Kings Byte

The Kings County TRS-80 Users Group

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LICA	LITRUG	FRED KEMPLER	(212)229-4040 EXT 6753

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KINGS BYTE MEETINGS

Our meetings take place on the first Monday of each month at BAM (B'klyn Academy of Music) located near the Atlantic Ave. and Pacific St. subway stations. It is also near the L.I.R.R station.

Meetings start at 7:00 PM. Assembly language course at 7:30 PM. Lectures and/or demonstrations start at 8:15 PM. For up-to-date information call our Official Contact, Morty Libowitz at (212)763-4233.

President's Keyboard
by
Steve Abramowitz

Go with the flow or Micros eat Mainframes

        The menacing demon for TIME magazine's 1982 "MAN of the YEAR" the
Computer, is its little brother, the microcomputer.

        All over the country, the traditional turf of the corporate or
government mainframe Electronic Data Processing or Computer Departments
was their control of the flow of information within an organization.
Information control has been their ability or inability to provide users
with what they want and need. Traditionally, the mainframe wizards were
an elite priest-hood speaking their own language, and doling out
knowledge to their customers, the users, in little or large spoonfuls,
as they saw fit.

        With the coming of microcomputers, all of this has changed. When
a non-data processing department in the Telephone Company, wanted to
install a few micros they were forced to circumvent their own Dp
department, the Mainframers, and describe the equipment as "calculating
equipment". This is ironic. It was the Bell Labs subsidiary of that
same Telephone Company which practically invented the micro computer.

        The pattern of bureaucratic infighting over the micro computer has
been replicated in large business and government organizations around
the country. With a somewhat similiar scenario repeated again and
again. More enlightened Mainframers, probably those who bought a micro
as a hobby or personal computer for the home, decided to create a
sub-section of their DP department to manage the micro revolution.
COBOL, unweildy, detailed, and internally documented, is the traditional
language of business computing. Its ponderous code may have had a part
in it, but, in the early days of micro computing, (the APPLE II and
TRS-80 Model I days), just a few years ago, COBOL, a compiled high level
language, (which is computerese for English-like) was not chosen as the
prime micro computer language. An interactive interpretive BASIC was
and is the lingua franca of the Micros. What this means is that the
Mainframers and the micro users (who each only spoke thier own native
computer tongue), could not easily relate to each other. To many
Mainframers, the thought of owning a micro at home was one of horror and
dismay. Who wants to come home to all the problems and difficulties one
was dealing with in the office? The more enlightened ones, and our
members include many of these types, accurately foresaw the potential of
the micros and rapidly acquired them.

        What can the micros do? Practically everything. From Spread
sheet analysis, as with VISICALC, to Word processing, as with Super
SCRIPSIT, Business accounting and bookkeeping, database management and

mail lists, financial analysis and Security portfolio management. They are all readily available, and are in off the shelf software packages. In business and government offices, they have taken up some of the too small, and one shot number crunching or data and information scheduling and, management tasks which the Mainframers could not do, or which did not warrant installation because of the cost, or the DP departments' programming time on the mainframes. Access to the large pools of data stored on the mainframes is an important adjunct to the successful utilization of the micros. What that means is that either by direct interconnection, by means of hard wiring or telephone communication into the mainframe, micros can be networked with the mainframes.

Word processing has not been neglected by the micros either. Super SCRIPSIT, spelling dictionaries (73,000 words on a disk Model III with provision for additions), a limited grammar checker, and even a thesaurus are among the many available software packages.

Oh yes! They also play games, such as Chess, Scrabble, Monopoly (with graphics and music), and about 10,000 others. They can be used to write and play music, (like Wagner's "Ride of the Valkyries"). They of course, create sounds, and can be programmed to dance on the video, CRT. Micros can be used to encrypt and decrypt messages. They can simulate events like the battle of Gettysburg, or simulate an interactive psychiatrist (whould you care to tell me more about that?) and even talk!

TIME magazines Man-of-the Year should not have been a COMPUTER but a COMPUTER designer, or a COMPUTER engineer, or a COMPUTER programmer. My vote would go to the guy who wrote a VISICALC, or designed the first microcomputer chip, or who installed on a ROM, Microsoft BASIC. TIME has made a fundamental layman's error of mistaking the virtual for the real. The real message of this piece is that Microcomputing is practical, relatively inexpensive, efficient, and fun. The Mainframers should get some fun into their lives.

As many of you know, I am a lawyer by profession. Yet, I am beginning to learn to speak computerese. Hang in there. There is room in the tent for many species of computer animals.

To show us how Micro computers eat Mainframes come to BAM for our next guest speaker. For our March 7, 1983 meeting at BAM I have invited Prof. Bob Greenblatt, from Brooklyn College. Professor Greenblatt will discuss microcomputers and multi-user, multi-tasking in a CP/M environment. He is using TURBODOS PLUS, a state-of-the-art CP/M compatible operating system. TURBODOS PLUS, should run on the Model II/16 and possibly on CP/M modified Model I/III's. It has in memory, a kernel and pipes, which are used to control a micro computer network of master and slave units and a hard disk.

Incidentally, LDOS 5.1.3, DOSPLUS 4.0, and a newly announced version of NEWDOS 80 version 2.0 also control hard disks. Bob uses TURBODOS to conduct large scale public opinion surveys, compute

statistical analysis of the data obtained, and to create with a data base manager, dBASE II, and with a word processor, WORD STAR, reports of the results.

Happy computing!
Steve

Notes And Corrections To BASIC Faster And Better And Other Mysteries
By Lewis Rosenfelder

The following is reprinted from ...ELSE..., a very fine newsletter from Florida. It was submitted to them by John Hallgren who obtained the corrections from Bob Thorpe of IJG Inc. It is about 11 pages long and (hopefully) will be continued in future issues.

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1.   First Edition, First printing, Page 179
        Just below where it says "Convert PO to column x and line Y", two lines are missing. They are: X=PO-INT(PO/64)*64
                                 Y=15-INT(PO/64)

---

2.   First Edition, First Printing, Second Printing, Page 180
        Line 40 of the VSHEETS/BAS program should read:
    40 FORY=0TO960 STEP 64: LPRINT USING "###";Y;: FORX= TO 63: LPRINT"";
    CHR$(95);:NEXT : LPRINT " ";NEXT

---

3. First Edition, First Printing, Page 210
        The last paragraph on the page should refer to the program "VETOM/DEM" rather then "VTOM/DEM"

---

4. First Edition, First Printing, Page 97
        Remember that you cannot use compressed strings in sequential disk files. This is because compressed strings are likely to contain any character code ranging from 0 to 255. Since BASIC uses certain codes such as CHR$(13) as "delimeters" to organize the data in sequential files, a CHR$(13) within a compressed string will confuse the system. This problem also occurs with numbers that are compressed with MKD$, MKS$, and MKI$ and dates that are compressed with date compression functions.
        Always use uncompressed "ASCII" data in sequential files!

---

5. First Edition, First Printing, Page 253
        To Model 2 note 54, you should add the following reminder:
"At line 5, add 'GOSUB 40090'---- Subroutine 40090 initializes the supervisor call magic array.

---

6. First Edition, First Printing, Page 207
        The comments for lines 40931 through 40980 are missing!
    Here they are:

40931 Temporarily store the current line pointer as integer J.
        :Temporarily store the position pointer of the current line as

A1%.
:Set current line pointer to the line at the bottom of the data
entry area.
:Set line position indicator, PL, to point to last line of the
data entry area.
:If we are now (temporarily) beyond the last line entered, then
clear the last line of the data entry area, otherwise call
subroutine 40961 to transfer the next line back onto the screen.
40932 Restore the current line pointer, integer LZ.
:Restore the position pointer of the current line, PL.
:Set up the parameters in the move-data magic array and move the
data in the memory storage area.
:Subtract 1 from the highest line indicator, integer LN.
:Go back to 40910 to await another special command.
40940 (Process the "L" command - Load from disk)
40950 (Process the "S" command - Save to disk)
40960 (Move a line from the screen to memory storage.)
40961 (Move a line from memory storage to the screen.)
40962 (Call the move-data USR routine to process the moves.)
40970 (Move up - Scroll down routine.)
:Erase the pointer arrow if any.
:Subtract 1 from the current line pointer, enforcing a minimum
result of zero.
:If the result is less that the number of lines in the scrolling
portion of the screen then no scroll necessary, so bypass the
routine and go to 40975.
40971 Load from address, to address, and number of bytes into the
move-data magic array.
40972 Call the move-data USR routine.
:Temporarily store the current line pointer as integer J.
:Compute the line pointer for the top line of the scrolling area.
40973 Call subroutine 40961 to move data stored in memory to the top
line of the video display scrolling area.
40974 Restore the current line pointer as integer LZ.
40975 Call subroutine 40990 to re-display the pointer arrow.
:Return.
40980 (Move down - scroll up subroutine.)
:Add 1 to the current line pointer.
:If it is now greater than the number of lines entered, then set
it equal to the number of lines entered and return. Otherwise,
if it's less than the number of lines in our scrolling area, then
skip the scroll. Otherwise, call the scroll up subroutine,
40711, and set the line position pointer, PL, to the last line on
the display.

---

7.   First Edition, First Printing, Second Printing, Page 26
      Program line 16 should read FORX=0TO11: instead of FORX=0TO1

---

8.   First Edition, First Printing, Page 272.
      The decimal values for NEWDOS 2.1 and DBLDOS 4.23 should be in
increments of 2, starting at 23316. That is, "23316, 23318, 23320" etc.
The hexidecimal values are shown correctly.

_____   _____   _____   _____   _____

9. First Edition, First Printing, Second Printing, Pages 159-164

On page 159 the text indicates that element 4 specifies the number of
records in the array when using SEARCH2. For proper operation of the
SEARCH2 USR subroutine as shown, your BASIC program must, instead, load
element 4 with the number of records in the array plus 1.

The following modification makes the SEARCH2 USR subroutine consistent
with the description on page 159, and thereby, directly compatible with
the KWKARRAY USR subroutine's use of element 4.

Assembly Listing:

```
F03B DD5E00   00590 RCLOOP LD   E,(IX+0)   ;
F03E DD5601   00600        LD   D,(IX+1)   ;CURRENT REC # IN DE
F041 DD6E08   00610        LD   L,(IX+8)   ;
F044 DD6609   00620        LD   H,(IX+9)   ;RECORD LIMIT IN HL
F047 B7       00630        OR   A          ;CLEAR CARRY
F048 ED52     00640        SBC  HL,DE      ;SUBTRACT
F04A 3854     00650        JR   C,NOTFND   ;NOT FOUND IF SEARCHED ALL
```

MAGIC ARRAY FORMAT (Pages 161, 164, 285)

Replace: 110, 26333, -8959, 2142, 22237, -18679, 21229, 21544
    with: 94, 22237, -8959, 2158, 26333, -18679, 21229, 21560

POKE FORMAT (Pages 161, 284)

Replace:110, 0, 221, 102, 1, 221, 94, 8, 221, 86, 9, 183, 237, 82, 40
    with:94, 0, 221, 86, 1, 221, 110, 8, 221, 102, 9, 183, 237, 82, 56
_____   _____   _____   _____   _____

10. First Edition, First Printing, Second Printing, Page 233-235

In some cases, DOCLIST/BAS will encounter problems with nested FOR-NEXT
loops. The listing shown does not properly handle a program line
such as: 10 NEXT : NEXT : NEXT
      or: 10 NEXT X,Y,Z

In line 4184, add ":V8=C" just before the ":GOTO4130".

Add the following line, (which resets the indentations by counting the
commas when a "NEXT X,Y,Z" statement is encountered.):

   4163 IFC=44ANDVB=135THENNF=(NF-I2)*-(I2<=NF):LN$=LEFT$ (LN$,6)+MID$
        (LN$,7+I2)

Note that the integer variable, I2, controls the number of spaces to be
indented for each FOR-NEXT loop. It is initialized to 5 in line 1010.
If you have deeply-nested FOR-NEXT loops in your program, you may need
to reduce the number of spaces indented by changing I2 to a number less
than 5.

In some programs, where FOR-NEXT loops are not organized in contiguous sequential lines (because of GOTO's), or where conditional NEXT statements are used, it is best to initialize I2 as zero in line 1010, disabling the FOR-NEXT indentations entirely. (You may want to modify the program so that the operator can specify the number of spaces to be indented.)

---

11. First Edition, First Printing, Page 250

Model 2 note 31 should read: Replace "109 with 113" instead of "10 with 113".

---

12. First Edition, First Printing, Second Printing, Page 199

In line 40712, "PRINT@PL" should be replaced by "PRINT@PL+LT".
This modification avoids the necessity of calling subroutine 40700 before the first PRINT command when displaying a line of data to be scrolled. (Although it wasn't a real "bug", it was an inconsistency.)

Note that this subroutine is called by the scrolled video entry handler, and it appears in VETOM/DEM.

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13. For users of the NEWDOS80 2.0 disk operating system, with the TRS-80 Model I, here are the updates for appendices 2, 3, and 4:

Appendix 2, page 272 - USR Routine Pointer Addresses

USR0	USR1	USR2	USR3	USR4	USR5	USR6	USR7	USR8	USR9
22704	22706	22708	22710	22712	22714	22716	22718	22720	22722
58B0	58B2	58B4	58B6	58B8	58BA	58BC	58BE	58C0	58C2

Appendix 3, page 273 - Disk Buffer Memory Locations

--1--	--2--	--3--	--4--	--5--	--6--
26347	26648	26949	27250	27551	27852
66EB	6818	6945	6A72	6B9F	6CCC

Appendix 4, page 274 - Disk Data Control Block Addresses

--1--	--2--	--3--	--4--	--5--	--6--
26315	26616	26917	27218	27519	27820
66CB	67F8	6925	6A52	6B7F	6CAC

---

14. First Edition, Printings 1-3, Page 27

The first example should read:

DUMP SFILL (START=X'BFF0',END=X'BFFB')

The paragraph that begins with "In Model III BASIC" should read as follows:

If you have a Model III with TRSDOS 1.3 your DUMP command from TRSDOS READY is:

DUMP SFILL (START=0BFF0,END=0BFFB)

Then, from TRSDOS READY, you can load the routine now stored on disk as SFILL/CMD, by simply typing SFILL. In BASIC, you can have a program line that reads: 10 CMD"L","SFILL/CMD"

15. First Edition, Printings 1-3, Page 131-133, 251

For SEARCH/DEM and the SEARCH1 USR subroutine, Model 2 users should also refer to MODEL 2 note 37.

On page 251, note that Model 2 note 37 refers to SEARCH1 as well as BITSRCH and KWKARRAY.

16. First Edition, Printings 1-3, Page 143

The second line of the third example on the page reads:
$P\%(0)=VARPTR(VD\$)$

It should read: $P\%(0)=VARPTR(VD\$(0))$

17. First Edition, Printings 1-3, Page 224

Since the Model 2 has an automatic repeat key, you should delete the reference to PEEK(14591). From line 46031 delete:

ELSEIFPEEK(14591)>0THEN46033

18. First Edition, Printings 1-3, Page 201, 204, and 205

For the Model 2, change each reference to "J=LZ" and "LZ=J" to "J1=LZ" and "LZ=J1", respectively. The lines affected are 40822, 40824, 40923, 40924, 40931, 40932, 40972, and 40974.

ATTENTION!   ATTENTION!   ATTENTION!

MARCH is the LAST MEETING on the first MONDAY!
Be sure to send in your questionnaire!
This is your last chance to vote!
Watch for NEW MEETING DAY in next issue!

ATTENTION!   ATTENTION!   ATTENTION!

CoCo Corner

I haven't heard from anyone yet re the first inclusion of CoCo Corner so I can't tell if it is of any help to anyone. Why don't you make some comments to me at the next meeting; pro or con?

In the meantime, some helpful hints. Why do you need a complicated program to print out your disk directories when all you have to do is type POKE 111,254:DIR. This command will automatically read the directory on drive Ø and send it to the printer. If you add :PRINT FREE(Ø) it will tell you the number of free grans left on the disk.

FCLEAR1 will release 6K of memory.

POKE25,6:NEW will release 1.5K of memory.

Type in the following program and see how you like it.

```
10 PMODE 4,1:PCLS
15 SCREEN 1,1
20 FOR A=1 TO 155 STEP 2
30 CIRCLE (129,96),A,,.60
40 NEXT A
50 PMODE 2,1: SCREEN 1,1
60 CIRCLE (128,96),80,,.75
70 FOR A=1 TO 155 STEP 4
80 CIRCLE (130,96),A,,.75
90 NEXT A
100 PMODE 3,1:SCREEN 1,1
110 GOTO 110
```

If anyone is interested in starting a library of cassette and/or disk programs why not get together with me at the meeting to discuss plans and procedures for implementing this idea. In the meantime why not type up some interesting items for inclusion in the next newsletter?

Ben Zinney

```
*****     *****     *****     *****     *****
*                                           *
*         NJ Business Computer Show         *
*               March 17-19 1983            *
*       Holiday Inn (North) Newark Airport  *
*                                           *
*****     *****     *****     *****     *****
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QUESTIONNAIRE

To better serve our members we have prepared the followii
questionnaire. KINGS BYTE belongs to all its members and the mo
members that reply the better your officers can serve you.

It is essential that you fill in your name since only paid
members will be counted on matters of policy, though all will be count
in general statistics.

PLEASE PRINT CLEARLY

NAME: ——————————————————————————————   I attend meetings?
I have been on the mailing list ———— months.   A —— Regularly.
                                                       B ——   Often.
                                                       C ——   Seldom.
                                                       D ——   Never.

I use the following: A —— Mod I   B —— Mod II   C —— Mod III   D ——

My largest computer has: A —— 4K   B —— 16K   C —— 32K   D —— 48K E —— 64

I have the following number of disk drives:
A —— 0   B —— 1   C —— 2   D —— 3   E —— 4

My printer is: A —— NONE   B —— EPSON   C —— OTHER

I have a MODEM: YES ——   NO —— (300 Baud ——   1200 Baud ——   Both ——)

If BAM requires we change our meeting night the following will be used

    I absolutely cannot attend on the circled nights!

        First — S M T W T F S of the month.
        Second — S M T W T F S of the month.
        Third — S M T W T F S of the month.
        Fourth — S M T W T F S of the month.

    I would prefer one of the nights circled below.

        First — S M T W T F S of the month.
        Second — S M T W T F S of the month.
        Third — S M T W T F S of the month.
        Fourth — S M T W T F S of the month.

    At meetings I would like to see or hear about — — — — — — — — —
— —
— —

    In the newsletter I would like to see — — — — — — — — — — — — —
— —
— —

Application for membership in KINGS BYTE TRS-80 USERS GROUP

You don't have to live in Brooklyn to become a member.

NAME..

ADDRESS...

CITY..........................STATE.............ZIP..............

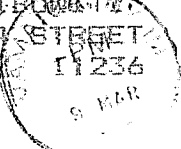   Enclosed is fifteen dollars ($15) for membership in
KINGS BYTE TRS-80 USERS GROUP.

        Make check payable to: KINGS BYTE COMPUTER CLUB.

        Send this form (or copy) to:

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