



QB MONITOR

QB-99'ERS U.C. NEWSLETTER

APRIL 1987

The QB MONITOR is the Newsletter of the QB-99'ers User Group, is printed Sept. thru June and sent in exchange for other User Group Newsletters. Send Exchange Newsletter to Frank Cotty, Queensborough Community College, Bayside, NY 11364. Credit original sources.

The QB 99'ers meets the second Saturday of each month September through May, at Queensborough Community College, Bayside New York, room S225. See the calendar at right for the dates

April 1987							May 1987						
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Articles for the June issue must be in by May 9

EDITORS NOTES

In this months' newsletter you will find some new articles. We will be starting a new question and answer column. It will be a sort of "Ann Landers" of computer problems. They can be technical or personal(such as, "I am becomming a slave to my keyboard. What can I do?"). The questions should be addressed to "Dear E. Manual". They will be answered by this Editor and one assistant. If you feel you can do a better job, let us know. We would love to share the work load.

There will also be one Article of the Month. It will be the most outstanding of the articles from all the newsletters sent to us by other Users Groups. Other articles considered interesting or informative will be reviewed and listed as "must reading" in another new column, Newsletter Tidbits. Of course all newsletters sent to us are on file in the QCC Library for you to read at your leisure.

Again a plea for help with the Newsletter. We can do all the typing and setting up and printings and mailings but, we need something to put into the newsletter. If we could get someone to be secretary at the Users Group meetings, they would only have to write a few notes on the proceedings and take attendance. I would be very happy to type up the notes and put them in the newsletter. You, of course would get all the credit.

We will be losing an efficient treasurer. The man who handles all the big bucks of the group, Paul Choplin, will be leaving us this fall. So..... you know what is next. We will be needing some new blood in our ministrations.

LIBRARY UPDATE

What is new in the Library? Has anyone looked lately? There are quite a few items there that could be of interest. For instance, all the newsletters we receive each month from other Users Groups. They are enjoyable reading as well as informative. And, from now on, they are bound in 3-ring binders for reading convenience. Check it out.

UPDATE ON HARDWARE

Hardware Modifications will be the topic of our next meeting. Ed Machonis will demonstrate how to stop the Alpha lock from interfering with the joystick use. Also on tap will be converting the Atari numeric keypad for use as a function keypad on our TI. No more pressing FCTN/anynumber in TI Writer, just press one key on the keypad.

+++++
+ JUNIOR'S USERS GROUP +

Our first children's meeting was a success. Twelve children, ages 4 to 12, attended. A few new members joined.

The children made friends quickly. The older helped the younger and all the children worked well together.

The children did not want the meeting to end and it was difficult for the senior enthusiasts to get the computer away from the junior enthusiasts.

We have planned to continue with the LOGO language for the next few meetings, then go on to other languages and abilities.

The children will soon have their own spot in this newsletter for programs and articles of interest to children.

Here is a short article contributed by a small person.

Have you ever felt that grownups always get to use the computer and when you get to use it you don't know what to do? Well try this when you get a chance.

```
100 PRINT "10-9-8-7-6-5-4-3-2-1 "
110 PRINT "blast off"
120 PRINT " /\\"
130 PRINT " / \\"
140 PRINT " / \\"
150 PRINT " | |"
160 PRINT " | |"
170 PRINT " | |"
180 PRINT " | |"
190 PRINT " | |"
200 PRINT " | |"
210 PRINT " | |"
220 PRINT " | |"
230 PRINT " / \\"
240 PRINT " / \\"
250 PRINT " "
260 PRINT "!!!!!!!!!"
270 PRINT
280 PRINT
290 PRINT
300 GOTO 120
```

TURNING PRINTERS INTO TYPEWRITERS

by Ed Machonis

There are often times when we just want to type a short note or letter and rather than load in a full blown word processing program, we settle for writing it out with such low tech implements as pens and pencils.

It is very easy to turn your printer into an electric typewriter. Four lines of Basic code will do it.

```
1 OPEN #1:"PIO"
2 INPUT A$
3 PRINT #1:A$
4 GO TO 2
```

This program enables the user to type a line of text, edit it as desired, and then print it by hitting the enter key.

Whenever a line of text is to be indented or contains a comma, that line must begin and end with a quotation mark ("). The quotes will not be printed nor will they be counted in the width of the line of text.

To skip a line, just hit enter.

This program allows sending of print codes directly to an Epson RX-80 printer provided they are in the the same form as in the previously described RX-80 program. (i.e., CHR\$(27)= CONTROL PERIOD) By pressing CONTROL PERIOD, then SHIFT E, and then <ENTER>, the print control code for emphasized type is sent to the RX-80 printer. Other codes, of course, can be sent in the same manner.

By adding a few more lines, the program can be made more useful. We can require an input as to the maximum line width to be printed and use this information to set equal right and left margins. A check has been added to insure that the maximum line width is not exceeded and it includes a prompt to display what a overly long line can be shortened to. User instructions have also been added. The expanded 10

Line Basic program looks like this.

PRINTALINE

```
1 PRINT :;;; "TO INDENT TEXT
OR TO USE A COMMA, BEGIN &
END THAT LINEWITH QUOTATION
MARKS"::
```

```
2 INPUT "PRESS ENTER TO SKIP
A LINE.
```

```
HOW WIDE?(80 CHARAC
TERS MAX)":WIDTH
```

```
3 MARGIN=INT((80-WIDTH)/2)
```

```
4 OPEN #1:"PIO"
```

```
5 INPUT "
```

```
INPUT LINE A LINE 0
```

```
6 TEXT:
```

```
":TEXT$
```

```
7 IF LEN(TEXT$)>WIDTH THEN 7
ELSE 9
```

```
8 PRINT : "LINE TOO LONG! SH
ORTEN TO":WIDTH;"CHARACTERS
MAX.":SEG$(TEXT$,1,WIDTH):
:
```

```
9 GOTO 5
```

```
10 PRINT #1:TAB(MARGIN);TEXT$
```

```
11 GOTO 5
```

When typing notes, etc., where it is desirable to start printing at column one, input a line width of 80 and monitor the line width on the screen.

A simple way to use this program for correspondence is to use a line width of 56. This will fill exactly two lines of the TI screen. Right margin justification can be accomplished by inserting spaces between words until the second line of text is completely filled.

The OPEN statement in Line 4 should be changed as required for the particular printer in use. The line width feature is designed for PICA print. Line 3 can be changed to accomodate ELITE or CONDENSED type styles.

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BRAIN TEASER

This test does not measure your intelligence, your fluency with words and certainly not your mathematical ability: It will, however, give you some gauge of your mental flexibility and creativity. In the three years since we developed the test, we've found few people who could solve more than half the 24 questions on the first try. Many however, reported getting answers long after the test had been set aside, particularly at unexpected moments when their minds were relaxed; and some reported solving all the questions over a period of several days. Take this as our personal challenge.

Instructions: Each question below contains the initials of words that will make it correct. Find the missing words.

Example: 16 O. in a P. 16 Ounces in a Pound

1. 26 L. of the A. _____
2. 7 W. of the A. W. _____
3. 1001 A. N. _____
4. 12 S. of the Z. _____
5. 54 C. in a D. (with the J.) _____
6. 9 P. in the S. S. _____
7. 88 P. K. _____
8. 13 S. on the A. F. _____
9. 32 D. F. at which W. F. _____
10. 18 H. in a G. C. _____
11. 90 D. in a R. A. _____
12. 200 D. for P. G. in M. _____
13. 8 S. on a S. S. _____
14. 3 B. M. (S.H.T.R.) _____
15. 4 Q. in a G. _____
16. 24 H. in a D. _____
17. 1 W. on a U. _____
18. 5 D. in a Z. C. _____
19. 57 H. V. _____
20. 11 P. on a F. T. _____
21. 1000 W. that a P. is W. _____
22. 29 D. in F. in a L. V. _____
23. 64 S. on a C. _____
24. 40 D. and N. of the G. F. _____

Original source unknown.

LEARNING ABOUT THE TI-99/4A HARDWARE by Andy Becker

The survey shows that most of us are interested in learning about the TI-99 hardware. I am too. I am writing this article for the second time because the computer suddenly returned to the color bar screen while I was writing. I suspect the power went low for a split second. I have had this problem several times while using TI-WRITER with the Extended BASIC module. Does this happen to other people too? I think I better add some batteries or big capacitors to the power supply. Maybe disconnecting the RESET pin of the CPU from the rest of the computer would help. For now I think I'll use the TI-WRITER module and see if it ever happens with that. I just reloaded TI-WRITER using the Editor/Assembler module. I didn't even know that was possible before I tried it. I'm using the "GIFT/2/QB99" disk which includes TK-WRITER. I used option 3 with the filename WRITER1. The program name is "EDITOR". The ShowDirectory command doesn't work this way.

Now I'll get back to learning about hardware. TI has some good information available. I got the TI-99/4A CONSOLE AND PERIPHERAL EXPANSION SYSTEM TECHNICAL DATA book, schematic diagrams for the peripheral cards, data books for the 9900, 9901, 9914, and 9118 (like the 9918 VDP), and the 9900 Family Systems Design book. The TI-99/4A schematics and data books are available from TI PARTS (800 741-3064). They accept credit card orders. They sent me the following list:

HOME COMPUTER

SCHEMATICS	DWG. NO.	PRICE EACH
RAM EXPANSION	1041336	2.50
DISC CONTROLLER (STAND ALONE)	1040378	2.50
RS-232 (STAND ALONE)	1037105	2.50
CARDS		
MEMORY EXPANSION	1039330	2.50
PROJECT 360	1039314	2.50
INTERCONNECTINON DIAGRAM WIRING PERIPHERAL BOX	1039437	2.50
POWER SUPPLY	1039304	2.50
INTERCONNECT ADAPTER	1039363	2.50
DISK CONTROLLER CARD	1039340	2.50
RS-232 CARD	1039308	2.50
PCF P-CODE	1039317	2.50
INTERCONNECT ADAPTER EXPANSION BOX	1039311	2.50
SERVICE MANUALS		
99/4A CONSOLE	1049716.1	10.00
99/4A CONSOLE & PERIPHERAL EXPANSION SYSTEM	1049717.1	15.00

HARDWARE.....continued

The IC data books are available free from the TI LEARNING CENTER to anyone interested. I don't remember the phone number of the LEARNING CENTER but if you call 800 TI CARES they should be able to help. I think the 9900 Family System Design and Data Book might not be available from TI anymore. This is over 800 pages of information on building and using 9900 family computer systems. I found my book in a used book store in Massachusetts. They had two copies. If someone wants me to, I'll try to buy the other copy next time I'm in the area.

Those who have some knowledge of the computer hardware might like to try making some modifications and accessories for their systems. I suggest using an extra system for those who are afraid of ruining something. I have heard that used consoles can be bought for as little as \$20. I have made some successful changes on my system (actually my father's). This is what I have done:

- Rewire expansion box transformer primary to reduce unregulated voltage and slow down fan.
- Adjust vidio modulator for minimum noise.
- Adjust color TV convergence and reduce horizontal size.
- Connect second disk drive using expansion box power supply.
- Make two RS232 cables
- Eliminate head load in original disk drive to reduce noise and power drain.
- Connect disk drive motor control to DRIVE SELECT so motor runs less.

I have seen many ideas for hardware projects in newsletters. Here are some possibilities for modifying the TI-99.

- internal 32k RAM (8 bit)
- internal 32k TURBO RAM (16 bit with no wait states)
- 8k Cartridge RAM
- 8k DSR RAM
- 8k operating system RAM
- up to 64k GRAM (Graphics Random Access Memory)
- super module expander to use all cartridge subprograms
- console speed-up (eliminate 2 wait states per memory access?)
- 9938 video display processor (80 column text)
- separate audio output (besides TV or monitor)
- keyboard projects - numeric keypad, separate function keys, 2 "extra" keys
- console power from expansion box or batteries.
- HOLD switch to temporarily stop a program
- LOAD interupt switch
- side select switch for double sided drives to get "2 disks on one"
- heavy duty voltage regulators in expansion box to power extra disk drives
- silent fan in expansion box
- "auto-fire" joystick

The R/D COMPUTING newsletter from RYTE DATA is the best one I've seen for hardware ideas. We have a collection of them in our library.

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The following article was taken from the Colorado Front Ranger. If you are interested in Data Base Software, then this article is a MUST to read.

Data Base Managers For the TI-99/4A By Bill Goskill

Some owners/authors of the applications I have covered in this article will no doubt be angered by the apparent brutality of it. I choose to view it as honesty rather than brutality. Too many reviewers white-wash the weakness of TI software they critically review. I will not. I think sometimes that we are afraid that the software market will dry up and blow away unless we give favorable reports on the software products that do appear for our computer. I prefer to think of it in another way: if we promote junk software in a favorable light those that do publish product reviews will lose credibility, and those that buy software based upon those reviews will simply be that much more reluctant to get burned a second time.

In the process of searching for the perfect data base manager I have purchased several programs and spent over \$300. All of the programs that I own have positive points and all have negative points. What I have discovered to date is that the "perfect" data base manager does not exist, yet (not even in the business world). What I am going to share with you are my impressions of the programs I own, and in doing so, will perhaps save you a little time and money if you too are looking for that "perfect" application.

The programs I own are:

ACORN 99 from Oak Tree Systems
DBMS from Navarone Industries
DATA BASE I from SPC Software
DATA BASE99 from Quality 99 Software
DATA BASE 300 from the Int'l Users Group
DATA BASE X from Western Ware
PRBASE V1.2 and V2.0 From William Warren
TURBO DATAMAN from Easy Ware

I have used these programs enough to feel comfortable with each and could probably write several pages about each

one. Unfortunately, publication space is limited and such a voluminous article would never see print because of it.

Thus I have tried to be brief, but to the point, in my comments on each program. Also, please keep in mind that my comments are subjective, based upon how each product meets MY needs and expectations. Yours may be different.

For ease of reference I have included some of the information in a comparison table that allow analysis at a glance. In the paragraphs that follow I will try to provide a little detail to each issue and cover special features, lack of what I view as standard features and product performance of each program. I apologize in advance for the cryptic style you will read, however, I needed to be brief. The DATABASE 300 program will not be looked at since it is not available.

ACORN 99:

Among the top three DBM's available to the TI community. The only relational data base available. Also, the only one with a programming language interface for custom applications. EXTREMELY powerful and well designed. Can support three active files at one time, allows existing data file formats to be edited, copied to another file, resequenced and can reformat a file structure into another file format. Does not have the ability to show number of records in a file. Can hold more than 1500 records per file on a SS/SD disk [depending on file size]. Sorts alpha characters and strings better than numbers. Indexes record location for subfile creation and main file is then concatenated to create the subfile as another database. Possesses ability to search, using "equal to, unequal, greater than, less than, ignore" logical operators. Supports relational

operators in search routines through the use of a true/false convention that allows selection of records where all parameters are met, or any parameters are met. CAN print a single record from a display screen. EXTREMELY slow in operation. Uses 40 column text mode. Allows duplicate key field data entries. Allows printer control codes to be encrypted in set up file. Provides input checking for "numeric, integer, money, string, flag and date" entries. Overall, a fabulous program, with almost limitless potential. The best documentation of the group, giving many examples along with explanations. SUPERB application.

DBMS (Navarone)

Allows 32,000 records per file, but only 350 per SS/SD diskette. Limits you to half that amount if you wish to sort the file since it creates a second sorted file that demands equal space on your data disk. Most interesting report generator I have ever seen, a cut and paste type affair that is really neat, but poorly documented. Excellent custom screen design module which includes help screens that you design. FASI, FAST, FAST. Requires unique key field entries only, which I find inconvenient. Documentation is better than originally written, but still confusing at times, and incomplete. Notes on mundane things and skips over, or entirely omits, important things. Does totaling in reports., but no other computational work. Does not support single record printing, but can use the report module to scroll data on screen, write it to disk or send it to your printer. Can append new data fields to the end of an existing record, but cannot reformat the record in any other way. Can create subfiles, but you have to figure out how to do it for yourself because the documentation does not tell you how. It doesn't even mention subfiles. Allows printer control codes to be encrypted in

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Report Generator file. Does not perform input checking of any type. All data is considered to be a string entry. Best suited for a hard disk environment. Not difficult to use once you have "played" with it, but can be intimidating at first.

DATA BASE 1:

Best suited for mailing lists or other LIST type data files. Cumbersome design setup requiring records to be accessed by their relative position in the file [record number]. You must first list the records by a specified field if you don't know the record number. Time consuming. Provides three pre-set mailing label report formats and one custom format for your own design. Will NOT do reports that have heading information. Includes several nice utilities, such as a formletter generator, disk file data base which creates a DB1 data base file out of the information on your library of disks. Does not provide for input checking, nor length of field entries. Only looks at the length of overall record. Does searches by "equal to" operator only, only one data field at a time. Requires that you first create an index file and then search. To search by another field you must create another index file. Searches by a maximum of 5 characters in any field. Sorts are limited to 1000 records, no matter how many exist in the file, but both alpha and numeric sorts are offered. Subfiles can be created to a printer in the main program or to disk by using the Utilities options. Selection is by "equal to" or "between two values", which can be either alpha or numeric type.

DATA BASE 99:

More emphasis put on copy protection than on program performance. Allows custom screen design and claims 28 fields of up to 28 characters each. Would be a neat trick to do since four of the 245 rows on screen are used by program prompts. (ast assembly language interface for report generation. Can not generate reports with headings and does not permit printer control codes to be inserted in report data. Does not save a format after design, so you will

have to re-create it each time you want a report. Data is printer in continuous format without regard to page breads or anything else. Design of layout is cumbersome, requiring you to conceptualize how many colons and/or semi-colons are needed to push the data across the page. Number of colons/semi-colons is limited to 127 characters allowed in a LINPUT command. A terrible system. Disk catalog accessed from main menu will crash program if you enter an alpha character instead of a number when it prompts for the disk drive number to be cataloged. Color is lost after a crash since it was CALLED from the LOAD program. Does not permit single record screen print (unless you buy the DB 99 utilities), must use EDIT option to search for a record or search sequentially. Can not go directly to a record by its relative position in the file. Will create subfiles to disk, allowing the search by "less than, equal to or greater than" operators. Search is limited to one field for all practical purposes. Sorts can be performed in ascending order, by any one field. Sort is an actual re-write of the file. All data is considered string information. No number crunching (again, unless you buy the DB 99 Utilities), no input checking. Documentation consists of two 8 1/2 X 11" sheets of paper printed on both sides. Program is slow, inflexible, inconvenient in many ways and cumbersome to use. It might have been an advanced application two years ago. Today it is a dinosaur, even with the DB 99 Utilities. MUCH TOO EXPENSIVE.

DATA BASE X:

Very modular, meaning that each function (adding, editing, printing, deleting etc.) is a separate program that must be loaded each time you want to use that function. Does statistical analysis of data. Record counter is inaccurate, code of program is jumbled and entirely unstructured. Does not sort data, even though documentation uses the term "sort". What it means is "select". When DATA BASE X "sorts" by a particular parameter it is really selecting records for dumping to a printer that meet that parameter. Does allow selection between ranges. Can not

create subfiles, does not index existing records. Access of a record is done sequentially, unless you know the record number. No way to tell the record number, you must guess. Supports 1 or 2 disk drives. Excruciatingly slow. Requires that you name the data disk DBXDATA, for no good reason that I can see, otherwise program errors out. Does not save report definition, but does allow it to be printed in normal or compressed mode. Definition process is fairly simple, but time consuming. Documentation is the "shabbiest" I have ever seen. It is photocopied and put into booklet form with the pages not even cut straight, so that some information is missing off of some pages. Overall, this program is JUNK! As with the IUG's DATA BASE 300/500, it never really belonged on the market in the stat that it is in. Unfortunately, I didn't know that and paid out over \$30 to find out.

PRBASE:

Totally assembly language coded. THE BEST all-round application in my opinion. FAST, flexible, does virtually anything a user would want in the way of data handling, except number crunching. It will not do anything in that area. Treats all data as part of a big string just as DBMS and DATA BASE 99 do. As long as you own the PRB Utilities written by John Johnson you can create subfiles, otherwise you can't. Has on-line help for commands, creates an index by any input field you choose and then accesses any record in about 1 second. Also has a FIND feature to look at data sequentially in any single field and a GLOBAL option that searches for a single data entry anywhere in the record. Saves up to five report formats, V2.0 allows you to format data disk. Custom screen layout with terrific graphics options for borders/windows etc. is available. A TREMENDOUS PROGRAM, well thought out, well designed, artistically executed. FAIRWARE!!!! PRB Utilities are free for the asking as long as you provide the disk and mailer. Report design is cumbersome and confusing. Prints single record from screen display in either 40 or 80 column mode. Program is very sensitive about I/O device names. My

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copies (V1.2 and V2.0) both require PIO. to work rather than just PIO or PIO/1, etc. With number crunching abilities this program would be a perfect "flat-file data manager" for most TI users. As it is, the value and performance for a FAIRWARE application, or a commercial application too for that matter, is unsurpassed. If you don't have PR BASE then you are missing out on one of the premier productivity tools available to the TI Community.

TURBO DATAMAN:

This is the second most powerful and useful data manager, taking a backseat only to PR BASE. It runs slightly ahead of ACORN because it performs number crunching and is faster in operation. Like ACORN, TURBO DATAMAN allows you to create a dictionary of data items (fields) and then lets you choose from that library of fields to put a record together. Up to 30 fields are allowed per record. Twenty pre-defined records (file formats) can exist on one disk. Allows custom screen layout design, complete with graphics for

vorders/windows etc. Does input checking, allows secondary screen access, like ACORN's Detail Records. Allows formulas to be created and saved that perform the four basic math functions. Report definitions can be saved. Allows wildcard type operators in searches, will print single record from screen display. Provides "less than, greater than, equal to, not equal to, greater than or equal to, less than or equal to" operators in screen display and report generation modules. Permits sub-totals in reports that can be formatted like TI Extended BASIC does with IMAGE statement. Subfiles can be created through the report generator by sending the output selected to a disk file rather than a printer. The results must be converted back to INTERNAL, FIXED from DISPLAY FIXED before you can use it in the program however. TURBO DATAMAN does not provide you with that utility. The documentation instructs you to "write a program" to do it. Names used for different modules in the program are confusing. Ex: ETCH, SKETCH, SKETCHR, FETCH. Should change

names to more accurately reflect function of module. Documentation acceptable, but lacks adequate coverage in some areas. Utilities are provided to perform some mundane operations, such as counting the amount of records in a database. Reformatting or restructuring of an existing file is not permitted, unless the input field is appended to the end of a record format. This program needs some "fine tuning" in some areas, but is still an exciting productivity tool with immense possibilities. Its speed of operation is not fast, but acceptable. It is faster than ACORN. One can set up the SKETCH program to auto-load if desired, but the whole application should be centered around a menu in my opinion. As it is now, you must RUN each module from the READY> prompt when you need to use it, because every module exists with an END statement. If you don't own this program, you should. Whenever you want to manage a mailing list or do accounting, TURBO DATAMAN is for you.

Feature table:

	----- DATA BASE NAME -----						
FEATURE	ACORN99	DBMS	DB1	DB99	DBX	PRBASE	TURBO DM
RECORDS/FILE	LIMITED	32,000	LIMITED	350-1400	LIMITED	350/710	LIMITED
	BY DISK		BY DISK		BY DISK		BY DISK
FIELDS/REC.	54	25	10	28	10	32	30
MAX. RECORD							
LENGTH	255	255	245	246	246	246	255
MAX. FIELD							
LENGTH	40	40	28	28	28	246	28
MEMORY REQUIRED	32K	32K	32K	32K	16K	32K	32K
LANGUAGE	XB/ASSM	ASSM	XB/ASSM	XB/ASSM	XB/ASSM	ASSM	XB/ASSM
CUSTOM DESIGN							
SCREEN LAYOUT	NO	YES	NO	YES	NO	YES	YES
SCRN GRPHCS							
CAPABILITY	NO	NO	NO	NO	NO	YES	YES
ALTERED CHAR							
SET USED	NO	YES	YES	NO	NO	YES	NO
CUSTOM REPORT							
DEFINITION	YES	YES	YES	YES	YES	YES	YES
SAVES REPORT							
DEFINITION	NO	YES	YES	NO	NO	YES	YES