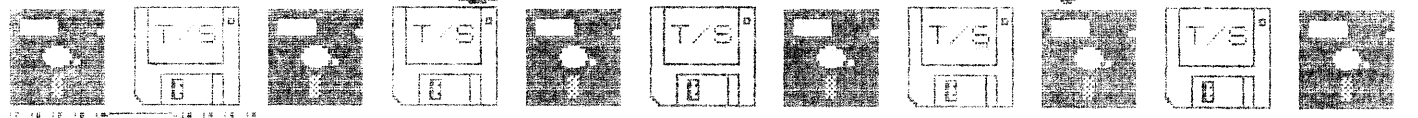
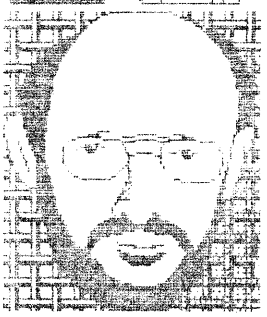


UPDATE MAGAZINE

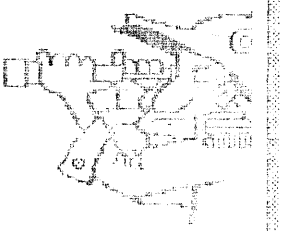
JANUARY, 1992

$4.95





THE YEAR OF DISCOVERY FOR SINCLAIR



QL

Z88

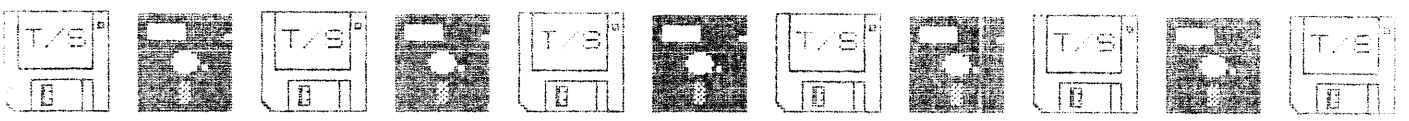
TS2068

SPECTRUM

USERS

INCLUDES THE SINCLAIR DESKTOP PUBLISHING JOURNAL





UPDATE COMPUTER SYSTEMS is Edited and Published by Carol and Frank Davis of P.O. Box 1095, Peru, Indiana 46970. Phone number is 317-473-8031, with normal phone hours being between 5 P.M. and 9:30 P.M. Eastern Time during the week and Noon to 6 P.M. on weekends. When we are not there or unavailable, please leave a message with our answering machine, you'll be answered by mail.

Mailing date for all issues is the fifteenth of the issue month. At times due to Postal Holidays, or the 15th falling on a weekend (bulk mail not accepted on weekends) they will be received at the Postal Unit the next business day. Please allow two to three weeks from this date before assuming your issue is not on its way to you. The Postal service tells us it can take as long as 6 weeks via bulk mail. For those wanting speedier service we can arrange your issue to go by First Class Mail, but that will raise the price of your subscription by $3.00.

The magazine is published on a quarterly basis in the months of October, January, April and July. All subscriptions begin and end at the same time...first issue being October and all renewals coming due after receipt of the July issue. The cost is $18.00 U.S. for a one year subscription for North America, and for those outside of this area $20.00 U.S. We accept personal and business checks, money orders, and Cash. We do not accept credit cards at this time, due to costs. Back issues, where available can be obtained from us, at regular prices.

Assistance in Publishing this magazine is provided by Eliad P. Wannum, poet, computer user and all round good guy. The magazine is made possible by the regular contributors such as Peter Hale, Bill Cable, Al Feng, Bob Hartung to name a few, and by the many contributions of other writers and programmers. Your contributions to this magazine are welcome. This is truly a magazine BY THE USER AND FOR THE USER OF SINCLAIR, TIMEX AND CAMBRIDGE COMPUTERS. When we cover other operating systems such as CPM or MSDOS it will be in relationship to our computers or emulators for our systems to run their software. We primarily cover disk based systems and software for the TS2068, Spectrum, QL, Z88...and will cover items on the TS1000 if disk drive based or in relationship to using it with the above mentioned computers. We do accept reviews of peripherals that are useable by our systems, such as scanners, printers, modems, etc. Submissions should be on disk or hard copy (two copies and at least NLQ, no draft mode). If there is artwork, please let us know in what order it should be used, and provide it as a saved screen or hard copy screen dump. The format is very relaxed. Just pay attention to the width of the pages and allow 3/4 inch top and bottom, and make the left and right margins wide enough to accomodate a 3 hole punch that does not cut out some of the text. We have enlarge and reduction capacity to adjust a page, but may lose some print legibility in the process. Most important is legibility. Draft quality dot matrix does not reproduce well. Print size preference is ELITE 12 characters per inch. PICA 10 characters per inch is okay also, but please no condensed print. Please do not make programs submitted on cassette tape under any circumstance, disk or hardcopy only. Exceptions to this would be the wafers used on the Rotronics Wafadrive for the Spectrum or TS2068 with emulator. Z88 programs on disk may be in either IBM or QL format or hardcopy. TS2068 programs may be LLISTED in 32 chr. lines.

UPDATE COMPUTER SYSTEMS PAGE DIRECTORY, JANUARY 1992

The computer that an article concerns is marked by using the following mark at the start of the page number-TS2068 = *,QL = # ,Z88 = % ,TS1000=^. There will be no mark if the article or ad applies to all or several different computer systems.

Inside Front Cover contains magazine basic information

Page No. 1---Directory
Page No. 2---The Editor Speaks by Frank Davis
*Page No. 3---Graphic Screen Dump by A. Kahale
Page No. 4---Editorial-The Year of Discovery by Bill Ferrebee
Page No. 5---RMG Ad
*Page No. 6---Wall Street, Here We Come!$ by A. Kahale
Page No. 9---Back Issues of UPDATE
*Page No. 9---Household Accounts on the TS2068 by Basil Wentworth
*Page No. 10---The Print Factory Graphics-an Ad by John McMichael
*Page No. 11---Byte Power Ad
*Page No. 12---More About Daisy Smart Text, Part of the Hybiscus Ensemble by Bill Jones
*Page No. 16---12 Volt Modification by William McKelvey
^Page No. 17---FD-ZX Floppy Disk Interface by Don Lambert
%Page No. 19---Z88 ASCII Translation Programs by Dave Bennett
%Page No. 20---A Few Z88 CLI Applications by Dave Bennett
%Page No. 21---Z88 Spreadsheet Use from Z88 Fax News
Page No. 22---Requests from UPDATE Subscribers
Page No. 22---Composite Monochrome Signal to a TTL for TS1000 and QL by Jim Harrell
Page No. 24---Computer Meandering by Eliad P. Wannum
*Page No. 25---New Commands Effective with JLO Safe V2.6 by John Oliger (more updates to come)
Page No. 27---Ed Grey Enterprises Ad
Page No. 29---Mechanical Affinity Ad
#Page No. 30---QL Solitaire-A Review by Peter Hale
#Page No. 31---Sorted Directories by Bob Hartung
#Page No. 33---Cable Column-Archive Series by Bill Cable
#Page No. 35---EMSoft Joins DJC
Page No. 37---EMSoft Ad
#Page No. 38---Video Interface with QL Computer
*Page No. 41---Sinclair Desktop Publishing Journal by Mike Felerski
#Page No. 46---QL Desktop Publishing by Frank Davis
Page No. 48---Sinclair Publications-A Review by E.P.Wannum
#Page No. 49---Quanta Library Update
#Page No. 50---Quanta Application
Back Covers ---Issue Disks for TS2068 and QL

All material used in this publication is copywritten and remains solely in ownership by either the Magazine or the author. To reprint from this magazine please contact either the magazine or specific author. All Issue Disks are copyrighted and remain the property of the software author. All hardware advice is followed at the users sole risk. Where needed please consultant competent help on all hardware modifications or projects. Most of all enjoy the magazine and may it greatly enhance your use of your computer.

THE EDITOR SPEAKS

Welcome once again to the pages of UPDATE. This is the 6th issue that Carol and I have produced since taking this over from Bill Jones. By the way, Bill Jones is also a subscriber. Those who use Sinclairs in North America can be proud of all he did to encourage North American production of programs for the TS2068, Z88 and the QL. I want to continue that tradition.

Several people, such as Kenton Garrett, Rob Martin, Bob Dyl, Peter Hale, to name a few, have over the past few months asked me why we do not have any North Americans putting together hardware and software to rival that for the Spectrum and the QL. Those are very good questions. We have access to a lot of technical data and hardware here in North America. Why are we not using it? We have some excellent programs from Peter Hale, Bill Cable, Al Feng for the QL...but the last game I recall was Mark Stubers war games for the QL, several years ago. If we can get some good games, arcade or adventure, we will do what we can to get them heard of outside of the U.S.A. and Canada. If you have an idea or are working on something, there are people who can give you support.

The same goes for the Spectrum. With a good Spectrum emulator on your TS2068, you can write programs for the Spectrum. This can be done. There is still a large market outside of our continent for this type of software. We are hampered here by the differences in our disk interfaces for the TS2068, so I think right here at home we need a program that will allow an Aerco to read and run programs made to run on Larken, Oliger, Ramex, or Zebra interface. Would it really be that difficult? It would be nice to be able to take a disk from the Toronto club in Larken format and be able to use it in Indiana on an Oliger without have to redo the Basic on it and change the DOS commands.

What about hardware? Bill Pedersen has for years tried to get someone to build his board to use IBM peripherals. Would it be nice to put a hard drive, or a scanner on your TS2068? I have long heard that we Sinclair users are cheap skates. Well guess what, IBM compatible IDE hard disk cards are cheap also. They can be gotten for anywhere from $29 to $100. I see IDE compatible hard drives for $75 to $200 everytime I go to a computer show or a ham radio show.

Please give this matter some real consideration.

NOTES FROM BOB HARTUNG

Too late to change in his article on "Sorted Directories", Bob called to tell me that line 120 should be "GOTO 210",rather than what is in the listing. Please note this change before typing in this program.

A 2068/QL MONITOR

--Bob Hartung--

The Winter catalog for American Design Components lists a close-out sale of Magnavox Model 80 monochrome (amber) monitors for $59.00 plus 10% shipping, and $3.00 handling per order. This composite monitor has an excellent "gray-scale" 900 X 350 resolution and a 2000 character, 25-line display. It may be connected to the 2068 composite output with a patch cable having two RCA phono plugs, and to the QL monitor socket using pins 2 (GRD) and 3 (COMPOSITE MONO) as shown in QLUG Concepts diagram, p. 33.

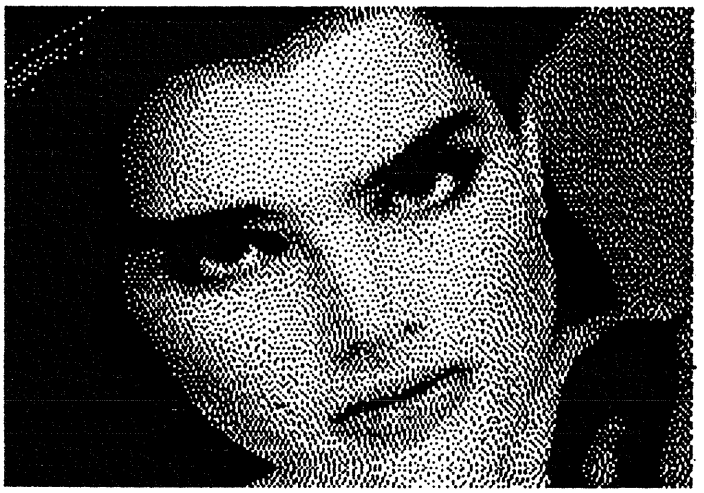
Address: P.O. Box 2601, Secaucus, NJ 07096-2601. Phone: (800) 776-3700. FAX: (201) 601-8990. AMEX, VISA, Mastercard.

GRAPHIC SCREEN$ DUMP

for the Tandy DMP105

by:- A. Kahale CATUG
335 W. Newport Rd.
Hoffman Est., IL 60195

This printer is not supported by any software that I know of, having a non Centronics protocol but a fairly good 7 pin head dot matrix with graphics capability. The 176 vertical pixcels divided by 7 do not result in an integer number. So, after a two hours session with Bob Swoger, the following program was developed and **it worked,** but **SLOW,** 15 minutes for the screen dump. Later on, I was able to convert the working part of the program to M.C. using the Timachine compiler. Now it only takes 20 seconds for **Brooke$** minus a piece of chin.



```
  1 REM TANDY DMP105   PRINTER DRIVER
  2 REM Abed Kahale 10/91   CATUG
  4 REM  CLEAR 64769: REM  Start address-1
  5 REM  RANDOMIZE USR 100: LOAD "PDRVR.CC"CODE 64770
 10 PAPER 1: INK 9: BORDER 1: CLS
 20 RANDOMIZE USR 100: OPEN #3,"LP"
 30 RANDOMIZE USR 100: POKE 16092,0: REM NO LINE FEED
 50 RANDOMIZE USR 100: POKE 16093,32: REM  LPRINT & CHR$ sent
to printer
 60 LPRINT CHR$ 10: REM Line feed
 65 REM  LPRINT CHR$ 27;CHR$ 19: REM PICA gives elongated pict
ure
 80 LPRINT CHR$ 27;CHR$ 23: REM ELITE gives correct picture
 90 REM  LPRINT CHR$ 27;CHR$ 20: REM CONDENSED gives narrow pi
cture
 95 RANDOMIZE USR 100: LOAD "B.C$"SCREEN$
100 LPRINT CHR$ 18: REM Puts printer in graphics mode
110 REM  RANDOMIZE USR 64770
120 REM !INT R,C,B: REM TIMACHINE Instuctions
130 REM ! LPRINT
150 REM ! OPEN #: REM TIMACHINE starts
155 FOR Y=0 TO 175 STEP 7: LET R=175-Y: REM vertical pixels fr
om the top
160 FOR C=0 TO 255: REM Horizontal pixels
170 LET B=0
180 LET B=B+POINT (C,R-1)
190 LET B=B+2*POINT (C,R-2)
200 LET B=B+4*POINT (C,R-3)
210 LET B=B+8*POINT (C,R-4)
220 LET B=B+16*POINT (C,R-5)
230 LET B=B+32*POINT (C,R-6)
240 LET B=B+64*POINT (C,R-7)
250 LET B=B+128
255 IF IN 127<>108 THEN  GO TO 255: REM Checks if busy
260 LPRINT CHR$ B;
270 NEXT C
280 LPRINT CHR$ 27;CHR$ 90;CHR$ 0: REM carrige return
290 NEXT Y
300 LPRINT CHR$ 27;CHR$ 30: REM Back to character mode
310 REM ! CLOSE #: REM TIMACHINE ends
320 STOP
```



EDITORIAL- "THE YEAR OF DISCOVERY" BY BILL FERREBEE

1992 marks the 500th anniversary of the discovery of America by Christopher Columbus. Little did he know then how developed that "new land" would become over the years!

Here in 1992 we are being challenged with new, exciting discoveries. We are expanding our travel scope to the outer limits of space. Scientists are rushing to find cures for diseases that didn't even exist 20 years ago. And our friends in other lands are discovering something for the first time that most of us take for granted...freedom.

Let's make 1992 a "year of discovery" for Sinclair. Let's expand our abilities to use our computers. It seems almost weekly I hear about a new use or enhancement being made. Just as I start thinking that we've exhausted the capabilities of these computers, someone comes along to rekindle my interest.

You are a dedicated Sinclair user. Just by reading this, you have told me that you still actively use your T/S. Many have given up on Sinclair, thinking that IBM holds the answer. What's the old adage about a flock of sheep following the leader off of the edge of a cliff?

The mass population has forgotten the ZX-81, T/S1000, Spectrum, T/S2068, QL and Z-88. - But the "core" of the apple holds the seeds. It is from this core that the future tree grows.

I am not trying to say that we can regain the number of users we had in the past. That would be like trying to convince people to turn their Z28's (Japanese car) in for Studebakers.

But I do believe we can keep the interest alive for those of us still using our Sinclairs. And who knows, maybe by sharing our love of our T/S with others, we can gain a new crop of users.

If you have a program you've written, share it with us. If you have an idea for a program, let us know. Maybe someone else is willing to write it.

If you are an electronics hacker, let us know if you've built that "black box" everybody wants. If you want a "black box", tell us what you want in it.

To sum it up, let's communicate with each other and discover our full potential as Sinclair users. May you have a safe and successful voyage in 1992!

EDITOR'S NOTE: Bill currently writes a column for the magazine Computer Monthly, put out by Vulcan's, of P.O. Box 7062, Atlanta, GA 30357-0062. He writes the Timex-Sinclair column for them. He also runs Mountaineer Software and is well known for his graphic and font creations for the TS2068. We thank him for his creation of the new cover on UPDATE Magazine, and for his contributions to Sinclair computing.

Carol Davis



Have You Heard Of AMG ENTERPRISES?

IF NOT, WHERE HAVE YOU BEEN!
WE HAVE BEEN SERVING THE T/S COMMUNITY SINCE 1981 AND WE ARE NOW THE WORLD'S LARGEST TIMEX/SINCLAIR DEALER!
FOR JUST $3.50 (REFUNDABLE) YOU CAN GET A CATALOG AND PRICE SHEET SO YOU CAN SEE WHAT WE HAVE TO OFFER TO FILL YOUR NEEDS. FROM PRINTERS AND INTERFACES TO DISK DRIVES AND RAMDISK, WE HAVE IT.





CALL OR WRITE:

1419 1/2 7TH STREET
OREGON CITY, OR 97045
503/655-7484 NOON-10PM PT T-S
FAX 503/655-4116 24 HOURS

Wall Street, Here We Come!$

By:- A. Kahale
335 W. Newport Rd.
Hoffman Est., IL 60195 (708 885-4337)

What everyone has been waiting for..... Kidding aside, there are a few inovations that might be of use to some T/S users. I decided that my 2068 can be put to more serious use . I rolled my own programs to analyze the market, not being a programmer, it took me about 3 months to have a program to meet my needs; the program was revised numerous times, then revised again...! you know the story. Presently, I daily update 17 programs to chart the Dow Jones Ind. and various stocks [275K worth]. The program below represents a stock charting.

Ofinterest are program lines 520 - 580, the highest and the lowest numbers to be plotted are established; the difference is then plotted within the screen limits by lines 660 & 670 that also draw a Vertical Line Chart; the **OVER 1** command line 100 is in effect. Line 660 **DRAW**s the bar from 0 to the high (H) point and line 670 **UNDRAW**s from 0 to the low (L) point. The numbers were INPUTed into DIM(125) arrays, starting at line 4000. The Moving Averages are plotted by lines 720 to 825. Thanks GOTO Bob Swoger for a faster moving average algorithm. Lines 2210 to 2310 print the scale values to the left of the screen and lines 5000 to 5075 draw and plot the scale tick marks at the screen borders and color lines.

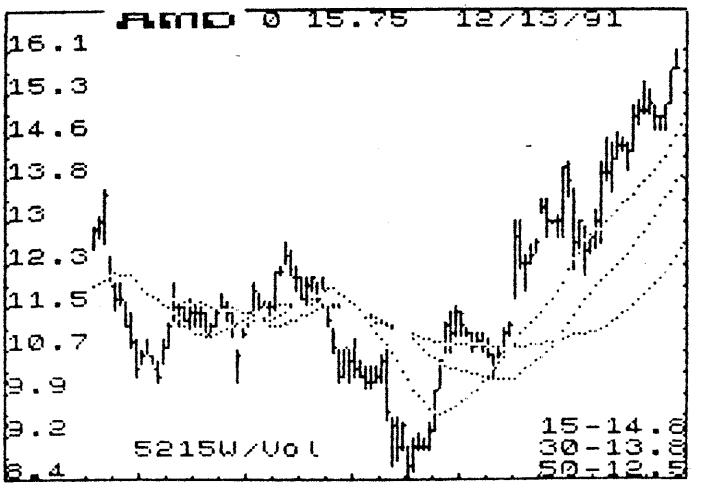
A differenf type of graph is plotted by lines 1450 to 1478 as shown on the bottom of the (O B V) chart.

The menu starts at line 120, at line 250 the **INKEY$** CMD is used for efficiency. The arrays are updated daily by lines 1800 - 1900 by dropping element #1 and adding element #125 where the 2068 is SLOW. The array elements can be reviewed by lines 2160 - 2180. **GOTO 90** must be used for the menu, otherwise the variables will be lost.

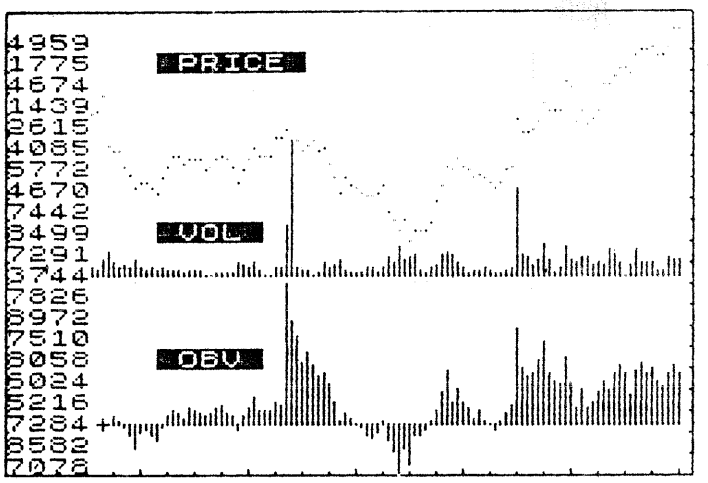
Tech. Analysis

```
  5 REM ZZZZZZZZZZZZZZZZZZZZ Stock Chart ZZZZZZZZZZZZZZZZZZZZ
 10 DIM H(125): DIM L(125): DIM C(125): DIM V(125): DIM Q(125)

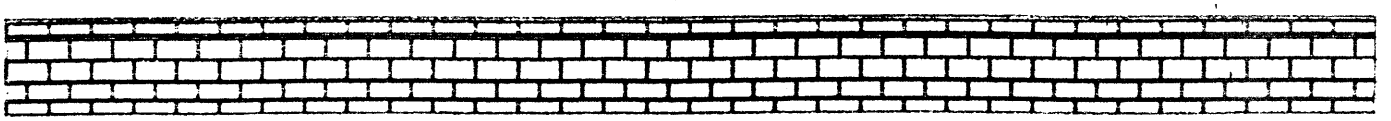
 90 CLS : PAPER SGN PI: BORDER SGN PI: INK VAL "9": POKE 23609
,10: POKE 23658,8: POKE 23617,236
 95 BEEP .03,40: BEEP .05,42: BEEP .03,45
100 OVER 1: LET G=90: LET H=100
110 DEF FN I(N)=INT (N*10+.5)/10
120 PRINT  PAPER PI;"     Advance Micro Devices      "
122 PRINT "       TECHNICAL ANALYSIS"
125 PRINT ''    Abed Kahale  1989 rev.G"
130 PRINT "       GO TO 90 TO Start ": REM ;Z$;"91"
140 PRINT "ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ"
160 PRINT ''1.  Start NEW chart"
170 PRINT ''2.  Add NEW  DATA      ";(38562- FREE )/1E3;"K"
180 PRINT ''3.  See charts"
190 PRINT ''4.  O B V "
200 PRINT ''5.  Backup"
210 PRINT ''6.  See  DATA            C. CAT."
220 PRINT ''7.  Correct DATA        L. CBU"
230 PRINT ''8.  Date ?              S. Save"
240 PAUSE NOT PI
245 LET A$=INKEY$
250 IF A$="1" THEN  GO TO VAL "4000"
260 IF A$="2" THEN  GO TO VAL "1790"
270 IF A$="3" THEN  GO TO VAL "500"
280 IF A$="4" THEN  GO TO VAL "847"
290 IF A$="5" THEN  SAVE "AMD.BB": VERIFY ""
300 IF A$="6" THEN  GO TO VAL "2160"
310 IF A$="7" THEN  GO TO VAL "1880"
320 REM  IF A$="8" THEN  INPUT "DATE?... ";Z$
340 IF A$="L" THEN  RANDOMIZE USR H: LOAD "CBU.BB"
350 IF A$="S" THEN  GO TO VAL "2370"
360 IF A$="C" THEN  CLS : RANDOMIZE USR H: CAT "",: PAUSE NOT
PI
370 GO TO G
500 CLS : REM  LINE CHART ******
```



```
 505>PRINT AT SGN PI,VAL "14";(Q(121)+Q(122)+Q(123)+Q(124
)+Q(125));"W/Vol"
 510 GO SUB VAL "5000"
 520 LET L=H(1)
 530 LET S=L(1)
 540 FOR N=2 TO 125
 550 IF H(N)>L THEN  LET L=H(N)
 560 IF L(N)<S THEN  LET S=L(N)
 570 NEXT N
 580 LET D=L-S
 590 PRINT AT NOT PI,VAL "6"; PAPER VAL "2";" AMD  ";FN I
(C(125)-C(124));"   ";C(125): REM "  ";z$;"91"
 600 GO SUB VAL "2210"
 650 FOR N=16 TO 125
 660 PLOT 2*N+1,((160/D)*(H(N)-S)): DRAW 0,-(160/D)*(H(N)
-S)
 670 PLOT 2*N+1,((160/D)*(L(N)-S)): DRAW 0,-(160/D)*(L(N)
-S)
 700 PLOT 2*N+2,((160/D)*(C(N)-S))
 710 NEXT N
 720 BEEP .1,45: REM MOVING AVE. ***** Repetitious lines
have been deleted *****
 810 LET TT=0: FOR N=1 TO 49: LET TT=TT+C(N): NEXT N
 812 FOR N=50 TO 125
 814 LET TT=TT+C(N)
 816 LET T=TT/50
 820 PLOT 2*N+2,(160/D)*(T-S)
 822 LET TT=TT-C(N-49)
 825 NEXT N
 827 PRINT AT VAL "20",VAL "25";"50-";FN I(T)
 840 PRINT #RND;"   M.A.   10    15    30    50": BEEP VA
L ".1",VAL "38"
 845 PAUSE VAL "200": IF INKEY$="Z" THEN  COPY
 847 GO SUB VAL "1240"
 850 REM  VOLUME *********
 884 LET L=Q(1): LET S=Q(1)
 886 FOR N=2 TO 125
 888 IF Q(N)>L THEN  LET L=Q(N)
 890 IF Q(N)<S THEN  LET S=Q(N)
 891 NEXT N: LET D=L-S
 892 FOR N=1 TO 125: PLOT 2*N,((50/D)*(Q(N)-S))+70: DRAW
0,-(50/D)*(Q(N)-S): NEXT N
1220 BEEP SGN PI,NOT PI: PAUSE VAL "200": IF INKEY$="Z" T
HEN  COPY
1230 GO TO G
1240 DIM M(122): REM  OBV ******
1250 FOR N=1 TO 14
1260 LET M(N)=V(N)+1.2*V(N+1)+1.6*V(N+2)+2*V(N+3)
1270 NEXT N
1280 FOR N=15 TO 122
```

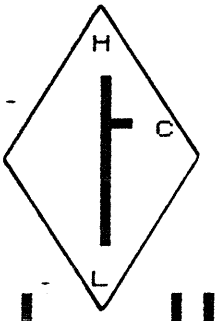


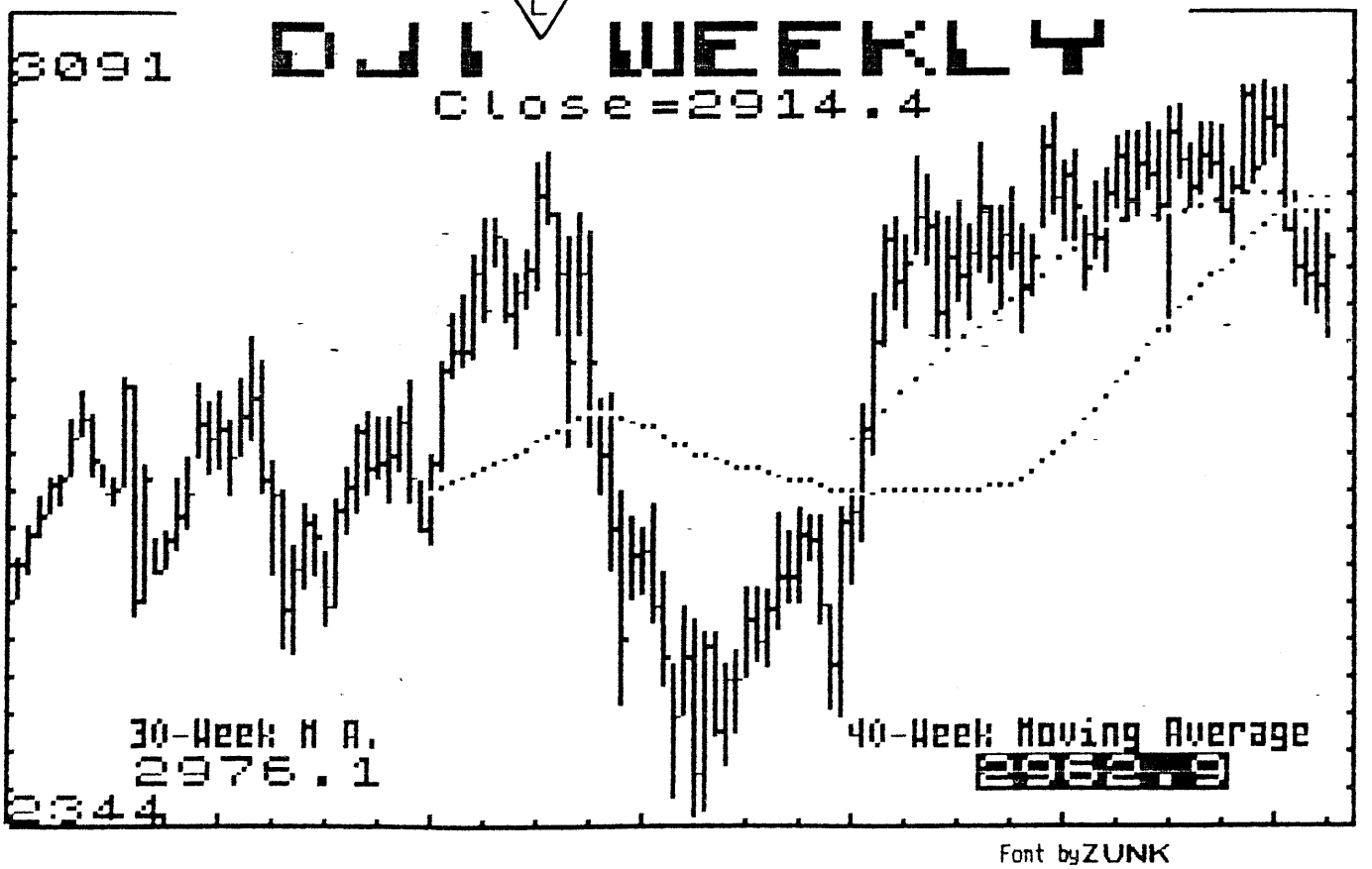

```
1290>LET M(N)=M(N-4)/2+V(N)+1.3*V(N+1)+1.6*V(N+2)+2*V(N+3)
1300 NEXT N
1310 LET K1=M(1)
1320 LET F1=M(1)
1330 FOR N=2 TO 122
1340 IF M(N)>K1 THEN  LET K1=M(N)
1350 IF M(N)<F1 THEN  LET F1=M(N)
1360 NEXT N
1370 IF K1<0 THEN  LET K1=0
1380 IF F1>0 THEN  LET F1=0
1390 LET H1=K1-F1
1400 CLS
1402 GO SUB 5000
1405 PRINT AT NOT PI,SGN PI; PAPER PI;" O B V "
1450 PRINT AT 21-(8/H1*(0-F1)),0;"    +"
1460 FOR N=17 TO 122
1465 PLOT 2*N+6,4*(18/H1*(M(N)-F1)): DRAW 0,-4*(18/H1*(M(N)-F1)
)+20
1471 NEXT N
1473 LET L=C(1): LET S=C(1)
1475 FOR N=2 TO 125
1476 IF C(N)>L THEN  LET L=C(N)
1477 IF C(N)<S THEN  LET S=C(N)
1478 NEXT N
1480 LET D=L-S
1481 FOR N=1 TO 125
1482 PLOT 2*N,4*((20/D)*(C(N)-S)+23)
1483 NEXT N
1500 RETURN
1790 CLS : REM  UPDATE *******
1800 FOR N=1 TO 124
1810 LET H(N)=H(N+1)
1820 LET L(N)=L(N+1)
1830 LET C(N)=C(N+1)
1840 LET V(N)=V(N+1)
```



Wall by LARKEN :CIRCLE x,x,8

```
1850 LET Q(N)=Q(N+1)
1870 NEXT N
1880 CLS
1890 BEEP .1,38: PRINT "AMD": INPUT "H"'H(125),'"L"'L(125
),'"C"'C(125)'"V"'V(125): LET Q(125)=V(125)
1900 IF C(125)=C(124) THEN  LET V(125)=NOT PI
1910 IF C(125)<C(124) THEN  LET V(125)=-V(125)
1939 PRINT '' PAPER 6;"1. Add more  DATA  "'"5. Correcti
on - Reenter "'"S. SAVE"
1960 PAUSE NOT PI
1970 IF INKEY$="1" THEN  GO TO VAL "1800"
1980 IF INKEY$="5" THEN  GO TO VAL "1880"
1985 IF INKEY$="S" THEN  GO TO 2370
2010 GO TO G: REM  DATA *******
2160 CLS : FOR N=104 TO 125
2170  PRINT N;" ";H(N);" ";L(N);" "; BRIGHT SGN PI;C(N);
BRIGHT NOT PI;" ";V(N);" ";Q(N)
2180 NEXT N
2190 PAUSE NOT PI: GO TO G: REM SCALE *******
2210 PRINT AT SGN PI,NOT PI;FN I(L)
2220 PRINT 'FN I(D*.9+S)
2230 PRINT 'FN I(D*.8+S)
2240 PRINT 'FN I(D*.7+S)
2250 PRINT 'FN I(D*.6+S)
2260 PRINT 'FN I(D*.5+S)
2270 PRINT 'FN I(D*.4+S)
2280 PRINT 'FN I(D*.3+S)
2290 PRINT 'FN I(D*.2+S)
2290 PRINT 'FN I(D*.2+S)
2300 PRINT 'FN I(D*.1+S)
2310 PRINT 'FN I(S)
2350 RETURN
2370 RANDOMIZE USR H: SAVE "AMD.BB" LINE 90: BEEP VAL ".1",NOT
PI: RANDOMIZE USR H: LOAD "L.B1"
4000 CLS : PRINT "USE 1000'S FOR VOLUME"
4010 FOR Y=1 TO 125
4020 INPUT "HIGH"'H(Y)'"LOW"'L(Y)'"CLOSE"'C(Y)'"VOLUME"'V(Y): L
ET Q(Y)=V(Y)
4030 IF C(Y)=C(Y-1) THEN  LET V(Y)=0
4040 IF C(Y)<C(Y-1) THEN  LET V(Y)=-V(Y)
4050 NEXT Y
4060 GO TO G
5000 DRAW 255,NOT PI: DRAW NOT PI,175: DRAW -255,NOT PI: DRAW N
OT PI,-175
5010 FOR Z=10 TO 250 STEP 10
5020 PLOT Z,1: NEXT Z
5030 FOR Z=10 TO 250 STEP 40
5040 PLOT Z,2: NEXT Z
5050 FOR Z=8 TO 160 STEP 8
5060 PLOT 254,Z: PLOT 1,Z
5070 NEXT Z
5075 FOR N=2 TO 21 STEP 2: PRINT AT N,NOT PI; PAPER NOT PI;"
                                ": NEXT N
5080 RETURN
```





Font by ZUNK

EXTRA *EXTRA*

BACK ISSUES OF UPDATE MAGAZINE

For those who are new to UPDATE and want to be able to get back issues that they may have missed, we will be offering the following for a short time only. This offer is good only till the end of March 1992. Any one back issue for only $4.50, or 4 issues for $16.00. We have available the following issues.

October 1991, July 1991, April 1991, January 1991, October 1990, April 1990, July 1989, and April 1988.

If ordered, these will be sent to the requested address by first class mail. From what we last heard from Bill Jones he did not indicate that he had any more back issues from when he was publishing UPDATE, so I assume these are the last issues available, other than by buying used copies from friends.

Now of course you may start or renew a subscription to UPDATE at any time and receive all of the back issues of the year in which you started the subscription. We may once in awhile be a week or two late getting the magazine out,but we will not leave you in the lurch like some have in the past.

We also have available for you copies, 1st Edition, of the QL Survivors Guide, for $7.00 postage paid. Find out where the hardware,software,repair facilities, user groups and magazines are that cover the QL worldwide.

HOUSEHOLD ACCOUNTS ON THE TS2Ø68

Basil Wentworth

Here is a little program that I use to keep a record of the costs of living. It's extremely simple, and includes in Lines 135Ø to 15ØØ a technique that I haven't seen used elsewhere, but have found extremely useful. (I call it "flabby ware", in contrast with "firmware".)

Lines 51Ø through 61Ø keep a record of the expenses you enter, plus a running total. When you have finished all entries, a null (press "ENTER" without any number) shifts you down to Line 1ØØØ. Here the monthly average for the year is computed and displayed, along with the total for the current month. Lines 135Ø to 15ØØ prompt you (with a display like the illustration titled "READOUT AFTER FIRST MONTH") to update line 999Ø in preparation for next month. You should start the year with M=Ø and AV=Ø, as shown, and then re-adjust these values every month to agree with the numbers displayed by Line 13ØØ. The program should be re-SAVEd, of course, after Line 999Ø has been updated.

Lines 9ØØØ and 9Ø1Ø are the SAVE routine for the OLIGER disk system. You should use whatever commands your own system requires.

Like any record-keeping system, this one depends on systematic entry of data, every month. Jocelyn doesn't let me forget.

```
 500 GO SUB 9990
 510 REM put at end of program
in order to make line 1500 more
convenient
 530 CLS
 540 PRINT ,0
 550 LET t=0
 560 INPUT "spent?  (""" if thr
ough)    ";a$
 570 IF a$="" THEN GO TO 1000
 580 LET t=t+VAL a$
 590 REM cumulative total for
month
 600 PRINT VAL a$,t
 610 GO TO 560
1000 LET ty=m*av+t
1010 REM total for the year,
including the current month
1050 LET m=m+1
1100 LET av=ty/m
1110 REM monthly average, in-
cluding current month
1150 LET av=.01*INT (100*av+.5)
1170 REM rounds off average to
nearest cent
1200 CLS : PRINT "MONTHLY   MONT
H      AV. /MONTH"
1250 PRINT "BILL";TAB 20;" FOR Y
EAR"
1300 PRINT 'T;TAB 11;m;TAB 21;av
1350 PRINT ' FLASH 1;">>>"; FLAS
H 0;"ADJUST ""M"" and ""AV"" in
9990"
1380 PRINT
1500 LIST 9990
2000 STOP
9000 SAVE /"H" LINE 1
9010 VERIFY /"H": BEEP .3,12: BE
EP 1,12
9020 REM format for SAVE with
OLIGER disk system
9050 STOP
9990 LET M=0: LET AV=0: RETURN
```

PROGRAM FOR HOUSEHOLD ACCOUNTS

```
MONTHLY    MONTH        AV. /MONTH
BILL                    FOR YEAR

100.21       1          100.21

>>>ADJUST "M" and "AV" in 9990

9990>LET M=0: LET AV=0: RETURN
```

READOUT AFTER FIRST MONTH

Put some **punch** in your
PRINT FACTORY© graphics!!

Collection#1	Collection#2	Collection#3
Miscellaneous	Animals	Digitized Misc.
Men/Boys	Funny	Female Faces
Women/Girls	Transportation	Male Faces
Digitized Misc.	Sports	Funny
	Computers	Animals
	Holidays	Zodiac Signs
	Food	Holidays
	Xmas	Transportation
		Xmas



Over 150 different large & small graphics in each collection!

$12.95 ppd each, $19.95 ppd for two, or all three collections for $26.95 ppd.
[Check or money order only.]
Available on tape or 5 1/4 " DSDD LARKEN or OLIGER disk - please specify.

Send order to :

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

BYTE POWER

Super Special!!!

All BYTE POWER titles at 50% off...

		·Now·
12	BYTE POWER Magazines (Back issues)	$27.50
6	BYTE POWER Magazines (Back issues)	$16.00
1	BYTE POWER Magazine (Back issue)	$3.00
	1st Class Pack (6 back issues in vinyl album)	$20.00
	Mega Pack (12 back issues in 2 vinyl albums).....	$31.50

Issues Available...

August '86, September '86, October '86, November '86, December-January '87, February '87, Spring '87, Fall '87, February '88, May '88, Fall '88, Winter '89

BYTE POWER 1st Class Fonts II	$10.00
2+FAST (Fast Load for TS2068).....	$10.00
The Print Factory	$12.50
The Companion Volume 1	$12.50
Best of Business and Utilities.....	$10.00
Best of Arcade Games.....	$10.00
Best of Entertainment, Strategy & Board Games	$10.00

** For those with remaining issues of BYTE POWER Magazine, you may use them as credit towards the purchase of any of the above packages...

Please add $3.00 for Shipping & Handling. U.S. Funds only...

BYTE POWER
1748 Meadowview Avenue
Pickering, Ontario, Canada
L1V 3G8

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

Dear TS-2068 User,

I want to take this opportunity to share with you some thoughts about TS-2068 Computing. We TS-2068 users have likely become the most sophisticated and capable of all who use computers. Most of us could be described as "Amateur Programmers", and we have also learned much about "interfacing". We had to learn and to improvise to make our old Cassette based computer into a powerful Disk System. And before that we had to improvise to make our computer do Printing with a Centronics Printer. Each of us have learned more about Programming and Interfacing than 95% of the world's users of computers ever learn. Our efficiency of learning is amplified by our Hobby Interests, which is the greatest of all motovating factors, even greater than the profit motive.

While I was learning the TS-2068, doing little crummy letters on the TS-2040 printer, and waiting eons for Cassette to load, I was in my glory! I am sure that some of your past experiences are also nostalgic. Then I started on the "Smart Text" program, mostly as a Learn by Doing project. I became fascinated by programming, and wondered how to make the TS-2068 "do more" than the small softwares available would provide. The practicality of increasing the scope of TS-2068 software became real only after Disk Drive Capability was developed. But by that time all of our industry programmers had abandoned the TS-2068 for more lucrative fields. There just has not been any "Full Function" software developed for the TS-2068, and UNTIL NOW, the capability of the TS-2068 Disk Drive system has not been exploited.

The TS-2068 is a strange critter! Its FREE MEMORY limitation prevents the development of MACHINE CODE programs that are comprehensive in functions. Comprehensive CODE Software just takes too much memory to develop. While BASIC is slower, Basic does provide the means of "integration" needed to SHARE the limited FREE Memory with a multitude of individual programs. AND, the "user friendliness" of Basic allows programs to be developed without the elaborate "error trapping" that is absolutely required in Machine Code. Code programs CRASH when un-protected errors occur. This is the reason why so much memory is required for Code programs- to protect against errors. So, while programming for most other computers is done in Machine Code, the TS-2068 capabilities can only be exploited by using BASIC as the primary language, plus small code programs for support.

Most of the TS-2068's ROM programming is devoted to the "Support of BASIC Programming". Our Disk Drive System is designed to be Commanded BY BASIC Programming. But, until now, BASIC has not been the primary Programming language for most TS-2068 Software. The result has been a library of TS-2068 Software that has very limited capability to do just a

single purpose. Some of these small softwares do a fine job in their limited scope. And most are quite snappy in their speed of operation. The DAISY.B6 Concept was conceived to be a "Systems Software" that does most jobs that anyone would want to do with a computer, an "all purpose software" if you will. Daisy is programmed about 98% in BASIC.

You may want to compare Daisy with something as a starting point. The only software that I am aware of having similiar concept is the "LOTUS" software "1,2.3" and "Symphony" for the IBM Systems. I have operated both of those softwares enough to become profficient. Those two titles are "all purpose" software costing around $1200 each. Of course I'd be silly to say that Daisy equals the capabilities of Lotus 1,2,3, but the concept is the same and Daisy strives to be in the same ball park, even with our early age computer. The principle strengths of Daisy is its DATA BASE MANAGEMENT and DISK DRIVE MANAGEMENT, for which we will coin a term, "DDBMS" for "Disk Data Base Management System". For the TS-2068 to manage complex DATA BASES there must be complete "DISK DRIVE INTEGRATION", because of the limited FREE MEMORY of the Computer.

Daisy is also a Word Processor, which also integrates DISK DRIVE in the management of word processing. And, Daisy is a DESK TOP PUBLISHING software whose features can be used to DESIGN SPECIAL PRINTING tasks. Daisy is also a "Control System" which can Manage other softwares MERGED to it, and also manage the data products of other softwares. DAISY IS BIG! While it may be a bit confusing while getting started, the Friendliness of the software soon will take one into some sophisticated operations. Daisy will help you do 95% of the functions that you use your computer to do. AND, I believe that you will learn a lot about programming as you learn to use the Daisy System. Daisy is designed to DOMINATE your TS-2068, to be loaded once in the morning and stay in the computer, to accomplish all tasks needed.

Frankly, without the Daisy - Smart Text software combination, I would have long ago departed TS-2068 operation and picked up with another computer. I took "time out" and learned to use the Sinclair QL. And, I bought and used an IBM AT 286 System. I like the QL but Daisy allows me to do more with the TS-2068 in a better organized manner than I can do with the QL. And, I gave the IBM AT to my Son who needed it in his senior year of his Business Management courses. I operated the IBM enough to realize that the TS-2068 is hard to beat, even though the IBM clock speed is TEN TIMES that of the TS-2068. I believe that the TS-2068, with DOS, is the very best HOBBY COMPUTER in existance! I hope that Daisy will help you to achieve some of the satisfaction that I have realized while operating the TS-2068. I challenge you to learn the Daisy system so that you can do just that.

Sincerely,

Bill Jones

More Features Added

Having just this June made major update revisions to the Daisy Program, two more comes along. "TURBO=3" Mode has been added. Now if in either "Turbo=0" or "Turbo=2" modes, and you elect "INPUT EDIT", the program MERGES the Data base programs "edt.B6" and "inpt.B6". This was as before, but the two programs remain ON-Board. Then if you had been in Turbo=0 mode the mode changes to Turbo=1. If you had been in Turbo=2 mode the mode changes to Turbo=3.

Another switcharoo takes place if you have selected "Print Menu". If operating in "Turbo=1" or "Turbo=0" modes the Printing Programs "repp.B6", "usrpgm.B6", and "wdpro.B6" MERGES and Remains ON-Board. The mode changes. If you had been in Turbo=0 mode you are now in Turbo=2 mode. If you had been in Turbo=1 mode you are now in Turbo=3 mode. After these automatic Turbo Changes the Daisy program remains in its changed Turbo Mode. TURBO=3 mode results in about 3K less Text Data Capacity than it would be in Turbo=1 or Turbo=2.

These changes were made to make the operation flow smoother to and from Data Base Management and Printing. There is always a Option at the Office Tools Menu to change Turbo Modes by Menu selection.

"Dbx.B6" New Program

The NEW Data Base Software "Dbx.B6" now replaces the "mail.B6" program. This Dbx.B6 program is, quite frankly, the best "Record" data base program that I've ever seen. I am giving Dbx.B6 to the readers of Update Magazine in the July 1990 issue. It is a Key-in Project and a Tutorial on SORTING. Please remove the pages in Update magazine and place them in your Daisy Manual. "Dbx.B6" operates either by MERGING to Daisy (Item <5> at the Office Tools Menu), or "Dbx.B6" may be LOADED separately and operated. Since the program in disk #2 is there to be MERGED it has no Auto Start Line.

Merge or Independant

To LOAD "Dbx.B6" and operate it as a stand-alone software type: RANDOMIZE USR 100: LOAD "Dbx.B6". Then to start it running type <GO TO 1975>. This program epitomizes "efficient management of FREE Memory". Such management results in the LARGEST Data Base of ALL TS-2068 programs. AND, the data base is the most flexible for "all purpose use" than any other TS-2068 "record type" data bases. The Capacity of the Data base depends upon how large the RECORD is that you yourself establish. A "one line Tel# list" could contain up to 1000 names and phone numbers. The SEARCH Function is fantastic!

The Record Data Base

The data base is the "O$()" character array and is dimensioned to the user's desires. A normal DB for mailing lists would be "4 lines of 31 Characters per line". The next will be hard to believe. When operating as an independant software, the Record Capacity is 236 records of 4 lines of 31 characters. The capacity varies when Dbx.B6 is MERGED to the Daisy programs. In the Turbo=0 mode, when MERGED, the capacity of records is 192 Records. When Merged to Daisy in the Turbo=1 Mode the capacity is 131 Records, and when merged in the Turbo=2 mode the capacity is 163 records.

Competing for FREE MEM

When creating Data Base Records to use with the Daisy program (Mail Merge, or just Records for Printing, one must be aware that other data bases created by the Daisy program COMPETES for FREE MEMORY. For example, if you want to create some text for a letter then the "record data base size" must be less than the total capacity of the Dbx.B6 program. For example, if you need a Text File of 4000 characters, then the maximum size "Mail Merge" file would be reduced by 4000/124=24. (24 less records than the Dbx.B6 Capacity).

Print Style Macro

More Macros! Added to this set of disks are several "Macro" utilities. One is a "Printer Style Macro". This one is a delightful bit of programming that gives you several new ways of printing both TEXT and HEADERS. Two groups of utilities are in program lines 2416 through 2438, and 2610 through 2622. The first group (2416-2438) is used for "scheduling Headers" and is well explained in the manual Tutorial. So, I'll give you the latest addition.

Subscript Macro

The "Subscript Macro", Lines 2610-2618, was designed to give a nice "small print" column, and matching LARGE HEADERS. I will explain by "GO SUB Entry Points". <GO SUB 2610> Sets up for Column Printing of a special Style Macro. It first SET ELITE style, then Subscript, then re-sets the spacing between lines. The results are a nice small print, 40 character columns, and 86 lines per page (allowing top and bottom margins). TAB to print is set at TAB 6 for a left column to print. The <GO SUB 2610> to do this type of column can be done anytime while in the DIRECT MODE (Break-in).

Special Headers Too

OR, <GO SUB 2610> can be used to "Schedule the Column Print" in the user programming lines of "usrpgm.B6". Still another way of using this Macro is to <GO SUB 2610> to set the styles, and then <GO SUB 2616> to print a Header. The Macro at line 2616 works this way: It first SETS EXPANDED HEIGHT and then EXPANDED WIDTH, then resets the "column center" to "half", then it does a <GO SUB 2622> to PRINT THE HEADER. When that is done Line 2622 comes into play to CANCEL DOUBLE HIGH and DOUBLE WIDTH and reset column center to "previous". So, you'll be back into the nice "Subscript Macro".

Key Variables

Must Mention that the "Page or Column Center" must be set into variable "QQ". The Header prints in reference to "var QQ". Also the "HEADER DATA" must be put into "M$" first, as <LET QQ=page Center: LET m$="Header": GO SUB 2616>. This routine at line 2616 can be use separately to "Schedule Giant Headers". Try that in the Direct mode with any print style. A more detailed run-down on this "Subscript Macro" is given in the July 1990 issue of Update Magazine. You can add that article to your manual.

Printer Control Codes

The COMMANDS to the Printer to SET ELITE, SET SUBSCRIPT, SET DOUBLE HIGH, SET DOUBLE WIDE, and to CANCEL each, is the codes used with my EPSON Compatable "KXP-1124" printer. You may need to edit the lines and replace the commands with those needed by your printer. Most EPSON compatables should work as is.

Details

The programming at Line #2622 does the following: 1. Cancels Subscript: 2. Cancels Double High: 3. Cancels Double Wide: 4.Restores Line Spacing to 3/16 inch (60 lines per Page). The way to use this line is to <GO SUB 2622> from either the DIRECT COMPUTER MODE, or from a line of programming in the "usrpgm.B6" program lines. Now lets see how these two groups of "Print Macro Programs" can be used.

Using Direct Mode

DIRECT MODE: <GO SUB 2610> to set Elite, subscript, emphasised print, and 98 lines per page spacing. Then print some text using the Daisy Menus. The text will print in the format shown in this page.

Spacing

HEADERS in the Direct Mode: <GO SUB 2416> prints large headers as shown in this page. Note that the headers use TWO PAGE LINES, so a line space before and after the headers is appropriate. <GO SUB sp> gets a line space. This is better than LPRINT because the line is counted for page control.

Header Position

<GO SUB 2416> prints a Double High Header for whatever print style your system is in. This uses the "current" Center or Page variable (qq) for reference and the Current Print Style. <GO SUB 2436> prints a GIANT HEADER, and then returns to current print style. The header size is variable depending upon your Current Print Style. The position of the Header print is "PAGE CENTER" if NOT in the (format Menu) mode of Column Printing. If in the Column Print Mode as set at the Format menu, the giant header prints at "Column Center".

Expand Width Problem

One must be careful to not exceed the number of characters in the header that EXPANDS beyond column width. Example: Column width = 50, then the max number of characters in the header (PICA) would be: 40 characters for FULL PAGE width, or about 12 to be centered over the column in the Column Print Mode.

Escaping the Macro

<GO SUB 2622> returns to Normal after using the "Subscript Macro" (line 2610). This places you in ELITE standard style because ELITE Subscript was set when you <GO SUB 2610 >. Also, the line spacing is re-set back to 3/16 inch lines to give a normal page length of 60 lines. Also, if you had been in DOUBLE HIGH or DOUBLE WIDTH character mode those printer settings would be cancelled.

Auto Macros

These special Print Macros were designed for use in the Automatic Printing environment- To be SCHEDULED within the "usrpgm.B6" lines (line 2182 through 2276). For Example: This paragraph will be the fifth para of the doc that I'm typing- or "H$(5)". I will edit line #2188 (that schedules H$(5) to print) and make it read: <2188 LET m$="Auto Scheduling": GO SUB sp: GO SUB 2616: GO SUB sp: LET w$=h$(5): GO SUB tel: GOSUB sp>

How it Works

The above action flow will: 1. Get a Line space (GO SUB sp), 2. Get a Large Header (GO SUB 2616): 3. Get a Line space (GO SUB sp): 4. Put the H$(5) data in "w$" (LET w$=h$(5): 5. Send the data to be printed (GO SUB tel): 6. Get a line space before the next paragraph is printed (GO SUB sp). Any of the "usrpgm.B6" lines can be edited and "print scheduling" inserted for print out during a Auto Print Event.

Walk before Running

This treatsie will come as a shocker because it takes you into advanced operations before you have read the manual or practiced using the Daisy system. Just insert the page in the back of the book to "get rountuit" at the proper time. It will eventually become a valuable guide to doing SPECIAL PRINTING. Also you can learn a bit about PRINTER PROGRAMMING for style change manipulations within an operating program. The printing and formatting of these two pages were done using the features described above. Three Disk Data files were scheduled and automatically printed "from Disk".

12 VOLT MODIFICATION

This little mod. helps clean up the picture and the computer runs cooler, especially if you have more than one peripheral attached.

Using proper care open your beloved 2068. Using figure #1, find the 78L12 voltage regulator. It looks like an ordinary transister (only good for milliamps). Using great care remove it. Make sure the holes are cleaned out. Now install the 78M12 (larger for more current). Radio Shack part #276-1771 about $1.20. Use figure #2, note that it is the BACK of the regulator that should be facing up.

Now for the test. Move everything away from the circuit board, without the keyboard attached, power up. Your 2068 should display the copyright notice. If it does not, power off immediately!! Check the orientation of the 7812. If you have a volt meter check the input and output.

After all goes well put your 2068 back together and gaze into your nice clean picture.

By William E. McKelvey

INSIDE YOUR 2068

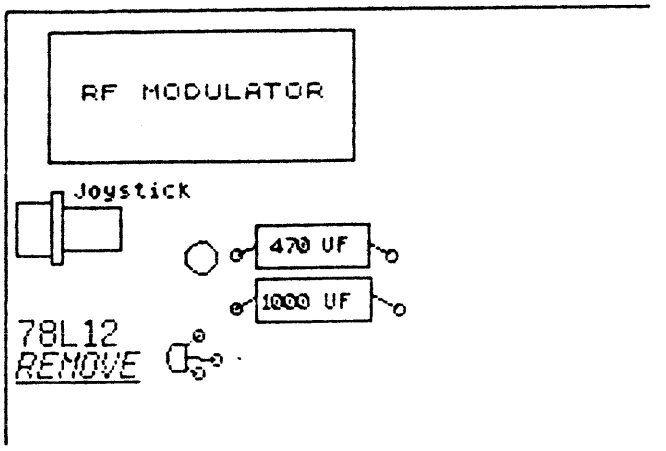


Figure #1

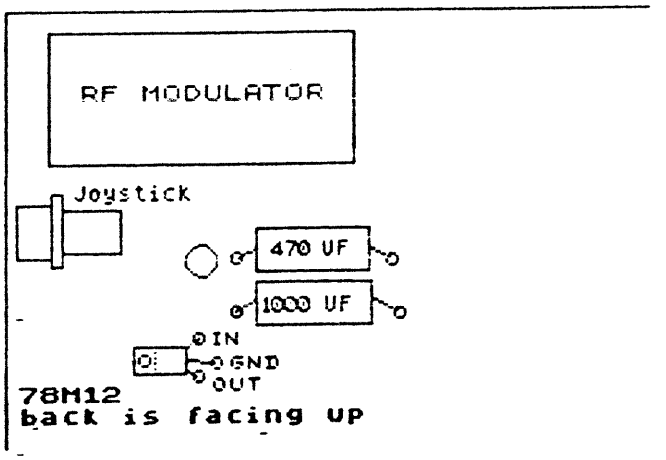


Figure #2

Inspired by Tim Stoddard
TIME DESIGNS Vol.3 No.5

Power Supplies available
William E. McKelvey
744 Wall Road
Spring Lake Heights, NJ 07762
(201)974-0297

FD-ZX FLOPPY DISK INTERFACE

UNOFFICIAL TECHNICAL MANUAL
AND FURTHUR INFORMATION
FOR THE FD-ZX FLOPPY DISK INTERFACE
THE ZX81 AERCO DISK SYSTEM

BY

DONALD S. LAMBERT
1301 KIBLINGER PLACE
AUBURN, IN 46706
TELE: (219) 925-1372

WITH HELP FROM THE FOLLOWING:
RICHARD MATEJOVIC
FRED STERN
FRANK DAVIS
JERRY OF AERCO

THIS IS A PUBLIC DOMAIN PUBLICATION. FEEL FREE TO COPY AND OR PASS ON REALIZING THAT NO ONE ACCEPTS RESPONSIBILITY FOR ANY DAMAGE TO HARDWARE OR SOFTEWARE RESULTING FROM USE OF INFORMATION PRESENTED HERE.

This publication is dedicated to the FD-ZX Floppy Disk users. This is to be a source of information for the FD-ZX users. If you know of anyone using the ZX81 and the AERCO disk interface please let them know of this publication and/or let me know of them by supplying me with their mailing address.

For those still using the ZX81 (MicroAce, ZX80 with 4K ROM, ZX80 with 8K ROM, the ZX81 and the T/S 1000 and possibly the T/S 1500 (I do not believe the PC8300 will work since the hardware is different) AERCO is still manufacturing them along with anything else they have manufactured for the T/S computers. I believe that the price is around $179.00 but am not sure. That is just for the interface, BOOT disk and necessary cables, the disk drives, case and power supply are extra. The on board EPROM for the disk controller has to be programmed for the disk drives you will use. Also, the disk drives have to have a minor alteration done to get the +5 and +12 volts supply to the disk controller board. The interface will handle any Shugart standard drive but you have to have all drives the same speed and the same track access time. The drive sizes run from 3 inch to 8 inch (single denisty only on the 8 inch) and the speed from 6 to 30 msec and the tracks 35/40/80. I am not absolutely sure that single sided and double sided disks can be used together. It is best to call them for furthur information. The address and a working telephone number as of 02 28 1991 is:
AERCO (ACME ELECTRIC ROBOT CO); BOX 18093; AUSTIN, TX 78760; TELE: (512) 451-5874.

The FD-ZX EPROM normally occupies the region from 12K (12288) decimal to 14K (14336) decimal (3000 to 3800 HEX) but can be ordered special to put it in another location which may require a change on the board. The special EPROM can be at (8/10/14K) but then the all USR calls must be changed accordingly. (*** I wonder if more than one EPROM could occupy the board so that different disk drives could be used? ***) If you are

using 64K the particular area of the 8 to 16K that the EPROM uses will have to be switched out.

The T/S 2040 printer may cause problems with its electronic noise.

The DOS occupies 8K so a minumum of 16k RAM has to be installed to use the system BOOT disk. (*** Can one fly blind and use USR calls to SAVE and LOAD so that more than 8K can be in a program with only 16K ram added? ***)

I bought my sytem sight unseen from a person in California. He was reluctant to ship since he could not get the BOOT disk to LOAD. I agreen to accept it as is. I also had problems with the BOOT disk only since I had the drive case open I could see the worm on the disk track mechanism and it seemed to be slow or jerky. So I put in a blank disk and ran it a while with the RAND USR 13303 till it seemed more perky and then it would LOAD the BOOT disk. After a little playing with the sytem I went to the SMUG FEST and not long after that we were involved in buying a house and packing to more and just a few days ago I got the old AERCO system out and started to play with it again. I did note that the storage space on the disk was small but so it is with the Larken ZX81 system. That and not being able to name the file at the time of SAVE like on other systems did turn me off originally. And my system has a single sided disk drive only. But recently I tried to SAVE a program on the Larken system and it would not SAVE and I learned that I had to POKE in the starting address and the length of the machine code to SAVE a program with machine code. And two FD-ZX disk drives are in the local users group plus there is another user in LISTing. So it was with renewed interest that I got back to the FD-ZX floppy system.

But the disk drive on my system bugged me, and then I got a more recent copy of a FD-ZX manual and lo and behold I saw that with my system the maximum number of pages with a single sided drive is 8 and 16 with a double sided drive and with the new manual it gives 10 for single sided and 20 for double sided drives - but the manual also calls out the 8 pages as maximum for 35 track single sided and 16 for double sided 35 track and 10 for single sided 40 track and 20 for double sided 40 track. And in my manual and the newer manual the USR calls for 35 track 8 pages and 16 pages are the same. One mystery solved, I have a 35 track single sided drive. My manual also refererenced to 8 inch drives which are single density and from casual conversation I believe are 35 track drives. So I will need an EPROM to be able to change over to 40 track drives. And possible a new BOOT disk, I suspect that if I SAVEd the BOOT program to cassette and reLOADed after I have the 40 track EPROM then I would have it. Be easier with a BOOT disk in 40 track though. As I wrote before it could be done with USR calls but you could not read the directory so you would be working blind.

I have heard of someone that has wrote a routine to name the directory as you SAVEd the page. I will try to get a copy of that program.

Unlike the Larken, SADOS will SAVE machine code with no pokes. That would be better than Larken and besides 20 pages on a disk over 16 is much better, or should I say 19 since one is the BOOT program.

Z88 Ascii Translation Programs

How is it that different computers can 'talk' to each other? A standard was developed called Ascii. Each letter, number and symbol is assigned a number from 0 to 255. Numbers from 0 to 128 consist of the symbols on your keyboard. Numbers above that are different for each computer.

When you have a text file it is sometimes called an Ascii file. It just consists of the letters on your keyboard. Usually formatting commnds for the word processor are not included.

So it should be simple to send Ascii text files from one machine to another. No. There is one difference in Ascii files from different machines. There is an invisible character on the end of each line. Different machines use different characters.

Each line on a Z88 Plain Text file has a Carriage Return (CR) on the end. The QL uses a Line Feed (LF) and the PC uses a Carriage Return and a Line Feed. (CR + LF). Text files on the Macintosh use a Carriage Return (CR) like the Z88.

The following program was originally written by Phil Wheeler to add a Line Feed to a Z88 Plain Text file so that the file could be printed.

I modified the program to convert a Z88 Plain Text file to an Ascii file that could be used on a QL or a PC. There is no conversion needed to send Ascii text files back and forth between a Z88 and a Macintosh.

By Dave Bennett

```
10 *NAME QLLF
15 REM Modified version to produce QL compatible ascii files ie LF on end
      of each line.
20 B$=CHR$(1)+"B":FL$=CHR$(1)+"F"
30 CLS:PRINT TAB(31,0)B$"Z88 QLLF Utility"B$
40 PRINT TAB(18,2)"File to process <ENTER to end>: ";:INPUTF$
50 IF F$="" THEN CLS:END ELSE PRINT TAB(18,3)"                    Output File: "
   ; :INPUTG$
60 F=OPENIN(F$):G=OPENOUT(G$)
70 PRINT TAB(35,5)FL$"Working..."FL$
80 H=BGET#F:IF H=10 THEN 120
85 IF H<>13 THEN 90 ELSE BPUT#G,10:GOTO 100
90 BPUT#G,H
100 IF EOF#F THEN CLOSE#0:PRINTCHR$(7);:GOTO 30 ELSE 80
120 PRINT CHR$(7)TAB(14,5)B$"This file ALREADY has at least one LF=CHR$(10) in
    it"B$:CLOSE#0:END

10 *NAME CRLF
15 REM Modification of Z88 ADDLF Utility
18 REM Produces PC compatible ascii file - CR and LF on end of each line.
20 B$=CHR$(1)+"B":FL$=CHR$(1)+"F"
30 CLS:PRINT TAB(31,0)B$"Z88 CRLF Utility"B$
40 PRINT TAB(18,2)"File to process <ENTER to end>: ";:INPUTF$
50 IF F$="" THEN CLS:END ELSE PRINT TAB(18,3)"                    Output File
   : ";:INPUTG$
60 F=OPENIN(F$):G=OPENOUT(G$)
70 PRINT TAB(35,5)FL$"Working..."FL$
80 H=BGET#F:IF H=10 THEN 120
85 IF H<>13 THEN 90 ELSE BPUT#G,13:BPUT#G,10:GOTO 100
90 BPUT#G,H
100 IF EOF#F THEN CLOSE#0:PRINTCHR$(7);:GOTO 30 ELSE 80
120 PRINT CHR$(7)TAB(14,5)B$"This file ALREADY has at least one LF=CHR$(10) in
    it"B$:CLOSE#0:END
```

A Few Z88 CLI Applications

Here are a few applications for the Z88 CLI. The CLI is a built-in Macro Language. It is similar to Macros on other machines. You can program the CLI's or you can open a file and all your keystrokes are saved. When you execute the file it appears that the commands are typed on the keyboard VERY rapidly.

This file sets the baud rate on the Z88:

9600.cli

```
~As~Un~U~U9600~U9600~E
```

Substitute whatever Baud Rate you need. such as 1200, 2400 etc....

When you select files on the Z88 you must type the full file name unless you have already selected the Device/Directory. There are two defaults to select on the Z88. One default is in the Filer and the other is in the Panel. This CLI sets both defaults for you. So after you execute this file you only have to type the file name that you want to use.

2.cli

```
~U~E~R~R~R~R~R~R~X2~E~As~D~D~D~R~R~R~R~R~R~X2~E
```

Substitute 1 and 0 for the 2 in the file. Put 1 and 0.cli in :RAM.2. Put 0 and 2.cli in :RAM.1. Put 1 and 2.cli in :RAM.0. Just Execute the files to set the default for one of the other devices.

Here are a few useful CLI files if you use a modem on the Z88. When you are online with the Z88 and you want to save the incoming text from the Modem, press the [] (Square) key, the + key and the S key. Everything that appears on the screen is saved into a file called :RAM.-/S.SGN. When you want to end the text that is saved press []-S. Now execute the following CLI file. (s.cli) It will copy the file to :RAM.1 and to Pipedream. It will also erase the original :RAM.- file. It is important that all :RAM.- files are erased as soon as you use them. There is a bug in Version (2.2/3.0) of the OZ operating system. If you have a :RAM.- file present and you do a soft reset it tends to screw-up the computer. You can have all sorts of strange problems! So it is best to delete any :RAM.- files as soon as you are finished with them.

s.cli

```
~A-S!SV~R~R~R~R~R~R~X-~E~R~E~L!CO:RAM.1/s.txt~E~E~R~E~L!ER~E
!SV~R~R~R~R~R~R~X1~E #P!FLs.txt~E!W80~Dya~E
```

And lastly here is a CLI file to delete that :RAM.- file so that you wont have any weird problems.

e.cli

```
#F!ER:RAM.-/*~EN~E!!
```

Type the files in Pipedream and save as plain text then Execute from the Filer!

------- The End !!!!! -------

By Dave Bennett

A program to make spreadsheets easier

For those occasional times when you run across a neat spreadsheet that is listed in a book or magazine in something like the format below, this program will make your life easier.

A1 "This is a spreadsheet"
D56 (A2+A4)/.34
and so on.

Just type it in and save it. Change the occurrences of CHR$(32) to a space with a quote on both sides of it.

When running, type carefully and follow instructions.

This program is not flawless and it's offered as a starting point.

Good luck!

Z88 TENNIES



```
1 CLS: PRINT "SPREADSHEETER    c. 1990 C. Clear":L$="":
  NUM=1: "NAME SSer
2 PRINT: INPUT "Destination File "; FILE$: IF FILE$="": VDU7:
  GOTO 2: ELSE: DS% = OPENOUT(FILE$): PRINT#DS%, "#P"
3 PRINT: PRINT "Begin entry. Type END when done.": PRINT
  EXAMPLES: AA17 ;"This is a string."" D56 D55+E55 , /G
  16 <--- Width of COL G to 16"
4 PRINT "Source Line #"; NUM;: INPUT L$: NUM=NUM+1: IF IN-
  STR(L$,CHR$(32))=0 AND L$ <> "END" AND L$ <> "": VDU7:
  NUM=NUM-1: PRINT "MUST HAVE A SPACE!": GOTO 4
5 IF L$ <> "END" AND L$ <> "": GOTO 7: ELSE: CLS: PRINT "NOTE:
  Most typing errors will be detected by this program or by
  PipeDream.": CLOSE#DS%
6 PRINT TAB(5,2); "To make use of what you've just done:";
  TAB(8,3); "1. Be running only ONE copy of PipeDream";
  TAB(8,4);"2. Add enough rows and columns to allow for spread-
  sheet you entered"; TAB(8,5); "3. Go to the Filer and Execute the
  CLI file": END
7 IF INSTR(L$,"/") = 1: C$ = MID$(L$, 2, INSTR(L$,CHR$(32))-2):
  W$ = RIGHT$(L$, LEN(L$) - INSTR(L$,CHR$(32))+1): L$="|W" +
  W$ + "~DY" + C$ + "~E": GOTO 10
8 IF INSTR(L$, CHR$(34)) <> INSTR(L$, CHR$(32) ) + 1: S$ =
  LEFT$(L$, INSTR(L$,CHR$(32))-1): C$=RIGHT$(L$, LEN(L$) -
  INSTR(L$,CHR$(32))):L$="|CGS" + S$ + "~E" + "|X" + C$ + "~E":
  GOTO 10
9 IF INSTR(L$, CHR$(34)) = INSTR(L$, CHR$(32)) + 1: S$ =
  LEFT$(L$, INSTR(L$,CHR$(32))-1): C$ = RIGHT$(L$, LEN(L$) -
  INSTR (L$,CHR$(32))-1): IF INSTR(C$, CHR$(34)) = 0: VDU7:
  PRINT "MISSING A QUOTE": NUM=NUM-1: GOTO 4: ELSE:
  C$=LEFT$(C$, LEN(C$) - 1): L$= "|CGS" + S$ + "~E" + C$:
  GOTO 10
10 PRINT#DS%, L$: GOTO 4
```

Names & numbers

Macro Systems
Salt Lake City UT
(801) 575-8855
Fax: (801) 364-6050

Sharp's Inc.
Box 326
Mechanicsville VA
(804) 730-9697
Fax: (804) 746-1978

Do you belong to QUANTA yet?

The QL User and Tinkerer Association is an independent QL User Group based in the UK. Worldwide membership of more than 2000 includes more than 60 in North America. Annual membership of £17.00 may be charged to Visa/Mastercard by writing Philip Borman, 1 Newtown Road, RAUNDS, Northants, NN9 6LX, United Kingdom. Telephone (0933) 460690. Benefits of membership include the monthly newsletter of tips and reviews by airmail and access to over 20 Megabytes of free software in the QUANTA library.

REQUESTS FROM UPDATE SUBSCRIBERS by Frank Davis

We have had a few requests over the last year of things that our readers would like to see covered in our pages. As I have neither the time or expertise to write for all of them, I am throwing them out to the general readership and vendors to come up with some material on these subjects.

Harry Spencer, Jr of Huntsville Alabama, would like to see us have some articles on Forth as a programming language on the Sinclair line of computers. He also requests that we not make the print too small, so that he can read it.

Howard Chegwidden of Dover, New Jersey, asked for more issue disks for the Aerco FD-68. He also asks if when we do list a TS2068 program for typing in, that we please list what changes are necessary, line by line, to get it to run on the FD-68. We have brought back one Aerco disk in this issue if you check the back pages. Next issue we will be bringing back at least one other one, plus some FD-68 listings.

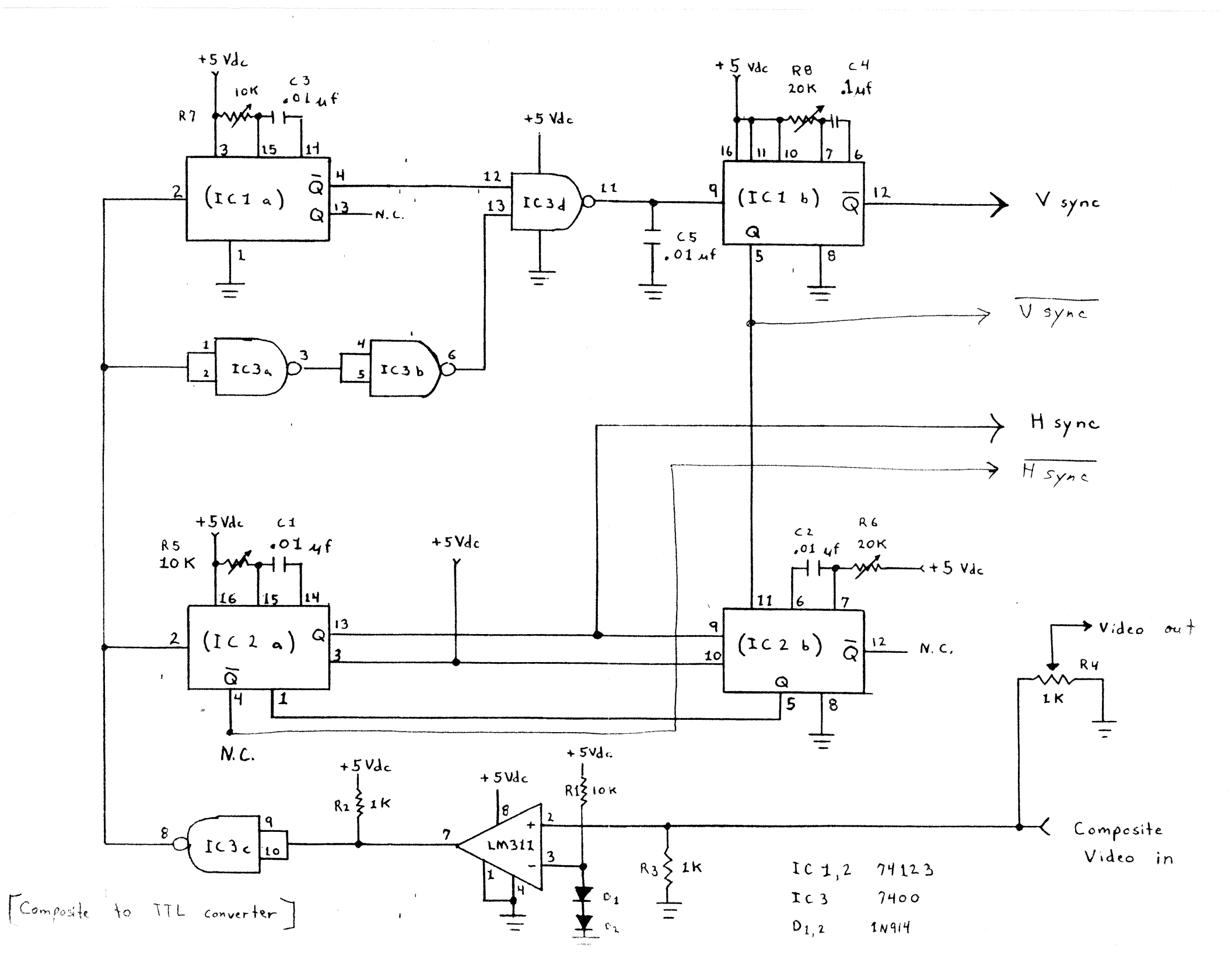
Carl Rink of Sunnyvale, California, would like to see any suggestions for emulation of MSDOS programs on the TS2068 format and is using Larken. I do believe that in the User Group library of the Toronto Sinclair Club they have a program to read MSDOS disks on the Larken. He would like any suggestions from people who want to work on an emulator for this. I notice that he uses an Olivetti Inkjet printer, so he may be interested in our new issue disk for CAD which is available with an Olivetti CAD version driver. This printer is excellent for graphics and printed circuit board work.

Eliad P. Wannum has reminded me to tell all of you QL users out there to occasionally take out all of your microdrive cartridges and either load them a few times or do a few DIRs on them, even if they are archival or not used very much. If allowed to sit too long without the tape moving, then the tape inside will start to stick together and that mdv cartridge is lost, along with all data on it. Also, do not store them in an overly warm place, as well as keeping both mdv cartridges and disks out of direct sunlight. The ultra violet light tends to break down all plastics over time. Store in the dark or covered.

Does any one out there know if Z88 FAX NEWS is still publishing? How about any other Z88 newsletters or magazines? Also, several of our readers want to know on what BBS or data services they can find sections or boards dealing with the Z88. Last of all, where do you send a Z88 to get it repaired? It appears that Mark Stuber is still advertising the Z88 for sale in ads in Computer Shopper. Macro Systems is still selling Z88s. Anyone else?

CONNECT A COMPOSITE TTL MONITOR TO A TS1000/QL
by Jim Harrell

I have included a schematic of a circuit I built to connect a composite monochrome signal (TS1000/QL) to a TTL input monitor. The circuit strips the sync pulses and then separates the horizontal (H) and vertical (V), and generates the (H) horizontal pulses while the (V) is active. Most TTL monitors require continuous (H) horizontal pulses to provide a signal to generate the high voltage to the CRT (cathode ray tube). The TS1000 stops sending (H) pulses while the (V) pulses are active. The circuit provides the inverse of the H & V signals too. Some TTL monitors need them to be inverted from what the TS1000 or QL provides. For any assistance on this you may send a SASE to Jim at 3545 S. Dupont Ave. #2, MPLS, MN 55408-4022. Jim promises soon to give us an article on repairing QL microdrive units.


+5 Vdc
R7
10K
C3
.01 µf
(IC 1 a)
N.C.
IC3d
C5
.01 µf
+5 Vdc
R8
20K
C4
.1µf
(IC 1 b)
V sync
V sync
IC3a
IC3b
H sync
H sync
+5Vdc
R5
10 K
C1
.01 µf
(IC 2 a)
N.C.
+5Vdc
C2
.01 µf
R6
20K
+5 Vdc
(IC 2 b)
N.C.
Video out
R4
1K
+5Vdc
R2 1K
IC3c
+5Vdc
+5Vdc
R1 10K
LM311
R3 1K
D1
D2
Composite
Video in
IC 1,2 74123
IC 3 7400
D1,2 1N914
[Composite to TTL converter]

COMPUTER MEANDERING by E.P.Wannum

I am back again to share with you both those things I have found out about Sinclair computers and those questions I still have unanswered. These thoughts are not particularly ordered, but that is why I call them meanderings.

First of all a tip for those who are fairly new to the QL and who have heard other users talking about what ROM version they are using. Did you ever get curious at that time as to "which version do I have?" How to find out? Fire up your computer and type in the following: PRINT VER$, and then hit the enter key. In the upper left hand corner of the screen you should see something like: AH, JM, JS, JSU, MG, MGUK, or MGUS, etc. Now ask your favorite QL guru just what that means. These are all different versions of the operating system and built in Super Basic for your computer.

Now I am going to alternate with a question. I recently got together with Frank Davis and he showed me some used Schoen keyboards that were meant to replace membrane and keys used on the QL. These are a few years old, and need some minor repair to the connectors. What he did not have was instructions or any data sheets on them. Anyone out there who has this information or other data on them.....please contact us or send us a copy so we can get them up and running.

I have a similar request on the ABC MEGA RAM board. Both Paul Holmgren and I have one each already installed in computers that appear to be working, but not accessing the extra RAM. I have been told that the command RAMEX will access the extra memory. I still need to know information as to how this partitioned up and how to add the other two possible megs of memory. You probably guessed we have no docs for these also.

Here's a tip for those of you that have and use Tony Tebby's Super Toolkit II. After initializing TK II, and you have a disk that is full of files, here is a useful trick to limit the amount of files you need to check when you do a DIR (the command used to get a listing of files on a disk). For example you only want to know about DOC files on the disk, so type in WDIR flp1_DOC, and it will list out only those files ending in the DOC suffix.The same goes for ABA, etc. I have found this does not work on my Gold Card version of TK II, so perhaps there has been a change somewhere along the way. I will let you know more on this if I find out. The ROM version on my Gold Card is 2.25, so perhaps this is just another bug in it. One thing I have noticed in it that I consider a bug is it's disregard of 360K disk drives. It will not format disks on them as 360K (720 sectors). It tries to format them as 720K disks and falsely tells you that you have 1440 sectors. You will have problems if you try to use this disk. This also creates read/write problems when trying to use the standard 360K disks while using PC Conqueror or Solution or the CPM emulators on the QL. I wrote to Miracle about this and hope for a new ROM soon. 720, 1.4 and 3.2 drives seem to have no problem with this ROM version on the Gold Card.

While on the subject of Toolkit II, did all of you know that with TKII you can overwrite existing files, and are politely asked if you wish to do so? When you do not have this utility and are just in Super Basic, you are told you can not overwrite the existing file. This makes TKII very handy for updating existing files.

Miracle Systems has been shipping the 3.2 drives to work with their Gold Card and have sort of promised to have their new VGA Graphics card out for the QL later this year. Besides 256 colors it will also have a parallel port and a true serial port for the QL. The QL is not dead!

NEW COMMANDS EFFECTIVE WITH JLO SAFE V2.6

The following commands have been added to JLO SAFE V2.6. All previous commands are still available with no changes:

1) CAT /n This new command will change the way JLO SAFE performs a CATalog. The command is similar to DIR W on an MSDOS computer. Argument n must be in the range 0-255 or number out of range error. Default CAT /n value of zero sets SAFE to perform a normal CATalog as it has always done in previous versions. A value of n greater than zero specifies the number of columns for SAFE to perform an abbreviated wide CATalog listing. Each column of this abbreviated catalog requires 16 character positions. Thus, you can get 1 or 2 columns on the screen in 32 column mode or 1-4 columns on the screen in 64 column mode. If output is sent to the printer via opening channel#2 to the Oliger printer port, you can print as many columns as your printer can handle (or you desire). Once an argument other than zero is used in this command, the computer will remember the number of columns requested and perform wide CATs at this setting on future uses of CAT and CAT /. To return SAFE to its normal CATalog mode, perform a CAT /n with an argument of zero. EG: CAT /2 CAT /0 CAT /cols

2) RUN /"FN" CODE This command will load a BYTES machine code file into the B Bank buffer at location 3800H, and CALL it. Exactly 1760 (06E0H) bytes will always be loaded to this location. If the actual file is shorter, additional bytes will be whatever is physically on the disk following the file. If file is longer than 1760 bytes it will be truncated. At the time of calling the machine code, Basic's pointers will point just past the CODE token following the filename. In this way, the machine code loaded at 3800H can further interpret the line to perform as desired. After the CALL, all bytes will be skipped by SAFE until an end of statement marker (CR or ':') is found. In this way, SAFE itself could be expanded further or machine code can easily be run without use of home ram or the hassle of where to load & how to access. Bear in mind when writing machine code to be run in this way, that the SAFE B Bank WILL be turned on at time of calling your code. Access to the normal Basic rom must be made using SAFE's RST 20H call rom function. Example programs demonstrating how this is accomplished is included on a separate sheet. EG: RUN /"BlUESCR$"CODE RUN /"My way"CODE 1234567890

3) GOSUB / This command does exactly what RUN /"FN"CODE above does, but skips the actual loading of the machine code. It is used to reCALL machine code previously loaded via RUN /"FN"CODE. If the RUN / command has not been executed since power-up, the report "FILE NOT FOUND" will be returned. Again, further arguments can be added to the line and SAFE will skip them after the call and at syntax check time. Your machine code will NOT be called except at run time. EG: GOSUB / GOSUB / "I will need this text for my machine code"

4) The British pound sign has been made a single character "wild card" that will match any other character.

5) An attempt was made to park the drive's head on track 1 instead of track zero as SAFE use to leave it. Hopefully, this will result in making the system less likely to corrupt the very important track zero CAT entrys and disk information areas, at the expense of making the system more likely to corrupt your first file. Of course, the corruption should very rarely ever occur in the first place, but I felt it wise to at least attempt to leave the drive "parked" NOT over the CAT entrys when SAFE gives up control of the computer.

Although items #2 & #3 are geared towards the more technically oriented user, I feel their availability will benefit the non-technical user via RUN / & GOSUB / subroutines developed by the more advanced users for use by all. Update magazine would be a good place for this kind of exchange to take place. If you come up with something interesting, send it to Frank Davis at Update and share it with us all.

Thanks, -John Oliger

This little routine will take the text starting at variable TEXTBEG and send it to the screen. This routine is intended to be used with the Oliger SAFE DOS RUN /"FN" and GOSUB / commands. End of text is marked with a 00 character.

```
                ORG 3800                All RUN/GOSUBS must start at location 3800H
                START 2000              Rom will start at 2000H
3800 S$WRITE    LD DE,0DAF              Spectrum clear screen routine
                LD A,(378A)             Get Timex/Spectrum flag
                AND A                   Test flag
                JR NZ,SPEC 380C         Jump if Spectrum rom
                LD DE,08EA              Timex CLS routine
380C SPEC       PUSH DE                 Address to call onto stack
                RST 20H                 Clear the screen
                LD DE,1601              Spectrum open channel#A routine
                LD A,(378A)             Get Timex/Spectrum flag
                AND A                   Test flag
                JR NZ,SPEC2 381A        Jump if Spectrum rom
                LD DE,1230              Timex open channel routine
381A SPEC2      PUSH DE                 Call address to stack
                LD A,02                 Set for channel#2
                RST 20H                 Open channel#2
                LD HL,TEXTBEG           Point to start of text
3821 SENDLOOP   LD A,(HL)               Get character
                AND A                   Test character
                RET Z                   Done if CHR$ 0
                INC HL                  Bump
                PUSH HL                 Save pointer
                LD HL,0010              Point to Basic's print chr A routine
                PUSH HL                 Call address to stack
                RST 20H                 Print the character
                POP HL                  Retrieve pointer
                JR SENDLOOP 3821        Loop to send next character


Start of text to print
382E TEXTBEG    DB 'This text is being generated by a machine language routine'
                DB 'being accessed and run by the JLO SAFE  RUN /  command.'
                DB 'This is just a little demo of something that can be'
                DB 'accomplished via use of this command.'
                DB 'It is hoped that really innovative uses are made of this new'
                DB 'command, and that those who DO come up with some good uses send'
                DB 'me and perhaps UPDATE MAGAZINE a copy for others to benefit!'
                DB 'Best of luck & have fun,   -John Oliger'
                DB 00


Z80 CODE FROM   .3800 TO .39D5


ERRORS = 0
BYTES ASSEMBLED = 01D6
```

Ed Grey Enterprises' Price List Fall/Winter '91

Ed Grey Enterprises
P.O. Box #2186
Inglewood, CA 90305
(213) 759-7406

Call The Grey Matter BBS & RCP/M (213-971-6260)

PRICES

Winter/Spring 1991

Timex/SINCLAIR Products:

**Software.....

SPECTERM-64 (TS-4.1) on tape.....$12.50 + S&H
SPECTERM-64 (ZX-4.1) on tape.....$12.50 + S&H
SPECTERM-64 (TS-4.1) AERCO, JLO, Larken.$12.50 + S&H
MAX-COM Term/BBS SW (LKDOS v 3).....$25.00 + S&H
PIX-FX (screen$ manipulator) on tape....$15.00 + S&H
Loader V (Mterm 2 Enhancer).....$12.50 + S&H
PC-Draw (ver 3.0) on tape.....$12.50 + S&H
COLOR2GREY (convert color to greyscale).$12.50 + S&H
**All software on this list S&H = $3.50 each with a $5.00 minimum per order.

CP/M (2.2/3.0) & DOS Software (new).....

WordStar 3.3 (for CP/M-80, 8" disk).....$20.00 + S&H
WordStar 3.3 (for CP/M-80, 5.25" disk).....$20.00 + S&H
Turbo Pascal 3.01A (for CP/M or DOS) .....$60.00 + S&H
MIX C Compiler (for CP/M 2.2, 5.25" disk).....$20.00 + S&H
MIX C Compiler (for MS/PC-DOS, 5.25" 360K).....$20.00 + S&H
Both MIX C Compilers (CP/M and DOS, 1 manual)..$25.00 + S&H
MIX Editor (for CP/M 2.2, 5.25" disk).....$20.00 + S&H
MIX Editor (for MS/PC-DOS, 5.25" 360k).....$20.00 + S&H
Both MIX Editors (CP/M and DOS, 1 manual).....$25.00 + S&H
MIX Ctrace Animated Debugger (DOS only).....$20.00 + S&H
UNIFORM (for CP/M or DOS).....$69.00 + S&H
**All software on this list S&H = $5.00

NOTE: See complete listing of CP/M software available on the (B) file of the (N)ews menu (or send SASE w/ 52 cents postage and $1.00 for a hardcopy).

NOTE: New CP/M software available on any UNIFORM supported 5.25" disk format.

**Timex/SINCLAIR Hardware.....

T/S2068 Used/Tested, CPU/Kybd only.....$60.00 + $6.50 S&H
T/S2068 Tested w/CPU, Manual, PS, Cables..$75.00 + $8.50 S&H
T/S1500 Tested w/CPU, Manual, PS, Cables..$40.00 + $7.50 S&H
T/S1000 Tested w/CPU, Manual, PS, Cables..$25.00 + $6.50 S&H
T/S2040 Printer w/ 1 roll paper.....$30.00 + $5.00 S&H
T/S1016 16K rampack.....$12.50 + $3.50 S&H
T/S2068 Power Supply Only (Used/Tested)...$12.50 + $3.50 S&H
NOTE: All T/S hardware is subject to availability.

**T/S2068 Disk Drive Interface.....

JLO Expansion Board....
Bare Board.....$15.00\
Board with Parts.....$44.00) + S&H
Assembled and Tested.....$55.00/

JLO Disk System Board 'A'.....
Bare Board.....$18.00\
Board with Parts.....!$56.00) + S&H
Assembled and Tested.....$67.00/

JLO Disk System Board 'B' with JLO SAFE Disk Basic Eprom..
Bare Board.....$27.00\
Board with Parts.....$46.00) + S&H
Assembled and Tested.....$64.00/

JLO Disk 'Combo' Assembled and Tested....
Boards A and B.....$128.00\
Boards A, B, and Expansion.....$178.00) + S&H

Boards A, B, Expan., and cable....$190.00/

JLO Parallel (Centronics) Printer Port....
Bare Board.....$12.00 \
Board with Parts.....$20.00 > + S&H
Assembled and Tested.....$31.00 /
Centronics Cable for Printer Port..$15.00/

JLO 2068/Spectrum Joystick Port.....
Bare Board.....$11.00\
Board with Parts.....$17.00 > + S&H
Assembled and Tested.....$22.00/

NOTE: The JLO Printer Port and Joystick Port are available with gold edge traces for an additional $3.00 per card. For ANY JLO product, or combination of products, in the 48 contiguous states, the S&H = $5.00.

**Other T/S Specific Hardware.....

AERCO Parallel Centronics Printer I/F.....$59.95 + $3.50 S&H
Z-SI/O Card Assembly Instructions w/2050...$7.50 + $3.50 S&H
2050 Modem Cards (new, untested).....8/$12.00 + $5.00 S&H

**T/S Specific Software and Books.....

T/S2068 Software (used, tested):

Horace and the Spiders	Flight Simulator
Horace Goes Skiing	Gulpman
Hungry Horace	Grafist
VU-3D	Spelling 1
Circuit Board Scrabble	Wordcross
Penetrator	Casino 1
Androids	Guardian

Keyboard Tutorial, Turtle Graphics, Home Acct. (1 tape)

T/S1000 Software (used, tested):

Checkbook Manager	Automobile Analyzer
Home Improvement Planner	Hot Z (T/S1000)
The Organizer	Ledger/Journal
Inventory Acct.	Invoice Control

NOTE: All of the above software titles are priced at $5.00 each or any 6 for $25.00. S&H is $3.50 for first cassette plus 75 cents for each additional title. All titles are subject to availability, give alternate choices if possible. NOTE: Some titles are missing documentation...

Timex/SINCLAIR Books:
T/S2068 Beginner/Intermediate Guide .....$5.00 + S&H
T/S2068 Intermediate/Advanced Guide .....$5.00 + S&H
.....both of the above books .....$8.50 + S&H
Munchers, The Ultimate T/S Games Book .....$5.00 + S&H
Vu-Calc and Vu-File, Getting Serious w/ T/S ..$9.00 + S&H
Tantalizing Games for T/S2000 series .....$3.00 + S&H
Profile 2068 Manual .....$6.50 + S&H
Sinclair SPECTRUM Manual (new) .....$10.00 + S&H
ZX Spectrum User's Handbook .....$6.50 + S&H
QL Computing by Ian Sinclair (new).....$9.50 + S&H
The Hacker's Handbook (new, not T/S specific).$6.00 + S&H
Programming Your TS1000 in BASIC.....$5.00 + S&H
Timex/SINCLAIR 1000: Astronomy.....$4.50 + S&H
GOSUBS: 100 Subroutines in T/S BASIC.....$4.50 + S&H
Byteing Deeper Into Your T/S1000.....$6.50 + S&H
T/S2068 User Manual.....$6.00 + S&H
T/S1500 User Manual.....$6.00 + S&H
T/S1000 User Manual.....$5.00 + S&H

NOTE: Unless otherwise indicated, all of the above books are used but in good condition. Used books are approximately 1/2 the original price (when I could tell.) S&H charges, for these books, are $3.50 for first book plus $1.25 each additional book. Minimum S&H = $5.00

Additional Hardware:
RS-232 Ribbon Cable 60".....$12.50 + $3.50 S&H
Dual Disk Drive Cable 30".....$12.50 + $3.50 S&H
Dual Disk Drive Cable 42".....$15.50 + $3.50 S&H
Call for prices on ANY other computer cables .....

MECHANICAL AFFINITY CATALOG

The following are now available from Mechanical Affinity for your Sinclair home or business computer. Most items listed are available in quantity. Orders may be placed by check or money order to either Paul Holmgren,5231 Wilton Wood Ct., Indianapolis In, 46254 317-291-6002 , ...or to Frank Davis, 513 East Main St., Peru, In 46970 317-473-8031. Do not make the check out to Mechanical Affinity.

All funds are in U.S. dollars, and include postage paid except where noted to include additional packing and insurance.

BOOKS

SYNCWARE NEWS Vol. 1 $8 All volume 1 issues bound in one book
TOURING THE TS2068 ROM OPERATING SYSTEM by WIDJUP $12
QL TECHNICAL GUIDE $15
QL SERVICE MANUAL $12

extras & new items

Replacement or backup power supply for the QL, no serious user should be without one. Available for only $15.

Micro Drive Cartridges 4 for $15

MDV labels, 3 sheets for $1.25. For the QL.

QL replacement membranes for keyboard $15.

Disk Drives, half height 3 1/2 and 5 1/4. Order from Paul at $55 @ for 3 1/2 or 5 1/4, or $165 for dual 3 1/2's w/ case & power.

Panasonic KX-3131 Daisy Wheel Printer, with extra ribbons and print wheels for $115, includes P. & H. Parallel Interface.

Towa Daisy Wheel Printer with extra ribbons and print wheels, parallel interface, QUME compatible for ribbons and print wheels. For only $115, includes P. & H.

5 1/4" 360K or 729K disks with Tyvek sleeves-- 100 for $18.00

IBM Keyboards, 101 keys PC-AT types, for $15 each.

LOTUS 1-2-3, new never used fullpackage with registration papers for only $75. For IBM or Compatible or QL IBM Emulator.

Commodore 1520 Color Plotter Printer with John McMichael Board that allows this to be used on TS2068 with Oliger motherboard. Includes software, all for only $100.

Rotronics Wafadrive, two 128K stringy floppy drives, parallel and serial printer ports, Spectrum mode only, for $90.

NEW

GOLD CARD FOR THE QL. THIS ALLOWS YOU TO HAVE 2 MEG OF MEMORY, 16 MEGAHERTZ SPEED. upto 4 times the present speed of your QL, AND USE UPTO THREE DRIVES INCLUDING THE 1.4 AND NEW 3.2 MEG DRIVES. HAS FULL TK2 AND EVEN INCLUDES THE CODE FOR OPERATING A WINCHESTER HARD DRIVE (hard drive interface and hard drive not included). All of this for only $500 plus $10 for insurance and handling. We take care of any import duty. Prepayment and please allow extra time for shipping.

Full Trump Card, with TK2, and capable of 2 drives, giving you a full memory of 896K. All for only $225, insured.

Add on for QL Trump Card to allow you to use upto 4 drives and latest operating system upgrade for only $40.

NEW FOR THE Z88!

Soft carrying case for the Z88. Protect your notebook sized computer from accidents and the elements. This case is also handy for those with the Laser PC3, Compumate 3 or PC4. $10

QL SOLITAIRE
A REVIEW

by Peter Hale

Games are not my forté, but I had seen the game of Solitaire on a friend's PC-Clone under Windows 3.0 and my father used pass cloudy afternoons in the summer playing the game with real cards.

So I bought a copy of version 1.0 for the QL from Sharp's for $19.95. It was entertaining but lacked the addiction of one variable offered on Windows - the option to play by Las Vegas gambling rules. This option is now available in version 2.01.

The game many know as Solitaire is just one of a number of solo card games and is actually called Canfield or Klondike. The deck is layed out in seven columns. The first column has one face up card; the second has one faceup and one face down, and so on through to the seventh column. The rest of the deck is placed face down.

The object is to move aces to the foundation and then build the suites through to kings.

Points are given for various achievements - 10 points for playing a card from the deck to the layout, 20 for exposing a face down card in the layout and 40 for playing a card to the foundation.

To play, select whether to turn the cards over three at a time or one at a time. If you choose the latter, the easy way, the points are halved.

On screen in white-on-green are the key codes for effecting the moves. Press D to move a card from the deck and an arrow lights under the deck. Press the number of the column to which you want to play it; F to play to the foundation; V to view the next card or cards in the deck.

A card can be played to the foundation only if there is already a card in the same suite one number lower. To play to the layout, there must be an exposed card one number higher and of the opposite color.

Cards can be moved from column to column to expose face down cards or from a column to the foundation.

The program keeps score. If you reach an impasse, press Q to Quit the particular game. If your score qualifies you, you may enter your name on the high score table. You can play again as often as you like.

Version 2.01 now has Las Vegas rules as well. In Vegas or other gambling houses you 'buy' the deck for $52. For each card that you play to the foundation, you get back $5. The program stores a running tally of your losses and gains between sessions.

It is a particularly addictive form of playing. Some would have you believe that the current recession is tied to the release of Windows 3.0 and the preoccupation of gamblers in the workplace. I will let you decide.

Version 2.01 runs on an unexpanded QL with any ROM. A TV does not do justice to the very sharp graphics of the card faces, but it works. As with Windows 3.0 version, QL Solitaire multitasks.

It is from Softshoe Software and is compiled with Q-Liberator. It comes with a short instruction manual and is available on a choice of disks for $19.95 ppd (plus $4.00 for micro-cartridge) from EMSoft, P.O. Box 8763, BOSTON MA 02114-0037.

UPDATE! MAGAZINE

SORTED DIRECTORIES

Bob Hartung, 2416 N. County Line Rd. E., Huntertown, IN 46748

There are times when it is desirable to have files saved in an alphabetic order for greater ease in accessing them, or simply for cosmetic reasons. This is made possible by the following listing, which is an adaptation of the LPRINTØ_0 program I gave in the 1/91 UPDATE issue (p. 31).

Because some parts of the original listing have been revised and renumbered, it may be easier to enter DIRdatCOPY from scratch rather than trying to add it to the old one. Both programs will be included on my QL ISSUE DISK if purchased from UPDATE after 1/15/92. Earlier versions of either my QL or TS2068 Oliger ISSUE DISK will be updated for $2.00 P & H each if you will send me (not UPDATE) a 5 1/4" 8Ø-track copy of your original.

To use DIRdatCOPY, key 1 to transfer directory data from the selected source drive to a RAM1 file. Key 2 to re-order the DIR data and re-save it to RAM1. Key 3 to copy sorted files from drive 1 to drive 2. Key 5 to access the LPRINTØ_0 routine for printing out ASCII files or listings with selected column length, width, and left margin. Key 7 to view the contents of the DIR data file in RAM1. If you do not have RAM_disk or TK2, change the listing as noted in REMarks. Change OPEN_OVER to OPEN_NEW.

DIRdatCOPY

```
1Ø REMark For microdrives change lines 2
Ø, 5Ø, 6Ø from flp to mdv and all RAM1 r
eferences to mdv1
2Ø FLP_USE flp: TK2_EXT: MODE 4: WTV
3Ø INPUT 'Enter YOUR printer codes in pr
ompt'\' or delete lines 3Ø-4Ø if not nee
ded'\\'For CPI: P=1Ø M=12 Panel-set Cond
ns/Draft'\'Key ENTER to skip printer-set
'\cpi$: IF cpi$="" THEN GO TO 5Ø
4Ø OPEN #7,ser1: PRINT #7,CHR$(27);cpi$:
 CLOSE #7: CLS
5Ø CLS: CLS #Ø: INPUT #Ø;'Data source dr
ive #';drv$: cmd$='flp' & drv$ & '_'
6Ø CLS: CLS #Ø: PRINT 'Source drive is '
;(drv$)\\'Ø - QUIT'\'1 - Load DIR into R
AM1'\'2 - Re-order DIR in RAM1'\'3 - COP
Y sorted files from flp1_ TO flp2_'\'4 -
 RAM1 DIR data print-out'\'5 - Listing o
r ASCII file print-outs'\'6 - Reset data
 source drive'\'7 - View RAM1 DIR data'
7Ø mu=CODE(INKEY$): IF mu=Ø THEN GO TO 7
Ø
8Ø mu=mu-48: IF mu='Ø' THEN STOP
9Ø IF mu=1 THEN GO TO 55Ø
1ØØ IF mu=2 THEN GO TO 6ØØ
11Ø IF mu=3 THEN GO TO 86Ø
12Ø IF mu=4 THEN y$="": GO TO 21Ø
13Ø IF mu=5 THEN GO TO 19Ø
14Ø IF mu=6 THEN GO TO 5Ø
15Ø IF mu=7 THEN CLS: VIEW RAM1_dirdat:
INPUT #Ø;'Key ENTER for menu ';cpi$
16Ø REMark If TK2 or RAMdisk is not avai
lable, use the lines following this REMa
rk and 17Ø REMark :  15Ø IF mu=7 THEN CL
S: OPEN_IN #7,flp1_dirdat
17Ø REMark : 17Ø IF EOF(#7) THEN CLOSE #
7: PRINT #Ø;'ANY KEY FOR MENU': PAUSE: G
O TO 6Ø: ELSE INPUT #7,P$: PRINT P$: PAU
SE 1ØØ: GO TO 17Ø
18Ø GO TO 6Ø
19Ø PRINT #Ø;'Key F5 TO SCROLL TK2 DIREC
TORY': DIR cmd$
2ØØ INPUT #Ø; 'File name for print-out:
';y$: cmd$=cmd$ & y$
21Ø INPUT #Ø;'Use cross-slash Ø y/n? ';c
z$
22Ø CLS #Ø: curln=Ø: remln=Ø: REMark cur
rent line; remaining line
23Ø IF mu=4 THEN OPEN_IN #8,RAM1_dirdat:
 GO TO 25Ø
24Ø OPEN_IN #8,cmd$
25Ø OPEN #7,ser1
26Ø CLS: INPUT 'Enter zero to cancel ';(
y$)\\'No. lines this page-column: ';line
s: IF lines=Ø THEN CLOSE #7: CLOSE #8: G
O TO 5Ø: END IF
27Ø INPUT "Columns per line: ";col
28Ø INPUT 'Left-margin setting: ';lm: lm
=lm-1: lm$='': lm$=lm$ & FILL$(' ',lm)
29Ø INPUT 'Key ENTER to skip title-print
      any chr to print ';t$: IF t$ <>''
THEN tl$='': tl$=tl$ & FILL$(' ',INT(col
/2+lm)-INT(LEN(y$)/2)): PRINT #7,tl$;y$\
: PRINT #7\: END IF
3ØØ REMark EPSON translation of cross-sl
ash character for zero
31Ø LET zr$=CHR$(27) & 'R' & CHR$(4) & C
HR$(92) & CHR$(27) & 'R' & CHR$(Ø)
32Ø cnt=Ø: IF t$<>''THEN cnt=2: END IF :
 REMark count print-lines
33Ø IF remln<>Ø THEN cnt=cnt+curln-remln
: GO TO 48Ø
34Ø IF EOF(#8) THEN CLOSE #7: CLOSE #8:
```

```
GO TO 5Ø: END IF
35Ø IF cnt>=lines THEN GO TO 26Ø: END IF
36Ø INPUT #8,p$: IF LEN(p$)=Ø THEN p$='
  '
37Ø lp=LEN(p$)
38Ø IF p$(lp)=' ' THEN lp=lp-1: END IF
39Ø IF cz$=='y' AND lp<=col THEN cnt=cnt
+1: PRINT #7,lm$;: FOR x=1 TO LEN(p$): I
F p$(x)='Ø' THEN PRINT #7,zr$;: NEXT x:
PRINT #7: ELSE PRINT #7,p$(x);: END FOR
x: PRINT #7:END IF : END IF
4ØØ IF cz$=='n' AND lp<=col THEN cnt=cnt
+1: PRINT #7,lm$;p$(1 TO lp)
41Ø IF lp<=col THEN GO TO 34Ø
42Ø curln=INT(lp/col)
43Ø DIM lin$(curln,col)
44Ø FOR n=Ø TO curln
45Ø LET clp=col*n+1: IF clp>lp THEN LET
clp=lp
46Ø lin$(n,1 TO col)=p$(clp TO lp)
47Ø END FOR n
48Ø FOR k=remln TO curln
49Ø IF cz$=='y' THEN PRINT #7,lm$;: FOR
x=1 TO col: IF lin$(k,x)='Ø' THEN PRINT
#7,zr$;: NEXT x: PRINT #7: ELSE PRINT #7
,lin$(k,x);: END FOR x: PRINT #7: END IF
 : END IF
5ØØ IF cz$=='n' THEN PRINT #7,lm$;lin$(k
, 1 TO col)
51Ø cnt=cnt+1: IF cnt>=lines THEN remln=
k+1: IF remln>curln THEN remln=Ø: END IF
 : GO TO 26Ø: END IF
52Ø END FOR k
53Ø remln=Ø
54Ø GO TO 34Ø
55Ø REMark DIR data to RAM1_
56Ø OPEN_OVER #5,RAM1_dirdat
57Ø DIR #5,cmd$
58Ø CLOSE #5
59Ø GO TO 6Ø
6ØØ REMark Re-order DIR in RAM
61Ø PRINT #Ø;'Please wait for re-orderin
g'
62Ø DIM f$(2ØØ,3Ø)
63Ø OPEN_IN #5,RAM1_dirdat
64Ø FOR n=Ø TO 2ØØ
65Ø IF EOF(#5) THEN CLOSE #5: LET direnD
=n: GO TO 68Ø
66Ø INPUT #5,f$(n,1 TO 3Ø)
67Ø END FOR n
68Ø REMark DIR sort
69Ø LET m=direnD: s=m: cnt=Ø
7ØØ LET s=INT(s/2): IF s<1 AND NOT cnt T
HEN GO TO 78Ø: END IF
71Ø IF s/2=INT(s/2) THEN LET s=s+1: END
IF
72Ø FOR n=2 TO m-s
73Ø LET cnt=Ø
74Ø LET j=n
75Ø IF f$(j,1 TO 4)>f$(j+s,1 TO 4) THEN
LET x$=f$(j,1 TO 3Ø):LET f$(j,1 TO 3Ø)=f
$(j+s,1 TO 3Ø): LET f$(j+s,1 TO 3Ø)=x$:
LET j=j-s: LET cnt=cnt+1: IF j>Ø THEN GO
 TO 75Ø: END IF : END IF
76Ø END FOR n
77Ø GO TO 7ØØ
78Ø REMark Save re-ordered DIR to RAM1
79Ø OPEN_OVER #5,RAM1_dirdat
8ØØ FOR n=Ø TO direnD
81Ø IF CODE(f$(n,1))=Ø THEN GO TO 83Ø
82Ø PRINT #5,f$(n,1 TO )
83Ø END FOR n
84Ø CLOSE #5
85Ø GO TO 6Ø
86Ø REMark COPY source drive 1_ TO dest
drive 2_
87Ø CLS
88Ø AT 1Ø,Ø: PRINT 'Place SOURCE media i
n drive 1 & DEST media in drive 2'\'Key
F to format drive 2 media'\'Press any ot
her key to start copying'
89Ø fdt$=INKEY$: IF CODE(fdt$)=Ø THEN GO
 TO 89Ø
9ØØ IF fdt$=="F" THEN CLS: INPUT #Ø;'Ent
er DRIVE 2 format title: ';fdt$: PRINT #
Ø;'Please wait -- FORMATTING ';fdt$: FOR
MAT "flp2_" & fdt$: CLS #Ø: GO TO 88Ø
91Ø FOR n=2 TO direnD
92Ø IF CODE(f$(n,1))=Ø THEN GO TO 94Ø
93Ø COPY flp1_ & f$(n,1 TO ) TO flp2_ &
f$(n,1 TO )
94Ø END FOR n
95Ø GO TO 6Ø
96Ø REMark ENTER sv to save listing
97Ø DEFine PROCedure sv: SAVE flp1_DIRDA
TCOPY: END DEFine
```

International QL Report

15 Kilburn Court, Newport, RI 02840 USA

CABLE COLUMN

By Bill Cable

ARCHIVE SERIES
PART 7 : ORDER,LOCATE,RESET COMMANDS

The ability to conceive of and make use of order is one of those magical results of the mingling of the humans mind and language. A trick that allows even a vast collection of items to be organized and used in productive ways. Order is based on some some common descriptive property of the items of interest that can be given rank. A hierarchy rule is established providing a process for setting up the order.

Databases are computer programs designed to handle information in a record/field structure. Each item is composed of a group of descriptive features called fields which remain linked or tied together as a record. A similar example is the row/column layout of a spreadsheet. Each record could be a row defined by the values across its fields (columns). File cards are another equivalent example where each record is a card with areas on the card defined for specific types of information (fields). In either example we maintain the record integrity by always keeping the field values of each record together. We would keep rows together in the spreadsheet and we wouldn't let the file cards be cut into pieces. It is easy to see ordering the rows in the spreadsheet by a particular column or ordering file cards by a particular entry could be extremely useful.

The FIND and SEARCH commands covered last issue are brute force commands not dependent on order. They work sequentially record by record until a match is found. They are adequate for moving about small databases. For large databases they are not fast enough for efficient work. Even though a computer is fast it can be overwhelmed by sheer volume just like a human. No matter how fast a program may be, sequential text searching becomes inefficient when the data becomes large enough. If there are 100 records FIND and SEARCH work okay. If there are 1000 records and the match is near the end they are too slow.

Imagine a phone list on paper in columns of name, city, and phone number with 1000 entries in random order. If you were given a name and told to find the phone number you would take a long time finding the phone number unless if was near the beginning of the list. If the information was in an ARCHIVE database and you used the FIND command you would find it much faster than your paper search but if it was near the end it would still take several seconds. Now imagine your paper list was ordered by name like a phone book. You could find any number almost as fast as the FIND command in the unordered database. ARCHIVE benefits in a similar manner if its database is ordered. Just like you it doesn't have to start at the beginning and tediously check each record. It jumps in the middle and if the name is before its guess it goes more towards the beginning else it goes more towards the end and so on. Like you it finds the name in several comparisons instead of hundreds. In fact in an ordered database the size is almost irrelevant for locating on the ordered field(s) just like a phone number can be found in a phone book quickly no matter how large the phone book.

The sequence in which records physically occur in a database is called the physical order. One would expect records would be in the database in the order they were entered called the historical order. There are a few complications in ARCHIVE that could make the physical and historical order slightly different. Because ARCHIVE allows variable length fields it must keep a lookup list pointing to where each record starts since there is no other way to locate them quickly. If at some later time the length of a record is increased by appending information to a field then it no longer fits where it was so ARCHIVE moves the record to the end and an unused gap is left in the file which ARCHIVE remembers. Later if a new record will fit in that gap ARCHIVE will put it there. All this is invisible to the user. This lookup list of where each record begins is actually part of the database file itself. The dreaded 'wrong file type' error that occurs when an opened database is changed and then not closed is explained by the fact that the new lookup list was not rewritten back to the file. ARCHIVE had marked the file as being in the state of alteration and now knows the lookup list didn't get updated. Since there is the possibility of an inconsistency it refuses to use the database file.

Not only can databases make good use of order but they can actually do the ordering very quickly. It would take us ages to take a random 1000 entry phone list and order it by name. ARCHIVE can do it in a few seconds. What is interesting is that the records are not actually moved when ordering is done. Instead the lookup list is just changed so that it is ordered. The first entry in the lookup list points to the smallest name (alphabetically speaking) and the second entry points to the next smallest name, etc. Ordering the lookup list is much more efficient than moving records around in the file to order them. All this is transparent to the user. All we know is that we have order and can take advantage of it.

PREPARATION

In the description below I will underline what you should enter to participate in the examples. It is always a good idea to use a copy not the original. Start ARCHIVE, access GAZET_DBF with the LOOK command, and display it.

look "{}gazet"<ENTER> {}=device, mdv1_,etc
display<ENTER>

ORDER COMMAND

ARCHIVE uses two types of ordering. For text fields it uses alphabetical order based on ASCII values ("0"<"9"<"A"<"Z"<"a"<"b" etc) and for numeric fields it uses numeric values (-1<0<1 etc). Note that as text "15">"140" because "15">"14". A complete ASCII table is listed on pages 5-9 of CONCEPTS of your QL manual. The decimal column is the common ASCII value for the characters although the values above 127 are not universally accepted ASCII character values. Interestingly, ARCHIVE allows you to customize the sorting order with the CONFIG_BAS program. See the INFORMATION section of the QL manual page 9.

The ORDER command takes the following form:

order fld1;a or d,fld2;a or d,fld3;a or d,fld4;a or d

Where fld1 would be the name of the most important field for order and "a" would mean ascending order and "d" would mean descending order and fld2 would be the next most important field for order and so forth. A maximum of 4 fields can be used. In most cases you would not want to order on more than 1 or 2 fields. Order by country name :

order country$;a<ENTER> semicolon is separator
first<ENTER>
next<ENTER>
<F5><ENTER>
(repeat <F5><ENTER> many times)
last<ENTER>

Now let us order by continent and population :

order continent$;a,pop;d<ENTER>
first<ENTER>
next<ENTER>
<F5><ENTER>
(repeat <F5><ENTER> through several continents)
last<ENTER>

Notice that ordering is fast. This means that you can easily reorder for specific purposes. Ordering is only 8 characters deep on each field. That would mean that "Sinclair QL" and "Sinclair Z88" would not be separated by ordering if they were entries in the same field of 2 different records. Once you order there is no available way to display what the order is so you have to keep track of it yourself. Notice that FIRST and LAST depend upon the current order. The commands that move us around the database use whatever current order exists. FIND and SEARCH start at the first record as defined by the current order and work through the records by they current order trying to find a match. When we ordered by continent and population we did population in descending order so that the largest countries in each continent would appear first. Ordering is the most powerful feature of databases and can be used in very sophisticated ways.

LOCATE COMMAND

The search command that takes advantage of order in a database is called LOCATE. Its form is :

locate "text1","text2","text3","text4"

Where text1 would be text to locate in the first ordered field and text2 would be text to locate in the second ordered field and so forth. Naturally if only one field were ordered you would only use text1. LOCATE is case sensitive so if what you are searching for has upper case characters you must also use upper case with locate. If one of the fields were numeric you would use a number without quotes instead of text. You can leave off field levels to locate on starting from the least important. Most of the time you will only order to 1 or 2 levels anyway. In any sort of database with peoples names you cannot just order by last name an expect to find people immediately. People have the same last name and they have last names that match up to 8 characters (LOCATE won't work beyond 8 characters). You could order on last name and first name to separate on most people. If you try to use LOCATE and the database is not ordered you will get error 8 variable not found.

Assuming that you have just done the examples above with gazet above let us use locate :

locate "ASIA",40<ENTER>

This locates the country in ASIA that has a population equal to or less than 40 (we ordered it descending).

Compare the speed with the search command:

search continent$="ASIA" and pop<=40<ENTER>

Follow along

order continent$;a,pop,a<ENTER>
locate "ASIA",40<ENTER>

Above we located asian country pop>=40

order country$;a<ENTER>
locate "SWEDEN"<ENTER>
first<ENTER>
find "sweden"<ENTER>
first<ENTER>
locate "SW"<ENTER>
let a$="FRANCE"<ENTER>
locate a$<ENTER>

See how much faster LOCATE is compared to FIND. When you use FIND it either makes a match or doesn't. If no match was found (found()=0) then your current record (the one displayed) will not change. With LOCATE you will always be moved to the closest match even if there is no exact match and the found() function is not affected.

RESET COMMAND

The RESET command will remove any order in a database and leave the database in its physical order. It is usually used in context with the SELECT (not yet covered).

reset<ENTER>
locate "a"<ENTER> error 8

Next time more on ORDER and introducing SELECT.
Until then Happy Archiving!

EMSoft JOINS DJC

EMSoft division of Estate Management Services in Boston has announced that it will handle selected titles of QL software from Dilwyn Jones Computing, the Welsh distributor of QL Software.

Programs available are those felt to be of interest in North America, but special orders are welcome. See the ads in QL World. Retail prices are approximately those advertised in the UK so there's no need to convert to British currency.

The following titles are available:

QUICK POSTERS is a very neat utility for printing bordered posters from a QL. The interface is similar to Quill's.

It simplifies the design and printing of single page posters on 8.5" by 11" paper using the native fonts in printer.

The user selects a character or characters to serve as a border design. Then design on-screen the text desired. Double-wide appears double wide, as do extra high characters. Character size can be changed with a feature similar to Quill's paint. Italic and other fonts are accessible. A handy feature lets you view the layout of the full page in a pop-up window.

The program is designed for Epson compatible printers capable of Quad-height, double-wide fonts, and a number of printer drivers are supplied as well as an editor for creating custom drivers.

Sample files show application for Posters, Bumper Stickers and Disk labels. Needs only 128K. Price $19.95.

FILEMASTER is a unique file handling utility distinguished by full screen displays of directories in up to 4 column screens and 6 columns on paper. Files can optionally be ordered on screen and is automatic to the printer. It is very quick.

Use cursor keys to select the files for copying or deletion then activate the designated function.

Also available are features for printing disk labels and sleeve inserts. Media can be formatted from within the program. Excellent error trapping.

Requires ram disking but is supplied with Public Domain software for dynamic ram-disk. Requires 256K. Price $23.95.

SUPER DISK INDEX is a program for maintaining a complete record of all files on all disks. Up to 999 disks/ microcartridges can be indexed before a separate index file must be opened.

Each medium is assigned a number. SDI assigns the next available number on the queue; you have to put it on the disk label.

The data file stores all file names, but optionally you can exclude specific file names for security reasons. An index can be printed to hard copy (both Epson and non-Epson printers are supported) in up to seven columns depending on the length of the longest file name and the fonts available on your printer. File names can be ordered or not as desired.

Once a disk directory is added to the index it is possible to locate it and the disk on which it is stored. The search is very, very quick and with less than 100 disks screen handling is more of a limit than the search. Search is independent of the case of letter used and partial names are all that is needed if you forget the full name of a file.

Has excellent error trapping and is a fine complement to Filemaster. Requires 256K ram. Price $23.95.

THE GOPHER is a utility to find lost files. You know. You forget the name of a specific document but remember some unique words in it. Just pop the disk/microcartridge into the drive and send GOPHER to find it. Takes less than one minute for a full 1440 sector

disk and works on hard disks as well.

If that is too slow, you can search only files that have specific characters in their names (e.g. _doc files) or only a part of each file, such as the beginning of letters when searching for the name of a person.

Up to one hundred characters can be specified in a search string and case can be ignored or not as desired.

It is Turbo-compiled but has some of its own custom extensions as well. Requires only 128K. Price $23.95.

QL BASIC REPORTER is an executable, multi-tasking SuperBASIC programming aid. It only requires that the program be in memory. No SuperBASIC programmer should be without it, and if you frequently compile programs, it will help clean up the original.

What does it do?

1. Reports all names used in arrays.
2. Reports all defined variables (including numeric/string, FOR, REPeat) as well as the option to locate all unset variables. Those are the ones that you spell wrong when you typed them in but didn't notice.
3. Reports the line numbers of SuperBASIC Procedures or Functions or both.
4. Reports line numbers from which all (or a user defined list) of Procedures and Functions are called.
5. Reports the Keyword list.
6. Reports all machine code extensions (See TKII EXTRAS) AND THEIR ADDRESSES.

A trace function is built in as an aid to debugging a running program. It reports the current line number in the upper left corner of the screen.

Requires only 128K. Price $19.95.

TRANS 24 is for all graphic and DTP program users with 24 pin printers. Sure the 9 pin dumps that come with the program work, but the resolution is less than the printer is capable of. TRANS 24 gets high resolution without jagged edges.

TRANS 24 works with standard QL screen files as well as Graphic-QL, PCB Designer 1 and 2, Professional Publisher and Desktop Publisher 2, QRAM screen dumps, Sidewinder files and Easel dumps.

This is a filter program that requires TKII (but a software file of the necessary commands is supplied if you still don't have it on ROM.)

It does not work directly from within a program. It operates on a file saved to medium (ram disk as well.)

It is suitable for Epson LQ printers, and SQ and GQ printers under LQ emulation, Star LC2410 and NEC P2200. Thus, virtually all 24 pin printers including the popular Panasonic KXP-1124 and 1124i are supported.

Needs only 128K. Price $19.95.

All these titles are available from EMSoft, P.O. Box 8763, Boston, MA 02114-0037. (617) 889-0830 on your choice of disk. If microcartridge are desired, please add $4.00 per title or send a blank, formatted one with your order.

Ed Grey Enterprises

QUALITY COMPUTER PRODUCTS

Sales and Information:
(213) 759-7406
P.O. Box #2186
Inglewood, CA 90305

On Line Support:
The Grey Matter BBS
213-9716260 (CALAN)

T/S • Hardware • Software • CP/M

EMSoft Software for the **QL** that really works

Now has in-stock from **Software87** the best value WYSIWYG **QL** word-processor: **text87** v 3.01 with **Qtyp** spell checker, several new features (and unlimited North America help.)

text87 v 3.01 (R) 7 mdvs **$99.95**
WYSIWYG wordprocessor & Qtyp spell checker

fountext88: graphic driver 4 mdvs 49.95
WYSIWYG output to 9 or 24 pin with 32 fonts

founted89: screen font editor 1 mdv 29.95
Make text87 custom fonts

24-88: 24 pin driver 5 mdvs 29.95
for text87 only

Order two or more **Software87** titles and take 10% off the second title, 15% off the third and fourth.

Boutal, Chris

QL_GENEALOGIST (2nd ED) (R) 54.95
Family history with UK royal family demo
ASK about SECOND EDITION upgrade 23.95

CAPE Software

RECIPE ver 2.0 NEW 1 mdv 19.95
Recipe card file _dbf and demo

EMSoft

MAILBAG ver 3.1 1 mdv 24.95
Mailing list _dbf with demo

QLAND_LORD ver 3.1 (R) 1 mdv 24.95
Real Estate management _dbf

TRUST_FUND ver 3.1 1 mdv 24.95
Stock, Bonds etc _dbf with demo

INVENTORY ver 1.3 1 mdv 14.95
Personal property record keeping _dbf

EMSoft title upgrade(with original) 4.95

TAX-I-QL/91 1 mdv 24.95
1991 IRS tax template _aba

MJM Software

CAM MASTER demo --JSU only; 384K Ram) 9.95

CAM MASTER site license 2850.00

Platypus Software

QLUSTer 1 mdv 12.95
EXECutable, multi-tasking files handling

QLuMSi 1 mdv 19.95
Pseudo MS-DOS file handling on a QL

Qfile

MS-QLINK (R) 1 mdv 24.95
Read/write/format QL/MS-DOS/Atari-TOS

DISCOPY 1 mdv 14.95
Fast copier between QL/MS-DOS/Atari-TOS

MS-QLINK with **DISCOPY** 2 mdvs 34.95

Sector Software

FILES2:Taskmaster Files upgrade 1 mdv 26.95
Now multi-tasks in **ANY** environment (R)

Williams, Richard

TAB>EDITOR (R) 2 mdvs 34.95
Friendly Editor with vertical block definition & 8 columns in 19" with word wrapping

Wood & Wind Computing

CHAOS BUSTERS 29.95
SuperBASIC to ARCHIVE utilities & DBEasy

DBEasy: UN or EXpanded QL 3 mdvs 21.95
User friendly front end for ARCHIVE (R)

DBProgs 1 mdv 19.95
6 useful ARCHIVE utilities

DBTutor: UN or EXpanded QL 3 mdvs 24.95
Archive "Flash card" to teach yourself

HELPER 1 mdv 9.95
SuperBASIC filehandling utility

DILWYN JONES COMPUTING

FILEMASTER 1 mdv 19.95
File handling utility

THE GOPHER 1 mdv 23.95
File finding utility

QL BASIC REPORTER 1 mdv 23.95
SB Programming aid

QUICK POSTER 2 mdvs 19.95
Easy to use poster/bumper sticker prog

SUPER DISK INDEX 1 mdv 23.95
The easy file cabinet for all your files

TRANS 24 1 mdv 19.95
24 pin printer filter for 9 pin Graphics

BOOKS & MAGAZINES

Syntax magazine set & Foyt book 29.95
All 48 monthlies, 3 quarterlies & book

Syncware News 19.95
All 30 issues (5 vols - 6/vol)

Quantum Levels 19.95
All 12 issues (2 vols - 6/vol)

SPECIAL THRU 02/28/92 postmark
Any 2 sets take off $10.00; all 3 for 49.95

The Secret Guide to Computers 15.00
Delightful, entertaining and informative

HARDWARE

T/S BUS Connector/Extender (3 paok) 13.95
T/S BUS Connector/Extender 3*(3 pack) 26.95

All prices are postpaid in N.A.
(but subject to change without notice.)

Choice of disk size/format; add $4.00 per mdv
(See number of mdvs required next to price)
Send #10 SASE for review (R), if available.

FREE CATALOGUE

EMSoft
P.O. Box 8763
BOSTON MA 02114-0037
(1-617) 889-0830

VIDEO INTERFACE WITH THE QL COMPUTER

Using the QL with color or monochrome monitors not sold specifically for it may require some care in making the initial connections. Here is some information that should help you or your computer monitor or electronics dealer in making these connections.

Use with the Television Set

Choosing F2 on the initial screen will give you the U.S. NTSC TV mode. The QL works well with a TV set, though it is the rare set that will adequately display characters in the high-res mode (Mode 4 or Mode 512). You should probably stick to Mode 8/Mode 256.

Use with a Monochrome Monitor

To connect to a monochrome monitor, use pins #3 (live, or the center of an RCA phono plug) and #2 (ground, or the outside of an RCA plug), as shown in the accompanying diagram. You can use an 8-pin or a 3-pin DIN plug.

Use with an RGB Monitor

Make connections as shown below via an 8-pin DIN plug. Use an RGB TTL monitor (be sure you don't have the rare RGB analog type).

Use with a Composite Color Monitor

Sinclair does not recommend this video alternative. You must use extreme care here. A PAL-(British color system) compatible monitor may work, and some VCR's composite video input, but an NTSC (U.S. system) monitor will not, without substantial alterations.

Using a Monitor on TV Setting

You can overcome the overscan problems that may occur on a monitor (causing you to lose the left-most and right-most portions of the screen) by pressing F2 for TV at power-up. Then you can select Mode 512 to get high resolution.

MONITORS: TECHNICAL NOTES

Horizontal Resolution

The horizontal resolution of the QL is 512 pixels across the screen. This means that a monitor used with the QL should have a shadow mask resolution adequate to cope with this. For a 14-inch monitor, this resolution should be at least one dot every 0.43mm (known as "medium resolution" in England, and "high resolution" in the U.S.); one dot every 0.31mm ("high resolution" in England) is better still. Monitors with standard T.V. tubes (one dot every 0.85mm) are usable, but can suffer from poor distinction of vertical lines.

Frame Rate

The QL in monitor mode runs at 50Hz non-interlaced, with 312 lines per frame, of which 256 are active. U.S. monitors usually require adjustment of the "Frame Hold" or "Vertical Hold" signal in order to synchronize on the 50Hz signal. They also usually require adjustment of the vertical picture size. Most U.S. monitors have these adjustments available without removing the cover.

Note that the U.S. QL in T.V. mode runs at 60Hz, and that this includes the initial sign-on message which asks you which mode you require. Ideally, a monitor should be capable of synchronizing to both 50Hz and 60Hz to get the sign-on message right; however, it is not a serious problem if this is not the case.

Overscan

The width of active video used on any scan line is over 51 microseconds; rather longer than most computers. This means that the QL picture tends to overscan; that is the edges of the picture are lost. Most monitors can have their horizontal picture width adjusted, but this usually requires an adjustment inside the monitor.

It is of course possible to use a monitor by pressing F2 for T.V. at start-up, and then typing mode 0 to get the higher resolution. This avoids problems of frame rate and overscan with a U.S. monitor.

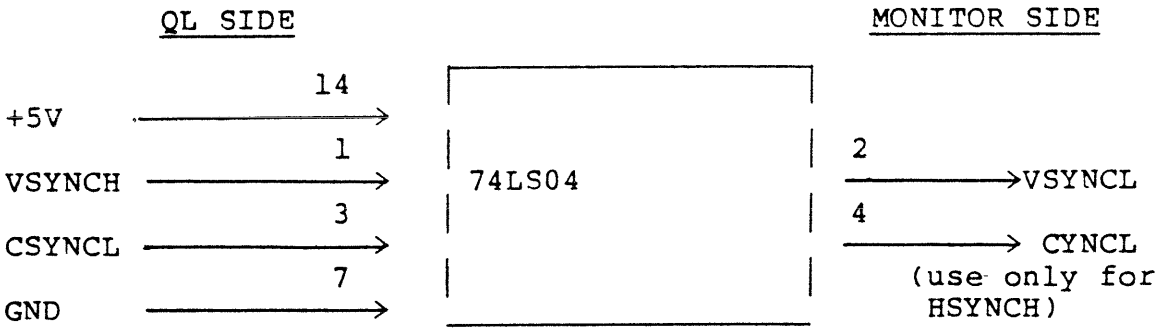
Connections and Pin-Out Data

The 8-way DIN connector on the U.S. QL contains the following connections: Red, Green, Blue, composite color video in place of the +5V.

The composite monchrome video signal is irrelevant to color monitor interfaces.

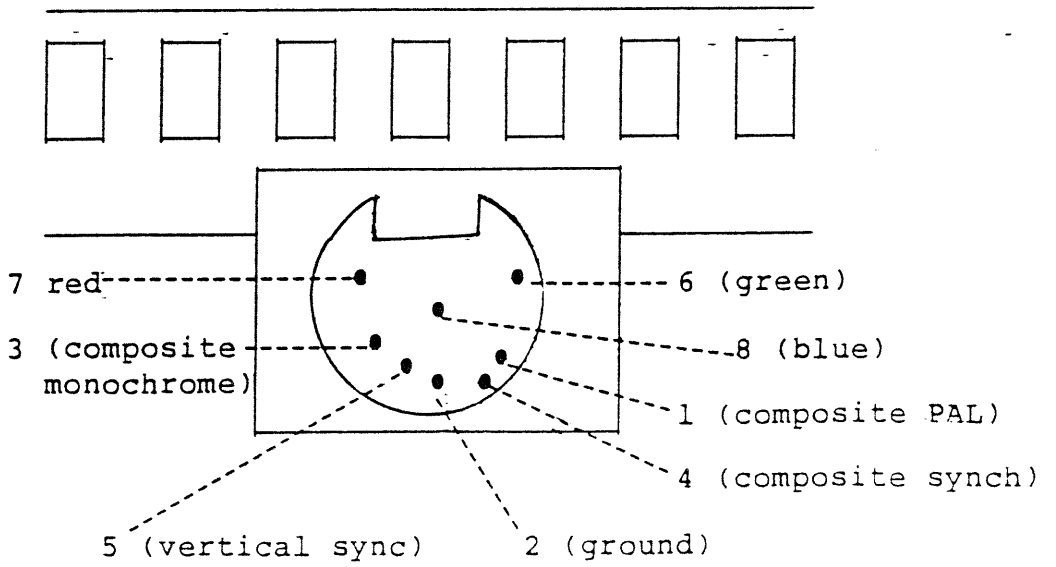
The Ground Red, Green and Blue signals can be hooked up directly.

The Sync signals vary from monitor to monitor. Usually, monitors which ask for Horizontal Sync will accept Composite Sync, so it is merely necessary to invert the Sync signals if they are of differenct polarities to those provided by the QL (this is sometimes required for both syncs, sometimes for one, and sometimes for neither). On U.S. QL's where the +5V signal is provided on the DIN connector, this can be done with a signal IC: the easiest is a 74LS04, but many other IC's can be used with appropriate adjustment to the pin-out.



Pin	Function	Signal	Wire Color	Signal Level
1	PAL	composite PAL	orange	1V pk-pk into 75 ohms
2	GND	ground	green	
3	VIDE	composite monochrome video	brown	1V pk-pk into 75 ohms
4	CSYN	composite sync	yellow	0-5V TTL (active low)
5	VSYN	vertical sync	blue	0-5V TTL (active high)
6	GREE	green	red	0-5V TTL (active high)
7	RED	red	white	0-5V TTL (active high)
8	BLUE	blue	purple	0-5V TTL (active high)

Diagram of Monitor Connector as Viewed from rear of QL. Showing pin number and functions:



The Sinclair Desktop Publishing Journal

Volume 2 Issue 4 Fall 1991
Edited By Mike Felerski

1991, A Quick Year

From the Editor

The year 1991 began by coming in like a lamb. By late summer, it began to go out like a lion. This is the end of the second year for the Sinclair Desktop Publishing Journal. I promised that if there was enough interest in the publication and enough material that I would continue to publish the Journal.

After reviewing the year, the nice comments from readers and the material I have which is still unpublished, it looks like 1992 will be our third year of publication!

I hope over the two years the Journal has been out that we have learned together about desktop publishing on the Sinclair computers, I know I have. And I look forward to improving not just my writing skills but also my format and layout.

So look out for the first issue of 1992! I hope to look at Gray Scale with ColortoGrey, ZPrint80, Art Studio and Word-Master. I am also looking at more articles on TS1000 publishing with Master-Scribe and some new fonts. Finally, as usual, ther are some big changes coming, so look out for '92!

...Mike Felerski, Editor.

In This Issue:

- 1991, A Quick Year
- Those Zebra Icons
- File Transfers
- A £ Apology
- Print Factory Graphics
- Word-Master Graphics
- John MCMichael' Graphics
- What Are These Double Icons?

Larken/Print Factory Companion File Transfer Programs

When you receive The Print Factory Companion series of graphics, fonts and SCREEN$s/Super SCREEN$s they are contained on four cassette tapes. Since I own a Larken disk interface connected to dual 3.5" 720K floppy disk drives, my first thought when I sat down the package was how would I transfer the data files to disk?

For the SCREEN$s I decided to use a utility I created called "TSX" or TS Transfer. I also knew that I had modified The Creator program (from The Print Factory) so that it would Save Graphic Design Files (and, of course Super Sets) from either disk or cassette.

(See Transfer, page 5)

Those Zebra Icons

As far as I can tell, the first graphic standard created for the TS2068 (and Spectrum for that matter) was created by Zebra Systems Inc. of New York. These graphics were called Icons and now are often refered to as "Zebra Icons". There were 23 original Zebra Icons which were provided with Zebra Systems Greeting Card, Poster and Banner Designer trio of programs.

(See Zebra Icons, page 5)

SDPJ Address

1284 Brushwood Aveue
Cincinnati, OH 45224

(Please enclose a LSASE)

The Making of this Issue

This issue of the Sinclair Desktop Publishing Journal was created using Word-Master for the first and fifth pages, The Print Factory's "First Edition" for the Second and fourth pages and The Print Factory's "The Press" (in three separate parts) for the third page.

Graphics were provided via Larken DOS SCREEN$ "Snaps" and/or edited with a Larken compatible version of Art Studio. The information boxe on page 5 was created using Byte Power's IBM font (in Art Studio) and a Word-Master box.

The program listings on page 5 were actual listings converted to text data files via the Larken DOS sequential file commands. They were then touched-up using MScript (for the Larken) and then directly LOADed into Word-Master where they were LINKed to the existing page five text file.

A £ Apology

Once can be covered by the statement, "A typo". When it is twice, there is no excuse. In the last two issues I have had a slight problem with my £s and my #s. Because of Word-Master, every time I want to use a # to indicate "number" I get a £. This is because £ is # and # is a backward apostrophe (unlike the TS2068 keyboard).

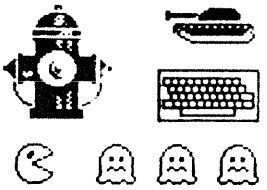
Maybe this is easy to keep track of if you live in Great Britain, but here, it just drives me nuts. So, I apologixe and promise to keep my £s and #s straight from now on.

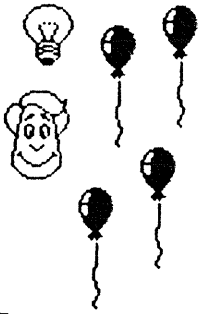
--MJF.

GRAPHICS

Paging Through the Graphic Design Files of The Print Factory and The Companion!

One of the most important features of The Print Factory suite of programs is their ability to use various sizes of graphics on a page. The original Print Factory package included seven graphic design files with a total of 168 graphics. Some samples of these original graphics are displayed to the left and below to the right of this text.





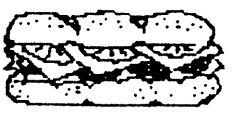
The files range from Animals & Nature to Home & Office, and a smattering of Comics/Cartoons and Digitized pictures to boot! But as any true desktop publisher knows, 168 graphics is just a tease. And we needed more! Enter The Companion...

The Companion not only included 11 new Super Set fonts, but, also offers 136 more graphics besides its 36 Super Large Screens and is 60 Standard SCREEN$ files. The Graphic Design include Figures (such as the sports examples in the bottom left corner of this page), Office, Nature, Religion, and three files of General all purpose graphics such as the sandwich below.

The Super Sets included in the collection are very impressive. I find them the most useful. There are eleven Super Set fonts in the set, of which one of them is used on this page (the GRAPHICS title above). They range from 32 point super bold characters to 56 point super fancy to 16 point unique character fonts.

The Super Large Screens are fascinating. Some of them have been featured on the covers of the Toronto Timex Sinclair Users Group newsletter: Sinc-Link.













One final note: In the overall collection of graphics and Super Sets, most of the graphics are 2-dimensional. The remaining are 3-D by the use of shading. I guess that it is safe to say that my favorite parts of the Companion series are the Super Sets followed by the Graphic Design files and then the Super Large Screens. Thus, I rate The Companion as a SDPJ "Must Have" product.

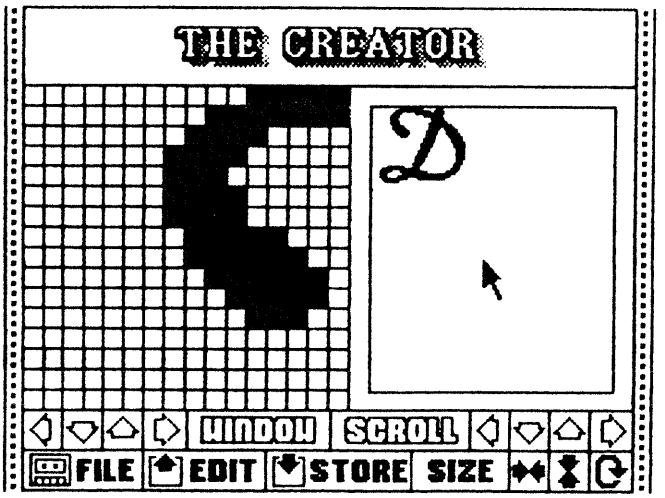
Creating Graphics for Print Factory with The Creator

By Mike Felerski

The Creator is introduced as a program which "...allows you to create your own custom graphic designs or modify existing ones." This is a very humble statement. You see, The Creator not only provides the user the ability to create Graphic Designs, but also create/modify font Super Sets and convert SCREEN$ graphics into Print Factory Graphic Designs!

The Creator uses simple "pixel-on, pixel-off" point and click, has its own Design File management menu and lets the user define each Graphic Design's size for efficient memory management. Each individual Print Factory Graphic Design can be as small as 1x1 TS2068 character (i.e. 8 pixels by 8 pixels) or all the way up to 12x24 characters.

Since many SCREEN$s are larger than 12x24 characters, four Graphic Designs may be needed to convert a SCREEN$. An example would be a SCREEN$ which is really only 18 characters tall by 30 characters wide. Such a SCREEN$ could be converted by The Creator for use, say in First Edition, into four Graphics. The first would be a full 12x24, the second would be 12x6, the third (lower left quadrant) would be 6x24, and the last Graphic would be 6x6. Of course, other combinations would work as well. This example utilizes the memory management techniques of The Creator to save Graphic Design memory space.



To the left of this text is an actual (Larken) SCREEN$ "Snap" of the Main Menu/Screen of The Creator. The snap was taken while editing a Super Set font. The Main Screen is actually made up of three parts: The title at the top, the working area to the left, with the full view window on the right and the options bar on the bottom.

When "Clicked" on, the title produces a window proclaiming the author and version number. The work area is used to create the Graphic (pixel-on/off), with the full view window showing the entire Graphic and not just the 2x2 character work area.

The options bar at the bottom of the Main Screen allows the user to move, rotate, edit and store the Graphics in memory. Graphic sizes are also selected here as well as file I/O.

As graphic programs go, it is straight forward and comfortable to use. It does lack some of the sophisticated features of SCREEN$ graphic programs. But, if any of those features are truly needed, those special graphics could be designed with, say Art Studio, and imported into The Creator.

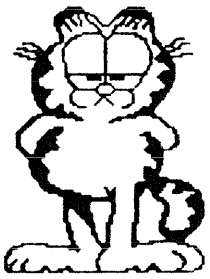
Let's Talk Briefly About Word-Master Graphics...

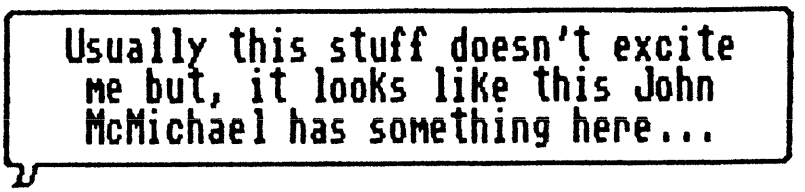
Unlike The Print Factory Graphic Designs or Pixel Print Icons, Word-Master does not use a specific type of graphic. Instead, the file handling menu of Word-Master allows the user to load a SCREEN$ and capture exactly what portion the user wishes to use. This is done with an adjustible window which adjusts on a per character basis.

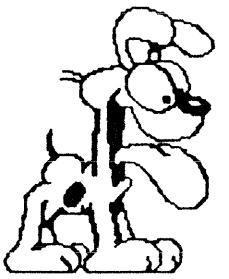
This feature acts similar to The Print Factory programs by conserving computer memory space. Remember, the more RAM which is used to store graphics, the less memory there is for text. In the case of Word-Master this can be very helpful when creating fancy titles and mastheads when using the Headliner program.

For more information about Word-Master and some of the graphics available, contact RMG Enterprises on:

Jack Dohany
390 Rutherford
Redwood City, CA 94061





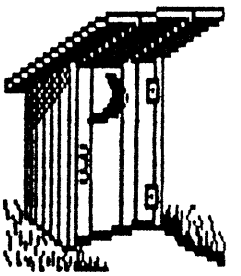


Graphic Design Files for
The Print Factory family of programs
As Reviewed By Mike Felerski

There are certain times in the life of a Timex/Sinclair computer owner which truly stand out in his/her mind. For me, these include the first Zebra Systems catalog I ever received, the day my disk system arrived (and it worked the first time), and my first issue of Time Designs. To these I add another moment: John McMichael's advertisement in Update Magazine for his new Graphics Collections!

Why was this moment so special? Because in this age of vanishing Sinclair products, the word NEW nearly knocks the Sinclair use right out of his/her chair! This is a great feeling mainly because every couple of months or so, I start getting that oh so familiar feeling that this is it, there just won't be anymore software for my computer! So thanks go out to John McMichael for pacifying me over the next couple of months.





John offers the owners of Byte Power's The Print Factory series of programs a set of three Graphic Design Collections. Each collection contains around 140 graphics in 16 design files. Each files falls under one of 15 different types: Men/Boys, Women/Girls, Animals, Funny, Sports, Transportation, Computers, Food, Holidays, Christmas, Male faces, Female faces, Zodiac signs, Digitized Miscellaneous and Miscellaneous.

The graphics on this page represent some of the 2-D, 3-D and shaded graphics from all three collections. There is an extensive collection of Garfield graphics and others from IBM public domain libraries which John converted and adjusted for use with The Print Factory. Each collection is $12.95, any 2 for $19.95 and all three for $26.95 pp.





John McMichael, 1710 Palmer Dr, Larame, WY 82070

Zebra Icons

(from page 1)

The Zebra Icon consists of 256 bytes of data which produces a graphic which is four TS2068/Spectrum characters across by seven characters down (note, the last 32 bytes of the original "Zebra" icon size are unused). Although a true Zebra Icon is 256 bytes long, a Modified Zebra Icon which is only 224 bytes long also works with many programs.

Since this icon size was established, it has been used as the primary graphic in the Pixel Print programs and is convertible into Byte Power's Print Factory "Graphic Design" files through a utility.

Lamke Software Design, the creator of Pixel Print, offered an Icon Package (which included an icon designer as well as icons) and an additional icon library. There was even a neat collection of "Mini" icons from Sting Graphics a.k.a. Steve Spaulding which were only 3x3 characters in size but would load in as full-size icons!

Toward the end of Zebra System's participation in the Sinclair world, a huge library of Zebra Icons were made available. The library consisted of twelve tapes containing 380 icons in all! Each icon was stored individually on the tapes, not in an icon library.

Since the time when Zebra left the Sinclair community, little if anything has been added to the world of Zebra Icons. But all is not lost...if you are looking for past or present Zebra type icons, or other graphics, contact RMG Enterprises or Mountaineer Software.

Companies Mentioned

RMG Enterprises
1419 1/2 7th Street
Oregon City, OR 97045

Phone: (503) 655-7494

Mountaineer Software
749 Hill Street #9
Parkersburg, WV 26104

Phone: (304) 424-7272

What are these Double Icons?

Recently it has come to light that many users of Pixel Print are unaware that there are/were "Double Icons" available for loading into Pixel Print. My first exposure to the double icons was from Steve Spalding of Sting Graphics.

Double Icons are icons which are twice the width of standard Zebra style icons (8 TS2068 characters wide). The Double Icons are loaded into programs like Pixel Print as two halves, a left and right half (each one icon wide) side by side. This produces an icon which is the size of many of the original IBM PC icons available with PC programs.

The Double Icon collection which I received contained 267 icons ranging from religion to medicine in a total of five collections. If you would like more information regarding Double Icons please contact the companies mentioned in the "Zebra Icons" article above.

Transfer (from page 1)

This left me only with transfering the Letter Perfect fonts and The Press double height fonts. In order to do this, I created the following two programs: DHFmov.Ba and LPFmov.Ba which I have listed below. So have fun and enjoy...

```
  5 REM This program LOADs
      Letter Perfect Print
      Factory Fonts and
      SAVEs them to Disk
 10 CLEAR 49999
 20 INPUT "Load Name? ";l$
 30 PRINT AT 1,1;"Cassette Load: ";l$
 35 INPUT "Font Length? ";len
 37 PRINT AT 3,1;"Font Length:   ";len;" Bytes"
 40 INPUT "Save Name? ";s$
 50 PRINT AT 5,1;"Disk Save:     ";s$
 55 PRINT : PRINT "Start Tape Now": PRINT
 60 LOAD l$ CODE 50000
 70 RANDOMIZE USR 100: SAVE s$ CODE 50000,len
 80 PRINT #0;"Press A Key or BREAK to Stop": PAUSE 0
 90 CLS : GO TO 20
9999 RANDOMIZE USR 100: SAVE "LPFmov.Ba"
```

```
  5 REM This program LOADs
      Double Height Print
      Factory Fonts and
      SAVEs them to Disk
 10 CLEAR 49999
 20 INPUT "Load Name? ";l$
 30 PRINT AT 1,1;"Cassette Load: ";l$
 40 INPUT "Save Name? ";s$
 50 PRINT AT 3,1;"Disk Save:     ";s$
 55 PRINT : PRINT "Start Tape Now": PRINT
 60 LOAD l$ CODE 50000
 70 RANDOMIZE USR 100: SAVE s$ CODE 50000,1536
 80 PRINT #0;"Press A Key or BREAK to Stop": PAUSE 0
 90 CLS : GO TO 20
9999 RANDOMIZE USR 100: SAVE "DHFmov.Ba"
```

Note: The Letter Perfect fonts have the following lengths: BOLD is 1839, BOLD 2 is 1899, TALL is 2257 and AVANTI is 1365 bytes.

QL DESKTOP PUBLISHING by Frank Davis

This issue I want to cover several programs related to creating pages on the QL, after all the object of DTP is the creation of a "page" which can contain graphics and text mixed together.

First of all just a few short items. I am looking to get a copy of Publishing Office-Ice by Eidersoft. It was part of the suite of programs created for use with the ICE front end for the QL. I have been told that it can also run without ICE. I have heard that it was a fairly simple to use DTP and one that was easily overlooked as it came out at the same time that Eidersoft was getting out of the market. Anyone who has a copy that they don't mind parting with, I will pay a reasonable fee to acquire it (or accept it as a donation). I have yet to acquire the program Page Designer 2, but am still trying to find it.

In an earlier issue I told you that the program Overdrive was for putting graphics or screens in with your Quill files. Well...that was correct, but that is not all. You can also use it to put a screen dump in a printer file for Archive and for Abacus. It will put the screen dump wherever you have placed the name of the file in curly brackets. When you combine that with something like Quill and some of the utilities given by us in the past to use 2 columns in Quill, then you have a fairly simple DTP setup, and one that is not all that difficult to master. All you would need then is a collection of Clip Art to use, or create your own with a program such as Eye-Q or the Painter. This would get you started in desktop publishing on the cheap. Archive with graphics is neat also.

A program well worth the attention of those wanting to do DTP on the QL is Grafix by Chas. Dillon. It is a printer driver program for dumping graphics screens produced with Front Page Extra, Desk Top Publisher and Professional Publisher. It is available from Digital Precision, and we even still have a few copies left of it at Mechanical Affinity. This program works with dot matrix printers. This program gets you away from the fact that most DTP programs have a fixed page size for hard copy. It also caters to more printers than the printer drivers that came with the above mentioned programs. Please be aware of the fact that this program requires memory expansion of at least 150K over the unexpanded QL. While looking through some of my saved DTP files I have found that a typical page can run upto almost 100K. They do eat up memory! So far I have not heard of any dot matrix printer that this program has not been made to work on. This is cheaper than a new printer!

Another good screen dump program that can be used with most dot matrix (I am not sure if all applies in this case) is the program Omnidump. This is one of the easiest to use dump programs I have yet to encounter. So far the only printer I have not been able to get it to dump a Front Page file to is my Olivetti Ink Jet printer. I am still holding onto hope for this one. I believe this one is also available from Digital Precision and from Mechanical Affinity. This program is not limited to DTP. It can be used with screens created by other art programs or that you have received as files on a disk. If you find this one as a used program then I recommend that you not get it if it is before version 2.0; in fact if you can find it then hold out for at least version 2.01. It seems more flexible.

Quite recently I was asked on two separate occasions if there was anything new out for DTP on the QL. As it was put by one person, "Front Page, Page Designer, etc. are all DTP programs that have been around for years! What is new?" Well, while it is true that they have been around for years, some have been improved upon. Digital Precision offers an upgrade on all of their programs that they have changed, and Professional Publisher is one of these. They also have a program called Professional Publisher Toolbox. This contains several beautiful high definition fonts, along with some new small fonts, more clipart, and utilities to handle Sector Software clipart and other forms of QL art. With this utility you can take any part of a screen from Professional Publisher and place it into a graphic program like the Painter or Eye-Q for manipulating. To find out more about this or to order you may contact them at: Digital Precision Ltd, 222 The Avenue, London E4 9SE, or call 081-527-5493. They also have available a Font Enlarger program that retails for #19.95, and Special Desktop Publisher (never heard of this one!) for #39.95. They seem to have a full stable of DTP programs and utilities.

Dilwyn Jones Computing is selling "The Clipart", which has 3 full 720K disks full of QL clipart for DTP. This can be ordered direct from them at DJC, 41 Bro Emrys, Tal-y-Bont, Bangor, Gwynedd LL57 3YT, or perhaps you can get this from EMSoft of Boston (see their ad this issue) as they are now carrying some of Dilwyn Jones products. From overseas the price is #12. He also has an excellent poster program by the name of Quick Posters for #10 on disk.

From C.G.H. Services we have 5 disks of QL clipart available on the subjects of Sports, whimsies, office, Viz, and general for #6 each. I am not sure just what Viz or whimsies are. Perhaps I will know by next issue. Software can be ordered from them by writing to C.G.H. Services, Cwm Gwen Hall, Pencader, Dyfed, Cymru, SA39 9HA or by phoning to England at 0559-384574. They also carry a large line of other inexpensive software. In addition they also have a public domain library available for a fee.

With all new subjects we find that they all develop their own jargon, words that are either new to us or that have a changed meaning. Desktop Publishing is no exception. Here are just a few of them and an explanation of what they mean to us on the QL.

BRUSH: this is a pattern that is contained in an 8X8 pixel square, which can be placed on a page repeatedly, in various contiguous positions so as to give the effect of a painter's brush. Most DTP programs and graphics programs have several different brush styles.

CLIP ART: this is a type of art file that contains figures and symbols that come in handy to illustrate text. You can place the chosen figure anywhere on the Page by using the cut and paste method. Generally you will find different library files containing all of one, or related subjects under the same heading. The file could be called Transportation or Food, etc. You are able to access a library and choose the file you need, then "lift" it out of the library and place it where you choose on the Page. Generally a library is just a screen filled with various pieces of clip art.

CLEAR: this is the act of covering the current Page you were viewing, or a selected part of it, with the currently chosen paper color. This erases anything printed or drawn there.

Bye till next time with more QL DTP! FWD

SINCLAIR PUBLICATIONS, A SHORT REVIEW by Eliad P. Wannum

Every now and again, someone will ask me, "Where can I find out more about Sinclair computers?" Now, to me the obvious well rounded choice is UPDATE Magazine! But of course, I have just a wee bit of prejudice in this matter, so I tell them about it...plus a few others to give a balanced picture. These are some that I find useful. I am not going to mention QL World till I find out what their future is, as they are part of the Maxwell fortune, and just a wee bit in limbo at the moment. I will say that I hope they survive the mess they got with the death of the mega-publisher Maxwell, and perhaps even come out of this stronger than before. They deserve to prosper and grow.

I will not be including user group or club newsletters in this listing. We have many fine ones in North America and in other parts of the world. What I will include are those publications done by groups or individual companies as a business or as a hobby.

Very new on the scene is ZX-91, the new newsletter for the Sinclair ZX81 / Timex 1000. It looks to be good for those who use this computer. To receive a copy, send a SASE envelope if you are Canadian, or a self addressed envelope and an INTERNATIONAL REPLY COUPON (available from your local post office) if you live elsewhere. It is available from Andre Baune, 304 Scott, Chateauguay, Quebec, Canada J6J 4H5.

For the QL we have the International QL Report, published by SeaCoast Services, and available from them by ordering from them at SeaCoast Services, 15 Kilburn Court, Newport, RI 02840, U.S.A.. They publish 4 to 6 issues a year, depending upon the amount of material received, and it averages 12 to 20 pages an issue. The price is $14.95 per year for the U.S., $16.95 per year for Canada, and $28.00 for the rest of the world. All funds are in U.S. dollars. They have put out 5 very good issues so far and have lived up to their name as being International in their coverage of the QL.

The QL Hacker's Journal, available from Tim Swenson, 4773 W. Braddock Rd. #3, Alexandria, VA 22311, is to be given a good report for those who are actual programmers on the QL. If you program on the QL and are looking for others who can give you support,this is a good place to look. They are "into" MicroEmacs, the language C, Pascal,and how to really use them, as well as solving software problems. They are not into just using off-the-shelf software, and would like to have readers who can contribute to the Journal. As Tim said in a recent issue, it gives him the chance to write the kind of articles he wants. At this time the price seems to be for free. I have been lucky enough to get Frank to share his issues with me.

Computer Monthly has a fairly regular column written by Bill Ferrebee. It has appeared almost every month. In this column Bill covers new program reviews for the TS1000, Spectrum and the TS2068. He also covers Sinclair publications and user groups for the above mentioned computers, as well as the QL and the Z88. He usually tries to throw in at least one short type-in public domain program every issue. He has been a big supporter of TS2068 Desk Top Publishing, using Sinclairs and of UPDATE Magazine. Computer Monthly also is an excellent replacement for Computer Shopper (it is the type of mag they used to be before they did away with the Classic Computer coverage.)

Next issue I will visit the QUANTA mag and user group newsletters for North America and perhaps a few from overseas.

QUANTA's Nov. 1991 revisions of the Library added files to 9 disks and added 3 new disks to the library.

Disk Name	Contents	Free Sectors
DUAL_GUIDE	(Archive based Library Guides)	650+
C.A.D_1	(Computer Aided Design)	312
COMMS_XFER1	(COMMunicationS/transfer).revised Nov.91.	309
COMMS_XFER2	(a BBS program)New Nov.90.revised Nov.91.	429
EDUC_1	(EDUCational).....revised Nov.90.	345
GAMES_GEN1	(GENeral games)	222
GAMES_GEN2		330
GAMES_GEN3	.....New Nov.90.revised Nov.91.	963
GMS_STRAT1	(GaMes advent/STRATegy)	108
GMS_STRAT2		105
GMS_STRAT3		75
GMS_STRAT4	.....revised Nov.90&91.	546
GRAPHICS_1	(Graphics programs)	231
GRAPHICS_2	.....revised Nov.90.	435
KERMIT_1	(Kermit for the QL)	99
KERMIT_2		825
KERMIT_3		354
LANGUAGES_1	(Forth, C, etc)	264
MANDEL_1	(MANDELbrot programs).....revised Nov.90.	138
MANDEL_2	.....New Nov.90.	12
MATHS_1	(Maths, etc)	186
MATHS_2		888
MISC_DEMO_1	(MISC & DEMOnstration).....revised Nov.90.	729
MISC_DEMO_2	.....New Nov.90.	87
MISC_DEMO_3	.....New Nov.90.revised Nov.91.	228
PAGE_DES	(Version 1)	60
PRT_FONTS_1	(PRinTer utilities & FONTS)	243
PRT_FONTS_2		222
PRT_FONTS_3	.....revised Nov.90&91.	744
PSION_1	(PSION utilities etc)	144
PSION_2	.....revised Nov.90.	195
PSION_3	.....re-issued Nov.90.	345
PSION_4	.....New Nov.91.	831
QDOS_JM_1	(JM ROM decoded)	501
QDOS_JM_2		687
QDOS_JM_3		45
QDOS_JM_4		225
QDOS_JS_1	(JS ROM)	459
SPECIALS_0	(Reserved - T. TEBBY + TRAPS ONLY)	1032
SPECIALS_1	(Specialist programs)	255
SPECIALS_2	.....revised Nov.91.	108
SPECIALS_3	.....revised Nov.91.	276
SPECIALS_4	.....New Nov.90.	315
SPECIALS_5	.....New Nov.91.	330
UTIL_DRCPY	(DiR & CoPY UTILities).....revised Nov.91.	552
UTIL_EMACS	(Micro EMACS V3.9 SOURCE FILES)	36
UTIL_EMAC2	(Run version. NON-SOURCE + new doc's)	704
UTIL_GEN_1	(General utilities)	144
UTIL_GEN_2	.....revised Nov.90.	96
UTIL_GEN_3	.....revised Nov.90.	333
UTIL_GEN_4	.....New Nov.91.	954
UTIL_TKMC_1	(ToolKits/MachineCode)	201
UTIL_TKMC_2	.....revised Nov.90.	903

Paul Holmgren, U.S. Librarian, 5231 Wilton Wood Ct.
Indianapolis, IN . 46254«

QUANTA

MEMBERSHIP DETAILS

Surname ..... Title.....

Forename(s) ..... Occupation.....

Address ..... Phone.....

..... Tick if you do **NOT** wish to be

..... contacted by other members ☐

Postcode .....

Membership is by annual subscription of £14 for UK members and £17 for overseas members who must pay in UK funds drawn on a British bank, or by Visa/Mastercard or by Transcash/Girobank Transfer to our Girobank account no. (72-00-02) 22116803. The subscription period runs for a year from either 1st January or 1st July. New members will receive back numbers of the Quanta Magazine for the current subscription period. Other back numbers are available from the Membership Secretary and cost £3 per half-year.
The Credit Card Authority below and the Standing Order Mandate overleaf enable you not only to pay the current subscription now, but also, if you wish, to renew your subscription automatically each year.

My total remittance is £..... Date.....
Paid by *Cheque/Cash/Postal Order/Standing Order/Credit Card/Giro Transfer

---

PLEASE CHARGE MY CREDIT CARD ACCOUNT

Access ☐ Visa ☐ (TICK ONE BOX) Card Number

Valid from | Expires End

Please insert your Card Number details and then sign

I authorise QUANTA to charge my Credit Card with the sum of £..... **now**

* **Delete if not applicable**

* **and thereafter** the sum of £..... every *1st January/1st July until you receive further notice from me.

Signature.....Date.....

TS2068 ISSUE DISKS

These disks contain at least one major piece of software written specifically for disk drive and are guaranteed to be worth the money. The rest of the disks are filled with various utility programs taken from the issues of UPDATE and a few surprises thrown in. Half of the money goes to the author and is meant to encourage new programming for the TS2068 that makes use of the various disk drive systems. Presently we are offering disks for the Larken and Oliger Interfaces, but have programs available for the Aerco (one is available in this issue and more will be made if wanted). All are $20.00 per disk (add $1.00 Canada) and include postage and handling. The programs have been Temporarily lowered in price to make them more widespread among the TS2068 Users! Both 3 1/2 and 5 1/4, 40 and 80 track available. Please add $5.00 for mailing to other countries. We accept personal checks, company checks, money orders and cash.

1) MITCHELL BUDGET DISK, with wide spreadsheet printer driver, MS-TAS and various other utilities. Available as either Larken or as Oliger format.

2) Bob Hartung DOSDEX UTILITY ISSUE DISK, a complete disk management group of programs for the Oliger Interface only. This includes Multi-Manager for file handling, double column for Tasword, Beta Basic demo, to name a few recent updates.

3) MAIL MERGE ISSUE DISK, Oct 87 and Jan 88 issues of UPDATE utilities added to fill out this disk. Includes a tutor program for the Mail Merge program, List Looker, Purity, J-Utilities and Extra Memory Utilities. This is available also on Aerco disk.

4) OLIGER DISK DRIVE BBS PROGRAM, this allows users of the Oliger interface to be able to operate a disk based bulletin board from the TS2068. The disk is also filled with many other Oliger disk routines and tips on using the Oliger System. New by Paul Holmgren. Can use upto four DSQD disk drives.

5)The HYBISCUS ENSEMBLE, consisting of two separate, but complimentary sets of programs. A) Daisy.B6 Ensemble, and B) Udbm.B6 Ensemble. LKDOS only, $22 each or $36 for both. The best file and database available for Larken, by Bill Jones. The price remains the same on this one, no change. Wordprocessor included.

6)WIDJUP'S CAD PROGRAM, to give you professional results on the TS2068 for computer aided design. This program comes to us from William J.Pedersen. It can be used to create user friendly printed circuit boards and does not require added memory in order to be used. Two versions are available, but both are limited, at this time, for use with the Larken Disk Interface. We hope to soon have an Oliger version from Bill. Version #2 is for the Olivetti Ink Jet Printer, and Version #3 is for IBM compatible Printers. More on this next issue. NEW!

UPDATE COMPUTER SYSTEMS invites you to submit software programs that may become Issue Disks. Please submit program on disk, with documentation and article to accompany the program. We are here to get North American software available and known. We also solicit minor programs, tips and utilities for print in future issues of the magazine. Please do not submit unlistable programs or copy protected programs.

These disks contain at least one major piece of software written specifically for disk drive and are guaranteed to be worth the money. The rest of the disks are filled with various utility programs taken from the issues of UPDATE and a few surprises thrown in. Half of the money goes to the author and is meant to encourage new programming for the QL that makes use of the disk drive systems, and microdrives on both the expanded and unexpanded QL. Where possible we will give a version for each of these configurations. Some of the programs take advantage of TK2 by Tony Tebby. All are 20.00, except QLuster, which is $15.00; includes P & H, add $1.00 CAN.Available as 3 1/2 or 5 1/4 disks. Add $5.00 for mailing to other countries. We accept personal checks, company checks, money orders as well as International Postal Money Orders, but no charge cards. If ordering on MDV, then please include one that is already formatted, so we will know it will run on your QL. Due to the expense of MDVs this is necessary. If two MDVs are required we will state so in the ad.

1) HARTUNG UTILITY ISSUE DISK- Several excellent programs such as stand alone data base, Address, and QSO files. All are in Superbasic. Lots of hints and tricks for programmers. Requires some knowledge of Superbasic or a yen to learn. Recently updated by Bob Hartung. Address file can be used as inventory program. It can print out labels. Both screen or paper printouts can be by Alpha sort, or be by last name.

2) CABLE ARCHIVE ISSUE DISK- Contains six Archive programs along with Doc files to get you going on making use of the Archive programming language. Also has Tasket, plus Doc file, to give you multi-tasking on your QL (much cheaper than QRAM or Taskmaster). Included is Arithmetic, a Superbasic program for math, along with math drills. This is for both the advanced and beginner user and greatly extends the use of Archive. To order on microdrive send two formatted microdrives, too much for one!

3) QLUSTER ISSUE DISK by Al Feng- QL utilities to declutter your disks and microdrives. COPY, DELETE, FORMAT, PRINT, VIEW, plus extended use of some Tool Kit 2 commands. TK2 is required. These are TURBO compiled for speed. Multitasks and uses minimal key presses. Includes Fast-Disk and Vegemat2, a super clone making program. Also Snap Shot-a directory column or condensed printout program.

4) DOS EMULATOR COMPANION ISSUE DISK by Al Feng- Just released in Oct. issue. Makes better use of Solution, PC Conqueror, DisCover, XOVER, QLuster and scr_codes. If you are going to use the emulators, then check this out, you won't regret this buy.

5) QLuMSi DOS by Al Feng- a MSDOS simulator and front end program for the QL, also includes other programs by AL Feng for file management and cloning of programs. A Great Learning Tool

UPDATE COMPUTER SYSTEMS invites you to submit software programs that may become Issue Disks. Please submit program on disk, with documentation and article to accompany the program. We are here to get North American software available and known. We solicit programs, tips, reviews and utilities for future issues.