. It is a great magazine but being great is not all that is necessary for survival. It requires a lot of time even after all copy is mastered and the printing begins. Then after printing the pages have to be assembled and stapled and mailed. Bill Jones did a great service for the T/S community and turned it over to Frank and Carol Davis who also did great service to the T/S community. I know that it wasn't an easy decision to make but one that had to be made. Bill Jones and Frank and Carol Davis should receive a standing ovation for their dedication to the T/S community. We at ZXir QLive Alive! salute Bill Jones, Frank and Carol Davis!!!

In my little working with the Z88, I did discover that part of my difficulties was in not realizing that the names of functions are different than on the T/S 2068. I did get the floppy drive to operate. However, on my first FORMAT attempt I got the messages that stated no disk or some-

such. Two more tries gave the same results. So I changed disks and that ended with "Done OK" and a CAT showed 202240 bytes so it had FORMATTed correctly. I had the help of Murphy's law! I had purchased a quantity of used disks (3.5") and the first one I tried was bad.

The Z88 disk manual states to fetch the program into BASIC. Why the manual doesn't state to LOAD the program into BASIC by ?? is beyond me! However, to use the disk drive requires more RAM than comes with the standard Z88 and more RAM is required for some programs anyway. So now I have a more expanded Z88.

I Just now realized that I have "The BASIC HANDBOOK" and this edition has 850 pages. In it (I Just looked) was the command CHAIN which is what the Z88

needs to LOAD a program. So I guess I will have to use that in addition to the Z88 manual and Z88 MAGIC to more fully understand what is going on. I will have to sit down and make out a list to guide me till I learn what is going on

with the Z88. Regardless of what they say, computers have added another layer of complexity to life. Technology is not free it requires one to learn more to use the newer methods. Look around you, terminology is changing. For instance, when I was young it was not unusual for someone to comment like "Gail is such a gay girl". Say that now and you could get punched out or sued. At one time gay meant happy or cheerful.

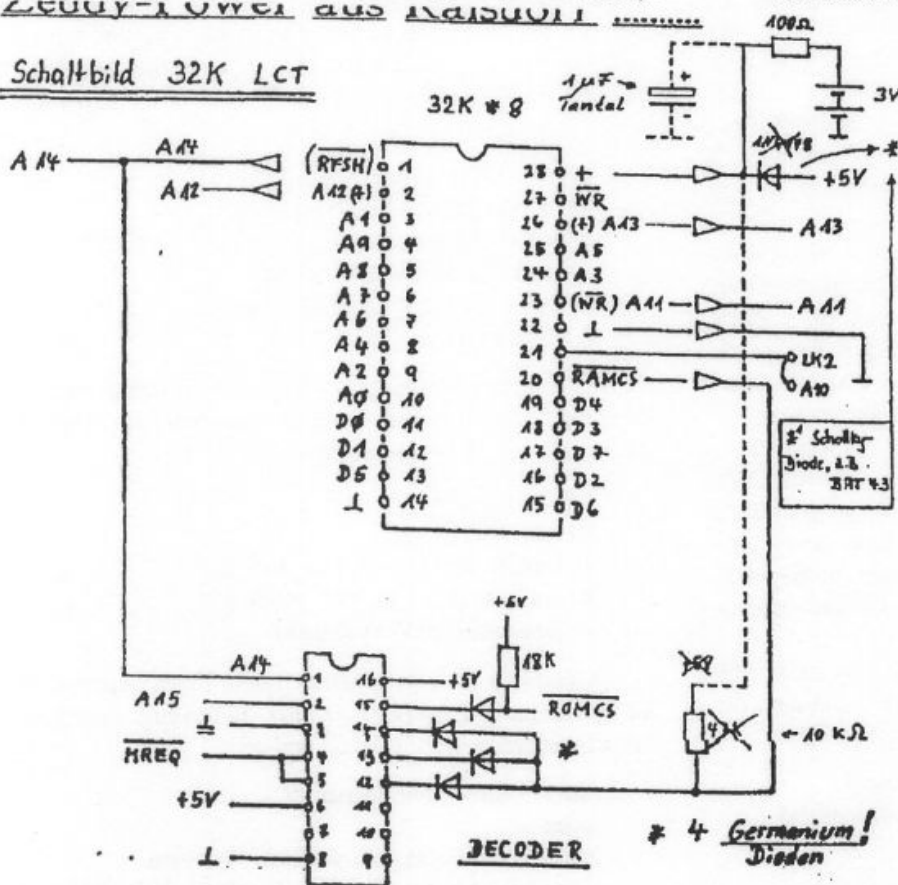
I thought that I had the answer to re-inking my printer ribbons. A felt pad is glued onto the ribbon cassette and then it is inked with special ink. The ink is messy. But there is one little problem that surfaced when I tried to use a revamped ribbon. On my printer, the head goes to the left side upon initialization and hits the felt pad and goes *thunk* *thunk* as it tries to get into the most left position. I will have to see if I can shave enough off of the pad to allow the print head to get into the most left position or also put the pad inside the ribbon cartridge and put a hole in to allow a drop of ink to be added easily. The sheet does show that option on some cartridges but not mine. No matter what system is used there is some ink that gets onto the hands and mechanic's cleanup stuff (GOOP in my case) gets all the ink off. I could glue the pads to a sort of tongs and use a motor to pull the ribbon through the tongs but that is so time consuming.

With that I will leave space for someone else. Does anyone have a problem with the T/S 2068 and wants to know what others have done with the problem? I Just might have material in the newsletters that cover the subject. I can't look it up and type it in if I don't know what someone wants. 0/0.



You need the schematic of ZX81, some know-how in soldering and some parts you can buy for pocket money.

Schaltbild 32K LCT



Stückliste:

- 1 RAM 32 K #8 (2.B. Toshiba TC
1 74LS138 55257 BPL-10)
4 Germaniumdioden (gibt günstig bei
1 Diode 1N4148 Oshorn Schütz
1 Widerstand 18K -Jodlin)
1 Widerstand 47K
1 " 100Ω
1 Knopfzelle NiCd 3V

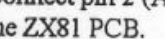
$\nabla \hat{=}$ hochgebogener IC-Fuß, der nicht im Sockel steckt!

ZX-81 ALLES , was ein Computer
braucht

W. H. H.

If you only want 16K-byte, it is very simple:

1. Remove the original 1 or 2k memory chip(s).
2. Solder a good 28-pins IC-socket in the place of IC4.
3. Fit a short wire at LK2 (on the right side of IC4).
4. Take the 38Kx8 RAM chip and bend up pins 1, 2, 22, 23, 26, (no connection to socket).
5. Put the RAM (43256, 55257 or 62256 e.g.) into the socket.
6. Connect pin 1(AI4) to ground (pin 14 of IC4).

7. Connect pin 2 (A12) to A12, this is the anode of D3 on the ZX81 PCB.
- 
8. Connect pin 22 to ground.
 9. Connect pin 23 (A11) to A11, this is the anode of D1 on the ZX81 PCB.
 10. Connect pin 26 (A13) to A13, this is the anode of D5 on the ZX81 PCB.
 11. That is all.

Full 32K-RAM from 16K to 48K-1

1. Remove the RAM from the socket and bend pins 20 and 28 up.
2. Put the RAM into the socket.
3. Connect pin 28 to +5 volts.
4. Connect pin 20 to output of the decoder (see schematic, sorry not on Internet).
5. Remove R2 and R28 from the ZX81 PCB (RAMCS and ROMCS).
6. Remove the wire from pin 1 to ground and connect pin 1 (A14) to A14, this is the anode of D7 on the ZX81 PCB.
7. Build a simple address decoder with 74LS138 and four germanium diodes. The function is as follows:
8. MREQ, A14 and A15 are used to select four areas of 16K. The first area ROM is selected. The second and third area is the 16 - 48K RAM. The fourth area RAM must be selected too, as the screen output routine in the ZX81 is working with M1 = 0 and A14 = 1 and A15 = 1. Three of the germanium diodes form OR-gate which pulls RAMCS to LOW whenever one output is LOW.
9. Connect the ROMCS output of the decoder to pin 20 of the ZX81 ROM (ROMCS).
10. Connect A14, A15, MREQ, 0 volts and + 5 volts to the decoder.

Memory Back-up

1. Only effective in 32K - 48K area, as RESET will delete the 16K - 32K area).
2. Replace the wire from RAM pin 28 to a Schottky diode.
- 3.6 volts backup batteries via a 100Ω resistor.

And now good luck! (Peter the translator)

This article is a translation from German ZX-TEAM-MAGAZIN, the words in the schematic are not translated, but I hope everybody will understand.

ZX81 - EVERYTHING a computer needs

DBEasy's EASY_OUT_CUSTOM

by Al Feng

Although I felt comfortable with the previous version of DBEasy [Wood and Wind Computing, RR3 Box 92, Cornish, NH 03745], my implementation of the "easy_out_cus(tom)" procedure was to mimic the address label for printing disk labels with lines of BOLD or italics output on different lines. In retrospect, I clearly did not have a full appreciation of the power of generating a custom output using the relational capabilities of the Archive database program.

A few years ago when someone asked me if there was an easy to use program which could generate a simple, monthly invoice I thought DBEasy might be a good foundation for an alternative to accounting software. As the Fates would have it, in the few days that transpired between the original query and developing the prototype, I learned the need no longer existed.

The experience was not a lost effort — at least, that's what I tell myself! After all, there were some programming routines which I "worked out" (surely, others have done the same elsewhere) that I would not have bothered to attempt otherwise. A "refined" version of that code is included in the following LISTing.

The standard DBEasy screen layout was used with the following sample labels and user input. Compare the final, generated output with the following record's data.

Using : INVOICE..DBF	Order : Natural
Date : 94/01/05	Keys : TxWA1001-5
ACCT. NAME	Wayne's Auto
ADDRESS	84 Granny Smith Road
more address	
city	Pie Town
state	NM
zip	87379
description1	6 spark plugs
description2	5 qt. oil 30wt
dateRECEIVED	
Monthly FEE	5 itemized 1 5.88
PreviousDUE	17.33 itemized 2 6.45
	0 0

In the following procedure, the "payment due" date is automatically calculated to be the 30th day of the subsequent month that the invoice is generated, with February's date adjusted to the "28th" of the month. Also, an adjustment to the next year is made if the invoice is generated in December.

```

proc easy_out_cus
rem /* use for invoicing */
let day_due=30
let month_due=val(today$(1 to 2))+1
let year_due=val(today$(9 to 10))
if month_due=13: let month_due=1: endif
if month_due=1: let year_due=year_due+1: endif
if month_due=2: let day_due=28: endif
lprint

```

The fonts defined are for a 9-pin, EPSON compatible printer. Of course, you will want to substitute the appropriate control codes for your printer. If you have a color printer, you can define the various colors as similar \$strings. And similarly, you can define actual typefaces and scales, too.

```

rem /* FX-80 printer control codes */
let bold$=chr(0)+chr(27)+chr(69)
let bold_off$=chr(0)+chr(27)+chr(70)
let ital$=chr(0)+chr(27)+chr(52)
let ital_off$=chr(0)+chr(27)+chr(53)
let fit$=chr(0)+chr(12)

```

If you are a vendor, you will need to calculate the tax. The "rate" (0.675) is New Mexico's previous rate in effect when this procedure was written.

```

rem /* tax rate */
let rate=0.0675
let lnpt3$=str(n1_+n2_+n4_+n5_,0,2)
let tax$=str((n1_+n4_+n5_)*rate,0,2)
let total=val(lnpt3$)+val(tax$)

```

Of course, how your actual output looks depends on the information you want to include. Regardless, note how the printer's fonts are turned on and off.

```

rem /* this is your header */
lprint
lprint tab 32:bold$;"PLATYPUS Software"
lprint tab 29:bold_off$;"914 Rio Vista Circle SW"
lprint tab 30;"Albuquerque, NM 87105"
lprint tab 35:ital$;"505 843-8414"
lprint ital_off$
rem /* line spaces vary with your header */
rem /* adjust accordingly if using letterhead */
lprint
rem /* the following is account information */
lprint tab 10;"Account Number: ";key_$; tab 48;
"Current Balance: $ ";total
lprint
rem /* parameters for this are modified above */
lprint tab 10;"Payment due by: ";month_due; "/" ;
day_due; "/" ;year_due; tab 48;
"Amount Enclosed: $ _____"
lprint : lprint
rem /* account address set for window envelope */
lprint
let i$=s1_$: if s2_<>"": let i$=s2_+$+" "+s1_$: endif
lprint tab 10:i$
lprint tab 10;s3_$
if s4_<>"": lprint tab 10;s4_$: endif lprint tab
10;s5_$; ", ";s6_$; ", ";s7_$ lprint : lprint : lprint
lprint "===== [ Please return above
portion with your payment ] ====="
rem /* customer retains this part */
lprint : lprint : lprint
lprint tab 10;" Account Number: ";key_$; tab 50;

```



```

"Billing date: ";today$(1 to 6); today$(9 to 10)
lprint
lprint tab 10;"Your check number: _____";
      tab 50;" Payment due: "; month_due; "/" ;
      day_due; "/" ;year_due
lprint : lprint : lprint
lprint tab 10;i$
lprint tab 10;s3_$
if s4_<>"": lprint tab 10;s4_$: endif
lprint tab 10;s5_$;" ";s6_$;" ";s7_$
lprint : lprint

```

The following method for aligning the two-place decimal output in column may not be the most compact or elegant sequence; but, it works. Since the working example does not utilize numerical fields "n3_" and "n6_" you should note that there is no corresponding "AddOn3" or "AddOn6" value.

```

rem /* to ensure two-place decimal output ... */
let Inpt1$=str(n1_,0,2)
let Inpt2$=str(n2_,0,2)
let Inpt4$=str(n4_,0,2)
let Inpt5$=str(n5_,0,2)
let Ln1=len(Inpt1$): let Ln2=len(Inpt2$):
      let Ln3=len(Inpt3$)
let Ln4=len(Inpt4$): let Ln5=len(Inpt5$):
      let LnT=len(tax$)
let AddOn1=Ln3-Ln1
let AddOn2=Ln3-Ln2
let AddOn4=Ln3-Ln4
let AddOn5=Ln3-Ln5
let AddOnT=Ln3-LnT
let Blank$="      ": rem 8 spaces
if AddOn1<1: let AddOn1$="": endif
if AddOn2<1: let AddOn2$="": endif
if AddOn4<1: let AddOn4$="": endif
if AddOn5<1: let AddOn5$="": endif
if AddOnT<1: let AddOnT$="": endif
if AddOn1>=1: let AddOn1$=Blank$(1 to AddOn1): endif
if AddOn2>=1: let AddOn2$=Blank$(1 to AddOn2): endif
if AddOn4>=1: let AddOn4$=Blank$(1 to AddOn4): endif
if AddOn5>=1: let AddOn5$=Blank$(1 to AddOn5): endif
if AddOnT>=1: let AddOnT$=Blank$(1 to AddOnT): endif
lprint tab 44;" Previous balance: $ ";
      AddOn2$;Inpt2$
lprint
lprint tab 10;"> ";s8_$; tab 65;" $ "; AddOn4$;Inpt4$
lprint tab 10;"> ";s9_$; tab 65;" $ "; AddOn5$;Inpt5$
lprint
lprint tab 44;"Monthly service fee: $ ";
      AddOn1$;Inpt1$
lprint
lprint tab 54;"sales tax: $ ";AddOnT$;Tax$
lprint tab 65;" -----"
lprint tab 44;"Current balance DUE: $ ";total
lprint : lprint : lprint : lprint

```

If you are re-creating an invoice similar to this one, you will probably want to "end" the invoice by repeating the information contained in your header. In this example, the information is put in a single line.

```

lprint tab 27;ital$;"Thank you for your patronage";
      ital_off$
lprint : lprint : lprint : lprint : lprint :
lprint : lprint
lprint bold$;" PLATYPUS Software";bold_off$;
      " 914 Rio Vista Cir. SW, Albuquerque, NM
      87105"; ital$;"505 843-8414";ital_off$
lprint ff$ : rem formfeed
endproc

```

Although the "invoice" example given is not a standalone procedure, it can be edited exclusive of DBEasy, SAVED, and then MERGED with the main program. While you may not have the need to generate an "invoice" from within DBEasy, I hope the preceding gives you a good idea about how flexible both DBEasy and the Archive programming language can be.

The sample record has "PLATYPUS Software" sourcing spark plugs and oil to "Wayne's Auto" account. Obviously, the appropriate data will be generated by your real world situation.

HAPPY TRAILS,
AND COMPUTING, TO YOU ...

PLATYPUS Software
914 Rio Vista Circle SW
Albuquerque, NM 87105
505 843-8414

Account Number: TxWA1001-5 Current Balance: \$ 35.83
Payment due by: 4/30/96 Amount Enclosed: \$ _____

Wayne's Auto
84 Granny Smith Road
Pie Town, NM 87379

=====[Please return above portion with your payment]=====

Account Number: TxWA1001-5 Billing date: 03/19/96
Your check number: _____ Payment due: 4/30/96

Wayne's Auto
84 Granny Smith Road
Pie Town, NM 87379

Previous balance:	\$	17.33
> 6 spark plugs	\$	5.88
> 5 qt. oil 30wt	\$	6.45
Monthly service fee:	\$	5.00
Sales tax:	\$	1.17

Current balance DUE:	\$	35.83

Thank you for your patronage

PLATYPUS Software 914 Rio Vista Cir. SW,
Albuquerque, NM 87105 505 843-8414

WINDOWS BY SHADE - PART 4

Continued from the Autumn 95 — Vol.5 No.3

Third is the data entry block which is the compiled machine code part of the data entry routine from address 60899 to 62298. This is the TIMEX BASIC part of the data entry routine that was correctly compiled by the TIMACHINE compiler and ran properly. This compiled machine code part of the data entry routine will be referred to from this point on as "Part #1 of the data entry routine". The remainder of the data entry routine, the TIMEX & LKDOS extended BASIC windows routines are in the CORE ROUTINES section from program lines 9889 to 9926. This TIMEX & LKDOS extended BASIC part of the data entry routine will be referred to as "Part #2 of the data entry routine". The complete data entry routine does six special operations which make it better than just a straight INPUT or INKEY\$ data entry operation. First it provides three cursors for data entry. it provides an "L", "C" & ">" cursors. Second it provides for three data entry modes.

These data entry modes are <1> All CHARACTERS mode. In this mode all the alpha-numeric characters, punctuation and symbols can be entered. Both upper and lower case letter characters can be entered by shifting the cursor with the standard CS + 2 keys, from L to C and vice versa. <2> CAPITALS mode. In this mode all the upper case letters, numbers, punctuation and symbols can be entered with the exception of lower case letter characters which are locked out. The C7 cursor will not shift to an L cursor in CAPITALS mode. <3> NUMBERS ONLY mode. In this mode only numbers can be entered. This mode uses the > cursor. This data entry mode eliminates the need of having a numbers only checker routine in the CORE ROUTINES. This data entry mode makes entering dates / times / amounts simple and foolproof. Third extended mode is locked out so those characters which are usually entered from extended mode are entered using the SS key plus the character key related to that extended mode character. Pressing the SS + Y keys enters "[", SS + U keys enters J, SS + F keys enters "(", SS + G keys enters ")" & SS + I keys enters "@".

Fourth the arrow keys and all non-character (commands or functions) entries are locked out.

Fifth the data entry line length is preset by the IMPLEMENTATION PROGRAM and the data entry routine prevents entry of characters beyond the preset line length limit. Sixth the data entered into a line is POKed into a 64 character storage buffer. This 64 character storage buffer holds one full screen row / line of 64 characters. When data entry on a line is completed the data is PEEKed from the 64 character storage buffer and placed into a STRING\$ variable by a GOSUB from the IMPLEMENTATION PROGRAM to a CORE ROUTINE. Then the 64 character storage buffer is cleared with the fourth machine code routine, the 64 character storage buffer clearing routine. The 64 character storage buffer clearing routine is initiated

from the IMPLEMENTATION PROGRAM. The data entry routine has many other features, but those noted above should make my point that this is a worth while project which should be completed.

Fourth is the 64 character storage buffer clearing routine from address 62304 to 62369. This routine CLEARs the 64 character storage buffer used to temporarily store a line of 64 characters by part #1 of the data entry routine,

Fifth is the screen PRINTing parameters storage buffer from 62375 to 62385. This buffer stores <1> Last character entered. <2> Current pixel column position. <3> Data entry mode, <4> Window in use. <5> Start / base pixel column position. <6> Start / base pixel row position. <7> Characters per line limit. <8> Ink color for PLOT function. <9> Line numbers to return to. <10> LKDOS DRAW function character erase width, <11> Current status of C or L cursor.

Sixth is a one number storage buffer at 62390 that holds the current number of characters stored in the 64 character storage buffer.

Seventh is the 64 character storage buffer from address 62391 to 62454. Part #1 of the data entry routine temporarily stores one line of up to 64 characters in this buffer.

Eighth is the fonts storage area from 62460 to 65535. This area regularly stores four mixed TIMEX & LKDOS fonts. The standard complement of fonts starts with <1> LKDOS 45 (approximate) character per line proportional italic font starting at 62460. <2> LKDOS 42 character per line font starting at 63229. <3> TIMEX bold 32 character per line font starting at 63998. <4> TIMEX graphics 32 graphics (icons) per line font starting at 64767.

There is a fifth font which is an LKDOS 64 character per line font which is LOAded into the LKDOS cartridge.

As noted above there are two versions of my LKDOS extended BASIC data entry demo programs. The simplest is the pseudo three window demo. The pseudo three window demo uses all the same TIMEX & LKDOS operations as the true three window demo but uses only one LKDOS extended BASIC window. The true three window demo is identical to the pseudo three window demo except it uses all three LKDOS extended BASIC windows.

The only noticeable difference the user would detect between the two versions of the data entry demos is that the true three window demo has a slower typing speed than the pseudo three window demo. This is due to the failure of the TIMACHINE compiler to produce runnable machine code from those program lines, of the original one part data entry routines, that contained LKDOS extended BASIC window operations. My original plan was to write the data entry routines in TIMEX & LKDOS extended BASIC, test and modify them until I was satisfied with their performance and then compile the data entry routines

to faster running machine code with the TIMACHINE Compiler. This is what I did, and after several weeks testing and modifying the data entry routines, and When I was satisfied with their performance I compiled them with the TIMACHINE compiler. When I went to run the compiled machine code routines I found that those operations containing LKDOS extended BASIC window functions had not been properly compiled by the TIMACHINE compiler and would not run.

Directly below is a list of the LKDOS extended BASIC window operations that the TIMACHINE compiler did not compile correctly, and which would not run at all.
 <1> PRINT #4: DRAW (4*DL),8,0 — (DL=Character width to be erased — MIN.1. MAX. 2)
 <2> PRINT #5;CHR\$ B; or PRINT #6;CHR\$ B; or PRINT #7;CHR\$ B;

```

9889 RANDOMIZE USR RN
9890 LET BG=PEEK 62383: LET CW=PEEK
62378: LET CU=PEEK 62385: LET CS=PEEK
61377: LET A=PEEK 62376: LET B=PEEK
62360
9891 IF CW=1 THEN PRINT#4: POKE
16005,A: PRINT #4: POKE 16006, B: GO TO
9894
9892 IF CW=2 THEN PRINT #4: POKE
16025,A: PRINT #4: POKE 16026, B: GO TO
9894
9893 IF CW=3 THEN PRINT #4: POKE
16045,A: PRINT #4: POKE 16046, B:
9894 IF BG=1 THEN GO TO 9914
9895 LET FIPEEK 62380: LET M=VEEK
62382: PLOT INK H;A,F: LET DL=PEEK
62304
9896 PRINT #4: DRAW (4*DL)18,0:
9898 IF BG=2 THEN GO TO 9902
9899 IF BG=3 THEN LET RN=61872: GO TO
9889
9900 IF BG=4 THEN -GO TO 9906
9901 IF BG=5 THEN LET RN=60899: GO TO
DR
9902 LET B=PEEK 62375
9903 IF CW=1 THEN PRINT #5;CHR$ B;: GO
TO 9917
9904 IF CW=2 THEN PRINT #6;CHR$ B;: GO
TO 9920
9905 IF CW=3 THEN PRINT #7;CHR$ B;: GO
TO 9923
9906 IF CW=2 THEN GO TO 9910
9907 IF CW=3 THEN GO TO 9912

```

<3> PRINT #5; “^”: or PRINT #5; “_”: or PRINT #6; “^”:
 or PRINT #6; “_”: or PRINT #7; “^” or PRINT #7; “_”.

<4> PRINT #5;“\”: or PRINT #6;“\”: or PRINT #7;“\”:

There are only three types of LKDOS extended BASIC window routines used by the data entry routine. These are <1> PRINT #4: DRAW (4*DL),8,0. <2> PRINT #5;CHR\$ B;. <3> PRINT #5;“^”:

Robert Shade
 3210 N Broad St
 Philadelphia PA 19140-5008

Demo programs excerpted Timex & LKDOS extended BASIC part #2 data entry routine

```

9908 IF CU=0 THEN PRINT #5; "A1 : GO TO
9926
9909 IF CU=1 THEN PRINT #5; "_": GO TO
9926
9910 IF CU=0 THEN PRINT #6; "A'": GO TO
9926
9911 IF CU=1 THEN PRINT #6; "@": GO, TO
9926
9912 IF CU=0 THEN PRINT #7; "": GO TO
9926
9913 IF CU=1 THEN PRINT #7; ".": GO TO
9926
9914 IF CW=1 THEN GO TO 9917
9915 IF CW=2 THEN GO TO 9920
9916 IF CW=3 THEN -GO TO 9923
9917 IF CS=0 AND CU=0 THEN PRINT #51"A1 : GO
TO 9926
9918 IF Ci=0 AND CV=t OR CS=1 THEN PRINT
#5;0-': GO TO 9926
9919 IF C8=2 THEN @PRINT #5;"\'': GO TO
9926
9920 IF CS=0 AND tUi0 THEN PRINT #6; MAX:
GO TO 9926
9921 IF CS=0 AND CU=1 OR CS=1 THEN PRINT
#6; '.': GO TO 9926
9922 IF CS=2 THEN PRINT #6; '\": GO TO
9926
9923 IF CS=0 AND CU=0 THEN PRINT #7; "A1
; GO TO 9926
9924 IF CS=0 AND CU=1 OR CS=1 THEN PRINT
#7; '.': GO TO 9926
9925 IF CS=2 THEN PRINT #7; "\"
9926 LET RN=62141: GO TO 9689

```

ERRATA

Part of the program listing of “Improving a Sector_COPYing Program” in the last issue - Vol. 6 No.1 was inadvertently left out. Here is the missing part:

```

420 =2: LET Density=2: message$="HD/1.44": SCOPY
430 =3: LET Density=3: message$="ED/3.2M": AT#0,8,7:
PRINT#0, "not yet supported": PAUSE 60:

```

```

AT#0,8,10: PRINT#0,Blank$: MAIN
440 =0: GO TO 1240
450 =4: Fmat
460 END SElect
470 END DEFine MAIN
480 :
490 DEFine PROCedure DD
500 OPEN#3, 'fp'&Aa$&'_d2d'

```

```

510 OPEN#4, 'flp'&Ab$&'_*d2d'
520 END DEFine DD
530 :
540 DEFine PROCedure HD
550 OPEN#3, 'flp'&Aa$&'_*d2h'
560 OPEN#4, 'flp'&Ab$&'_*d2h'
570 END DEFine HD
580 :
590 DEFine PROCedure ExD
600 OPEN#3, 'flp'&Aa$&'_*d4e'
610 OPEN#4, 'flp'&Ab$&'_*d4e'
620 END DEFine ExD
630 :
640 DEFine PROCedure SCOPY
650 CLS#2: PAPER 0: INK 7
660 AT 2,41: PRINT " _"; INK 5: PRINT Press$: INK 2
670 AT 2,19: PRINT "SCOPY "; INK 5: PRINT "from ";
      INK 7: PRINT message$; INPUT "flp";a
680 Aa$=a
690 AT 2,43: PRINT Blank$: INK 7
700 AT 4,41: PRINT " _"; INK 5: PRINT Press$: INK 5
710 AT 4,24: PRINT " to "; INK 7: PRINT message$;
      INPUT "flp";b
720 IF b=a THEN BEEP 2000,20: GO TO 700
730 Ab$=b
740 AT 4,43: PRINT Blank$: INK 7
750 IF Density=1 THEN DD
760 IF Density=2 THEN HD
770 IF Density=3 THEN ExD
780 tracks = 80
790 sides = 2
800 FOR track = 0 TO tracks - 1
810 x = 65536 * track
820 getrack
830 putrack
840 WINDOW#0,190,50,166,130: BORDER#0,1,2:
      INK#0,7
850 AT#0,2,10: PRINT#0,(1.25*(track+1)) DIV 1.25;"%";
      INK#0,2: PRINT#0," COPIed"
860 NEXT track
870 END FOR track
880 CLOSE#3
890 CLOSE#4
900 PAPER 0: INK 7: CLS: PAPER#2,0: CLS#2
910 BEEP 2000,20: PAUSE 14: BEEP 1000,14: PAUSE 10:
      BEEP 2000,20
920 INK 7: PRINT\,
      "Disk in flp"&a&" _ CLONed TO Disk in
      flp"&b&" " \\\\", " - PRESS <ANY KEY> to
      Continue -":
      PAUSE: CLS#2: MAIN
930 END DEFine SCOPY
940 :
950 DEFine PROCedure getrack
960 GET #3\X+1,a$:
      GET #3\X+4,b$:
      GET #3\X+7,c$:
      GET #3\X+2,d$:
      GET #3\X+5,e$:

```

```

      GET #3\X+8,f$:
      GET #3\X+3,g$:
      GET #3\X+6,h$:
      GET #3\X+9,i$
970 IF Density=2 OR Density=3 THEN
      GET #3\X+1+9,ha$:
      GET #3\X+4+9,hb$:
      GET #3\X+7+9,hc$:
      GET #3\X+2+9,hd$:
      GET #3\X+5+9,he$:
      GET #3\X+8+9,hf$:
      GET #3\X+3+9,hg$:
      GET #3\X+6+9,hh$:
      GET #3\X+9+9,hi$
980 REMark IF Density=3 THEN REMark
990 IF sides = 2 THEN
1000 GET #3\X+257,j$:
      GET #3\X+260,k$:
      GET #3\X+263,l$:
      GET #3\X+258,m$:
      GET #3\X+261,n$:
      GET #3\X+264,o$:
      GET #3\X+259,p$:
      GET #3\X+262,q$:
      GET #3\X+265,r$
1010 IF Density=2 OR Density=3 THEN GET
      #3\X+257+9,hj$:
      GET #3\X+260+9,hk$:
      GET #3\X+263+9,hl$:
      GET #3\X+258+9,hm$:
      GET #3\X+261+9,hn$:
      GET #3\X+264+9,ho$:
      GET #3\X+259+9,hp$:
      GET #3\X+262+9,hq$:
      GET #3\X+265+9,hr$
1020 REMark IF Density=3 THEN REMark 1030 END IF
1040 END DEFine getrack
1050 :
1060 DEFine PROCedure putrack
1070 PUT #4\X+1,a$:
      PUT #4\X+4,b$:
      PUT #4\X+7,c$:
      PUT #4\X+2,d$:
      PUT #4\X+5,e$:
      PUT #4\X+8,f$:
      PUT #4\X+3,g$:
      PUT #4\X+6,h$:
      PUT #4\X+9,i$
1080 IF Density=2 OR Density=3 THEN PUT
      #4\X+1+9,ha$:
      PUT #4\X+4+9,hb$:
      PUT #4\X+7+9,hc$:
      PUT #4\X+2+9,hd$:
      PUT #4\X+5+9,he$:
      PUT #4\X+8+9,hf$:
      PUT #4\X+3+9,hg$:
      PUT #4\X+6+9,hh$:
      PUT #4\X+9+9,hi$
1090 REMark IF Density =3 THEN REMark

```


QL Hacker's Journal

by Tim Swenson

The QL Hacker's Journal (QHJ) is published by Tim Swenson as a service to the QL Community. The QHJ is freely distributable. Past issues are available on disk, via e-mail, or via the Anon-FTP server, garbo.uwasa.fi. The QHJ is always on the look out for article submissions.

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c/o Tim Swenson
5615 Botkins Rd
Huber Heights, OH 45424 USA
(513) 233-2178
swensontc@mail.serve.com
<http://www.serve.com/swenson/>
swensont@dgis.dtic.dla.mil

Editors' Forum

As time goes by I'm finding myself doing less and less programming. My recent foray into distributing QL and Z88 freeware has kept me busy collecting QL freeware. Now I will have the pleasure of trying some of this software out, which always takes some time. I'm still working on getting QFAX going (after having it for almost a year). For some reason QFAX did not talk well to my modem. I've been meaning to sit down and figure out the problem, but it has become one of those get-around-to-it's.

The only programming I have been doing in some work in Perl. Perl is great for some Sys Admin work in Unix and I've written a few CGI-BIN scripts in Perl. I'm hoping to do Perl work full time.

A port of Perl to the QL may happen and I hope it does. Perl is a great language for quick programs. It's got the speed of development of SuperBASIC but with the power of C, awk, and SED.

In my browsing of the Web I've run across a web site dedicated to programming. Besides carrying information about a number of different languages, they also have a section on "classic" papers. I downloaded the following papers:

☐ What is "Object-Oriented-Programming"?

by Bjarne Stroustrup

Recommended C Style and Coding Standards

☐ How to Steal Code or Inventing The Wheel Only Once

by Henry Spencer

The papers are stored in Adobe Acrobat (.pdf) format and need an Adobe viewer to view or print out.

I started reading Bjarne's paper on OOP but have yet to sit down and go through it all. It discusses OOP by starting with procedural programming, then discusses data hiding, data abstractions, and then moves on to OOP. It looks like this may actually be the article I've been looking for, that really discusses OOP in relation to procedural programming.

I've always found other OOP articles that start of discussing OOP by defining the OOP terms but not relating them back to procedural programming. I need to see OOP in relation to something that I already know.

If you want to visit the site, it's at: <http://www.strange creations.com/strange/>

Using an older form of browsing, I was looking through my local library and ran across a book by P. J. Plauger. Mr. Plauger used to own Whitesmiths, a C compiler vendor, and has contributed to "Computer Language" and "C Users Journal" magazines. The book is called "Programming on Purpose III" and is a collection of "Programming on Purpose" columns he wrote for "Computer Language." The topics all deal with software technology, while the other two books deal with software design and software people.

The articles have some good things to say. They cover a wide variety of topics and are good idea generators. Some of the better articles covered technical writing, maintaining code, text editors, and user interface issues. I'm hoping that the library has the other two books as I am sure that they are worth the read.

I'd like to end with one final note; when I started the QHJ I had hoped that most of the articles would come from you, the readers, but I was not so lucky. As it is taking me longer and longer to produce each issue, I would like to make a request to some of you might take pity of me in my plight and pen a few words for this one-magazine.

Some Notes On Archive by Bill Cable

[This came to me as a letter and not an article - ED]

I am heavy into really relational databases now. The place I work uses Oracle. They have tables in their database with 50 million records or rows are they like to call them. I finally get to compare ARCHIVE (a quasi relational database) with the real thing. One thing that is striking is how the syntax of ARCHIVE like insert, select, order and so forth are actually the same terms used in SQL compliant relational databases. As far as I can tell anything you can do in a relational database you can also do in ARCHIVE. In a relational database it can often be done directly while in ARCHIVE you will have to write procedures to do it and often a simple SQL statement can require a lot of procedures to duplicate. Still, taking ARCHIVE and its language you can do about anything you want. It may take too long to be practical but you can still do it.

[SQL is only a language used to query a relational database. ARCHIVE is a relational database and most resembles dBase (II/III/IV). When doing queries, both ARCHIVE and dBase suffer when compared to SQL - ED]

In your last QHJ you discuss ARCHIVE a little bit. It is a very nice language to use and it is very tight (not many bugs). As you mention the `_prg` files are text files but the indentations seen in the ARCHIVE editor are not there. There is an easy way to get such a listing. In ARCHIVE you can list a program using the `LLIST` command. It normally lists to the printer with the indentations shown. If

you want to send the listing to a file use the SPOOLON command which will redirect LLIST, LPRINT, and such to a file or to the screen. That way you can use LPRINT and control output from LPRINT to screen, printer, or file.

So if you have some procedures loaded in ARCHIVE: llist <enter> will send indented listing to the printer.

```
spoolon "ram1_proc_txt"<enter>
llist<enter>
spooloff<enter>
```

will send indented listing to ram1_proc_txt. Be sure to always turn spoolon off or the file is still open and you can't access it if you haven't quit ARCHIVE yet.

Spooloff always sets output back to the printer. You can spooloff even if you haven't done spoolon without an error. A spoolon screen<enter> will send output to the screen instead.

Unfortunately there is no way for ARCHIVE to ready text files as when you might want to parse text and turn it into a database. If can, of course, read text files in the standard export format.

You are right in that ARCHIVE can load indented .prg files. One of the more powerful features of ARCHIVE is that you can have an ARCHIVE procedure write a procedure to disk and then merge it and use it. That is one way I have my ARCHIVE programs do things you can't simply precode.

Passing Parameters

When I was learning Pascal, one of the hurdles I had to get over was the concept of parameter passing. Parameters are used when passing data to procedures and functions. Parameters come in two types; "call by value" and "call by reference." When you pass operation to a procedure, you are "calling" that procedure.

When using procedures and functions, you need to know if you are calling by reference or value. Each has different effects on your program and not knowing the effects can cause what is called "side effects."

Call by Value - This means that the value of the parameter is passed to the procedure. The procedure only gets a copy of the data and whatever it does to the data, it does not affect the original variable. C defaults to call by value. SuperBASIC defaults to call by value only when you use numbers.

Call by Reference - This means that the variable itself (or a reference to it) is passed to the procedure. If the procedure changes the value of the variable, it is changed throughout the whole program. C uses pointers to get procedures to do call by reference. SuperBASIC defaults to call by reference when using variables.

When programming in C, you know when you are calling by value or reference. It is an important part of the language and taught early when learning C. In SuperBASIC it is not very apparent and not really discussed. In fact, I've been programming in SuperBASIC for over 10 years now and I did not know if it used call by reference or value. So I decided to play with SuperBASIC, read the manual, and figure this out.

Below is a simple procedure that takes a variable as a

parameter and increases it by one. We'll call the procedure inc for increment.

```
10 DEFine PROCedure inc ( x )
20 LET x = x + 1
30 PRINT x
40 END DEFine
```

When you call the procedure with a literal:

```
100 inc 20 or 100 inc (20)
```

SuperBASIC can only use call by value, since there is no variable to use in a call by reference.

When you call it with a variable:

```
100 inc var
```

SuperBASIC uses call by reference. This means that when you call the procedure, the value of VAR will increase by 1. In a way this procedure is working like a function called like this:

```
100 var = inc (var)
```

Of course, when you use a function you must use a RETURN statement.

If you do not know that SuperBASIC uses call by reference in this instance, then the value of VAR will increase when you do not want it to. This is often called a "side effect" of a procedure.

If you want to call the procedure with a call by value, you must tell SuperBASIC this. You can do this by putting parentheses around your variable, like this:

```
100 inc (var)
```

Now the procedure inc will get its own copy of VAR to play with and the real variable VAR will not change.

The same works with functions. Since functions need parentheses around variables used in a call, a single set of parentheses is used for a call by Reference and a double set of parentheses is used for a call by Value.

Recent Freeware - Clips

CLIPS is an expert system developed by NASA in 1986. It has been ported to the QL by Emiliano Barbaini of Italy. CLIPS is an interpretive language like BASIC or Lisp. Like Lisp or Prolog, CLIPS is designed for use in artificial intelligence.

CLIPS has three ways to represent knowledge: Rules, Generic Functions, and Object Oriented Programming (OOP). CLIPS supports the 5 features of OOP: classes, message handlers, abstraction, inheritance, and polymorphism. Or so the manual says.

When I read through the first part of the manual, it introduced CLIPS by talking about facts and rules. Facts are just "words" you tell CLIPS and rules are actions it takes based on the facts. Facts are whatever you define them to be. Here some examples:

```
(assert (bob))
(assert (animal-is duck))
(assert (animal-is bob))
```

Each fact is stored as a literal in CLIPS and no check is done on it. Rules are really IF..THEN statements. Rules say that if a given fact exists, then perform some function. Here is an example

```
(defrule animal
(animal-is duck)
=>
```


(assert (sound-is quack)))

If the fact (animal-is duck) exists (has been asserted) then the fact (sound-is quack) will be asserted. You can have multiple facts in a rule, the same as using AND in an IF statement, by listing the facts before the \Rightarrow . The same goes for having multiple actions in the rule, by listing them before ending the rule with a closing).

CLIPS terminology is a bit different and takes some getting used to. CLIPS uses the term field to define a single element in a fact. In (assert (bob)), bob is a field. In (assert (bob dave)), both bob and dave are fields. CLIPS supports the following types of fields: float, integer, symbol, string, external address, fact address, instance address, and instance name.

The manual that comes with CLIPS is really a tutorial. The reference manual as not passed to me. As someone new to CLIPS it is probably better to have a tutorial instead of the reference manual, it's makes it easier to learn the language.

I have not gone too far into the manual, nor do I know how far I will go. I don't see CLIPS used for much everyday computing on the QL, but it does have the potential for letting a QLer explore the non-everyday areas of computer science.

To get an idea of what one can do with CLIPS, the Proceeding from the first three CLIPS Users Conference are included at the back of the manual. Some of the area covered are: "Three CLIPS-based Expert Systems for Solving Engineering Problems", "Using CLIPS in a Distributed System - the Network Control Center (NCC) Expert System", "Space Shuttle Systems Monitoring: Real-Time Telemetry Processing Using CLIPS", "A CLIPS Expert System for Maximizing Alfalfa", "MOM - A Meteorological Data Checking Expert System in CLIPS", and "Using a CLIPS Expert System to Automatically Manage TCP/IP Networks". It looks like CLIPS can be used for a variety of applications.

CLIPS is a 500K executable and requires an expanded QL. I have a Gold Card on my QL and it works fine. I have not tested it on a 640K QL. CLIPS is available via QHJ Freeware (same address as the QHJ). Send a disk and return postage and it is yours. The FTP site maya.dei.unipd.it seems to be down, so Emiliano did not put it there. If a request is made, it can be put on ftp.nvg.unit.no in the QL subdirectory.

House Of Coding Style

I was recently doing some CGI-BIN programming in Perl. Since I was new to CGI-BIN programming, I did what every other programmer does when he is new to something, he borrows somebody else's code to see how it is done. I borrowed some Perl CGI-BIN code from our local CGI-BIN expert at work.

When writing my code I tried to stay close to the style that he was writing in. I did notice that he has a style that is very different than mine. He likes to put any long sections of code in a subroutine. Where as I do not like to break up these sections in to subroutines. My code looks kind of like this:

```
IF ..... THEN .....
```

```
-----  
IF ..... THEN .....
```

```
-----  
ELSE
```

```
-----  
END IF
```

Where as his code looks like this:

```
-----  
IF ..... THEN .....
```

```
Call Subroutine1
```

```
ELSE
```

```
Call Subroutine2
```

```
END IF
```

where the code in the IF-THEN-ELSE constructs were moved to two subroutines.

Now none of these subroutines were going to be called from more than one place in the code. I prefer to write subroutines only when they save writing the same code in different part of the program. To me subroutines are designed to save the amount of code you are writing.

My friends idea of subroutines is to make the main part of your code shorter and easier to read. This is fine if the sections of code that you are going to move into a subroutine are fairly long.

I prefer to not use a subroutine unless I need to write the same code many places. For me the subroutines break the flow of the structure of the program. I view it sort of like parsing a tree. Just as with a left- or right-handed rule, you keep moving down a tree until you come to a leaf node and then you back up and take the next branch, coding flows out like a tree structure going down all of the IF-THEN statements until an end is reached and then brought back up the tree with an END IF statement. One never parses a tree by individual levels of depth at a time.

I wanted to bring this up because it shows two distinct coding styles and why they are done that way, and maybe it will get you thinking about your personal coding style and how you feel about it versus others.

Recent Freeware - REXX

The REXX language was derived from a batch language on the IBM System/370 called EXEC 2. It has since become a standard language for OS/2 with implementations on other platforms, including the Amiga. A version of REXX has been ported to the QL.

REXX is a procedural language like BASIC, C, Pascal, etc. and its code has the same look as these languages. REXX seems to have the same constructs for writing a program, such as conditional statements, looping statements, input, output, etc., as the above languages, it just does it a little differently.

A beginning REXX program is like this:

```
pull a  
b=a*a  
c=1/a  
d=3+a  
e=2**(a-1)
```


say 'Results are:' a b c d e

Pull is equivalent to INPUT and say is equivalent to PRINT. The assignment statements are the same format as BASIC.

REXX supports untyped data in the same way that Perl does. A variable can hold either string or a number. The following program demonstrates how this can work:

```
a = 'A String'
b = '123'
c = '456'
d = a "." (b||c)*3
say d
```

The results will be: "A String: 370368". The function || concatenates the two strings, which is a number so it can be multiplied by three. This is then added with a variable holding a string and a string constant to get the final result.

REXX has a variety of loops and conditional loops.

Here are a few:

```
do 10 (repeat 10 times)
say "hello"
end
do c= 1 to 20 (FOR C = 1 TO 20)
say c
end
do until var = 10
.....
end
do while error = 0
.....
end
```

As you can see REXX is a fairly verbose language and is

fairly easy to read (unlike the terseness of C or FORTH). Most of the example programs are things that can be done in other languages, it's just a matter of figuring out how to do them in REXX.

The version of REXX for the QL is a 500K executable, so it will require an expanded machine. I don't know what the lower limits are to run REXX. I have tested it on a QL with a Gold Card and it runs just fine.

REXX is an interpretive language, like BASIC, but this implementation is not an interactive interpreter. If you execute REXX with no arguments, it will essentially do nothing. To run a REXX program, you have to exec REXX with the argument of the program you want to run. Of course, this means you need to have TKII.

To exec REXX with the example animal_rexx program included, you would do this:

```
exec rexx_exe;"animal_rexx"
```

This will execute REXX and load in the REXX program animal_rexx.

The QL version of REXX comes with a simple tutorial for beginners and a longer fuller document that does into greater detail about REXX. Since REXX is popular for OS/2 and Amiga, there are a number of sources on the Internet.

There really is not much else to say about REXX. If you are looking for another language to play around with, here is a good one. If you are looking to learn REXX to use on other platforms, this version of REXX should do the job. At the very least it give the QL programmer one more

TELECOMMUNICATION

by David Lassov

We have completed work on breaking out LarKen MaxCom into manageable pieces for the Timex-Sinclair 2068 computer. In so doing, memory was found for some additional features, and processing speed is enhanced.

We discuss three different areas here, features gained and lost, a change in CODE for remote character input, and future prospects.

We break MaxCom out into two versions, BOTH with and without Dallas SmartWatch, four versions in all.

Features Gained and Lost

MaxCom.BX does not use the clock and implements remote input, BBS MODE. Additional features, beyond Larry's product, include QUICKLOAD, BACKUP, LINE EDITOR, SWITCH MESSAGE BASE (at Larry's suggestion,) expanded STATUS list, on-line users' choice of four Message Bases, and lots of HELP FILES.

QUICKLOAD changes operating mode from MENU to BBS, while LOADING the GENERAL MESSAGES message base. BACKUP SAVES program and variables to the current disk and reLOADs. QUIT performs a LarKen NEW operation on the RAMDISK, replacing MaxCom.BX with the AUTOSTART file on channel 4. The line editor is an amendment to the WRITE MESSAGE facility of the remote BBS. It is required by the half duplexity of the WRITES.

The ability to switch to arbitrary MBs is available only to the SYSOP, since it accesses the system drive. Users already have a choice of four such MBs as well as many HELP files.

MaxCom.BT does the same as MaxCom.BX with addition of access to the DALLAS SmartWatch. We get time on, time off, elapsed time, current times, expressed in the STATUS reports and the stamping of remote message receipt.

TERMax.BX adds some features to Larry's product also, such as QUICKLOAD, SQUEEZE Message Base, BACKUP, QUIT, ZAP remote messages, VIEW FILE, and LINE EDITOR, amended to message entry.

QUICKLOAD goes from MENU mode to Message Menu, while LOADING the GENERAL MESSAGES Message Base. First, SQUEEZE does a CAT of the system disk and then regains message slots, by moving active messages to occupy ZAPPED message slots, freeing up their former locations for new messages. Progress is monitored by timely LISTs and STOPs, before proceeding with a CONTINUE. You don't want to lose anybody's information now, do you? On the other hand, any message can be VIEWED and ZAPPED here, too. Arbitrary ASCII files also can be VIEWED in either 32 columns or 64 columns.

TERMax.BT does the same as TERMax.BX with the addition of ability to READ the time stamps of messages plus some timing of its own.

Neither MaxCom.BX nor MaxCom.BT implements a CAPTURE buffer. There are no AUTODIAL facilities either. Thus, TERM mode (local access) is a little bit limited. There is, of course, less FREE RAM in any of these versions of LarKen MaxCom, due to the addition of so many features. And, lastly, duplexity has been reduced from FULL to HALF in the remote messaging system. The loss of FULL duplexity in trying to speed up LarKen MaxCom is what makes the line editor mandatory. For, with Larry, what you see-is-what-I-get. But now, what you see is what you requested. If you want to see what I get, then you have to go to EDIT.

With both versions of TERMax, we lose BBS mode and remote messaging, thus freeing up logging and commands sections for SQUEEZE, etc. Bottom line, we have less FREE RAM than with Larry's product.

The BIG CHANGE in coding philosophy for remote messaging is one use of INPUT#7 for a message line, rather than as many as eighty uses of INKEY\$7 for the same message line. Larry complimented us on the slow performance of the latter with FULL duplex, but Don

Walterman's use of the line editor convinced us to go with the former and HALF duplex. I mean, INKEY\$7 with FD is slow and gives immediate feedback on the integrity of the last character ENTERed. But, INPUT#7 with HD is FAST, and the integrity of ALL the lines ENTERed can be confirmed by POST-EDIT, a more satisfactory solution all around, except in the case of cheap-skates who don't care what OUR version of THEIR message looks like

So now, message entry is RAPID and ACCURATE, subject only to a very minor irregularity in WORD-WRAP, which does not even show up in the received message.

Prospects

Our main interest in engineering is MODELING and SIMULATION. We have developed our own simulation language. Systems-Oriented Language, and we got into messaging, only as a way of sending SOL over the phone. We have found, that phone connections are conserved, even after performing a LOAD and a SAVE, at least they are under SOL BBS. And, we are anxious to report on the results of our continued attempts to SEND SOL. Think we'll need to send graphics though. We'll let you know in the pages of UPDATE magazine!!

DAISY BE GOOD -VII

by David Lassov

Greetings, once again, to all us aficionados of the Timex-Sinclair Computer, model 2068. Let us proceed with our exposition of Bill Jones' GREAT software for Word Processing on the 2068, by performing a LarKen NEW operation on the Daisy issue disk #1 from UPDATE magazine. This LOADs the AUTOSTART program in and also begins executing file Daisy.B6.

We are first presented with Bill's broadside, "DAISY / The TS-2068 Software System / For The / LarKen Disk System" in the form of a screen string or SCREEN file. Press of 3 2 1 y y y in succession, get us to where we want to start this discussion, the FUNCTION MENU, by initializing the printer and its software.

This time, we discuss entry #6 on the MENU. It is a short topic, called "Print Typing," and provides a means to use the 2068 in what Bill calls "Typewriter Mode."

All it does is PRINT u\$. What is u\$, you ask? All textual input from the keyboard goes first into u\$, before being broken up into manageable pieces by the daisy software.

So, here is how we make use of u\$ and Typewriter Mode. First, put something into u\$, by pressing #1 at the FUNCTION MENU, which is "Input-Edit". Then, elect #1, "Daisy DB Manager", since we are discussing DAISY

here, and UDBM is a whole other program (worthy of its own series of articles.)

OK, now we are looking at the "QUICKIE MENU", which governs Input and Edit. Do you see #1 "Typing" and #5 "DELETE BUFFER"? Well, they are both talking about u\$, the typing buffer, and, as long as we don't touch

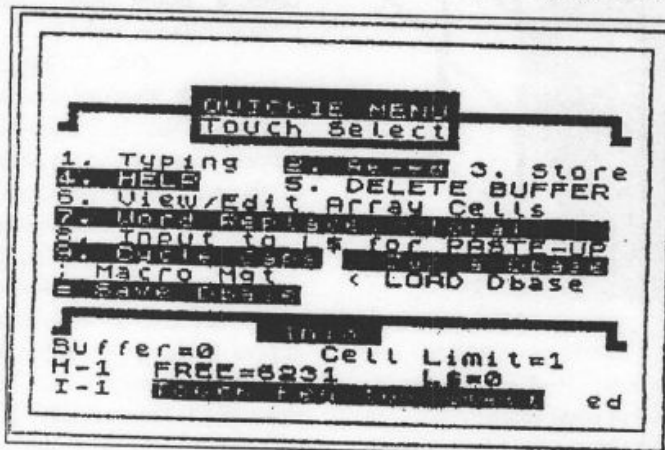
#3 or #5, working only with #1, we can build and add to u\$ via keyboard input, limited only by available FREE RAM, as shown on the QUICKIE MENU. We can also PRINT the contents of u\$ at any time, by going to the FUNCTION MENU (either BREAK, GOTO fin. or PRESS 4 at the QUICKER MENU!)

We see, that punching #5 DELETES whatever we are working on in u\$ and

starts us over with anew u\$, whereas punching #3 "Stores" the current u\$ into the next available buffer, h\$ or i\$, there being seven of each buffer. In any case, #3 or #5 results in an empty u\$, and we have to start all over, if we be only using #6 at the FUNCTION MENU to "Print Typing".

Next time, we get into #7 on the FUNCTION MENU, which invokes Automatic Printing, the main feature of Daisy

Welcome back !! We LOAD our RAMDISK with the daisy menus, using Richard Hurd's "rdbkup" and drive #0.



Then, we swap disks, putting in our souped-up version of Daisy, and bring up the MAIN MENU on drive #0 as the AUTOSTART file.

Well, let's see, entry #3 "dbms" doesn't have any printers or input/edit facilities on board. Entry #2 "Input+Edit" has no printers. Entry #1 "Print+MMrg" has no way of inputting text. Entry #0 "Manl Adrsg" has everything except enough memory. We keep it around for use in bank H, after we develop a bank-switched version, using RAMDISK. We expect a lot of FREE RAM then !!

Now, we are talking about using Typewriter Mode, which doesn't sound too memory-intensive. So, we punch 0 at on the MAIN MENU on drive 0.

The drive grinds away, as "ManlAd.B6" LOADs, and

our broadside comes up, inviting 3,2,1,y,y,y as keypresses, to initialize the printer.

Up comes the FUNCTION MENU. We press #1 for Input-Edit. We press #1 again "Typing" and enter a test message into u\$. We exit this INPUT mode for the EDIT mode by pressing Symbol-shift and CAPS-shift at the same time. Thus, we are at the QUICKIE MENU, and we punch #4 "HELP" in order to bring up the FUNCTION MENU.

Here, we punch #6 "Print Typing", and the on-line printer springs to life, listing u\$ in an overwhelming display of the convenience of Bill Jones' Typewriter Mode on our DAISY software... PERFECT !!

The Web

When it comes to the World Wide Web, it's easy to feel stupid, or just out of it. Every newspaper and magazine seems filled with know-it-all stories, about the thing, and your computeraddicted friends can't wait to babble on about it, pausing dramatically at cocktail parties to utter techie terms like "home page" and "browser." They all make the Web sound better than sex, only more



Nurit Karlin

mysterious. But unlike sex, which is depicted and dissected in detail hourly on every TV channel, nobody seems to want to explain the Web in plain English.

Well, here, ignorance of technology is never mistaken for stupidity, and no question is too simple. So here are some succinct answers to common questions about the Web. Cut this out and memorize it so you, too, can act cool at parties.

Just what is the World Wide Web in 25 words or less?

It's the most famous and usable feature of the Internet, which is a worldwide network of computers you can tap into with your computer.

Why would I want to use the Web?

Because the Internet's computers, many of which are

huge machines at universities and corporations, store vast volumes of publicly available material. This includes text, pictures, sound and video that you may find useful, or just interesting, for business, education or entertainment. Using the Web, you can read, view or hear this stuff on your own PC, and print it out or save it on your disk for perusal.

What's a "home page" or a "Web site"?

The Web is made up of millions of "pages," which are nothing more than small collections text pictures and graphics, and usually references to other pages containing related material. A "Web site" may contain many such pages. A "home page" is the page at each site which serves as a kind of book cover or table of contents to organize and introduce the other pages and site.

Even if a site consists of just a single page, it's still called a "home page." The coolest feature on any Web page is called a "link."

OK, I'll bite. What's a "link"?

A link, also called a "hyperlink" is a special hot spot marked on the Web page. When you click on it with your mouse, you jump to an entirely different page - possibly in a whole different Web site in another state or country - which has material related to the link.

For instance, a Web page about rock 'n' roll might contain links that transport you to a separate in-depth pages devoted to individual performers. Links usually appear on a page in the form of underlined words or phrases in special colors, or small pictures or graphical icons. Each has invisibly embedded within it a "URL," or the unique address of another page.

A U-R-what?

It's an acronym for "Uniform Resource Locator," or "universal resource locator". This is the complex address that directs your computer to the location on the Internet of any Web page.

These addresses look like this "http://www.apple.com", which is the location of Apple Computer's home page. The "http" refers to a protocol, or communications method. The "www" stands for World Wide Web and "apple.com" refers to a big computer at Apple. The suffix ".com" means the site is commercial.

Colleges use the suffix ".edu" government agencies use ".gov"

If a URL points to a page located outside the US., it also includes a two-letter country code, like ".uk" for the United Kingdom. The Web gives you access to sites in virtually every country in world.

How do I "tap into" the Web?

Some of the Internet large computers function as gateway to the Web. By connecting to one of these gateways temporarily, a computer user can "surf" the Web. If your computer is in a corporation, government agency or university, you can often reach one of these gateway machines by simply linking up to it via an internal computer network. (That is why students are over-represented among Internet users.)

Otherwise, you have to pay somebody with a gateway computer for access to the Web, and then dial into that gateway over the phone lines using the modem on your computer.

These commercial "access providers" range from the big on-line services, like America Online, to smaller

national outfits like Netcom, to local firms. A typical fee is \$20 a month for 20 or more hours of access time, but rates and plans vary.

Do I need special software to dial into the Web?

Yes. You need one or more programs that actually make the phone connection, and you'll also need a program called a "Web browser" that can display the contents of the Web. There are many such browsers, but the best-known one is the "Netscape Navigator".

In some cases, the dialing programs and browsers are combined into just one software. The latest versions of the America Online, CompuServe WinCIM, that I use, and Prodigy software perform both functions, as does a program called NetCruiser sold by Netcom. These programs also automatically sign you up for an access account the first time you use them.

So those are the basics. Practice in front of a mirror tonight, saying things like "Netscape" and "URL" with the right air of techno arrogance, and amaze your friends tomorrow.

From the MMCC BBS 847 632-5558

WANTED Fred Reimers, KF9GX, is looking for an old article. March 1993 QEX 432 MHz Amplifier.

Fred Reimers, KF9GX, is looking for an old article. Dec. 88 issue of Ham Radio magazine. Article is 4-digit DTMF decoder

Contact Fred on 847-576-3540.

FOR SALE Icom T21AT 2M HT. The unit also receives on 440 and will do full duplex, transmitting on 2M and receiving on 440. Given 12V this HT will produce 6W, rather than the more common 5W.

Usual HT stuff, 99 memories, CTCSS encode/decode. DTMF encode/decode, autodial. The T21AT is a nice compact size, has a backlit display and keypad, 800mah battery (in very good shape).

Downsides? The T21AT uses an SMA antenna connector, I have an adapter for BNC which I'll include. There are a couple light scratches on the outside edges of the display. I'll also include the filtered car cord and an AA battery case. I have the original manual and box. Steve KA9QOA . \$175

FOR SALE 2 month old Yaesu FT40 440 HT The HT includes the 5W (600mah) battery and the FFT-10/A16S keypad with CTCSS encode/decode, DCS encode /decode, digital voice recorder- all the bells and whistles. Memories are kept in banks, a nice touch, and can be named with 4 characters. Direct FM allows the digital coded squelch (DCS) to function and results in excellent voice quality. The FT10/40/50 series is very well built (meets some mil-spec rating) and is water resistant. I have also had very good luck with the receiver being intermod resistant. Radio is in excellent condition, only downside is the SMA antenna connector (male on the radio) but I'm including the BNC adapter. I have all the original accessories, box, and manual. Steve KA9QOA \$275

FOR SALE Radio Shack, Patrolman mobile scanner 12V only, 100 channel, in banks of 20 x 5. Cover 30-950, with the standard skips. 30-50, 118-174, 440-512, 800, modified

to extend on to 950, yes it receives cellular. 5 years old, works-looks like new. Orig 220.00, Want \$75

Call Gary 847-538-1449 N9SBL

WANTED Looking for a Kenwood BT-1 Alkaline Battery Case for a TR-2500/3500.

Call John Gilbert KA4JMC at 847-576-6215.

FOR SALE IC-37A 222 MHz 25 W Icom Mobile Never used in contests or HiPwr operation. \$225 IC3AT 222 MHz Icom Portable w/PL \$100

IC02AT 2 meter Icom Portable w/PL, LCD display, 10 memory \$175 Both with Hi Capacity Battery Call Nick Berg 847-435-7880 or CNB001@email.mot.com

FOR SALE Upgraded SB-220 New Heavy Duty Peter Dahl Hypersil Power Transformer New filter capacitors New Metering/Rectifier board VHF parasitic suppression In-rush current limiting New heavy duty fan Soft-Keying The above upgrades were made in March 1996. Tubes are in Excellent condition 2 spare tubes included 2 new condition tubes included. These tubes have been tested but never put in service. \$800 Andy Bachler N9AB

Work 523-6167 Home 566-0594

FOR SALE Amiga 2000 w/HD 8M Fatter Agnus and loads of software\$600 GVP G-lock new in box\$150 TASCA Porta 03 new\$160 312-536-6693

FOR SALE Epson 286 40M HD 14" color mntr NEC 5200 Pinwriter dot matrix printer & lots of software 815-477-9934.....\$250 OBO

FOR SALE Macintosh color classic 6M RAM 80M HD 14.4 FAX MODEM \$600 OBO Jeff 815-334-0048

FOR SALE Iomega 100 MB zip disks 3-pack. \$35 708-894-8716

FOR SALE Intel P-133 MHz computer brand new 1 yr parts & labor 16MB EDO RAM 4XCD & sound card 1.2 GB HD, 15" monitor 28.8 fax/modem Windows 95 CD games pack Shibu 708-549-9472

FOR SALE NEC multisync 2A 13" color mntr 800X600
Exc cond\$150 OBO Dave 708-359-8574

FOR SALE Internet in a Box 2.0 for Wndws & Windows
95 never used \$45 708-934-5431

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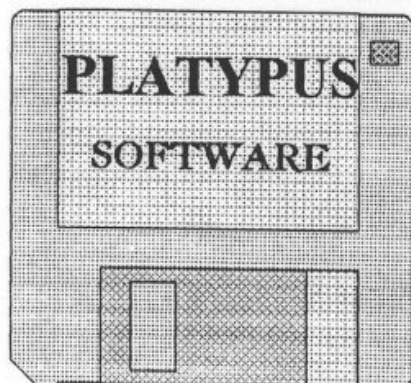
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| A real Collector's Item! | |
| 1 Melbourne House Software Pack 8 Pieces | \$25 |
| 1 SOFTSYNC Software Pack, 9 Pieces | \$25 |
| 1 Software Farms HI REZ Software Pack, 3 Pieces | \$20 |
| All 3 Titles For The 1000 | |
| 1 TIMEX Software Pack, 3 Pieces | \$10 |

- | | |
|--------------------------------------|------|
| 1 Magazine/Book Pack 3 Books/21 Mags | \$25 |
|--------------------------------------|------|

For Above Items Please Use Reference # FRSU0792

- | | |
|--|----------|
| 1 MIRACLE QL Printer Interface | \$35 |
| 1 QL Technical Guide | \$10 |
| 2 AERCO FD 68 Disk Interface w/256K RAM | \$100 ea |
| 1 COLECO Power Supply For Use With FD 68 | \$5 |
| 1 RITEMAN 9 Pin Dot Matrix Printer | \$115 |

Includes: Tractor/Roll Feed w/8 Ribbons Graphics Compatible

For Above Items Please Use Reference # RDSU0393

- | | |
|---|--------|
| 1 Timex Sinclair 1000/ZX81 Users Manual | \$2.50 |
| 1 The Timex Personal Computer Made Simple | \$2.50 |
| 1 Mastering Your TS1000 Personal Computer | \$2.50 |

Collector's Items

LIPINSKI'S Software Buyer's Guide To TS Products and Services In Loose Leaf Binder \$10 pp.

Special! All 4 items above for only \$15 pp.

For Above Items Use Reference # HCU0793

CNSN 3 Last Updated: April 29, 1996

- | | |
|---|---|
| 1 TS1000 with Filesixty rubber keyboard overlay, excellent condition. | \$25 (Add \$5 for 1000 ma. power supply). |
| 1 MagicBridge 16K RAMPACK (Great Britain). Siliconed rear cover removed, can easily be replaced. Like new | \$5.50 |
| 1 E-Z Key Keyboard mounted in 9"x14" E-Z Key enclosure. TS1000 mounted inside. Added features: AC & DC power switches, AC & CD fuse holders, reset switch, video INVERTER, AC outlets for power pack/TV/cassette, MOV spike protection. DC voltmeter & ammeter. Paint is scratched some, but good for peripheral experimentation. | \$60 |

For Above Items Please Use Reference # VVU0491

- | | |
|---|--------------|
| 1 TS2068 Computer - New - Never used - Complete | \$55 |
| 1 TS 2068 RGB Monitor adaptor w/docs. | \$10 |
| 4 TS 1000 S/W: Toolkit/Grapkics Kit/Pac-Rabbit WMJ Supertape. | All for \$12 |
| 1 A&J Printer Driver Software For 2068 And A&J | \$5 |
| 2 TS 1000 Computers In Original Boxes -Never Used | \$28 ea. |

For Above Items Please Use Reference # FHU0291

- | | |
|------------------------------------|----------|
| 1 Miracle Centronics I/F | \$40 pp. |
| 1 Dual 5.25 Drives W/Case/Cable/PS | \$195pp |

For Above Item Please Use Reference # SAU0291

Another Great Package Buy!

Here is your chance to get a Sinclair QL, in great shape, with power supply, manual and original software, 8 blank MDV carts and a box that holds 12 cartridges. You will also get a NAP 12" amber composite monitor and all cables needed to hook it up. To round out the package, there are 3 books and several issues of QL magazines to go along.

All Of This For Only \$100!!

Please add \$15 for shipping within the 48 contiguous states. Don't wait! This one will sell fast! A great starter or back up package for someone.

Use Reference # JCU0893

NOTE: All of the above include shipping unless noted to add more.
Please allow 3-6 weeks delivery on these items. Owner will be shipping direct to the buyer.

CNSN 5 Last Updated: May 12, 1996

Here Are A Few Great Items For You Collectors!

1 TS1000 16K RAM, Manual, p/s, MINOT adaptor	\$25
1 Memopak 64K	\$27.50
1 Digital dual disk drive w p/s/fan/case/2 drives 40 tr. SS/DD 5.25"(Aerco FD/ZX) w/Aerco Centronics interface w/docs. Bill Boss DOS on disk for the TS1000. This requires the MINOT adaptor. PRO/File on disk, 6 Disks with many programs.	\$225
1 TS2040 Printer in original box	\$20
1 Memotext Module	\$20
1 Memotext on disk by F. Nachbauer	\$20
1 Memocalc Module	\$20
1 Memotech HRG Module Never used w/book below. Graphics A to Z Bingham explains HRG	\$30
CASSETTES	
2 ea. Prog. Tool Kit/Graphics Softsync	\$4 ea.
1 Krakit/ 2 Frogger	\$4 ea.
2 ea. Budgeter/States & Caps	\$1 ea.
1 Algebra 1	\$3
1 Carpooler	\$1
1 ea. Strategy Football/Puzzler/Graphic Golf Crosswd	\$2 ea.
1 ea. Organizer/Home Asset mgr	\$2 ea.
All Of The Above For Only \$4.50 (Includes Shipping)	
1 Memotech Centronics interface	\$25
1 Cable for above	\$6.50
1 Advanced budget mgr. Softsync	\$4

1 Execu-Soft 7 software prgms for the small business:	
1 Customer Credit	1 General Ledger
1 Execu Diary	1 Address and Phone File
1 Accounts Payable	1 Accounts Receivable
1 Inventory	3 Blank Cassettes/data
All in plastic binder	
\$30	

For above unit use reference #HCU0793

CNSN 11 Last updated: April 29, 1996

A new client has the following for sale:

You can own all of the items in this group for only \$400 pp.

1 QL Package includes:	\$350
1 QL Computer	
1 Trump Card 768K RAM	
1 Dual disk drive set; 1 5.25" 360K, 1 3.5" 720K	
1 Sinclair Vision 12" RGB Monitor.	

1 Miracle Centronics printer Interface	\$25
1 Star Gemini 10X parallel dot matrix printer	\$75
QL Computer (backup)	\$40

These items are in extremely good condition and will make someone a great package.

Please use reference RCU0696

You can own all of the items below for only \$350 pp.

1 TS-2068 Computer in original box	\$50 pp.
1 TS-2068 Computer with modified keyboard overlay	\$35 pp.
1 TS-1000 in metal EZK60 keyboard box w/RAMPAK	\$75 pp.
1 Dual 1/2 ht. 5.25" disk drive set in case w/ps.	\$100 pp.
1 TS-2040 printer w/ps	\$25 pp.
1 High quality Joystick	\$12 pp.
1 Centronics printer Interface (AERCO)	\$40 pp.
10 5.25" disk holders - each holds 10 disks	all \$10 pp.

(All interfaces and adapters needed to run each item included; including disk interfaces)

Cassette software: TASWORD/Taswide/Multidraw*/Personal accountant/Scrabble*/VU-File/Machine Code tutor/MTERM/MTERM+/Profile*/TS Count/Spectra-Mac/MSCRIPT*/VU-3D*/Inventory Control/007

Spy/ZXAS/The Complete TS-1000/ZX-81 BASIC Course. (Followed by an * means also available on 5.25" disk)

Disk Software: MSCRIPT 5D/VU-File/Gaz/World all \$20 pp. Operating system includes: AERCO, HDOS, LarKen and QDOS

Books all for \$30 pp.

TreeForth, Profile 2068, the Essential Guide to TS computers, the TS-2068 Explored, VU-CALC, TS-1000 User's Guide (2 vol.), TS-2068 Tech. Manual, Inside the TS-1000, the Sinclair ZX-81/TS-1000, SAMS Beg./Int. Guide (2068), SAMS Int./Adv. Guide (2068), ZX Spectrum, Mastering TS-1000, 51 Games (TS-1000/1500).

All documentation are included where possible.

Please use reference JCU0989

CNSN 17 Last updated: May 6, 1996

The second item is a **2068 Emulator** for the IBM PC. Actually it is an overlay for an existing Z80 emulator. This overlay, written by Keith Watson, allows us to run most 2068 software on our IBM machines. If you register the Z80 emulator, you can even SAVE/LOAD to/from cassette tape via the parallel port as well as save to the floppy or hard drive. (The emulator also emulates the Interface One microdrive serial SAVes.) RMG will have both the shareware version of the Z80 emulator and the 2068 overlays available very soon. If you order both at the same time, the cost will be just \$10 postpaid. We can supply them on 3.5" 720K or 1.44M as well as 5.25" 360K or 1.2M MS-DOS format.

We have a new software package for anyone who might want to start their own **BBS** on a Timex/LKDOS system. After more than 3 years of work, this software is now on-line in Arizona and the creator wishes to offer the program for sale to anyone else who may want to give it a try. The **SOL-BBS** Program is being offered for the price of \$25.00 postpaid on LarKen disk. The system can be used with a variety of disk configurations. It works with a ZSI/O serial port and LarKen RAMDISK board. It operates flawlessly at 1200 baud according to the writer. If you have an interest in giving it a try, give us a call or drop us a line for more information. Please include a legal (#9 or #10) SASE.

For you **MS-DOS** or **PC-DOS** users out there: RMG has written and is marketing a new utility package for DOS users. It is very user friendly and is a great way for beginners to get things done, such as formatting disks, copying/moving /viewing/editing/deleting files, as well as many other everyday things we DOS users need to do. It is called the RMG UTS Package and the price is \$10 postpaid. Available on 3.5" or 5.25" disk. It makes use of PKZIP, 4DOS, and QEDIT shareware programs. All are available if needed. If you need all of them, the price would be \$20 postpaid. Let us know if you are interested.

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